

Identifying Communities Associated with the Fishing Industry in Texas

-Final Report-



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By



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by

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Disclaimer

This report was compiled as specified by NOAA Fisheries under Contract WC133F-03-SE-0603. Project goals and objectives are directly related to agency needs per the Magnuson-Stevens Fisheries Management and Conservation Act as Amended, and National Standard 8. Neither the U.S. Government nor its contractor warrant or assume liability for external use or misuse of this information for other purposes.

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Identifying Communities Associated with the Fishing Industry in Texas

1.0 Introduction

This and the following chapters provide a comprehensive report on the NOAA Fisheries study titled “Identifying Communities Associated with the Fishing Industry in Texas.” The report is companion to others developed through identical research in Gulf Coastal Florida, Alabama, Mississippi, and Louisiana. The research has been conducted for NOAA Fisheries Southeast Regional Office (SERO), in fulfillment of its goal to effectively manage the various fisheries upon which residents of certain towns and cities in the Gulf of Mexico have depended and/or continue to depend, to greater and lesser degrees, for economic and social purposes. Systematic description of relevant aspects of those places is the overarching goal of the current study.¹ The project was undertaken and completed by Impact Assessment, Inc. (IAI), a research firm specializing in maritime social science in the coastal zone of the United States.

IAI worked with SERO during autumn 2002 to develop a systematic methodology for investigating and describing Gulf communities likely to exhibit some or all of the attributes of “fishing communities” as defined by the Magnuson-Stevens Fishery Conservation and Management Act as Amended (the Magnuson Act; MSFCMA), and by National Standard 8 (NS-8).² The project methodology emphasizes: (a) collection and geospatial analysis of various fishing license, landings, economic, and demographic attribute data, and (b) collection and analysis of a variety of descriptive economic and social data considered viable indicators of fishing community status.

Successful completion of the project has been highly dependent on the gracious cooperation of numerous entities and individuals. These include, among others: the Gulf States Marine Fisheries Commission (GSMFC), various offices of NOAA Fisheries, the Gulf of Mexico Fishery Management Council (GMFMC), officials in state government agencies, local officials in the study towns and cities, and many hundreds of fishery participants in the region.

The scope of this study is quite large, encompassing 67 communities in 18 coastal counties in Texas. The study areas were chosen for description by NOAA Fisheries based on evidence that some residents in each were in some manner involved in marine fisheries in the region. Given the number of study towns and cities, depth of coverage is necessarily cursory and descriptive rather than in-depth and highly analytical. We focus on providing descriptive information at a level of detail that will enable NOAA Fisheries staff to conduct or coordinate additional future research as needed to effect appropriate resource management decisions under the MSFCA, National Environmental Policy Act (NEPA), Executive Order 12898, and other pertinent marine

¹The project builds on the work of Jacob et al. (2000) who used similar methods and central place theory to develop socioeconomic profiles of a small number of fishing communities along the West Florida coastline.

²NS-8 is a component of the Sustainable Fisheries Act, Public Law 104-297, prepared by the National Oceanic and Atmospheric Administration Office of General Counsel in 1997; the Standard provides guidance for addressing community issues in the course of federal management of fisheries along the U.S. coastline.

policy. As the final version of this report is being submitted just months following the passage of Hurricane Rita in the Orange County area September 2005, the reports and associated data may also serve to inform readers about the general nature of fishing-related industry and associated social conditions in the affected and adjacent areas.

1.1 Project Goals and Objectives

The overarching goal is to provide NOAA Fisheries staff with information needed to determine whether, or to what degree, each of the study communities fits the federal definition of “fishing community.” Provision of relevant descriptive information about communities associated with the fishing industry in the region is therefore the overarching goal of this study. These data have been gathered through the following steps, as follow:

1. With due attention to issues of confidentiality and anonymity that surround collection and use of proprietary data, IAI acquired fishing license and trip ticket data from the GSMFC and Texas; federal permit, dealer, and processor data from NOAA Fisheries; and various public information data regarding fishing-related businesses;
2. Based on address fields in each database, the firm developed a Geographic Information System (GIS) enabling geospatial depiction and analysis of: (a) fishery participant residence patterns, and (b) the distribution of fishing-related businesses in and around the study communities;
3. Various pertinent secondary source data were collected to aid in describing relevant social, economic, and demographic trends and conditions in each of the prospective fishing communities across the region (including the location of processing and service sector facilities); these data were incorporated into the GIS database to depict social and economic linkages between fishery sectors, communities, and counties;
4. A team of researchers conducted Rapid Assessment field research in study communities across the region, with field methods including observation and documentation of local fishing and industry infrastructure, and discussions with key informants (resident fishery participants, local government officials, harbormasters, local and regional fishery managers, and representatives of local fishing groups and organizations). Discussions focused on: (a) the nature of local and regional fishing infrastructure, (b) relevant aspects of community life, and (c) salient fisheries issues and other issues of local importance. Sub-communities and supra-communities located within or surrounding the study communities were visually identified and described; and
5. Observational data, interview data, secondary source information, and other data collected through the rapid assessment process were used to complement development of the GIS and narrative description of the communities.

Based on information and products derived from meeting the objectives described above, this final report provides: (a) fisheries-relevant narrative description of historic and contemporary life in the study counties, cities, and towns, (b) tabular and spatial description of fisheries infrastructure and services, and fleet characteristics specific to those places, and (c) preliminary assessment of the manner in, and degree to which, each study town or city does or does not approximate the National Standard 8 definition of fishing community. As preface to the descriptive core of the report that follows in Section 3.0, we provide that definition, as follows:

The term 'fishing community' means a community that is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew, and fish processors that are based in such communities. A fishing community is a social or economic group whose members reside in a specific location and share a common dependency on commercial, recreational, or subsistence fishing or on directly related fisheries-dependent services and industries (for example, boatyards, ice suppliers, tackle shops) (Section 300.345, part 3).

1.2 Research Methods

The methodology used to characterize communities associated with the fishing industry in the study area involves multiple overlapping data collection techniques. Table 1, below, summarizes the general categories of information that were needed to conduct the research, and the various sources and methods through which those data were acquired.

Table 1-1 Principal Information Needs and Associated Data Sources and Methods

General Category of Information Need	Source and Research Methods
Nature of Community and its Social and Economic Involvement in Fishing Industries	Archival search and analysis of local history, collection/analysis of permit, license, trip ticket, landings, census data; observation and spatial analysis of local fleets and infrastructure; key person interviews and thematic analysis
Spatial Distribution of Harvesting Sector	Collection/geospatial analysis of permit, license, and census data; observation; key person interviews
Spatial Distribution of Support Sectors	Collection/geospatial analysis of processor, dealer, retail, and wholesale distribution data; observation; key person interviews

As noted in the table, review and synthesis of secondary source data focused on: (a) spatial aspects of participation in fisheries in state and federal jurisdiction waters in the region, (b) demographic characteristics of the study counties, cities, and towns, and (c) the nature of fishing-related industry in those places. Such extant information is of variable quality. Given our concern for providing the most accurate description of the communities and counties possible, we have proceeded with due awareness of potential problems in the use and interpretation of archival data, and we qualify use of such information as necessary.

Collection and analysis of primary source data focused on: (a) the nature and extent of local fishing infrastructure, (b) the operational dynamics of fisheries and industries in which participants are involved, and (c) fishery-specific aspects of local life. The data resulting from both secondary and primary sources contribute to the narrative descriptions of the study towns and cities, and to the accompanying maps and spatial analyses. The resulting composite descriptions are the focus of this report.

We reiterate that this study was intended to generate general information about many towns and cities rather than extensive information about a few. Thus, we were not able to pursue the kind of detailed information that is typically gathered through ethnographic research, such as in-depth information about crew composition, familial involvement in marine fisheries, and so forth. Rather than attempting to estimate such information, we use only those empirical data in hand to describe the communities. As such, the profiles may tend to be conservative as regards the actual scope of fishing-related industry in a given town or city.

Secondary Source Data Collection and Analysis. Following an initial round of data requests and discussions with data management personnel at the federal, state, and regional levels of government, our secondary source data collection efforts focused on acquisition and analysis of the following: (a) federal permit, processor, dealer, and head boat information, (b) state fishing license and trip ticket data (as available), (c) U.S. Census Bureau information, (d) information about the histories of the communities and counties, and (e) fishing-related commercial business listings from a private data source that included but was not limited to yellow page listings. Each acquired dataset was reviewed for its utility in meeting project objectives, subsequently formatted to improve its quality and to eliminate potential problems with confidentiality and propriety, and in the cases of (a), (b), and (e) above, ultimately organized and entered for purposes of geo-coding; that is, identification of latitude and longitude in decimal degrees for mapping purposes. Non-spatial data, including U.S. Census data, were tabulated for use in the community profiles.

Primary Source Data Collection and Analysis. The study team used Rapid Assessment procedures to collect various observation-based and interview data as time and resources would allow while present in the study areas. The effort relied heavily on: observation and documentation of local and regional: (a) fishing fleets, (b) fishing-related infrastructure, (c) fishing-specific industry, and (d) fisheries-relevant social and economic linkages within and between towns and cities. Follow-up telephone interviews with key informants were conducted to cross-validate and enhance data of observation, and to explore historic and current trends in and local perspectives on fishing and associated industry in and around the study areas.

1.3 Geographic Scope and Rationale for Organization of the Report

This study has involved field activities in, and archival data collection, analysis, and description for all the Texas towns and cities of interest to NOAA Fisheries. While some are located in inland portions of the state, most are situated along the coastline in relatively close proximity to the Gulf of Mexico.

Various geographic concepts were considered as potential organizing principles for this report. But given interest in inter-community and regional social and economic linkages, and following review of various data and discussions with field staff and resource managers in the region, it was determined that the most logical way to organize the descriptions was by county. This strategy is deemed appropriate in that geo-political bounds were originally formulated based largely on aspects of the landscape that in various ways continue to condition transportation, commerce, and other social interaction in the coastal portions of the states of interest.

As such, we organize the community profiles in the body of the report by county, beginning with Orange County along the northeast coast of Texas, and finishing with Cameron County in the southwestern-most part of the state. The community descriptions are arranged alphabetically within each county section for ease of reference.

Table 1-2 Texas Communities by County

County	Study Community
Aransas	Aransas Pass, Fulton, Rockport
Brazoria	Alvin, Brazoria, Clute, Freeport, Lake Jackson, Pearland, Sweeny
Calhoun	Indianola, Port Lavaca, Port O'Connor, Seadrift
Cameron	Brownsville, Laguna Vista, Los Fresnos, Port Isabel, San Benito, South Padre Island
Chambers	Anahuac
Dallas	Carrollton
Galveston	Bacliff, Crystal Beach, Dickinson, Friendswood, Galveston, Kemah, La Marque, League City, Port Bolivar, San Leon, Texas City
Harris	Baytown, Channelview, Highlands, Houston, Pasadena, Seabrook
Jefferson	Beaumont, Groves, Nederland, Port Acres, Port Arthur, Port Neches, Sabine Pass
Kleberg	Kingsville, Riviera/Riviera Beach
Liberty	Liberty
Matagorda	Bay City, Matagorda, Palacios, Sargent
Nueces	Corpus Christi, Port Aransas, Robstown
Orange	Bridge City, Orange, Vidor
Refugio	Bayside, Tivoli
San Patricio	Ingleside, Portland, Sinton, Taft
Victoria	Victoria
Willacy	Port Mansfield

Each group of study communities is preceded by brief description of the parent county, with the content of that description providing basic social and demographic information needed to better understand the social and economic context of the study area. Where applicable and available, we also provide fishing-specific information, aggregated to the county level. County maps orient the reader to the location of the communities and depict offshore features of general economic interest (such as offshore oil platforms), and of specific interest to fishing captains (such as natural reefs and shipwrecks). We believe this narrative and spatial approach provides the best possibility for inferring potential linkages between communities, counties, and the larger region, and for describing the realities of those linkages where empirical data allow.

Following this introduction, Section 2.0 presents some prefatory materials in advance of the community descriptions and county-level discussions. These are presented in sections three. Summary analysis is provided as the last substantive section of the report, and references complete the report.

2.0 Preface to the Study Community Descriptions

While the tendency of sociologists and anthropologists specializing in community studies is to explore local social, economic, and demographic processes in great depth and detail, the extensive scope of this project, and the geographically-diffused nature of the study towns and cities demanded a different focus and strategy. Given limitations of time and resources amidst the many logistical challenges associated with data collection across a large study area, the focus of the current project is necessarily broad rather than in great depth, and its data collection strategy is one of systematic consistency in numerous pertinent categories of information, rather than attention to extensive detail. In short, the requested study was designed to systematically develop valid sketches of many study communities rather than detailed pictures of a few.

The primary thrust of the work has been to identify and describe those aspects of the study towns and cities that are necessary precursors to local involvement in fishing-related industry. Again, this is not a detailed ethnographic or economic analysis. While the effort yielded extensive information that may be used to develop preliminary models of fisheries dependence and guide subsequent in-depth ethnographic inquiry, such work awaits a subsequent phase of research. The final chapter of this report develops a typology of study towns and cities, and provides a rationale for where and why future in-depth research would ideally be conducted.

2.1 Overarching Data Issues and Challenges

The research team did indeed seek consistency in data collection and description. Yet not all data were available for all communities – in large part an effect of the rural nature of many of the study towns and rural places, and the corresponding lack of available secondary source information describing those areas. For instance, this was frequently the case for local histories, since, in many cases, the place in question was without library or other information repository, and because the aforementioned resource limitations precluded conduct of oral histories, as

might be pursued during the course of in-depth ethnographic research in a single or few communities. There were other challenges as well, as outlined below.

Paucity of “Subsistence” Fishing Data. Marine fisheries research has long focused primarily on aspects of commercial and recreational fishing activities. Consumption-oriented fishing in the U.S. has been consistently and thoroughly addressed only in Alaska, and there primarily in the Native context only. The semantic challenges of adequately defining subsistence fishing as distinct from recreational (or commercial) fishing notwithstanding, fishing for the purpose (or with the end result) of consumption or sharing has indeed been largely ignored by social scientists. Indeed, while it is widely acknowledged that the consumptive component of both recreational and commercial fishing trips is an important motive for involvement; few directly relevant studies have been conducted outside of Alaska.

Yet our research in the study areas, and especially in the more rural areas, confirms the widespread importance of fishing for food. Observation and discussions with informants in these places made clear that many participants use at least some component of seafood landed during their commercial and recreational trips for consumptive purposes. But we were able to identify no published studies or data that would assist in describing the scope or importance of subsistence or consumptive activities to residents in the communities of interest. Systematic investigation of the topic exceeds the scope of this project, which is intended rather to identify towns and cities associated with fishing *industries*. We submit, however, that subsistence fishing issues are critically important to contemporary natural resource management in the U.S., and constitute an area ripe for research in the study region and elsewhere.

Recreational Fishing Data Challenges and Solutions. Despite the widespread importance of recreational fishing, relevant data specific to the study communities were also relatively sparse. For example, the NOAA Fisheries Marine Recreational Fisheries Statistics Survey (MRFFS) is not designed to generate information that could be used to infer degree and manner of community-level involvement in recreational fishing activities. The MRFSS sampling methodology and the information it generates are rather intended to address recreational fishing activity as it occurs across relatively large regions and as enacted by both residents and visitors. Efforts to generate analysis with more geographic specificity using MRFSS data may be prone to interpretation challenges since sampling occurs in locations and times that do not necessarily capture the full range of activities or intensity of recreational effort undertaken by anglers in a given study town or city.

While we make best use of available data, development of a detailed understanding of recreational fishing activities specific to any given community also exceeds the scope of this study. IAI was able to acquire state recreational license data for Texas, and various additional data were used to indicate recreational fishing activity in and around the study communities.

Challenges to Street-Level Mapping Resolution. Finally, address resolution issues have, to some extent, limited our ability to accurately document spatial aspects of participation in fishing-related industry at the community level of analysis. The primary challenge was that, in many cases, permit and license holders, seafood dealers, and seafood processors list a post office box address rather than a physical address on their permit and license applications. While this

enables sufficient understanding and depiction of distribution patterns at the zip code level of resolution, it confounds efforts at the finer street-level resolution that was the preferred level of resolution for the current study given community definitions that require co-residence or co-location in a specific rural place or within specific municipal boundaries.

Understanding patterns of physical residence was considered important since participants in the harvest sector, and especially those in distant water fisheries such as offshore shrimping, may set up a post office box near place of vessel mooring, but quite often live elsewhere. But because it cannot be readily known whether persons maintaining post office box addresses actually do or do not reside in the town or city in question (since physical residence and post office box usage are not necessarily mutually exclusive), we also tallied and depicted the total number of permit and license holders using either form of local address. We believe this dual approach provides an understanding of residence patterns across the full range of participants living or working in the study areas on a permanent, seasonal, or transient-remote basis.

