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Involving Fishing Communities in Data Collection: a Summary and Description of the Alaska Community Survey, 2010

by
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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
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Abstract

A review of existing fisheries data collected by the State of Alaska and the National Marine Fisheries Service (NMFS) shows that many Alaskan communities are highly engaged in commercial, recreational, and subsistence fisheries. These resources are frequently affected by fisheries management decisions and anthropogenic effects on resource distribution and abundance that can either threaten or enhance community well-being. However, much of the existing economic data about Alaskan fisheries is collected and organized around units of analysis such as counties (boroughs), fishing firms, vessels, sectors, and gear groups that is often difficult to aggregate or disaggregate for analysis at the individual community or regional level. In addition, some relevant community level economic data have not been collected historically. As a result, the North Pacific Fishery Management Council (NPFMC), the Alaska Fisheries Science Center (AFSC), and community stakeholder organizations identified the ongoing collection of community level socio-economic information, specifically related to commercial fisheries, as a priority.

To address this need, the AFSC Economic and Social Sciences Research Program (ESSRP) began implementing the Alaska Community Survey – a voluntary data collection program to improve the socio-economic data available for consideration in North Pacific fisheries management using the community as the unit of reporting and analysis. ESSRP social scientists partnered with community-based organizations and individuals from fishing communities around Alaska to ensure that detailed community level information is collected and made available for the socio-economic impact assessment of communities involved in North Pacific fisheries (initially focused on Alaska communities for feasibility reasons). An additional goal was to ensure that community level socio-economic and demographic data are collected at comparable levels of spatial and thematic resolution to commercial fisheries data. Such data will facilitate analysis of the impacts of proposed changes in commercial fisheries management, both within and across North Pacific communities involved and engaged in various types of fishing. These data will also help scientists and NPFMC staff to better understand Alaskan communities' social and economic ties to the fishing industry and facilitate the analysis of potential impacts of catch share programs and coastal and marine spatial planning efforts.

This survey was designed to gather information about Alaskan fishing communities and to help determine each community's capacity to support fishing activities. The types of data collected from communities include recommendations from community representatives that participated in our community meetings. The survey was intended to collect information that is currently lacking about individual community involvement in fishing. This report gives an

overview of the survey, results from the first year of implementation in 2011, and addresses the potential for this and other methods of engaging communities to better inform fisheries management in isolated areas of Alaska.

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INTRODUCTION

The National Marine Fisheries Service (NMFS) is the agency responsible for the stewardship of the Nation's living marine resources. In addition to managing, protecting, and conserving our marine resources, the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) mandates that management considers the importance of fishery resources to fishing communities through the use of socio-economic data (§301, National Standard 8). Much of the existing economic data about Alaska fisheries is collected and organized around units of analysis such as counties (boroughs), fishing firms, vessels, sectors, and gear groups. It is often difficult to aggregate or disaggregate these data for analysis at the individual community or regional level. In addition, at present some relevant community level economic data simply are not collected at all. As a result, the North Pacific Fishery Management Council (NPFMC), the Alaska Fisheries Science Center (AFSC), and community stakeholder organizations identified ongoing collection of community-level socio-economic information that is specifically related to commercial fisheries as a priority.

In partnership with community organizations and individuals from fishing communities around Alaska, the AFSC's Economic and Social Sciences Research Program (ESSRP) has been working to ensure that detailed community level socio-economic and demographic data are collected at comparable levels of spatial and thematic resolution to that of commercial fisheries data collection. To address this need specifically, ESSRP social scientists developed and implemented the Alaska Community Survey. The survey is a voluntary data collection program designed to improve the availability of socio-economic data for consideration in the North Pacific fisheries management process as required under the MSFCMA. These data can aid researchers and NPFMC staff to better understand Alaskan communities' social and economic ties to the fishing industry. Such community-level data collection facilitates diverse analyses including predicting and measuring the impacts of proposed changes in commercial fisheries management (e.g., rationalization), both within and across North Pacific communities involved in and engaged in various types of fishing.

The Alaska Community Survey was also originally implemented as a data collection tool to aid the ESSRP in the revision process of the document "*Community Profiles for North Pacific Fisheries – Alaska*" (Sepez et al. 2005) which was recently completed in winter 2013 (Himes-Cornell et al. 2013). In community meetings held by AFSC social scientists in August and September 2010, community input was sought on how the community profiles could better represent communities and their ties to North Pacific fisheries (Himes-Cornell et al. 2011). Much of the input received at the meetings included suggestions for new types of socio-economic data to better represent the interests of communities in the fisheries management process and in socio-economic impact analyses. A large amount of the data requested by communities for inclusion was not obtainable from other sources and was therefore requested directly from communities through the implementation of the Alaska Community Survey.

The survey was implemented as a source of data for practical use, for NOAA social scientists and for the NPFMC for descriptive and analytical purposes including socio-economic impact analyses of potential regulations. In addition to direct fisheries management utility, this research and the resultant data can be utilized in future ecosystem management efforts. These efforts include the development of ecosystem models which incorporate various socio-economic indicators and other social information. The survey results are also available for public use to support community development, other research concepts, and future research design. In

addition, the data presented here may have utility for Alaskan fishing communities themselves in understanding their own engagement in fishing and socio-economic structure compared to other communities around the state. Aggregate data from the survey can be used to describe demographics of Alaskan fishing dependent communities, fishing-related businesses, and the importance of fishing to various regions of Alaska. The information may be used to give communities a voice in the decision-making process.

The results of the first year of implementation (2011) of the survey are presented here with data reported for the 2010 calendar year. The survey was implemented for a second time in 2012 and will be implemented in 2014 for a third round of data collection. Results of subsequent years of data collection will be presented in separate reports. The remainder of the report is structured as follows: a description of the development and pretesting of the survey instrument, a description of the sampling protocol used to determine which communities were surveyed, and a brief overview of the implementation of the survey. We also include a description of post-hoc data management, an overview of the non-response bias analysis methodology, and a brief summary of the results of the non-bias response analysis. Next, the report provides a summary of results from the survey and a summary of the findings. Finally, the report discusses the conclusions and next steps for this research.

METHODS

Survey development

The survey instrument was developed through significant pretesting and assistance from experts in survey design and representatives of communities that were part of the overall respondent population. Pretesting activities were spaced out to allow sufficient time to revise the survey materials between each activity. The survey instrument also benefited from early input from several cognitive interviews with representatives from Alaska fishing communities. Three methods were used to pretest and refine the survey instrument used for this project.

First, experts in survey design who worked with Alaskan fishing communities on a regular basis were asked to review the draft survey instrument and provide comments on the wording of questions, additional questions to include, question order effects, question structure and response categories.

Second, cognitive (one-on-one) interviews were used to ensure the survey instrument used words and terms people could understand, was a comfortable length, and was easy to complete. Cognitive interviews were conducted in Dutch Harbor, Nome, Petersburg, and Kodiak with participants in a series of community meetings (Himes-Cornell et al. 2011). All interviews were conducted with people that could be potential respondents to the survey. Each interview consisted of asking individuals to review the questionnaire in the presence of an interviewer. Respondents were instructed to read through each question aloud and give a verbal account of everything they are thinking and to explain their thoughts about whether the question struck them in a favorable or unfavorable way, how easy it would be to answer the question, whether the question was clear and whether the instructions about what to do to complete the survey were adequate. The interviews were then followed by a short debriefing interview to discuss the overall design of the questionnaire and the respondent's suggested general changes. During

these interviews, it was determined that the survey would take approximately 45 minutes to an hour to complete.

Third, a small formal pretest was completed with potential respondents from four communities: Valdez, Dillingham, Aleknagik, and Ugashik. Implementation of the formal pretest followed the same survey protocol as was instituted for full implementation of the survey (see below). The formal pretest implementation occurred between October and November 2010, and was principally intended to ensure the initial survey protocols were functioning as expected. The telephone interview and final mailing stages were not undertaken for the formal pretest.

Data collected

The following is a discussion of the data collected with the survey instrument and how individual questions in the survey instrument are expected to be used. The full survey instrument is included as an appendix to this report (Appendix D).

- Q1 collects information about how many people live in the community as year-round residents, as seasonal workers or transients, and as year-round residents that work in a shore-side processing plant. The U.S. Census does not differentiate between residents that live in a place year-round or that are seasonal residents. The data collected in this question can facilitate an understanding of the difference between the types of residents in terms of reliance on social services and participation in civic activities.

- Q2 provides information on which months per year seasonal workers live in the community. The ebb and flow of seasonal worker residents can have a strong impact on the population of a given community. The information collected from this question will assist in understanding the link between the peaks and troughs in fisheries participation and temporal impacts of fisheries management decisions on the social structure of a given community.

- Q3 requests information on the length of the fishing season(s) that residents of the community participate in. The information gathered from this question will be used to facilitate an understanding of the temporal economic, cultural, and social effects fishing has on a given community.

- Q4 asks for the month(s) that the community's population reaches its annual peak. Responses to this question will be used to map out the population over time and determine what months of the year will have the largest burden on civil services.

- Q5 is used to determine the degree the community's annual peak in population is driven by employment in the fishing sector. Reponses to this question will be used to add focus to the responses from Q2 and Q4 to determine how much the population fluctuations of an individual community are specifically related to fishing.

- Q6 collects information about the infrastructure available in the community and whether it was completed in the last 10 years, is currently being constructed, is planned for completion in the next 10 years, and the year of completion. Representatives from Alaskan fishing communities have indicated that the availability of local infrastructure is imperative for the

sustained existence of a given community. The information collected in this question will be used to respond to this request and will be an indicator of vibrancy and resiliency of a given community and the quality of economic performance of a local fishery.

- Q7 and Q8 provide information on the availability of public dock space for moorage of permanent and transient vessels (Q7) and the maximum length of vessels that can moor in the community (Q8). Responses will be used to assess the capacity of each community to host fishing vessels and generate revenue from public moorage facilities. If the availability of moorage space changes over time, this could have an effect on local participation in fisheries.

- Q9 requests information about the annual revenue that public moorage facilities earned in the previous calendar year. Responses will be used as a quantitative indicator of vessel transit activity and revenue generation from public moorage facilities for each community. This source of public revenue can directly feed into the community's municipal finances and be earmarked as a direct benefit of fishing to the community. As a result, changes in fisheries management could have an effect on municipal finances if moorage revenue goes down from fewer or smaller vessels utilizing public moorage facilities. This type of information will be used to assist in the analysis of impacts of proposed fishing regulations or allocations that are based on vessel size.

- Q10 is used to determine the types of regulated vessels that the community's port is capable of handling. Responses will be used to describe the non-fisheries fleet activity in a community. This type of information can be used to measure the resiliency of communities in the face of changes in fisheries management and with regards to the diversity of the economic base that supports the port services. This is important in looking at the amount of moorage space available as regulated vessels could account for a high level of dock space available when fishing is not heavily present in a community.

- Q11 collects information on the types of commercial fishing boats that use the community's port during the fishing season as their base of operations. Responses to this question will be used to assist in describing the local fishing fleet's contribution to the local economy. The home port listed on the vessel registration most often does not reflect where the vessel is based during the fishing season, and thus to which local economy the vessel is contributing to during the fishing season. Since there are no known records of which fishing vessels use which communities as their base of operations and because it would be too onerous to ask harbormasters or community officials to list out which vessels use their community in a given year, the data from the questions in this survey with regards to a community's capacity to host commercial fishing vessels will be used to form assumptions about the effect commercial fishing has on a community's economy. In addition, the capacity of a community to host certain sizes of vessels will be used as an indirect multiplier of potential effects of fisheries management actions based on vessel size class.

- Q12 and Q12a provide information about the trends in the number of different types of vessels that are based in the community compared to 5 years ago. The responses to this question will be used as one method of tracking the trends of the local vessel types over time.

- Q13 and Q14 ask for the type of recreational or sport fishing that occurs in the community (Q13) and the saltwater species that are targeted (Q14). The information collected from this question will be used to describe the presence of recreational fishing in each community so that a community's dependence on recreational fishing can be determined.

- Q15 is used to determine the types of fishing gear used by commercial fishing vessels based out of the community. This question will aid in describing the effects of fishing regulations that are based on fishing gear type per community and describing the commercial fishing fleet that uses each community during the fishing season.

- Q16 collects information about the types of fishing support businesses located in the community. The information collected from this question will be used to provide insight into how each community contributes to fishing both locally and regionally. The hypothesis is that changes to services in a regionally important community hub will have a multiplier effect in that they will affect not only their own community but also all of the satellite communities that rely on the services in the hub to keep fishing operations active. This question can also aid in determining the social organization of remote communities in Alaska by identifying which communities serve as service hubs for fishing.

- Q17 provides the location(s) of the communities that local residents go to for fishing support businesses that are not located in the community. The provided answers to this question will be used to provide insight into which communities are considered hubs for fishing-related services in a given region and what fisheries service networks exist among Alaskan communities.

- Q18 asks for information about the public social services that are available in the community. This question will be used to discern which public social services are available both to residents and individuals temporarily based in the community.

- Q19 requests information about the natural resource-based industries that the community's economy relies on. The results of this question will aid in understanding the diversity of natural resources that a given community might have to support itself in the event that fishing does not bring in adequate money or food. In addition, these data can be used to evaluate the resiliency of a community's economy and alternate sources of jobs.

- Q20 is used to determine the three most important subsistence marine or aquatic resources the residents of the community rely on. The Alaska Department of Fish and Game (ADF&G) does not undertake subsistence harvest surveys on an annual basis. The results of this question will be used to gain an understanding of what aquatic resources a community might rely on for subsistence purposes. In general, communities have expressed concern that not enough data are collected on the subsistence activities of Alaskan communities. The purpose of this question is to document that subsistence harvesting is important to communities and will be used to show differences between the subsistence resources that communities rely on in different regions of the state.

- Q21 and Q22 collect information about funding or grants that the community received from

Community Development Quota entities and from fisheries-related taxes or fee programs in the previous calendar year. The results from this question will be added to all other known community revenue streams to determine the total amount of revenue that a community receives related to fishing-related activity. These data can be used to understand the total benefit that a community receives from fishing and can assist in understanding how positive or negative changes to this revenue stream from fisheries management decisions might affect a community's ability to provide community services.

- Q23 asks for information about the community's public services that are at least partially funded by a local raw fish tax, the state Shared Fisheries Business Tax, the state Fisheries Resource Landing Tax, or marine fuel sales taxes. The responses will be used to understand which community services are dependent on fisheries-related revenue, and thus which community services might be affected by changes in revenue caused by fisheries management decisions.

- Q24 and Q24a request information about additional local fishing-related fee programs charged to the fishing industry that specifically support public services and infrastructure. The responses will be used to determine local fishing related revenue streams that might be affected by fisheries management decisions. For years, community representatives have been requesting that fisheries managers take into account such municipal fee programs that are susceptible to changes in fishing activities and incorporate potential impacts to those revenue streams into socio-economic impact analyses for potential fisheries management changes. The results of this question will be used to direct analyses of this type of impact.

- Q25 and Q25a are used to determine how the community participates in the fisheries management process in Alaska. Since this data collection will happen on an annual basis, the results will be used to understand the trends in annual community participation. It is hypothesized that communities with more varied and professionalized participation are more likely to be considered in the fisheries management process. An individual conducting a socio-economic impact analysis needs to understand the degree to which communities participate in the process so that their impact analysis can consider those communities that might be least likely to represent themselves. Participation in fisheries management was emphasized during community profile update meetings as an important dimension to understand.

- Q26-29 collect information about the current challenges for the portion of the local economy that is based on fishing (Q26), the effects of fisheries policies or management actions on the community (Q27), the past or current fisheries policy or management action that has affected the community the most (Q28), and the potential future fisheries policy or management actions that concern the community the most. The responses will be used to understand what fisheries management issues may affect communities in what ways, which in turn can assist the assessments of cumulative effects of fisheries management actions in compliance with the National Environmental Policy Act (NEPA).

- Q30 provides information on the individuals in the community that contributed to filling out the survey. The responses to this question will be used to add context to the subjective questions included in the survey.

- Q31 asks for any additional information that the respondent would like to provide NOAA about how the community is engaged in or affected by fisheries. The responses to this question will be used to identify any additional issues that communities have with regards to their involvement in fishing that were not addressed in the survey but about which the public should be informed.

Sampling protocol

The sampling methodology was the same as was used in Himes-Cornell et al. (2013), which can be consulted for the full methodological explanation. The sampling frame for the population of interest included 194 communities, composed of the 136 communities that were profiled in the 2005 *Community Profiles for North Pacific Fisheries – Alaska* (Sepez et al. 2005) and an additional 58 communities that were profiled for the 2013 update (Himes-Cornell et al. 2013). The additional 58 communities were selected due to their involvement in commercial, recreational and subsistence fishing in Alaska, as determined using a data envelopment analysis (DEA) model that focused on scoring communities based on their overall dependence and reliance on fishing to support their well-being (Sepez et al. 2007). For community selection, 2009 fishing data for each community was used in the DEA model which then attributed a score to each community based on multiple indicators of participation in various fisheries. As a non-parametric approach, DEA may more effectively capture fisheries participation across multiple indicators without giving a pre-determined weight or importance to each indicator. The communities selected through the DEA model demonstrated strong participation in any unique combination of commercial, recreational, and subsistence fisheries. A caveat to the community sampling methodology was discovered after the implementation of the survey began. It was found that the subsistence data that was utilized was not as reliable as the data used for commercial and recreational fishing because data collection efforts had been sharply reduced after 2008. It is therefore possible the sampling tool did not effectively capture communities whose fisheries participation is solely subsistence based. In order to address this shortcoming, we intend to revisit the list of communities that receive the survey in future implementation years in order to effectively capture these types of communities.

Survey implementation

Due to low population numbers, a census of the population was feasible and preferable given that standard sampling approaches would have required a sample size of 186 out of 196 communities in order to be representative. A census of identified fishing communities was also necessary in order to obtain the same set of unique information about each community's involvement in fishing for use in revising the Community Profiles.

Most of the communities in our study (N = 154) were sent a copy of the survey to the municipal office and another to the tribal office. Some communities were only sent one copy of the survey if there was not a known tribal or municipal office (N = 40). A few communities (N = 5) were sent three copies if they had two different contacts associated with the municipal office

or had two different tribal offices in the same community (e.g., Juneau). Appendix C breaks down how many copies of the survey each community received and how many copies each community returned. Figure 1 shows the communities that completed the survey as well as the regional groupings communities were organized into for the analysis. As defined in Himes-Cornell et al. (2013), the regional groupings were determined using census area designations and geographic approximations to break the state into even assemblages of communities. The regional groupings are intended to approximate representative sets of communities that rely on specific stocks of natural resources.

Figure 1. -- Respondent communities organized by regional grouping.

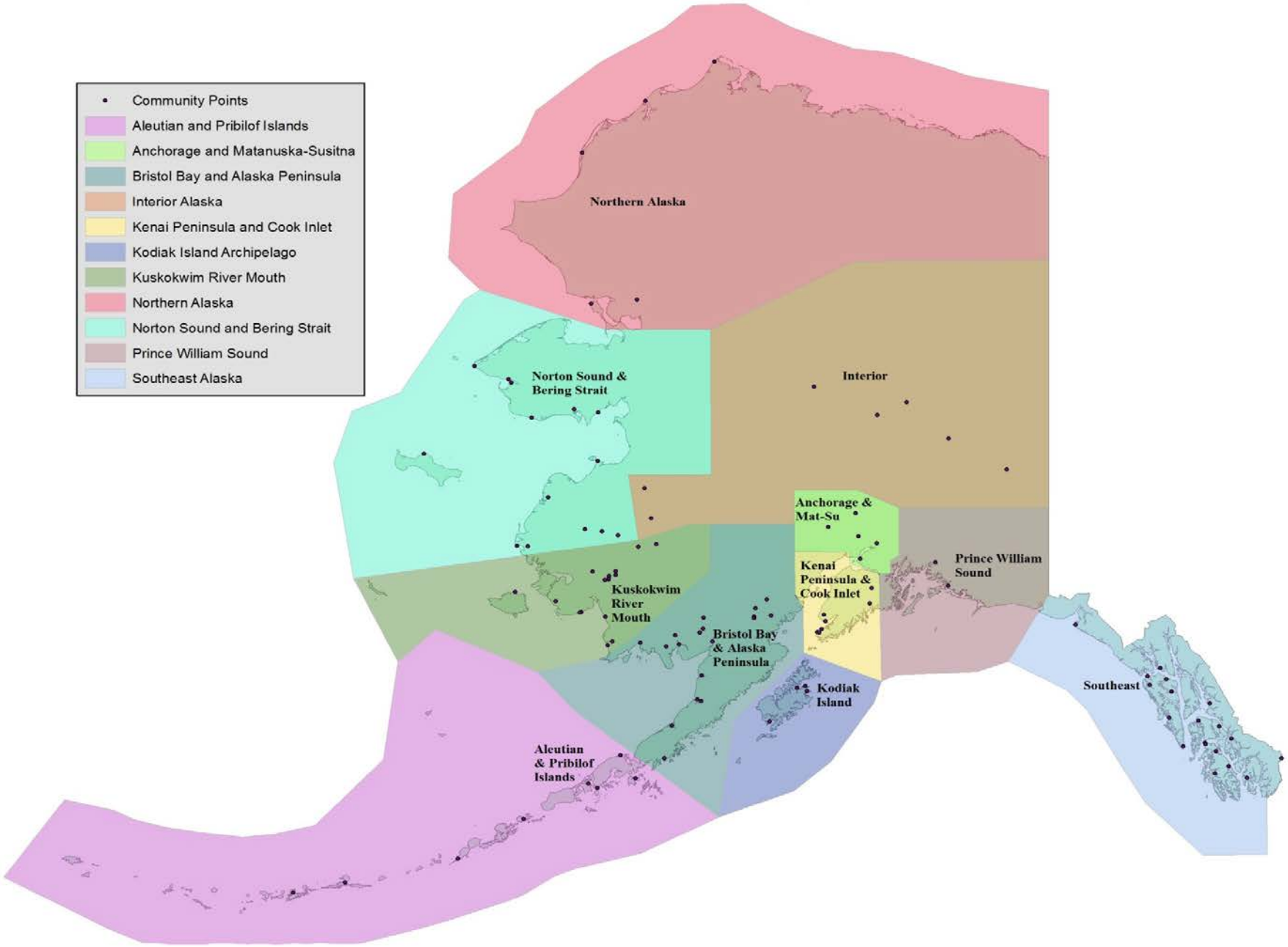


Figure 1. -- Cont'd.

Aleutian and Pribilof Islands	Anchorage and Mat-Su	Bristol Bay and Alaska Peninsula	Interior	Kenai Peninsula and Cook Inlet	Kodiak Island	Kuskokwim River Mouth	Northern Alaska	Norton Sound and Bering Strait	Prince William Sound	Southeast
Adak	Anchorage	Aleknagik	Delta Junction	Homer	Akhiok	Akiachak	Barrow	Alakanuk	Chenega	Craig
Akutan	Eagle River	Clarks Point	Fairbanks	Moose Pass	Alitak Bay	Aniak	Kiana	Brevig Mission	Cordova	Elfin Cove
Atka	Palmer	Dillingham	Grayling	Nanwalek	Kodiak	Bethel	Kotzebue	Chevak	Valdez	Gustavus
Cold Bay	Skwentna	Egegik	Holy Cross	Nikolaevsk	Ouzinkie	Chefornak	Point Lay	Elim		Hobart Bay
Dutch Harbor	Talkeetna	Ekwok	Huslia	Port Graham	Port Lions	Goodnews Bay	Wainwright	Hooper Bay		Hoonah
King Cove	Willow	Iliamna	Nenana	Seldovia		Kasigluk		Marshall		Hyder
Nelson Lagoon		Koliganek	Tanana	Seward		Kongiganak		Nome		Kake
Nikolski		Levelock	Tok			Kwethluk		Pilot Station		Ketchikan
Port Moller		Manokotak				Kwigillingok		Russian Mission		Pelican
Saint George		New Stuyahok				Lower Kalskag		Saint Mary's		Petersburg
Saint Paul		Newhalen				Mekoryuk		Savoonga		Point Baker
Sand Point		Nondalton				Napakiak		Stebbins		Port Alexander
		Pedro Bay				Napaskiak		Teller		Port Protection
		Perryville				Oscarville		Wales		Sitka
		Pilot Point				Platinum		White Mountain		Tenakee Springs
		Port Alsworth				Quinhagak				Thorne Bay
		Port Heiden								Whale Pass
		Twin Hills								Wrangell
		Ugashik								Yakutat

The implementation techniques that were employed are consistent with methods that maximize response rates. Mail survey implementation followed a modified Dillman Tailored Design Method (Dillman 2009), which included the following steps (excluding any steps after a respondent returned their completed survey):

1. An **advance letter** notifying respondents about the survey a few days prior to the questionnaire arriving.
2. An **initial mailing** sent 5 days after the advance letter. Each mailing contained a personalized cover letter, questionnaire, and a pre-addressed stamped return envelope.
3. A **postcard follow-up reminder** mailed 7 days following the initial mailing.
4. A **follow-up telephone reminder** 28 days after the advance letter to encourage response.
5. A **second full mailing** mailed 36 days after the advance letter was sent.

This flow deviated from the classic Dillman Tailored Design Method with the placement of the telephone contact prior to the second mailing of the survey instrument. This method was used because it was conjectured that the personal connection is important in community surveys, especially given the extremely small size of Alaskan communities (the median population size in 2010 was 358 (U.S. Census 2010)) and it could elicit better participation than repeated mailings with no verbal contact. The survey was implemented between April and October 2011 by ICF Macro and AFSC social scientists. Although the full survey protocol was executed between April and June, surveys were accepted as late as mid-October, given that many community leaders were out of their communities on summer subsistence fishing and harvesting trips and were not available to complete the survey until September. In these cases, additional telephone follow-up was conducted when community leaders returned to remind them of the survey and answer any questions they may have had while completing it. Table 1 outlines the timing of the implementation of the survey.

Table 1. -- Survey implementation timing.

Stage	Date
Advance Letter	April 20, 2011
Initial Mailing	April 25, 2011
Postcard Follow-up Reminder	May 2, 2011
Follow-up Telephone Reminder	May 18-24, 2011
Second Full Mailing	May 27, 2011

Response rate

Of the 353 surveys that were mailed, 130 surveys were returned. More than one survey was returned for 14 communities (10.8% of the total survey returns), resulting in a total of 115 unique surveys, representing 59.6% of communities contacted. To avoid duplication in the data, only one response per question was analyzed for each community. Therefore, for communities that returned two surveys, a protocol was developed to deal with duplication (see below in the section on post-hoc data management for details). Surveys returned due to bad addresses represented 4.0% (14 surveys) of all surveys mailed while three communities (1.5%) refused to

participate in the survey. Figure 2 and Table 2 present the response rates by geographic region of the state.

Figure 2. -- Survey response rates by region.

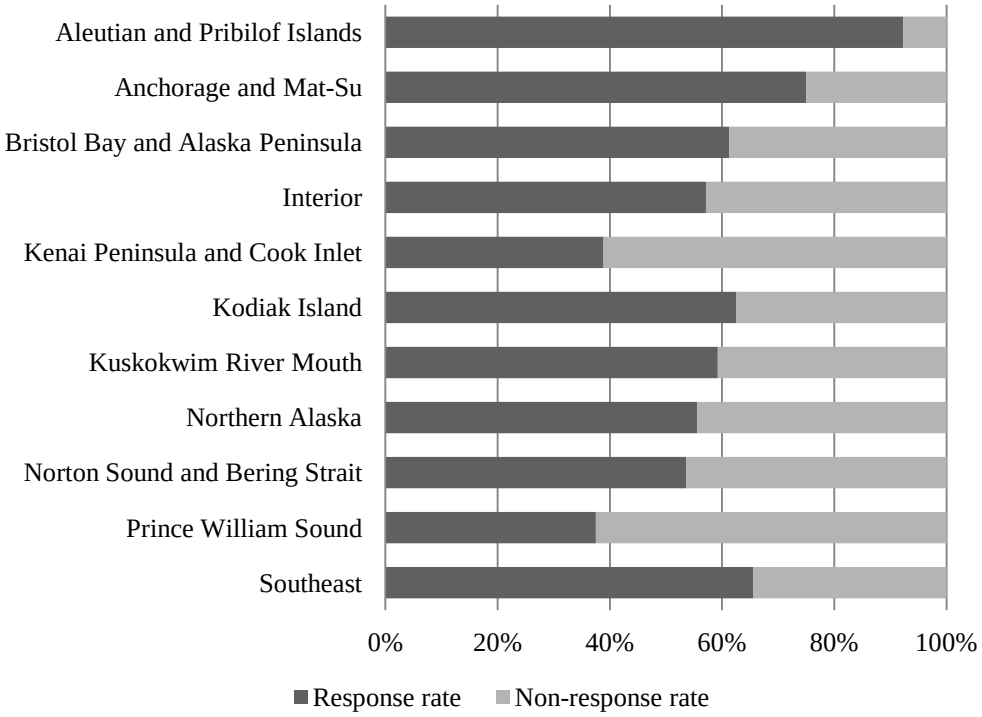


Table 2. -- Survey response rates by region.

	Response	**Non-response**
Aleutian and Pribilof Islands	12	1
Anchorage and Mat-Su	6	2
Bristol Bay and Alaska Peninsula	19	12
Interior	8	6
Kenai Peninsula and Cook Inlet	7	11
Kodiak Island	5	3
Kuskokwim River Mouth	16	11
Northern Alaska	5	4
Norton Sound and Bering Strait	15	13
Prince William Sound	3	5
Southeast	19	10
Total	**115**	**78**

Post-hoc data management

As referred to earlier, for communities that returned two surveys, a protocol was developed to limit the number of responses per question per community to one entry. This was determined to be necessary given that communities are the base unit of analysis, and leaving more than one survey response per community (herein referred to as duplicate surveys) in the data could bias the results towards the communities that returned more than one survey. To inform the development of the duplicate survey removal procedure, a brief analysis was done on the 14 instances of duplicate surveys to determine how survey responses differed between the duplicates. With this information, a set of rules was developed based on the most common issues in duplicate surveys that precluded basic merging of similar responses. The most common duplicate response issues that were encountered were on multiple response questions and on Likert scale questions. For multiple response questions (i.e., check all that apply), responses were combined between the two surveys to report the widest spread possible. Responses to Likert scale questions were averaged between the surveys. All open-ended question responses were combined. Numerical short-answer response questions such as population estimates were averaged if answers were similar. If responses were significantly different, the response from the more complete survey was taken under the reasoning that that response may be more accurate due to a more comprehensive overall survey. For multiple survey responses for one community where this was not a clear choice, responses were evaluated in relation to the Himes-Cornell et al. (2013) community profiles to determine which response was more plausible. After the 14 pairs of surveys were combined so each community had a single response for each question, the response data was added back in the larger dataset for analysis.

Data analysis

Survey responses to each question were analyzed by community and sorted into regional groupings. Response frequency distributions are presented for categorical response questions and descriptive statistics are presented for non-categorical response questions. For the non-categorical response questions, such as fill-in-the-blank survey items, responses were coded into categories and themes for ease of analysis.

Survey question Q17 asked respondents to name the top three communities that provide fishery support businesses that are not available within their own community, for respondents that included more than three communities, all responses were analyzed. The responses were analyzed as social network data in UCInet 6 (Borgatti et al. 2002) and sociograms were created in Netdraw to visually represent how communities are connected to each other through the exchange of fishery-related goods and services. Both the comprehensive network of all item respondent communities and nominated communities and the sub-networks of respondent communities sorted into regional groupings are presented (Figs. 12-22).

Additionally, network measures such as degree centrality were measured, which evalutes activity in a network through the number of direct links each node or actor has with all other nodes in the network (Hanneman and Riddle 2005, Ernoul and Warden-Johnson 2013). The degree centrality of the network as a whole lends itself to the discussion of the existence of hub communities in Alaska that smaller, perhaps more remote, communities depend on for goods and services specific to fishing activity. The degree centrality of the regional sub-networks can be examined as a comparison of how strongly connected communities may be within a smaller

geographic area versus how connected they are to hub communities outside the region. Both in-degree and out-degree centrality measures are presented. In-degree centrality measures how many times a particular node was nominated by other nodes. Out-degree centrality measures how many times a particular node nominated other nodes. Out-degree centrality is constrained by the structure of the survey question in which respondents were asked to name three other communities. Additionally, frequency distributions are presented for each sub-network with ties between nodes partitioned as either same region ties (in-region) or different region ties (out-region). These frequency distributions offer a rough proxy of homophily in the sub-networks, or the occurrence of connections within a regional grouping as compared to those connections to ouside communities (Bazeley 2007).

There were five open-ended questions on the survey that were analyzed using standard qualitative data analysis methods. The software package NVivo was used for the analysis of responses from Q12a and Q26-29. Coding was used to draw out themes reported by respondents. Response distributions of themes were calculated and distributions were broken out by regional groupings to provide further illumination of results (Tables 22-29). Additionally, representative quotes are included as samples of the coding and responses.

Non-response bias analysis

A unit non-response bias analysis was completed for general survey response. Item non-response was assessed separately for each individual question through the reporting of response distributions based on the total number of surveys received and the number of item respondents. Data presented in this report do not include any adjustment for item non-response given the categorical nature of the majority of the survey questions. To assess unit non-response, several variables were analyzed for the presence of a significant relationship with the overall community response results to determine if there is any bias in the survey results from communities that did not return a survey. Potential bias variables included a collection of variables that were sourced from the U.S. Census, the Alaska Fisheries Information Network, the Alaska Commercial Fisheries Entry Commission (CFEC), and the Alaska Department of Commerce, Community, and Economic Development's Division of Community and Regional Affairs. Analyses were run in Microsoft Access and Excel, and statistical analyses were completed in Stata. Statistical analyses included two-sample t-tests with equal variances and Pearson's Chi-squared test.

Twenty variables were analyzed in the unit non-response bias analysis. Variables were chosen to test both physical limitations of communities that could impact survey receipt and therefore response, such as presence of a post office and connection to the main road system, as well as variables such as percent Alaska Native and educational attainment that could create a source of bias in the results. Fisheries variables were included to determine if communities were self-selecting for non-response based on their perceived fisheries participation and therefore the applicability of the survey. Additionally, some basic demographic variables were included to assess any key differences between communities that responded to the survey and those that did not. The full list of variables analyzed included:

- Percent of the population that considers themselves Alaskan Native
- 2010 U.S. Census population size
- Educational attainment of those 25 years and older

- Language other than English spoken at home of those 5 years and older that consider themselves as speaking English less than "very well"
- Percentage of families with income in the last year below the poverty level
- Median household income
- Census area designation
- Community governance classification (see Table 3)
- Geographic region of the state (following Himes-Cornell et al. (2013))
- Connection to the intercontinental highway system
- Presence of a post office
- Number of ADF&G permits issued for subsistence harvest of salmon
- Count of distinct vessels delivering salmon
- Eligibility for the Community Quota Entity program
- Eligibility for the Community Development Quota program
- Per capita count of distinct vessels participating in all fisheries based on homeport
- Count of all distinct vessel owners based on vessel owner residency
- Sum of ex-vessel value for all landings based on vessel owner residency
- Count of all distinct CFEC permits fished
- Count of distinct sport fishing licenses sold to residents of community

Table 3. -- Description of Alaska community governance classification.

Type of governance structure	**Type**	**Description**[1]
1st Class City	Municipal	A 1st Class City must have at least 400 permanent residents; has a voter elected mayor and city council.
Home Rule City	Municipal	A Home Rule City must be a first class city that has adopted a home rule charter.
2nd Class City	Municipal	A 2nd Class City must have at least 25 resident voters; has a city council and an internally elected mayor.

[1] Definitions were obtained from the Alaska Department of Commerce, Community and Economic Development Glossary of terms (http://commerce.alaska.gov/dnn/dcra/ResearchAnalysis/Glossary.aspx).

Only 2 of the 20 variables analyzed in the non-response bias analysis returned significant results at a significance level of 0.05: community governance classification (P-value = 0.044) and whether or not the community was connected to the intercontinental highway system (P-value = 0.039) (Tables 4 and 5). Two of the variables tested that did not return significant results are also included below (Tables 6 and 7). A simple non-response bias analysis was conducted but further scrutiny of the statistical responses is merited. Looking at the results for the connection to the intercontinental highway system, the bias appears to be in the opposite direction than one would assume if a community's survey non-response was influenced by its lack of connection to the larger road system. It is likely that the intercontinental highway system connection variable is too blunt to capture whether the remoteness of a community influenced its non-response to the survey. Many Alaskan communities are well-served by air and water travel

infrastructure which might nullify the importance of being connected to the road system. So, it is possible that the statistically-detected relationship between these two variables is spurious. The analysis of the community governance classification follows more closely to what one would assume the variable's influence would be on non-response. Communities assumed to have more organization or government structure such as 1st and 2nd class cities were more likely to have responded to the survey whereas unincorporated communities that would be generalized as having less structure and centralized organization were less-likely to have responded to the survey.

Table 4. -- Pearson's Chi-squared test results for survey response and community governance classification.

	Non-response	**Response**	**Chi^2**	**Prob**
Federal Indian Reservation	1.32%	0.00%	9.8124	0.044
1st class city	7.89%	12.50%		
Home rule	3.95%	11.61%		
2nd class city	40.79%	47.32%		
Unincorporated	46.05%	28.57%		
Total	**76**	**112**		

Table 5. -- Pearson's Chi-squared test results for survey response and connection of community to the intercontinental highway system.

	No	**Yes**	**Chi^2**	**Prob**
Non-response	36.60%	56.25%	4.2572	0.039
Response	63.40%	43.75%		
TOTAL	**153**	**32**		

Table 6. -- Two-sample t-test with equal variances results for survey response and percent of community that is Alaska Native.

	Mean	**St. Dev.**	**N**	**P-value**
Non-response	59.82836	38.07206	67	0.3158
Response	53.98981	36.83934	108	

Table 7. -- Two-sample t-test with equal variances results for survey response and sum of ex-vessel value for all landings based on vessel owner residency.

	Mean	**St. Dev.**	**N**	**P-value**
Non-response	1,001,538	365,547	76	0.0816
Response	3,643,616	1,217,001	112	

SUMMARY OF SURVEY RESPONSES

This section summarizes data collected from the 2010 Alaska Community Survey. Overall response distributions and basic summary statistics are included for each survey question in Appendix B. Distributions are broken down by survey respondents and item respondents. Survey respondents are defined as the 115 unique communities that returned completed (or partially completed) surveys. Item respondents are defined as the subset of survey respondents that provided a valid numerical response if called for or that selected a category where a categorical response was called for. For all questions that asked for a categorical response or otherwise non-numerical response, the response distribution of item respondents is provided to show the proportion of respondents selecting each category. Additionally, response distributions grouped by geographic region of the state (following Himes-Cornell et al. 2013) are provided. The graphical geographic response distributions are included in text while full tables are included in Appendix A.

Population distribution

Communities were asked to provide basic population information as well as information on seasonal workers that come to the community and any year-round residents that are employed in a shore-side processing plant (Q1). Year-round population numbers submitted by respondents varied between the smallest mean size reported for communities in the Bristol Bay and Alaska Peninsula grouping (266 residents) and the largest mean size for the Anchorage and Mat-Su grouping (55,470 residents) (Appendix Table A1). The number of residents employed by a shore-side processing plant also ranged widely between the regional groupings with no Northern Alaska communities reporting any processing employee residents and Prince William Sound communities reporting a mean of 282 people (Appendix Table A2). Communities were also asked to report the number of seasonal workers or transients that spent time in the community. The Prince William Sound grouping reported the highest mean (906 people) and Norton Sound and Bering Strait communities had the lowest mean (96 people) (Appendix Table A3).

To further understand the seasonal presence of non-residents workers in various communities, respondents were asked to report what months seasonal workers were present (Q2). All 11 regions showed a higher presence of seasonal workers between April and June and between July and September than the rest of the year (Fig. 3, Appendix Table A4). This corresponds to the response distribution of the survey question on the seasonal peak of population (Q4). The greatest proportion of communities in each of the 11 regions reported that the population peak occurred between April and June or July and September (Fig. 4, Appendix Table A5).

Communities were also asked to relate the fluctuation in population to employment in fishing sectors (Q5). All communities in the Northern Alaska regional grouping reported that population fluctuations were not at all attributable to fishing (Fig. 5, Appendix Table A6). In the Aleutian and Pribilof Islands grouping, 58% of communities reported that their population changes were entirely driven by fishing industry employment. Seasonal presence of workers in communities may be driven by employment in other natural resource-based industries in addition to fishing, including construction and tourism (Q19). For example, more communities in the Northern Alaska grouping reported oil and gas as economically important to their communities (40%) versus those that noted fishing as important (20%) (Fig. 6, Appendix Table A7). Some

regional groupings of communities (e.g., Aleutian and Pribilof Islands, Bristol Bay and Alaska Peninsula, and Kodiak Island) show the economic importance of fishing for a majority of communities, but also reported some measure of economic importance in at least two other natural resource-based industries (e.g., logging and ecotourism). No communities noted all six options as being important to their economy.

Figure 3. -- Regional breakdown of responses to the following question: On average, which months per year does your community have seasonal workers living there? (Q2).

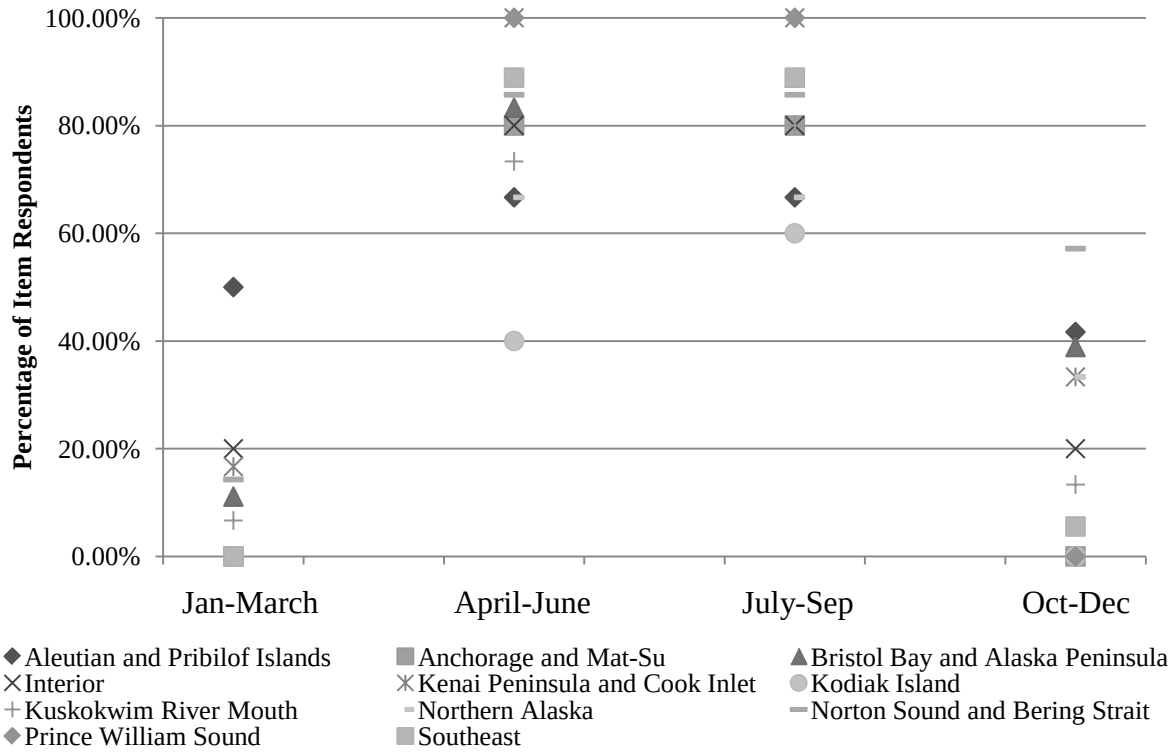


Figure 4. -- Regional breakdown of responses to the following question: In what month(s) does the population in your community reach its annual peak? (Q4).

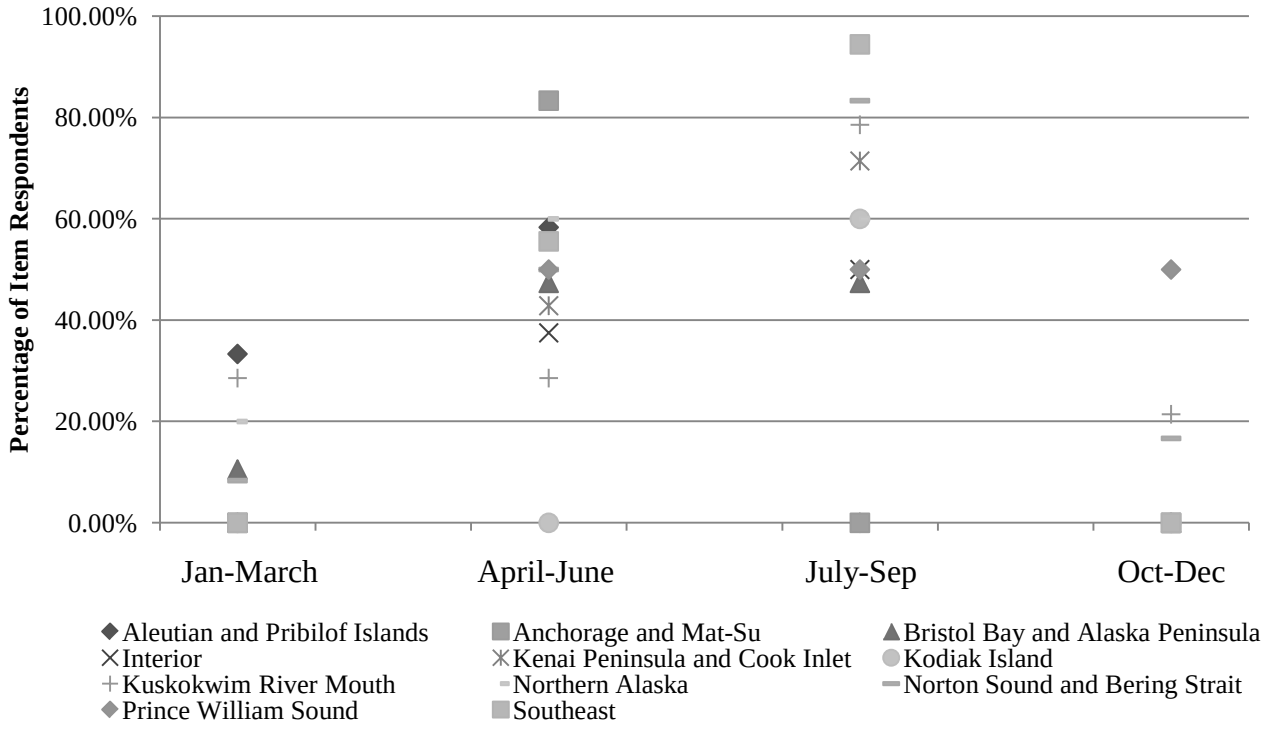


Figure 5. -- Regional breakdown of responses to the following question: To what degree is this peak in population driven by employment in the fishing sectors? (Q5).