Regarding the “Rule of Three.” Marine resource management agencies, including NOAA Fisheries, typically allow reporting of fishing business information only in situations where there are at least three local businesses for any given category of activity (including harvesting, processing, and distribution). This reduces the possibility that available production or employment information could be attributed to any single business or individual, thereby affording potential business competitors the unfair advantage of inside knowledge.

While the protective value of the rule is obvious, it challenges our mission to report on fishing industry activities in small rural communities where the presence of even a single business can be an important indicator of local involvement in, or dependence on fishing. For instance, there are numerous communities in which one or two seafood processors provide local jobs, but relatively few in which there are sufficient numbers of such businesses to enable reporting of employment or production figures without concern for the potential effects on business owners. Similarly, we cannot and do not in the public release version of this report provide community landings or ex-vessel value information for federal or state-managed species where there are fewer than three dealers (if the data are dealer-derived), or resident permit- or license-holders (if the data are trip ticket-derived).

2.2 Data Sources and Triangulation: A User’s Guide and Cautionary Note

The profiles provided in the subsequent section of this report contain extensive information about the study towns and cities, with focus on local demographics, fishing infrastructure, and fishing-related activities and conditions. Wherever possible, multiple data sources contribute to the descriptions. Given the importance of demographic information from the year 2000 U.S. Census, we chose, for sake of compatibility, to collect and analyze wherever possible year 2000 state fishing license data, year 2000 federal permit data, and year 2000 processor, dealer, and head boat data. We used year 2002 dealer data to determine landings. Year 2002 yellow pages/public information records were used to identify and map fishing-related businesses and services. These data were complemented with observation of fishing infrastructure documented during 2003 and 2004.

An Extended Exposure Snapshot. This combination of data sources and years provides what might be called an “extended exposure” snapshot of contemporary fishing-related attributes and conditions in the study areas. Description of local history, and discussion of demographic and industry production trends lends some depth of time to the profiles. But the primary intent of the work is to generate valid composite descriptions that indicate or do not indicate, as the case may be, the degree to which the study towns and cities approximate the National Standard 8 definition of fishing community.

On Interpreting Apparently Conflicting Data Points. We note both the cross-validating usefulness of multiple data sources and points, and the danger of interpreting them without condition. It is critically important in this case to recognize that parity between data sources for a given variable cannot necessarily be expected since each single source is itself necessarily conditioned in terms of validity and reliability. Such is the nature of marine fisheries data.

The presence of seafood dealers in a given study area is a good example of the issue and problem. Three primary data sources were used as indicators for this variable during the course of the study: (1) federal seafood dealer data, (2) yellow page/public information data (business listings), and (3) field observation. If (1) and/or (2) above provided good physical address data, the location of the dealer could be depicted on the community (and parish) map. But the table depicting enumerated fishing-related services and infrastructure derived from (3) would not include that business in the count if it was not visible to our field staff. This was sometimes the case, since many such businesses can be located on back roads out of the reach of Rapid Appraisal fieldwork. Further, it may have been the case that some seafood dealers active in 2002 (the year used to analyze dealer permits) may no longer have been active in 2003 (the year of field observation). This was a potential trade-off in the decision to seek parity between the secondary source fisheries data and U.S. Census data.

As such, we stress the importance of envisioning the multiple data points and sources as *indicators* that provide individual and in some cases aggregate evidence that a town or city does or does not possess or reveal a given attribute (such as the presence of seafood dealers), and to what degree it possesses or reveals that attribute. The following section further describes project data sources, and potential challenges (and solutions) to interpreting those data.

Organization of, and Data Sources for, the Community Profiles. Most of the profiles include a brief section highlighting the history of the place in question, though such information was not universally available. Sources ranged from documents found in local and regional libraries, to limited information available on county or community websites. In the interest of conserving space, and because the historical descriptions provided are based on both primary and secondary sources, sources generally are not cited parenthetically in the text, but are provided rather as bibliographic entries in a reference section at the end of the report.

In all cases, we provide an overview-style description of the study counties and communities. The *county overviews* provide basic social and economic information about the region of interest, along with a county map. We also provide a table that depicts the total number of state license and federal permit holders who were residing in or maintained post office boxes in the study

communities in the county of interest during the year 2000. The federal permit numbers are tallied by type of permit. The *community overviews* describe local geography, and primary forms of local economic activity.

A map of each community is provided to depict, as data allow, the location and spatial distribution of state license holders, federal permit holders, fishing-related services and infrastructure, and important physical aspects of the local terrain, waterscape, and transportation system. It should be noted that symbols for the location of state licenses and federal permits in actuality refer to the residential location of license-holders and permit-holders. As such, more than one license and/or permit may be “housed” at a particular location, and represented by a given symbol. Symbols are provided for cases in which state licenses and federal permits are both held by a given individual, with a unique symbol provided for persons who also hold federal charter permits. As noted above, in some rural areas, remote addressing presents a challenge to comprehensive mapping efforts. Geo-coded fishing business location data are also depicted on the maps.

The spatial scope of the community maps incorporate the maximum extent of area needed to depict all local license and permit holders with known physical addresses. Thus, in many cases, the maps depict data that extend beyond the political bounds of town or city (also depicted) to include permit or license holders residing on its outskirts or hinterlands (in Central Place Theory parlance). Municipal bounds naturally are depicted only for the incorporated towns and cities.

The “Current Conditions and Trends” section provides a variety of information: (a) trends in population per U.S. Census information, (b) a statement about the nature of local employment, (c) indication of predominant types of fishing and the nature of the local fleet or fleets derived from fisheries data and interview data, and (d) a report on federal Gulf shrimp permit activity for 2003, if any. Information about existing fishing-related services and infrastructure is also provided, as derived from field observation. In sum, the section derives from a mix of interview, secondary source, and observational data.

Table 1, in each profile, provides a broad range of demographic information for 1990 and 2000, per the stated interests of the sponsor. We note with double asterisks that changes in the Occupation and Industry categories between those years does not allow for direct diachronic comparison. Table 2 details our report on the existence and quantity of various fishing-related infrastructure and services for both the recreational and commercial sectors. Because all such businesses are not necessarily readily observable, we note again that that these data do not necessarily achieve parity with Table 3, which is derived from a private source listing of primary (high volume or value) fishing-related businesses, derived from occupation code analysis. Moreover, vessel and gear counts do not necessarily reflect the full range of activity of community residents in a fishery (the license and permit counts do a better job in that respect) since, as indicated above, it is sometimes the case (especially for the more inland communities) that vessels (especially larger vessels) are moored elsewhere.

As Table 4 provides total pounds landed as based on dealer data, we unavoidably cannot be sure all landings derive solely from residents, or that the efforts of all residents are represented in the figures. Ex-vessel values are provided in conjunction with the landings. These are based on state value figures for that landings year. As noted above, we cannot and do not report landings and/or value data for communities with less than three resident state-licensed or federally-permitted commercial harvesters.

Table 5 provides a summary of state license and federal permit data for each community *as derived from physical address data only. Note that the full counts based on all address types are tabulated in the parent county overview.* It should be kept in mind that the counts are proxies for the activities of residents who may or may not be fishing locally. Recreational saltwater fishing license holders are also enumerated - per all address types. Finally, the table includes an indication of overall involvement in the harvest sector. The total number of known resident license and permit holders is measured against the total number of households, to arrive at the percentage of households in each community in which there was at least one active commercial license or permit during 2000 (we also depict the fractional number of saltwater recreational licenses held in each household in the study community on average).

Since it is possible that a given household may, potentially, be home to more than one permit or license holder (e.g., father and son), the former figure represents the maximum allowable percentage, and, as such, is a simplified indicator of overall participation. It is also an indicator of relative rather than absolute involvement in marine fisheries. That is, it is an indicator of the involvement of the harvest sector relative to the entire community perceived in aggregate, but significantly, it is not an indicator of the absolute experience of the harvest sector in and of itself.

Resource Management Jurisdictional Boundaries in the Study Area. State of Texas jurisdictional boundaries and associated state resource management zones extend from the shoreline to nine miles offshore. NOAA Fisheries regulates fishing activity occurring in the federal jurisdiction waters of the Gulf of Mexico. The federal waters, also known as the Exclusive Economic Zone or EEZ, extend from the state boundaries to two hundred miles offshore, as depicted on the map that follows. Much commercial and recreational fishing in the region occurs in the nearshore and inshore waters, though some also occurs in federal waters. Enumeration of federal permit holders and permits by type is an important aspect of the following county- and community-level profiles, indicative of the scope of commercial fishing activity occurring in the EEZ in the region.



State and Federal Jurisdiction Waters of the Gulf of Mexico

3.0 Texas Community Descriptions

This section of the report presents profiles of 67 community profiles, prefaced with brief cultural geographic description of the Texas coastal zone. The materials are presented in a manner intended to be both readable and of maximal utility to NOAA fisheries staff and other analysts and readers. The section begins with profiles in Orange County, which is located just west of the Calcasieu and Cameron Parishes in southwestern Louisiana. The descriptive discussion then progresses southwestward, and ultimately southward, to coastal towns and cities just north of the Mexican border.

A Brief Geography of Coastal Texas. The Texas coastline stretches some 624 miles from its eastern border with Louisiana southwest and southward to the border with Mexico. Estuarine habitat flourishes throughout the entire coastal zone, with some 3.9 million square acres of coastal wetlands (Texas Environmental Profiles). Oceanfront marshes occur where wave energy is low, and extensive salt marsh vegetation tends to grow in the back bays and coastal streams. These are important spawning grounds for finfish, shrimp, crabs, and oysters. Redfish, flounder, and sea trout are common nearshore fishes of interest to visiting and resident fishers (Jacob et al. 2003:8-10).

The coastline is typically described by sub-region. These include Southeast Texas, the Houston-Galveston areas, the Golden Crescent, the Coastal Bend, and the Lower Rio Grande Valley. These regions relate both to physical environmental features and socio-political boundaries.

Of interest in the Southeast Texas region is the *Chenier* Plain, a unique type of estuarine system common in coastal portions of Orange and Jefferson Counties. *Cheniers* (French for “oak”) are sandy ridges, characteristically topped with oak trees. These formations were created nearly 3,000 years ago as the meandering Mississippi River deposited sediment along remnant ridges. Marshes were also created, eventually cutting off the Sabine and Neches Rivers from the Gulf of Mexico and forming salt and brackish marshes connected by tidal channels to Sabine Pass.

Residents in Southeast Texas communities such as Orange, Beaumont, and Port Arthur historically produced vegetables, rice, and cotton. Lumber production became important in the late 1800s and led to an increase in shipping and shipbuilding. Deepening of Sabine Pass in the early 1900s further enhanced commerce in the region. The “Spindletop Gusher” brought oil production and economic prosperity to the region after 1901 (Isaac 2002; Beaumont Chamber of Commerce 2003).

Farther west on the central coastal prairie is the Greater Houston area. Like most of the coastal prairie, this region is relatively flat. Maximum elevations range from 35 feet in Galveston County to 300 feet in Harris County.

Throughout the 1800s, the Port of Galveston was critically important for local and regional commerce. During this time, the region's population rivaled that of other urban centers in Texas. Inhabitants of this region, and indeed the whole of the Texas coastline, were reliant on boats for

transportation and pursuit of marine resources. The names of many of Texas coastal towns and cities reflect the close relationship of resident to the sea: Sabine Pass, Baytown, Channelview Seabrook, and so forth.

Today, the Port of Galveston and marine services supporting the Texas City area are of central importance to the regional economy. The industrial base of Harris County began to develop in earnest after the formation of the Harris County Ship Channel Navigation District in 1911. By the 1920s, petroleum refiners had developed properties along Buffalo Bayou and the San Jacinto River, to the east and northeast of Houston (Henson 2002).

Further south in Matagorda County, residents of the bayside town of Palacios remain deeply involved in shrimp trawling, processing, and distribution. A particularly large fleet of commercial vessels is located here.

The Golden Crescent is comprised of 15 counties, including coastal Calhoun County and near-coastal Victoria County. Residents in this region can readily access Matagorda, Lavaca, Chocolate, Espiritu Santo, San Antonio, Hynes, and Guadalupe Bays. Waterways that connect these bays to the Gulf enable access to commercial and recreational fishing, offshore oil and gas development, and shipping. Many residents are active in the commercial fishing industry. In Port O'Connor, for instance, commercial shrimping and offshore charter fishing are particularly important industries. Local involvement in marine fisheries and maritime transportation is readily evident in Port Lavaca and Point Comfort, where fishing, tug operations, and other marine-oriented jobs employ many in the workforce.

The topography surrounding bays in Calhoun County is relatively flat, with a maximum elevation not more than 50 feet. Further inland in Victoria County, rolling prairies are intersected by rivers and streams, and the topology rises to 205 feet above sea level (Ramos et al. 2001:274).

The Coastal Bend Region includes communities in Aransas, Refugio, Nueces, San Patricio, and Kleberg Counties. This area is characterized by relatively flat coastal prairie that rises only slightly in inland portions. The Coastal Bend surrounds the Corpus Christi Bay system; many residents use the bays here for purposes of boating and related recreation pursuits, marine transportation, and commercial fishing. The Port of Corpus Christi, in Nueces County is the third largest petrochemical complex and the sixth largest port in the United States. Gulf of Mexico access is available through Aransas Pass near the city of Ingleside in San Patricio County.

Many residents of Rockport and Fulton in Aransas County are involved in the region's long-standing commercial shrimp industry. The close proximity of these communities to the Gulf of Mexico makes for convenient access to offshore fishing grounds, and recreational fishing is also common here. The waters of the bays in this area characteristically shallow, and thus knowledge of shoals and other obstructions is critical and highly-valued among fishery participants and other marine travelers.

The Lower Rio Grande Valley region encompasses the counties of Kenedy, Kleburg, Willacy, and Cameron Counties. Barrier islands are common in this region, and unlike most such areas around the nation, extensive acreage on these islands remains undeveloped.

Port Mansfield, in Willacy County, is located at the terminus of State Highway 186 directly across the Laguna Madre from the Port Mansfield Channel. This channel is heavily trafficked by recreational and commercial fishery participants crossing into Gulf waters. Local catch consists of shrimp, speckled trout redfish, flounder, sailfish, marlin, tarpon, ling, mackerel, and snapper (Port Mansfield 2003).

Undeveloped Padre Island National Seashore and the developed town of South Padre Island border the Gulf of Mexico and form the eastern shoreline of the Laguna Madre, a hyper-saline bay between the barrier island and the mainland. The lower coastline of Padre Island bears little resemblance to the lush marshes of its upper coast. The Laguna Madre periodically floods the tidal flats, creating salt buildup on the soil and subsequently, a barren landscape. Although the salt flats are devoid of plant life, a blue-green algae grows there, supporting a large population of crabs, snails, and amphipods (Jacob et al. 2003:13).

Port Isabel is located on the mainland in southern Cameron County, directly adjacent to South Padre Island. Many residents of this town and South Padre Island are also deeply involved in fishing-related pursuits. The City of Brownsville, located along the Rio Grande, is home to a large and highly productive shrimp trawl fleet.

A Prefatory Note on Saltwater Fishing in Texas: Access, Community & Regulation. The Texas coastline is immensely complex in physical terms, and varies significantly by region. Virtually all Texas coastal communities are in close proximity to salt or brackish (or fresh) water, but the maze of bayous, creeks, rivers, and various estuaries may or may not lead to the Gulf of Mexico, or enable access to offshore species. If there *is* marine access, getting to the ocean may or may not require circuitous navigation. Thus, the proximity of a given community to a specific body of water and associated fishery is a critical point of understanding in regard both to its origins and its modern relationship to various types of fishing and associated industries.

For this reason, residents likely to harvest for commercial purposes on a regular basis in the Gulf of Mexico (with federal permits beyond three miles and/or state licenses within three miles) typically operate: (1) small or large vessels from areas with good and relatively close access to the Gulf, or (2) larger vessels from coastal or more remote locations with good navigational access to the Gulf. In the first case, small boats ideally are kept near the ocean since fuel range is limited, and it is relatively costly and can be troublesome to transport them to point of access either on the water or by trailer. In the second case, while large vessels with extended range and below deck berths can and do profitably travel long distances to point of harvest with less regard for cost or logistic problems, proximity to the ocean does reduce costs and time associated with travel to point of ocean access. These considerations are reflected in Table 3 below, which depicts select community types, vis-à-vis coastal geology and Gulf access. Note that quality of access may be a function of type of vessel and travel time.