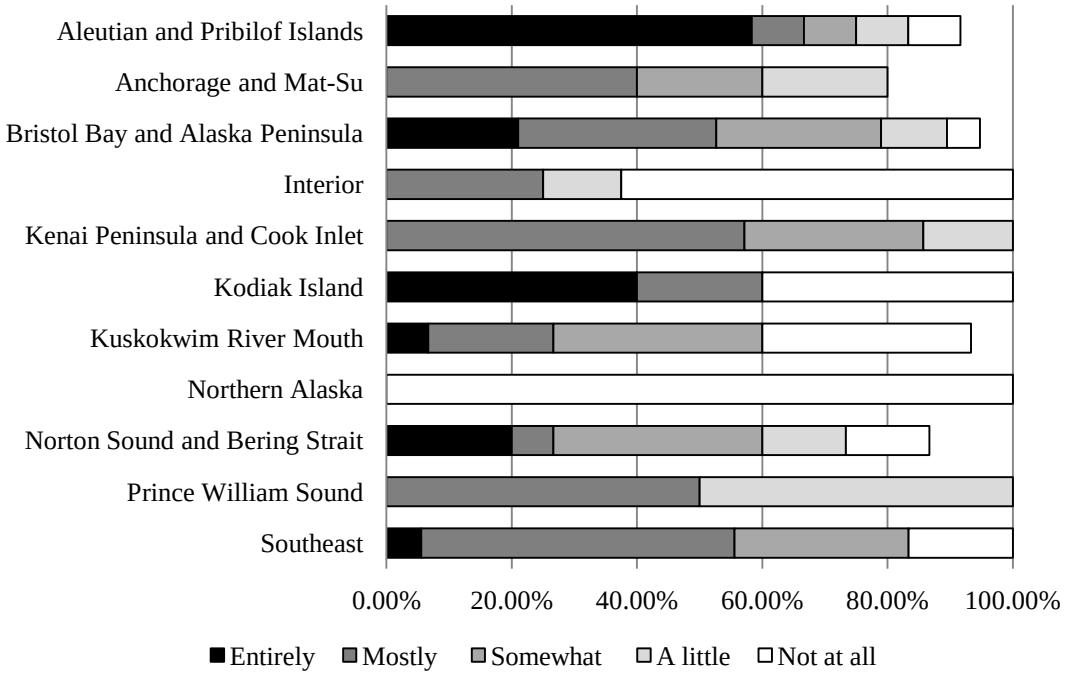
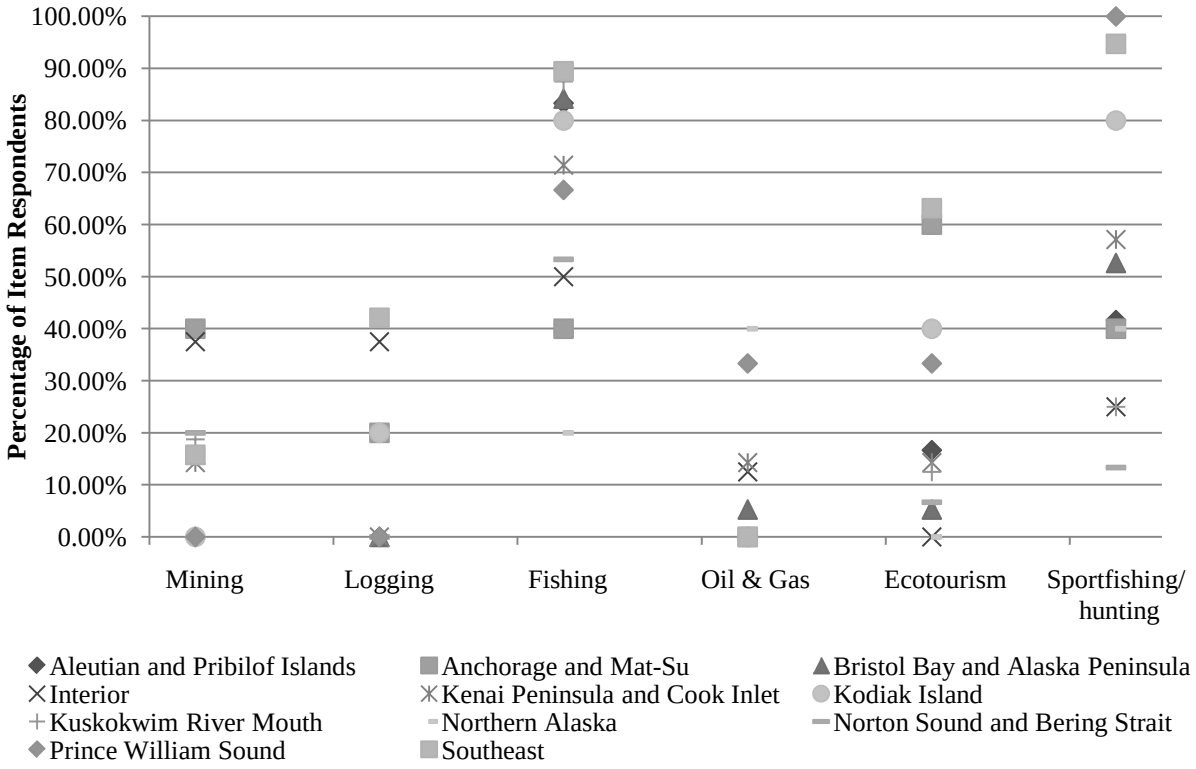


Figure 6. -- Regional breakdown of responses to the following question: Which, if any, natural resource-based industries does your community's economy rely upon? (Q19).



Vessel and fisheries support infrastructure

Respondents were asked about the dock infrastructure in their community (Q7). Of the Anchorage and Mat-Su and Interior grouping communities that responded to the question, 100% reported that they had no permanent public moorage (Fig. 7, Appendix Table A8). The communities in the Southeast and Aleutian and Pribilof Islands grouping showed the greatest diversity of permanent moorage capacity with communities offering a range of moorage between 0 and 20,000 feet of dock space. Every community that responded to this item on the survey in the Southeast grouping (N = 13) had some availability of permanent public moorage. Figure 8 and Table A9 show the response distribution of regional groupings for temporary public moorage. Of the communities that responded to this survey item, fewer numbers of communities reported having no public temporary moorage as compared to those that reported having no public permanent moorage. The survey also posed a question to gather information on infrastructure projects. Communities were asked to report whether a specific infrastructure project had been completed in the last 10 years, was currently being built, or if the community is planning to complete the project in the next 10 years (Q6). The results are presented for each regional grouping in Appendix Tables A10-A20.

Respondents were also asked what the largest length of vessel that their community could accommodate (Q8). Many communities in all but one regional grouping (Anchorage and Mat-Su) could handle vessels 1-100 feet (Fig. 9, Appendix Table A21). Four groupings had communities that could handle boats larger than 500 feet: Aleutian and Pribilof Islands (8.3% of

communities), Kenai Peninsula and Cook Inlet (17%), Kodiak Island (25%), and Southeast (11%).

Figure 7. -- Regional breakdown of responses to the following question: How many feet of public dock space for moorage are located in and around the port of your community for permanent vessels? (Q7).

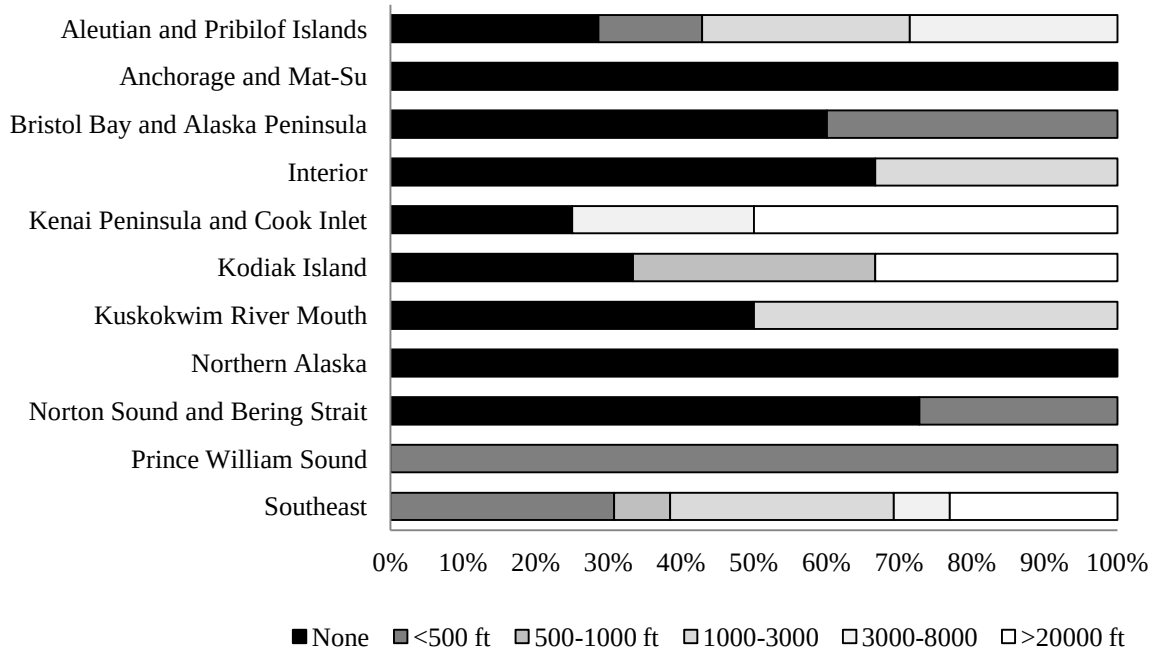


Figure 8. -- Regional breakdown of responses to the following question: How many feet of public dock space for moorage are located in and around the port of your community for transient vessels? (Q7).

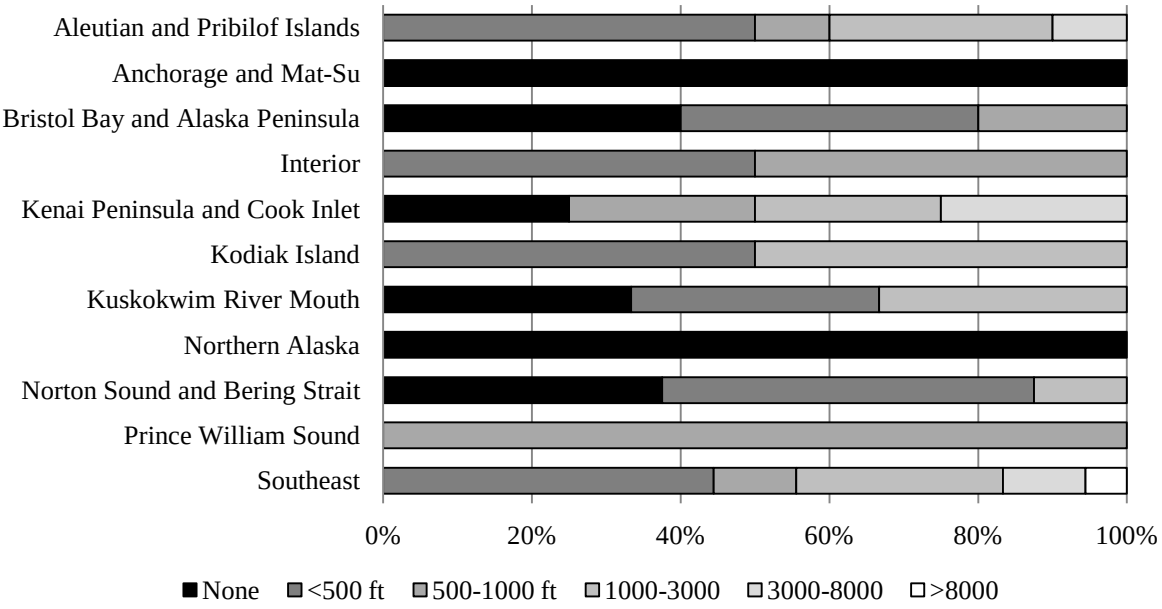
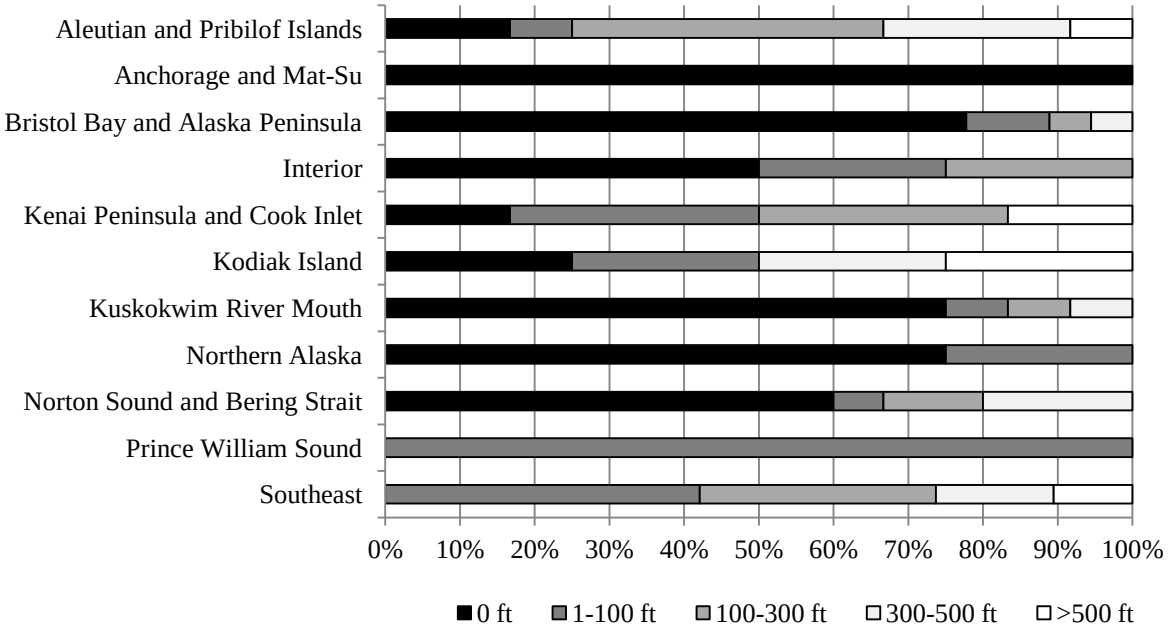


Figure 9. -- Regional breakdown of responses to the following question: What is the maximum vessel length that can use moorage in your community? (Q8).



Respondents also reported on any annual revenue they received from their public moorage facilities (Q9). Of communities that reported having any revenue, communities in the Kenai Peninsula and Cook Inlet had the highest mean revenue ($973,458) and communities in the Kuskokwim grouping reported the lowest mean revenue ($12,500) (Table 8). Communities in the Interior grouping that responded to the survey item reported no revenue earned from public moorage facilities.

The survey also questioned respondents about what types of regulated vessels each community could accommodate (Q10). More than 50% of communities in each regional grouping could handle fuel barges while only a few groupings had communities that could handle ferries and cruise ships (Fig. 10, Appendix Table A23).

Respondents were asked to report on whether various fishing support businesses were located in their community (Q16). In the Aleutian and Pribilof Islands (N = 9), Prince William Sound (N = 2), and Southeast (N = 11) groupings, communities reported the presence of fish processing plants (Table A24). Very few communities in any regional grouping reported fishing gear manufacturers (Kenai Peninsula and Cook Inlet (N = 1) and Southeast (N = 1). Communities that had haul-out facilities for boats less than 60 tons were in the Aleutian and Pribilof Islands (N = 9) and Northern Alaska (N = 2) groupings. Large boat haulouts were found in Kenai Peninsula and Cook Inlet (N = 2), Prince William Sound (N = 1), and the Southeast (N = 5) community groupings. All regional groupings had at least one community that had fishing gear sales. Only one community in both the Kenai Peninsula and Cook Inlet (Homer) and Prince William Sound (Cordova) groupings reported the presence of a fishing business attorney in the community, while two communities (Petersburg and Ketchikan) in the Southeast grouping reported that this service was present. For commercial cold storage facilities, six communities in the Aleutian and Pribilof Islands grouping and 11 communities in the Southeast reported having this service available. For each of the other groupings, less than three communities reported

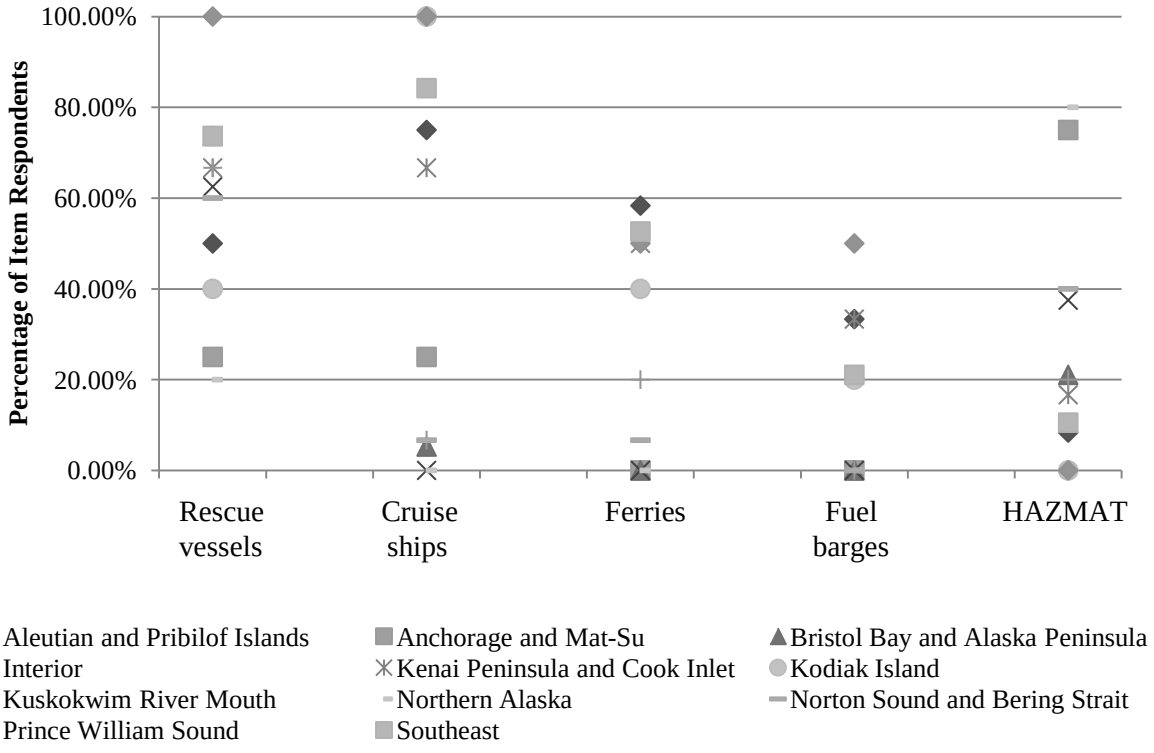
having this service available to residents or non-residents that utilize the community as a base of operation for fishing.

Table 8. -- Regional breakdown of responses to the following question: What is the annual revenue that public moorage facilities earned in 2010? (Q9).

	N	Mean	Median	Max	Min	St.Dev.
Aleutian and Pribilof Islands	9	$117,200	$4,365	$501,313	$0	$188,322
Anchorage and Mat-Su	3	*	*	*	*	*
Bristol Bay and Alaska Peninsula	14	$13,624	$0	$187,888	$0	$50,160
Interior	5	$0	$0	$0	$0	$0
Kenai Peninsula and Cook Inlet	5	$973,458	$187,747	$3,400,000	$0	$1,457,256
Kodiak Island	3	*	*	*	*	*
Kuskokwim River Mouth	4	$12,500	$0	$50,000	$0	$25,000
Northern Alaska	3	*	*	*	*	*
Norton Sound and Bering Strait	11	$18,545	$0	$120,000	$0	$40,401
Prince William Sound	1	*	*	-	-	-
Southeast	18	$715,591	$29,488	$9,279,534	$0	$2,177,641

Note: Asterisk (*) represent confidential data due to three or fewer communities reporting.

Figure 10. -- Regional breakdown of responses to the following question: Which of the following types of regulated vessels is the port of your community capable of handling? (Q10).



Communities were asked to to name the top three communities that people in their community go to for fishery support businesses that are not available within their own community (Q17). The responses were analyzed as network data and sociograms were created to visually represent the relationships. The total number of communities (nodes) was 118 -- 89 of which were survey respondents and the other 29 were additional communities nominated by respondents. A total of 233 connections (ties) link the communities, where a connection between two communities is created when a respondent community nominated another community in response to this question. Table 9 contains the regional break-down of item non-response. Communities that did not provide a response for the question were identified as isolates and were not included in the analysis. None of the communities from the Prince William Sound region that responded to the survey provided a response to this survey item; therefore, no sub-network for this grouping is provided. However, communities from the grouping were nominated by other communities. Therefore, the regional grouping is represented in the overall network visualization. Figure 11 shows the network of all item respondents. Communities are sized by in-degree centrality (the number of times they were nominated) to aid visual analysis of hub communities. Table 10 contains the descriptive statistics for the degree centrality measures for the network as a whole.

Table 9. -- Item non-response statistics by regional grouping for the following question: For those businesses in Q16 that are not available in your community, please list the top three communities that people go to for these services (Q17).

	N	Total	Non-Response Rate
Aleutian and Pribilof Islands	1	12	8.33%
Anchorage and Mat-Su	2	6	33.33%
Bristol Bay and Alaska Peninsula	3	19	15.79%
Interior	2	8	25.00%
Kenai Peninsula and Cook Inlet	1	7	14.29%
Kodiak Island	2	5	40.00%
Kuskokwim River Mouth	7	16	43.75%
Northern Alaska	2	5	40.00%
Norton Sound and Bering Strait	3	15	20.00%
Prince William Sound	3	3	100.00%
Southeast	0	19	0.00%

Table 10. -- Descriptive statistics of degree centrality measures for social network analysis.

	Out-Degree	In-Degree
Mean	1.975	1.975
St. Dev	1.464	4.043
Minimum	0	0
Maximum	6	29
Network Centralization	3.470%	23.296%

The network of item respondents shown in Figure 11 has an in-degree network centralization of 23%. This suggests that there are significant differences in the in-degree centrality of different communities, meaning a few communities were nominated many more times than others. From observing the sociogram of the network, a few statewide hubs of fishery-support businesses are evident. Anchorage has the highest in-degree centrality, with 29 community nominations. Seattle and Homer rank second and third with 17 and 15 ties, respectively. Juneau had the fourth highest in-degree centrality, nominated by 11 communities. Seward, Bethel, and Dillingham tied for the fifth highest in-degree centrality with 10 nominations each.

Sub-networks were created for each regional grouping of communities. To build the sub-networks, communities that fell in each grouping were isolated as the respondents, and any communities they named were included as nominations. Additionally, communities outside the regional grouping that nominated one of the within-group respondent communities were incorporated. Sociograms created for each sub-network were coded by regional grouping to visually demonstrate how interconnected a region might be or how dependent its communities are on communities outside the grouping for fishery-support businesses. Figure 12 shows the sociogram for the sub-network of communities assigned to the Aleutian and Pribilof Islands grouping. The network is comprised of 18 total communities, of which 61% are communities in the grouping and the other 39% are outside of it. These external communities include Kodiak, Seattle, Seward, Homer, Nome, Perryville, and Anchorage (Table 11). The ties to these outside communities represent 49% of the total ties within the sub-network (N = 17).

Figure 13 depicts the sociogram for the Anchorage and Mat-Su sub-network. In this sub-network, 19% of nodes are considered in the grouping while 81% of the total ties are to communities outside of the grouping (e.g., Seward, Homer, and Whittier) (Table 12). Communities in all regional groupings except Southeast nominated Anchorage. The sociogram for the Bristol Bay and Aleutian Islands sub-network shown in Figure 14 has 81% of nodes from within the regional grouping and 69% of ties to communities within the grouping (Table 13).

Using communities assigned to the Interior regional grouping, the resulting sociogram in Figure 15 has 18 nodes; of which 44% are in-grouping while ties between in-group communities represent 30% of the total number of ties (N = 20) (Table 14). Figure 16 shows the sociogram for the Kenai Peninsula sub-network which has 39% of its nodes (N = 10) within the Kenai Peninsula regional grouping and 32% of the total ties are between members of the grouping (Table 15). Many communities from other regional groupings nominated both Homer and Seward. The Kodiak Island sub-network has 11 total nodes, 36% of which are considered Kodiak Island grouping communities (Fig. 17 and Table 16) and 19% of the total ties are between regional grouping members. For the Kuskokwim River Mouth sub-network, the sociogram shown in Figure 18 shows that 60% of the nodes are in-region and ties between these nodes represent 54% of the overall ties within the sub-network (N = 26) (Table 17).

The Northern Alaska sub-network is small and only has six total nodes, three of which are considered in-region (Fig. 19 and Table 18). Of the six total ties, five are to out-of-region nodes including Anchorage, Fairbanks, and Nome. The Norton Sound regional grouping sub-network is illustrated in the Figure 20 sociogram. There are 20 total nodes, 40% of which are considered out-of-the region and these nodes account for 73% of the ties within the sub-network (Table 19). Figure 21 shows the sociogram of the Southeast regional grouping. There are 59 total ties, 80% are between communities within the region which represent 79% of the total nodes

(Table 20). Out-of-the-region nodes included in the sub-network are Washington State (Seattle, Port Townsend, Anacortes) and British Columbia communities (Terrace, Steward).

Figure 11. -- Distribution of responses to the following question: For those businesses in Q16 that are not available in your community, please list the top three communities that people go to for these services (Q17). Regional groupings are circled and labeled.

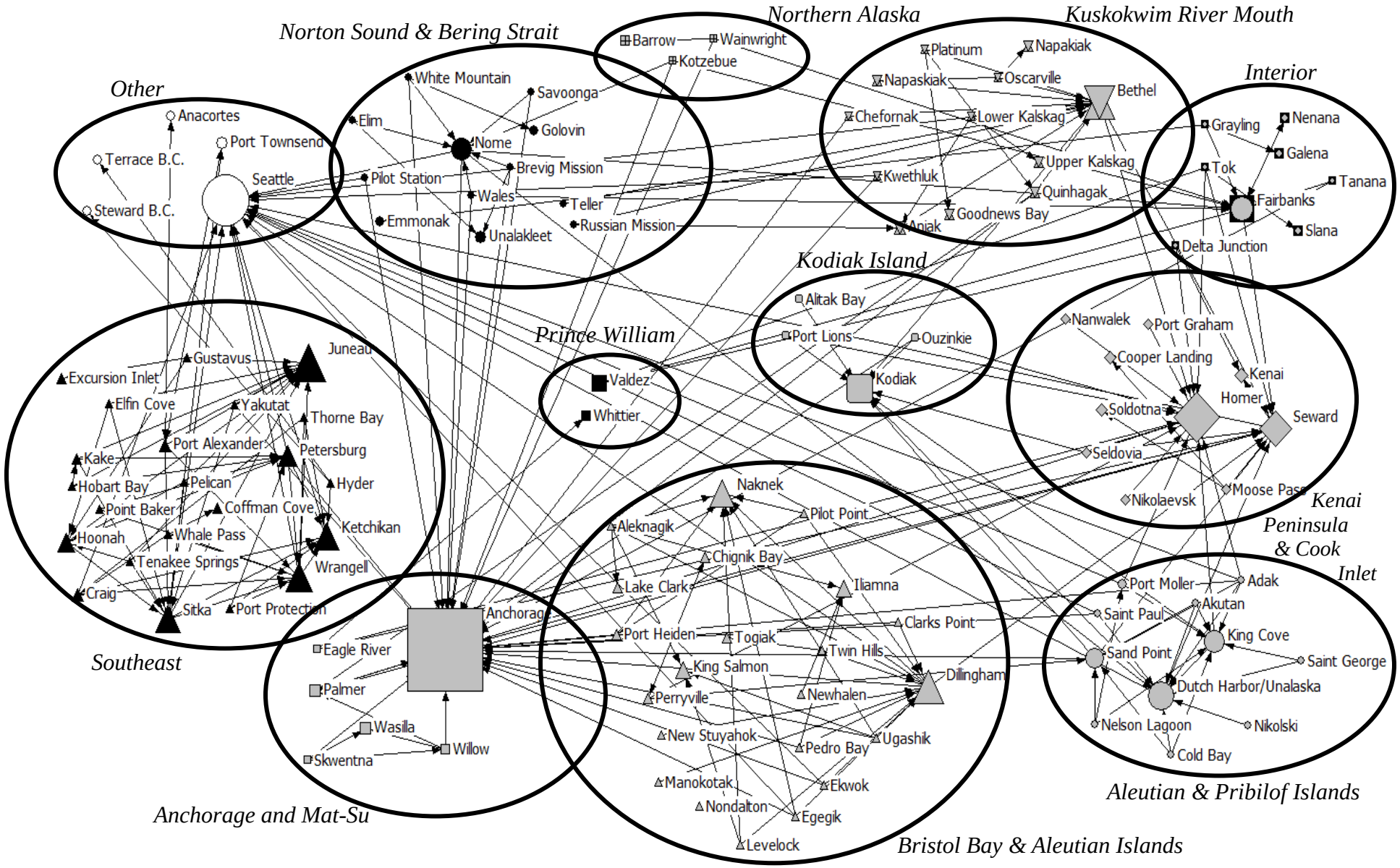


Figure 12. -- Regional breakdown of responses to the following question: For those businesses in Q16 that are not available in your community, please list the top three communities that people go to for these services (Q17). Aleutian and Pribilof Islands regional grouping.

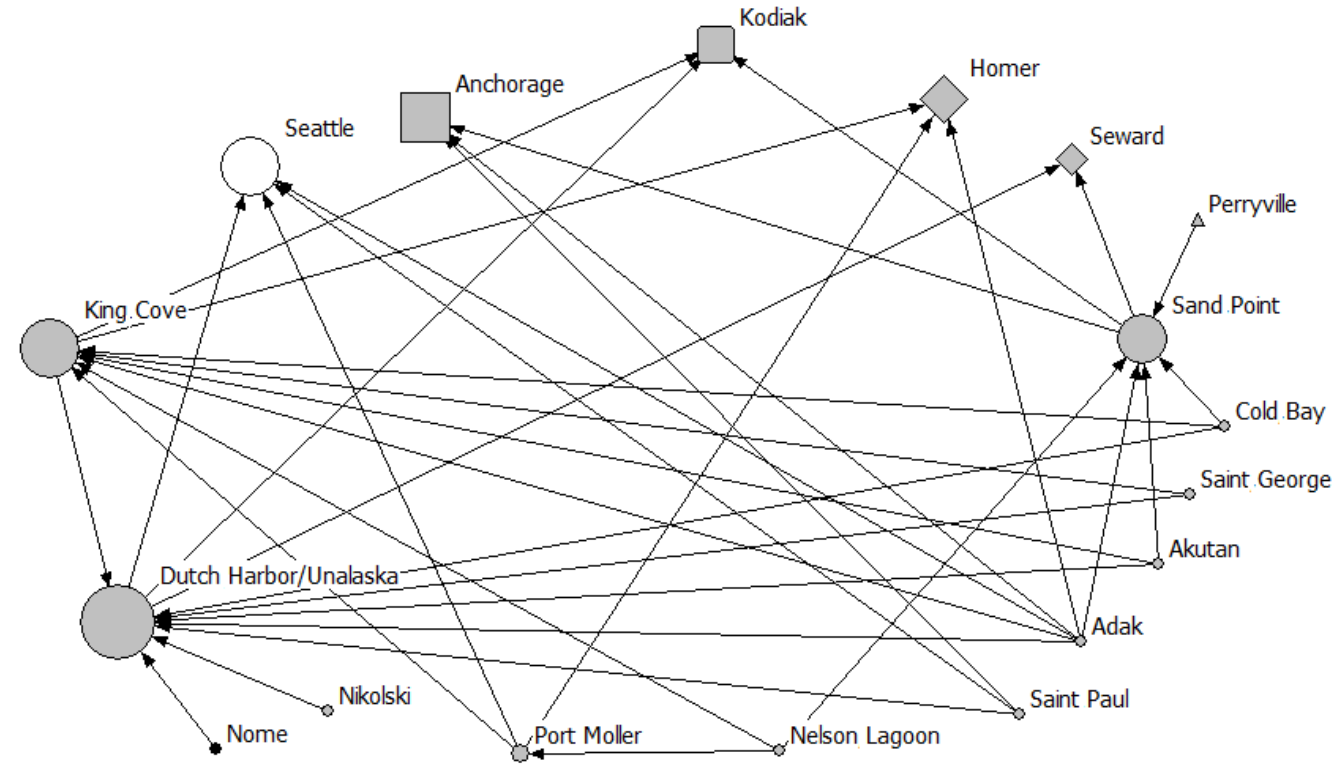
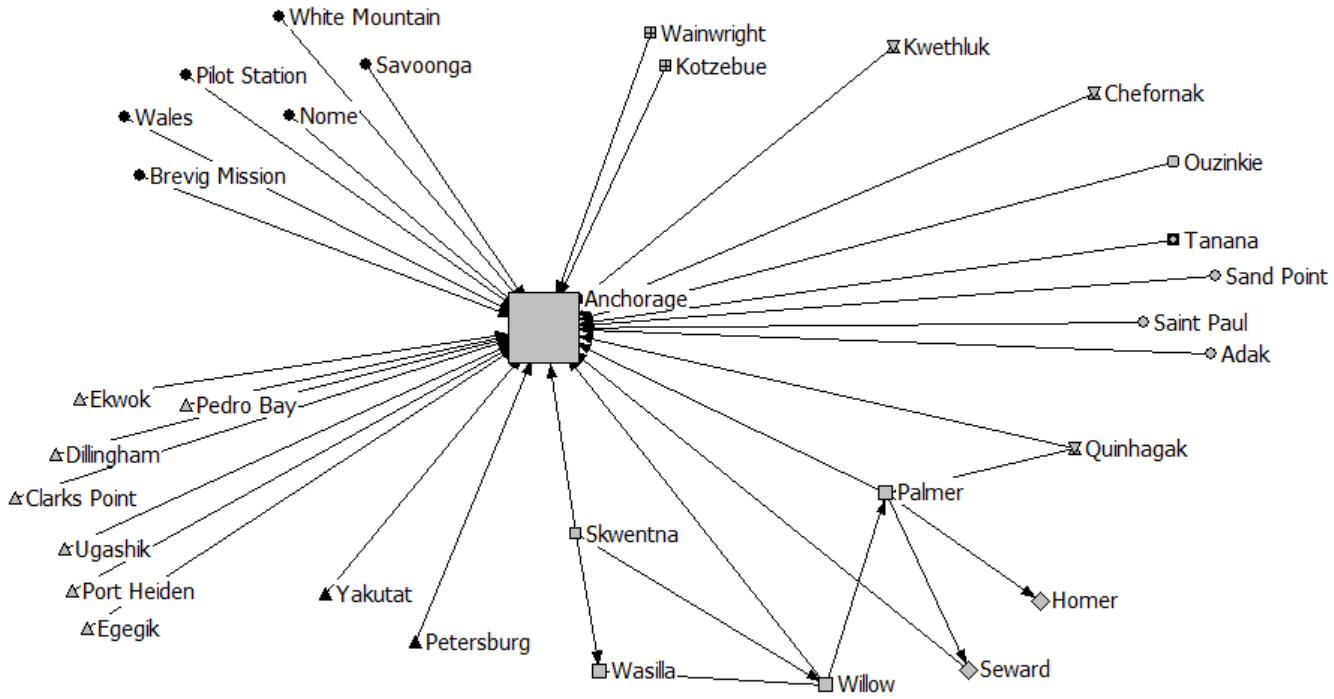


Table 11. -- Descriptive statistics and network centralization measures. *Aleutian and Pribilof Islands regional grouping.*

	Out-of-grouping		**In-grouping**		**Total**
	N	Percentage	N	Percentage	
Number of nodes	7	38.89%	11	61.11%	18
Number of ties	17	48.57%	18	51.43%	35

Figure 13. -- Regional breakdown of responses to the following question: For those businesses in Q16 that are not available in your community, please list the top three communities that people go to for these services (Q17). Anchorage and Mat-Su regional grouping.



Aleutian and Pribilof Islands
Anchorage and Mat-Su
Bristol Bay and Alaska Peninsula
Interior
Kenai Peninsula and Cook Inlet
Kodiak Island
Kuskokwim River Mouth
Northern Alaska
Norton Sound and Bering Strait
Prince William Sound

Table 12. -- Descriptive statistics and network centralization measures. *Anchorage and Mat-Su regional grouping.*

	Out-of-grouping		**In-grouping**		**Total**
	N	Percentage	N	Percentage	
Number of nodes	26	81.25%	6	18.75%	32
Number of ties	30	83.33%	6	16.67%	36

Figure 14. -- Regional breakdown of responses to the following question: For those businesses in Q16 that are not available in your community, please list the top three communities that people go to for these services (Q17). Bristol Bay and Aleutian Islands regional grouping.

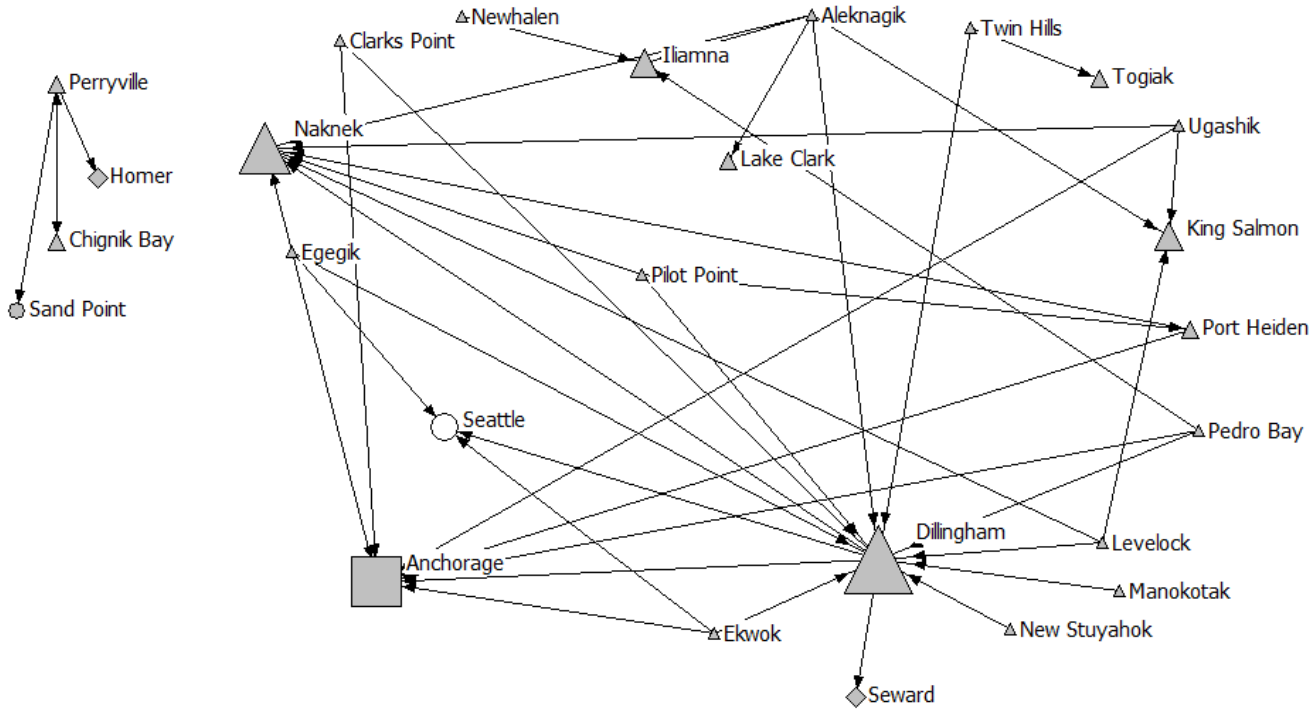


Table 13. -- Descriptive statistics and network centralization measures. *Bristol Bay and Aleutian Islands regional grouping.*

	Out-of-grouping		**In-grouping**		**Total**
	N	Percentage	N	Percentage	
Number of nodes	5	19.23%	21	80.77%	26
Number of ties	13	31.71%	28	68.29%	41

Figure 15. -- Regional breakdown of responses to the following question: For those businesses in Q16 that are not available in your community, please list the top three communities that people go to for these services (Q17). Interior regional grouping.

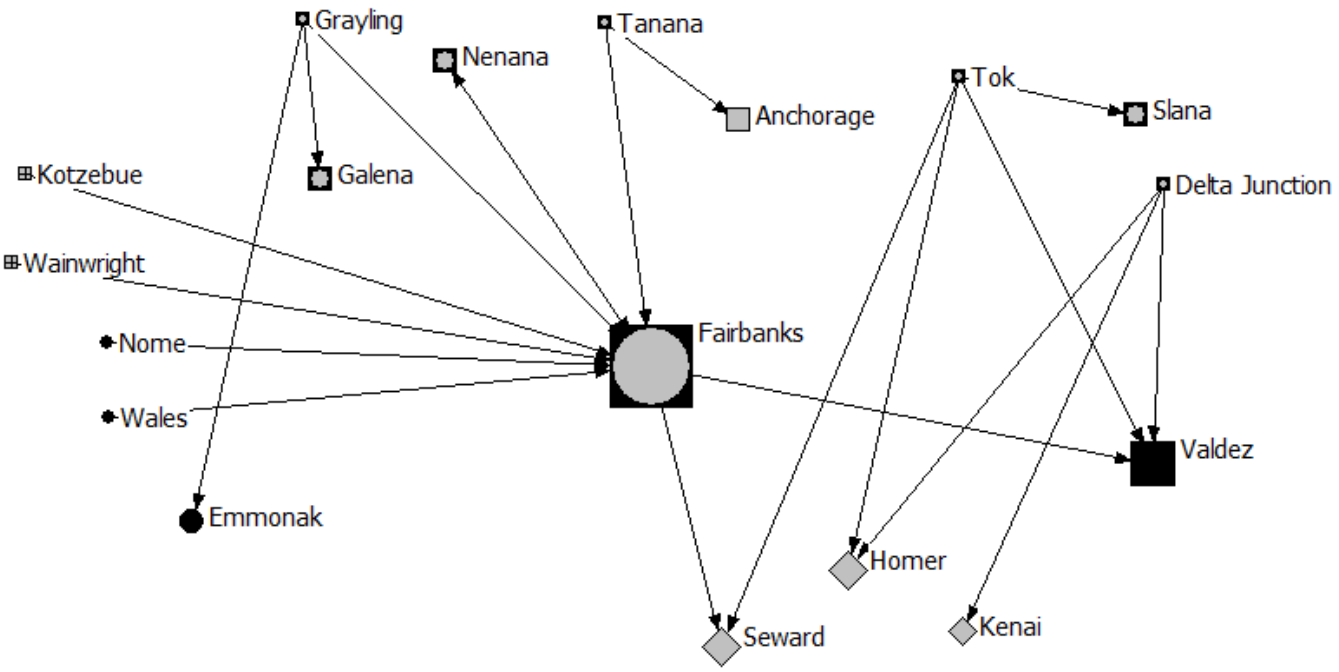


Table 14. -- Descriptive statistics and network centralization measures. *Interior regional grouping.*

	Out-of-grouping		**In-grouping**		**Total**
	N	Percentage	N	Percentage	
Number of nodes	10	55.56%	8	44.44%	18
Number of ties	14	70.00%	6	30.00%	20

Figure 16. -- Regional breakdown of responses to the following question: For those businesses in Q16 that are not available in your community, please list the top three communities that people go to for these services (Q17). Kenai Peninsula regional grouping.

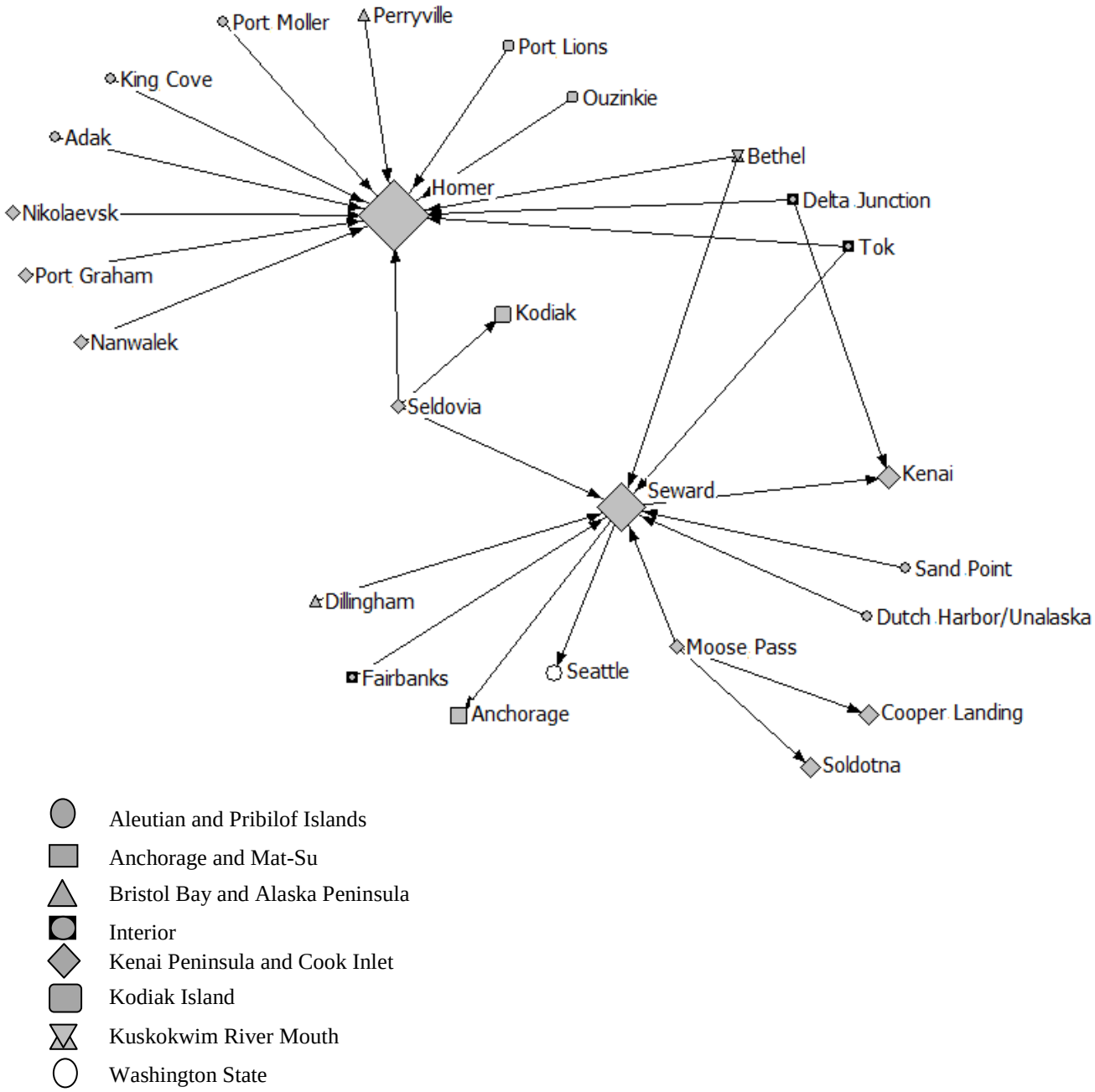


Table 15. -- Descriptive statistics and network centralization measures. *Kenai Peninsula regional grouping.*

	Out-of-grouping		**In-grouping**		**Total**
	N	Percentage	N	Percentage	
Number of nodes	16	61.54%	10	38.46%	26
Number of ties	19	67.86%	9	32.14%	28

Figure 17. -- Regional breakdown of responses to the following question: For those businesses in Q16 that are not available in your community, please list the top three communities that people go to for these services (Q17). Kodiak Island regional grouping.

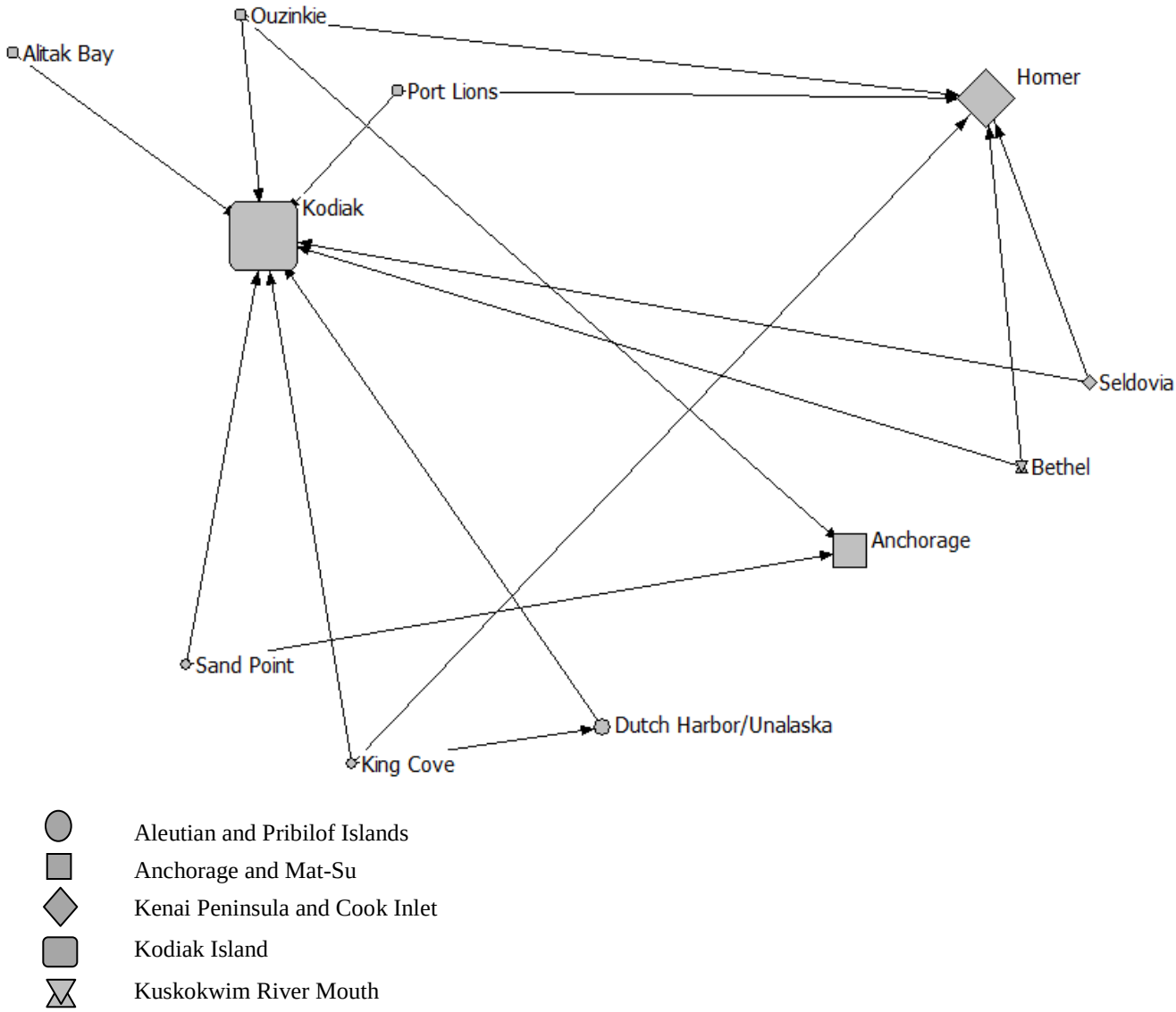


Table 16. -- Descriptive statistics and network centralization measures. *Kodiak Island regional grouping.*

	Out-of-grouping		**In-grouping**		**Total**
	N	Percentage	N	Percentage	
Number of nodes	7	63.64%	4	36.36%	11
Number of ties	13	81.25%	3	18.75%	16

Figure 18. -- Regional breakdown of responses to the following question: For those businesses in Q16 that are not available in your community, please list the top three communities that people go to for these services (Q17). Kuskokwim River Mouth regional grouping.