Table 3.0 Study Communities and Gulf Access by Region

Piney Woods	Chenier Plain	Coastal Prairie					Inland w/Gulf Access	No/Poor Gulf Access
Southeast Texas	Southeast Texas	Southeast Texas	Houston-Galveston	Golden Crescent	Coastal Bend	Lower Rio Grande Valley	--	--
Orange	Port Acres	Bridge City	Bacliff	Indianola	Aransas Pass	Brownsville	Alvin	Carrollton
--	Port Neches	Groves	Bay City	Port Lavaca	Bayside	Laguna Vista	Anahuac	Los Fresnos
--	Sabine Pass	--	Brazoria	Port O'Connor	Corpus Christi	Port Isabel	Baytown	San Benito
--	--	--	Clute	Seadrift	Fulton	Port Mansfield	Beaumont	--
--	--	--	Crystal Beach	--	Ingleside	South Padre Island	Channelview	--
--	--	--	Dickinson	--	Port Aransas	--	Friendswood	--
--	--	--	Freeport	--	Portland	--	Highlands	--
--	--	--	Galveston	--	Rockport	--	Kingsville	--
--	--	--	Houston	--	Sinton	--	Liberty	--
--	--	--	Kemah	--	Taft	--	Nederland	--
--	--	--	La Marque	--	--	--	Riviera/Riviera Beach	--
--	--	--	Lake Jackson	--	--	--	Robstown	--
--	--	--	League City	--	--	--	Tivoli	--
--	--	--	Matagorda	--	--	--	Victoria	--
--	--	--	Palacios	--	--	--	Vidor	--
--	--	--	Pasadena	--	--	--	--	--
--	--	--	Pearland	--	--	--	--	--
--	--	--	Port Bolivar	--	--	--	--	--
--	--	--	San Leon	--	--	--	--	--
--	--	--	Sargent	--	--	--	--	--
--	--	--	Seabrook	--	--	--	--	--
--	--	--	Sweeny	--	--	--	--	--
--	--	--	Texas City	--	--	--	--	--

A Note on Commercial and Recreational Fishing Regulations in Texas. A variety of commercial licenses are required for legal commercial pursuit of marine resources in Texas, as administered by the Texas Parks and Wildlife Department. The following description does not describe the program in its entirety, but is rather intended to provide a general understanding of the licensing system in Texas.

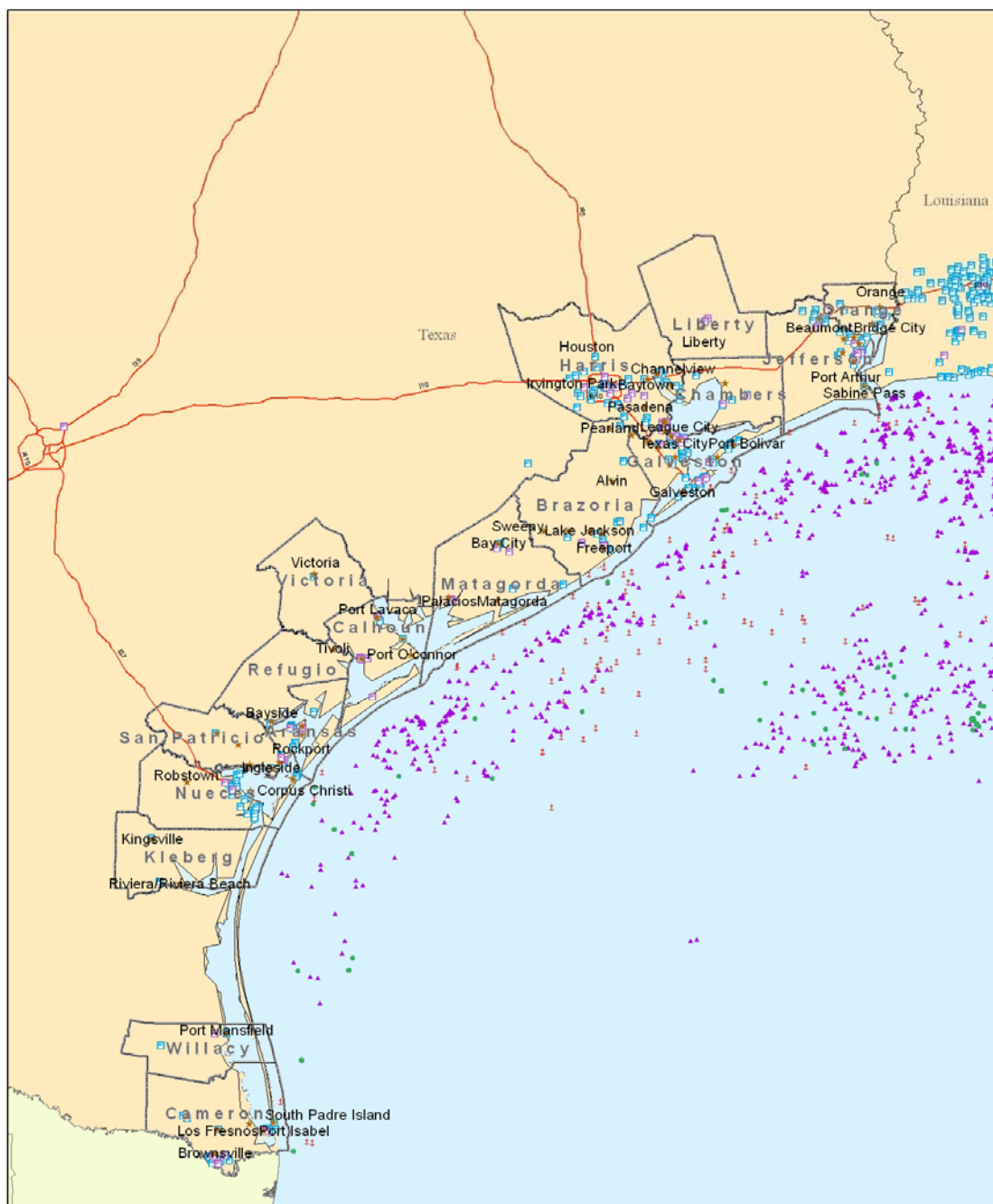
A general commercial fisherman's license is required for any person who catches aquatic products from the waters of this state for the purpose of sale, barter, exchange, or receipt of wages. A general license is not required if a participant holds a specific form of commercial license, including: a commercial shrimp boat captain's license, a commercial oyster boat captain's license, a bait dealer's license, a commercial crab fisherman's license, a commercial finfish fisherman's license, a Class A and Class B menhaden boat license, or if he or she is the crew of a licensed commercial shrimp or oyster vessel.

A general commercial fishing vessel license is required of each boat registered under federal or state laws and is used for the purposes of taking aquatic products. Exceptions are made for menhaden, oysters, crab, and shrimp since specific boat licenses are required to pursue these species. A limited entry program has been in effect for: (a) the Texas bay and bait shrimp fisheries since June 1995, (b) the commercial crab fishery since 1997, and (c) the commercial finfish fishery since 1999.

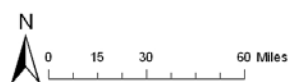
Texas requires a variety of business licenses for those who are involved in the sale of seafood. A wholesale fish dealer or truck dealer license is required for any person who operates a place of business for the purpose of selling, offering for sale, canning, preserving, processing, or handling for shipment or sale aquatic products to retail or wholesale fish dealers, hotels, restaurants, cafes, or consumers. A retail fish dealer license is required for those who sell directly to consumers. All products purchased from anyone but dealers must be reported through commercial harvest reports. These are to be filed monthly.

A saltwater fishing guide license is required for any person who is compensated for accompanying, assisting, or transporting persons engaged in fishing in the salt or fresh waters of the state. A vessel license is required from the U. S. Coast Guard to carry passengers for hire on waters designated as navigable.

A recreational saltwater fishing license and fishing stamp endorsement are required for all persons who are 17 years old or over and younger than 75 years. Certain exceptions are made, such as for those who are handicapped.



Texas Study Communities and Counties



Legend

- | | |
|--------------------------------|----------------|
| ★ Study Community | ● Reef |
| ■ Processor | ⚓ Wreck |
| ■ Processor and Seafood Dealer | ▲ Platform |
| ■ Seafood Dealer | — County Lines |
| | — Interstate |

3.1 Orange County Communities

This section describes the study communities in Orange County. These are Bridge City, Orange, and Vidor. Orange County is bordered on the north by Newton and Jasper Counties, on the northwest by Hardin County, on the southwest by Jefferson County, and on the east by the State of Louisiana.

The year 2000 population of Orange County was 84,966 persons, making it the 39th most populous in Texas that year (Bureau of Economic Analysis 2003). Orange is the county seat and was home to 18,643 residents in 2000. The City of Orange is 24 miles east of Beaumont and approximately 18 miles northeast of Port Arthur, the closest urban areas. The county is characteristically low lying, as are many towns and cities in this region of Texas.

Orange County was formed from Jefferson County in 1852. Natural resources, specifically lumber, were historically important. The petrochemical industry has gradually surpassed the lumber industry in terms of regional economic importance (Mason 2002).

As of the year 2000 Census, the population of Orange County was 87 percent Caucasian, eight percent African-American, four percent Hispanic, and .5 percent Native American. Median family income was \$26,563 in 1990; this figure had increased to \$37,586 in 2000. The latter figure was 94 percent of the state median. In 1990, the poverty level was 15 percent, but this figure increased to 28 percent in 2000. Single women acted as heads of households for more than 15 percent of families in 2000.



List of Veterans Who Fought on First Combat Ship of WWII, Constructed in Orange, Texas

Table 3.1-1 Earnings in Orange County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share of 2000 Earnings	\$ Change 1990-2000	% Share of Change 1990-2000
	1990	2000			
Earnings	912,176	1,120,165	100.0	207,989	100.0
Farm earnings	460	-793	0	-333	-0.2
Ag. services, forestry, fish.	2,966	5,213	0.5	2,247	1.1
Fishing	680	1,248	0.1	568	0.3
Mining	6,622	17,796	1.6	11,174	5.4
Oil and gas extraction	5,412	17,125	1.5	11,713	5.6
Construction	58,650	91,626	8.2	32,976	15.8
Special trade contractors	36,134	57,630	5.1	21,496	10.3
Manufacturing	408,879	404,537	36.1	-4,342	-2.1
Fabricated metal products	16,039	29,343	2.6	13,304	6.4
Industrial mach. & equip.	8,215	17,267	1.5	9,052	4.3
Food and kindred	486	NA	NA	NA	NA
Chemicals and allied	251,708	243,193	21.7	-8,515	-4.1
Petroleum and coal	10,386	NA	NA	NA	NA
Transportation/Public Utilities	52,616	71,406	6.4	18,790	9.0
Trucking and warehousing	14,329	21,043	1.9	6,714	3.2
Water transportation	15,103	14,259	1.3	-844	-0.4
Transportation by air	120	NA	NA	NA	NA
Wholesale trade	11,739	31,177	2.8	19,438	9.3
Retail trade	80,872	95,877	8.5	15,005	7.2
Eating and drinking places	17,200	21,847	1.9	4,647	2.2
Finance, insurance, real estate	21,378	51,169	4.6	29,791	14.3
Services	136,443	197,303	17.6	60,860	29.2
Business services	31,042	35,577	3.2	4,535	2.2
Health services	40,522	57,707	5.1	17,185	8.3
Legal services	6,486	14,256	1.3	7,770	3.7
Engineer./Management serv.	13,287	26,258	2.3	12,971	6.2
Government	131,551	152,061	13.6	20,510	9.9

Source: Bureau of Economic Analysis, Regional Economic Information System

Table 3.1-2 Year 2000 Commercial Permits and Licenses, and 2003 Gulf Shrimp Permits: Orange County *

Permit Type	Study Communities		
	Bridge City	Orange	Vidor
Pelagic Charter	--	--	1
Reef Fish Charter			1
Swordfish	--	--	--
King Mackerel	--	--	--
Rock Shrimp	--	--	--
Red Snapper	--	--	--
Spiny Lobster	--	--	--
Spanish Mackerel	--	--	--
Gulf Reef Fish	--	--	--
Shark	--	--	--
South Atlantic Snapper Grouper	--	--	--
Total Federal Permits 2000	--	--	2
Total Federal Permit Holders 2000	--	--	1
Total State License Holders 2000	16	28	6
Gulf Shrimp Permits 2003 **	4	3	5

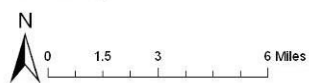
*Includes all permits and licenses that can be attributed to the communities by *both* street and post office box addresses; these data are used to generate counts of permit and license holders for whom evidence indicates actual residence, as provided in the community descriptions. ** 2003 is the first year for which Gulf shrimp permit data are available.



Orange Waterfront in 2003



Orange



Legend

- | | |
|--------------------------------|----------------|
| ★ Study Community | ● Reef |
| □ Processor | ⚓ Wreck |
| □ Processor and Seafood Dealer | ▲ Platform |
| □ Seafood Dealer | — County Lines |
| | — Interstate |

3.1.1 Bridge City (incorporated, pop. 8,651)

Location and Overview. Bridge City is located on State Route 73/87 in southern Orange County. This primarily residential community is equidistant between Orange and Port Arthur. Two bridges, Veteran's Memorial Bridge and Rainbow Bridge, span the Neches River, connecting Bridge City and Port Arthur. Bridge City is bounded by the Sabine River on the east, Cow Bayou on the west, and the Neches River on the south and west. Residents may access the Gulf of Mexico, some 25 miles south, via Sabine Lake to Sabine Pass. Surrounded by water, the Bridge City area is popular for recreational angling.

History. The Attakapa Native Americans are the earliest known residents of the Bridge City area. Reputedly, the Choctaws, Alabama-Coushatta, Biloxi, and Cherokee Indians settled briefly in the area following the American Revolution (Bridge City Chamber of Commerce 2003).

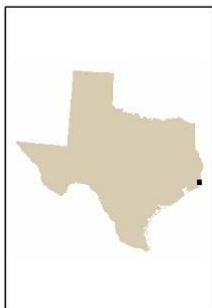
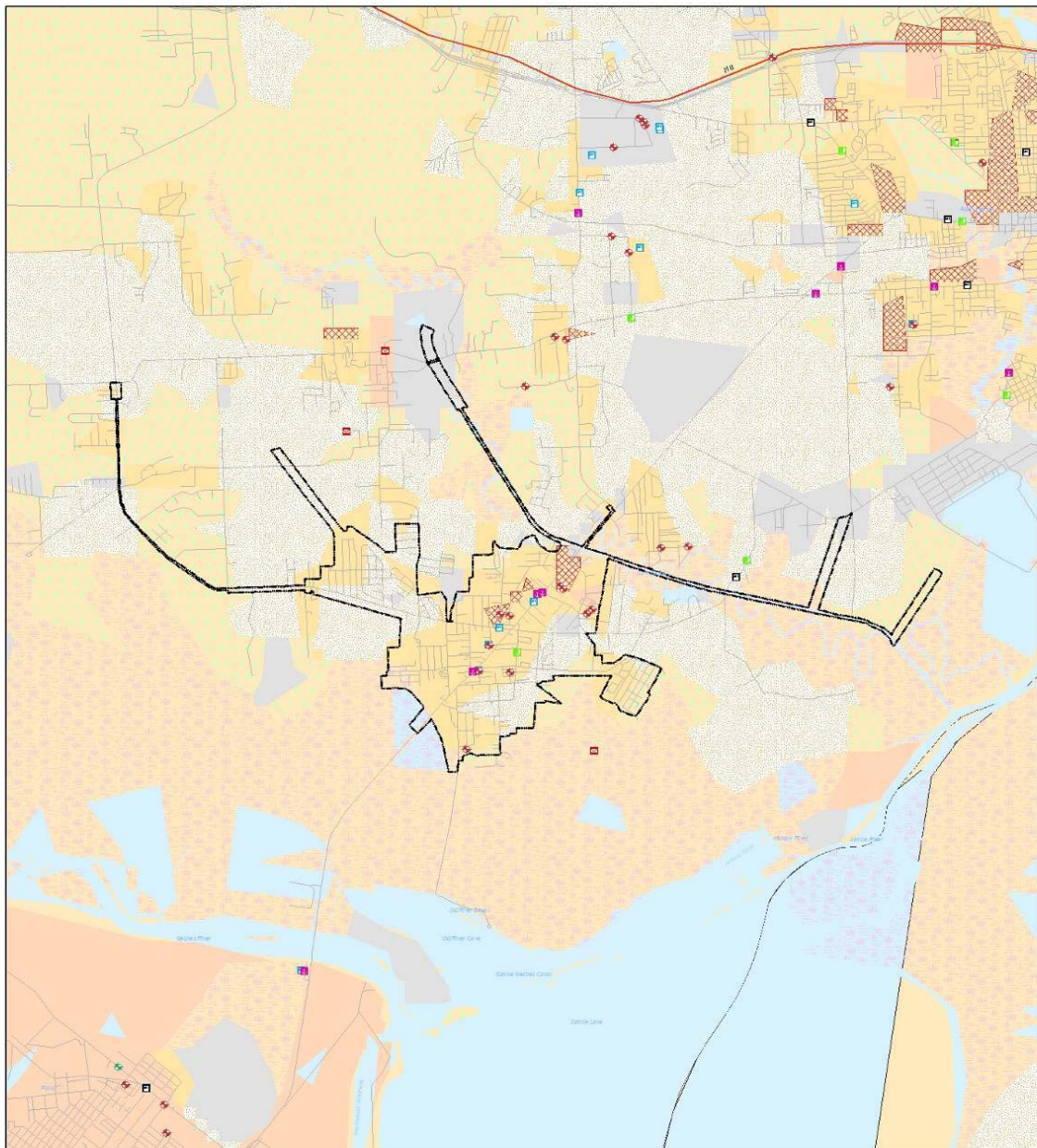
Because of its location on the coastal prairie, Bridge City was initially called "Prairie View." The city's present-day name derives from the 1938 completion of a highway bridge over the Neches River linking Port Arthur to the town (Wooster 2002). Bridge City's earliest industries included cattle farming, ranching, and fruit, vegetable, and sugarcane agriculture (Bridge City Chamber of Commerce 2003).