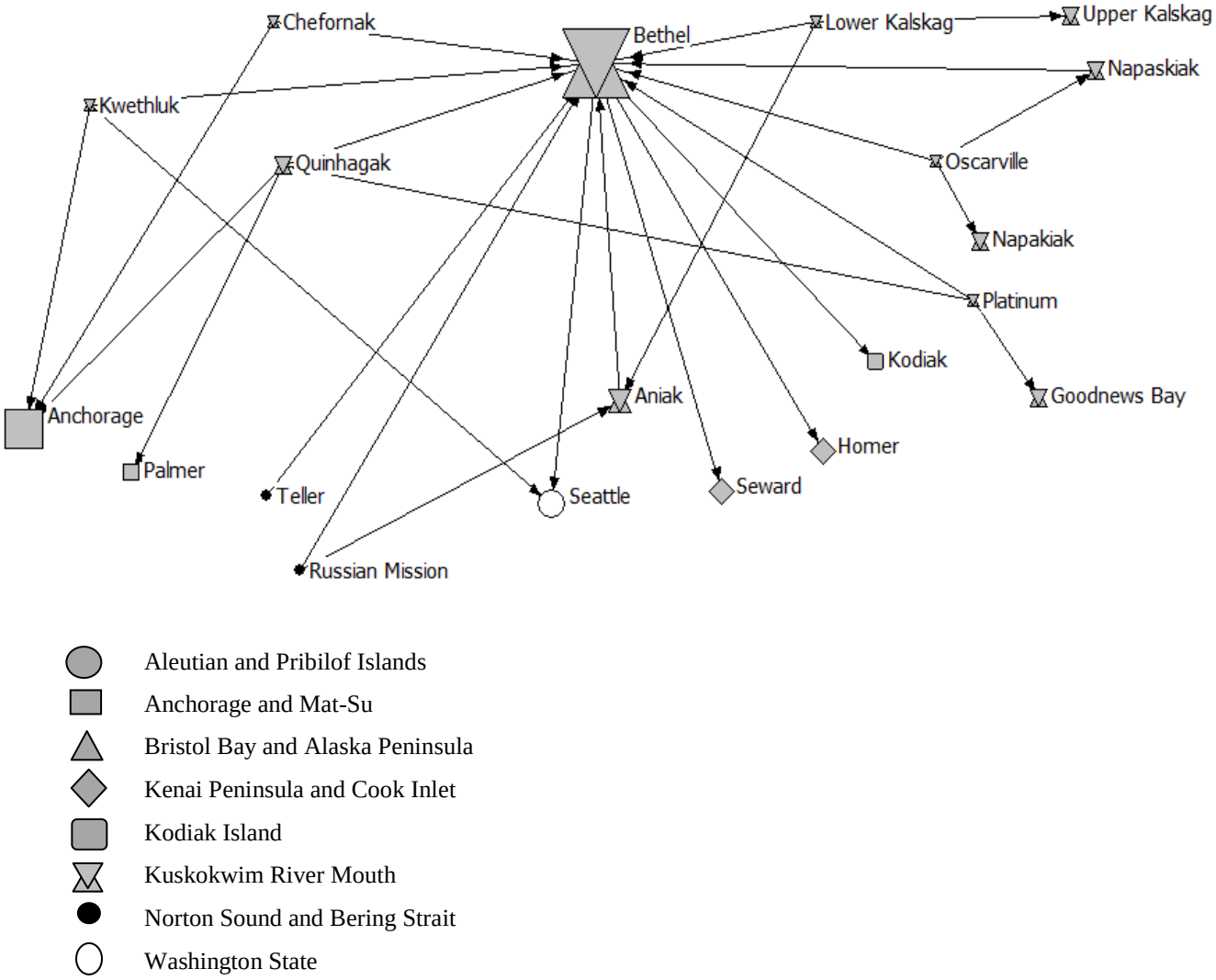


Table 17. -- Descriptive statistics and network centralization measures. *Kuskokwim River Mouth regional grouping.*

	Out-of-grouping		**In-grouping**		**Total**
	N	Percentage	N	Percentage	
Number of nodes	8	40.00%	12	60.00%	20
Number of ties	12	46.15%	14	53.85%	26

Figure 19. -- Regional breakdown of responses to the following question: For those businesses in Q16 that are not available in your community, please list the top three communities that people go to for these services (Q17). Northern Alaska regional grouping.

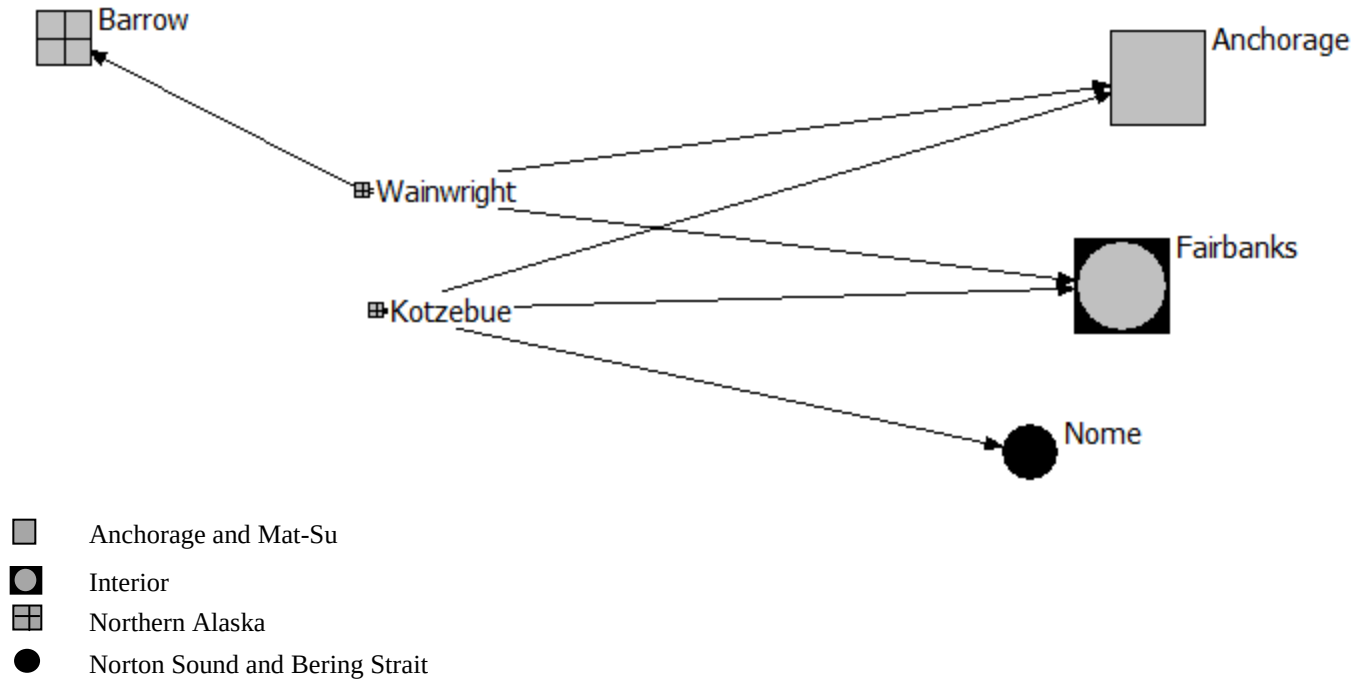


Table 18. -- Descriptive statistics and network centralization measures. *Northern Alaska regional grouping.*

	Out-of-grouping		**In-grouping**		**Total**
	N	Percentage	N	Percentage	
Number of nodes	3	50.00%	3	50.00%	6
Number of ties	5	83.33%	1	16.67%	6

Figure 20. -- Regional breakdown of responses to the following question: For those businesses in Q16 that are not available in your community, please list the top three communities that people go to for these services (Q17). Norton Sound regional grouping.

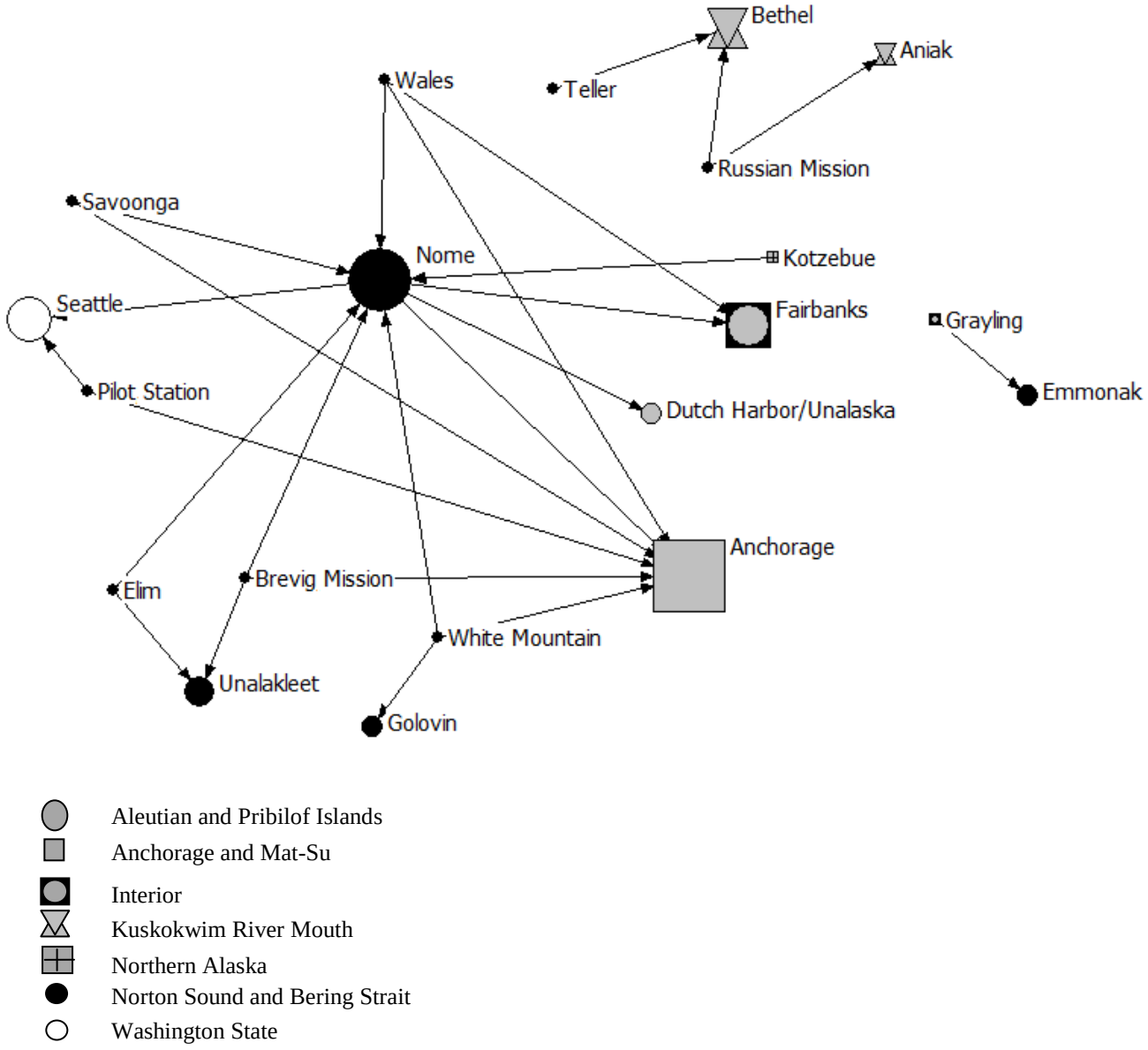


Table 19. -- Descriptive statistics and network centralization measures. *Norton Sound regional grouping.*

	Out-of-grouping		**In-grouping**		**Total**
	N	Percentage	N	Percentage	
Number of nodes	8	40.00%	12	60.00%	20
Number of ties	22	73.33%	8	26.67%	30

Figure 21. -- Regional breakdown of responses to the following question: For those businesses in Q16 that are not available in your community, please list the top three communities that people go to for these services (Q17). Southeast regional grouping.

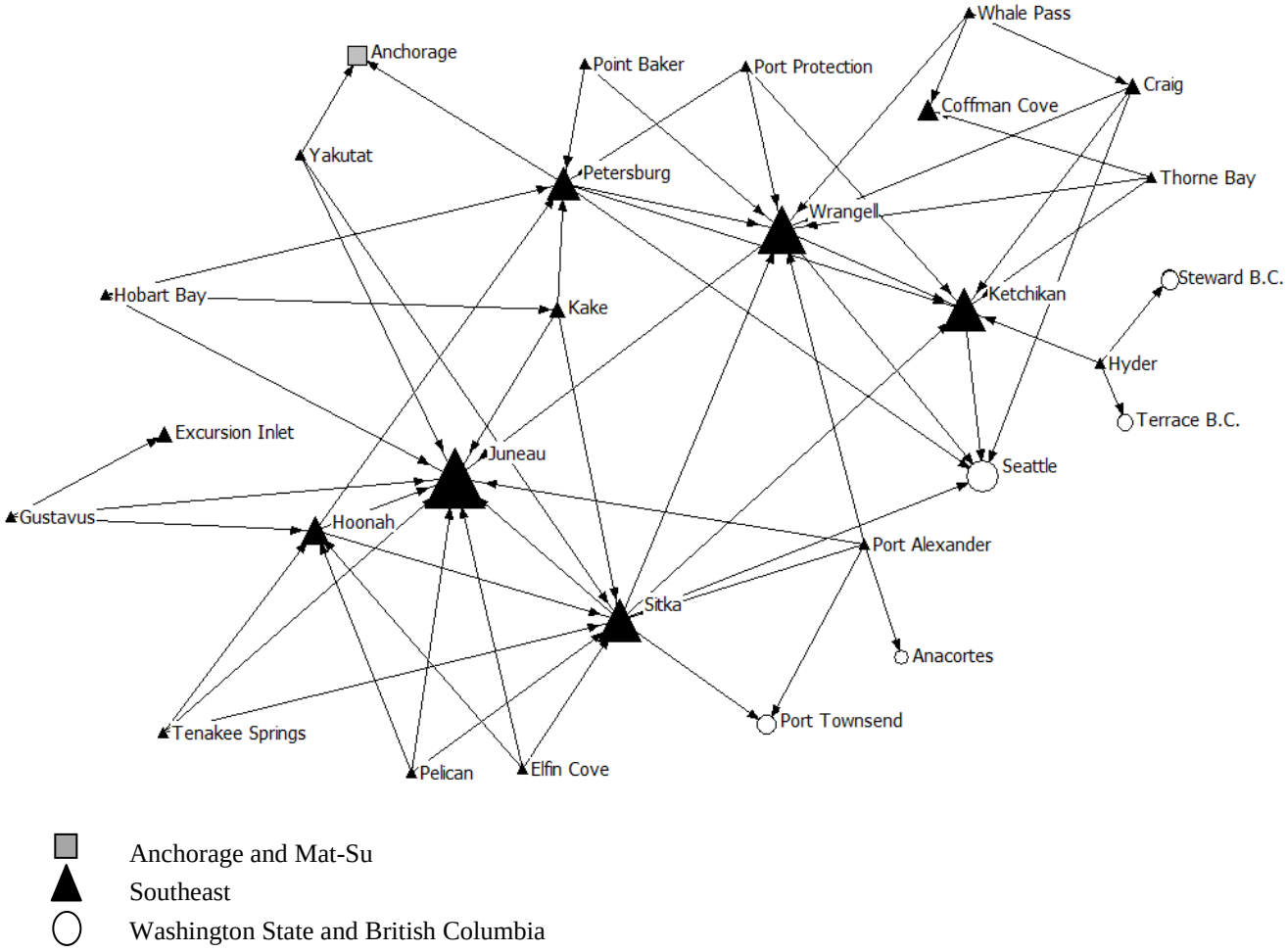


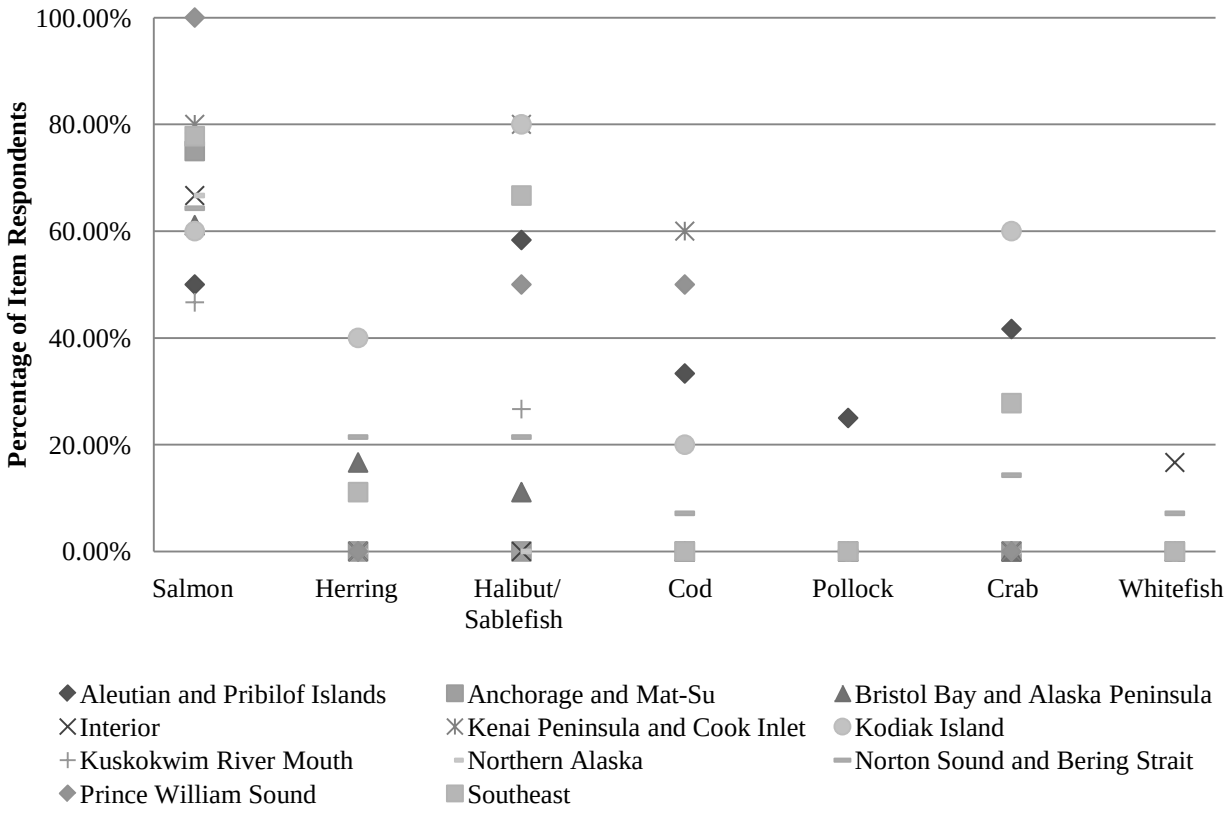
Table 20. -- Descriptive statistics and network centralization measures. *Southeast regional grouping.*

	Out-of-grouping		**In-grouping**		**Total**
	N	Percentage	N	Percentage	
Number of nodes	6	21.43%	22	78.57%	28
Number of ties	12	20.34%	47	79.66%	59

Fishing Activity

Several survey questions prompted respondents to report on fishing activity based out of their community or done by their residents. Questions included one about the major fishing seasons for each community and a few specific to commercial, recreational, and subsistence fisheries. When asked to report the major fishing seasons for the community (Q3), salmon was reported by a majority of communities across all regional groupings (e.g., 75% of the Anchorage and Mat-Su communities and 80% of the Kenai Peninsula and Cook Inlet communities). Herring was reported by communities in the Bristol Bay and Alaska Peninsula (17%), Kodiak Island (40%), Norton Sound and Bering Strait (21%), and Southeast groupings (11%) (Fig. 22, Appendix Table A25).

Figure 22. -- Regional breakdown of responses to the following question: What is/are the major fishing season(s) in your community each year? (Q3).



Commercial fishing activity

Respondents were asked about the size of commercial fishing boats that utilize their community as their base during the fishing season (Q11). Communities in the Bristol Bay and Alaska Peninsula, Interior, Kuskokwim River Mouth, and Norton Sound and Bering Strait groupings reported the highest proportion of vessel size capacity as those less than 35 feet (Fig. 23, Appendix Table A22). Aleutian and Pribilof Islands, Kenai Peninsula and Cook Inlet, Kodiak

Island, Prince William Sound, and Southeast communities reported a spread of vessel length capacities.

Additionally, the survey asked communities about the types of gear used by commercial fishing boats that were based out of the community during the fishing season (Q15). The Aleutian and Pribilof Islands grouping showed a spread of gears used including trawl (17%), pot (17%), longline (28%), gillnet (17%), purse seiner (10%), and troll (3%) (Fig. 24, Appendix Table A26). For communities that responded to the survey item in the Interior and Northern Alaska regional groupings, all reported one specific gear, which was gillnet (Fig. 25, Appendix Table A27). The communities in the Bristol Bay and Alaska Peninsula and the Norton Sound and Bering Strait groupings had a prevalence of communities that reported a single gear (57% and 67% respectively). Under the survey item, respondents could also write in a gear type utilized by their community not already on the list, responses under other included jigs, rod and reel, and dive boats.

Figure 23. -- Regional breakdown of responses to the following question: Which size classes of commercial fishing boats use your community as their base of operation during the fishing season? (Q11).

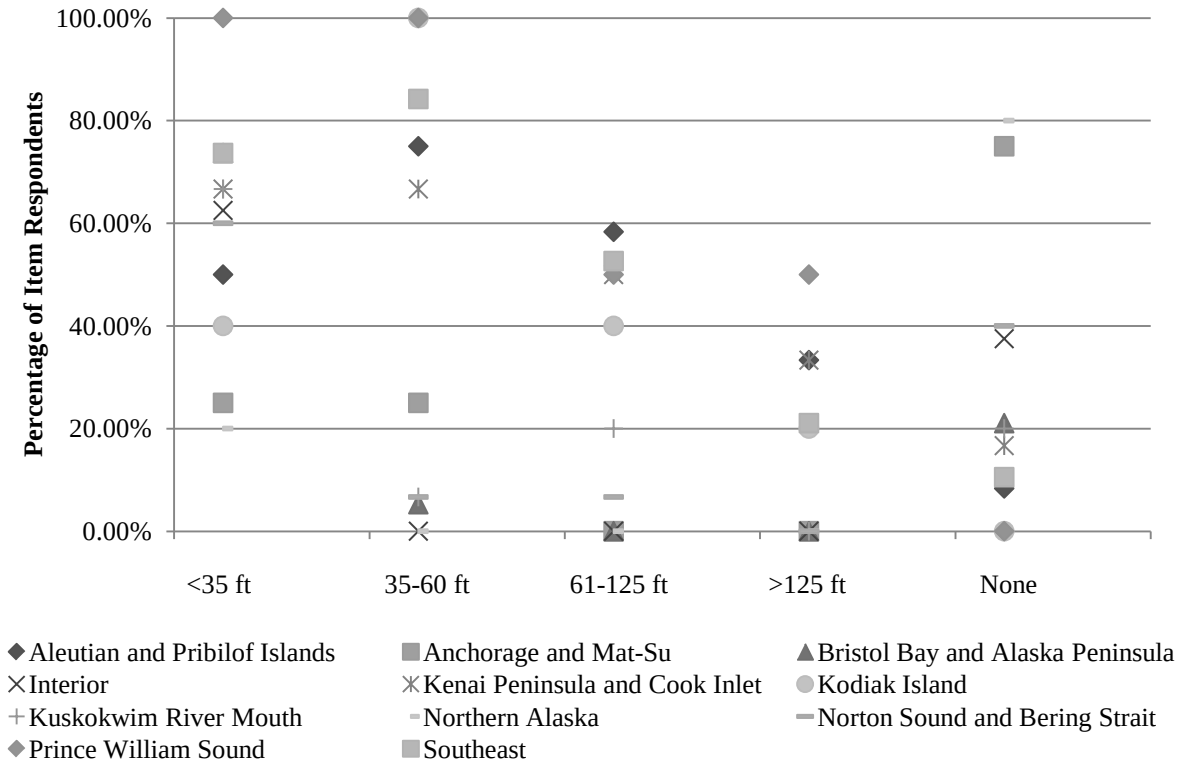


Figure 24. -- Regional breakdown of responses to the following question: Which fishing gear types are used by commercial fishing boats that use your community as their base of operation during the fishing season? (Q15).

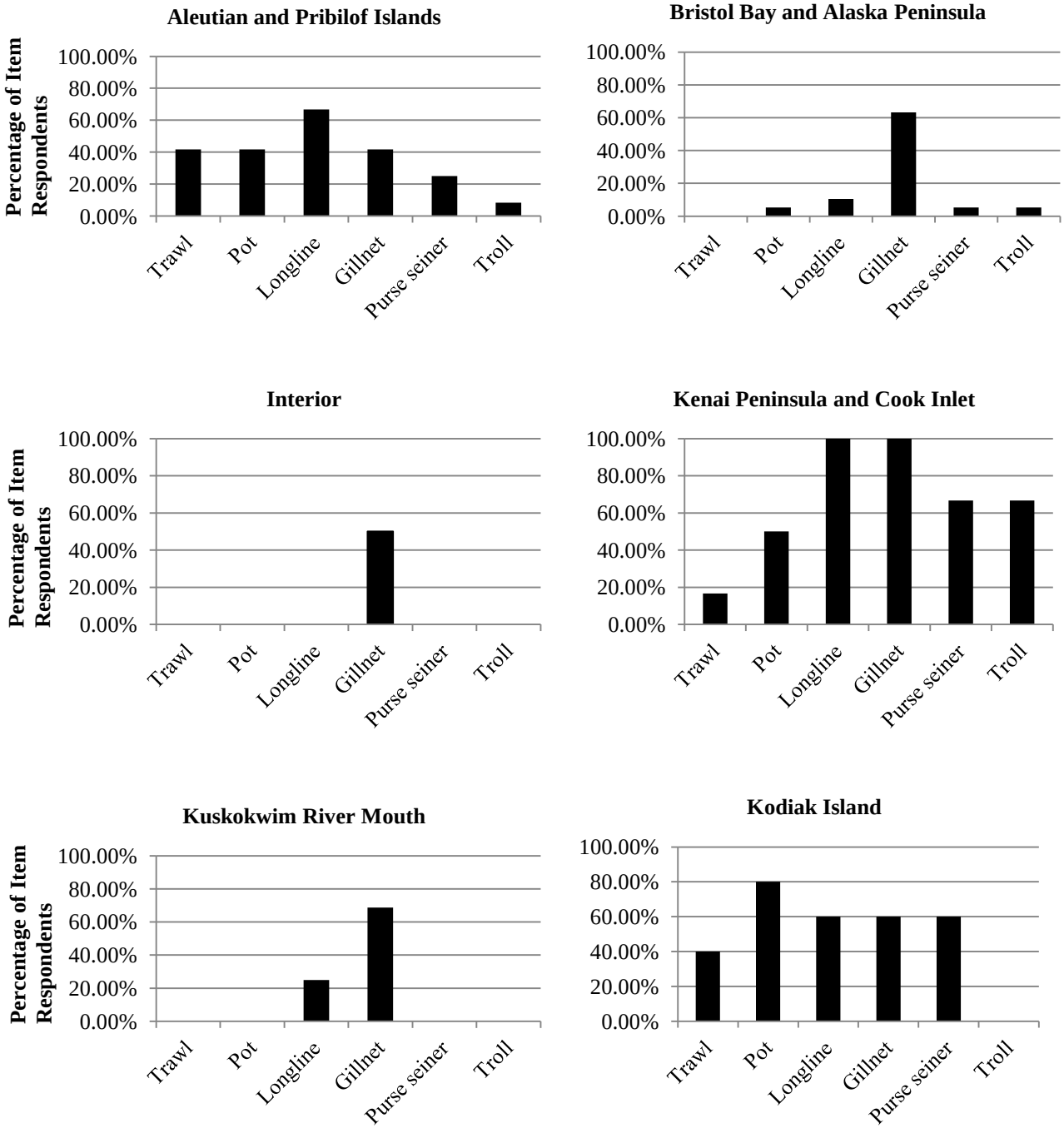


Figure 24. -- Cont'd.

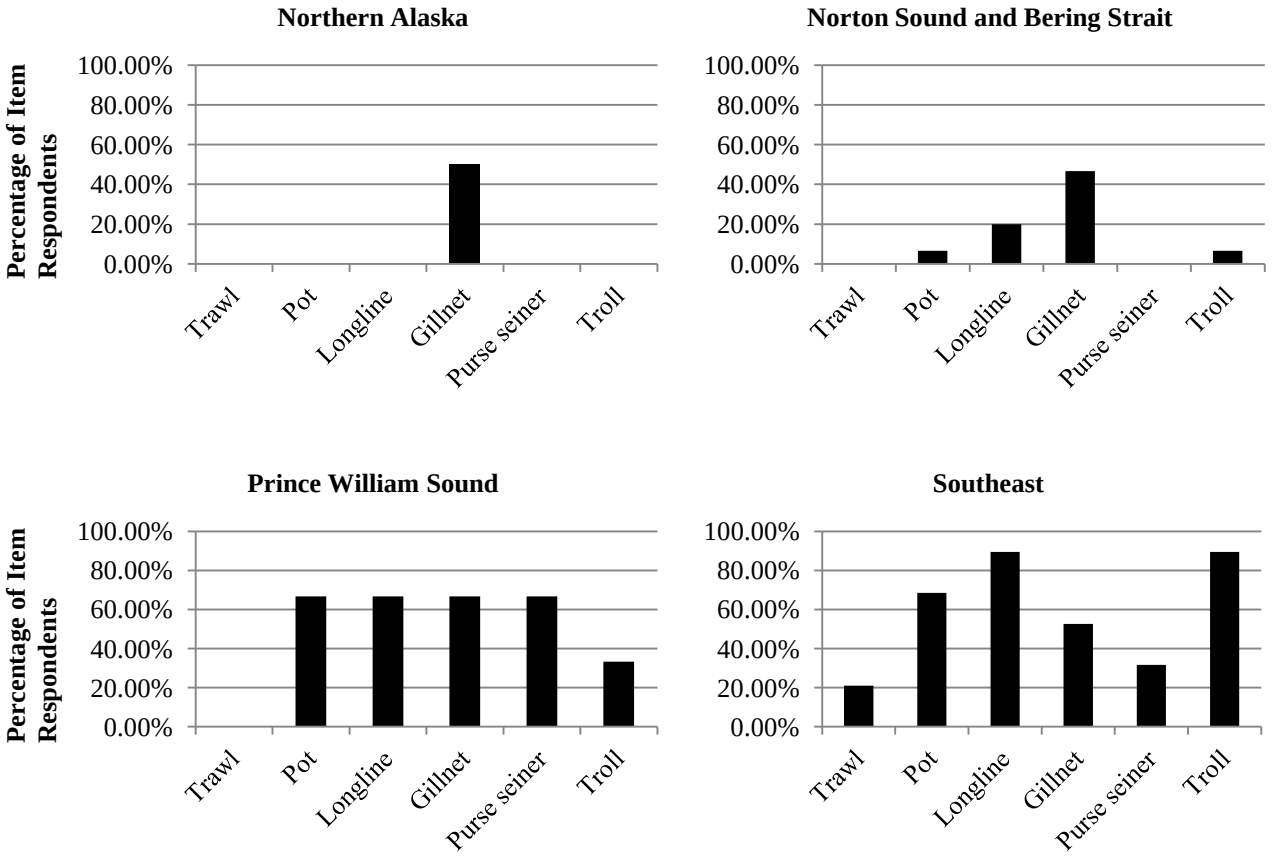
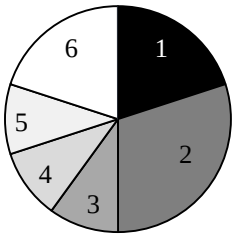
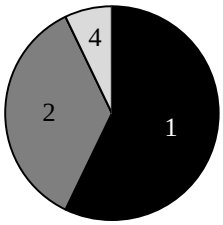


Figure 25. -- Regional breakdown of the number of different gears used by commercial fishing boats that use your community as their base of operation during the fishing season. (Q15).

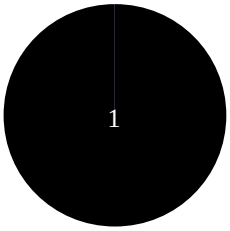
Aleutian and Pribilof Islands



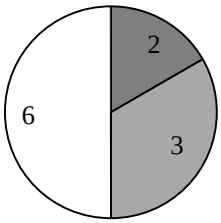
Bristol Bay and Alaska Peninsula



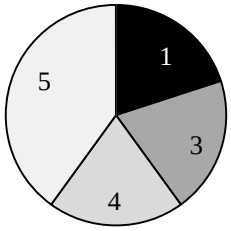
Interior



Kenai Peninsula and Cook Inlet



Kodiak Island



Kuskokwim River Mouth

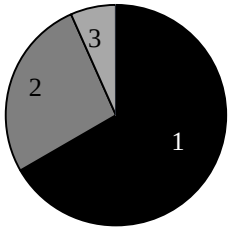
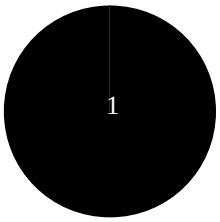
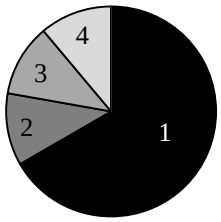


Figure 25. -- Cont'd.

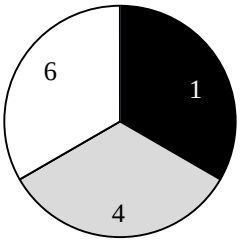
Northern Alaska



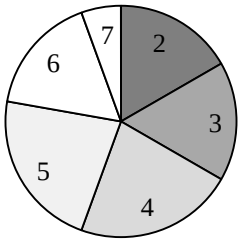
Norton Sound and Bering Strait



Prince William Sound



Southeast



Recreational fishing activity

The survey also sought information from communities on recreational or sport fishing activity (Q13). Communities were given a list of recreational fishing activities and asked which types occur in or out of their community. Many communities in the Anchorage and Mat-Su (80%), Kodiak Island (60%), Prince William Sound (67%), and Southeast (89%) regional groupings reported charter or party boats operating out of their community (Fig. 26, Appendix Table A27). Relatively few communities reported no recreational or sport fishing: Interior (13%), Kuskokwim River (31%), Northern Alaska (20%) and Norton Sound and Bering Strait (27%).

Residents were also asked about what species were targeted by recreational fishermen based out of the community (Q14). Salmon species were a very common target for communities in all regional groupings (Fig. 27, Appendix Table A28). Other species varied across regional groupings, with rockfish caught in the Kenai Peninsula and Cook Inlet (100%) and Prince William Sound (100%) groups and crab fished recreationally from the Kenai Peninsula and Cook Inlet (67%), Kodiak Island (80%), Prince William Sound (67%), and the Southeast (90%) (Fig. 28, Table A28). Survey respondents had the opportunity to write in other targeted species, responses included octopus, lingcod, herring, and Pacific cod.

Figure 26. -- Regional breakdown of responses to the following question: To the best of your knowledge, what type of recreational or sport fishing, if any, goes on in your community? (Q13).

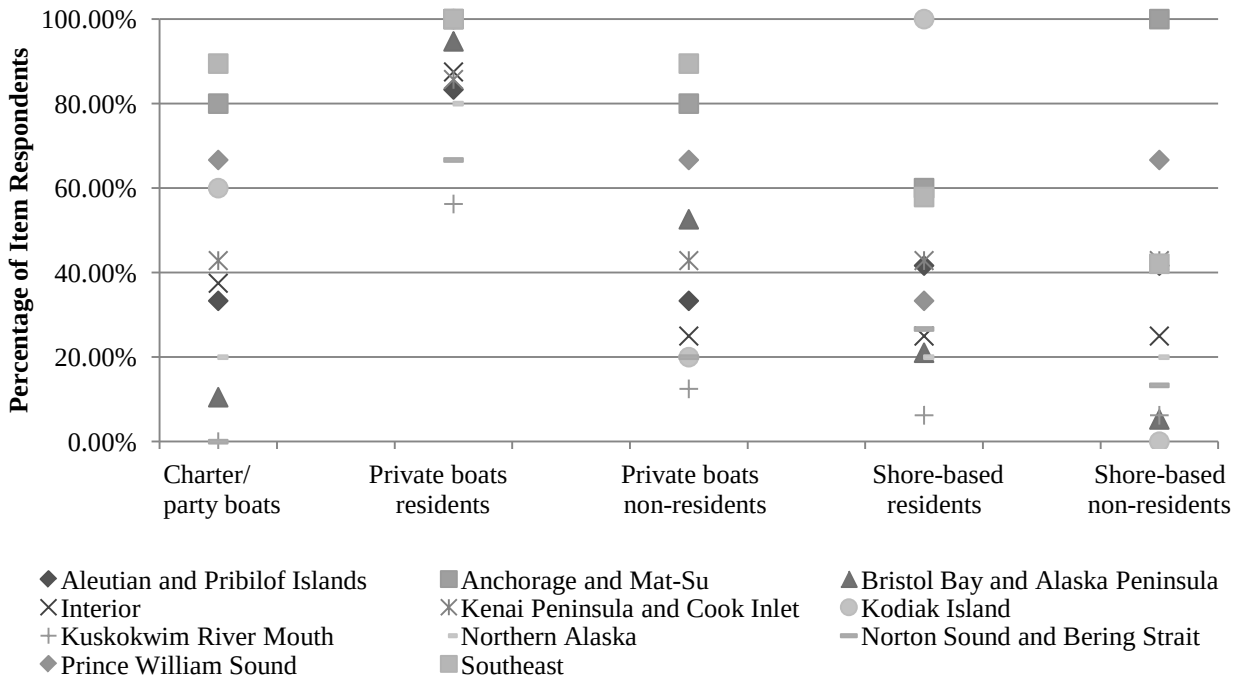


Figure 27. -- Regional breakdown of responses to the following question: What saltwater species, if any, are targeted by recreational fishermen that use boats based in your community? (Q14).

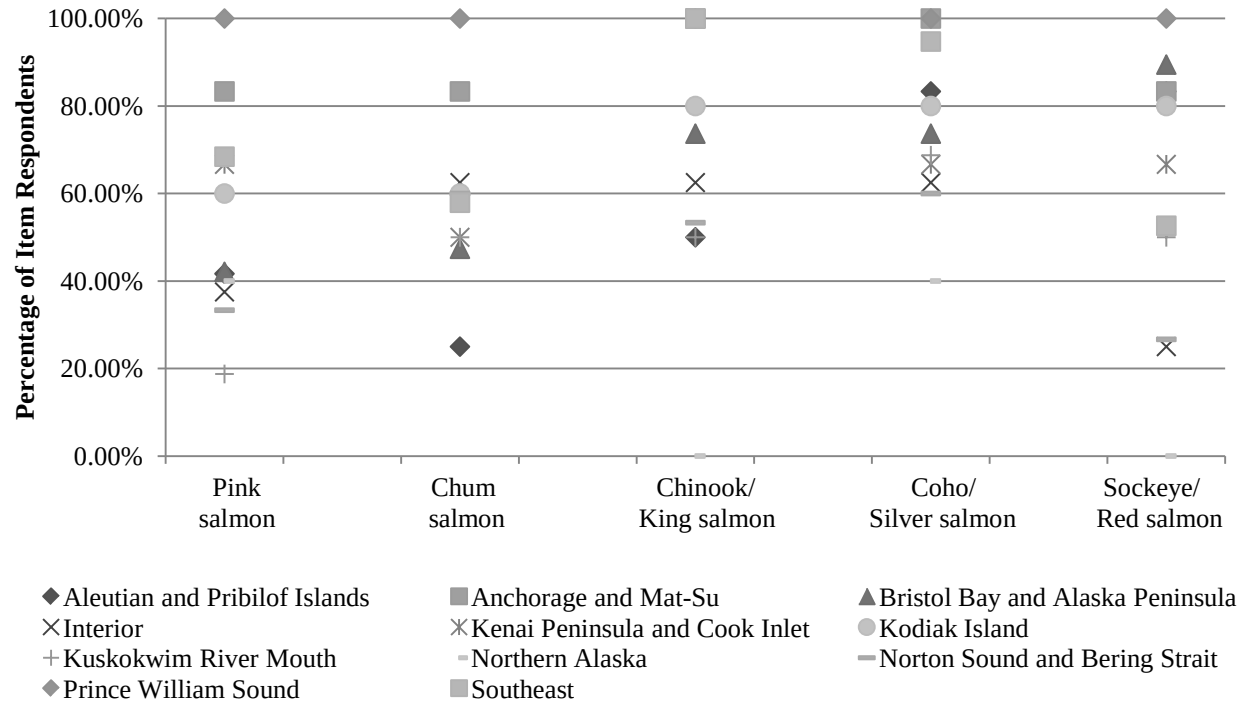
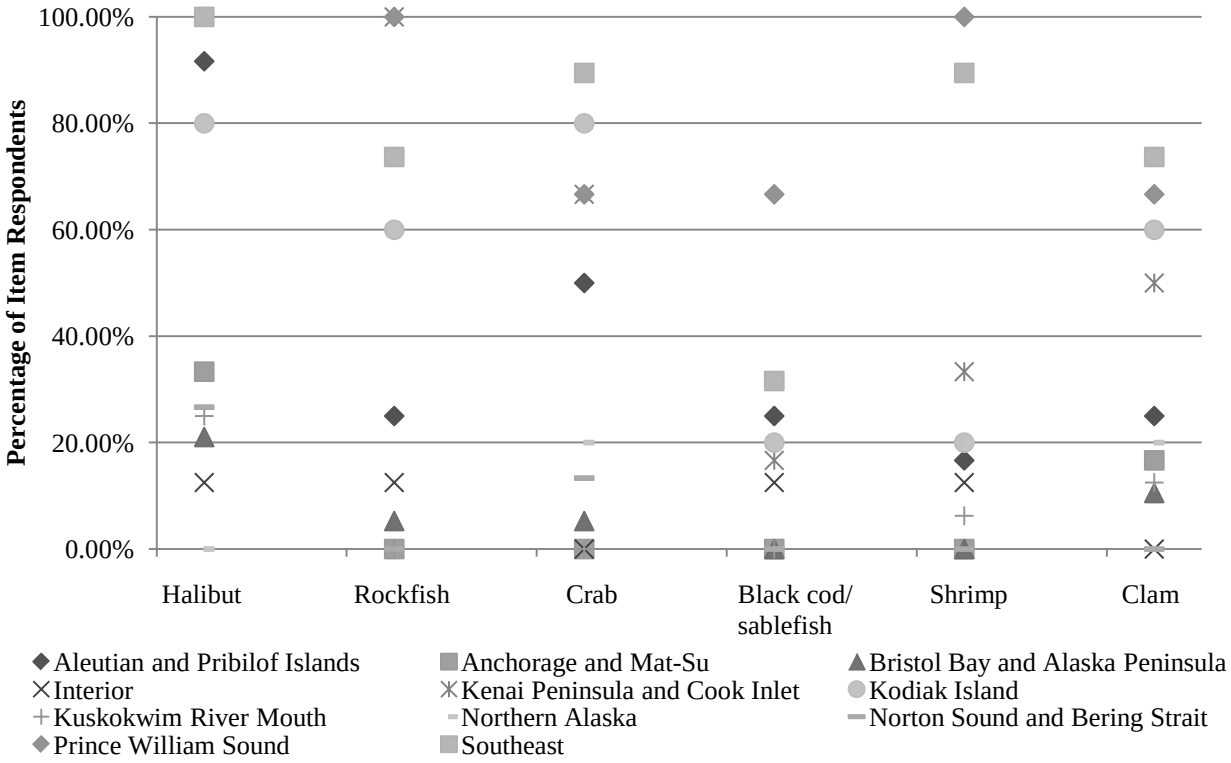


Figure 27. – Cont'd.



Subsistence activity

Communities were asked to list the subsistence resources that are important to their residents (Q20). The question was open-ended so responses were grouped into larger categories for analysis. Salmon was specifically reported as important for more than two-thirds of communities in all groupings except for Northern Alaska (40%) (Fig. 28, Appendix Table A30). However, 100% of communities in the Northern Alaska grouping reported whale as an important species while only three other groupings (Bristol Bay and Alaska Peninsula (6%), Kuskokwim River Mouth (6%), and Norton Sound and Bering Strait (27%)) reported whale as an important resource.

Figure 28. -- Regional breakdown of responses to the following question: What are the three (3) most important subsistence marine or aquatic resources to the residents of your community? (Q20).

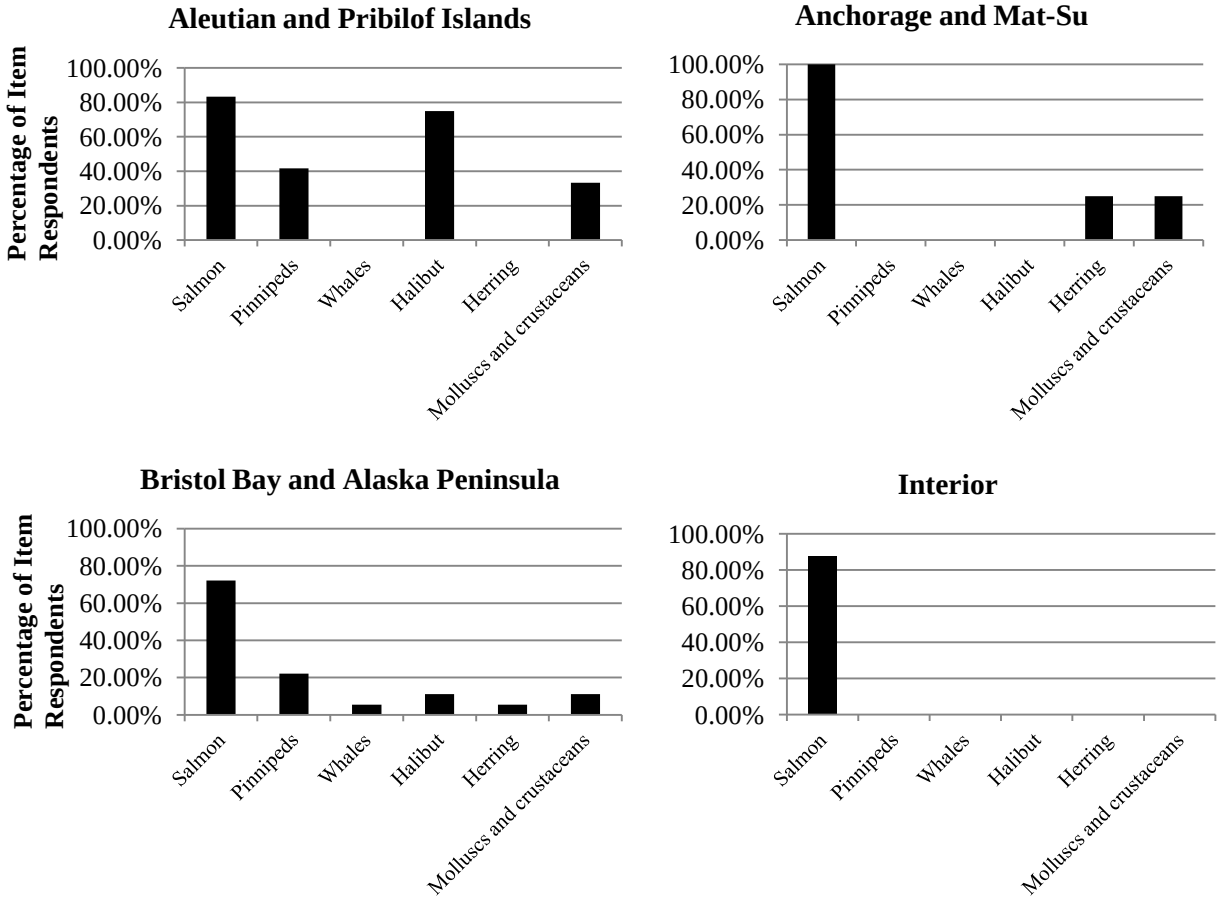


Figure 28. -- Cont'd.

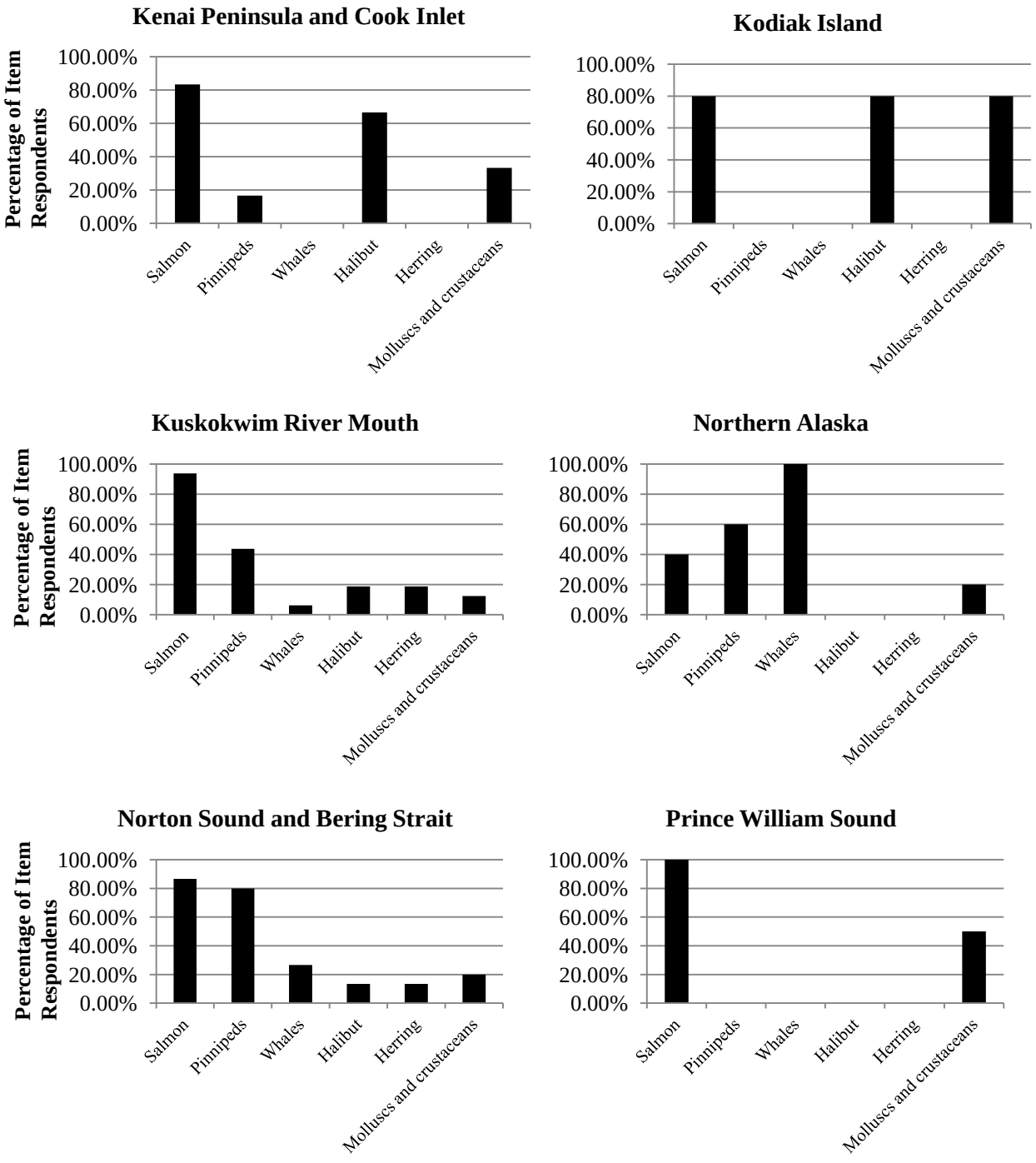
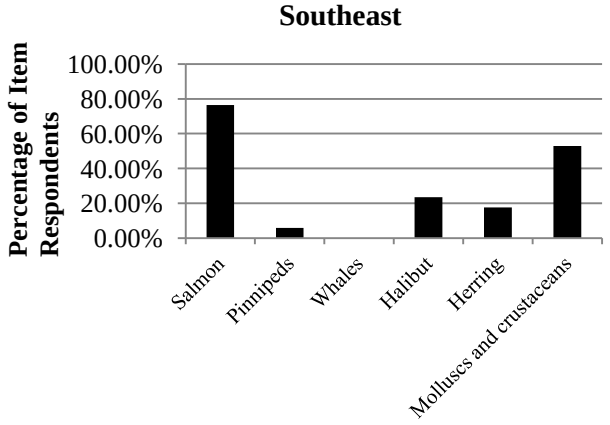


Figure 28. -- Cont'd.



Revenue and funding

Respondents were asked about any funding they received through the Community Development Quota (CDQ) program (Q21). Of item respondents from the Aleutian and Pribilof Islands grouping, 64% of communities reported they received funding or grants through the program in 2011 (Appendix Table A31). The mean value of this funding was $3,358,071 though the median value was $100,000 (Table 21). Norton Sound and Bering Strait communities (59%) reported receiving funding or grants with a mean value of $77,500 and a median value of $100,000.

The survey asked for information from communities about revenue received from fisheries-related taxes or fee programs (Q22). The Anchorage and Mat-Su, Interior, and Northern Alaska communities that responded to the survey item reported no revenue from any of the listed categories (Fig. 29, Appendix Table A32). The most common source of revenue identified by communities with revenue reported was municipal dock use fees. Respondents also had the opportunity to write in their own sources of revenue. Write-in answers included raw fish taxes, fisheries business tax, and fish box taxes.

In addition, respondents provided information on local fishing-related fee programs that specifically support public services and infrastructure (Q24). Communities in the Aleutian and Pribilof Islands (N = 4), Bristol Bay and Alaska Peninsula (N = 1), Kenai Peninsula and Cook Inlet (N = 3), and Southeast (N = 3) regional groupings reported that they had such programs (Table A33). These programs included a launch fee used to offset the costs of maintaining the harbor and providing crane services (Dillingham), a Fisheries business impact tax used to help fund public works (King Cove), and a tax on gross salmon sales that is used for salmon habitat restoration projects (Yakutat).

The survey gave communities a list of social services and asked them to report which were available in the community (Q18). Most communities across all regional groupings reported having medical services or doctors (e.g., Kodiak Island (100%) and Southeast (75%)), while few reported having soup kitchens (Interior (13%) and Norton Sound and Bering Strait (7.14%)) (Fig. 30, Appendix Table A35). Only one community (Fairbanks) reported that it had all of the categories of public social services available. Respondents had the opportunity to write

in responses as well, and answers included women's shelters, mental/behavioral health services, and alcoholism treatment.

Communities were also asked to identify community public services that were funded by fisheries-related tax revenues (Q23). The most common public service funded by these taxes across regional groupings was maintaining a harbor (Fig. 31, Appendix Table A34). Of the item respondents, 25 communities only reported one service as supported by those revenue streams while 28 total communities reported that the revenue supports more than one of these services, however there was no discernible pattern as to which services are most commonly funded together. All respondent communities in the Interior and Anchorage and Mat-Su groupings reported that no community services are funded by fish taxes. Only one community (Dutch Harbor) reported that fish taxes and other similar revenue sources funded all eight response categories. Communities that wrote in answers most often reported that these funds support general administration and municipal services (N = 8).

Table 21. -- Regional breakdown of the following question: Does the community local government, organizations, or other local entities receive any funding or grants from a Community Development Quota entity? If funding or grants were received in 2010, please indicate how much the local government received. (Q21).

	N	Mean	Max	Min	StdDev	Median
Aleutian and Pribilof Islands	7	$3,358,071.43	$23,000,000.00	$12,000.00	$8,661,356.11	$100,000
Bristol Bay and Alaska Peninsula	9	$152,700.00	$200,000.00	$100,000.00	$27,795.79	$150,000
Kuskokwim River Mouth	5	$125,724.75	$373,035.01	$16,120.00	$168,697.02	$56,872
Norton Sound and Bering Strait	7	$77,500.00	$100,000.00	$25,000.00	$35,178.12	$100,000

Figure 29. -- Regional breakdown of responses to the following question: How much total revenue did the community receive from fisheries-related taxes or fee programs this year? (Q22).

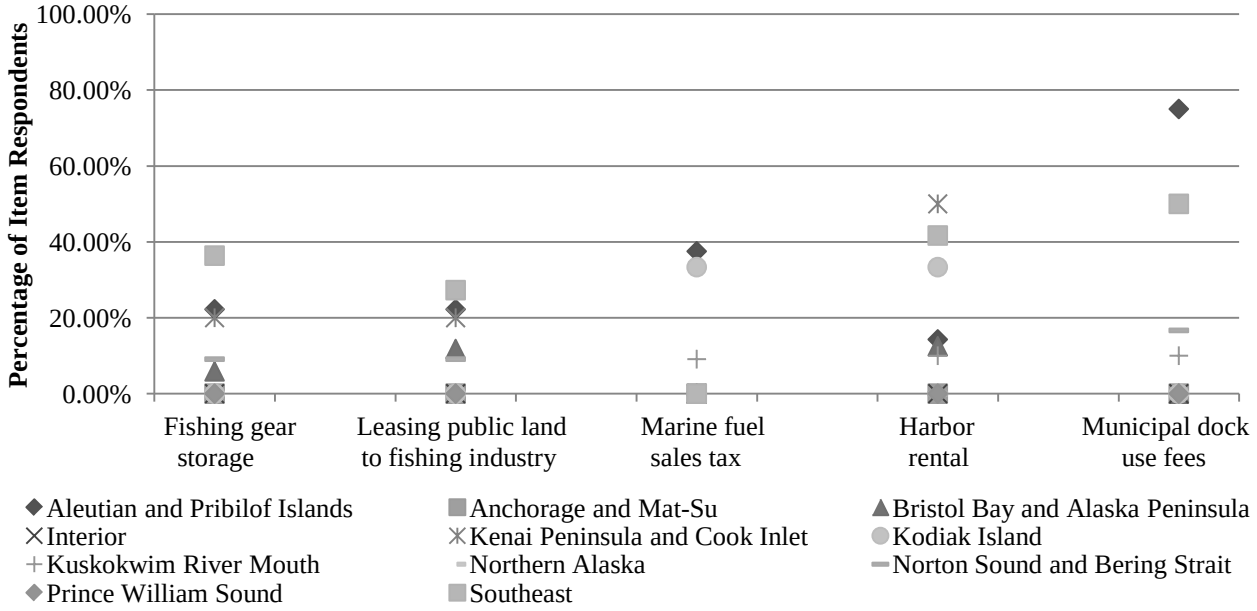


Figure 30. -- Regional breakdown of responses to the following question: Which public social services are available in your community? (Q18).

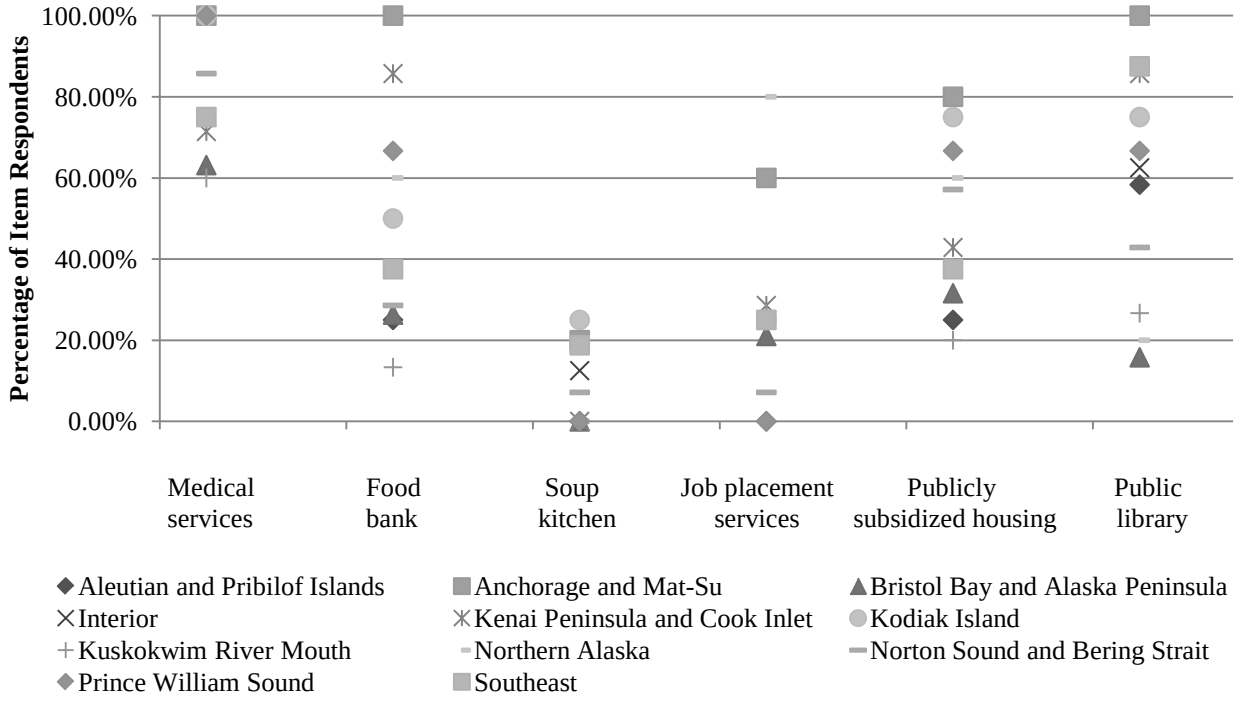
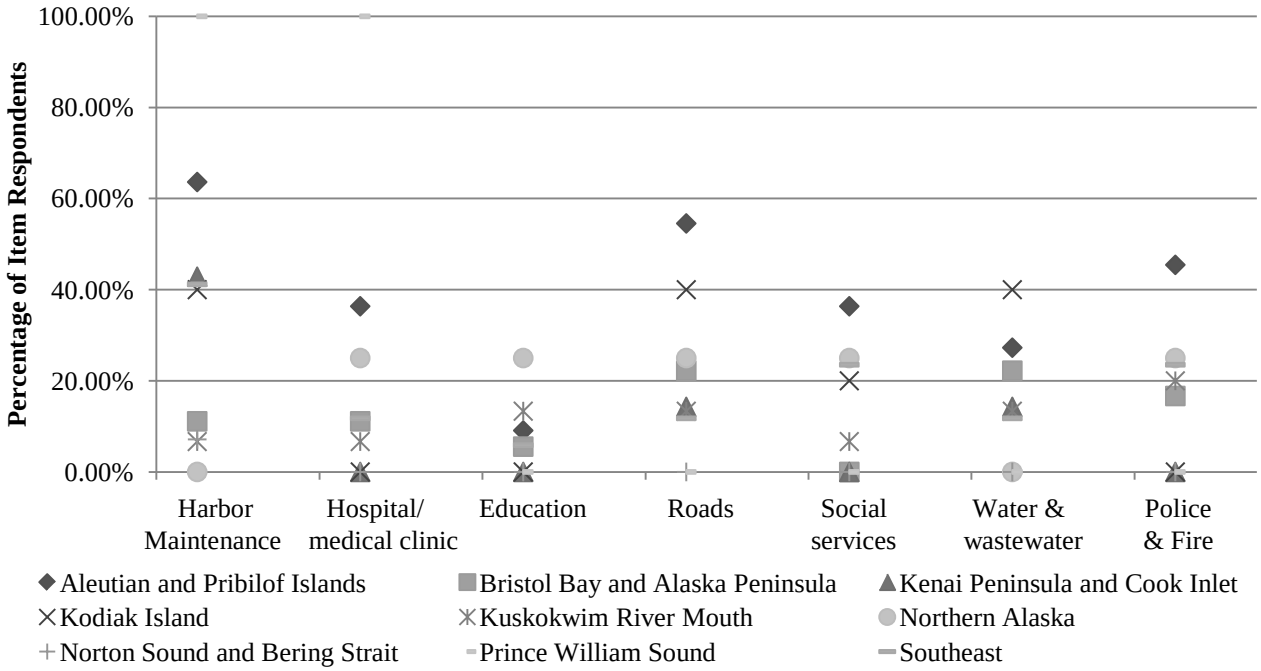


Figure 31. -- Regional breakdown of responses to the following question: Which of your community's public services are at least partially supported or funded by any of the following: Local or Borough Raw Fish Tax, Shared Fisheries Business Tax, the Fisheries Resource Landing Tax, or marine fuel sales tax? (Q23).



Changes in vessel activity

Communities were asked about perceived changes over the last 5 years in the number of boats from specific categories in their community (Q12). The categories were charter boats/party boats, private pleasure boats, commercial fishing boats, boats less than 35 feet, boats between 35 and 60 feet, boats between 60 and 125 feet, and boats greater than 125 feet. In the Kenai Peninsula and Cook Inlet regional grouping communities were divided in their perception of change, 40% of communities responding to the survey item reported less charter or party boats and 40% reported more charter or party boats (Fig. 32, Appendix Table A36). With regard to private pleasure boats, 36% of item respondent communities in the Kuskokwim River Mouth grouping noted that there were a lot more. For the Kodiak Island and Aleutian and Pribilof Islands groupings, 40% of communities reported more commercial fishing boats. For boats shorter than 35 feet, 75% of Northern Alaska communities and 50% of Bristol Bay and Alaska Peninsula communities reported more. And for boats 35 to 60 feet, 44% of Kuskokwim River Mouth communities reported a lot less. For Kodiak Island communities, 33% noted there were more boats 60 to 125 feet. Many Kuskokwim River Mouth communities (57%) also reported a lot less boats greater than 125 feet.

Figure 32. -- Regional breakdown of responses to the following question: For the types of boats listed, would you say there were a lot more, more, no more or less, less, or a lot less boats in your community compared to 5 years ago? (Q12).

A. Charter boats/party boats

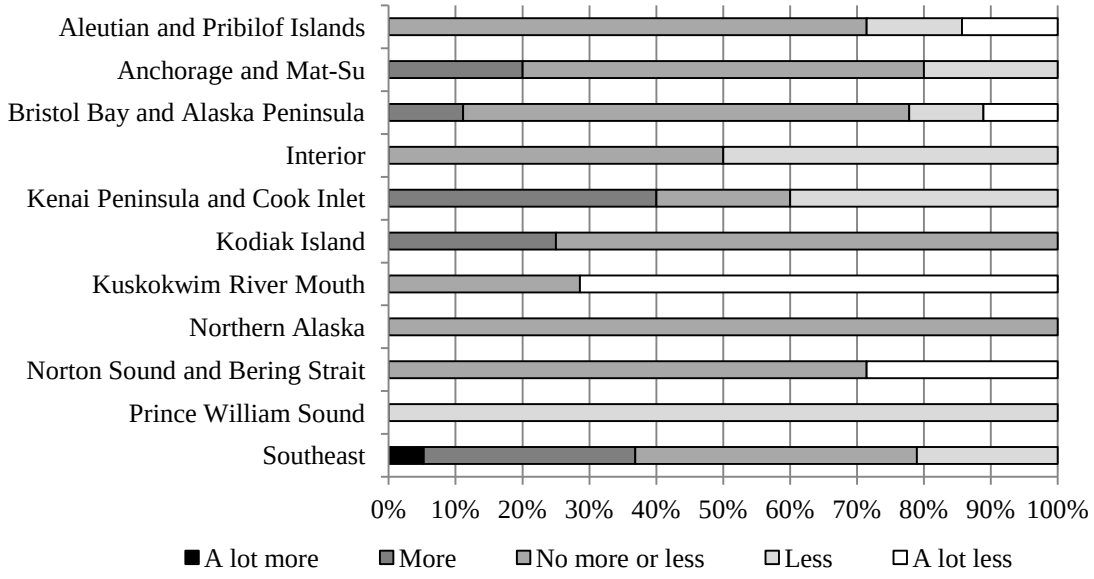
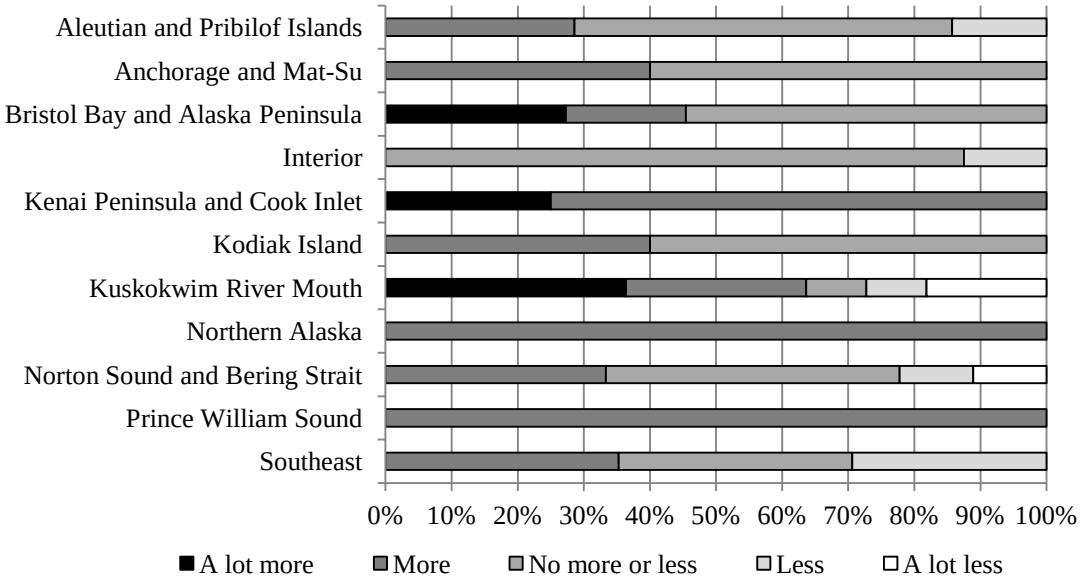


Figure 32. -- Cont'd.

B. Private pleasure boats



C. Commercial fishing boats

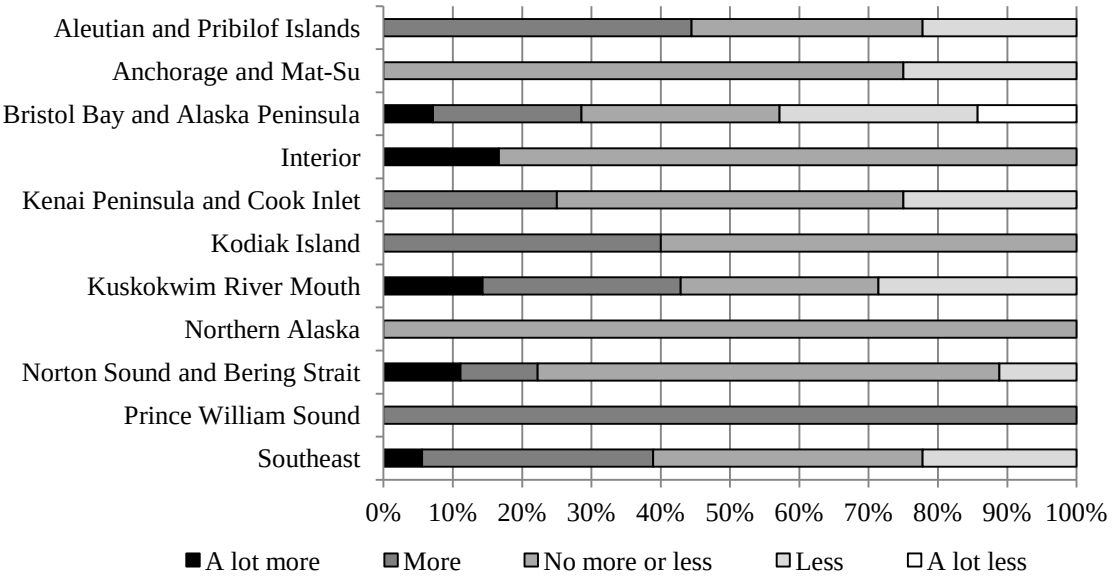
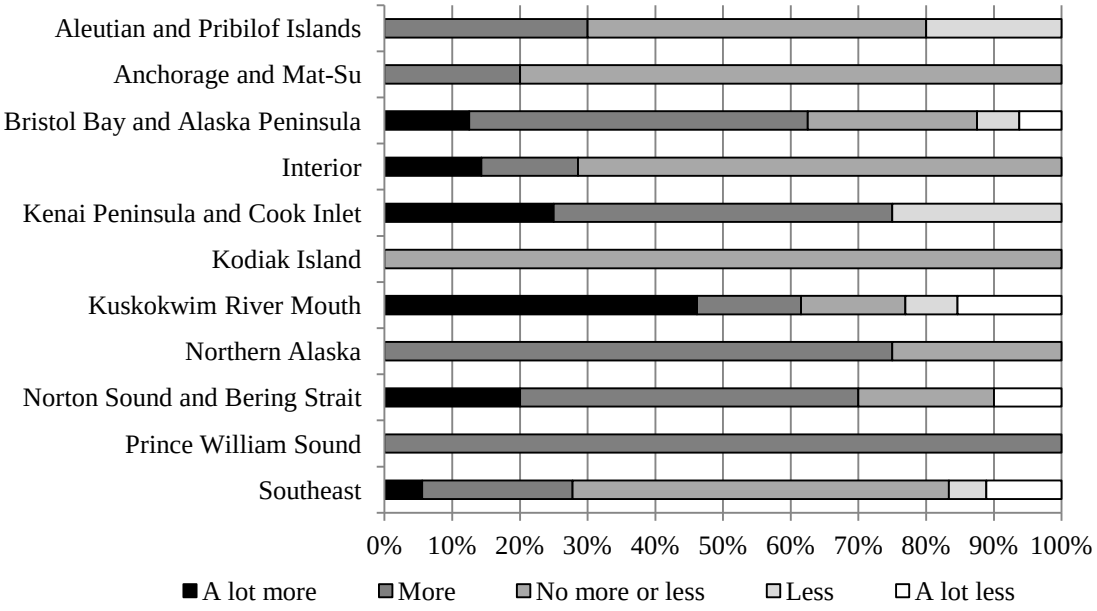


Figure 32. -- Cont'd.

D. Boats less than 35 feet



E. Boats 35 to 60 feet

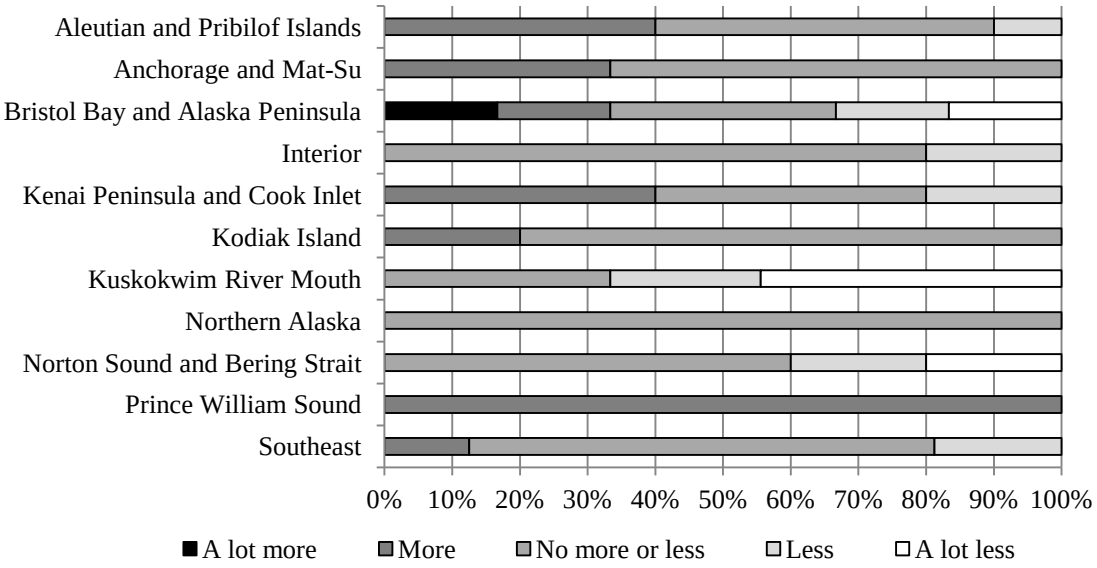
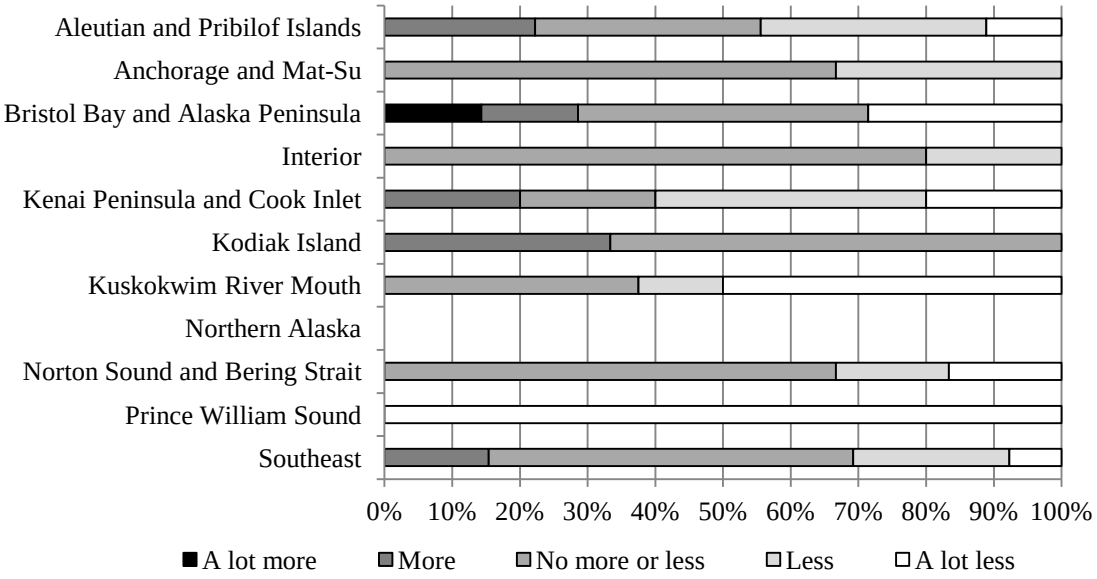
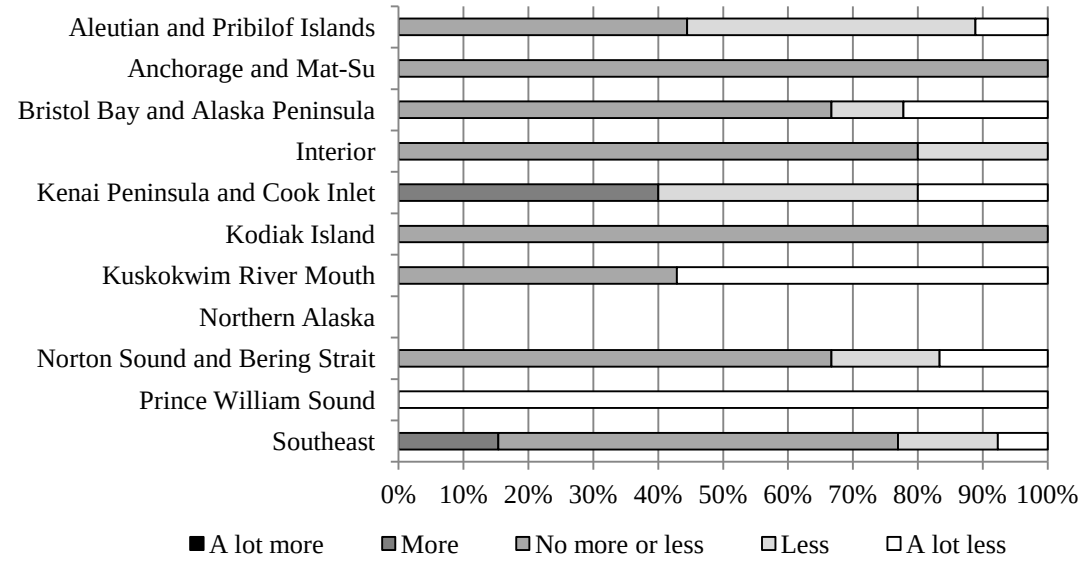


Figure 32. -- Cont'd.

F. Boats 61 to 125 feet



G. Boats greater than 125 feet



Communities were also asked in Q12a to elaborate on any changes they noted in Q12. Sample responses included:

> "New restrictions on charter halibut fishing have had an adverse impact on the charter boat fleet."

"Less crab boats after 1999 opi crash/crab rationalization; less local halibut boats as population declined […]"

"Due to less commercial fishing the need for large boats is not necessary."

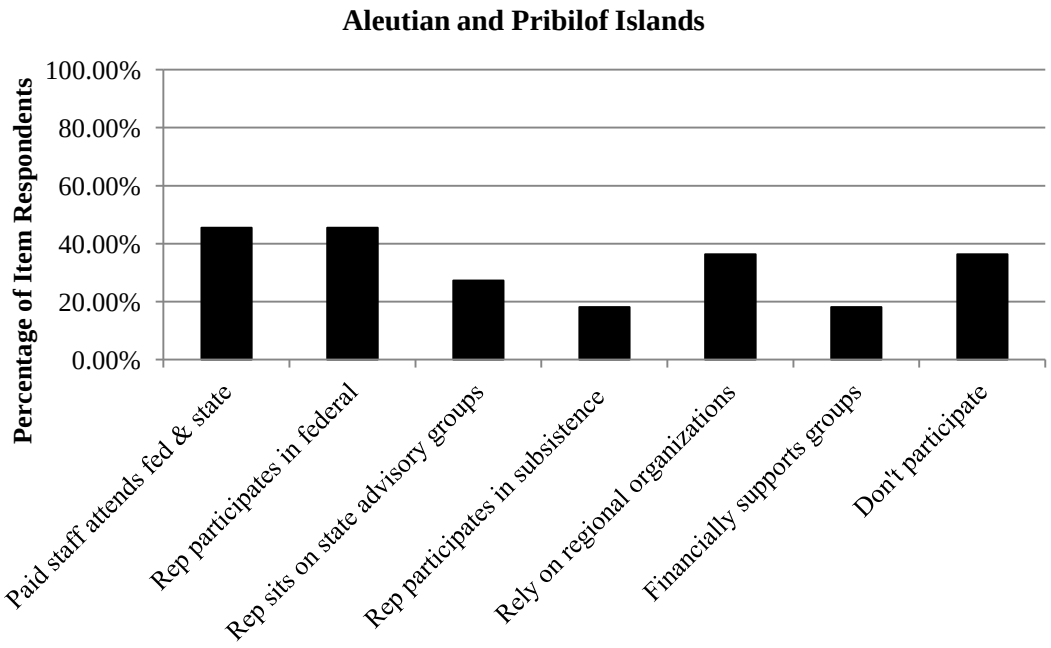
"New harbor and haulout facility have contributed toward increased boats, as well as Trident's purchase of fish processing plant."

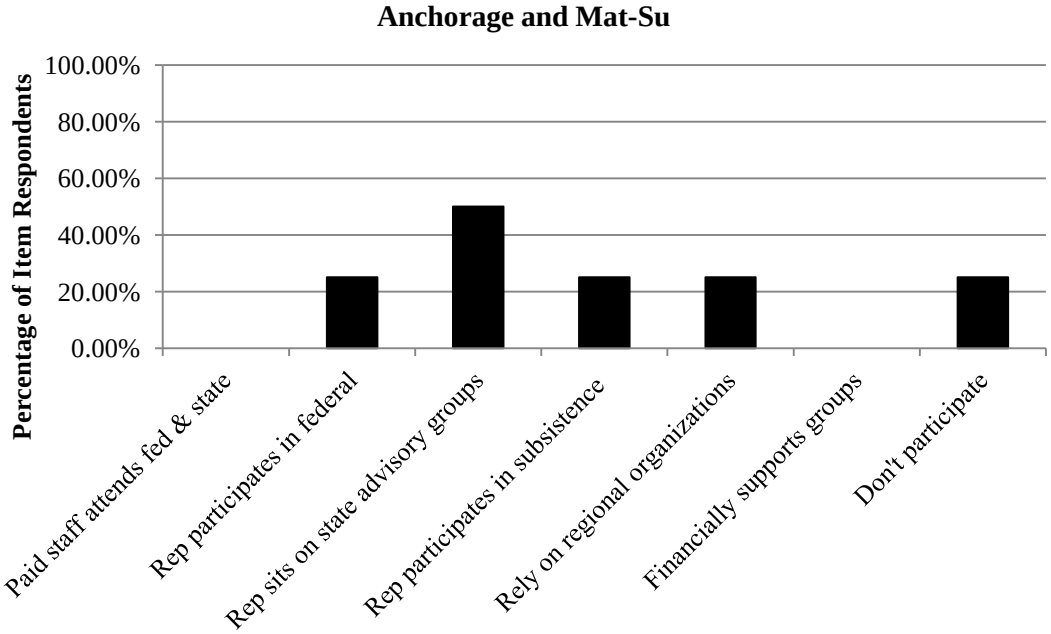
"Commercial fishing has become more profitable, therefore there has been a higher level of participation."

Management participation

Communities were asked whether or not they participate in the fisheries management process in Alaska and if so, to choose off a provided list the ways in which they participate (Q25). Of Aleutian and Pribilof Islands communities that responded to the survey item, 45% reported that they had a paid staff member that attends NPFMC or Board of Fisheries meetings (Fig. 33, Appendix Table A37). In the Anchorage and Mat-Su grouping, 50% of communities had a representative that sits on regional fisheries advisory or working groups run by ADF&G in addition to 47% of Bristol Bay and Alaska Peninsula communities. Kodiak Island communities showed diverse participation, with 50% having a representative that participates in NPFMC committees or advisory groups, 50% with a representative sitting on advisory or working groups, and 50% that rely on regional organizations to provide information on fisheries management issues. Of respondent communities in the Northern Alaska grouping, 80% reported that they do not participate in the fisheries management process at all. Communities also had the opportunity to write in other ways in which they participate in management. Written-in responses included Adak Community Development Corporation, Yukon Delta Fisheries Development Association, Yukon River Drainage Fisheries Association, Tribal corporation involvement in management, and Petersburg Vessel Owners Association.

Figure 33. -- Regional breakdown of responses to the following question: Does your community participate in the fisheries management process in Alaska? (Q25).





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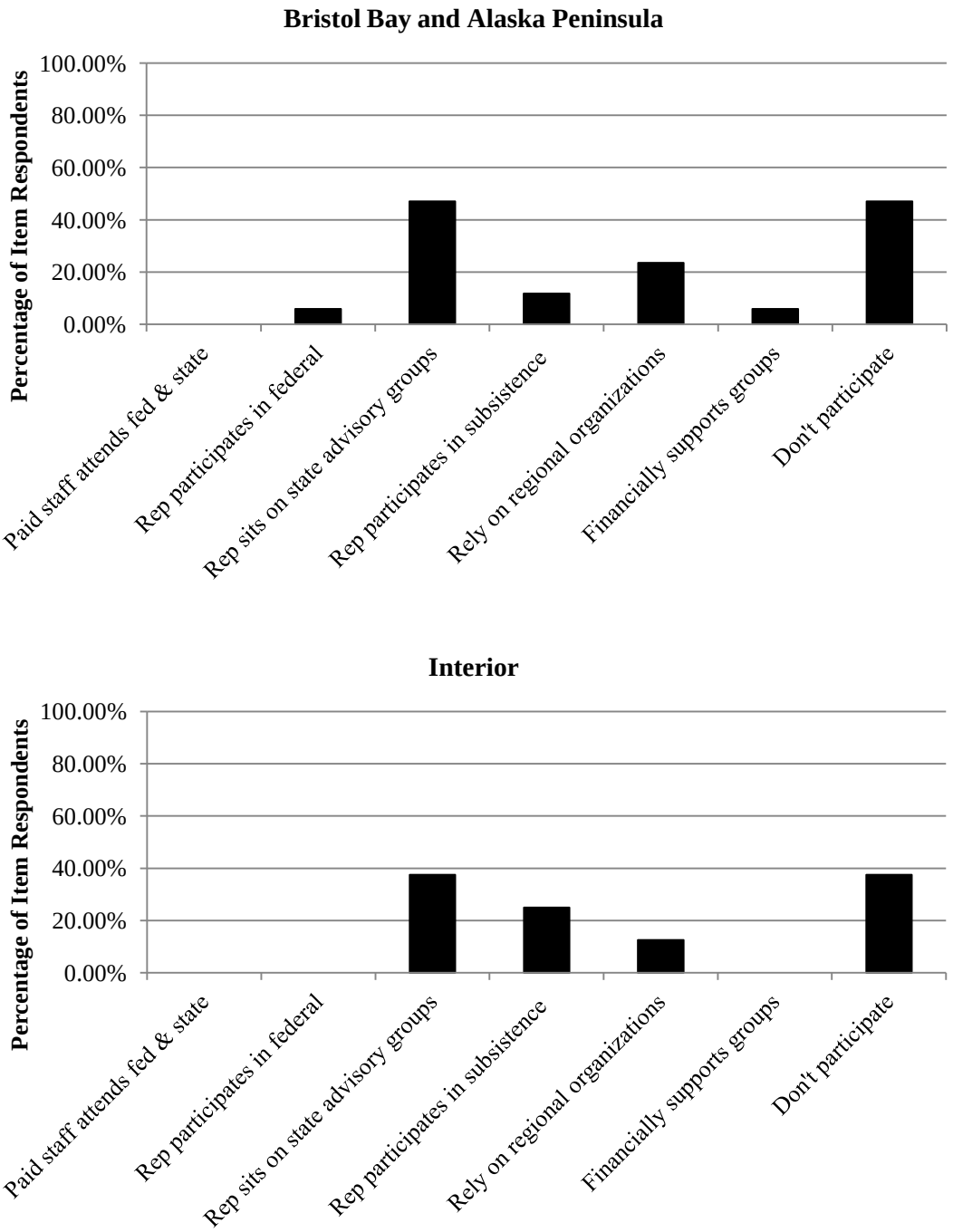

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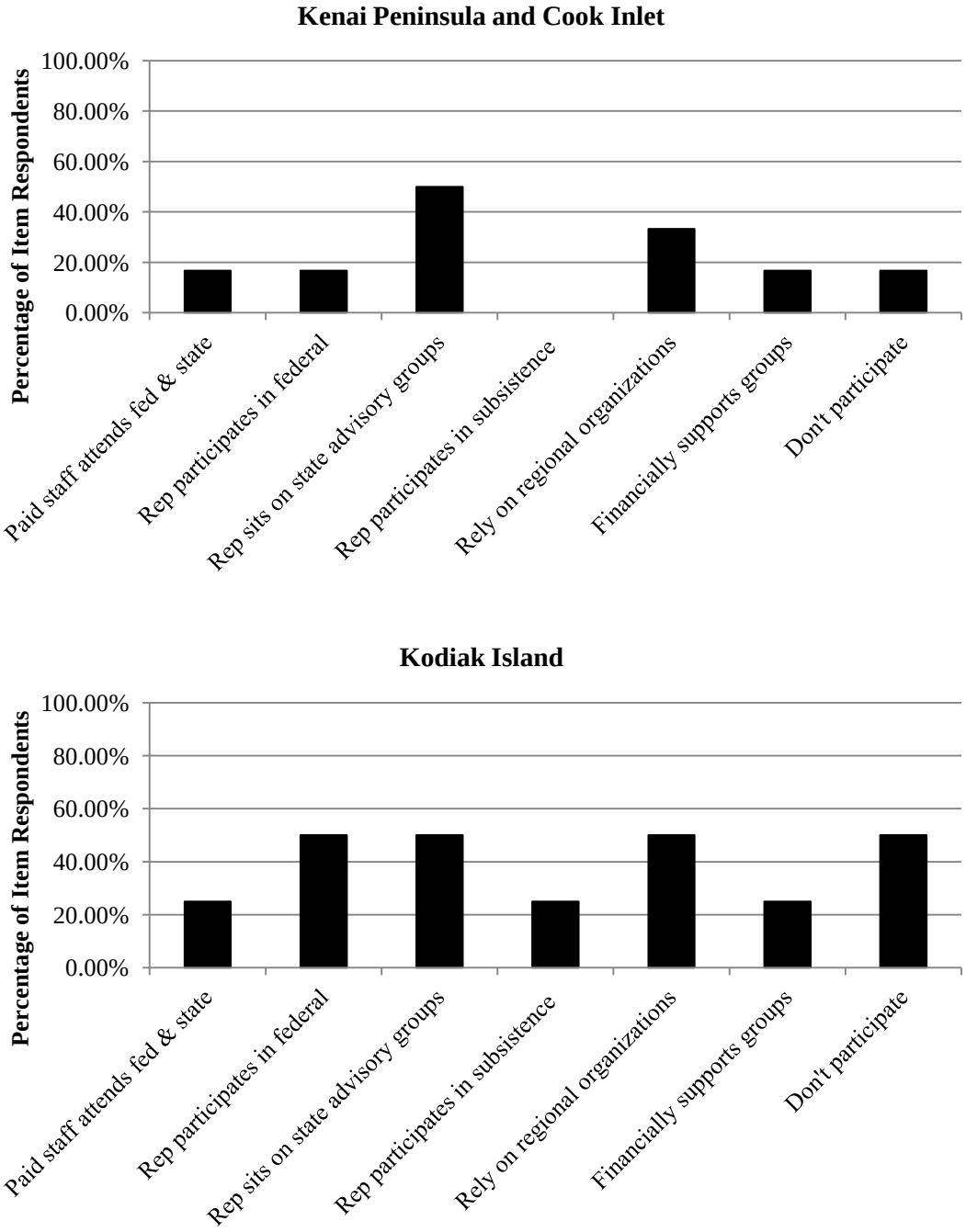

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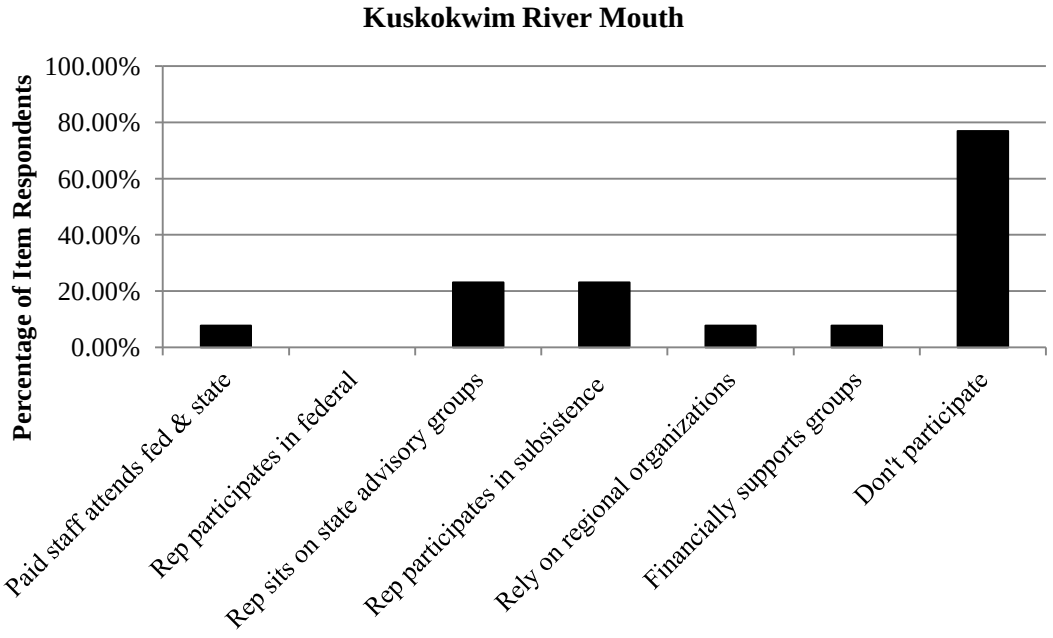

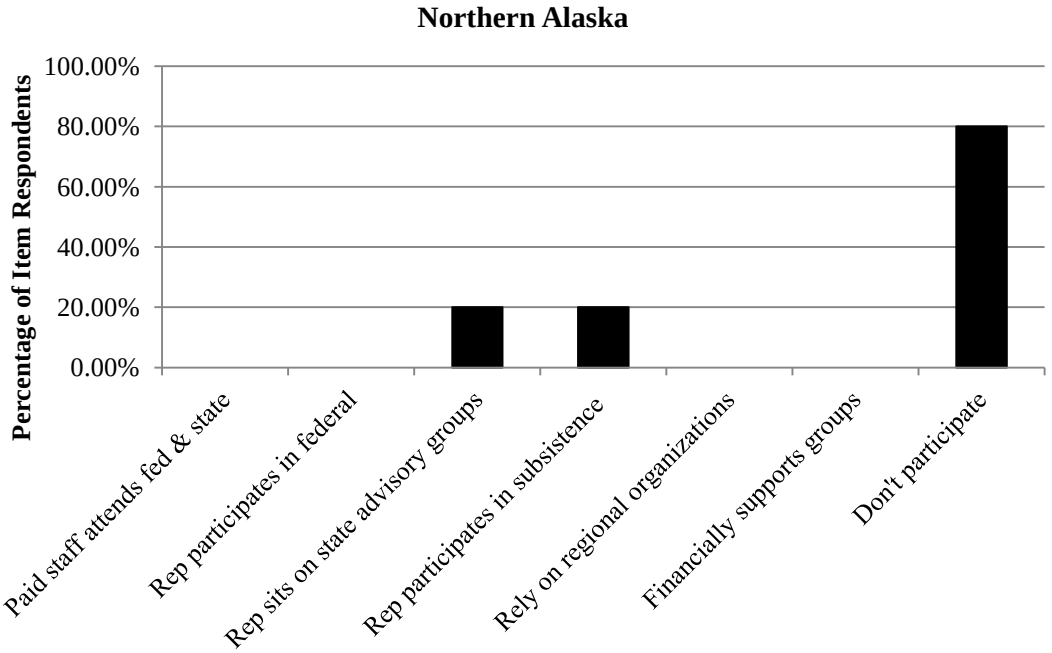

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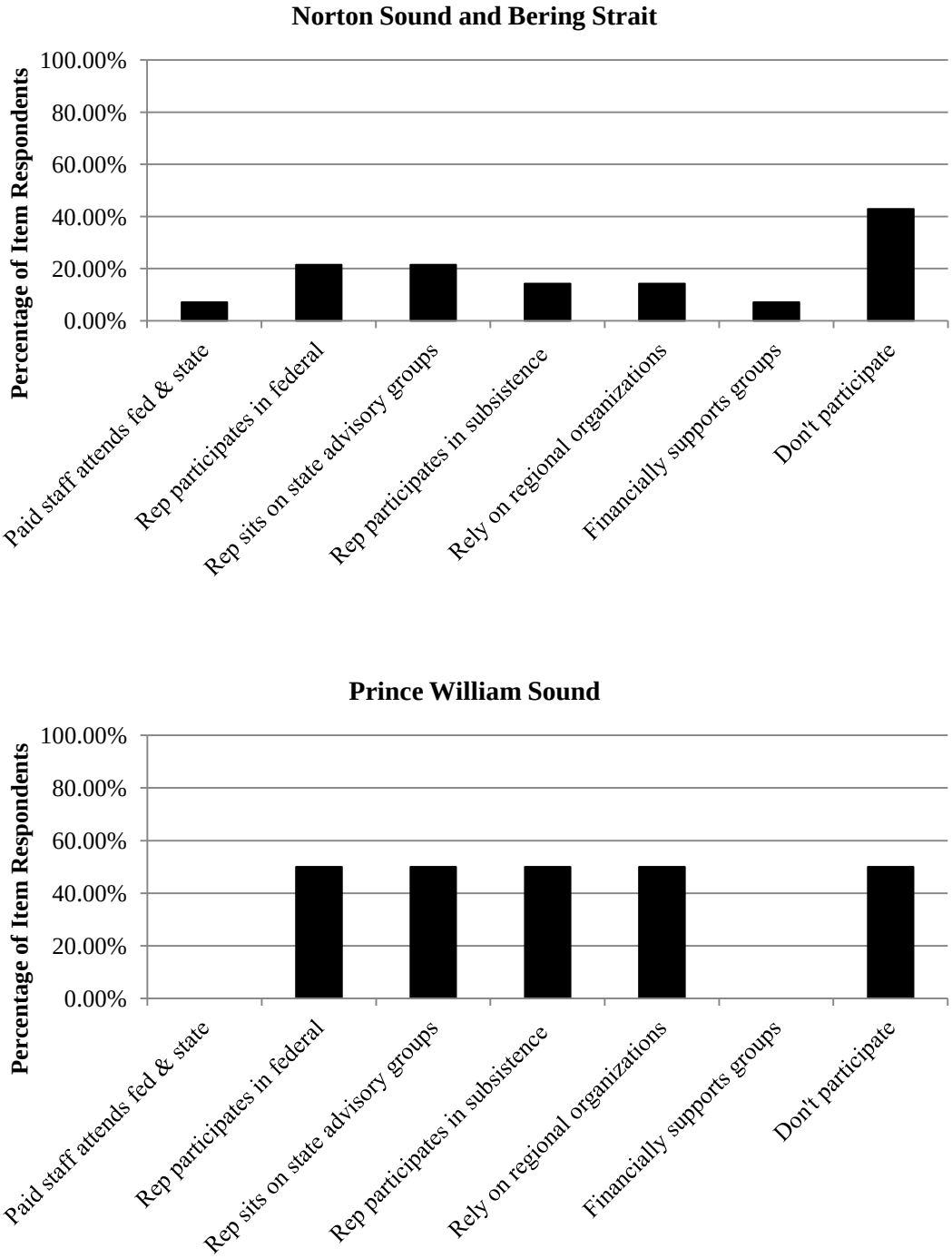

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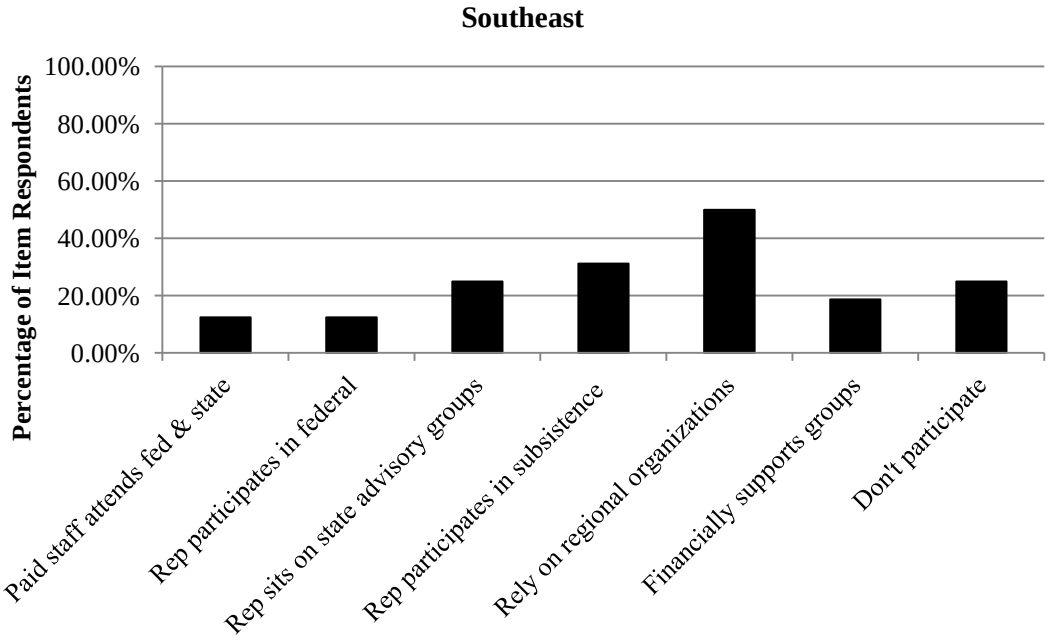


Fisheries Management Issues

Current challenges

Respondents were asked to respond to several open-ended questions, one of which pertained to current challenges facing their community's fishing economy (Q26). Responses varied but were grouped into themes, a few of which were further broken down into subthemes. Many respondents gave multi-faceted responses that spoke to more than one distinct challenge. Response distributions are shown in Table 22 with the regional break-down of responses shown in Table 23 and Figure 34. A total of 93 (81%) survey respondents provided a response to this question.