Current Conditions and Trends. Growing a moderate 7.7 percent during the 1990s, Bridge City's population reached 8,651 in 2000. Nearly half of all employed residents commuted outside the county of residence for work, most to jobs in the urban areas of Beaumont and Port Arthur in neighboring Jefferson County. Between census years, there was a shift away from employment in the manufacturing industry to management/professional and sales occupations.

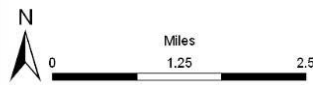
Fishing infrastructure is minimal in Bridge City, with one boat builder/broker and two marinas. Docking facilities and repair facilities are also limited. Two bait and tackle shops support recreational fishing. Two public boat ramps accommodate anglers. In 2003, four Gulf shrimp permit holders were residing in Bridge City.



Marina near Bridge City in 2003



Bridge City



Projection: Alber's Equal Area, NAD83
November 2004

Transportation

Interstate
Roads

Features/Boundaries

River/Stream
Ocean/Lake

Reef
Wreck

County
Municipal

Commercial License/Permit Types

State

Federal

Federal & State

Federal Charter

Federal & Fed. Charter & State

Land Use

Commercial/Services

Feeding Operations

Industrial/Commercial

Industrial

Forest

Wetland

Agriculture

Reservoirs

Residential

Other Urban

Scrub/Shrub

Sand

Barren Land

Salt Flats

Fishing Businesses

Aquaculture

Boat Builder/Broker

Fish Hatchery

Fishing Tackle/Dive Equipment

Head Boat Operation

Marine Electronics Retail

Marina/Boatyard

Pier/Boat Rentals

Seafood Sales (Retail Only)

Seafood Dealer

Seafood Processor

Seafood Processor/Dealer

Post Office

Table 1. Bridge City Demographics

Factor	1990	2000
Total population	8,034	8,651
Gender Ratio M/F (Number)	3,924/4,110	4,247/4,404
Age (Percent of total population)		
Under 18 years of age	28.2	27.0
18 to 64 years of age	62.2	60.7
65 years and over	9.6	12.3
Ethnicity or Race (Number)		
White	7,883	8,256
Black or African American	19	17
American Indian and Alaskan Native	22	65
Asian	61	121
Native Hawaiian and other Pacific Islander	N/A	5
Some other race	49	110
Two or more races	N/A	77
Hispanic or Latino (any race)	210	309
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	8.8	6.2
Percent high school graduate or higher	76.5	82.3
Percent with a Bachelor's degree or higher	8.0	8.6
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	7.3	7.2
Percent who speak English less than very well	3.2	2.8
Household income (Median \$)	30,090	42,045
Poverty Status (Percent of population with income below poverty line)	9.9	10.3
Percent female headed household	11.0	10.6
Home Ownership (Number)		
Owner occupied	2,151	2,510
Renter occupied	664	685
Value Owner-occupied Housing (Median \$)	49,600	70,000
Monthly Contract Rent (Median \$)	266	514
Employment Status (Population 16 yrs and over)		
Percent in the labor force	59.8	62.4
Percent of civilian labor force unemployed	7.0	8.3
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	24.9
Service occupations	N/A	13.8
Sales and office occupations	N/A	25.2
Farming, fishing, and forestry occupations	1.2	1.2
Construction, extraction, and maintenance occupations	N/A	16.2
Production, transportation, and material moving occupations	N/A	18.6
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	0.6	1.2
Mining (includes the offshore oil/gas industry workforce)	1.1	1.1
Manufacturing	27.6	9.7
Percent government workers	10.6	11.0
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	19.9
Percent worked outside of county of residence	40.5	49.1

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Bridge City in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (docksides)	1
Marine railways/haul out facilities	1
Museums—fishing/marine-related	1
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	2
Recreational docks/marinas	1
Bait & Tackle/fishing supplies	2
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	2
Seafood retail markets	1
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Bridge City in 2003

Type of Business	Frequency
Boat Builder/Broker	1
Boat Builder/Broker; Marina	1
Marina	2
Total	4

Table 4. Bridge City Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	736,895	561,176

Table 5. Bridge City License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
13	--	12
Total = 13		
% Households Holding Commercial Permit or License: 13/3,195 = .4		Average Number of Licenses per Household: 12/3,195 = 0.0

Please reference Table 3.1-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.1.2 Orange (incorporated, pop. 18,643)

Location and Overview. Orange is the county seat. The city is located along U.S. Highway 90, approximately 16 miles northeast of Port Arthur, the closest metropolitan area. The Intracoastal Waterway and the Sabine River form its eastern boundary. The Gulf of Mexico is approximately 28 miles south, via Sabine Lake to Sabine Pass. Numerous fresh and saltwater fishing areas can be accessed from this residential and industrial city.

History. This city was named for the wild orange groves that once grew on the banks of the Sabine River. It was established in 1836. Orange became the county seat in 1852 and was incorporated in 1858 (Texas Online 1998). Cotton was the primary economic crop until lumber production became important in the late 1800s. In fact, Orange thrived as a center of timber industry at the turn of the century. Shipping and shipbuilding were historically important. In 1916, a channel was completed here, creating a deepwater port. Although the shipping industry fell into decline after World War I, shipbuilding production increased dramatically during World War II. Following World War II, petrochemical and steel production figured more prominently in Orange's economy. The City of Orange, along with Beaumont and Port Arthur, form the "Golden Triangle," an industrialized manufacturing center (Kleiner 2002).

Current Conditions and Trends. The year 2000 census enumerated 18,643 persons in Orange, a slight decrease from 19,381 in 1990. Between census years, nearly twice as many employed residents have taken positions outside their county of residence, primarily in Beaumont or Port Arthur.

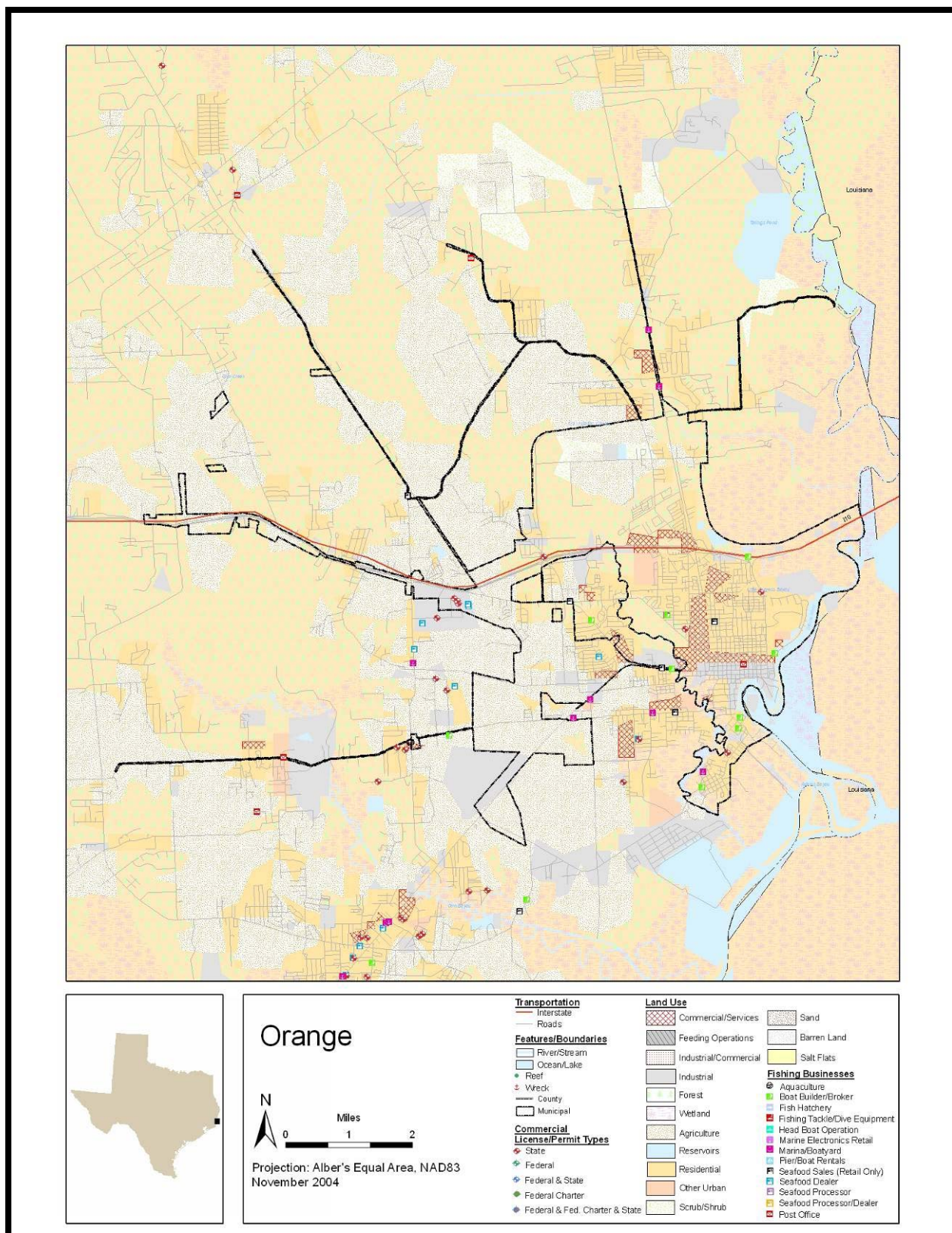
Fishing infrastructure is limited here, and there are signs of diminishing involvement in maritime business and trade. There were three resident Gulf shrimp permit holders in 2003.



Turn-of-the-Century Victorian Mansion in Orange



Defunct Fabrication Yard in Orange



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Orange Demographics

Factor	1990	2000
Total population	19,381	18,643
Gender Ratio M/F (Number)	9,185/10,196	8,952/9,691
Age (Percent of total population)		
Under 18 years of age	28.4	27.4
18 to 64 years of age	56.9	56.8
65 years and over	14.7	15.8
Ethnicity or Race (Number)		
White	12,563	11,295
Black or African American	6,450	6,593
American Indian and Alaskan Native	37	70
Asian	195	218
Native Hawaiian and other Pacific Islander	N/A	15
Some other race	136	201
Two or more races	N/A	251
Hispanic or Latino (any race)	457	675
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	10.2	7.3
Percent high school graduate or higher	71.0	78.1
Percent with a Bachelor's degree or higher	17.7	15.3
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	6.7	6.3
Percent who speak English less than very well	2.9	1.7
Household income (Median \$)	22,664	29,519
Poverty Status (Percent of population with income below poverty line)	22.7	22.9
Percent female headed household	22.7	18.3
Home Ownership (Number)		
Owner occupied	4,495	4,356
Renter occupied	2,891	2,954
Value Owner-occupied Housing (Median \$)	40,600	53,300
Monthly Contract Rent (Median \$)	261	459
Employment Status (Population 16 yrs and over)		
Percent in the labor force	54.6	55.9
Percent of civilian labor force unemployed	4.5	10.6
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	30.5
Service occupations	N/A	17.1
Sales and office occupations	N/A	24.1
Farming, fishing, and forestry occupations	1.1	0.3
Construction, extraction, and maintenance occupations	N/A	12.1
Production, transportation, and material moving occupations	N/A	15.9
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	0.8	0.3
Mining (includes the offshore oil/gas industry workforce)	0.7	1.1
Manufacturing	23.7	19.8
Percent government workers	14.2	14.1
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	18.6
Percent worked outside of county of residence	13.8	25.5

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Orange in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	1
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	3-4
Fishing associations (recreational/commercial)	2
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (docksides)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	2
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	1
Recreational Fishing Tournaments	1
Sea Grant Extension office	0
Seafood restaurants	1
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	2
Charter/Head Boats	6
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Orange in 2003

Type of Business	Frequency
Boat Builder/Broker	10
Boat Builder/Broker; Marina	3
Marina	6
Retail Seafood Dealer	6
Total	25

Table 4. Orange Commercial Landings and Value Summary: 2002

No data available for commercial participants from Orange.

Table 5. Orange License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
19	--	31
Total = 19		
% Households Holding Commercial Permit or License: 19/7,310 = 0.3		Average Number of Licenses per Household: 31/7,310 = 0.004

Please reference Table 3.1-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.1.3 Vidor (incorporated, pop. 11,440)

Location and Overview. Vidor is located at the junction of Interstate Highway 10 and State Highway 105 in western Orange County. Beaumont, the closest metropolitan area, is located about six miles southwest. The Neches River forms Vidor's eastern border and provides boaters with access to Sabine Lake, some 13 miles southeast. The Gulf of Mexico is some 33 miles south, accessible via Sabine Pass.

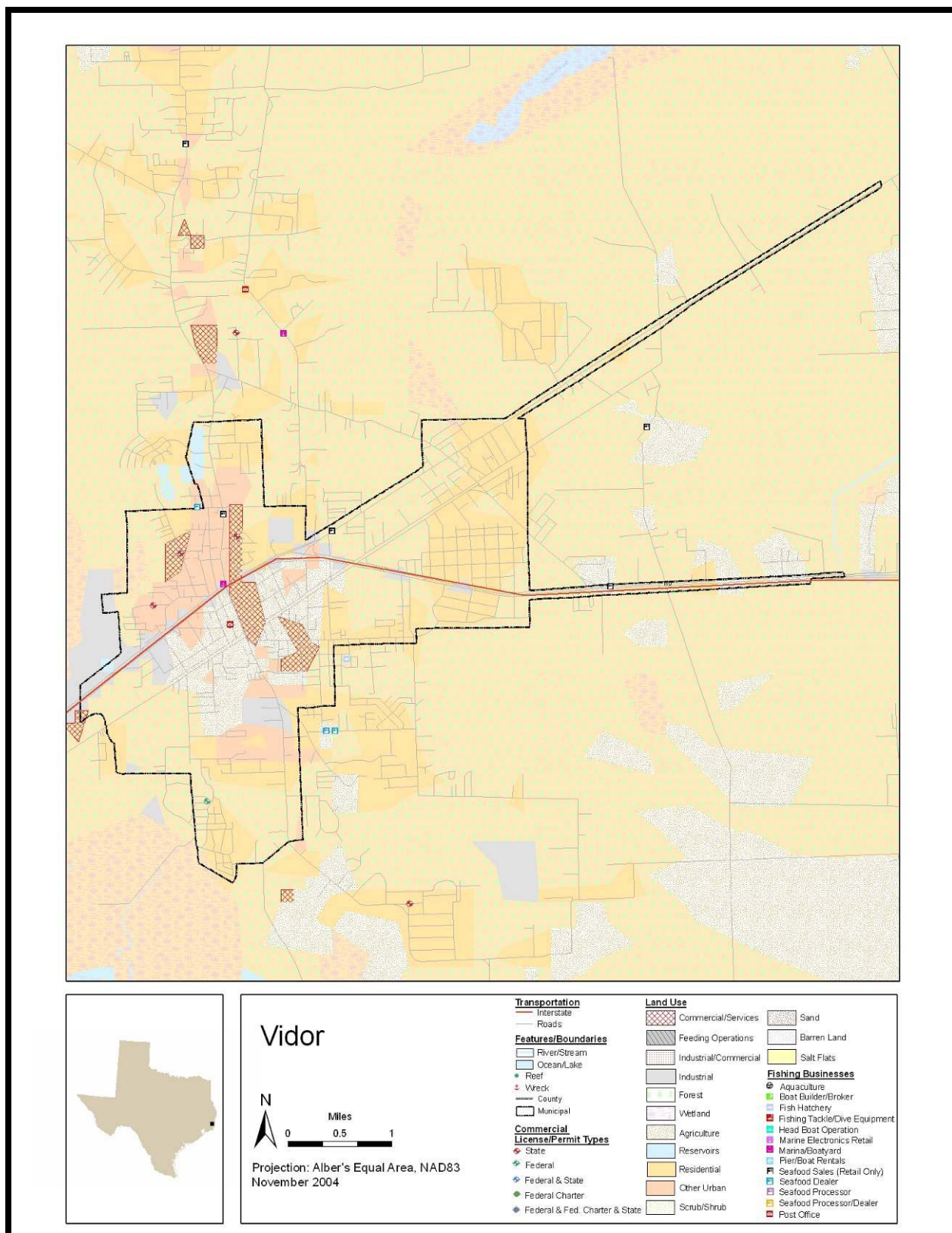
History. Until unregulated logging depleted forest resources in the mid-1920s, the timber industry was a primary industry in the region. Rice production, cotton farming, and cattle ranching were important in the 1930s. Vidor's population increased dramatically during the 1960s and 1970s as an influx of residents relocated there from nearby urban areas (Wooster 2002). Vidor was incorporated in 1960.