The major themes that emerged as current challenges were the availability of fish and the status of stocks (40% of item respondents), maintaining or providing fisheries support infrastructure and services (39%), challenges associated with the nature of the fishing industry (38%), and challenges associated with participation costs (38%).

Some respondents spoke to the challenge of diminishing fish stocks in direct relation to the economy or the food needs of the community. The regional distribution of responses shows that of item respondent communities, 45% of communities in the Aleutian and Pribilof Island, 100% of the Anchorage and Mat-Su, 43% of Interior, and 79% of Norton Sound and Bering Strait regional grouping communities brought up this issue in their responses. One respondent reported:

> "Our economy has been distressed for the past two years. If this continues with our poor fish runs, we will be closing the door on this village."

Respondents who reported challenges for their community associated with the availability of fish also frequently cited allocation disputes about who had access to the fish or if the actions of one group were impacting another groups' fishing activities (17% of item respondents, 43% of theme respondents). Responses included:

> "There is not enough salmon to be shared with commercial fisheries in this area."

> "Subsistence and commercial fishing for salmon species that migrate to spawn in the Kuskokwim River and its tributaries have been severely impacted by Bering Sea High Seas fisheries or ocean trawling of Pollock."

For the respondents that cited challenges associated with the community's ability to provide and maintain infrastructure and services to support fishing activity, many specifically cited funding limitations (12% of item respondents, 31% of theme respondents), reporting that:

> "The challenges facing Adak's economy based on fishing are related to providing support services to the industry. The city has strived to complete its small boat harbor project. But has been hampered in obtaining grant funding in part because of recent regulations that have been proposed to shut down the local fishing area."

> "Continued maintenance funding for main breakwater, dredging, etc. is getting more and more difficult to receive as government cash becomes tighter. The industry itself can't support such major infrastructure, nor can local population."

Reporting on this theme was especially prevalent in communities in the Aleutian and Pribilof Islands grouping (64%) and Southeast grouping (75%).

Respondents that cited challenges relating to the seasonality of fishing activity or the lack of stability in fishing employment, the lack of economic opportunities in fishing, and challenges related to the changes in the seafood market where grouped into the theme of the nature of the fishing industry. Of the respondents that reported challenges for their community related to the nature of the fishing industry, 31.43% cited the seasonality of fishing activity or the lack of stability. Communities in the Aleutian and Pribilof, Bristol Bay and Alaska Peninsula, Kuskokwim River Mouth, Norton Sound and Bering Strait, and Southeast groupings brought this up as an issue. A respondent reported that:

> "The current challenges are based on the fact that fishing is a seasonal activity and preparation starts in June and activity ends 8/10."

Respondents also cited the lack of stability of the fisheries economy for their community:

> "The local economy has fits and starts and there are very few people who are able to create a stable lifestyle."

Some respondents spoke to a lack of jobs or reduced economic opportunities (40%), saying that there are:

> "Fluctuations in harvest levels, profitability, and employment."

Responses related to the seafood market were also numerous (40% of theme respondents), including 31% of communities in the Southeast regional grouping. Responses include:

> "The price that residents get for their fish sales is different every year. This creates economic challenges for residents who are not able to budget and save."

Participation costs were also a highly cited challenge for communities in terms of their economic dependence on fisheries. Respondents cited the cost of gear, the cost of insurance, and the cost of permits as specific items. The largest proportion of respondents that noted a challenge related to participation costs specifically cited the cost of fuel and energy (24% of item respondents, 63% of theme respondents). This included 50% of Kenai Peninsula and Cook Inlet, 50% of Kodiak Island, and 44% of Southeast regional grouping communities. One respondent reported that fishing activity is:

> "Not profitable due to rising fuel prices."

Table 22. -- Distribution of responses to the following question: In your opinion, what are the current challenges for the portion of your community's economy that is based on fishing? (Q26).

	N	% survey respondents	% item respondents
Access to fishing opportunities	5	4.35%	5.38%
Barriers to new entry	4	3.48%	4.30%
Availability of fish and status of stocks	37	32.17%	39.78%
Allocation disputes	16	13.91%	17.20%
Bycatch	4	3.48%	4.30%
Hatcheries	1	0.87%	1.08%
Community Development Quotas	2	1.74%	2.15%
Environmental concerns and regulations	2	1.74%	2.15%
Fisheries support infrastructure and services	36	31.30%	38.71%
Funding limitations	11	9.57%	11.83%
Management and regulations	20	17.39%	21.51%
Nature of the industry	35	30.43%	37.63%
Limited jobs or economic opportunity	14	12.17%	15.05%
Seasonality, lack of economic stability	11	9.57%	11.83%
Seafood market uncertainty	14	12.17%	15.05%
Participation costs	35	30.43%	37.63%
Cost of fuel and energy	22	19.13%	23.66%
Sport fishing	10	8.70%	10.75%
Subsistence fishing	5	4.35%	5.38%
Total item respondents	**93**	**80.87%**	**-**

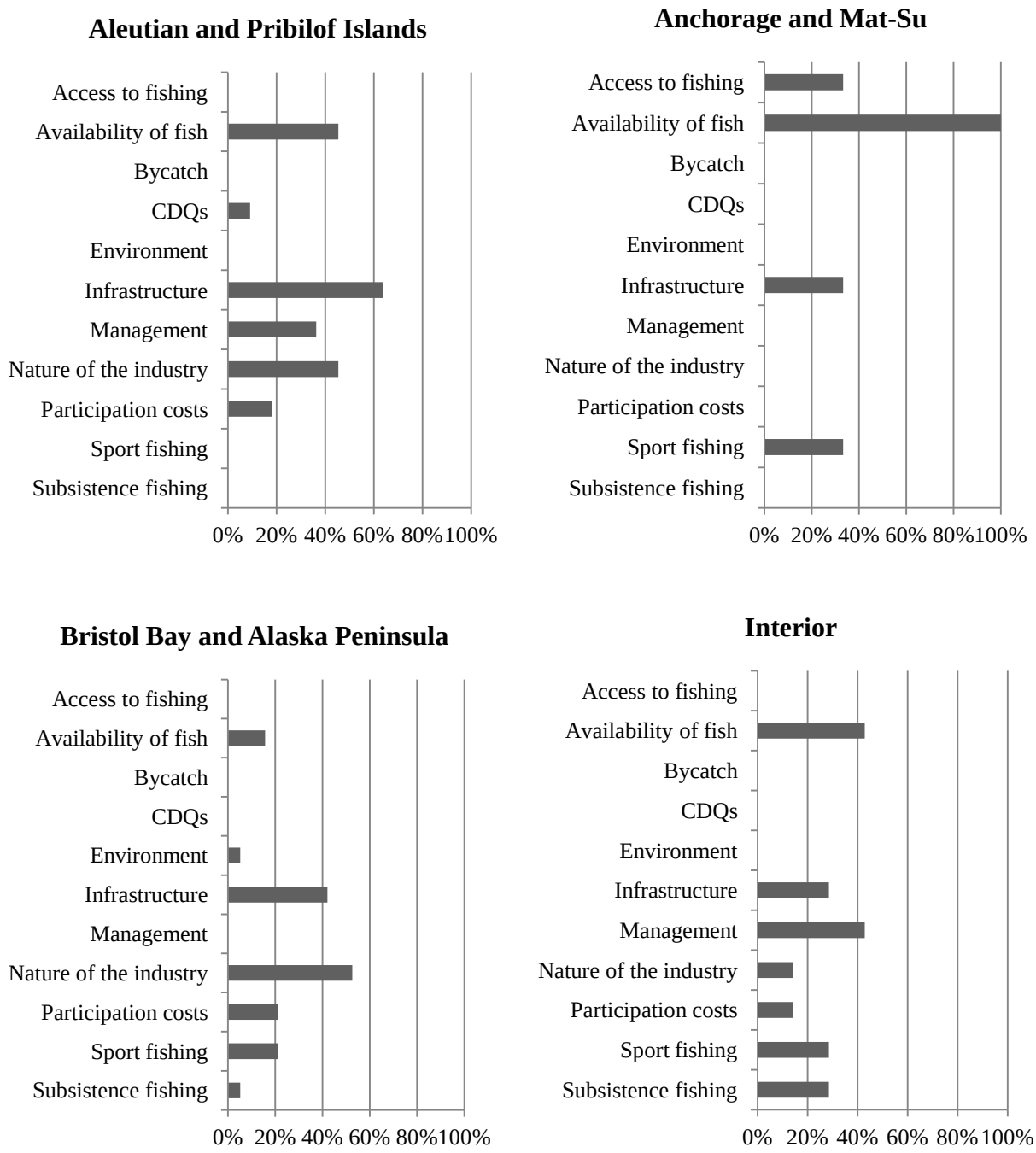
Table 23. -- Regional breakdown of responses to the following question: In your opinion, what are the current challenges for the portion of your community's economy that is based on fishing? (Q26).

	Aleutian and Pribilof Islands	Anchorage and Mat-Su	Bristol Bay and Alaska Peninsula	Interior	Kenai Peninsula and Cook Inlet	Kodiak Island
Access to fishing opportunities	0.00%	33.33%	0.00%	0.00%	0.00%	0.00%
Barriers to new entry	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Availability of fish and status of stocks	45.45%	100.00%	15.79%	42.86%	16.67%	25.00%
Allocation disputes	18.18%	33.33%	10.53%	0.00%	0.00%	25.00%
Bycatch	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Hatcheries	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Community Development Quotas	9.09%	0.00%	0.00%	0.00%	0.00%	0.00%
Environmental concerns and regulations	0.00%	0.00%	5.26%	0.00%	0.00%	0.00%
Fisheries support infrastructure and services	63.64%	33.33%	42.11%	28.57%	33.33%	25.00%
Funding limitations	9.09%	0.00%	21.05%	0.00%	16.67%	0.00%
Management and regulations	36.36%	0.00%	0.00%	42.86%	50.00%	50.00%
Nature of the industry	45.45%	0.00%	52.63%	14.29%	33.33%	25.00%
Limited jobs or economic opportunity	18.18%	0.00%	21.05%	0.00%	16.67%	0.00%
Seasonality, lack of economic stability	18.18%	0.00%	15.79%	0.00%	0.00%	0.00%
Seafood market uncertainty	9.09%	0.00%	21.05%	14.29%	16.67%	25.00%
Participation costs	18.18%	0.00%	21.05%	14.29%	50.00%	50.00%
Cost of fuel and energy	18.18%	0.00%	21.05%	14.29%	50.00%	50.00%
Sport fishing	0.00%	33.33%	21.05%	28.57%	0.00%	25.00%
Subsistence fishing	0.00%	0.00%	5.26%	28.57%	0.00%	0.00%
Item Respondents	**11**	**3**	**19**	**7**	**6**	**4**

Table 23. -- Cont'd.

	Kuskokwim River Mouth	Northern Alaska	Norton Sound and Bering Strait	Prince William Sound	Southeast
Access to fishing opportunities	8.33%	0.00%	7.14%	0.00%	12.50%
Barriers to new entry	8.33%	0.00%	7.14%	0.00%	12.50%
Availability of fish and status of stocks	25.00%	0.00%	78.57%	50.00%	37.50%
Allocation disputes	25.00%	0.00%	35.71%	50.00%	6.25%
Bycatch	16.67%	0.00%	14.29%	0.00%	0.00%
Hatcheries	0.00%	0.00%	7.14%	0.00%	0.00%
Community Development Quotas	0.00%	0.00%	7.14%	0.00%	0.00%
Environmental concerns and regulations	0.00%	0.00%	0.00%	0.00%	6.25%
Fisheries support infrastructure and services	8.33%	0.00%	7.14%	50.00%	75.00%
Funding limitations	0.00%	25.00%	0.00%	0.00%	12.50%
Management and regulations	0.00%	0.00%	21.43%	0.00%	31.25%
Nature of the industry	41.67%	25.00%	21.43%	0.00%	43.75%
Limited jobs or economic opportunity	16.67%	25.00%	14.29%	0.00%	12.50%
Seasonality, lack of economic stability	16.67%	0.00%	7.14%	0.00%	12.50%
Seafood market uncertainty	8.33%	0.00%	0.00%	0.00%	31.25%
Participation costs	8.33%	0.00%	21.43%	0.00%	56.25%
Cost of fuel and energy	8.33%	0.00%	14.29%	0.00%	43.75%
Sport fishing	0.00%	0.00%	0.00%	0.00%	12.50%
Subsistence fishing	8.33%	0.00%	7.14%	0.00%	0.00%
Item Respondents	**12**	**4**	**14**	**2**	**16**

Figure 34. -- Regional breakdown of responses to the following question: In your opinion, what are the current challenges for the portion of your community's economy that is based on fishing? (Q26).



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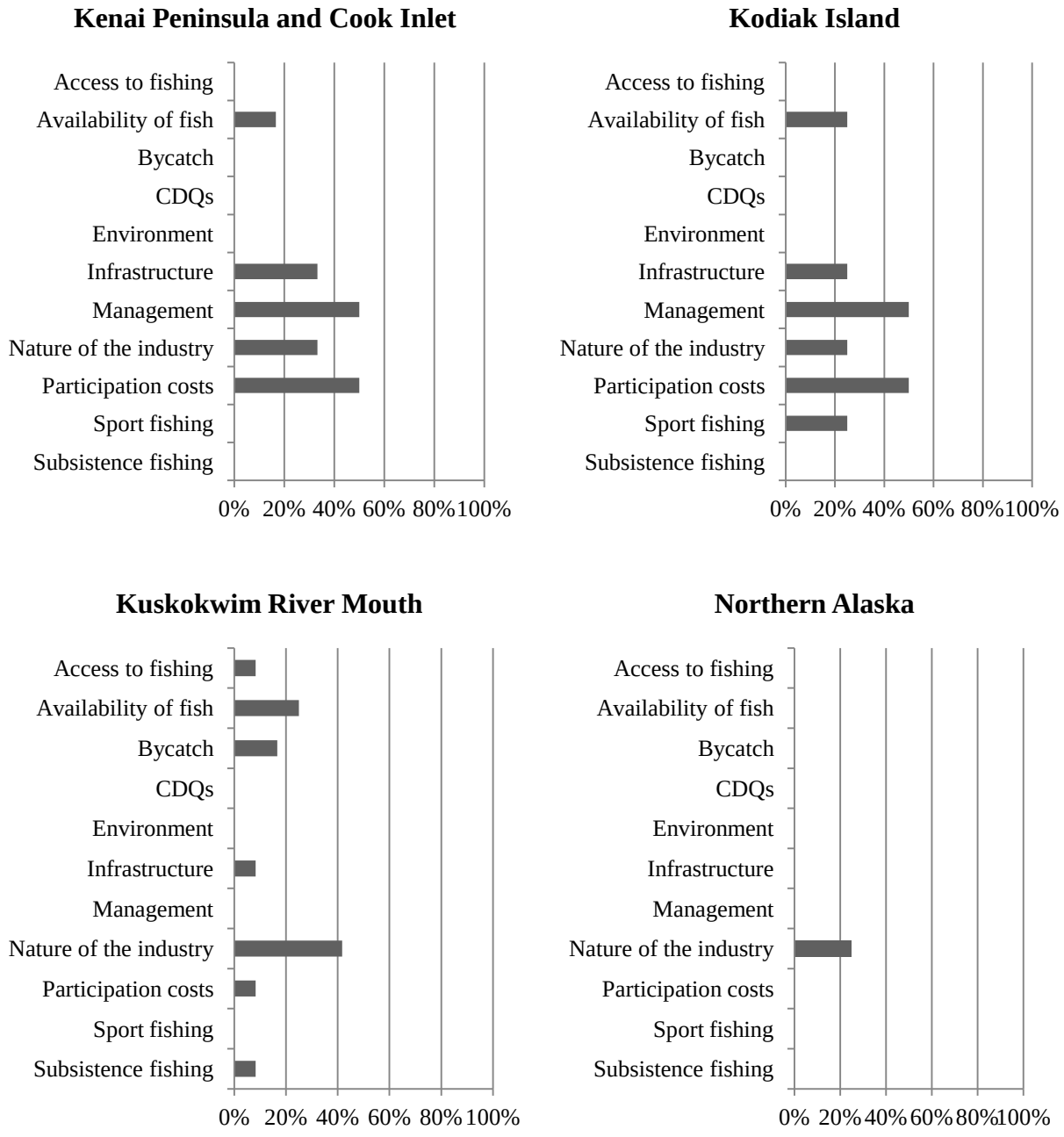

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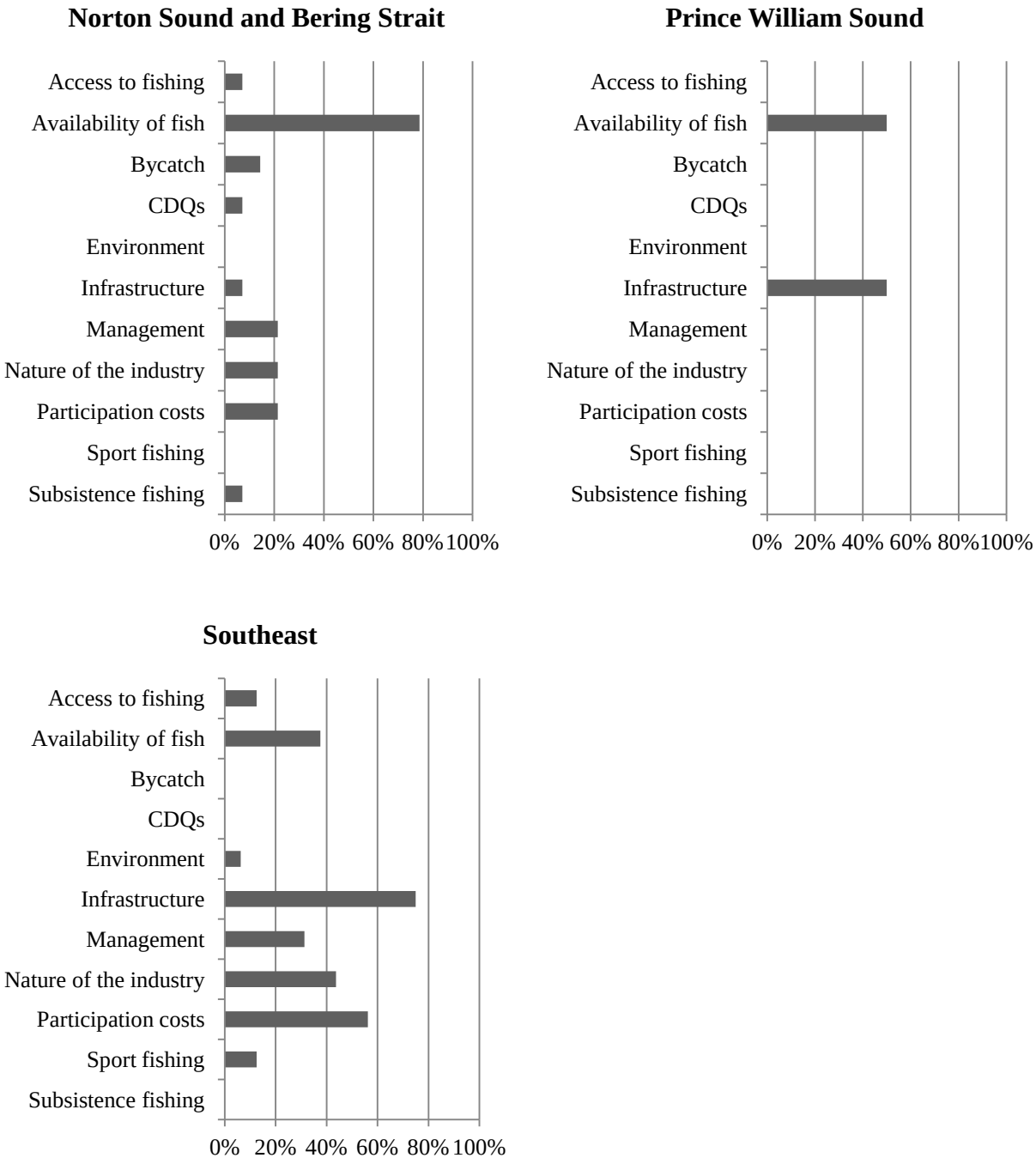


Effects of fisheries policies

Respondents were asked to describe any observed effects of fisheries policies or management actions on their community (Q27). A total of 70 respondents responded to this question (61%). Responses were grouped into themes and subthemes, and the response distributions are shown in Table 24 with the regional responses shown in Table 25 and Figure 35. The most common theme pointed to effects stemming from access to fishing opportunities (43% of item respondents), including both positive and negative views. More than a third of communities in all groupings except the Kuskokwim River Mouth and Northern Alaska groupings referenced this theme.

A subset of these responses also incorporated a response that spoke to the availability of jobs as a community-level impact (17% of item respondents, 40% of theme respondents, 45% of communities in the Bristol Bay and Alaska Peninsula grouping) or specifically referenced season openings as a management decision or policy (9% of item respondents, 20% of theme respondents). One respondent noted the impact of changes in access to fishing opportunities:

> "More and more the community is seeing the effects of reduced ability to participate in fisheries. With no indication that attitude towards fishery participation are improving."

While another respondent noted that:

> "As the fisheries management keeps the salmon fishing periods open, it helps our economy by creating jobs for our local fishermen."

Another respondent spoke to the effects on the processing component of the fishing industry:

> "Management practices (state and federal) have restricted activity enough to cause closure of local processors."

With respect to the lack of jobs, one respondent reported that:

> "The commercial IFQ program greatly reduced the number of commercial halibut fishermen and made it nearly impossible for new fishermen to enter the industry."

A large number of item respondents cited policy or management effects on the availability of fish which then impacted their community (34% of item respondents). This included 100% of Anchorage and Mat-Su, 50% of Interior, and 73% of Norton Sound and Bering Strait regional grouping respondent communities. Additionally, seven respondents reported specifically that it is the lack of bycatch regulations that has made an impact on the availability of fish that has affected their community. Example responses include:

> "The King and Red salmon are disappearing from this area due to mismanagement by the State and salmon bycatch occurring in the pollock fishing industry. Subsistence salmon fishing is overregulated and the trawl industry just being allowed to do what they do."

> "Fish and Game restrictions on harvesting greyling [sic] has brought back greyling [sic] populations."

Several respondents reported that catch shares were a policy or management decision that had effects on their community (10% of item respondents). From the Aleutian and Pribilof Islands grouping, 33% of respondent communities mentioned catch shares as well as 25% from the Kenai Peninsula and Cook Inlet and Kodiak Island communities and 14% of Southeast communities. A positive take on the impact of catch shares was captured by one respondent that noted:

> "On the positive side, catch share programs have worked very well on pollock, crab, IFQ, halibut and sablefish, and on co-ops for longline and Amendment 80 fleets."

However, the majority of responses that addressed catch shares were connected with negative impacts (71% of theme respondents). Examples include:

> "Every time fishing rights are allocated to one group over another, we see a class system fall in place that upsets the natural competitive balance of business. Also if you track the ownership of permits in Alaska it has further enhanced the state mentality of large corporation-owned business versus the small town business that supports Alaskan communities."

> "Halibut and black cod IFQ's have caused a relocation away from Pelican for most of the fleet."

Table 24. -- Regional breakdown of responses to the following question: Please describe the effects you've seen of fisheries policies or management actions, if any, on your community? (Q27).

	N	% survey respondents	% item respondents
Access to fishing opportunities	30	26.09%	42.86%
Availability of jobs	12	10.43%	17.14%
Season openings	6	5.22%	8.57%
Availability of fish	24	20.87%	34.29%
Bycatch regulations	12	10.43%	17.14%
Catch shares	7	6.09%	10.00%
Community Development Quotas regulations	4	3.48%	5.71%
Effects on business	2	1.74%	2.86%
Environment and environmental regulations	6	5.22%	8.57%
Gear regulations	2	1.74%	2.86%
Total item respondents	**70**	**60.87%**	**-**

Table 25. -- Regional breakdown of responses to the following question: Please describe the effects you've seen of fisheries policies or management actions, if any, on your community? (Q27).

	Aleutian and Pribilof Islands	Anchorage and Mat-Su	Bristol Bay and Alaska Peninsula	Interior	Kenai Peninsula and Cook Inlet	Kodiak Island	Kuskokwim River Mouth	Northern Alaska	Norton Sound and Bering Strait	Southeast
Access to fishing opportunities	33.33%	33.33%	55.56%	50.00%	50.00%	50.00%	11.11%	0.00%	45.45%	57.14%
Availability of jobs	22.22%	0.00%	44.44%	33.33%	0.00%	25.00%	0.00%	0.00%	18.18%	7.14%
Season openings	0.00%	0.00%	11.11%	33.33%	0.00%	0.00%	0.00%	0.00%	9.09%	14.29%
Availability of fish	11.11%	100.00%	33.33%	50.00%	25.00%	0.00%	11.11%	0.00%	72.73%	28.57%
Bycatch regulations	11.11%	66.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	27.27%	0.00%
Catch shares	33.33%	0.00%	0.00%	0.00%	25.00%	25.00%	0.00%	0.00%	0.00%	14.29%
Community Development Quotas regulations	11.11%	0.00%	11.11%	0.00%	0.00%	0.00%	0.00%	100.00%	9.09%	0.00%
Effects on business	11.11%	0.00%	0.00%	0.00%	0.00%	0.00%	11.11%	0.00%	0.00%	0.00%
Environment and environmental regulations	22.22%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	21.43%
Gear regulations	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.09%	7.14%
Item Respondents	**9**	**3**	**9**	**6**	**4**	**4**	**9**	**1**	**11**	**14**

Figure 35. -- Regional breakdown of responses to the following question: Please describe the effects you've seen of fisheries policies or management actions, if any, on your community? (Q27).

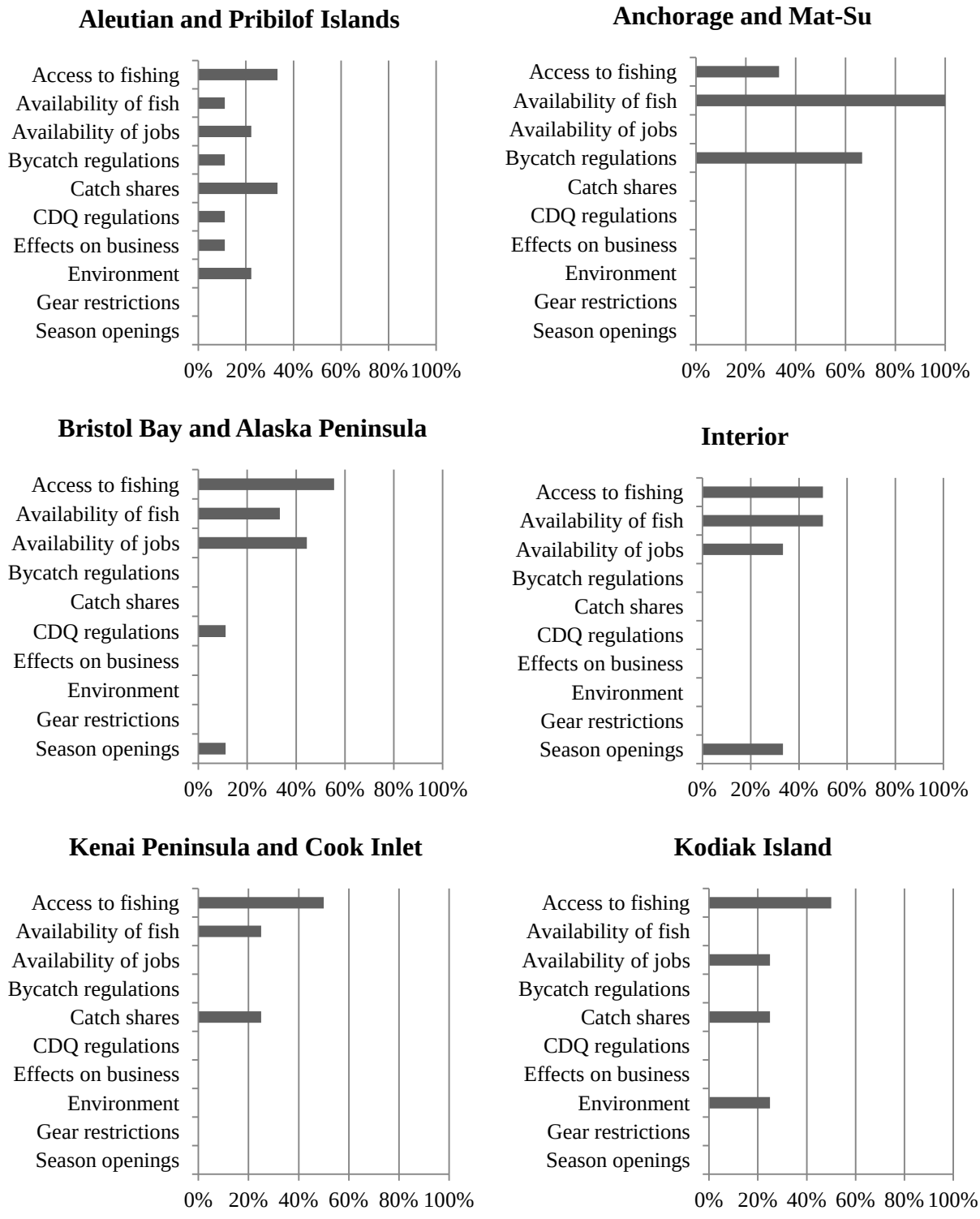
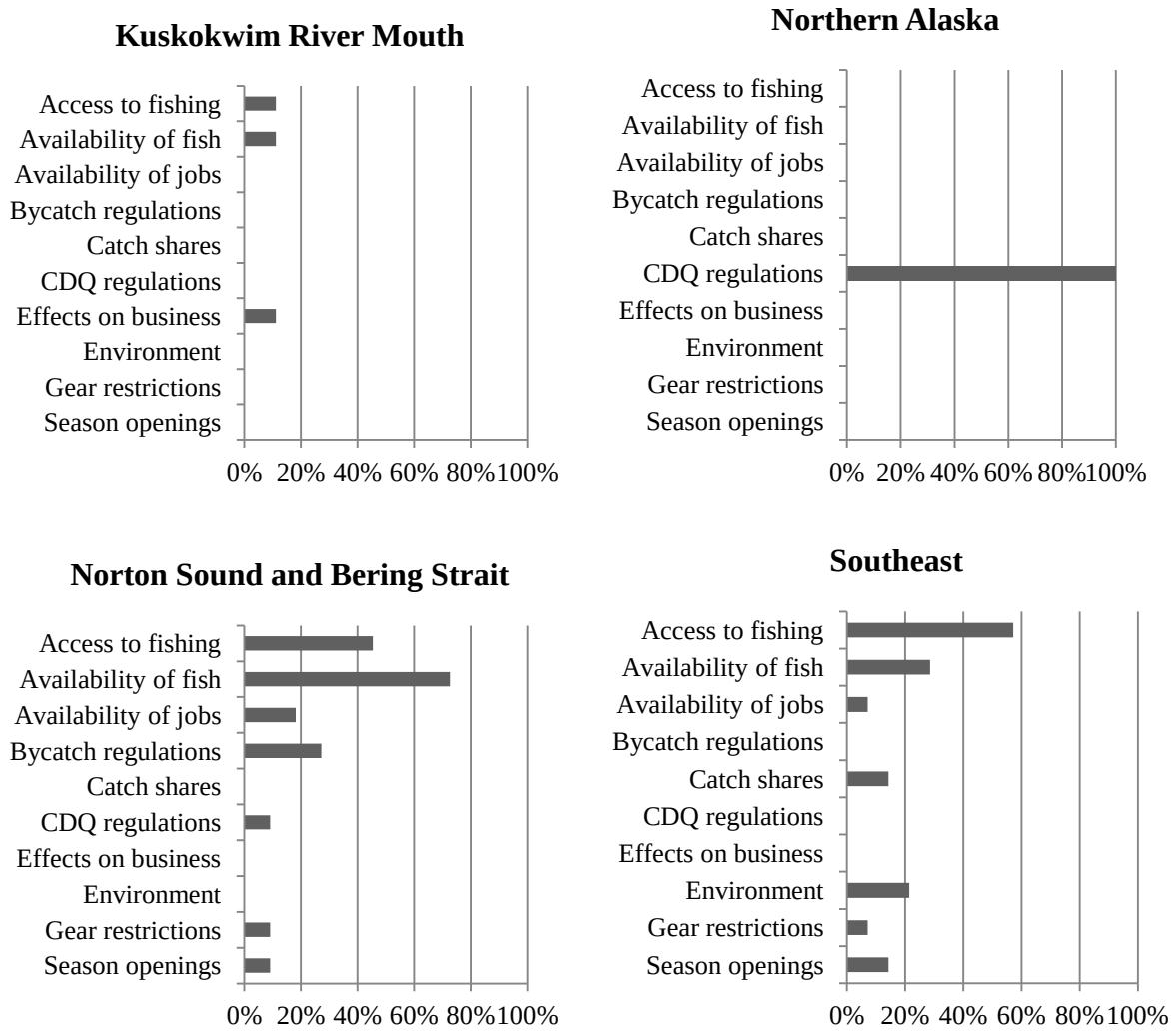


Figure 35. -- Cont'd.



Past and current management actions affecting communities

Another open-ended survey question posed to respondents asked them to report on which past or current policy or management action they feel affected their community the most (Q28). Out of the 115 survey respondents, 68 (59%) included a response to this survey item. Respondents identified a number of different themes in their responses, the response distributions are shown in Table 26 and Table 27 and Figure 36 with the regional distribution of responses. Allocation decisions were listed as affecting the community by 12% of item respondents. This theme was discussed by four of the regional groupings, including Anchorage and Mat-Su (33%), Kuskokwim River Mouth (25%), Prince William Sound (100%), and Southeast (29%). For example, one respondent stated that:

> "The current management of the Sitka sac roe herring fishery has had a negative impact on the subsistence herring egg harvest. The frequency and intensity of test

fishing and commercial openings just prior to major spawning events has disrupted traditional spawning patterns."

While another reported that:

> "The subsistence halibut (SHARC) program for local rural Alaska residents native and non native has proven to be a successful program. This program allows for the legal take of halibut for subsistence purposes, while allowing managers to gain valuable data through harvest surveys (creel surveys) on the take of halibut and by-catch of other species particularly of rockfish and lingcod."

Nearly 21% of item respondents cited allowable catch decisions as a policy or management action that affected their community the most, including 50% of communities in the Southeast grouping. Notable responses included:

> "Halibut quota cuts in Wrangell area has devalued the package to the fisherman and restricted income."

> "Negative – Skwentna area Chinook runs are not meeting goal ranges, as sockeye also have not in years recent, so, restrictions have been placed on area sport harvests, which hurts the local economy. Subsistence fisheries are being threatened by low returns also. Positive – managers have started Northern Pike control to allow salmon to rebound back from concern."

Some respondents referenced the CDQ program as a policy or management action they perceive as having had the greatest impact on their community (12% of item respondents). Responses included:

> "Most – as far as city goes, the reorganization of the CDQ groups has allowed city projects to move ahead quickly to the benefit of the community and harbor users."

> "We have been adversely affected by the policy of not being able to participate in the CDQ program. We are the farthest north fishery and have not been able to upgrade our fishery and continue to struggle as the CDQ groups are subsidizing their fishermen in their development process."

Some respondents reported answers that mentioned policies or management actions on limited entry, quota management, or catch shares (26% of item respondents). This theme was reported by 25% of Aleutian and Pribilof Islands communities, 50% of Bristol Bay and Alaska Peninsula, 50% of Kenai Peninsula and Cook Inlet, 100% of Kodiak Island, 100% of Prince William Sound, and 36% of Southeast regional grouping communities. For example:

> "IFQ program. Most of the original holders of IFQs have sold there [sic] shares out of the community."

"Limited entry permits for salmon/halibut/king crab. Loss of income = loss of resident jobs."

Another common theme for responses was marine mammal regulations (10% of item respondents) and the Endangered Species Act specifically (57% of theme respondents). Marine mammals were discussed by 50% of Aleutian and Pribilof Island communities, 33% of Kodiak Island communities, and 14% of Southeast communities. One respondent stated:

"The proposed regulations regarding the Stellar Sea Lion Protection Act, are poised to have the most detrimental effects on Adak. As mentioned before, without fishing the community is hampered in its quest to diversify the economy. While there may be an intrinsic benefit in some future year, the reality is that 2011 saw its worse economic year due to lack of traffic and usage of local businesses. Without this act and the associated closure, the economic impact on the Island would have been much more positive than was experienced."

Table 26. -- Distribution of responses to the following question: Which past or current fisheries policy or management action affected your community the most? (Q28).

	N	% survey respondents	% item respondents
Allocation decisions	8	6.96%	11.76%
Allowable catch decisions	14	12.17%	20.59%
Bycatch regulations	6	5.22%	8.82%
Community Development Quotas	8	6.96%	11.76%
Charter industry regulations	1	0.87%	1.47%
Fishery season openings and closures	3	2.61%	4.41%
Gear restriction changes	5	4.35%	7.35%
Limited entry, quota management, and catch shares	18	15.65%	26.47%
Management structure	6	5.22%	8.82%
Marine mammal regulations	7	6.09%	10.29%
Endangered Species Act	4	3.48%	5.88%
Subsistence regulations	1	0.87%	1.47%
Total item respondents	**68**	**59.13%**	**-**

Table 27. -- Regional breakdown of responses to the following question: Which past or current fisheries policy or management action affected your community the most? (Q28).

	Aleutian and Pribilof Islands	Anchorage and Mat-Su	Bristol Bay and Alaska Peninsula	Interior	Kenai Peninsula and Cook Inlet	Kodiak Island
Allocation decisions	0.00%	33.33%	0.00%	0.00%	0.00%	0.00%
Allowable catch decisions	12.50%	33.33%	0.00%	20.00%	0.00%	0.00%
Bycatch regulations	12.50%	33.33%	0.00%	0.00%	0.00%	0.00%
Community Development Quotas	25.00%	0.00%	20.00%	40.00%	0.00%	0.00%
Charter industry regulations	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%
Fishery season openings and closures	12.50%	0.00%	0.00%	0.00%	0.00%	0.00%
Gear restriction changes	0.00%	0.00%	10.00%	20.00%	0.00%	0.00%
Limited entry, quota management, and catch shares	25.00%	0.00%	50.00%	0.00%	50.00%	100.00%
Management structure	0.00%	0.00%	0.00%	60.00%	0.00%	0.00%
Marine mammal regulations	50.00%	0.00%	0.00%	0.00%	0.00%	33.33%
Endangered Species Act	37.50%	0.00%	0.00%	0.00%	0.00%	33.33%
Subsistence regulations	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%
Item respondents	**8**	**3**	**10**	**5**	**4**	**3**

Table 28. -- Cont'd.

	Kuskokwim River Mouth	Northern Alaska	Norton Sound and Bering Strait	Prince William Sound	Southeast
Allocation decisions	25.00%	0.00%	0.00%	100.00%	28.57%
Allowable catch decisions	12.50%	0.00%	27.27%	0.00%	50.00%
Bycatch regulations	12.50%	0.00%	27.27%	0.00%	0.00%
Community Development Quotas	0.00%	100.00%	9.09%	0.00%	0.00%
Charter industry regulations	0.00%	0.00%	0.00%	0.00%	0.00%
Fishery season openings and closures	12.50%	0.00%	0.00%	0.00%	7.14%
Gear restriction changes	0.00%	0.00%	27.27%	0.00%	0.00%
Limited entry, quota management, and catch shares	0.00%	0.00%	0.00%	100.00%	35.71%
Management structure	0.00%	0.00%	27.27%	0.00%	0.00%
Marine mammal regulations	0.00%	0.00%	0.00%	0.00%	14.29%
Endangered Species Act	0.00%	0.00%	0.00%	0.00%	0.00%
Subsistence regulations	0.00%	0.00%	0.00%	0.00%	0.00%
Item respondents	**8**	**1**	**11**	**1**	**14**

Figure 36. -- Regional breakdown of responses to the following question: Which past or current fisheries policy or management action affected your community the most? (Q28).

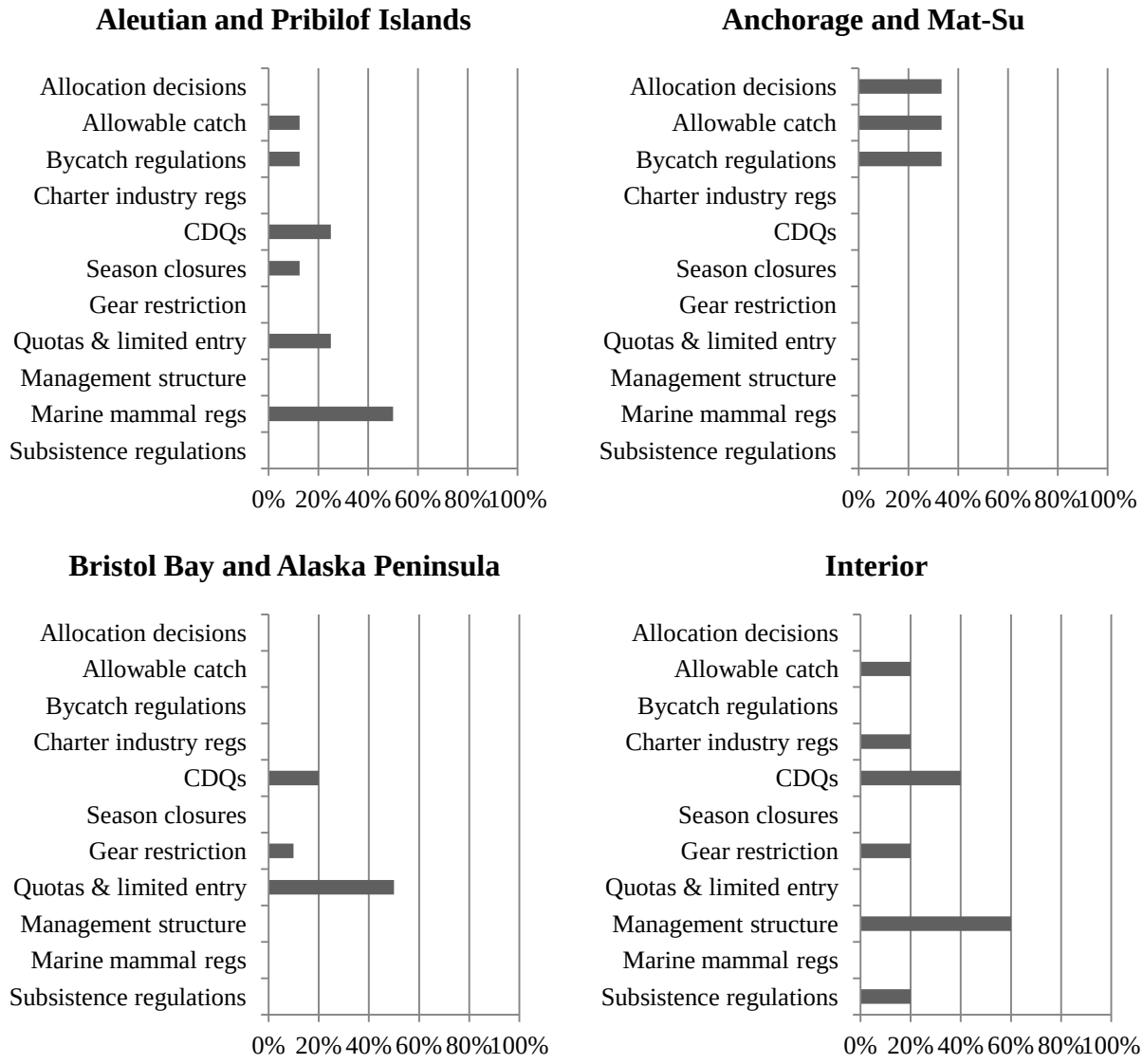


Figure 36. -- Cont'd.