Current Conditions and Trends. The year 2000 census enumerated 11,440 residents, a 4.6 percent increase from the 10,935 persons counted in 1990. Employment in virtually every industrial sector declined between 1990 and 2000. Many residents have relocated to Jefferson County to work in the petrochemical industry. The Vidor School District and Northwest Steel are major employers (City of Vidor 1999).

There is limited fishing infrastructure in Vidor. Two shops are available to repair fishing gear, and there are a number of seafood retailers based here. There is one boat ramp. Five Gulf shrimp permit holders resided here in 2003.



Neches River Waterfront Park



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Vidor Demographics

Factor	1990	2000
Total population	10,935	11,440
Gender Ratio M/F (Number)	5,267/5,668	5,467/5,973
Age (Percent of total population)		
Under 18 years of age	28.3	26.7
18 to 64 years of age	60.2	59.2
65 years and over	11.5	14.1
Ethnicity or Race (Number)		
White	10,844	11,135
Black or African American	0	8
American Indian and Alaskan Native	19	59
Asian	17	22
Native Hawaiian and other Pacific Islander	N/A	3
Some other race	55	75
Two or more races	N/A	138
Hispanic or Latino (any race)	252	399
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	11.2	8.5
Percent high school graduate or higher	66.8	73.6
Percent with a Bachelor's degree or higher	5.6	5.6
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	3.4	5.1
Percent who speak English less than very well	0.5	1.8
Household income (Median \$)	24,568	31,982
Poverty Status (Percent of population with income below poverty line)	15.1	10.7
Percent female headed household	12.3	13.4
Home Ownership (Number)		
Owner occupied	2,902	3,203
Renter occupied	1,026	1,019
Value Owner-occupied Housing (Median \$)	39,100	53,200
Monthly Contract Rent (Median \$)	232	472
Employment Status (Population 16 yrs and over)		
Percent in the labor force	58.7	57.5
Percent of civilian labor force unemployed	6.4	8.7
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	17.7
Service occupations	N/A	20.9
Sales and office occupations	N/A	24.5
Farming, fishing, and forestry occupations	0.7	0.0
Construction, extraction, and maintenance occupations	N/A	19.7
Production, transportation, and material moving occupations	N/A	17.1
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	1.1	0.0
Mining (includes the offshore oil/gas industry workforce)	0.8	1.0
Manufacturing	16.1	14.7
Percent government workers	11.4	10.1
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	21.6
Percent worked outside of county of residence	58.2	60.3

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years

Table 2. Fishing Infrastructure and Services Observed in Vidor in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	2
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	1
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	0
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	2
Seafood retail markets	2
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Vidor in 2003

Type of Business	Frequency
Boat Builder/Broker; Marina	2
Fish Hatchery	1
Marina	1
Retail Seafood Dealer	6
Retail/Wholesale Seafood Dealer	1
Total	11

Table 4. Vidor Commercial Landings and Value Summary: 2002

Data may not be attributed to commercial participants from Vidor.

Table 5. Vidor License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
6	1	37
Total = 7		
% Households Holding Commercial Permit or License: 7/4,222 = 0.2		Average Number of Licenses per Household: 37/4,222 = 0.01

Please reference Table 3.1-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.2 Jefferson County Communities

This section describes the Jefferson County study communities. These are: Beaumont, Groves, Nederland, Port Acres, Port Arthur, Port Neches, and Sabine Pass. Jefferson County is bordered on the northeast by Orange County, on the east by Cameron Parish, Louisiana, on the south by the Gulf of Mexico, on the southwest by Chambers County, on the west by Liberty County, and on the northwest by Hardin County.

The year 2000 population was 252,051 persons, making it the 16th most populous county in Texas that year (Bureau of Economic Analysis 2003). The county seat of Beaumont was home to 113,866 residents, and was the most populous urban center in Jefferson County.

The county encompasses 937 square miles, consisting primarily of dense forest in the northwest and grassy plains and salt marsh in the southern regions. The eastern border of the county is formed by the Neches River, Sabine Lake, Sabine Pass, and Pine Island Bayou. The Port Arthur ship canal, which initiates in Sabine Lake at Port Arthur, provides deepwater access for Beaumont, Port Arthur, Nederland, and Port Neches.

Jefferson County was incorporated in 1837. In the 1840s, Cajun settlers arrived in the area and were followed by other immigrants from the Northern states and from Europe. Historically, lumber and associated industries were economically important, as was cattle ranching. Today, oilfield support facilities and petrochemical plants provide numerous jobs for residents (Ramos et al. 2001:206).

Jefferson County fisheries activity includes a strong commercial shrimp fishery based in the Sabine Pass/Sabine area. The fleet is comprised of and supported by a close-knit community of persons of Vietnamese ancestry. The wholesale sector of the seafood industry has grown significantly, while the harvesting sector has declined. There are numerous new wholesale operations observable in Port Arthur and other areas; these are typically supported by the Sabine fleet.

Table 3.2-1 Jefferson County Employment in Marine Fisheries

Sector	1990 Employment	1995 Employment	Percent Change
Commercial Harvesting	1,528	1,208	-20.9
Processing	153	55	-64.1
Wholesale	8	51	637.5
Retail	841	920	9.41

Source: Dokken et al. (1998:94)

The year 2000 population of Jefferson was 52 percent Caucasian, 34 percent African-American, and 11 percent of Hispanic origin. The median family income was \$34,706, which was somewhat below the state median income of \$39,927. Some 17 percent of residents lived in poverty, and 16 percent of families with children were headed by single females.

Table 3.2-2 Earnings Jefferson County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share of 2000 Earnings	\$ Change 1990-2000	% Share of Change 1990-2000
	1990	2000			
Earnings	4,310,087	5,391,831	100.0	1,081,744	100.0
Farm earnings	12,883	6,445	0.1	-6,438	0
Ag. services, forestry, fish.	22,061	31,199	0.6	9,138	0.8
Fishing	10,790	11,498	0.2	708	0
Mining	59,135	21,824	0.4	-37,311	0
Oil and gas extraction	NA	NA	NA	NA	NA
Construction	400,965	574,062	10.6	173,097	16.0
Special trade contractors	149,743	249,117	4.6	99,374	9.1
Manufacturing	1,019,759	1,040,696	19.3	20,937	1.9
Fabricated metal products	64,831	81,944	1.5	17,113	1.6
Industrial mach. & equip.	18,619	32,763	0.6	14,144	1.3
Food and kindred	12,247	15,621	0.3	3,374	0.3
Chemicals and allied	380,285	401,153	7.4	20,868	1.9
Petroleum and coal	445,827	361,302	6.7	-84,525	0
Transp./ Public Utilities	392,283	365,756	6.8	-26,527	0
Trucking and warehousing	42,570	59,963	1.1	17,393	1.6
Water transportation	98,440	33,095	0.6	-65,345	0
Transportation by air	6,259	13,100	0.2	6,841	0.6
Wholesale trade	203,646	208,138	3.8	4,492	0.4
Retail trade	401,762	522,619	10.0	120,857	11.2
Eating and drinking places	89,623	135,140	2.5	45,517	4.2
Finance, insur., real estate	139,231	219,711	4.1	80,480	7.4
Services	1,112,881	1,614,278	29.9	501,397	46.3
Business services	146,309	233,993	4.3	87,684	8.1
Health services	509,103	630,887	11.7	121,784	11.2
Legal services	124,779	254,415	4.7	129,636	12.0
Engineer./Management serv.	126,677	189,726	3.5	63,059	5.8
Government	545,482	793,548	14.7	248,066	22.9

Source: Bureau of Economic Analysis, Regional Economic Information System

Table 3.2-3 Year 2000 Commercial Permits and Licenses, and 2003 Shrimp Permits: Jefferson Co *

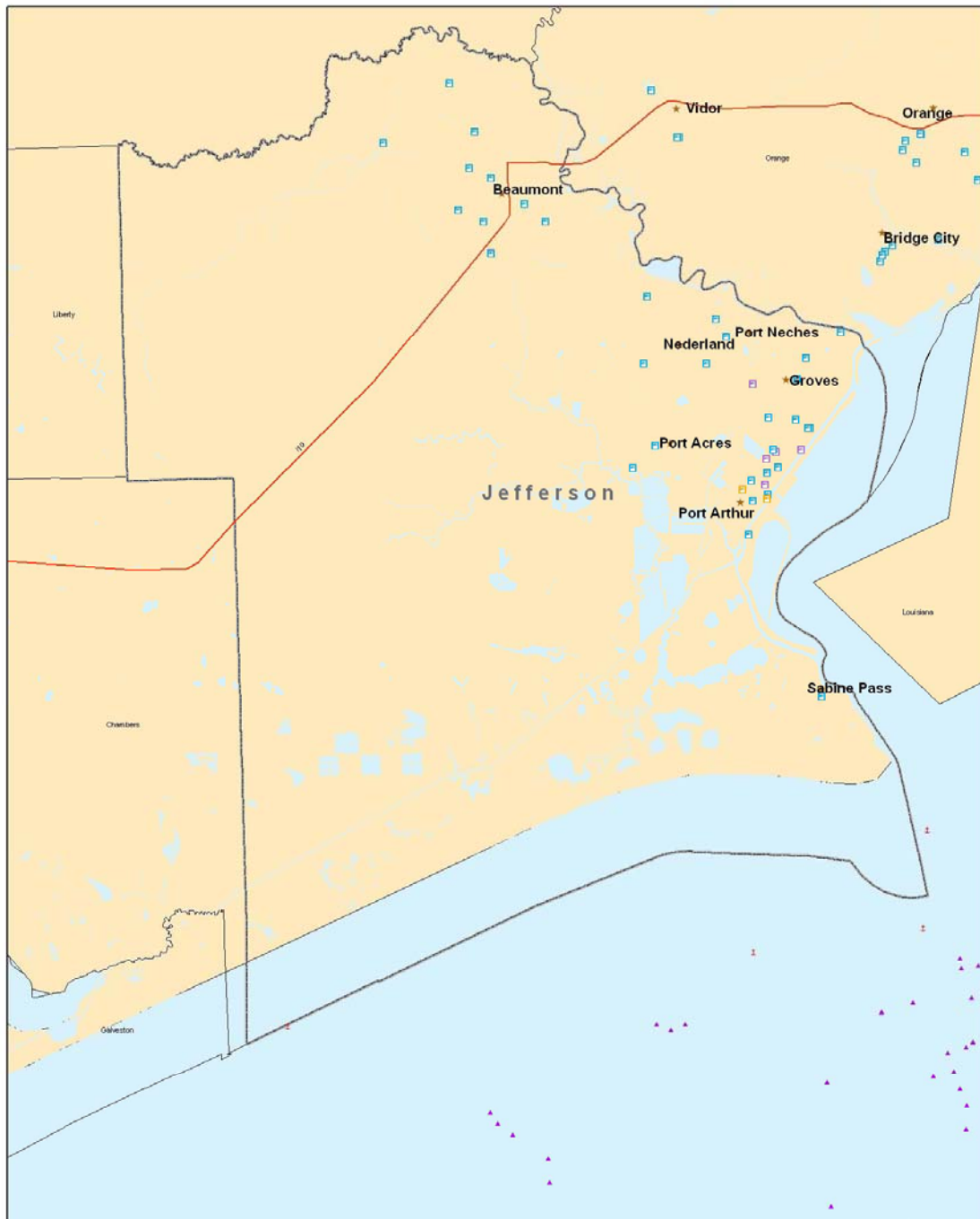
Permit Type	Study Communities						
	Beaumont	Groves	Nederland	Port Acres	Port Arthur	Port Neches	Sabine Pass
Pelagic Charter	1	--	2	--	--	1	--
Swordfish	--	--	--	--	--	--	--
King Mackerel	--	--	1	--	--	--	--
Rock Shrimp	--	--	--	--	1	--	--
Red Snapper	1	--	1	--	2	--	--
Spiny Lobster	--	--	--	--	--	--	--
Spanish Mackerel	--	--	--	--	--	--	--
Gulf Reef Fish	3	--	5	--	6	1	--
Shark	--	--	--	--	--	--	--
South Atlantic Snapper Grouper	--	--	--	--	--	--	--
Total Federal Permits 2000	5	--	9	--	9	2	--
Total Federal Permit Holders 2000	5	--	3	--	5	1	1
Total State License Holders 2000	35	19	19	--	119	6	10
Gulf Shrimp Permits 2003 **	4	4	4	--	35	2	1

Includes all permits that can be attributed to the communities by *both* street and P.O. Box addresses; these data are subsequently refined to provide counts of permit holders for whom evidence suggests actual residence in the community in 2000.

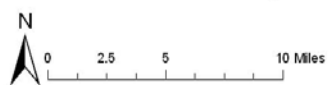
** 2003 is the first year for which Gulf shrimp permit data are available.



Aerial view of Industrial Coastline near Port Arthur
(Photo by Marge Beaver, courtesy of [NOAA](http://www.noaa.gov))



Jefferson County



Legend

- | | |
|--------------------------------|----------------|
| ★ Study Community | ● Reef |
| □ Processor | ⚓ Wreck |
| ▣ Processor and Seafood Dealer | ▲ Platform |
| ■ Seafood Dealer | — County Lines |
| | — Interstate |

3.2.1 Beaumont (incorporated, pop. 113,866)

Location and Overview. Beaumont, the county seat, is located in the northeastern part of Jefferson County. This inland city is 85 miles east of Houston and 30 miles upstream from the Gulf of Mexico, with Sabine Pass its nearest point of Gulf access. Sabine Lake, which lies about 17 miles southeast, leads to the Pass. The west banks of the Neches River and the Lawson Canal border Beaumont's eastern perimeter. This "hub city" is easily accessible by air, rail, or water and is the region's largest city (Texas Economic Development 1998). Together with neighboring Port Arthur and Orange, Beaumont is part of the "Golden Triangle," a major industrial area on the Gulf Coast (Isaac 2002).

Beaumont is one of the world's largest refining and petrochemical centers (Beaumont Chamber of Commerce 2003). Local chemical plants and refineries are currently expanding to meet increasing production demands. Additionally, paper, rice, lumber and shipping production contribute significantly to the economy. New shopping centers and revitalized historic sites and districts have increased area tourism (City of Beaumont). A total of 2,400 hotel/motel rooms accommodate visitors (Texas Economic Development 1998).

History. Beaumont was established in 1836 on the Neches River Bluff by Henry Millard. The town was named in honor of Millard's wife, Mary Beaumont (Beaumont Chamber of Commerce 2003). Beaumont was incorporated as the county seat in 1838. Cattle and farming industries were important prior to the Civil War. Railroad development during the 1870s and 1880s figured significantly in post-war recovery efforts. Lumber and rice production became important as port activity increased in the late 1800s. The Beaumont Rice Mill, established in 1892, was Texas's first commercial rice mill (Isaac 2002).

In 1901, the discovery of the "Spindletop gusher" brought oil production and economic prosperity to Beaumont (Beaumont Chamber of Commerce 2003). Within a year, the Texas Company (later Texaco), Gulf Oil Corporation, and Humble (later Exxon) had established production offices in Beaumont; the Magnolia Refinery was the city's largest employer. Beaumont's population more than doubled from 9,427 to 20,640 persons between 1900 and 1910 (Isaac 2002).

Beaumont became a major deepwater seaport in 1908 (Isaac 2002). While Beaumont was devastated by the Depression in 1931, its economy rebounded during World War II. Indeed, oil refining, war material manufacturing, and shipbuilding here contributed significantly to the war effort (City of Beaumont). Once again, there was a significant population boom.

In the 1960s and 1970s, there was accelerated growth in Beaumont with development of the Golden Triangle area (Beaumont, Port Arthur and Orange) in the petrochemical industrial complex of Southeast Texas (City of Beaumont). However, in 1982, the region's economy declined when chemical, oil drilling, shipbuilding, and petroleum industries downsized their employment base, cutting tens of thousands of jobs (City of Beaumont). Consequently, civic leaders have worked to diversify the region's economic base.

Conditions and Trends. The year 2000 census enumerated 113,866 persons in Beaumont, a decline of 457 from 1990. While jobs in area oil industries declined, local government employment increased between 1990 and 2000.

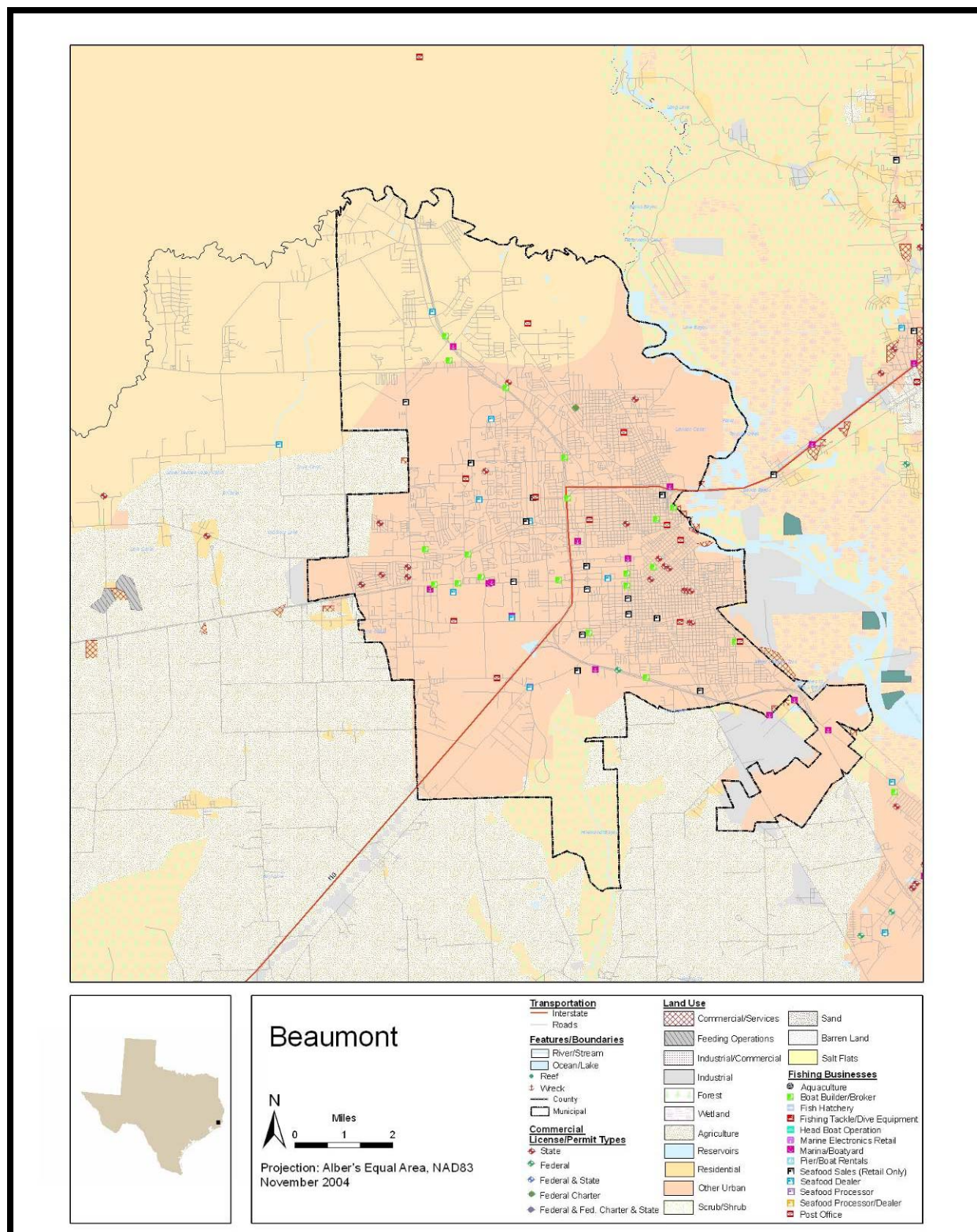
The Port of Beaumont has eight berths for docking large commercial vessels. While many residents access marine-related services and infrastructure in nearby Port Arthur, there are some 50 fishing-related businesses in Beaumont, including various boat builders, marinas, and retail and wholesale seafood dealers. There is one crawfish plant/farm in Beaumont. In 2003, Beaumont residents held a total of four Gulf shrimp permits.



Nightlife in Downtown Beaumont



Street Fair in Beaumont



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Beaumont Demographics

Factor	1990	2000
Total population	114,323	113,866
Gender Ratio M/F (Number)	54,377/59,946	54,142/59,724
Age (Percent of total population)		
Under 18 years of age	26.8	27.1
18 to 64 years of age	59.5	59.5
65 years and over	13.7	13.4
Ethnicity or Race (Number)		
White	62,842	52,826
Black or African American	47,164	52,206
American Indian and Alaskan Native	243	269
Asian	1,905	2,827
Native Hawaiian and other Pacific Islander	N/A	46
Some other race	2,169	4,038
Two or more races	N/A	1,654
Hispanic or Latino (any race)	4,919	9,028
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	9.8	606
Percent high school graduate or higher	75.2	80.6
Percent with a Bachelor's degree or higher	19.7	21.5
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	8.0	11.0
And Percent who speak English less than very well	2.9	4.6
Household income (Median \$)	24,495	32,559
Poverty Status (Percent of population with income below poverty line)	21.1	19.6
Percent female headed household	23.3	18.1
Home Ownership (Number)		
Owner occupied	2,,020	26,557
Renter occupied	17,337	17,804
Value Owner-occupied Housing (Median \$)	44,500	62,500
Monthly Contract Rent (Median \$)	275	488
Employment Status (Population 16 yrs and over)		
Percent in the labor force	61.1	60.0
Percent of civilian labor force unemployed	7.8	8.2
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	32.4
Service occupations	N/A	18.8
Sales and office occupations	N/A	26.5
Farming, fishing, and forestry occupations	0.8	0.3
Construction, extraction, and maintenance occupations	N/A	9.5
Production, transportation, and material moving occupations	N/A	12.6
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	0.9	0.4
Mining (includes the offshore oil/gas industry workforce)	0.6	0.5
Manufacturing	14.4	11.5
Percent government workers	15.0	18.7
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	20.1
Percent worked outside of county of residence	6.3	9.1

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Beaumont in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	2
Boat yards/ Boat builders (recreational/commercial)	2
Churches with maritime theme	1
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	1
Fish processors, Wholesale fish house	0
Fishing pier	2
Hotels/Inns (docksides)	0
Marine railways/haul out facilities	4
Museums—fishing/marine-related	1
Net makers	0
NMFS or state fisheries office (port agent, etc.)	1
Public boat ramps	1
Recreational docks/marinas	1
Bait & Tackle/fishing supplies	0
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	10
Seafood retail markets	3-4
Trucking operations	0
Site-seeing/pleasure tours	4
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Beaumont in 2003

Type of Business	Frequency
Boat Builder/Broker	19
Boat Builder/Broker; Marina	2
Marina	10
Retail Seafood Dealer	14
Retail/Wholesale Seafood Dealer	1
Wholesale Seafood Dealer	4
Total	50

Table 4. Beaumont Commercial Landings and Value Summary: 2002

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	3,215	16,394

Table 5. Beaumont License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
27	3	7,709
Total = 30		
% Households Holding Commercial Permit or License: 30/44,361 = 0.06		Average Number of Licenses per Household: 7,709/44,361 = 0.2

Please reference Table 3.2-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.2.2 Groves (incorporated, pop. 15,733)

Location and Overview. Groves is located three miles north of Port Arthur, 12 miles southeast of Beaumont, and three miles west of Sabine Lake in the eastern portion of Jefferson County. State Highways 73, 87, and 347 are the main thoroughfares in Groves. Sabine Pass, some 17 miles to the south, is the nearest point of Gulf access. While there is fresh- and saltwater fishing in nearby Lake Sabine and the Gulf of Mexico, the fishing industry does not figure prominently in Groves' economy.

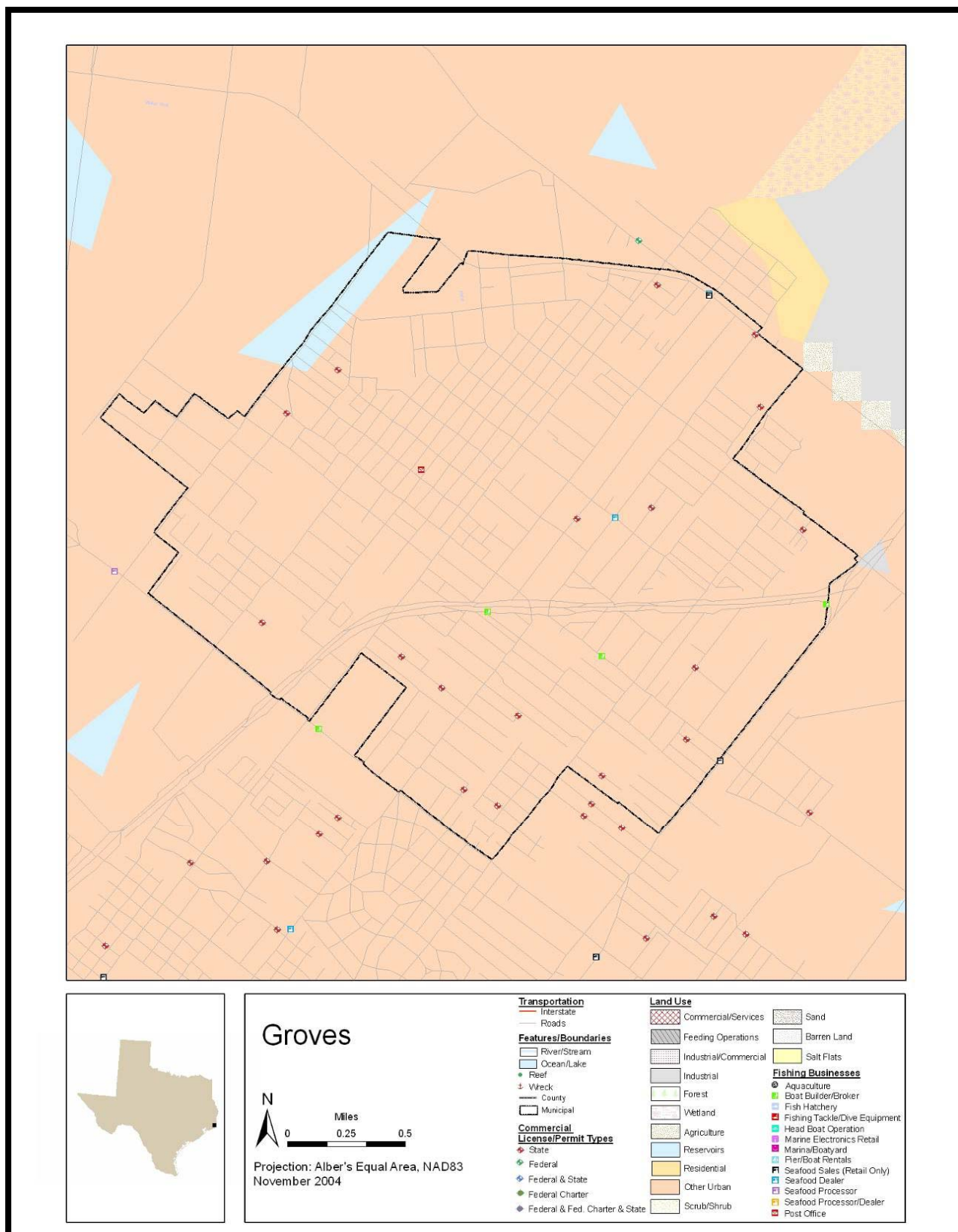
History. Farmers began settling in the Groves' area in 1886 (The City of Groves 2003). The town was incorporated in 1952. Rice farming was historically important. Shipbuilding, refineries, and petrochemical plants supplanted the agricultural industries in the mid-1900s. The economy and population declined during the oil bust of the 1980s (Wooster 2002).

Current Trends and Conditions. Groves had a year 2000 population of 15,733, a decline of 780 persons since 1990. Many of Groves' working residents commuted to jobs in the nearby urban areas of Port Arthur and Beaumont.

There are four fishing-related businesses in Groves. Of these, three were boat builders/brokers and one retail seafood dealer. In 2003, there were four Gulf shrimp permit holders resident here.



USGS Satellite View of Sabine Pass in 2003



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Groves Demographics

Factor	1990	2000
Total population	16,513	15,733
Gender Ratio M/F (Number)	7,997/8,516	7,560/8,173
Age (Percent of total population)		
Under 18 years of age	25.1	23.9
18 to 64 years of age	59.0	57.0
65 years and over	15.9	19.1
Ethnicity or Race (Number)		
White	15,545	14,704
Black or African American	565	208
American Indian and Alaskan Native	30	41
Asian	95	260
Native Hawaiian and other Pacific Islander	N/A	5
Some other race	278	312
Two or more races	N/A	203
Hispanic or Latino (any race)	1,103	1,231
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	6.1	4.4
Percent high school graduate or higher	81.0	84.4
Percent with a Bachelor's degree or higher	12.5	14.5
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	8.5	9.6
And Percent who speak English less than very well	3.1	3.6
Household income (Median \$)	31,053	42,692
Poverty Status (Percent of population with income below poverty line)	8.6	7.0
Percent female headed household	11.9	9.9
Home Ownership (Number)		
Owner occupied	4,700	4,887
Renter occupied	1,550	1,295
Value Owner-occupied Housing (Median \$)	43,000	61,000
Monthly Contract Rent (Median \$)	292	542
Employment Status (Population 16 yrs and over)		
Percent in the labor force	55.4	59.8
Percent of civilian labor force unemployed	4.9	5.4
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	27.5
Service occupations	N/A	13.9
Sales and office occupations	N/A	28.1
Farming, fishing, and forestry occupations	1.0	0.0
Construction, extraction, and maintenance occupations	N/A	14.6
Production, transportation, and material moving occupations	N/A	15.8
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	1.7	0.2
Mining (includes the offshore oil/gas industry workforce)	1.2	0.6
Manufacturing	22.9	17.5
Percent government workers	10.1	14.3
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	20.3
Percent worked outside of county of residence	6.4	8.2

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Groves in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (docksides)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	1
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	1
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Groves in 2003

Type of Business	Frequency
Boat Builder/Broker	3
Retail Seafood Dealer	1
Total	4

Table 4. Groves Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	335	816

Table 5. Groves License/Permit Summary: 2000

Commercial (based on physical address data)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
17	--	1,593
Total = 17		
% Households Holding Commercial Permit or License: 17/6,182 = 0.3		Average Number of Licenses per Household: 1,593/6,182 = 0.3

Please reference Table 3.2-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.2.3 Nederland (incorporated, pop. 17,422)

Location and Overview. Nederland is located between Beaumont and Port Arthur in the eastern portion of Jefferson County. Beaumont is about nine miles northwest; Port Arthur is six miles southeast. U.S Routes 69, 96, and 287 bisect the city. Rail and deepwater port facilities are available nearby (Texas Economic Development). Sabine Lake is immediately adjacent, and the Gulf of Mexico lies some 30 miles south, with Sabine Pass the nearest point of Gulf access. Nederland's primary industries and major employers are the petrochemical and oil refining industries (Nederland Economic Development Corporation).