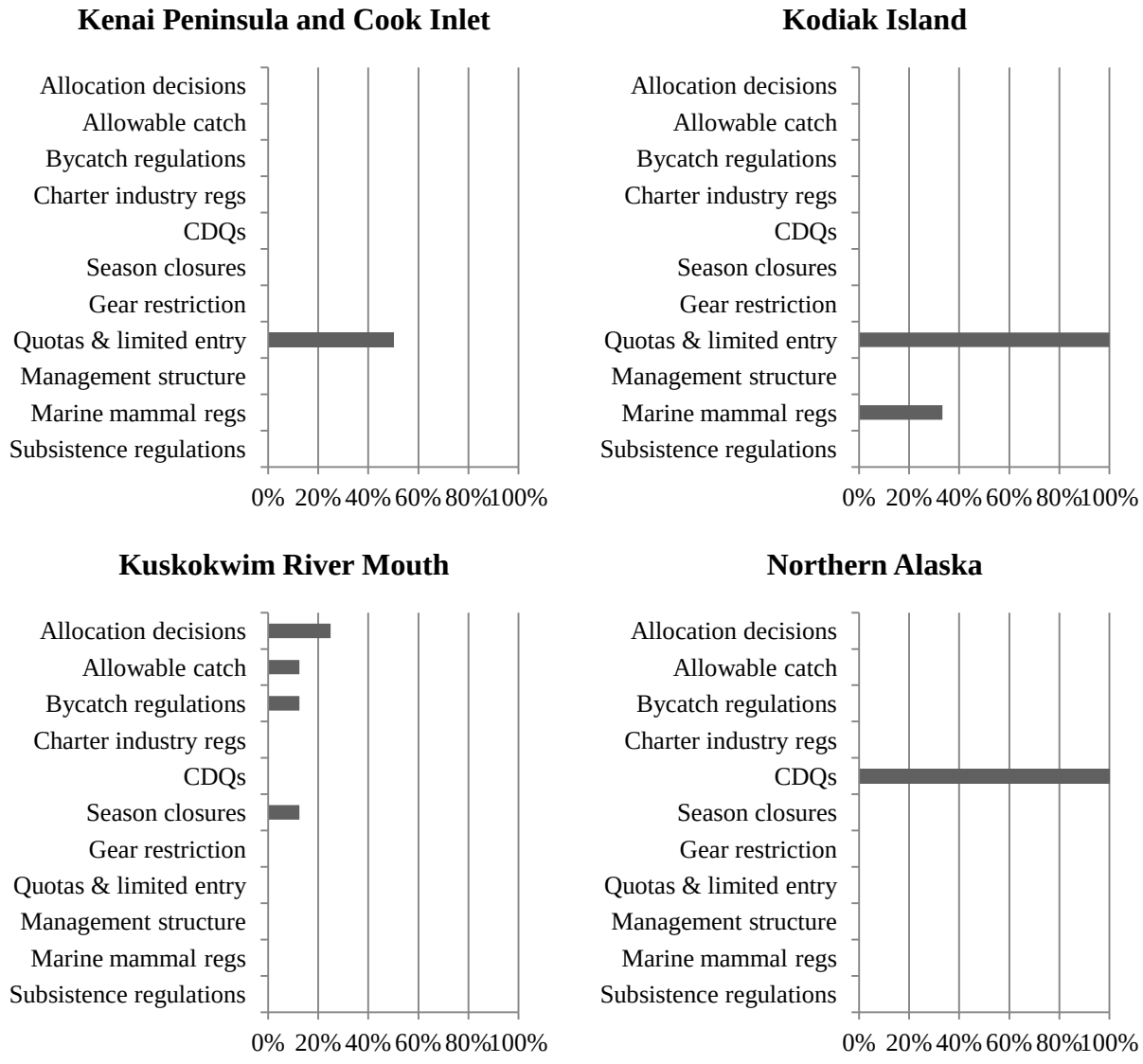
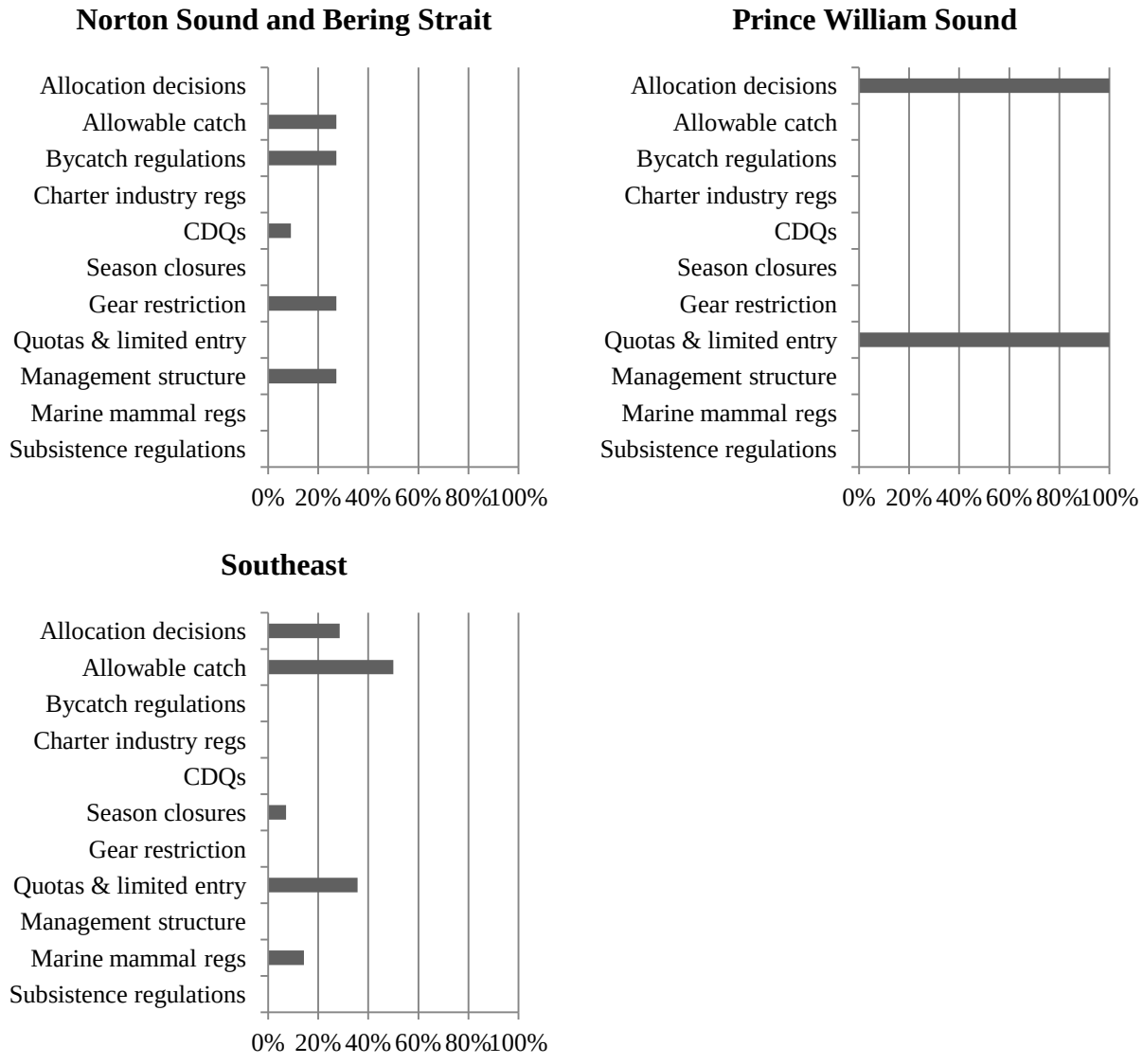


Figure 36. -- Cont'd.



Future fisheries management concerns

The final open-ended question asked respondents to report on what potential future fisheries policy or management action concerns their community the most (Q29). Responses touched on a variety of topic areas, with some clustering under a few common themes as shown in Table 29 and Table 30 and Figure 37 with the regional distribution of responses. Of the item respondents, 23% referenced some sort of allocation or quota decision as the policy or management action their community is most concerned about, including 29% of communities in the Aleutian and Pribilof Islands, 27% in Bristol Bay and the Alaska Peninsula, 50% in the Interior, 33% on the Kenai Peninsula and Cook Inlet, 25% on Kodiak Island, 13% near the Kuskokwim River mouth, 33% in Norton Sound and the Bering Strait, and 9% of communities in Southeast Alaska. One respondent noted:

> "Any actions that affect quotas, which reduce processing (i.e., less tax revenues) or less transient (or local) vessels using King Cove harbor facilities (i.e. less harbor/port fees), are a concern for King Cove."

Several respondents also referenced bycatch (16% of item respondents) in discussing future policy or management action concerns for their community. All respondents referenced salmon bycatch specifically, therefore it is inferred that most respondents were speaking to prohibited species catch (PSC) rather than incidental catch. From the regional groupings, 67% of the Anchorage and Mat-Su, 33% of the Kenai Peninsula and Cook Inlet, and 38% of Kuskokwim River mouth communities reported answers that referenced this theme. Respondents reported:

> "Need to restrict or close high sea fishing in the Bering Sea until different salmon species numbers or counting becomes normal as in the past within there were no fisheries that disrupted the ocean ecosystem where the different salmon species grow. Now they are returning as being abnormal or smaller in size due to their food chain being severely impacted by ocean trawler bottom fishing for pollock, etc."

> "Skwentna is a terminal fishery for salmon, so several intercept fisheries may be negatively affecting this fishery. 1. Offshore pollock fishery has a Chinook bycatch. 2. Cook Inlet drift salmon fishery intercepts sockeye, coho, chum, pink destined for Skwentna. 3. Cook Inlet setnets intercept Chinook ground for Skwentna."

Some respondents touched on environmental issues in their responses (9% of item respondents).:

> "The community is enormously worried about the Pebble mine as well as offshore drilling. Acid mine runoff and industrial activity at the headwaters of the two largest salmon streams in Bristol Bay would inevitably pollute these waters. These two prospective development actions may be outside the hands of fisheries policy makers or management, but both state and federal managers need to be proactive, organized, and funded to gather information and data to protect the fisheries."

> "Need more action and research on the affects [sic] of ocean acidification and climate change on fish populations and shellfish populations."

Other topical areas that responses referenced included sea otter management and subsistence regulations. Examples are included below:

> "There has been a large increase in numbers sea otters in the Kake area, and a subsequent drop in the number of crab, shrimp, and clams harvested. The most affected is the local Kake commercial Dungeness crab fishermen who have seen their revenues dwindle from the poor catches and the City of Kake with lost moorage revenues from the lower number of out of town crabbers who have given up on fishing the area and finally the local sport and subsistence user who finds it

more difficult and costly to catch what they need. Local residents support any effort (legislation, regulations etc.) to allow culling of the population of sea otters to help crab, shrimp and clam stocks to recovery. So that the local commercial and subsistence fishing can remain viable."

"The potential future fishery policy or management action concerns Chevak the most is the regulations that may affect our subsistence way of living: which most of Chevak depends on throughout the year.[…]"

Additionally, the topic of sportfishing regulations was brought up by 17% of Interior communities, 33% of Kenai Peninsula and Cook Inlet communities, and 9% of Southeast communities.

Table 28. -- Distribution of responses to the following question: What, if any, potential future fisheries policy or management action concerns your community the most? (Q29).

	N	% survey respondents	% item respondents
Allocation and quota decisions	16	13.91%	23.19%
Bycatch	11	9.57%	15.94%
Catch shares	3	2.61%	4.35%
Community Development Quotas	2	1.74%	2.90%
Environmental issues	6	5.22%	8.70%
Endangered Species Act	2	1.74%	2.90%
Fisheries closure	2	1.74%	2.90%
Fishery enhancement	2	1.74%	2.90%
Fuel costs	1	0.87%	1.45%
Genetically-engineered salmon	1	0.87%	1.45%
Gear changes	2	1.74%	2.90%
Market changes	2	1.74%	2.90%
Marine Mammal Protection Act	2	1.74%	2.90%
New entry	1	0.87%	1.45%
Overregulation	2	1.74%	2.90%
Sea otter management	3	2.61%	4.35%
Sport fishing regulations	3	2.61%	4.35%
Stakeholder representation	2	1.74%	2.90%
Subsistence regulations	2	1.74%	2.90%
Vessel restrictions	1	0.87%	1.45%
Total item respondents	**69**	**60.00%**	**-**

Table 29. -- Regional breakdown of responses to the following question: What, if any, potential future fisheries policy or management action concerns your community the most? (Q29).

	Aleutian and Pribilof Islands	Anchorage and Mat-Su	Bristol Bay and Alaska Peninsula	Interior	Kenai Peninsula and Cook Inlet	Kodiak Island	Kuskokwim River Mouth	Northern Alaska	Norton Sound and Bering Strait	Southeast
Allocation and quota decisions	28.57%	0.00%	27.27%	50.00%	33.33%	25.00%	12.50%	0.00%	33.33%	9.09%
Bycatch	0.00%	66.67%	9.09%	16.67%	33.33%	0.00%	37.50%	0.00%	25.00%	0.00%
Catch shares	14.29%	0.00%	9.09%	0.00%	33.33%	0.00%	0.00%	0.00%	0.00%	0.00%
Community Development Quotas	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%	33.33%	0.00%	0.00%
Environmental issues	14.29%	0.00%	18.18%	0.00%	0.00%	0.00%	0.00%	33.33%	0.00%	18.18%
Endangered Species Act	14.29%	0.00%	0.00%	0.00%	33.33%	0.00%	0.00%	0.00%	0.00%	0.00%
Fisheries closure	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.33%	9.09%
Fishery enhancement	0.00%	33.33%	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%
Fuel costs	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.50%	0.00%	0.00%	0.00%
Genetically-engineered salmon	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.09%
Gear changes	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.50%	0.00%	0.00%	9.09%
Market changes	0.00%	0.00%	9.09%	0.00%	0.00%	0.00%	12.50%	0.00%	0.00%	0.00%
Marine Mammal Protection Act	0.00%	0.00%	0.00%	0.00%	33.33%	0.00%	0.00%	0.00%	0.00%	9.09%
New entry	0.00%	0.00%	9.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Overregulation	0.00%	0.00%	0.00%	16.67%	0.00%	0.00%	0.00%	0.00%	0.00%	9.09%
Sea otter management	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	27.27%
Sport fishing regulations	0.00%	0.00%	0.00%	16.67%	33.33%	0.00%	0.00%	0.00%	0.00%	9.09%
Stakeholder representation	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.50%	0.00%	8.33%	0.00%
Subsistence regulations	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.50%	0.00%	8.33%	0.00%
Vessel restrictions	0.00%	0.00%	9.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Item Respondents	**7**	**3**	**11**	**6**	**3**	**4**	**8**	**3**	**12**	**11**

Figure 37. -- Regional breakdown of responses to the following question: What, if any, potential future fisheries policy or management action concerns your community the most? (Q29).

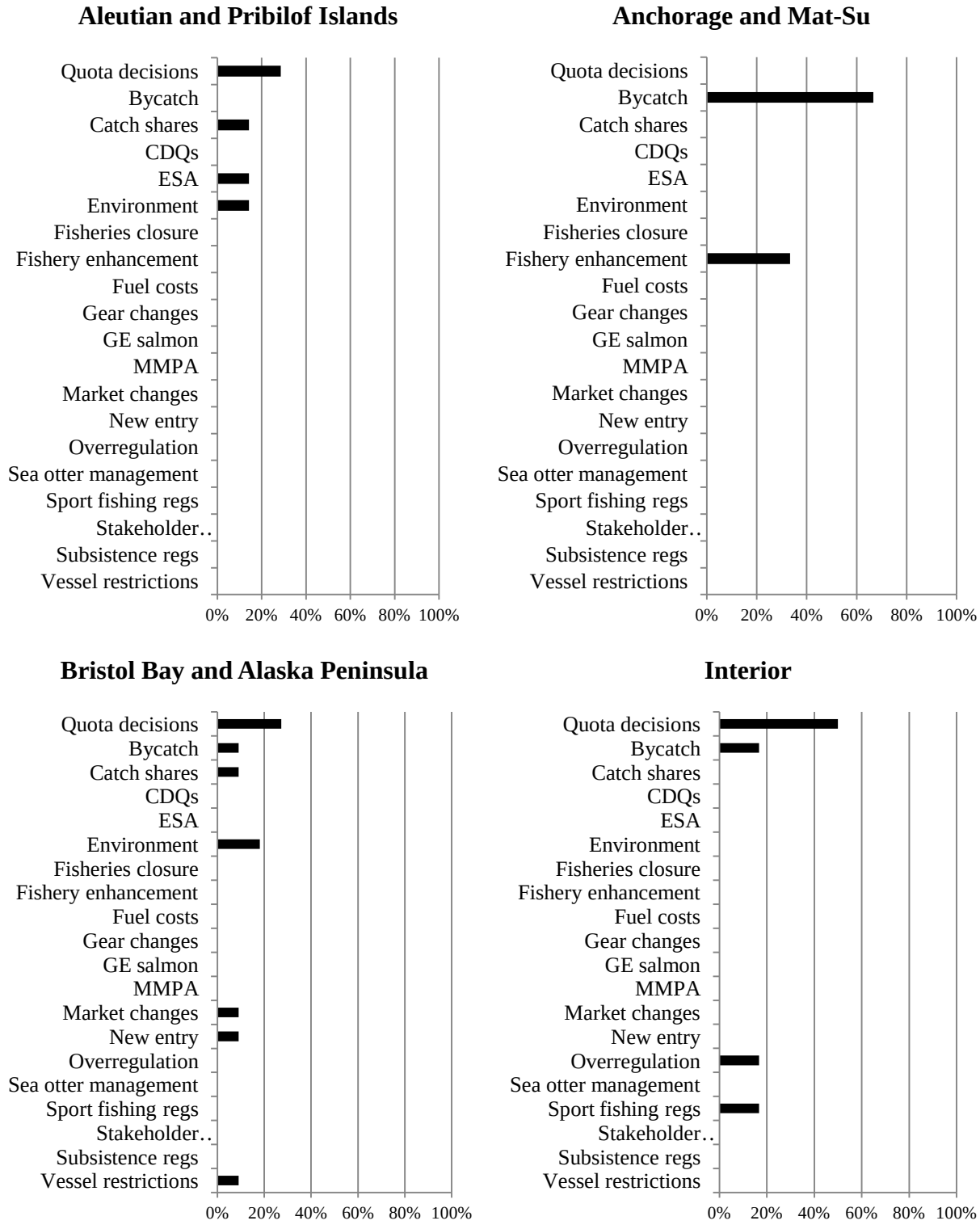


Figure 37. -- Cont'd.

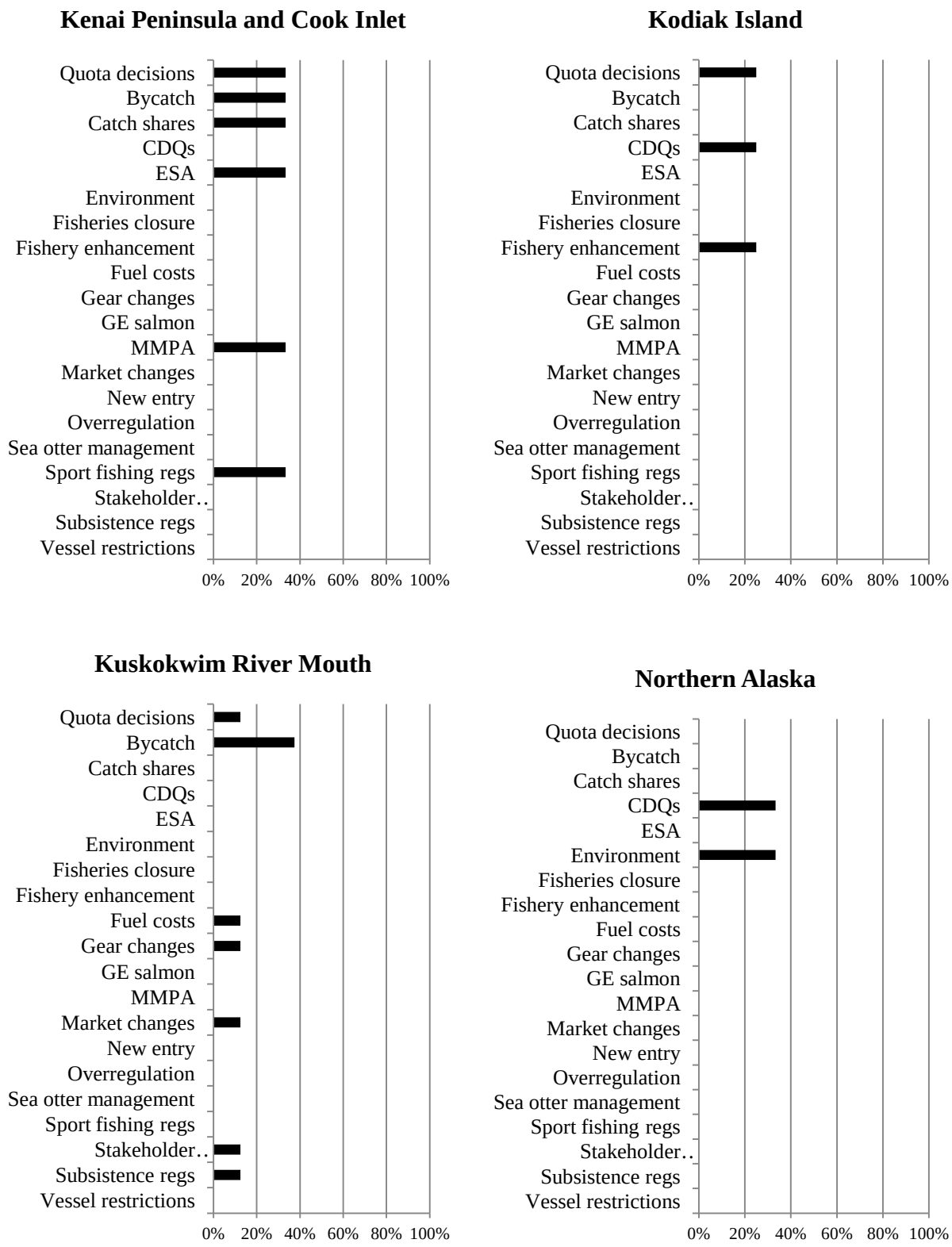
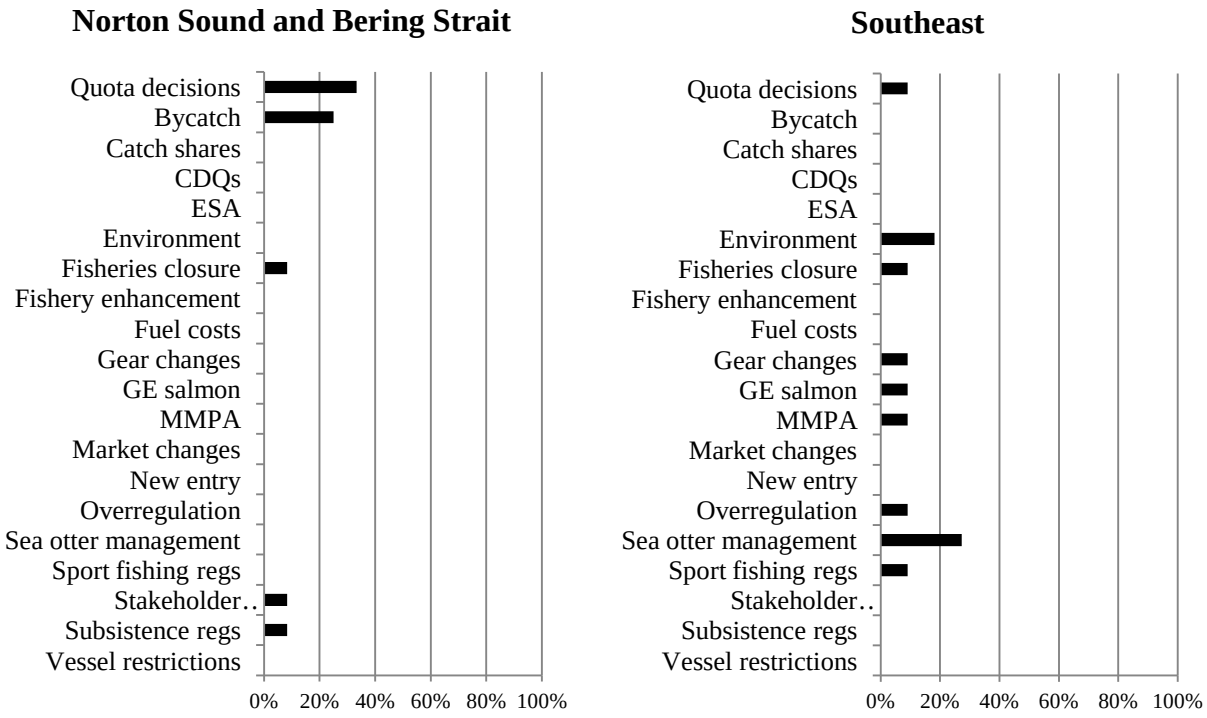


Figure 37. -- Cont'd.



DISCUSSION AND CONCLUSION

This report detailed the development, implementation and results of the first year of the Alaska Community Survey data collection. Surveys were sent to communities in Alaska that met specific criteria for participation and engagement in commercial, recreational, and subsistence fisheries. The goal of the survey was to address an existing informational void by collecting community-level data that can be utilized for numerous fisheries management purposes. The overall response rate for the survey was 59.6%. A non-response analysis was done to reveal any potential sources of bias in the survey results based on characteristics of the communities that did and did not respond to the survey. Twenty variables were analyzed, of which community governance classification and connection to the highway system returned significant values for the relationship between the characteristic and survey response. The data presented in this report have not been adjusted for these potential sources of bias. Subsequent publications of this data may seek to address this.

The data summary demonstrates that among Alaskan communities pre-selected based on measures of participation in fisheries, there are both commonalities and substantial differences in how communities can support, and be supported by, fishing activities. The survey data was analyzed by post-hoc assignment of communities into 11 different regional groupings. Many communities reported seasonal population fluctuations, which some attributed to employment in the fishing industry. The results across regional groupings varied, with communities within the Aleutian and Pribilof Islands and Kodiak Island groups more often reporting a strong influence of fishing on population fluctuations. In all regions, many communities reported that their economy depends on fishing and hunting. Mining, logging, and oil and gas as important industries for communities' economies were reported much less frequently across all regions. However, it is important to note that the pool of communities was pre-selected based on some level of fishing participation.

The survey results also offer snapshots of the fishing infrastructure present in each community. The majority of respondent communities in the Anchorage and Mat-Su, Bristol Bay and Alaska Peninsula, Interior, Northern Alaska, and Norton Sound and Bering Strait groupings reported no public dock space available for permanent vessels. This indicates that many of these communities may have residents that participate in the fishing industry in some capacity, but that boats are either small enough to be pulled up on the beach or are moored elsewhere. A few of the regional groupings encompass communities that offer different infrastructure capacities such as ports capable of handling different size classes of vessels. The Aleutian and Pribilof Islands, Kenai Peninsula and Cook Inlet, Kodiak Island, and Southeast regional groupings have relatively even frequency distributions of capacities across various vessel size classifications. This may represent a diversification of fishing activity capacity across communities within regional groupings.

The survey question regarding gear use reveals the degree of diversification or specialization of an individual community relative in commercial fishing. Within the Bristol Bay and Alaska Peninsula, Interior, Kuskokwim River Mouth, Northern Alaska, and Norton Sound and Bering Strait groupings, the majority of communities reported that residents use only one gear type (predominantly gillnets). Communities in the Aleutian and Pribilof Islands, Kenai Peninsula and Cook Inlet, Kodiak Island, Prince William Sound, and Southeast groupings reported a greater diversity in the number of gear types employed by commercial fishermen

based out of their community. This suggests that a change in regulations such as restrictions on mesh size in gillnets may affect regions differently depending on their portfolio of gear types.

The survey also gathered information on the subsistence resources important to different communities. Patterns of subsistence use emerged based on geography which might indicate the localized availability of resources. For example, whale was listed as a top subsistence resource in all Northern Alaska communities that responded to the survey item. Respondents specifically noted that bowhead and beluga whales were important sources of food for their communities. The most common subsistence resource listed by communities across all regional groupings was salmon, highlighting the potential for wide-ranging impacts of fluctuations in salmon populations and the associated ecosystem health.

Questions from the survey gathered information that help reveal the avenues through which communities receive revenue from fishing activity. For some communities, fees associated with public moorage facilities bring in significant revenue. Communities in the Southeast, for example, reported an average of $715,591 in revenue earned from public moorage facilities. This suggests that just as individual fishermen may depend on a community for goods, services, and infrastructure relative to fishing activity, communities may economically depend on individual fishermen paying to utilize this infrastructure and access to goods and services.

Many communities reported that funding from fisheries-related taxes or fee programs was used to support fishing activity including maintaining docks; and some communities indicated that fishery-sourced funding was also used to support social services beyond fishing, such as building or maintaining roads and funding police and fire services. These results suggest that revenue brought into a community through fishing activity can have far-reaching effects on overall social functioning and available services within a community. Communities may also be eligible for funding through the CDQ program depending on their geographic location. The level of funding varied widely between regional groupings, with Aleutian and Pribilof Islands communities reporting a mean of $3.4 million in funding received while Norton Sound and Bering Strait communities reported a mean of $77,500 in funding, suggesting that CDQ funding may be a significant source of revenue for some program eligible communities, but not all.

Communities were asked to characterize their involvement or participation in the fisheries management process, and results show broad diversity across regional groupings. One interesting factor underlying participation rates was whether communities have a paid staff member that attends NPFMC and/or Board of Fisheries meetings. Respondent communities in the Anchorage and Mat-Su, Bristol Bay and Alaska Peninsula, Interior, Northern Alaska, and Prince William Sound groupings did not report having a paid representative acting on their behalf in front of these management bodies. This may suggest significant differences in how regional interests are represented in the management process in terms of the time and effort that an unpaid representative versus a paid representative may be able to spend in an advocacy role for a region's interests.

The final significant result stemming from this survey was a social network analysis of the connections between communities and where they obtain fishery-support goods or services that are not available within their own community. The sub-networks of the regional groupings were all different in terms of whether the connections a community reported were within the same regional grouping or to communities in different groupings. Due to the differences in sample size between the regional grouping sub-networks, extensive comparison across regions may give a biased view of the survey results. However, general patterns can be observed. The Bristol Bay and Alaska Peninsula, Kuskokwim River Mouth, and Southeast regional groupings

reported the majority of connections to be to communities within the same regional groupings. The Anchorage and Mat-Su, Interior, Kenai Peninsula, Kodiak Island, Northern Alaska, and Norton Sound groupings reported a predominance of ties to communities outside the regional grouping. The other grouping (Aleutian and Pribilof Islands) reported a more even split between ties to within-region communities as to those outside of the regional grouping. These results can help formulate characterizations of communities or regions in terms of their self-sufficiency for supporting fishing activity. It is important to note, though, that the regional groupings are a post-hoc data attribute chosen to help illustrate likely regional affiliation. It is possible that for certain communities on the geographic edge of their grouping, a neighboring grouping may be physically closer and thus more likely to serve as connection if it happens to have the needed fishery support businesses. Future analyses could be done on the networks using variables such as physical distance or transportation infrastructure to further elucidate the connections between communities.

The results of the survey's open-ended questions help demonstrate salient themes important to communities across Alaska. When asked about the challenges for a community's fishery-based economy, common themes across the state included the availability of fish and the status of stocks, maintaining or providing fisheries support infrastructure and services, the nature of the fishing industry (such as the seasonality of fishing), and participation costs. Nearly all item respondents consistently cited these four themes. The availability of fish affects the revenue brought into a community from fishing activities which in turn affects the ability of a community to fund fisheries support infrastructure and services. The nature of fishing with its seasonality and unpredictability, and dependence on fuel prices, may also add risk and volatility to local economies that may not have many other options for employment and income beyond fishing. Fishing and fishermen support a community via income and revenue while communities support fishermen via infrastructure and services; the main themes identified in the survey suggest that the balance between the two is delicate.

A symptom of the challenges a community may face due to a reduced availability of fish may be a lack of access to fishing opportunities, which was the most cited theme as a response to the effects of management on a community. Respondents noted that this resulted in a loss of jobs in the community, an effect that may be especially pronounced in a community with few other economic opportunities. Several respondents also spoke to bycatch issues, noting that salmon bycatch (generally assumed to be PSC rather than incidental catch) in other fisheries impacted the availability of fish for their local fishermen. Catch shares were also an often cited theme in terms of a specific management decision or policy that affected a community. Communities reported that the negative impacts included lack of access to the fishery for new entrants and loss of fishing rights to non-local entities. This suggests that some communities have seen an eroding ability to participate and have a stake in fisheries as a result of the shift to catch share management type programs.

The results of this survey offer a snapshot in time for Alaskan communities and their respective fisheries participation. Lessons learned from the first year of the implementation of this survey resulted in a change in the timing of when the survey was administered. Respondents provided feedback that the survey administration should be scheduled around major fishing seasons to increase response rates. As a result of this suggestion, the second year of survey implementation was conducted in late 2012 to provide data for the 2011 calendar year. These data will be published in a separate report. Currently, the survey is undergoing preparation for a third year of implementation in the fall of 2014. It is our hope that implementation of the survey

over successive years will provide longitudinal insight into Alaskan communities' fisheries participation.

ACKNOWLEDGMENTS

We would like to thank Dan Lew and Ron Felthoven for help in the review of the survey instrument and for their useful suggestions that have improved this report, and Kristin Hoelting and Conor Maguire of the Pacific States Marine Fisheries Commission for research assistance.

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APPENDIX A: REGIONAL RESPONSE DISTRIBUTION TABLES

TABLES

TABLES

Appendix Table A1. -- Regional breakdown of responses to the following question: How many people live in your community as year round residents? (Q1).

	N	Mean	Median	Max	Min	St.Dev.
Aleutian and Pribilof Islands	12	566.88	97.50	4,376.00	1.00	1,234.70
Anchorage and Mat-Su	6	55,470.17	4,019.50	291,826.00	100.00	116,417.51
Bristol Bay and Alaska Peninsula	19	266.37	108.00	2,264.00	10.00	506.11
Interior	8	4,899.00	391.00	31,535.00	200.00	10,874.74
Kenai Peninsula and Cook Inlet	7	1,719.43	350.00	5,600.00	133.00	2,454.17
Kodiak Island	5	1,298.40	180.00	6,000.00	32.00	2,629.19
Kuskokwim River Mouth	16	780.50	457.00	5,803.00	68.00	1,363.42
Northern Alaska	5	1,783.20	556.00	4,380.00	260.00	1,907.72
Norton Sound and Bering Strait	15	1,238.60	550.00	7,850.00	148.00	1,998.48
Prince William Sound	2	1,149.50	1,149.50	2,239.00	60.00	1,540.79
Southeast	19	1,671.24	450.00	13,000.00	1.00	3,436.53

Appendix Table A2. -- Regional breakdown of responses to the following question: How many live in your community as year round residents and work in a shore-side processing plant? (Q1).

	N	Mean	Median	Max	Min	St.Dev.
Aleutian and Pribilof Islands	11	79.36	0.00	800.00	0.00	239.23
Anchorage and Mat-Su	3	1.67	0.00	5.00	0.00	2.89
Bristol Bay and Alaska Peninsula	16	12.75	0.00	165.00	0.00	41.12
Interior	6	0.50	0.00	3.00	0.00	1.22
Kenai Peninsula and Cook Inlet	7	31.43	0.00	150.00	0.00	55.51
Kodiak Island	5	200.80	1.00	1,000.00	0.00	446.77
Kuskokwim River Mouth	11	78.32	3.00	770.00	0.00	229.78
Northern Alaska	4	0.00	0.00	0.00	0.00	0.00
Norton Sound and Bering Strait	13	8.54	0.00	48.00	0.00	15.59
Prince William Sound	1	282.00	282.00	282.00	282.00	0.00
Southeast	18	26.33	2.00	150.00	0.00	47.26

Appendix Table A3. -- Regional breakdown of responses to the following question: How many people live in your community as seasonal workers or transients? (Q1).

	N	Mean	Median	Max	Min	St.Dev.
Aleutian and Pribilof Islands	12	525.25	250.00	2,500.00	0.00	768.80
Anchorage and Mat-Su	3	200.00	200.00	300.00	100.00	100.00
Bristol Bay and Alaska Peninsula	17	597.94	40.00	4,500.00	2.00	1,228.61
Interior	5	192.80	30.00	800.00	10.00	341.22
Kenai Peninsula and Cook Inlet	7	837.86	120.00	4,000.00	0.00	1,493.06
Kodiak Island	4	222.50	140.00	600.00	10.00	269.24
Kuskokwim River Mouth	15	115.73	25.00	600.00	3.00	188.50
Northern Alaska	5	106.00	40.00	400.00	10.00	165.02
Norton Sound and Bering Strait	13	96.88	7.00	600.00	0.00	204.53
Prince William Sound	2	906.25	906.25	1,800.00	12.50	1,263.95
Southeast	19	313.18	60.00	1,800.00	0.00	467.51

Appendix Table A4. -- Regional breakdown of responses to the following question: On average, which months per year does your community have seasonal workers living there? (Q2).

	N	Jan-March	April-June	July-Sept	Oct-Dec	All year	None
Aleutian and Pribilof Islands	12	50.00%	66.67%	66.67%	41.67%	16.67%	8.33%
Anchorage and Mat-Su	5	0.00%	80.00%	80.00%	0.00%	20.00%	0.00%
Bristol Bay and Alaska Peninsula	18	11.11%	83.33%	88.89%	38.89%	11.11%	0.00%
Interior	5	20.00%	80.00%	80.00%	20.00%	0.00%	20.00%
Kenai Peninsula and Cook Inlet	6	16.67%	100.00%	100.00%	33.33%	0.00%	0.00%
Kodiak Island	5	0.00%	40.00%	60.00%	0.00%	0.00%	40.00%
Kuskokwim River Mouth	15	6.67%	73.33%	80.00%	13.33%	13.33%	6.67%
Northern Alaska	3	0.00%	66.67%	66.67%	33.33%	33.33%	0.00%
Norton Sound and Bering Strait	14	14.29%	85.71%	85.71%	57.14%	7.14%	7.14%
Prince William Sound	3	0.00%	100.00%	100.00%	0.00%	0.00%	0.00%
Southeast	18	0.00%	88.89%	88.89%	5.56%	0.00%	11.11%

Appendix Table A5. -- Regional breakdown of responses to the following question: In what month(s) does the population in your community reach its annual peak? (Q4).

	N	Jan-March	April-June	July-Sept	Oct-Dec	All year
Aleutian and Pribilof Islands	12	33.33%	58.33%	0.00%	0.00%	0.00%
Anchorage and Mat-Su	5	0.00%	83.33%	0.00%	0.00%	0.00%
Bristol Bay and Alaska Peninsula	19	10.53%	47.37%	47.37%	0.00%	0.00%
Interior	8	0.00%	37.50%	50.00%	0.00%	0.00%
Kenai Peninsula and Cook Inlet	5	0.00%	42.86%	71.43%	0.00%	0.00%
Kodiak Island	5	0.00%	0.00%	60.00%	0.00%	20.00%
Kuskokwim River Mouth	16	28.57%	28.57%	78.57%	21.43%	14.29%
Northern Alaska	5	20.00%	60.00%	60.00%	0.00%	20.00%
Norton Sound and Bering Strait	14	8.33%	50.00%	83.33%	16.67%	0.00%
Prince William Sound	3	0.00%	50.00%	50.00%	50.00%	0.00%
Southeast	18	0.00%	55.56%	94.44%	0.00%	5.56%

Appendix Table A6. -- Regional breakdown of responses to the following question: To what degree is this peak in population driven by employment in the fishing sectors? (Q5).

	N	Entirely	Mostly	Somewhat	A little	Not at all
Aleutian and Pribilof Islands	12	58.33%	8.33%	8.33%	8.33%	8.33%
Anchorage and Mat-Su	5	0.00%	40.00%	20.00%	20.00%	0.00%
Bristol Bay and Alaska Peninsula	19	21.05%	31.58%	26.32%	10.53%	5.26%
Interior	8	0.00%	25.00%	0.00%	12.50%	62.50%
Kenai Peninsula and Cook Inlet	7	0.00%	57.14%	28.57%	14.29%	0.00%
Kodiak Island	5	40.00%	20.00%	0.00%	0.00%	40.00%
Kuskokwim River Mouth	15	6.67%	20.00%	33.33%	0.00%	33.33%
Northern Alaska	5	0.00%	0.00%	0.00%	0.00%	100.00%
Norton Sound and Bering Strait	15	20.00%	6.67%	33.33%	13.33%	13.33%
Prince William Sound	2	0.00%	50.00%	0.00%	50.00%	0.00%
Southeast	18	5.56%	50.00%	27.78%	0.00%	16.67%

Appendix Table A7. -- Regional breakdown of responses to the following question: Which, if any, natural resource-based industries does your community's economy rely upon? (Q19).

	N	Mining	Logging	Fishing	Oil and gas	Eco-tourism	Sportfishing/ hunting
Aleutian and Pribilof Islands	12	0.00%	0.00%	83.33%	0.00%	16.67%	41.67%
Anchorage and Mat-Su	5	40.00%	20.00%	40.00%	0.00%	60.00%	40.00%
Bristol Bay and Alaska Peninsula	19	15.79%	0.00%	84.21%	5.26%	5.26%	52.63%
Interior	8	37.50%	37.50%	50.00%	12.50%	0.00%	25.00%
Kenai Peninsula and Cook Inlet	7	14.29%	0.00%	71.43%	14.29%	14.29%	57.14%
Kodiak Island	5	0.00%	20.00%	80.00%	0.00%	40.00%	80.00%
Kuskokwim River Mouth	16	18.75%	0.00%	87.50%	0.00%	12.50%	25.00%
Northern Alaska	5	20.00%	0.00%	20.00%	40.00%	0.00%	40.00%
Norton Sound and Bering Strait	15	20.00%	0.00%	53.33%	0.00%	6.67%	13.33%
Prince William Sound	3	0.00%	0.00%	66.67%	33.33%	33.33%	100.00%
Southeast	19	15.79%	42.11%	89.47%	0.00%	63.16%	94.74%

Appendix Table A8. -- Regional breakdown of responses to the following question: How many feet of public dock space for moorage are located in and around the port of your community for permanent vessels? (Q7).

	N	None	<500 ft	500-1,000 ft	1,000-3,000 ft	3,000-8,000 ft	>20,000 ft
Aleutian and Pribilof Islands	7	28.57%	14.29%	0.00%	28.57%	28.57%	0.00%
Anchorage and Mat-Su	1	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Bristol Bay and Alaska Peninsula	5	60.00%	40.00%	0.00%	0.00%	0.00%	0.00%
Interior	3	66.67%	0.00%	0.00%	33.33%	0.00%	0.00%
Kenai Peninsula and Cook Inlet	4	25.00%	0.00%	0.00%	0.00%	25.00%	50.00%
Kodiak Island	3	33.33%	0.00%	33.33%	0.00%	0.00%	33.33%
Kuskokwim River Mouth	2	50.00%	0.00%	0.00%	50.00%	0.00%	0.00%
Northern Alaska	2	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Norton Sound and Bering Strait	11	72.73%	27.27%	0.00%	0.00%	0.00%	0.00%
Prince William Sound	1	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%
Southeast	13	0.00%	30.77%	7.69%	30.77%	7.69%	23.08%

Appendix Table A9. -- Regional breakdown of responses to the following question: How many feet of public dock space for moorage are located in and around the port of your community for temporary vessels? (Q7).

	N	None	<500 ft	500-1,000 ft	1,000-3,000 ft	3,000-8,000 ft	>20,000 ft
Aleutian and Pribilof Islands	10	0.00%	50.00%	10.00%	30.00%	10.00%	0.00%
Anchorage and Mat-Su	1	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Bristol Bay and Alaska Peninsula	5	40.00%	40.00%	20.00%	0.00%	0.00%	0.00%
Interior	2	0.00%	50.00%	50.00%	0.00%	0.00%	0.00%
Kenai Peninsula and Cook Inlet	4	25.00%	0.00%	25.00%	25.00%	25.00%	0.00%
Kodiak Island	2	0.00%	50.00%	0.00%	50.00%	0.00%	0.00%
Kuskokwim River Mouth	3	33.33%	33.33%	0.00%	33.33%	0.00%	0.00%
Northern Alaska	2	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Norton Sound and Bering Strait	8	37.50%	50.00%	0.00%	12.50%	0.00%	0.00%
Prince William Sound	1	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%
Southeast	18	0.00%	44.44%	11.11%	27.78%	11.11%	5.56%

Appendix Table A10. -- Regional breakdown of responses to the following question: Which of the following types of infrastructure projects have been completed in your community since 2000, are currently in progress, or are being planned for completion in the next 10 years? (Q6) Aleutian and Pribilof Islands.

	N	Completed in the last 10 years?	Currently in progress?	Plan to complete in the next 10 years?
Improve existing dock structure	10	70.00%	10.00%	40.00%
Electricity serving the dock	10	70.00%	30.00%	20.00%
Water serving the dock	10	70.00%	30.00%	10.00%
Diesel powerhouse	10	70.00%	10.00%	20.00%
Broadband internet access	9	88.89%	22.22%	11.11%
Alternative energy (e.g., hydro, wind, tidal)	9	33.33%	66.67%	22.22%
Fish cleaning station	8	62.50%	25.00%	12.50%
Sewage treatment	8	62.50%	12.50%	25.00%
Water treatment	8	75.00%	25.00%	12.50%
Barge landing area	7	71.43%	28.57%	0.00%
Construct new dock space	7	57.14%	14.29%	28.57%
Pilings	7	85.71%	14.29%	14.29%
Breakwater	7	42.86%	28.57%	42.86%
Road	7	57.14%	14.29%	28.57%
Water and sewer pipelines	7	85.71%	14.29%	28.57%
New landfill/solid waste site	7	42.86%	28.57%	42.86%
School	7	100.00%	0.00%	0.00%
Telephone service	7	85.71%	28.57%	0.00%
Fuel tanks at dock	6	66.67%	0.00%	33.33%
Harbor dredging	6	50.00%	16.67%	50.00%
Airport/seaplane base	6	66.67%	16.67%	16.67%
Community center/Library	6	83.33%	16.67%	33.33%
Emergency response	6	83.33%	33.33%	16.67%
Fire department	6	100.00%	16.67%	16.67%
Post office	6	100.00%	0.00%	0.00%
Roads serving dock space	5	100.00%	0.00%	0.00%
Haulout facilities	5	20.00%	20.00%	60.00%
Jetty	4	75.00%	0.00%	25.00%
Dry dock space	4	50.00%	0.00%	50.00%
Public safety – Police department	4	100.00%	25.00%	25.00%
EPA certified boat cleaning station	3	0.00%	0.00%	100.00%

Appendix Table A11. -- Regional breakdown of responses to the following question: Which of the following types of infrastructure projects have been completed in your community since 2000, are currently in progress, or are being planned for completion in the next 10 years? (Q6) Anchorage and Mat-Su.

	N	Completed in the last 10 years?	Currently in progress?	Plan to complete in the next 10 years?
Fish cleaning station	2	50.00%	50.00%	50.00%
Construct new dock space	2	50.00%	100.00%	50.00%
Harbor dredging	2	0.00%	100.00%	0.00%
Broadband internet access	2	50.00%	100.00%	100.00%
Road	2	100.00%	100.00%	100.00%
Water and sewer pipelines	2	100.00%	100.00%	0.00%
Sewage treatment	2	100.00%	0.00%	0.00%
New landfill/solid waste site	2	100.00%	0.00%	0.00%
Community center/Library	2	50.00%	0.00%	50.00%
Fire department	2	50.00%	0.00%	50.00%
Post office	2	100.00%	0.00%	0.00%
Barge landing area	1	0.00%	100.00%	0.00%
Improve existing dock structure	1	0.00%	100.00%	0.00%
Electricity serving the dock	1	0.00%	100.00%	0.00%
Water serving the dock	1	0.00%	100.00%	100.00%
Roads serving dock space	1	0.00%	100.00%	0.00%
Pilings	1	0.00%	100.00%	0.00%
Water treatment	1	100.00%	0.00%	100.00%
Alternative energy (e.g., hydro, wind, tidal)	1	100.00%	0.00%	100.00%
Public safety – Police department	1	100.00%	0.00%	0.00%
Emergency response	1	0.00%	0.00%	100.00%
School	1	100.00%	100.00%	100.00%
Telephone service	1	0.00%	100.00%	100.00%
Fuel tanks at dock	0	0.00%	0.00%	0.00%
Breakwater	0	0.00%	0.00%	0.00%
Jetty	0	0.00%	0.00%	0.00%
Dry dock space	0	0.00%	0.00%	0.00%
Haulout facilities	0	0.00%	0.00%	0.00%
EPA certified boat cleaning station	0	0.00%	0.00%	0.00%
Airport/seaplane base	0	0.00%	0.00%	0.00%
Diesel powerhouse	0	0.00%	0.00%	0.00%

Appendix Table A12. -- Regional breakdown of responses to the following question: Which of the following types of infrastructure projects have been completed in your community since 2000, are currently in progress, or are being planned for completion in the next 10 years? (Q6) Bristol Bay and Alaska Peninsula.

	N	Completed in the last 10 years?	Currently in progress?	Plan to complete in the next 10 years?
Road	15	40.00%	40.00%	33.33%
New landfill/solid waste site	15	53.33%	33.33%	20.00%
Broadband internet access	11	36.36%	45.45%	27.27%
Alternative energy (e.g., hydro, wind, tidal)	11	0.00%	45.45%	45.45%
Telephone service	11	72.73%	27.27%	9.09%
Barge landing area	10	50.00%	20.00%	50.00%
Water and sewer pipelines	10	50.00%	30.00%	40.00%
Public safety – Police department	10	40.00%	20.00%	40.00%
Emergency response	10	50.00%	20.00%	30.00%
Airport/seaplane base	9	66.67%	11.11%	22.22%
Diesel powerhouse	9	77.78%	33.33%	0.00%
School	9	88.89%	11.11%	11.11%
Post office	9	100.00%	0.00%	0.00%
Construct new dock space	8	25.00%	25.00%	50.00%
Roads serving dock space	8	50.00%	37.50%	12.50%
Haulout facilities	8	50.00%	37.50%	25.00%
Water treatment	8	75.00%	25.00%	0.00%
Sewage treatment	7	57.14%	42.86%	0.00%
Improve existing dock structure	6	16.67%	50.00%	33.33%
Community center/Library	6	33.33%	33.33%	33.33%
Fire department	6	33.33%	0.00%	66.67%
Electricity serving the dock	5	0.00%	40.00%	60.00%
Fish cleaning station	3	0.00%	0.00%	100.00%
Water serving the dock	3	33.33%	0.00%	0.00%
Fuel tanks at dock	3	33.33%	0.00%	66.67%
Pilings	2	0.00%	0.00%	100.00%
Breakwater	2	0.00%	0.00%	100.00%
Harbor dredging	2	50.00%	0.00%	100.00%
Dry dock space	2	0.00%	100.00%	0.00%
Jetty	0	0.00%	0.00%	0.00%
EPA certified boat cleaning station	0	0.00%	0.00%	0.00%

Appendix Table A13. -- Regional breakdown of responses to the following question: Which of the following types of infrastructure projects have been completed in your community since 2000, are currently in progress, or are being planned for completion in the next 10 years? (Q6) Interior.

	N	Completed in the last 10 years?	Currently in progress?	Plan to complete in the next 10 years?
Barge landing area	4	25.00%	25.00%	50.00%
Construct new dock space	4	25.00%	25.00%	50.00%
Broadband internet access	4	75.00%	0.00%	25.00%
Alternative energy (e.g., hydro, wind, tidal)	4	25.00%	50.00%	50.00%
New landfill/solid waste site	4	75.00%	25.00%	0.00%
Community center/Library	4	75.00%	0.00%	25.00%
School	4	100.00%	25.00%	25.00%
Improve existing dock structure	3	33.33%	33.33%	66.67%
Road	3	33.33%	33.33%	33.33%
Water treatment	3	66.67%	0.00%	33.33%
Fire department	3	100.00%	0.00%	0.00%
Airport/seaplane base	2	100.00%	0.00%	0.00%
Water and sewer pipelines	2	50.00%	0.00%	50.00%
Sewage treatment	2	50.00%	0.00%	50.00%
Public safety – Police department	2	100.00%	0.00%	0.00%
Telephone service	2	100.00%	0.00%	0.00%
Post office	2	100.00%	0.00%	0.00%
Fish cleaning station	1	0.00%	0.00%	100.00%
Electricity serving the dock	1	0.00%	0.00%	100.00%
Water serving the dock	1	100.00%	0.00%	0.00%
Roads serving dock space	1	100.00%	0.00%	0.00%
Pilings	1	0.00%	0.00%	100.00%
Fuel tanks at dock	1	0.00%	0.00%	100.00%
Harbor dredging	1	100.00%	0.00%	0.00%
Jetty	1	100.00%	0.00%	0.00%
Dry dock space	1	0.00%	100.00%	0.00%
Haulout facilities	1	100.00%	0.00%	0.00%
Diesel powerhouse	1	100.00%	0.00%	0.00%
Emergency response	1	100.00%	0.00%	0.00%
Breakwater	0	0.00%	0.00%	0.00%
EPA certified boat cleaning station	0	0.00%	0.00%	0.00%

Appendix Table A14. -- Regional breakdown of responses to the following question: Which of the following types of infrastructure projects have been completed in your community since 2000, are currently in progress, or are being planned for completion in the next 10 years? (Q6) Kenai Peninsula and Cook Inlet.

	N	Completed in the last 10 years?	Currently in progress?	Plan to complete in the next 10 years?
Water and sewer pipelines	6	66.67%	33.33%	0.00%
Broadband internet access	5	80.00%	20.00%	0.00%
Water treatment	5	100.00%	0.00%	0.00%
New landfill/solid waste site	5	60.00%	40.00%	0.00%
Community center/Library	5	40.00%	40.00%	20.00%
Fire department	5	80.00%	0.00%	20.00%
Post office	5	100.00%	0.00%	0.00%
Improve existing dock structure	4	25.00%	25.00%	50.00%
Electricity serving the dock	4	50.00%	50.00%	0.00%
Water serving the dock	4	50.00%	50.00%	0.00%
Haulout facilities	4	50.00%	25.00%	25.00%
Diesel powerhouse	4	100.00%	0.00%	0.00%
Emergency response	4	75.00%	25.00%	0.00%
School	4	100.00%	0.00%	0.00%
Telephone service	4	100.00%	0.00%	0.00%
Fish cleaning station	3	100.00%	0.00%	0.00%
Barge landing area	3	33.33%	33.33%	33.33%
Construct new dock space	3	66.67%	0.00%	33.33%
Roads serving dock space	3	100.00%	0.00%	0.00%
EPA certified boat cleaning station	3	33.33%	33.33%	66.67%
Road	3	100.00%	0.00%	0.00%
Airport/seaplane base	3	100.00%	0.00%	0.00%
Sewage treatment	3	66.67%	0.00%	33.33%
Public safety – Police department	3	66.67%	33.33%	0.00%
Pilings	2	50.00%	50.00%	0.00%
Harbor dredging	2	100.00%	50.00%	50.00%
Alternative energy (e.g., hydro, wind, tidal)	2	0.00%	0.00%	100.00%
Fuel tanks at dock	1	100.00%	0.00%	0.00%
Breakwater	1	100.00%	0.00%	0.00%
Jetty	1	100.00%	0.00%	0.00%
Dry dock space	1	100.00%	0.00%	0.00%

Appendix Table A15. -- Regional breakdown of responses to the following question: Which of the following types of infrastructure projects have been completed in your community since 2000, are currently in progress, or are being planned for completion in the next 10 years? (Q6) Kodiak Island.

	N	Completed in the last 10 years?	Currently in progress?	Plan to complete in the next 10 years?
Fish cleaning station	4	50.00%	25.00%	25.00%
Construct new dock space	4	25.00%	50.00%	50.00%
Electricity serving the dock	4	50.00%	50.00%	0.00%
Water serving the dock	4	50.00%	25.00%	25.00%
Pilings	4	50.00%	50.00%	0.00%
Barge landing area	3	66.67%	0.00%	33.33%
Improve existing dock structure	3	33.33%	33.33%	33.33%
Roads serving dock space	3	66.67%	33.33%	0.00%
Breakwater	3	66.67%	0.00%	33.33%
Water treatment	3	33.33%	33.33%	33.33%
Alternative energy (e.g., hydro, wind, tidal)	3	0.00%	0.00%	100.00%
Fuel tanks at dock	2	100.00%	0.00%	0.00%
Harbor dredging	2	50.00%	0.00%	50.00%
Water and sewer pipelines	2	0.00%	50.00%	100.00%
Community center/Library	2	50.00%	0.00%	50.00%
Public safety – Police department	2	50.00%	0.00%	50.00%
Emergency response	2	50.00%	50.00%	0.00%
Fire department	2	50.00%	0.00%	50.00%
Telephone service	2	50.00%	50.00%	0.00%
Post office	2	100.00%	0.00%	0.00%
Dry dock space	1	100.00%	0.00%	0.00%
Haulout facilities	1	100.00%	0.00%	0.00%
EPA certified boat cleaning station	1	100.00%	0.00%	0.00%
Broadband internet access	1	0.00%	100.00%	0.00%
Road	1	0.00%	0.00%	100.00%
Airport/seaplane base	1	100.00%	0.00%	0.00%
Diesel powerhouse	1	100.00%	0.00%	0.00%
Sewage treatment	1	0.00%	0.00%	100.00%
New landfill/solid waste site	1	0.00%	0.00%	100.00%
School	1	100.00%	0.00%	0.00%
Jetty	0	0.00%	0.00%	0.00%

Appendix Table A16. -- Regional breakdown of responses to the following question: Which of the following types of infrastructure projects have been completed in your community since 2000, are currently in progress, or are being planned for completion in the next 10 years? (Q6) Kuskokwim River Mouth.

	N	Completed in the last 10 years?	Currently in progress?	Plan to complete in the next 10 years?
Telephone service	12	91.67%	16.67%	0.00%
Post office	12	91.67%	8.33%	0.00%
School	11	72.73%	27.27%	9.09%
Broadband internet access	10	40.00%	40.00%	30.00%
Water treatment	10	40.00%	40.00%	20.00%
Public safety – Police department	10	80.00%	20.00%	0.00%
Water and sewer pipelines	9	11.11%	55.56%	44.44%
Sewage treatment	7	28.57%	42.86%	42.86%
New landfill/solid waste site	7	28.57%	42.86%	28.57%
Fire department	7	71.43%	42.86%	0.00%
Barge landing area	6	16.67%	33.33%	66.67%
Road	6	50.00%	33.33%	50.00%
Airport/seaplane base	6	66.67%	16.67%	16.67%
Alternative energy (e.g., hydro, wind, tidal)	6	16.67%	33.33%	66.67%
Emergency response	6	50.00%	50.00%	0.00%
Diesel powerhouse	5	80.00%	20.00%	0.00%
Roads serving dock space	4	75.00%	25.00%	25.00%
Fish cleaning station	3	66.67%	33.33%	0.00%
Improve existing dock structure	3	33.33%	33.33%	66.67%
Electricity serving the dock	3	33.33%	0.00%	66.67%
Haulout facilities	3	100.00%	0.00%	0.00%
Community center/Library	3	33.33%	33.33%	33.33%
Construct new dock space	2	0.00%	50.00%	100.00%
Pilings	2	50.00%	50.00%	50.00%
Fuel tanks at dock	2	100.00%	0.00%	0.00%
Harbor dredging	2	0.00%	50.00%	50.00%
Dry dock space	2	50.00%	0.00%	50.00%
Breakwater	1	0.00%	0.00%	100.00%
Jetty	1	100.00%	0.00%	0.00%
Water serving the dock	0	0.00%	0.00%	0.00%
EPA certified boat cleaning station	0	0.00%	0.00%	0.00%

Appendix Table A17. -- Regional breakdown of responses to the following question: Which of the following types of infrastructure projects have been completed in your community since 2000, are currently in progress, or are being planned for completion in the next 10 years? (Q6) Northern Alaska.

	N	Completed in the last 10 years?	Currently in progress?	Plan to complete in the next 10 years?
Broadband internet access	4	50.00%	0.00%	50.00%
New landfill/solid waste site	4	75.00%	0.00%	25.00%
Barge landing area	3	33.33%	33.33%	33.33%
Construct new dock space	3	0.00%	33.33%	66.67%
Improve existing dock structure	3	33.33%	33.33%	33.33%
Water and sewer pipelines	3	66.67%	0.00%	33.33%
Community center/Library	3	33.33%	66.67%	0.00%
Public safety – Police department	3	66.67%	0.00%	33.33%
Fire department	3	66.67%	33.33%	0.00%
Roads serving dock space	2	50.00%	0.00%	50.00%
Road	2	50.00%	0.00%	50.00%
Airport/seaplane base	2	100.00%	0.00%	0.00%
Diesel powerhouse	2	50.00%	50.00%	0.00%
Sewage treatment	2	100.00%	0.00%	0.00%
Water treatment	2	100.00%	0.00%	0.00%
Emergency response	2	50.00%	50.00%	0.00%
Telephone service	2	100.00%	0.00%	0.00%
Electricity serving the dock	1	100.00%	0.00%	0.00%
Water serving the dock	1	100.00%	0.00%	0.00%
Pilings	1	0.00%	0.00%	100.00%
Fuel tanks at dock	1	0.00%	0.00%	100.00%
Breakwater	1	0.00%	0.00%	100.00%
Harbor dredging	1	0.00%	0.00%	100.00%
Dry dock space	1	0.00%	0.00%	100.00%
Haulout facilities	1	0.00%	0.00%	100.00%
Alternative energy (e.g., hydro, wind, tidal)	1	100.00%	0.00%	0.00%
School	1	100.00%	0.00%	0.00%
Post office	1	100.00%	0.00%	0.00%
Fish cleaning station	0	0.00%	0.00%	0.00%
Jetty	0	0.00%	0.00%	0.00%
EPA certified boat cleaning station	0	0.00%	0.00%	0.00%

Appendix Table A18. -- Regional breakdown of responses to the following question: Which of the following types of infrastructure projects have been completed in your community since 2000, are currently in progress, or are being planned for completion in the next 10 years? (Q6) Norton Sound and Bering Strait.

	N	Completed in the last 10 years?	Currently in progress?	Plan to complete in the next 10 years?
New landfill/solid waste site	11	63.64%	9.09%	45.45%
Airport/seaplane base	10	60.00%	20.00%	30.00%
Public safety – Police department	10	70.00%	20.00%	20.00%
Barge landing area	9	22.22%	77.78%	22.22%
Broadband internet access	9	55.56%	33.33%	22.22%
Alternative energy (e.g., hydro, wind, tidal)	9	33.33%	55.56%	11.11%
School	9	100.00%	11.11%	11.11%
Construct new dock space	8	25.00%	50.00%	50.00%
Water and sewer pipelines	8	62.50%	37.50%	12.50%
Water treatment	8	62.50%	25.00%	12.50%
Community center/Library	8	62.50%	12.50%	37.50%
Emergency response	8	25.00%	75.00%	25.00%
Post office	8	100.00%	0.00%	12.50%
Road	7	28.57%	28.57%	57.14%
Diesel powerhouse	7	71.43%	28.57%	14.29%
Sewage treatment	7	57.14%	42.86%	14.29%
Fire department	7	28.57%	42.86%	42.86%
Roads serving dock space	6	16.67%	16.67%	66.67%
Telephone service	6	100.00%	16.67%	16.67%
Improve existing dock structure	5	20.00%	40.00%	40.00%
Electricity serving the dock	5	20.00%	20.00%	80.00%
Water serving the dock	4	25.00%	0.00%	100.00%
Pilings	4	25.00%	25.00%	50.00%
Dry dock space	4	25.00%	0.00%	75.00%
Fish cleaning station	3	100.00%	0.00%	0.00%
Breakwater	3	33.33%	0.00%	66.67%
Harbor dredging	3	33.33%	66.67%	66.67%
Haulout facilities	3	33.33%	0.00%	66.67%
Fuel tanks at dock	2	0.00%	0.00%	100.00%
EPA certified boat cleaning station	2	0.00%	0.00%	100.00%
Jetty	1	0.00%	0.00%	100.00%

Appendix Table A19. -- Regional breakdown of responses to the following question: Which of the following types of infrastructure projects have been completed in your community since 2000, are currently in progress, or are being planned for completion in the next 10 years? (Q6) Prince William Sound.

	N	Completed in the last 10 years?	Currently in progress?	Plan to complete in the next 10 years?
Construct new dock space	2	100.00%	0.00%	50.00%
Improve existing dock structure	2	100.00%	0.00%	0.00%
Electricity serving the dock	2	100.00%	0.00%	50.00%
Water serving the dock	2	100.00%	50.00%	0.00%
Pilings	2	50.00%	0.00%	50.00%
Water treatment	2	50.00%	50.00%	50.00%
New landfill/solid waste site	2	100.00%	0.00%	0.00%
Fish cleaning station	1	100.00%	0.00%	0.00%
Roads serving dock space	1	100.00%	0.00%	0.00%
Breakwater	1	0.00%	0.00%	100.00%
Dry dock space	1	0.00%	0.00%	100.00%
Haulout facilities	1	0.00%	0.00%	100.00%
Broadband internet access	1	0.00%	0.00%	100.00%
Road	1	0.00%	0.00%	100.00%
Airport/seaplane base	1	100.00%	0.00%	0.00%
Diesel powerhouse	1	100.00%	0.00%	0.00%
Sewage treatment	1	0.00%	100.00%	100.00%
Alternative energy (e.g., hydro, wind, tidal)	1	0.00%	100.00%	0.00%
Community center/Library	1	0.00%	100.00%	100.00%
Public safety – Police department	1	0.00%	0.00%	100.00%
Fire department	1	0.00%	0.00%	100.00%
School	1	100.00%	0.00%	0.00%
Telephone service	1	100.00%	100.00%	0.00%
Barge landing area	0	0.00%	0.00%	0.00%
Fuel tanks at dock	0	0.00%	0.00%	0.00%
Harbor dredging	0	0.00%	0.00%	0.00%
Jetty	0	0.00%	0.00%	0.00%
EPA certified boat cleaning station	0	0.00%	0.00%	0.00%
Water and sewer pipelines	0	0.00%	0.00%	0.00%
Emergency response	0	0.00%	0.00%	0.00%
Post office	0	0.00%	0.00%	0.00%

Appendix Table A20. -- Regional breakdown of responses to the following question: Which of the following types of infrastructure projects have been completed in your community since 2000, are currently in progress, or are being planned for completion in the next 10 years? (Q6) Southeast.

	N	Completed in the last 10 years?	Currently in progress?	Plan to complete in the next 10 years?
Broadband internet access	15	66.67%	26.67%	20.00%
Construct new dock space	14	71.43%	21.43%	7.14%
Improve existing dock structure	13	53.85%	30.77%	30.77%
Alternative energy (e.g., hydro, wind, tidal)	11	27.27%	63.64%	36.36%
Fire department	11	54.55%	36.36%	9.09%
Pilings	10	60.00%	40.00%	10.00%
Water and sewer pipelines	10	80.00%	50.00%	30.00%
Electricity serving the dock	9	77.78%	0.00%	22.22%
Breakwater	9	55.56%	11.11%	44.44%
Water treatment	9	66.67%	44.44%	22.22%
Fish cleaning station	8	100.00%	0.00%	12.50%
Water serving the dock	8	75.00%	12.50%	12.50%
Airport/seaplane base	8	87.50%	12.50%	12.50%
Community center/Library	8	50.00%	37.50%	12.50%
Emergency response	8	87.50%	12.50%	12.50%
Barge landing area	7	71.43%	14.29%	14.29%
Roads serving dock space	7	57.14%	42.86%	0.00%
Public safety – Police department	7	42.86%	28.57%	28.57%
Haulout facilities	6	16.67%	50.00%	33.33%
EPA certified boat cleaning station	6	50.00%	16.67%	50.00%
Diesel powerhouse	6	83.33%	16.67%	0.00%
Post office	6	83.33%	16.67%	0.00%
Fuel tanks at dock	5	40.00%	40.00%	20.00%
Harbor dredging	5	40.00%	20.00%	40.00%
Road	5	80.00%	40.00%	20.00%
Telephone service	5	80.00%	20.00%	0.00%
Dry dock space	4	50.00%	25.00%	50.00%
New landfill/solid waste site	4	50.00%	25.00%	25.00%
Sewage treatment	3	100.00%	33.33%	0.00%
School	3	100.00%	0.00%	0.00%
Jetty	1	0.00%	100.00%	0.00%

Appendix Table A21. -- Regional breakdown of responses to the following question: What is the maximum vessel length that can use moorage in your community? (Q8).

	N	0 ft	1-100 ft	101-200 ft	201-300 ft	301-400 ft	401-500 ft	>500 ft
Aleutian and Pribilof Islands	12	16.67%	8.33%	16.67%	25.00%	16.67%	8.33%	8.33%
Anchorage and Mat-Su	5	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Bristol Bay and Alaska Peninsula	18	77.78%	11.11%	5.56%	0.00%	5.56%	0.00%	0.00%
Interior	8	50.00%	25.00%	25.00%	0.00%	0.00%	0.00%	0.00%
Kenai Peninsula and Cook Inlet	6	16.67%	33.33%	33.33%	0.00%	0.00%	0.00%	16.67%
Kodiak Island	4	25.00%	25.00%	0.00%	0.00%	0.00%	25.00%	25.00%
Kuskokwim River Mouth	12	75.00%	8.33%	8.33%	0.00%	8.33%	0.00%	0.00%
Northern Alaska	4	75.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Norton Sound and Bering Strait	15	60.00%	6.67%	13.33%	0.00%	13.33%	6.67%	0.00%
Prince William Sound	1	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Southeast	18	0.00%	42.11%	26.32%	5.26%	10.53%	5.26%	10.53%

Appendix Table A22. -- Regional breakdown of responses to the following question: Which size classes of commercial fishing boats use your community as their base of operation during the fishing season? (Q11).

	N	<35 ft	35-60 ft	61-125 ft	>125 ft	NONE
Aleutian and Pribilof Islands	12	50.00%	75.00%	58.33%	33.33%	8.33%
Anchorage and Mat-Su	4	25.00%	25.00%	0.00%	0.00%	75.00%
Bristol Bay and Alaska Peninsula	19	73.68%	5.26%	0.00%	0.00%	21.05%
Interior	8	62.50%	0.00%	0.00%	0.00%	37.50%
Kenai Peninsula and Cook Inlet	6	66.67%	66.67%	50.00%	33.33%	16.67%
Kodiak Island	5	40.00%	100.00%	40.00%	20.00%	0.00%
Kuskokwim River Mouth	15	66.67%	6.67%	20.00%	0.00%	20.00%
Northern Alaska	5	20.00%	0.00%	0.00%	0.00%	80.00%
Norton Sound and Bering Strait	15	60.00%	6.67%	6.67%	0.00%	40.00%
Prince William Sound	2	100.00%	100.00%	50.00%	50.00%	0.00%
Southeast	19	73.68%	84.21%	52.63%	21.05%	10.53%

Appendix Table A23. -- Regional breakdown of responses to the following question: Which of the following types of regulated vessels is the port of your community capable of handling? (Q10).

	N	Rescue vessels	Cruise ships	Ferries	Fuel barges	HAZ-MAT	None
Aleutian and Pribilof Islands	12	66.67%	58.33%	50.00%	91.67%	16.67%	8.33%
Anchorage and Mat-Su	5	40.00%	20.00%	0.00%	60.00%	20.00%	20.00%
Bristol Bay and Alaska Peninsula	18	11.11%	0.00%	0.00%	61.11%	0.00%	33.33%
Interior	8	0.00%	0.00%	0.00%	62.50%	0.00%	37.50%
Kenai Peninsula and Cook Inlet	6	50.00%	33.33%	50.00%	66.67%	33.33%	16.67%
Kodiak Island	5	60.00%	20.00%	40.00%	60.00%	40.00%	40.00%
Kuskokwim River Mouth	14	7.14%	0.00%	0.00%	64.29%	7.14%	28.57%
Northern Alaska	5	20.00%	0.00%	0.00%	80.00%	0.00%	20.00%
Norton Sound and Bering Strait	15	20.00%	6.67%	6.67%	93.33%	13.33%	6.67%
Prince William Sound	2	50.00%	50.00%	100.00%	100.00%	50.00%	0.00%
Southeast	19	78.95%	36.84%	52.63%	78.95%	36.84%	15.79%

Appendix Table A24. -- Regional breakdown of responses to the following question: What types of fishing support businesses are located in your community? (Q16).

	Aleutian and Pribilof Islands	Anchorage and Mat-Su	Bristol Bay and Alaska Peninsula	Interior	Kenai Peninsula and Cook Inlet	Kodiak Island	Kusko-kwim River Mouth	Northern Alaska	Norton Sound and Bering Strait	Prince William Sound	Southeast
Fish processing plants	75.00%	0.00%	11.76%	14.29%	50.00%	40.00%	21.43%	0.00%	35.71%	66.67%	61.11%
Fishing gear sales	58.33%	80.00%	17.65%	14.29%	50.00%	40.00%	50.00%	33.33%	42.86%	33.33%	83.33%
Fishing gear manufacturer	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.25%
Boat repair	50.00%	75.00%	29.41%	14.29%	57.14%	60.00%	25.00%	0.00%	50.00%	100.00%	50.00%
Electrical	45.45%	75.00%	29.41%	0.00%	33.33%	40.00%	16.67%	0.00%	18.18%	66.67%	50.00%
Welding	54.55%	50.00%	35.29%	16.67%	57.14%	60.00%	50.00%	33.33%	66.67%	66.67%	66.67%
Mechanical services	54.55%	66.67%	35.29%	16.67%	50.00%	40.00%	42.86%	33.33%	36.36%	66.67%	50.00%
Machine Shop	45.45%	25.00%	17.65%	0.00%	50.00%	60.00%	30.00%	0.00%	30.00%	100.00%	38.89%
Hydraulics	54.55%	0.00%	25.00%	0.00%	50.00%	40.00%	0.00%	0.00%	20.00%	66.67%	38.89%
Haul-out facilities for small boats (less than 60 tons)	75.00%	0.00%	50.00%	28.57%	50.00%	20.00%	7.69%	100.00%	15.38%	33.33%	38.89%
Haul-out facilities for large boats (more than 60 tons)	25.00%	0.00%	6.25%	0.00%	33.33%	20.00%	0.00%	0.00%	0.00%	33.33%	27.78%
Tidal grid for small boats (less than 60 tons)	25.00%	0.00%	0.00%	0.00%	33.33%	40.00%	0.00%	0.00%	7.69%	33.33%	82.35%
Tidal grid for large boats (more than 60 tons)	8.33%	0.00%	0.00%	0.00%	33.33%	20.00%	0.00%	0.00%	0.00%	33.33%	31.25%
Commercial fishing vessel moorage	58.33%	0.00%	28.57%	14.29%	50.00%	60.00%	15.38%	0.00%	21.43%	100.00%	72.22%
Recreational fishing vessel moorage	58.33%	40.00%	35.71%	14.29%	83.33%	60.00%	14.29%	0.00%	35.71%	100.00%	72.22%
Tackle sales	50.00%	80.00%	26.67%	57.14%	66.67%	0.00%	60.00%	50.00%	38.46%	66.67%	72.22%
Bait sales	66.67%	75.00%	6.67%	42.86%	66.67%	25.00%	20.00%	0.00%	7.69%	66.67%	72.22%
Commercial cold storage facilities	50.00%	40.00%	6.25%	28.57%	50.00%	25.00%	13.33%	0.00%	23.08%	33.33%	61.11%
Drydock storage	41.67%	25.00%	40.00%	14.29%	33.33%	20.00%	13.33%	0.00%	14.29%	66.67%	38.89%
Marine Refrigeration	41.67%	0.00%	7.69%	0.00%	33.33%	20.00%	6.67%	0.00%	7.69%	33.33%	33.33%
Fish lodges	33.33%	60.00%	50.00%	0.00%	66.67%	60.00%	14.29%	50.00%	15.38%	50.00%	84.21%

Appendix Table A24. -- Cont'd.

	Aleutian and Pribilof Islands	Anchorage and Mat-Su	Bristol Bay and Alaska Peninsula	Interior	Kenai Peninsula and Cook Inlet	Kodiak Island	Kusko-kwim River Mouth	Northern Alaska	Norton Sound and Bering Strait	Prince William Sound	Southeast
Fishing business attorneys	0.00%	0.00%	0.00%	0.00%	16.67%	0.00%	0.00%	0.00%	0.00%	50.00%	11.11%
Fishing related bookkeeping	41.67%	20.00%	7.69%	0.00%	33.33%	40.00%	0.00%	33.33%	15.38%	50.00%	38.89%
Boat fuel Sales	90.91%	40.00%	43.75%	57.14%	66.67%	80.00%	86.67%	100.00%	64.29%	66.67%	88.89%
Fishing gear repair	41.67%	40.00%	40.00%	14.29%	71.43%	40.00%	13.33%	0.00%	15.38%	33.33%	33.33%
Fishing gear storage	66.67%	20.00%	20.00%	14.29%	57.14%	80.00%	0.00%	0.00%	23.08%	33.33%	50.00%
Ice sales	58.33%	50.00%	20.00%	14.29%	33.33%	25.00%	6.67%	0.00%	30.77%	66.67%	61.11%
Water taxi	8.33%	40.00%	0.00%	14.29%	50.00%	50.00%	0.00%	0.00%	7.69%	33.33%	38.89%
Seaplane service	16.67%	60.00%	20.00%	14.29%	66.67%	60.00%	0.00%	33.33%	0.00%	33.33%	83.33%
Air taxi	66.67%	60.00%	53.33%	57.14%	83.33%	60.00%	57.14%	66.67%	46.15%	66.67%	70.59%

Appendix Table A25. -- Regional breakdown of responses to the following question: What is/are the fishing season(s) in your community each year? (Q3).

	N	Salmon	Herring	Halibut/ Sablefish	Cod	Pollock	Crab	Whitefish
Aleutian and Pribilof Islands	12	50.00%	0.00%	58.33%	33.33%	25.00%	41.67%	0.00%
Anchorage and Mat-Su	4	75.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Bristol Bay and Alaska Peninsula	18	61.11%	16.67%	11.11%	0.00%	0.00%	0.00%	0.00%
Interior	6	66.67%	0.00%	0.00%	0.00%	0.00%	0.00%	16.67%
Kenai Peninsula and Cook Inlet	5	80.00%	0.00%	80.00%	60.00%	0.00%	0.00%	0.00%
Kodiak Island	5	60.00%	40.00%	80.00%	20.00%	0.00%	60.00%	0.00%
Kuskokwim River Mouth	15	46.67%	0.00%	26.67%	0.00%	0.00%	0.00%	0.00%
Northern Alaska	3	66.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Norton Sound and Bering Strait	14	64.29%	21.43%	21.43%	7.14%	0.00%	14.29%	7.14%
Prince William Sound	2	100.00%	0.00%	50.00%	50.00%	0.00%	0.00%	0.00%
Southeast	18	77.78%	11.11%	66.67%	0.00%	0.00%	27.78%	0.00%

Appendix Table A26. -- Regional breakdown of responses to the following question: Which fishing gear types are used by commercial fishing boats that use your community as their base of operation during the fishing season? (Q15).

	N	Trawl	Pot	Longline	Gillnet	Purse seiner	Troll	None
Aleutian and Pribilof Islands	12	17.24%	17.24%	27.59%	17.24%	10.34%	3.45%	6.90%
Anchorage and Mat-Su	4	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Bristol Bay and Alaska Peninsula	19	0.00%	4.55%	9.09%	54.55%	4.55%	4.55%	22.73%
Interior	8	0.00%	0.00%	0.00%	50.00%	0.00%	0.00%	50.00%
Kenai Peninsula and Cook Inlet	6	4.17%	12.50%	25.00%	25.00%	16.67%	16.67%	0.00%
Kodiak Island	5	13.33%	26.67%	20.00%	20.00%	20.00%	0.00%	0.00%
Kuskokwim River Mouth	16	0.00%	0.00%	25.00%	68.75%	0.00%	0.00%	6.25%
Northern Alaska	4	0.00%	0.00%	0.00%	50.00%	0.00%	0.00%	50.00%
Norton Sound and Bering Strait	15	0.00%	5.56%	16.67%	38.89%	0.00%	5.56%	33.33%
Prince William Sound	3	0.00%	22.22%	22.22%	22.22%	22.22%	11.11%	0.00%
Southeast	19	5.88%	19.12%	25.00%	14.71%	8.82%	25.00%	1.47%

Appendix Table A27. -- Regional breakdown of responses to the following question: Which fishing gear types are used by commercial fishing boats that use your community as their base of operation during the fishing season? (Q15).

	One gear	Two gears	Three gears	Four gears	Five gears	Six gears	Seven gears
Aleutian and Pribilof Islands	20.00%	30.00%	10.00%	10.00%	10.00%	20.00%	0.00%
Anchorage and Mat-Su	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Bristol Bay and Alaska Peninsula	57.14%	35.71%	0.00%	7.14%	0.00%	0.00%	0.00%
Interior	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Kenai Peninsula and Cook Inlet	0.00%	16.67%	33.33%	0.00%	0.00%	50.00%	0.00%
Kodiak Island	20.00%	0.00%	20.00%	20.00%	40.00%	0.00%	0.00%
Kuskokwim River Mouth	66.67%	26.67%	6.67%	0.00%	0.00%	0.00%	0.00%
Northern Alaska	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Norton Sound and Bering Strait	66.67%	11.11%	11.11%	11.11%	0.00%	0.00%	0.00%
Prince William Sound	33.33%	0.00%	0.00%	33.33%	0.00%	33.33%	0.00%
Southeast	0.00%	16.67%	16.67%	22.22%	22.22%	16.67%	5.56%

Appendix Table A28. -- Regional breakdown of responses to the following question: To the best of your knowledge, what type of recreational or sport fishing, if any, goes on in your community? (Q13).

	N	Charter boats/ Party boats	Private boats owned by residents	Private boats owned by non-residents	Shore based or dock fishing by local residents	Shore based or dock fishing by non-residents	None
Aleutian and Pribilof Islands	12	33.33%	83.33%	33.33%	41.67%	41.67%	0.00%
Anchorage and Mat-Su	5	80.00%	100.00%	80.00%	60.00%	100.00%	0.00%
Bristol Bay and Alaska Peninsula	19	10.53%	94.74%	52.63%	21.05%	5.26%	0.00%
Interior	8	37.50%	87.50%	25.00%	25.00%	25.00%	12.50%
Kenai Peninsula and Cook Inlet	7	42.86%	85.71%	42.86%	42.86%	42.86%	0.00%
Kodiak Island	5	60.00%	100.00%	20.00%	100.00%	0.00%	0.00%
Kuskokwim River Mouth	16	0.00%	56.25%	12.50%	6.25%	6.25%	31.25%
Northern Alaska	5	20.00%	80.00%	20.00%	20.00%	20.00%	20.00%
Norton Sound and Bering Strait	15	0.00%	66.67%	20.00%	26.67%	13.33%	26.67%
Prince William Sound	3	66.67%	100.00%	66.67%	33.33%	66.67%	0.00%
Southeast	19	89.47%	100.00%	89.47%	57.89%	42.11%	0.00%

Appendix Table A29. -- Regional breakdown of responses to the following question: What saltwater species, if any, are targeted by recreational fishermen that use boats based in your community? (Q14).

	N	Pink salmon	Chum salmon	Chinook/ King salmon	Coho/ Silver salmon	Sockeye/ Red salmon	Halibut
Aleutian and Pribilof Islands	12	41.67%	25.00%	50.00%	83.33%	83.33%	91.67%
Anchorage and Mat-Su	6	83.33%	83.33%	100.00%	100.00%	83.33%	33.33%
Bristol Bay and Alaska Peninsula	19	42.11%	47.37%	73.68%	73.68%	89.47%	21.05%
Interior	8	37.50%	62.50%	62.50%	62.50%	25.00%	12.50%
Kenai Peninsula and Cook Inlet	6	66.67%	50.00%	100.00%	66.67%	66.67%	100.00%
Kodiak Island	5	60.00%	60.00%	80.00%	80.00%	80.00%	80.00%
Kuskokwim River Mouth	16	18.75%	50.00%	50.00%	68.75%	50.00%	25.00%
Northern Alaska	5	40.00%	60.00%	0.00%	40.00%	0.00%	0.00%
Norton Sound and Bering Strait	15	33.33%	60.00%	53.33%	60.00%	26.67%	26.67%
Prince William Sound	3	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Southeast	19	68.42%	57.89%	100.00%	94.74%	52.63%	100.00%

	N	Rockfish	Crab	Black cod/ sablefish	Shrimp	Clam	None
Aleutian and Pribilof Islands	12	25.00%	50.00%	25.00%	16.67%	25.00%	0.00%
Anchorage and Mat-Su	6	0.00%	0.00%	0.00%	0.00%	16.67%	0.00%
Bristol Bay and Alaska Peninsula	19	5.26%	5.26%	0.00%	0.00%	10.53%	5.26%
Interior	8	12.50%	0.00%	12.50%	12.50%	0.00%	25.00%
Kenai Peninsula and Cook Inlet	6	100.00%	66.67%	16.67%	33.33%	50.00%	0.00%
Kodiak Island	5	60.00%	80.00%	20.00%	20.00%	60.00%	20.00%
Kuskokwim River Mouth	16	0.00%	0.00%	0.00%	6.25%	12.50%	25.00%
Northern Alaska	5	0.00%	20.00%	0.00%	20.00%	20.00%	20.00%
Norton Sound and Bering Strait	15	0.00%	13.33%	0.00%	0.00%	0.00%	13.33%
Prince William Sound	3	100.00%	66.67%	66.67%	100.00%	66.67%	0.00%
Southeast	19	73.68%	89.47%	31.58%	89.47%	73.68%	0.00%

Appendix Table A30. -- Regional breakdown of responses to the following question: What are the three (3) most important subsistence marine or aquatic resource to the residents of your community? (Q20).

	N	Salmon	Pinnipeds	Whales	Halibut	Herring	Molluscs and crustaceans
Aleutian and Pribilof Islands	12	83.33%	41.67%	0.00%	75.00%	0.00%	33.33%
Anchorage and Mat-Su	4	100.00%	0.00%	0.00%	0.00%	25.00%	25.00%
Bristol Bay and Alaska Peninsula	18	72.22%	22.22%	5.56%	11.11%	5.56%	11.11%
Interior	8	87.50%	0.00%	0.00%	0.00%	0.00%	0.00%
Kenai Peninsula and Cook Inlet	6	83.33%	16.67%	0.00%	66.67%	0.00%	33.33%
Kodiak Island	5	80.00%	0.00%	0.00%	80.00%	0.00%	80.00%
Kuskokwim River Mouth	16	93.75%	43.75%	6.25%	18.75%	18.75%	12.50%
Northern Alaska	5	40.00%	60.00%	100.00%	0.00%	0.00%	20.00%
Norton Sound and Bering Strait	15	86.67%	80.00%	26.67%	13.33%	13.33%	20.00%
Prince William Sound	2	100.00%	0.00%	0.00%	0.00%	0.00%	50.00%
Southeast	17	76.47%	5.88%	0.00%	23.53%	17.65%	52.94%

Appendix Table A31. -- Regional Breakdown of CDQ Funding (Q21).

	N	Funding or Grants	Special Allocation	None
Aleutian and Pribilof Islands	11	63.64%	9.09%	27.27%
Anchorage and Mat-Su	5	0.00%	0.00%	100.00%
Bristol Bay and Alaska Peninsula	17	52.94%	0.00%	47.06%
Interior	8	12.50%	0.00%	87.50%
Kenai Peninsula and Cook Inlet	3	0.00%	0.00%	100.00%
Kodiak Island	5	0.00%	0.00%	100.00%
Kuskokwim River Mouth	10	50.00%	10.00%	40.00%
Northern Alaska	4	25.00%	0.00%	75.00%
Norton Sound and Bering Strait	12	58.33%	0.00%	41.67%
Prince William Sound	3	0.00%	0.00%	100.00%
Southeast	16	0.00%	0.00%	100.00%

Appendix Table A32. -- Regional breakdown of responses to whether the community received revenue from fisheries related taxes or fee programs this year. (Q22).

	N	Fishing gear storage	Leasing public lands to fishing industry	Marine Fuel Sales Tax	Harbor Rental	Municipal dock use fees
Aleutian and Pribilof Islands	11	22.22%	22.22%	37.50%	14.29%	75.00%
Anchorage and Mat-Su	5	0.00%	0.00%	0.00%	0.00%	0.00%
Bristol Bay and Alaska Peninsula	17	5.88%	11.76%	0.00%	12.50%	0.00%
Interior	7	0.00%	0.00%	0.00%	0.00%	0.00%
Kenai Peninsula and Cook Inlet	6	20.00%	20.00%	0.00%	50.00%	50.00%
Kodiak Island	3	0.00%	0.00%	33.33%	33.33%	0.00%
Kuskokwim River Mouth	12	0.00%	0.00%	9.09%	10.00%	10.00%
Northern Alaska	3	0.00%	0.00%	0.00%	0.00%	0.00%
Norton Sound and Bering Strait	12	9.09%	9.09%	0.00%	0.00%	16.67%
Prince William Sound	0	0.00%	0.00%	0.00%	0.00%	0.00%
Southeast	15	36.36%	27.27%	0.00%	41.67%	50.00%

Appendix Table A33. -- Regional breakdown of responses to the following question: Does your community have local fishing-related fee programs charged to the fishing industry that specifically support public services and infrastructure? (Q24).

	N	Yes	No
Aleutian and Pribilof Islands	11	36.36%	63.64%
Anchorage and Mat-Su	5	0.00%	100.00%
Bristol Bay and Alaska Peninsula	19	5.26%	94.74%
Interior	8	0.00%	100.00%
Kenai Peninsula and Cook Inlet	7	42.86%	57.14%
Kodiak Island	5	0.00%	100.00%
Kuskokwim River Mouth	16	0.00%	100.00%
Northern Alaska	5	0.00%	100.00%
Norton Sound and Bering Strait	14	0.00%	100.00%
Prince William Sound	1	0.00%	100.00%
Southeast	19	15.79%	84.21%

Appendix Table A34. -- Regional breakdown of responses to the following question: Which of your community's public services are at least partially supported or funded by any of the following: Local or Borough Raw Fish Tax, Shared Fisheries Business Tax, the Fisheries Resource Landing Tax, or marine fuel sales tax? (Q23).

	N	Maintaining the harbor	Hospital/ Medical clinic	Educational scholarships	Roads	Social Services	Water and wastewater systems	Police enforcement & fire protection	No community services are funded by fish taxes
Aleutian and Pribilof Islands	11	63.64%	36.36%	9.09%	54.55%	36.36%	27.27%	45.45%	27.27%
Anchorage and Mat-Su	5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Bristol Bay and Alaska Peninsula	18	11.11%	11.11%	5.56%	22.22%	0.00%	22.22%	16.67%	33.33%
Interior	8	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kenai Peninsula and Cook Inlet	7	42.86%	0.00%	0.00%	14.29%	0.00%	14.29%	0.00%	42.86%
Kodiak Island	5	40.00%	0.00%	0.00%	40.00%	20.00%	40.00%	0.00%	20.00%
Kuskokwim River Mouth	15	6.67%	6.67%	13.33%	13.33%	6.67%	13.33%	20.00%	40.00%
Northern Alaska	4	0.00%	25.00%	25.00%	25.00%	25.00%	0.00%	25.00%	75.00%
Norton Sound and Bering Strait	14	7.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	78.57%
Prince William Sound	1	100.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Southeast	17	41.18%	11.76%	5.88%	11.76%	23.53%	11.76%	23.53%	29.41%

Appendix Table A35. -- Regional breakdown of responses to the following question: Which public social services are available in your community? (Q18).

	N	Medical services or doctors	Food bank	Soup kitchen	Job placement services	Publicly subsidized housing	Public library
Aleutian and Pribilof Islands	12	100.00%	25.00%	0.00%	0.00%	25.00%	58.33%
Anchorage and Mat-Su	5	100.00%	100.00%	20.00%	60.00%	80.00%	100.00%
Bristol Bay and Alaska Peninsula	19	63.16%	26.32%	0.00%	21.05%	31.58%	15.79%
Interior	8	75.00%	37.50%	12.50%	25.00%	37.50%	62.50%
Kenai Peninsula and Cook Inlet	7	71.43%	85.71%	0.00%	28.57%	42.86%	85.71%
Kodiak Island	4	100.00%	50.00%	25.00%	25.00%	75.00%	75.00%
Kuskokwim River Mouth	15	60.00%	13.33%	0.00%	26.67%	20.00%	26.67%
Northern Alaska	5	100.00%	60.00%	0.00%	80.00%	60.00%	20.00%
Norton Sound and Bering Strait	14	85.71%	28.57%	7.14%	7.14%	57.14%	42.86%
Prince William Sound	3	100.00%	66.67%	0.00%	0.00%	66.67%	66.67%
Southeast	16	75.00%	37.50%	18.75%	25.00%	37.50%	87.50%

Appendix Table A36. -- Regional breakdown of responses to the following question: For the types of boast listed, would you say there were a lot more, more, no more or less, less, or a lot less boats in your community compared to five years ago? (Q12).

A. Charter boats/party boats

	N	A lot more	More	No more or less	Less	A lot less
Aleutian and Pribilof Islands	7	0.00%	0.00%	71.43%	14.29%	14.29%
Anchorage and Mat-Su	5	0.00%	20.00%	60.00%	20.00%	0.00%
Bristol Bay and Alaska Peninsula	9	0.00%	11.11%	66.67%	11.11%	11.11%
Interior	5	0.00%	0.00%	40.00%	40.00%	0.00%
Kenai Peninsula and Cook Inlet	5	0.00%	40.00%	20.00%	40.00%	0.00%
Kodiak Island	4	0.00%	25.00%	75.00%	0.00%	0.00%
Kuskokwim River Mouth	7	0.00%	0.00%	28.57%	0.00%	71.43%
Northern Alaska	1	0.00%	0.00%	100.00%	0.00%	0.00%
Norton Sound and Bering Strait	8	0.00%	0.00%	62.50%	0.00%	25.00%
Prince William Sound	1	0.00%	0.00%	0.00%	100.00%	0.00%
Southeast	19	5.26%	31.58%	42.11%	21.05%	0.00%

Appendix Table A36 -- Cont'd.

B. Private pleasure boats

	N	A lot more	More	No more or less	Less	A lot less
Aleutian and Pribilof Islands	7	0.00%	28.57%	57.14%	14.29%	0.00%
Anchorage and Mat-Su	5	0.00%	40.00%	60.00%	0.00%	0.00%
Bristol Bay and Alaska Peninsula	12	25.00%	16.67%	50.00%	0.00%	0.00%
Interior	8	0.00%	0.00%	87.50%	12.50%	0.00%
Kenai Peninsula and Cook Inlet	4	25.00%	75.00%	0.00%	0.00%	0.00%
Kodiak Island	5	0.00%	40.00%	60.00%	0.00%	0.00%
Kuskokwim River Mouth	11	36.36%	27.27%	9.09%	9.09%	18.18%
Northern Alaska	3	0.00%	100.00%	0.00%	0.00%	0.00%
Norton Sound and Bering Strait	10	0.00%	30.00%	40.00%	10.00%	10.00%
Prince William Sound	1	0.00%	100.00%	0.00%	0.00%	0.00%
Southeast	18	0.00%	33.33%	33.33%	27.78%	0.00%

C. Commercial fishing boats

	N	A lot more	More	No more or less	Less	A lot less
Aleutian and Pribilof Islands	10	0.00%	40.00%	30.00%	20.00%	0.00%
Anchorage and Mat-Su	4	0.00%	0.00%	75.00%	25.00%	0.00%
Bristol Bay and Alaska Peninsula	15	6.67%	20.00%	26.67%	26.67%	13.33%
Interior	6	16.67%	0.00%	83.33%	0.00%	0.00%
Kenai Peninsula and Cook Inlet	4	0.00%	25.00%	50.00%	25.00%	0.00%
Kodiak Island	5	0.00%	40.00%	60.00%	0.00%	0.00%
Kuskokwim River Mouth	14	14.29%	28.57%	28.57%	28.57%	0.00%
Northern Alaska	1	0.00%	0.00%	100.00%	0.00%	0.00%
Norton Sound and Bering Strait	11	9.09%	9.09%	54.55%	9.09%	0.00%
Prince William Sound	1	0.00%	100.00%	0.00%	0.00%	0.00%
Southeast	19	5.26%	31.58%	36.84%	21.05%	0.00%

Appendix Table A36 -- Cont'd.