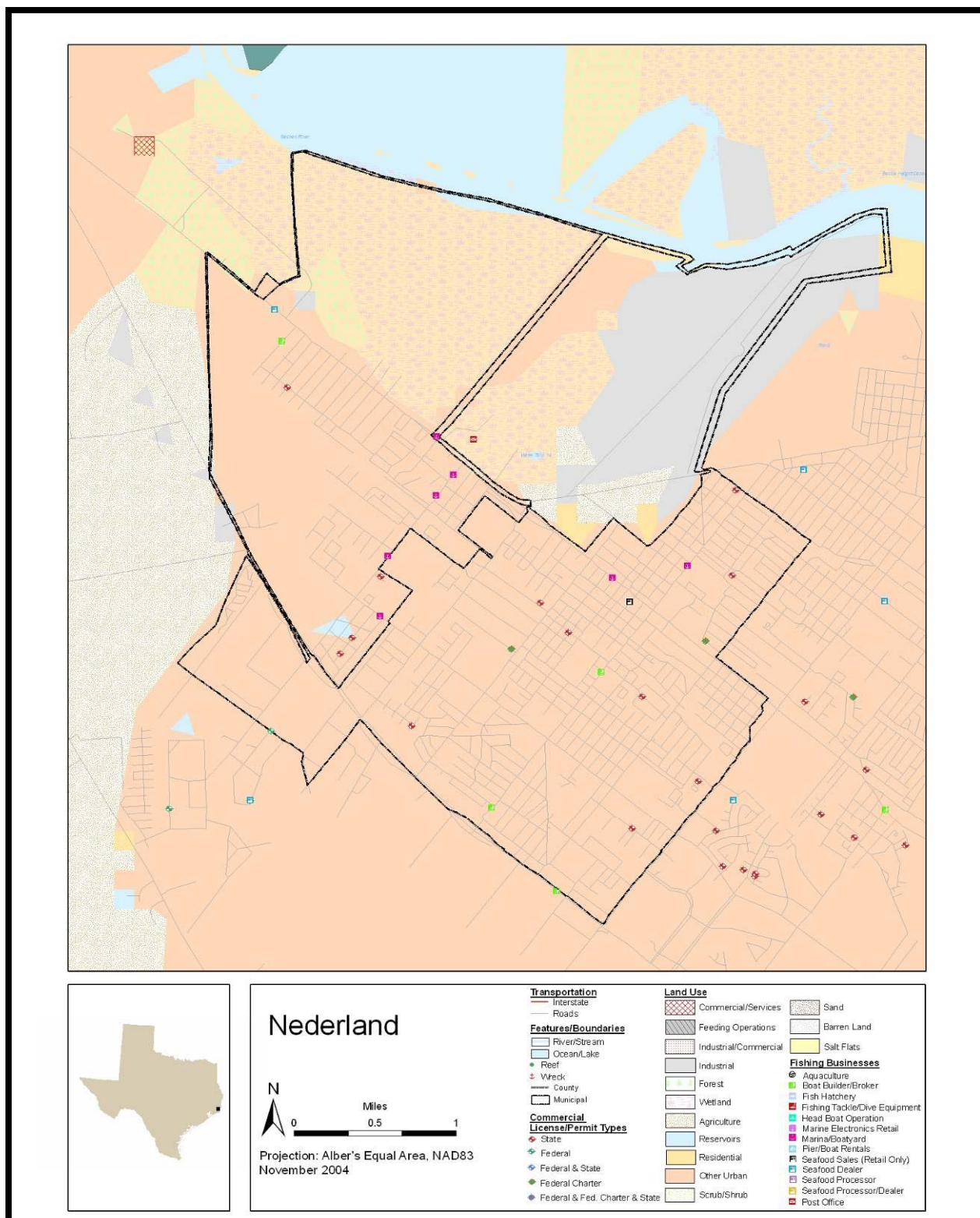
History. Nederland, which means "lowland" in Dutch, was founded in 1897 by immigrants from Holland. Rice and dairy farming were initially important endeavors. However, overproduction and over-speculation wiped out the rice industry in 1907 (Block et al. 2002). The 1901 discovery of the Spindletop oil field in neighboring Beaumont, and the subsequent establishment of several oil refineries, brought renewed economic prosperity and growth to the area (Block et al., 2002; Texas Online 1998).

Conditions and Trends. The year 2000 population of Nederland was 17,422 persons, an increase of 1,230 from 1990. The city's proximity to urban areas, along with the abundance of oil-related industry, allows for diversity in the job market for area residents.

Various fishing-related businesses are based here and in neighboring Port Arthur, including some boat dealers and builders, marine supply stores, and a retail seafood dealer. A small fleet of commercial fishery participants resides here, and in 2003, four Nederland residents held Gulf shrimp permits.



Windmill Museum in Nederland (photo courtesy of www.nederlandtx.com)



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Nederland Demographics

Factor	1990	2000
Total population	16,192	17,422
Gender Ratio M/F (Number)	7,980/8,212	8,501/8,921
Age (Percent of total population)		
Under 18 years of age	26.3	26.2
18 to 64 years of age	62.8	59.8
65 years and over	10.9	14.0
Ethnicity or Race (Number)		
White	15,719	16,291
Black or African American	88	155
American Indian and Alaskan Native	47	58
Asian	130	351
Native Hawaiian and other Pacific Islander	N/A	7
Some other race	208	351
Two or more races	N/A	208
Hispanic or Latino (any race)	735	1,089
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	5.2	3.7
Percent high school graduate or higher	84.3	87.4
Percent with a Bachelor's degree or higher	13.9	16.6
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	6.1	8.2
And Percent who speak English less than very well	1.6	2.6
Household income (Median \$)	33,253	45,188
Poverty Status (Percent of population with income below poverty line)	6.7	6.7
Percent female headed household	11.3	10.3
Home Ownership (Number)		
Owner occupied	4,536	5,168
Renter occupied	1,679	1,690
Value Owner-occupied Housing (Median \$)	45,400	68,200
Monthly Contract Rent (Median \$)	304	538
Employment Status (Population 16 yrs and over)		
Percent in the labor force	65.0	62.0
Percent of civilian labor force unemployed	2.5	5.0
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	29.1
Service occupations	N/A	12.6
Sales and office occupations	N/A	29.4
Farming, fishing, and forestry occupations	0.4	0.2
Construction, extraction, and maintenance occupations	N/A	12.0
Production, transportation, and material moving occupations	N/A	16.8
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	0.8	0.1
Mining (includes the offshore oil/gas industry workforce)	0.5	0.9
Manufacturing	23.2	19.7
Percent government workers	11.8	15.1
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	17.9
Percent worked outside of county of residence	6.7	7.2

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Nederland in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	0
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	5
Seafood retail markets	1
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Nederland in 2003

Type of Business	Frequency
Boat Builder/Broker	3
Boat Builder/Broker; Marina	2
Retail Seafood Dealer	1
Total	12

Table 4. Nederland Commercial Landings and Value Summary: 2002

No landings data could be attributed to commercial fishery participants in Nederland

Table 5. Nederland License/Permit Summary: 2000

Commercial (based on physical address data)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
14	3	2,154
Total = 17		
% Households Holding Commercial Permit or License: $17/6,858 = 0.2$		Average Number of Licenses per Household: $2,154/6,858 = 0.3$

Please reference Table 3.2-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.2.4 Port Acres (unincorporated, pop. 3,695)

Location and Overview. Port Acres is located just south of Nederland between State Highway 73 and Farm Road 365 in the eastern portion of Jefferson County. The Murphree Wildlife Management Area, with its abundant fishing resources, is adjacent to the community to the south. There is no direct Gulf access from town. Fishery participants must first travel some eight miles to Sabine Lake, then navigate south about five miles to Sabine Pass. Port Acres is primarily residential in nature, with many workers commuting to Port Arthur.

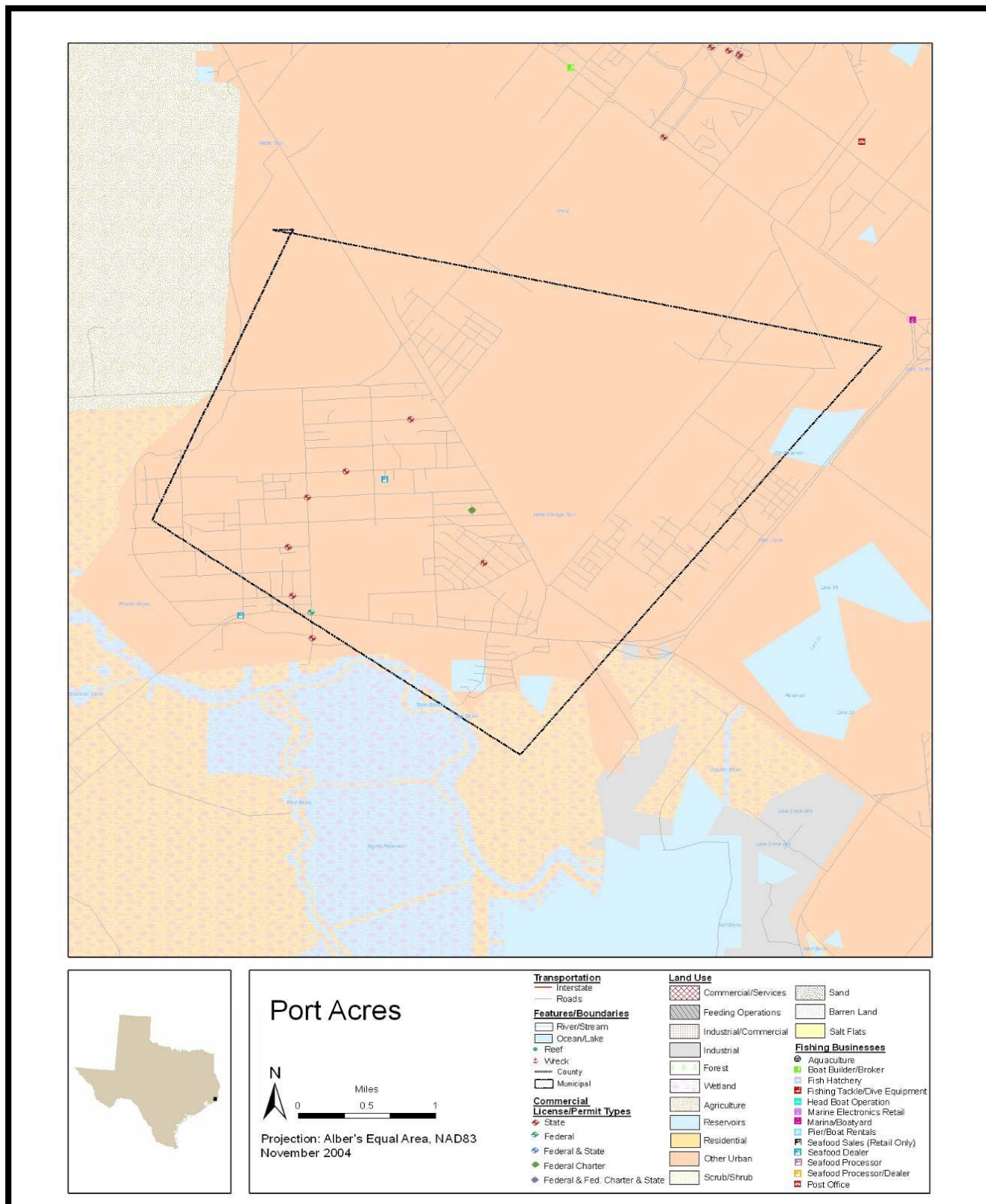
History. In 1923, the town of Port Acres was laid out near the El Vista Railroad on land owned by J.M. Herbert. By 1949, there were nearly 1,500 residents in the community. The town was incorporated in 1959, but it was later annexed by Port Arthur (Wooster 2002).

Current Conditions and Trends. The year 2000 census enumerated 3,695 persons in Port Acres, a decline of 430 from 1990. Many residents commuting to jobs in petrochemical manufacturing plants in nearby Port Arthur. In 2000, manufacturing lost nearly a third of its workforce while the mining sector gained workers.

While recreational angling is very popular in this area, only a handful of residents are involved in commercial fishing activity. Fishing infrastructure is limited.



Anglers along Route 73 in Jefferson County, Petrochemical Facilities in Background



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Port Acres Demographics

Factor	1990	2000
Total population	4,125	3,695
Gender Ratio M/F (Number)	2,063/2,062	1,861/1,834
Age (Percent of total population)		
Under 18 years of age	26.8	21.6
18 to 64 years of age	59.8	60.3
65 years and over	13.4	18.1
Ethnicity or Race (Number)		
White	3,943	3,252
Black or African American	128	220
American Indian and Alaskan Native	21	21
Asian	8	31
Native Hawaiian and other Pacific Islander	N/A	4
Some other race	25	332
Two or more races	N/A	387
Hispanic or Latino (any race)	186	660
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	14.8	8.2
Percent high school graduate or higher	69.3	71.6
Percent with a Bachelor's degree or higher	2.5	6.5
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	14.4	23.6
And Percent who speak English less than very well	4.6	7.0
Household income (Median \$)	25,677	35,489
Poverty Status (Percent of population with income below poverty line)	10.9	12.3
Percent female headed household	5.9	10.7
Home Ownership (Number)		
Owner occupied	1,197	1,163
Renter occupied	1,457	269
Value Owner-occupied Housing (Median \$)	35,689	43,433
Monthly Contract Rent (Median \$)	260	347
Employment Status (Population 16 yrs and over)		
Percent in the labor force	53.9	52.6
Percent of civilian labor force unemployed	7.3	3.9
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	20.1
Service occupations	N/A	12.9
Sales and office occupations	N/A	28.2
Farming, fishing, and forestry occupations	1.3	0.0
Construction, extraction, and maintenance occupations	N/A	19.9
Production, transportation, and material moving occupations	N/A	18.8
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	1.0	0.0
Mining (includes the offshore oil/gas industry workforce)	0.3	1.8
Manufacturing	21.6	14.9
Percent government workers	11.8	11.8
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	N/A
Percent worked outside of county of residence	4.1	7.5

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Port Acres in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	0
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	1
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	0
Seafood retail markets	1
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Port Acres in 2003

None listed

Table 4. Port Acres Commercial Landings and Value Summary: 2002

No landings data may be attributed to commercial participants from Port Acres

Table 5. Port Acres License/Permit Summary: 2000

Commercial (based on physical address data)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
--	--	7
--		
% Households Holding Commercial Permit or License: --/1,432 = --		Average Number of Licenses per Household: 7/1,432 = 0.5

Please reference Table 3.2-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

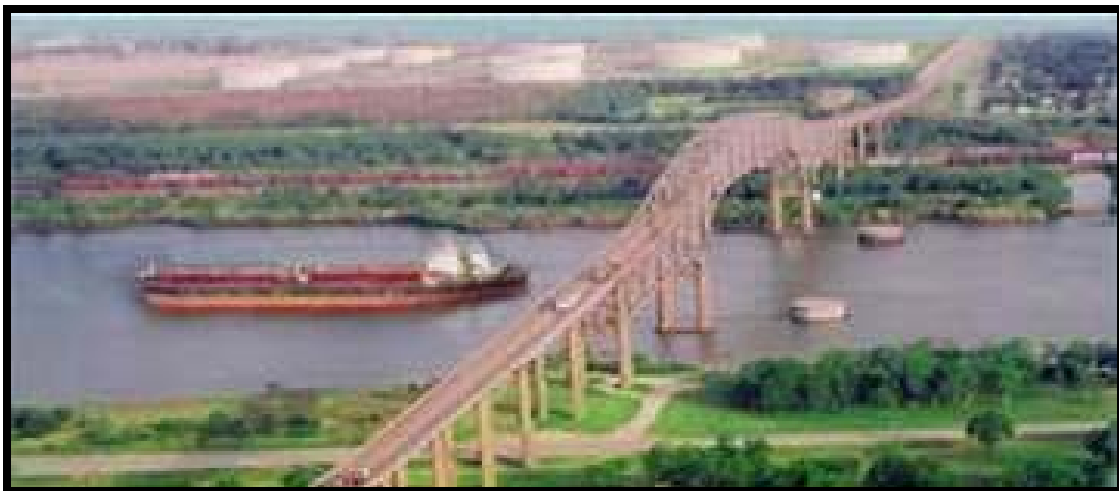
3.2.5 Port Arthur (incorporated, pop. 57,755)

Location and Overview. Port Arthur is located along the Intracoastal Waterway and Sabine Lake in eastern Jefferson County. It is approximately 90 miles east of Houston and 15 miles southwest of Beaumont. The area is a popular year-round fishing destination for recreational anglers, and a productive commercial fleet is based here. From its location on the western shores of Sabine Lake, Port Arthur is about 14 miles north of the Gulf of Mexico. The Gulfgate Bridge connects Port Arthur with Pleasure Island and provides access to the Sabine Lake Causeway.