D. Boats less than 35 ft

	N	A lot more	More	No more or less	Less	A lot less
Aleutian and Pribilof Islands	10	0.00%	30.00%	50.00%	20.00%	0.00%
Anchorage and Mat-Su	5	0.00%	20.00%	80.00%	0.00%	0.00%
Bristol Bay and Alaska Peninsula	16	12.50%	50.00%	25.00%	6.25%	6.25%
Interior	7	14.29%	14.29%	71.43%	0.00%	0.00%
Kenai Peninsula and Cook Inlet	4	25.00%	50.00%	0.00%	25.00%	0.00%
Kodiak Island	5	0.00%	0.00%	100.00%	0.00%	0.00%
Kuskokwim River Mouth	13	46.15%	15.38%	15.38%	7.69%	15.38%
Northern Alaska	4	0.00%	75.00%	25.00%	0.00%	0.00%
Norton Sound and Bering Strait	12	16.67%	41.67%	16.67%	0.00%	8.33%
Prince William Sound	1	0.00%	100.00%	0.00%	0.00%	0.00%
Southeast	18	5.56%	22.22%	55.56%	5.56%	11.11%

E. Boats 35 to 60 ft

	N	A lot more	More	No more or less	Less	A lot less
Aleutian and Pribilof Islands	11	0.00%	36.36%	45.45%	9.09%	0.00%
Anchorage and Mat-Su	3	0.00%	33.33%	66.67%	0.00%	0.00%
Bristol Bay and Alaska Peninsula	7	14.29%	14.29%	28.57%	14.29%	14.29%
Interior	5	0.00%	0.00%	80.00%	20.00%	0.00%
Kenai Peninsula and Cook Inlet	5	0.00%	40.00%	40.00%	20.00%	0.00%
Kodiak Island	5	0.00%	20.00%	80.00%	0.00%	0.00%
Kuskokwim River Mouth	9	0.00%	0.00%	33.33%	22.22%	44.44%
Northern Alaska	1	0.00%	0.00%	100.00%	0.00%	0.00%
Norton Sound and Bering Strait	6	0.00%	0.00%	50.00%	16.67%	16.67%
Prince William Sound	1	0.00%	100.00%	0.00%	0.00%	0.00%
Southeast	18	0.00%	11.11%	61.11%	16.67%	0.00%

Appendix Table A36 -- Cont'd.

F. Boats 61 to 125 ft

	N	A lot more	More	No more or less	Less	A lot less
Aleutian and Pribilof Islands	9	0.00%	22.22%	33.33%	33.33%	11.11%
Anchorage and Mat-Su	3	0.00%	0.00%	66.67%	33.33%	0.00%
Bristol Bay and Alaska Peninsula	8	12.50%	12.50%	37.50%	0.00%	25.00%
Interior	5	0.00%	0.00%	80.00%	20.00%	0.00%
Kenai Peninsula and Cook Inlet	5	0.00%	20.00%	20.00%	40.00%	20.00%
Kodiak Island	3	0.00%	33.33%	66.67%	0.00%	0.00%
Kuskokwim River Mouth	8	0.00%	0.00%	37.50%	12.50%	50.00%
Northern Alaska	0	0.00%	0.00%	0.00%	0.00%	0.00%
Norton Sound and Bering Strait	7	0.00%	0.00%	57.14%	14.29%	14.29%
Prince William Sound	1	0.00%	0.00%	0.00%	0.00%	100.00%
Southeast	14	0.00%	14.29%	50.00%	21.43%	7.14%

G. Boats greater than 125 ft

	N	A lot more	More	No more or less	Less	A lot less
Aleutian and Pribilof Islands	9	0.00%	0.00%	44.44%	44.44%	11.11%
Anchorage and Mat-Su	2	0.00%	0.00%	100.00%	0.00%	0.00%
Bristol Bay and Alaska Peninsula	9	0.00%	0.00%	66.67%	11.11%	22.22%
Interior	5	0.00%	0.00%	80.00%	20.00%	0.00%
Kenai Peninsula and Cook Inlet	5	0.00%	40.00%	0.00%	40.00%	20.00%
Kodiak Island	2	0.00%	0.00%	100.00%	0.00%	0.00%
Kuskokwim River Mouth	7	0.00%	0.00%	42.86%	0.00%	57.14%
Northern Alaska	0	0.00%	0.00%	0.00%	0.00%	0.00%
Norton Sound and Bering Strait	7	0.00%	0.00%	57.14%	14.29%	14.29%
Prince William Sound	1	0.00%	0.00%	0.00%	0.00%	100.00%
Southeast	14	0.00%	14.29%	57.14%	14.29%	7.14%

Appendix Table A37. -- Regional breakdown of responses to the following question: Does your community participate in the fisheries management process in Alaska? (Q25).

	N	Paid staff member attends NPFMC &/or Board of Fish meetings	Representative participates in NPFMC committees or advisory groups	Representative sits on regional fisheries advisory &/or working groups run by ADF&G	Representative participates in Federal subsistence Board or Federal Subsistence Regional Advisory Council process	Relies on regional organizations to provide information on fisheries management issues	Financially supports research organizations, industry coalitions, and trade associations	Doesn't participate
Aleutian and Pribilof Islands	11	45.45%	45.45%	27.27%	18.18%	36.36%	18.18%	36.36%
Anchorage and Mat-Su	4	0.00%	25.00%	50.00%	25.00%	25.00%	0.00%	25.00%
Bristol Bay and Alaska Peninsula	17	0.00%	5.88%	47.06%	11.76%	23.53%	5.88%	47.06%
Interior	8	0.00%	0.00%	37.50%	25.00%	12.50%	0.00%	37.50%
Kenai Peninsula and Cook Inlet	6	16.67%	16.67%	50.00%	0.00%	33.33%	16.67%	16.67%
Kodiak Island	4	25.00%	50.00%	50.00%	25.00%	50.00%	25.00%	50.00%
Kuskokwim River Mouth	13	7.69%	0.00%	23.08%	23.08%	7.69%	7.69%	76.92%
Northern Alaska	5	0.00%	0.00%	20.00%	20.00%	0.00%	0.00%	80.00%
Norton Sound and Bering Strait	14	7.14%	21.43%	21.43%	14.29%	14.29%	7.14%	42.86%
Prince William Sound	2	0.00%	50.00%	50.00%	50.00%	50.00%	0.00%	50.00%
Southeast	16	12.50%	12.50%	25.00%	31.25%	50.00%	18.75%	25.00%

Appendix Table A38. -- Regional response or non-response to the following question: In your opinion, what are the current challenges for the portion of your community's economy that is based on fishing? (Q26).

	N	Response rate	Total
Aleutian and Pribilof Islands	11	91.67%	12
Anchorage and Mat-Su	3	50.00%	6
Bristol Bay and Alaska Peninsula	19	100.00%	19
Interior	7	87.50%	8
Kenai Peninsula and Cook Inlet	6	85.71%	7
Kodiak Island	4	80.00%	5
Kuskokwim River Mouth	12	75.00%	16
Northern Alaska	4	80.00%	5
Norton Sound and Bering Strait	14	93.33%	15
Prince William Sound	2	66.67%	3
Southeast	16	84.21%	19
Total	93	80.87%	115

Appendix Table A39. -- Regional response or non-response to the following question: Please describe the effects you've seen of fisheries policies or management actions, if any, on your community? (Q27).

	N	Response rate	Total
Aleutian and Pribilof Islands	9	75.00%	12
Anchorage and Mat-Su	3	50.00%	6
Bristol Bay and Alaska Peninsula	9	47.37%	19
Interior	6	75.00%	8
Kenai Peninsula and Cook Inlet	4	57.14%	7
Kodiak Island	4	80.00%	5
Kuskokwim River Mouth	9	56.25%	16
Northern Alaska	1	20.00%	5
Norton Sound and Bering Strait	11	73.33%	15
Prince William Sound	0	0.00%	3
Southeast	14	73.68%	19
Total	70	60.87%	115

Appendix Table A40. -- Regional response or non-response to the following question: Which past or current fisheries policy or management action affected your community the most? (Q28).

	N	Response rate	Total
Aleutian and Pribilof Islands	8	66.67%	12
Anchorage and Mat-Su	3	50.00%	6
Bristol Bay and Alaska Peninsula	10	52.63%	19
Interior	5	62.50%	8
Kenai Peninsula and Cook Inlet	4	57.14%	7
Kodiak Island	3	60.00%	5
Kuskokwim River Mouth	8	50.00%	16
Northern Alaska	1	20.00%	5
Norton Sound and Bering Strait	11	73.33%	15
Prince William Sound	1	33.33%	3
Southeast	14	73.68%	19
Total	68	59.13%	115

Appendix Table A41. -- Regional response or non-response to the following question: What, if any, potential future fisheries policy or management action concerns your community the most? (Q29).

	N	Response rate	Total
Aleutian and Pribilof Islands	7	58.33%	12
Anchorage and Mat-Su	3	50.00%	6
Bristol Bay and Alaska Peninsula	11	57.89%	19
Interior	6	75.00%	8
Kenai Peninsula and Cook Inlet	3	42.86%	7
Kodiak Island	4	80.00%	5
Kuskokwim River Mouth	8	50.00%	16
Northern Alaska	3	60.00%	5
Norton Sound and Bering Strait	12	80.00%	15
Prince William Sound	1	33.33%	3
Southeast	11	57.89%	19
Total	69	60.00%	115

APPENDIX B: SUMMARY RESPONSE DISTRIBUTION TABLES

TABLES

Appendix Table B1. -- Distribution of responses to the following question: On average, which months per year does your community have seasonal workers living there? (Q2).

	N	% survey respondents	% item respondents
Jan-March	13	11.30%	12.50%
April-June	83	72.17%	79.81%
July-Sept	86	74.78%	82.69%
Oct-Dec	27	23.48%	25.96%
All year	9	7.83%	8.65%
None	8	6.96%	7.69%
Blank	11	9.57%	-
Total	**115**		

Appendix Table B2. -- Distribution of responses to the following question: In what month(s) does the population in your community reach its annual peak? (Q4).

	N	% survey respondents	% item respondents
Constant population	8	6.96%	7.69%
Peak in Jan-Mar	12	10.43%	11.54%
Peak in Apr-Jun	51	44.35%	49.04%
Peak in July-Sept	64	55.65%	61.54%
Peak in Oct-Dec	13	11.30%	12.50%
Blank	11	9.57%	-
Total	**115**		

Appendix Table B3. -- Distribution of responses to the following question: To what degree is this peak in population driven by employment in the fishing sectors? (Q5).

	N	% survey respondents	% item respondents
Entirely	18	15.65%	16.22%
Mostly	30	26.09%	27.03%
Somewhat	24	20.87%	21.62%
A little	9	7.83%	8.11%
Not at all	24	20.87%	21.62%
Blank	4	3.48%	-
Total	**115**		

Appendix Table B4. -- Distribution of responses to the following question: Which, if any, natural resource-based industries does your community's economy rely upon? (Q19).

	N	% survey respondents	% item respondents
Mining	19	16.52%	16.67%
Logging	13	11.30%	11.40%
Fishing	77	66.96%	67.54%
Oil and gas	4	3.48%	3.51%
Geothermal	0	0.00%	0.00%
Ecotourism	4	3.48%	3.51%
Sportfishing/hunting	6	5.22%	5.26%
Other	4	3.48%	3.51%
None	9	7.83%	7.89%
Blank	1	0.87%	-
Total	**115**		

Appendix Table B5. -- Distribution of responses to the following question: What types of fishing support businesses are located in your community? (Q16).

	N	% survey respondents	% item respondents
Fish processing plants	38	33.04%	34.23%
Fishing gear sales	50	43.48%	45.05%
Fishing gear manufacturer	2	1.74%	1.80%
Boat repair	41	35.65%	36.94%
Electrical	32	27.83%	28.83%
Welding	52	45.22%	46.85%
Mechanical services	42	36.52%	37.84%
Machine Shop	31	26.96%	27.93%
Hydraulics	26	22.61%	23.42%
Haul-out facilities for small boats (less than 60 tons)	36	31.30%	32.43%
Haul-out facilities for large boats (more than 60 tons)	13	11.30%	11.71%
Tidal grid for small boats (less than 60 tons)	23	20.00%	20.72%
Tidal grid for large boats (more than 60 tons)	10	8.70%	9.01%
Commercial fishing vessel moorage	39	33.91%	35.14%
Recreational fishing vessel moorage	46	40.00%	41.44%
Tackle sales	52	45.22%	46.85%
Bait sales	39	33.91%	35.14%
Commercial cold storage facilities	32	27.83%	28.83%
Drydock storage	29	25.22%	26.13%
Marine Refrigeration	18	15.65%	16.22%
Fish lodges	45	39.13%	40.54%
Fishing business attorneys	4	3.48%	3.60%
Fishing related bookkeeping	22	19.13%	19.82%
Boat fuel Sales	73	63.48%	65.77%
Fishing gear repair	32	27.83%	28.83%
Fishing gear storage	34	29.57%	30.63%
Ice sales	34	29.57%	30.63%
Water taxi	18	15.65%	16.22%
Seaplane service	33	28.70%	29.73%
Air taxi	61	53.04%	54.95%
Blank	4	3.48%	-
Total	**115**		

Appendix Table B6. -- Distribution of responses to the following question: How many feet of public dock space for moorage are located in and around the port of your community for permanent and transient vessels? (Q7).

	Permanent			Transient		
	N	**% survey respondents**	**% item respondents**	**N**	**% survey respondents**	**% item respondents**
None	71	61.74%	68.63%	55	47.83%	54.46%
<500 ft	11	9.56%	11.76%	23	20.00%	22.77%
500-1000 ft	2	1.74%	0.98%	7	6.09%	6.93%
1000-2000 ft	6	5.22%	5.88%	4	3.48%	3.96%
2000-3000 ft	2	1.74%	1.96%	5	4.35%	4.95%
3000-5000 ft	2	1.74%	1.96%	2	1.74%	1.98%
5000-6000 ft	1	0.87%	0.98%	0	0.00%	0.00%
6000-8000 ft	1	0.87%	0.98%	0	0.00%	0.00%
8000-20000 ft	0	0.00%	0.00%	1	0.87%	0.99%
>20000 ft	6	5.22%	5.88%	0	0.00%	0.00%
Blank	13	11.30%		14	12.17%	-
Total	**115**			**115**		

Appendix Table B7. -- Distribution of responses to the following question: Which of the following types of infrastructure projects have been completed in your community since 2000, are currently in progress, or are being planned for completion in the next 10 years? (Q6).

	Completed in the last 10 years?			Currently in progress?			Plan to complete in the next 10 years?		
Type of infrastructure project	N	% survey respondents	% item respondents	N	% survey respondents	% item respondents	N	% survey respondents	% item respondents
Fish cleaning station	25	21.74%	67.57%	5	4.35%	13.51%	8	6.96%	21.62%
Barge landing area	23	20.00%	43.40%	18	15.65%	33.96%	16	13.91%	30.19%
Construct new dock space	26	22.61%	44.83%	16	13.91%	27.59%	22	19.13%	37.93%
Improve existing dock structure	24	20.87%	45.28%	15	13.04%	28.30%	20	17.39%	37.74%
Electricity serving the dock	23	20.00%	51.11%	11	9.57%	24.44%	14	12.17%	31.11%
Water serving the dock	23	20.00%	60.53%	9	7.83%	23.68%	9	7.83%	23.68%
Roads serving dock space	25	21.74%	60.98%	9	7.83%	21.95%	6	5.22%	14.63%
Pilings	19	16.52%	52.78%	10	8.70%	27.78%	10	8.70%	27.78%
Fuel tanks at dock	12	10.43%	52.17%	2	1.74%	8.70%	9	7.83%	39.13%
Breakwater	12	10.43%	41.38%	4	3.48%	13.79%	16	13.91%	55.17%
Harbor dredging	12	10.43%	46.15%	7	6.09%	26.92%	13	11.30%	50.00%
Jetty	6	5.22%	66.67%	1	0.87%	11.11%	2	1.74%	22.22%
Dry dock space	8	6.96%	38.10%	4	3.48%	19.05%	10	8.70%	47.62%
Haulout facilities	14	12.17%	42.42%	8	6.96%	24.24%	12	10.43%	36.36%
EPA certified boat cleaning station	5	4.35%	33.33%	2	1.74%	13.33%	10	8.70%	66.67%
Broadband internet access	41	35.65%	57.75%	22	19.13%	30.99%	18	15.65%	25.35%
Road	26	22.61%	49.06%	16	13.91%	30.19%	22	19.13%	41.51%
Airport/seaplane base	36	31.30%	75.00%	6	5.22%	12.50%	8	6.96%	16.67%
Water and sewer pipelines	34	29.57%	56.67%	23	20.00%	38.33%	18	15.65%	30.00%
Diesel powerhouse	36	31.30%	78.26%	9	7.83%	19.57%	3	2.61%	6.52%
Sewage treatment	25	21.74%	58.14%	12	10.43%	27.91%	10	8.70%	23.26%
Water treatment	39	33.91%	65.00%	16	13.91%	26.67%	10	8.70%	16.67%
Alternative energy (e.g., hydro, wind, tidal)	13	11.30%	22.03%	28	24.35%	47.46%	25	21.74%	42.37%
New landfill/solid waste site	35	30.43%	56.45%	15	13.04%	24.19%	16	13.91%	25.81%
Community center/Library	25	21.74%	52.08%	13	11.30%	27.08%	14	12.17%	29.17%
Public safety – Police department	34	29.57%	64.15%	10	8.70%	18.87%	12	10.43%	22.64%
Emergency response	28	24.35%	58.33%	17	14.78%	35.42%	8	6.96%	16.67%
Fire department	32	27.83%	60.38%	12	10.43%	22.64%	13	11.30%	24.53%
School	47	40.87%	90.38%	7	6.09%	13.46%	5	4.35%	9.62%
Telephone service	45	39.13%	83.33%	12	10.43%	22.22%	4	3.48%	7.41%
Post office	51	44.35%	96.23%	3	2.61%	5.66%	2	1.74%	3.77%

Appendix Table B8. -- Distribution of responses to the following question: What is the maximum vessel length that can use moorage in your community? (Q8).

	N	% survey respondents	% item respondents
0 ft	48	41.74%	46.15%
1-100 ft	27	23.48%	25.96%
101-200 ft	17	14.78%	16.35%
201-300 ft	5	4.35%	4.81%
301-400 ft	6	5.22%	5.77%
401-500 ft	2	1.74%	1.92%
>500 ft	4	3.48%	3.85%
Blank	11	9.57%	-
Total	**115**		

Appendix Table B9. -- Distribution of responses to the following question: What is the annual revenue that public moorage facilities earned in 2010? (Q9).

	Value
N	76
Mean	$285,044.29
Median	$0.00
Maximum	$9,279,534.00
Minimum	$0.00
Standard deviation	$1,159,058.28

Appendix Table B10. -- Distribution of responses to the following question: Which size classes of commercial fishing boats use your community as their base of operation during the fishing season? (Q11).

	N	% survey respondents	% item respondents
Under 35 feet	68	59.13%	61.82%
35-60 feet	40	34.78%	36.36%
61-125 feet	17	14.78%	15.45%
Over 125 feet	12	10.43%	10.91%
None	27	23.48%	24.55%
Blank	5	4.35%	-
Total	**115**		

Appendix Table B11. -- Distribution of responses to the following question: Which of the following types of regulated vessels is the port of your community capable of handling? (Q10).

	N	% survey respondents	% item respondents
Rescue vessels	39	33.91%	35.78%
Cruise ships	21	18.26%	19.27%
Ferries	18	15.65%	16.51%
Fuel barges	60	52.17%	55.05%
Hazmat	9	7.83%	8.26%
None	23	20.00%	21.10%
Blank	6	5.22%	-
Total	**115**		

Appendix Table B12. -- Distribution of responses to the following question: Which fishing gear types are used by commercial fishing boats that use your community as their base of operation during the fishing season? (Q15).

	N	% survey respondents	% item respondents
Trawl	12	10.43%	10.81%
Pots	29	25.22%	26.13%
Longline	45	39.13%	40.54%
Gillnet	62	53.91%	55.86%
Purse seiner	19	16.52%	17.12%
Troll	10	8.70%	9.01%
None	25	21.74%	22.52%
Blank	4	3.48%	-
Total	**115**		

Appendix Table B13. -- Distribution of number of different gears used by commercial fishing boats that use the community as their base of operation during the fishing season. (Q15).

	N	% item respondents[1]
One gear	31	36.05%
Two gears	20	23.26%
Three gears	9	10.47%
Four gears	9	10.47%
Five gears	7	8.14%
Six gears	9	10.47%
Seven gears	1	1.16%
Total	**86**	-

[1] The pool of item respondents in this case refers to communities that reported at least one specific gear type.

Appendix Table B14. -- Distribution of responses to the following question: To the best of your knowledge, what type of recreational or sport fishing, if any, goes on in your community? (Q13).

	N	% survey respondents	% item respondents
Charter boats/Party boats	39	33.91%	34.21%
Private boats owned by residents	96	83.48%	84.21%
Private boats owned by non- residents	49	42.61%	42.98%
Shore-based or dock fishing by local residents	40	34.78%	35.08%
Shore-based or dock fishing by non- residents	30	26.09%	26.32%
None	11	9.57%	9.65%
Blank	1	0.87%	-
Total	**115**		

Appendix Table B15. -- Distribution of responses to the following question: What saltwater species, if any, are targeted by recreational fishermen that use boats based in your community? (Q14).

	N	% survey respondents	% item respondents
Pink salmon	54	46.96%	47.37%
Chum salmon	62	53.91%	54.39%
Chinook/King salmon	79	68.70%	69.30%
Coho/Silver salmon	86	74.78%	75.44%
Sockeye/Red salmon	67	58.26%	58.77%
Halibut	58	50.43%	50.88%
Rockfish	31	26.96%	27.19%
Crab	37	32.17%	32.46%
Black cod/sablefish	14	12.17%	12.28%
Shrimp	28	24.35%	24.56%
Clam	31	26.96%	27.19%
Other	25	21.74%	21.93%
None	11	9.57%	9.65%
Blank	1	0.87%	-
Total	**115**		

Appendix Table B16. -- Distribution of community fishery participation.[1] (Q3).

	N	% survey respondents	% item respondents
Salmon	65	56.52%	63.11%
Herring	10	8.70%	9.71%
Halibut/sablefish	37	32.17%	35.92%
Cod	10	8.70%	9.71%
Pollock	3	2.61%	2.91%
Crab	15	13.04%	14.56%
Whitefish	2	1.74%	1.94%
Shrimp	3	2.61%	2.91%
Shellfish	1	0.87%	0.97%
Blank	12	10.43%	-
Total	**115**		

[1]Survey question was: "On average, how long is the fishing season(s) in your community each year?"

Appendix Table B17. -- Distribution of responses to the following question: What are the three (3) most important subsistence marine or aquatic resource to the residents of your community? (Q20).

	N	% survey respondents	% item respondents
Salmon	88	76.52%	81.48%
Unspecified fish	52	45.22%	48.15%
Pinnipeds (e.g., seals and walrus)	33	28.70%	30.56%
Molluscs and crustaceans (e.g., clams and crabs)	29	25.22%	26.85%
Halibut	28	24.35%	25.93%
Ungulates	19	16.52%	17.59%
Plants	16	13.91%	14.81%
Whales	11	9.57%	10.19%
Birds	11	9.57%	10.19%
Herring	10	8.70%	9.26%
Bear	2	1.74%	1.85%
Beaver/mink	1	0.87%	0.93%
Blanks	7	6.09%	-
Total	**115**		

Appendix Table B18. -- Distribution of responses to the following question: Does the local government, organizations, or other local entities of your community receive any funding or grants from a Community Development Quota entity? (Q21).

	N	% survey respondents	% item respondents
Funding and grants	25	21.74%	27.47%
Special allocations	7	6.09%	7.69%
None	59	51.30%	64.84%
Blank	24	20.87%	-
Total	**115**		

Appendix Table B19. -- Distribution of responses to the following question: How much total revenue did the community receive from fisheries related taxes or fee programs this year? (Q22).

	N	% survey respondents	% item respondents
Fishing gear storage	9	7.83%	9.38%
Leasing public land to fishing industry	9	7.83%	9.38%
Marine fuel sales tax	5	4.35%	5.21%
Harbor rental	13	11.30%	13.54%
Municipal dock use fees	19	16.52%	19.79%
Blank	19	16.52%	-
Total	**115**		

Appendix Table B20. -- Distribution of responses to the following question: Does your community have local fishing-related fee programs charged to the fishing industry that specifically support public services and infrastructure? (Q24).

	N	% survey respondents	% item respondents
Yes	11	9.57%	10.00%
No	99	86.09%	90.00%
Blank	5	4.35%	-
Total	**115**		

Appendix Table B21. -- Distribution of responses to the following question: Which of your community's public services are at least partially supported or funded by any of the following: Local or Borough Raw Fish Tax, Shared Fisheries Business Tax, the Fisheries Resource Landing Tax, or marine fuel sales tax? (Q23).

	N	% survey respondents	% item respondents
Maintaining the harbor	24	20.87%	22.86%
Hospital/Medical clinic	11	9.57%	10.48%
Educational scholarships	6	5.22%	5.71%
Roads	18	15.65%	17.14%
Social Services	11	9.57%	10.48%
Water and wastewater systems	14	12.17%	13.33%
Police enforcement/fire protection	5	4.35%	4.76%
Not able to determine	11	9.57%	10.48%
Other	51	44.35%	48.57%
No community services are funded by fish taxes	24	20.87%	22.86%
Blank	10	8.70%	-
Total	**115**		

Appendix Table B22. -- Distribution of responses to the following question: Which public social services are available in your community? (Q18).

	N	% survey respondents	% item respondents
Medical services or doctors	85	73.91%	78.70%
Food bank	41	35.65%	37.96%
Soup kitchen	7	6.09%	6.48%
Job placement services	25	21.74%	23.15%
Publicly subsidized housing	44	38.26%	40.74%
Public library	56	48.70%	51.85%
Other	34	29.57%	31.48%
Blank	7	6.09%	-
Total	**115**		

Appendix Table B23. -- Distribution of responses to the following question: For the types of boast listed, would you say there were a lot more, more, no more or less, less, or a lot less boats in your community compared to five years ago? (Q12).

		A lot more	More	No more no less	Less	A lot less	Blanks	Total
Charter boats/ Party boats	N	1	11	36	12	9	44	**115**
	% survey respondents	0.87%	9.57%	31.30%	10.43%	7.83%	38.26%	
	% item respondents	1.41%	15.49%	50.70%	16.90%	12.68%	-	
Private pleasure boats	N	8	27	34	9	3	31	**115**
	% survey respondents	6.96%	23.48%	29.57%	7.83%	2.61%	26.96%	
	% item respondents	9.52%	32.14%	40.48%	10.71%	3.57%	-	
Commercial fishing boats	N	6	22	38	17	2	25	**115**
	% survey respondents	5.22%	19.13%	33.04%	14.78%	1.74%	21.74%	
	% item respondents	6.67%	24.44%	42.22%	18.89%	2.22%	-	
Boats <35 ft	N	13	30	38	6	6	20	**115**
	% survey respondents	11.30%	26.09%	33.04%	5.22%	5.22%	17.39%	
	% item respondents	13.68%	31.58%	40.00%	6.32%	6.32%	-	
Boats between 35-60 ft	N	1	12	37	10	6	44	**115**
	% survey respondents	0.87%	10.43%	32.17%	8.70%	5.22%	38.26%	
	% item respondents	1.41%	16.90%	52.11%	14.08%	8.45%	-	
Boats between 61-125 ft	N	1	2	0	12	11	52	**115**
	% survey respondents	0.87%	1.74%	0.00%	10.43%	9.57%	45.22%	
	% item respondents	1.59%	3.17%	0.00%	19.05%	17.46%	-	
Boats >125 ft	N	0	4	33	11	11	54	**115**
	% survey respondents	0.00%	3.48%	28.70%	9.57%	9.57%	46.96%	
	% item respondents	0.00%	6.56%	54.10%	18.03%	18.03%	-	

Appendix Table B24. -- Distribution of responses to the following question: Does your community participate in the fisheries management process in Alaska? (Q25).

	N	% survey respondents	% item respondents
Paid staff attends fed & state	44	38.26%	44.00%
Rep participates in federal	11	9.57%	11.00%
Rep sits on state advisory groups	16	13.91%	16.00%
Rep participates in subsistence	33	28.70%	33.00%
Rely on regional organizations	20	17.39%	20.00%
Financially supports groups	26	22.61%	26.00%
Don't participate	10	8.70%	10.00%
Blank	15	13.04%	-
Total	**115**		

APPENDIX C: RESPONSE RATES

TABLES

Appendix Table C1. -- Response rates by region.

	N	Total	Response Rate
Aleutian and Pribilof Islands	12	13	92.31%
Anchorage and Mat-Su	6	8	75.00%
Bristol Bay and Alaska Peninsula	19	31	61.29%
Interior	8	14	57.14%
Kenai Peninsula and Cook Inlet	7	18	38.89%
Kodiak Island	5	8	62.50%
Kuskokwim River Mouth	16	27	59.26%
Northern Alaska	5	9	55.56%
Norton Sound and Bering Strait	15	28	53.57%
Prince William Sound	3	8	37.50%
Southeast	19	29	65.52%
Total	**115**	**193**	**59.59%**

Appendix Table C2. -- Alaska Community Survey Implementation and Response.

Community	# of Surveys Received	# of Surveys Returned
Adak	2	2
Akhiok	2	1
Akiachak	2	1
Akiak	2	0
Akutan	2	1
Alakanuk	2	1
Aleknagik	2	1
Alitak Bay	1	1
Anchor Point	1	0
Anchorage	2	1
Angoon	2	0
Aniak	2	1
Anvik	2	0
Atka	3	1
Barrow	2	1
Bethel	2	1
Brevig Mission	2	2
Chefornak	2	1
Chenega	1	1
Chevak	2	2
Chignik (Bay)	2	0
Chignik Lagoon	2	0
Chignik Lake	2	0
Chugiak	1	0
Clam Gulch	1	0
Clarks Point	2	1
Cold Bay	1	1
Cooper Landing	1	0
Copper Center	1	0
Cordova	1	1
Craig	2	1
Delta Junction	1	1
Dillingham	2	1
Diomede	2	0
Douglas	1	0
Dutch Harbor/Unalaska	2	1
Eagle River	2	2
Edna Bay	1	0
Eek	2	0
Egegik	2	1
Ekuk	2	1
Ekwok	2	1
Elfin Cove	1	1
Elim	2	1

Appendix Table C2. -- Cont'd.

Community	# of Surveys Received	# of Surveys Returned
Emmonak	2	0
Excursion Inlet	1	0
Fairbanks	2	1
False Pass	2	1
Fort Yukon	2	0
Fritz Creek	1	0
Gakona	2	0
Galena	2	0
Gambell	2	0
Glennallen	2	0
Golovin	2	0
Goodnews Bay	2	1
Grayling	2	1
Gustavus	2	1
Haines	2	0
Halibut Cove	1	0
Hobart Bay	1	1
Holy Cross	2	1
Homer	2	1
Hoonah	2	1
Hooper Bay	2	1
Huslia	2	1
Hydaburg	2	0
Hyder	2	1
Igiugig	2	0
Iliamna	2	1
Ivanof Bay	2	0
Juneau	2	0
Kake	2	1
Karluk	2	0
Kasigluk	2	1
Kasilof	1	0
Kenai	2	0
Ketchikan	2	1
Kiana	2	1
King Cove	3	1
King Salmon	1	0
Kipnuk	2	0
Kivalina	2	0
Klawock	2	0
Kodiak	2	1
Kokhanok	2	0
Koliganek	1	1
Kongiganak	2	1
Kotlik	2	0
Kotzebue	2	1
Koyuk	2	0
Kwethluk	2	1

Appendix Table C2. -- Cont'd.

Community	# of Surveys Received	# of Surveys Returned
Kwigillingok	2	1
Larsen Bay	2	0
Levelock	1	1
Lower Kalskag	2	1
Manokotak	2	1
Marshall	2	1
McGrath	2	0
Mekoryuk	2	1
Metlakatla	1	0
Meyers Chuck	1	0
Moose Pass	1	1
Mountain Village	2	0
Naknek	2	0
Nanwalek	2	1
Napakiak	2	1
Napaskiak	2	1
Nelson Lagoon	2	0
Nenana	2	1
New Stuyahok	2	1
Newhalen	2	1
Newtok	2	0
Nightmute	2	0
Nikiski	1	0
Nikolaevsk	1	1
Nikolski	3	2
Ninilchik	2	0
Noatak	1	0
Nome	2	2
Nondalton	2	2
North Pole	2	0
Nunapitchuk	2	0
Old Harbor	2	0
Oscarville	2	1
Ouzinkie	2	1
Palmer	3	1
Pedro Bay	2	2
Pelican	2	2
Perryville	2	1
Petersburg	2	2
Pilot Point	2	1
Pilot Station	2	1
Platinum	2	1
Point Baker	1	1
Point Lay	2	1
Port Alexander	1	1
Port Alsworth	2	2
Port Graham	2	1
Port Heiden	2	1

Appendix Table C2. -- Cont'd.

Community	# of Surveys Received	# of Surveys Returned
Port Lions	2	1
Port Moller	1	1
Port Protection	1	1
Portage Creek	2	0
Prudhoe Bay	1	0
Quinhagak	2	1
Russian Mission	2	1
Saint George	2	1
Saint Mary's	2	1
Saint Michael	2	0
Saint Paul	2	1
Sand Point	3	1
Savoonga	2	1
Scammon Bay	2	0
Selawik	2	0
Seldovia	2	1
Seward	2	1
Shageluk	2	0
Shaktoolik	2	0
Sheldon Point (Nunam Iqua)	2	0
Shishmaref	2	0
Sitka	2	2
Skwentna	1	1
Soldotna	1	0
South Naknek	1	0
Stebbins	2	1
Sterling	1	0
Talkeetna	2	1
Tanana	2	1
Tatitlek	2	0
Teller	2	1
Tenakee Springs	1	1
Thorne Bay	2	1
Togiak	2	0
Tok	2	2
Toksook Bay	2	0
Tuluksak	2	0
Tuntutuliak	2	0
Tununak	2	0
Twin Hills	2	1
Ugashik	2	1
Unalakleet	2	0
Valdez	2	1
Wainwright	2	1
Wales	2	1
Wasilla	1	0
Whale Pass	2	1
White Mountain	2	2

Appendix Table C2.-- Cont'd.

Community	# of Surveys Received	# of Surveys Returned
Whittier	2	0
Willow	2	1
Wiseman	1	0
Wrangell	2	1
Yakutat	2	1
Total	**353**	**130**

APPENDIX D: SURVEY INSTRUMENT

Alaska Community Survey

Sponsored by:
NOAA Fisheries (National Marine Fisheries Service)
Alaska Fisheries Science Center
Economic and Social Science Research Program

Questions?

Please contact Amber Himes, AFSC Social Scientist
Phone: (206) 526-4221
Email: Amber.Himes@noaa.gov

OMB Control No.: 0648-0626 **EXPIRATION DATE:** 03/31/2014

This survey is voluntary. **All responses are anonymous.**

SURVEY INSTRUCTIONS

◊ All answers given in this survey should reflect information about [COMMUNITY NAME].

◊ Please ask questions if anything is unclear. Contact Dr. Amber Himes at Amber.Himes@noaa.gov or at (206)526-4221.

◊ Please use pen in blue or black ink.

◊ Please **DO NOT** write your name anywhere on this survey.

◊ Please mark only one answer for each question unless otherwise instructed.

◊ If you are unable to answer the question, please write why you are unable to answer in the margin. (e.g., Data not available)

THANK YOU FOR YOUR TIME AND PARTICIPATION

Q1 **How many people live in [COMMUNITY NAME]…** *Please indicate the source of the number of people or if the number is an estimation. Seasonal workers includes all industries (for example, fishing, construction, tourism, etc.)*

… as year round residents? _____ people
- ❑ Source: _____
- ❑ This is an estimation.

… as seasonal workers or transients? _____ people
- ❑ Source: _____
- ❑ This is an estimation.

… as year round residents and work in a shore-side processing plant? _____ people
- ❑ Source: _____
- ❑ This is an estimation.

Q2 **On average, which months per year does [COMMUNITY NAME] have seasonal workers living there?** *Seasonal workers includes all industries (for example, fishing, construction, tourism, etc.)*

_____

Q3 **On average, how long is the fishing season(s) in [COMMUNITY NAME] each year?** *Please provide the months that fishing out of [COMMUNITY NAME] typically begins and ends each year and indicate which fishery(ies) you are referring to.*

Fishery: _____ From _____ to _____
Fishery: _____ From _____ to _____
Fishery: _____ From _____ to _____
Fishery: _____ From _____ to _____

Q4 **In what month(s) does the population in [COMMUNITY NAME] reach its annual peak?**
_____
_____
_____

Q5 **To what degree is this peak in population driven by employment in the fishing sectors (for example, processing plants, commercial fishing, subsistence fishing, recreational/sport fishing, and charter fishing)?**

❑	❑	❑	❑	❑
Entirely	Mostly	Somewhat	A little	Not at all

Q6 Which of the following types of infrastructure projects, if any, have been completed in [COMMUNITY NAME] since 2000, are currently in progress, or are being planned for completion in the next 10 years? *Please mark the applicable boxes for each project.*

Type of infrastructure project	Completed in the last 10 years?	Currently in progress?	Plan to complete in the next 10 years?	Year of completion or planned completion (if not known, write "unknown")
Fish cleaning station	❑	❑	❑	_____
Barge landing area	❑	❑	❑	_____
Construct new dock space	❑	❑	❑	_____
Improve existing dock structure	❑	❑	❑	_____
Electricity serving the dock	❑	❑	❑	_____
Water serving the dock	❑	❑	❑	_____
Roads serving dock space	❑	❑	❑	_____
Pilings	❑	❑	❑	_____
Fuel tanks at dock	❑	❑	❑	_____
Breakwater	❑	❑	❑	_____
Harbor dredging	❑	❑	❑	_____
Jetty	❑	❑	❑	_____
Dry dock space	❑	❑	❑	_____
Haulout facilities	❑	❑	❑	_____
EPA certified boat cleaning station	❑	❑	❑	_____
Broadband internet access	❑	❑	❑	_____
Road	❑	❑	❑	_____
Airport/seaplane base	❑	❑	❑	_____
Water and sewer pipelines	❑	❑	❑	_____
Diesel powerhouse	❑	❑	❑	_____
Sewage treatment	❑	❑	❑	_____
Water treatment	❑	❑	❑	_____
Alternative energy (e.g., hydro, wind, tidal)	❑	❑	❑	_____
New landfill/solid waste site	❑	❑	❑	_____
Community center/Library	❑	❑	❑	_____
Public safety – Police department	❑	❑	❑	_____
Emergency response	❑	❑	❑	_____
Fire department	❑	❑	❑	_____
School	❑	❑	❑	_____
Telephone service	❑	❑	❑	_____
Post office	❑	❑	❑	_____
Other_____	❑	❑	❑	_____

Q7 How many feet of <u>public</u> dock space for moorage are located in and around the port of [COMMUNITY NAME] for permanent and transient vessels?

_____ feet of dock space is available for permanent vessels to moor at.

❑ No dock space is available for permanent vessels to moor at.

_____ feet of dock space is available for transient vessels to moor at.

❑ No dock space is available for transient vessels to moor at.

Q8 What is the maximum vessel length that can use moorage in [COMMUNITY NAME]?

Vessels up to _____ feet long can use moorage in [COMMUNITY NAME].

❑ No dock space is available for public moorage.

Q9 What is the annual revenue that public moorage facilities earned in 2010?

US$ _____

Q10 Which of the following types of regulated vessels, if any, is the port of [COMMUNITY NAME] capable of handling? *Regulated vessels are those that are specially regulated by the U.S. Coast Guard and must conform to the Maritime Transportation Security Act.*

❑ Rescue vessels (e.g., Coast Guard)
❑ Cruise ships
❑ Ferries
❑ Fuel barges
❑ HAZMAT
❑ None of the above
❑ Other: _____

Q11 Which size classes, if any, of commercial fishing boats use [COMMUNITY NAME] as their base of operation <u>during</u> the fishing season? *Check all that apply.*

❑ Under 35 feet
❑ 35 to 60 feet
❑ 61 to 125 feet
❑ Over 125 feet
❑ None

Q12 For the types of boats listed, would you say there were a lot more, more, no more or less, less, or a lot less boats in [COMMUNITY NAME] compared to five years ago?

	A lot more	More	No more or less	Less	A lot less
Charter boats/Party boats	❑	❑	❑	❑	❑
Private pleasure boats	❑	❑	❑	❑	❑
Commercial fishing boats	❑	❑	❑	❑	❑
Boats shorter than 35 feet	❑	❑	❑	❑	❑
Boats between 35 and 60 feet	❑	❑	❑	❑	❑
Boats between 61 and 125 feet	❑	❑	❑	❑	❑
Boats longer than 125 feet	❑	❑	❑	❑	❑
Other (specify): _____	❑	❑	❑	❑	❑

Q12a For any changes you noted in Q12, please describe any changes that you have noticed.

Q13 To the best of your knowledge, what type of recreational or sport fishing, if any, goes on in [COMMUNITY NAME]? *Check all that apply.*

- ❑ Charter boats or party boats
- ❑ Private boats owned by local residents
- ❑ Private boats owned by non-residents
- ❑ Shore-based or dock fishing by local residents
- ❑ Shore-based or dock fishing by non-residents
- ❑ Other: _____
- ❑ None

Q14 What saltwater species, if any, are targeted by recreational fishermen that use boats based in [COMMUNITY NAME]? *Check all that apply.*

- ❑ Pink salmon
- ❑ Chum salmon
- ❑ Chinook/King salmon
- ❑ Coho/Silver salmon
- ❑ Sockeye/Red salmon
- ❑ Halibut
- ❑ Rockfish
- ❑ Crab
- ❑ Black cod/sablefish
- ❑ Shrimp
- ❑ Clam
- ❑ Other: _____
- ❑ None

Q15 Which fishing gear types, if any, are used by commercial fishing boats that use [COMMUNITY NAME] as their base of operation <u>during</u> the fishing season? *Check all that apply.*

- ❑ Trawl
- ❑ Pots
- ❑ Longline
- ❑ Gillnet
- ❑ Purse seiner
- ❑ Troll
- ❑ Other: _____
- ❑ None of the above

Q16 What types of fishing support businesses are located in [COMMUNITY NAME])? *From the list below, check one box for each type of business to indicate if it is present in [COMMUNITY NAME].*

Business type	**Located in the community?**	
Fish processing plants	❑ Yes	❑ No
Fishing gear sales	❑ Yes	❑ No
Fishing gear manufacturer	❑ Yes	❑ No
Boat repair	❑ Yes	❑ No
Electrical	❑ Yes	❑ No
Welding	❑ Yes	❑ No
Mechanical services	❑ Yes	❑ No
Machine Shop	❑ Yes	❑ No
Hydraulics	❑ Yes	❑ No
Haulout facilities for small boats (less than 60 tons)	❑ Yes	❑ No
Haulout facilities for large boats (more than 60 tons)	❑ Yes	❑ No
Tidal grid for small boats (less than 60 tons)	❑ Yes	❑ No
Tidal grid for large boats (more than 60 tons)	❑ Yes	❑ No
Commercial fishing vessel moorage	❑ Yes	❑ No
Recreational fishing vessel moorage	❑ Yes	❑ No
Tackle sales	❑ Yes	❑ No
Bait sales	❑ Yes	❑ No
Commercial cold storage facilities	❑ Yes	❑ No
Drydock storage	❑ Yes	❑ No
Marine Refrigeration	❑ Yes	❑ No
Fish lodges	❑ Yes	❑ No
Fishing business attorneys	❑ Yes	❑ No
Fishing related bookkeeping	❑ Yes	❑ No
Boat fuel Sales	❑ Yes	❑ No
Fishing gear repair	❑ Yes	❑ No
Fishing gear storage	❑ Yes	❑ No
Ice sales	❑ Yes	❑ No
Water taxi	❑ Yes	❑ No
Seaplane service	❑ Yes	❑ No
Air taxi	❑ Yes	❑ No
Other: _____	❑ Yes	❑ No

Q17 For those businesses in Q16 that are not available in [COMMUNITY NAME], please list the top three communities that people go to for these services.

1) _____
2) _____
3) _____

Q18 Which public social services are available in [COMMUNITY NAME]? *Check all that apply.*

- ❑ Medical services or doctors
- ❑ Food bank
- ❑ Soup kitchen
- ❑ Job placement services
- ❑ Publicly subsidized housing
- ❑ Public library
- ❑ Other _____

Q19 Which, if any, natural resource-based industries does [COMMUNITY NAME]'s economy rely upon? *Check all that apply.*

- ❑ Mining
- ❑ Logging
- ❑ Fishing
- ❑ Oil and natural gas exploration or drilling
- ❑ Geothermal
- ❑ Ecotourism (e.g., whale watching, kayaking)
- ❑ Sport hunting and fishing
- ❑ Other: _____
- ❑ None of the above

Q20 What are the three (3) most important subsistence marine or aquatic resources to the residents of [COMMUNITY NAME]? *Subsistence may be defined as the harvest of local natural resources for local consumption. We encourage you to answer this question in conjunction with others from [COMMUNITY NAME].*

1) _____
2) _____
3) _____

- ❑ Subsistence harvesting is not done by residents of [COMMUNITY NAME].

Q21 Does the [COMMUNITY NAME] local government, organizations, or other local entities receive any funding or grants from a Community Development Quota entity? *If funding or grants were received in 2010, please indicate how much the local government received.*

- ❑ [COMMUNITY NAME] received $ _____ in funding or grants from a Community Development Quota entity in 2010.
- ❑ [COMMUNITY NAME] received $ _____ in special allocations from a Community Development Quota entity in 2010.
- ❑ [COMMUNITY NAME] does not receive any funding or grants from Community Development Quota entities.

Q22 How much total revenue did the community of [COMMUNITY NAME] receive from fisheries related taxes or fee programs in 2010? *If no revenue was received from one of the sources of revenue listed, please write $0 in the "Revenue Received" column. If revenue is received for one of the sources of revenue listed, but there are no records of the total amount, please write "unknown."*

Source of Revenue	Amount of Total Revenue Received in US$
Fishing gear storage on public/tribal land	US$_____
Leasing public/tribal land to members of the fishing industry	US$_____
Tax on the sale of marine fuel (used to power private and commercially owned boats)	US$_____
Harbor rental	US$_____
Municipal dock use fees (for example, container offloading/onloading, fishing gear transfer, etc.)	US$_____
Other:_____	US$_____
Other:_____	US$_____
Other:_____	US$_____

Q23 Which of [COMMUNITY NAME]'s public services are at least partially supported or funded by any of the following: Local or Burough Raw Fish Tax, Shared Fisheries Business Tax, the Fisheries Resource Landing Tax, or marine fuel sales tax? *Check all that apply.*

- ❑ Maintaining the harbor
- ❑ Hospital/medical clinic/emergency response
- ❑ Educational scholarships
- ❑ Roads
- ❑ Social services (e.g., libraries, etc.)
- ❑ Water and wastewater systems
- ❑ Roads
- ❑ Police/enforcement/fire protection
- ❑ Not able to determine
- ❑ Other: _____
- ❑ No community services are funded by these taxes.

Q24 Does [COMMUNITY NAME] have local fishing-related fee programs charged to the fishing industry that specifically support public services and infrastructure?

- ❑ Yes
- ❑ No

Q24a If you answered yes to Q24, please describe those local fee programs and what community services and infrastructure they support.

Q25 Does [COMMUNITY NAME] participate in the fisheries management process in Alaska?

- ❑ **Yes**
- ❑ **No**

Q25a If yes, how? *Check all that apply.*

- ❑ [COMMUNITY NAME] has a paid staff member that attends North Pacific Fisheries Management Council meetings and/or Board of Fisheries meetings.
- ❑ [COMMUNITY NAME] has a representative that participates in North Pacific Fisheries Management Council committees or advisory groups.
- ❑ [COMMUNITY NAME] has a representative that sits on regional fisheries advisory and/or working groups run by Alaska Department of Fish and Game.
- ❑ [COMMUNITY NAME] has a representative that participates in the Federal Subsistence Board or Federal Subsistence Regional Advisory Council process.
- ❑ [COMMUNITY NAME] relies on regional organizations, such as the Gulf of Alaska Coastal Communities Coalition, Southeast Conference, or Southwest Alaska Municipal Conference, to provide information on fisheries management issues.
- ❑ [COMMUNITY NAME] financially supports research organizations, industry coalitions, and trade associations, such as_____.
- ❑ Other: _____

Q26 In your opinion, what are the current challenges for the portion of [COMMUNITY NAME]'s economy that is based on fishing? *Please feel free to provide additional information on a separate sheet of paper.*

Q27 Please describe the effects you've seen of fisheries policies or management actions you've seen, if any, on [COMMUNITY NAME]. *Please describe the policies or management action(s), both positive and negative and what impact it has had on [COMMUNITY NAME]. Please feel free to provide additional information on a separate sheet of paper.*

Q28 Which <u>past or current</u> fisheries policy or management action affected [COMMUNITY NAME] the most? *Please describe the policy or management action, positive or negative, and how [COMMUNITY NAME] residents were affected. Please feel free to provide additional information on a separate sheet of paper.*

Q29 What, if any, <u>potential future</u> fisheries policy or management action concerns [COMMUNITY NAME] the most? *Please describe the policy or management action, positive or negative, and why [COMMUNITY NAME] residents are concerned. Please feel free to provide additional information on a separate sheet of paper.*

Q30 Who contributed to filling out this survey? *Check all that apply. The answers to this question will not be reported.*

- ☐ Local government staff
- ☐ Local elected officials
- ☐ Harbormaster
- ☐ Tribal Council member or staff
- ☐ Non-governmental organization (for example, GOACCC, SWAMC, etc.)
- ☐ Fishing industry participants (for example, commercial/recreational/subsistence fishermen, processing plant workers, etc.)
- ☐ Local fishing support sector businesses
- ☐ Other: _____

Q31 Please use the space below to provide us with any additional information you would like us to know about [COMMUNITY NAME] that shows how [COMMUNITY NAME] is engaged in or affected by fisheries. *Please feel free to provide additional information on a separate sheet of paper.*

AFSC MID #########

THANK YOU FOR YOUR PARTICIPATION!

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