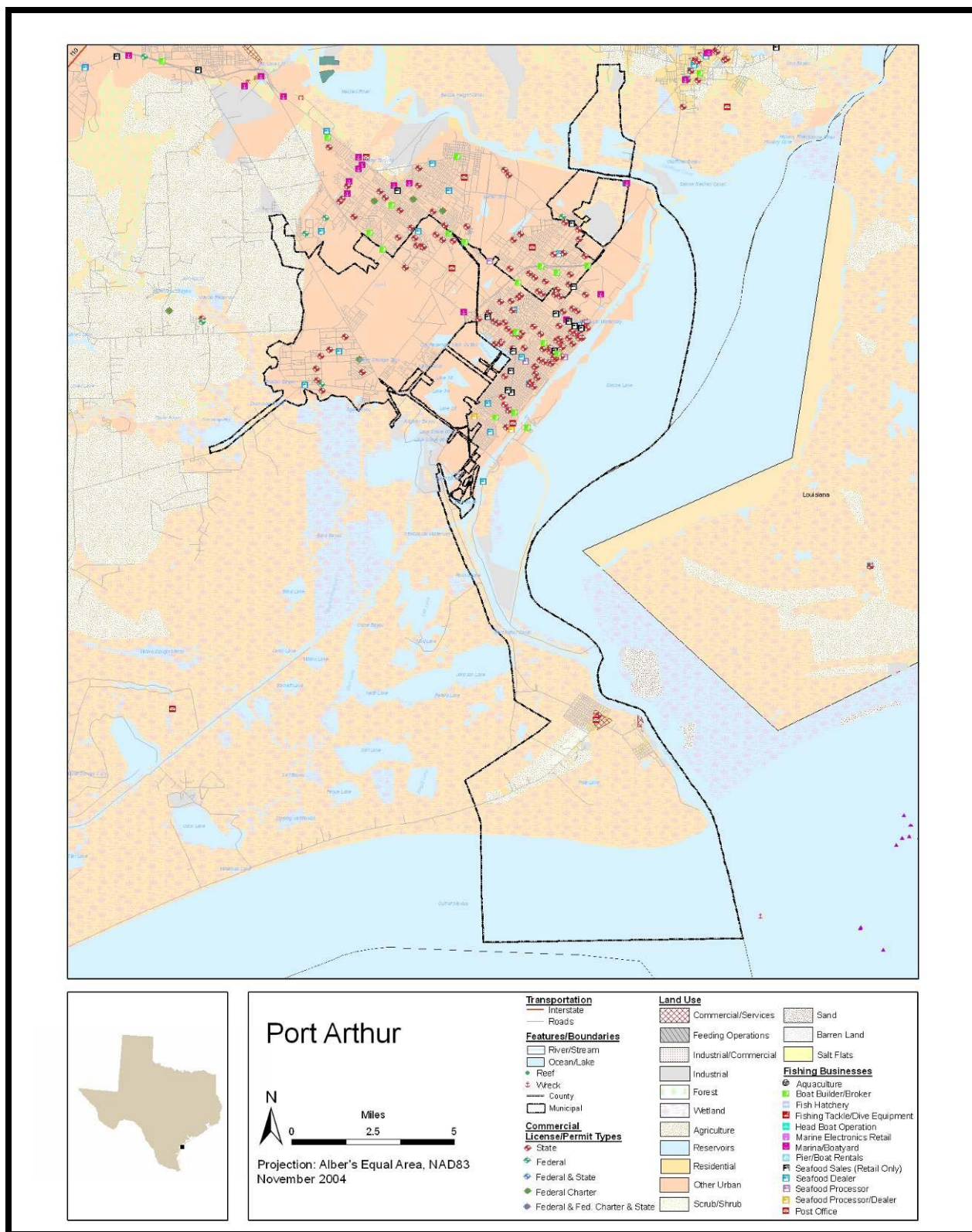
History. The Atakapas tribes were the earliest known inhabitants of the Port Arthur area. Spanish, French, and English explorers began arriving in the late 1700s. Sabine Lake was an established trade route by the 1800s.

The town of Port Arthur was founded in the late 1800s by railroad pioneer Arthur E. Stilwell, with financial support from Dutch investors. Growth occurred in the early 1900s after the port opened for shipping. Economic prosperity was closely tied to the Spindletop oil field in nearby Beaumont. The Gulf Oil Corporation and Texaco established refineries in Port Arthur. By 1957, Port Arthur employed some 12,000 workers and was regarded as an important center of oil refining (Greater Port Arthur Chamber of Commerce 2002; Storey 2002). During the late 1990s, an average of 23,000,000 cargo tons of crude oil per year was exported from Port Arthur (Texas Online 1998).

Current Conditions and Trends. The year 2000 census reported a population of 57,755 persons, a loss of 969 from 1990. Extensive fishing-related infrastructure is in place here, including numerous boat builders and brokers, marinas, processors, and retail and wholesale seafood dealers. A fleet of charter vessels is also based here. A relatively large fleet of trawlers is based here, with 35 persons holding Gulf shrimp permits in 2003.



Port Arthur Aerial View (photo courtesy of Greater Port Arthur Chamber of Commerce)



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Port Arthur Demographics

Factor	1990	2000
Total population	58,724	57,755
Gender Ratio M/F (Number)	27,697/31,027	27,525/30,230
Age (Percent of total population)		
Under 18 years of age	28.2	28.7
18 to 64 years of age	54.8	55.8
65 years and over	17.0	15.5
Ethnicity or Race (Number)		
White	28,955	22,528
Black or African American	24,778	25,240
American Indian and Alaskan Native	147	260
Asian	2,825	3,404
Native Hawaiian and other Pacific Islander	N/A	9
Some other race	2,019	5,127
Two or more races	N/A	1,187
Hispanic or Latino (any race)	4,829	10,081
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	16.6	14.4
Percent high school graduate or higher	65.5	69.7
Percent with a Bachelor's degree or higher	10.0	9.3
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	15.6	23.2
And Percent who speak English less than very well	7.2	12.7
Household income (Median \$)	18,548	26,455
Poverty Status (Percent of population with income below poverty line)	28.1	25.2
Percent female headed household	17.2	19.7
Home Ownership (Number)		
Owner occupied	14,515	13,578
Renter occupied	7,811	8,261
Value Owner-occupied Housing (Median \$)	30,400	35,900
Monthly Contract Rent (Median \$)	226	405
Employment Status (Population 16 yrs and over)		
Percent in the labor force	54.3	52.8
Percent of civilian labor force unemployed	6.9	7.0
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	20.8
Service occupations	N/A	23.2
Sales and office occupations	N/A	23.8
Farming, fishing, and forestry occupations	2.0	1.1
Construction, extraction, and maintenance occupations	N/A	12.2
Production, transportation, and material moving occupations	N/A	18.8
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	2.1	1.3
Mining (includes the offshore oil/gas industry workforce)	0.7	1.6
Manufacturing	17.6	13.1
Percent government workers	13.4	17.0
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	19.7
Percent worked outside of county of residence	5.4	7.8

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Port Arthur in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	0
Docking facilities (commercial)	6
Fishing Gear, Electronics, Welding, and other repair	6
Fishing associations (recreational/commercial)	3
Fish processors, Wholesale fish house	7
Fisheries research laboratories	0
Fishing monuments	1
Fishing pier	10
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	1
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	4
Recreational docks/marinas	5
Bait & Tackle/fishing supplies	4
Recreational Fishing Tournaments	3
Sea Grant Extension office	0
Seafood restaurants	7
Seafood retail markets	4
Trucking operations	2
Site-seeing/pleasure tours	1
Charter/Head Boats	9
Commercial Boats	35

Table 3. Primary Fishing-related Businesses Listed for Port Arthur in 2003

Type of Business	Frequency
Boat Builder/Broker	8
Boat Builder/Broker; Marina	2
Marina	2
Processor	2
Processor; Retail Seafood Dealer	1
Processor; Wholesale Seafood Dealer	1
Retail Seafood Dealer	11
Wholesale Seafood Dealer	1
Total	28

Table 4. Port Arthur Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	6,574,094	18,800,645

Table 5. Port Arthur License/Permit Summary: 2000

Commercial (based on physical address data)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
103	3	3,177
Total = 106		
% Households Holding Commercial Permit or License: 106/21,839 = 0.5		Average Number of Licenses per Household: 3,177/21,839 = 0.1

Please reference Table 3.2-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

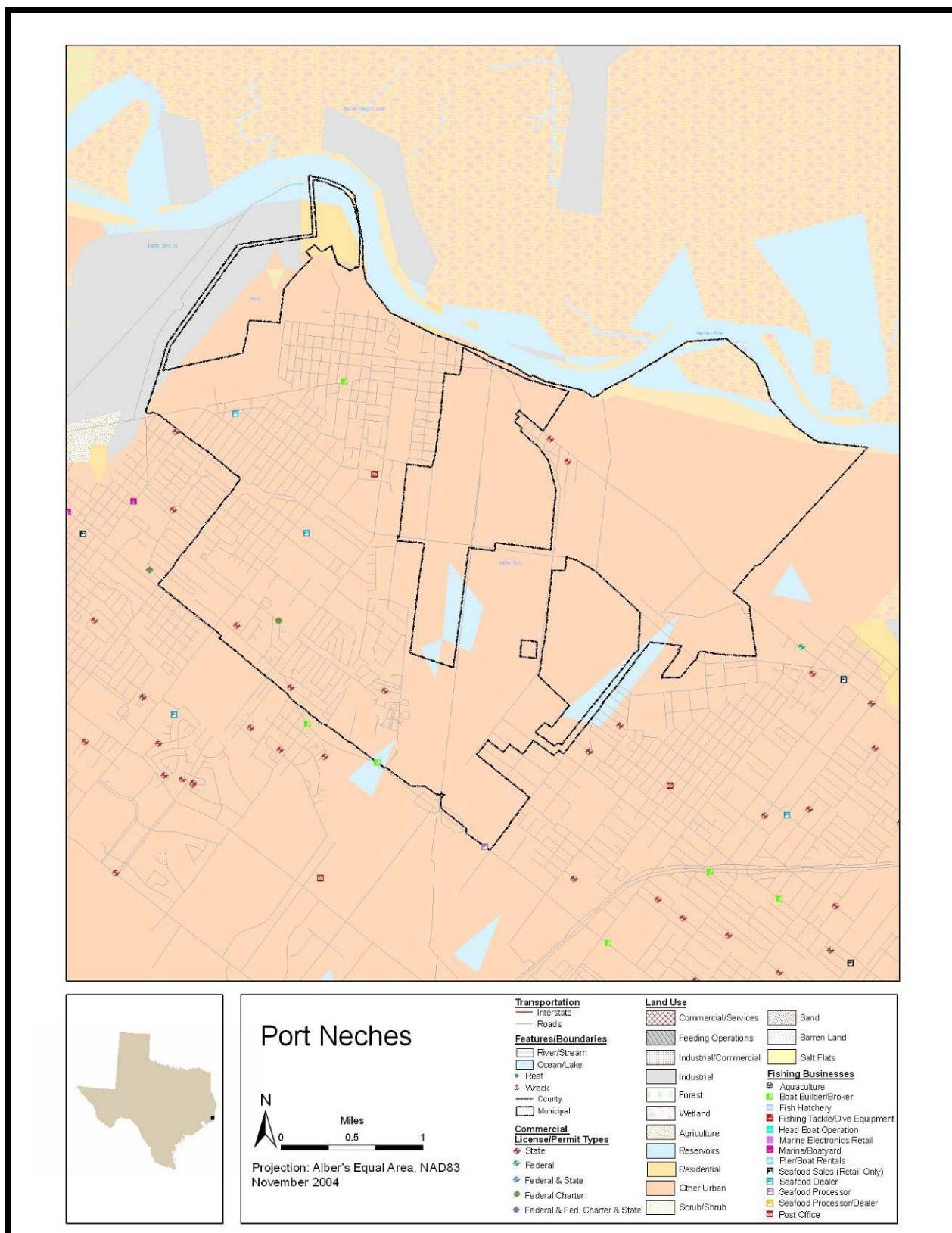
3.2.6 Port Neches (incorporated, pop. 13,601)

Location and Overview. Port Neches is located on the Neches River in eastern Jefferson County. It is about 13 miles southeast of Beaumont and less than six miles north of Port Arthur. Farm Road 366 is its closest thoroughfare. Fishery participants may access the Gulf of Mexico—some 24 miles south—via the Neches River to Sabine Lake, and then out to Gulf waters through Sabine Pass.

History. Artifacts discovered in 1841 indicate that Atakapas Indians once inhabited the area. The earliest Anglo settlers arrived in 1837. Early industries included rice and orange cultivation, lumber and asphalt production, and in 1906, oil production. Port Neches was incorporated in 1927. Population growth was slow until after World War II when the town grew from 2,487 in the early 1940s to 8,696 in the 1960s; by 1988, the population exceeded 14,000 (Wooster 2002).

Current Conditions and Trends. The year 2000 population of Port Neches was 13,601 persons, an increase of 627 from 1990. Leading employment sectors were sales positions and management occupations, though most residents were employed in petrochemical production. Some residents commute to nearby Beaumont and Port Arthur for work.

Many residents engage in recreational angling, but commercial fishing and related industry are relatively limited. Roughly one-dozen commercial fishing vessels were docked in the area at the time of this research. Two residents held Gulf shrimp permits in 2003.



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Port Neches Demographics

Factor	1990	2000
Total population	12,974	13,601
Gender Ratio M/F (Number)	6,432/6,542	6,679/6,922
Age (Percent of total population)		
Under 18 years of age	26.1	25.5
18 to 64 years of age	62.9	60.2
65 years and over	11.0	14.3
Ethnicity or Race (Number)		
White	12,640	12,887
Black or African American	39	126
American Indian and Alaskan Native	47	64
Asian	129	214
Native Hawaiian and other Pacific Islander	N/A	1
Some other race	119	161
Two or more races	N/A	148
Hispanic or Latino (any race)	421	690
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	4.8	4.3
Percent high school graduate or higher	84.6	88.2
Percent with a Bachelor's degree or higher	17.9	20.6
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	6.3	8.6
And Percent who speak English less than very well	1.6	2.4
Household income (Median \$)	36,171	47,523
Poverty Status (Percent of population with income below poverty line)	7.5	5.6
Percent female headed household	9.5	10.0
Home Ownership (Number)		
Owner occupied	3,757	78.0
Renter occupied	1,180	22.0
Value Owner-occupied Housing (Median \$)	54,600	79,600
Monthly Contract Rent (Median \$)	282	540
Employment Status (Population 16 yrs and over)		
Percent in the labor force	63.2	63.1
Percent of civilian labor force unemployed	3.7	3.6
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	31.2
Service occupations	N/A	10.1
Sales and office occupations	N/A	31.6
Farming, fishing, and forestry occupations	0.4	0.3
Construction, extraction, and maintenance occupations	N/A	12.9
Production, transportation, and material moving occupations	N/A	13.9
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	0.4	0.3
Mining (includes the offshore oil/gas industry workforce)	0.4	1.3
Manufacturing	25.5	19.4
Percent government workers	13.9	15.5
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	18.8
Percent worked outside of county of residence	5.9	7.9

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Port Neches in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	2
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	0
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	4
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	0
Recreational Fishing Tournaments	1-2
Seafood restaurants	1
Seafood retail markets	1
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	1-2
Commercial Boats	12

Table 3. Primary Fishing-related Businesses Listed for Port Neches in 2003

Type of Business	Frequency
Boat Builder/Broker	2
Total	2

Table 4. Port Neches Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	1,563,161	4,770,455

Table 5. Port Neches License/Permit Summary: 2000

Commercial (based on physical address data)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
5	1	1,361
Total = 6		
% Households Holding Commercial Permit or License: 6/5,280 = 0.1		Average Number of Licenses per Household: 1,361/5,280 = 0.3

Please reference Table 3.2-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.



Port Neches Petrochemical Manufacturing Plant

3.2.7 Sabine Pass (unincorporated, pop. 1,330)

Location and Overview. Sabine Pass is located along State Highway 87 in southeastern Jefferson County. It is bordered on the west by Keith, Salt, and Knight Lakes, and lies approximately five miles north of the Gulf of Mexico. Port Arthur, the nearest metropolitan area, is some 12 miles north. While fishing and other marine industry were once highly significant in economic terms, these industries have diminished significantly over the last decade (Texas Online 1998; Wooster 2002).

History. Called Sabine City by Sam Houston and Philip Sublett in 1836, the town's name was changed to Sabine Pass in 1839. By 1861, Sabine Pass was an established seaport, and an importance center of commerce for cotton and cattle. The Civil War, hurricanes, and an outbreak of yellow fever limited growth in the formative years of the town. In 1900, only 363 residents lived in Sabine Pass (Wooster 2002).

Sabine Pass residents did not experience the oil-related prosperity enjoyed by residents of neighboring Jefferson County communities. Although the Sun Oil Company located a facility in Sabine Pass, the majority of petrochemical companies preferred Port Arthur's deep water port. As such, commercial fishing and marine repair emerged as primary industries (Wooster 2002). Today, however, the fishing industry here has all but disappeared. Sabine Pass was annexed by Port Arthur in 1978 (Texas Online 1998; Wooster 2002).

Current Conditions and Trends. The year 2000 census enumerated 1,330 residents, an increase of 92 from 1990. Employed residents held positions in a variety of occupations, primarily in petrochemical facilities in nearby Port Arthur.

Relatively few fishing-related businesses were based in Sabine Pass at the time of this study. There were, however, numerous shrimp trawlers and commercial fishing and offshore oilfield

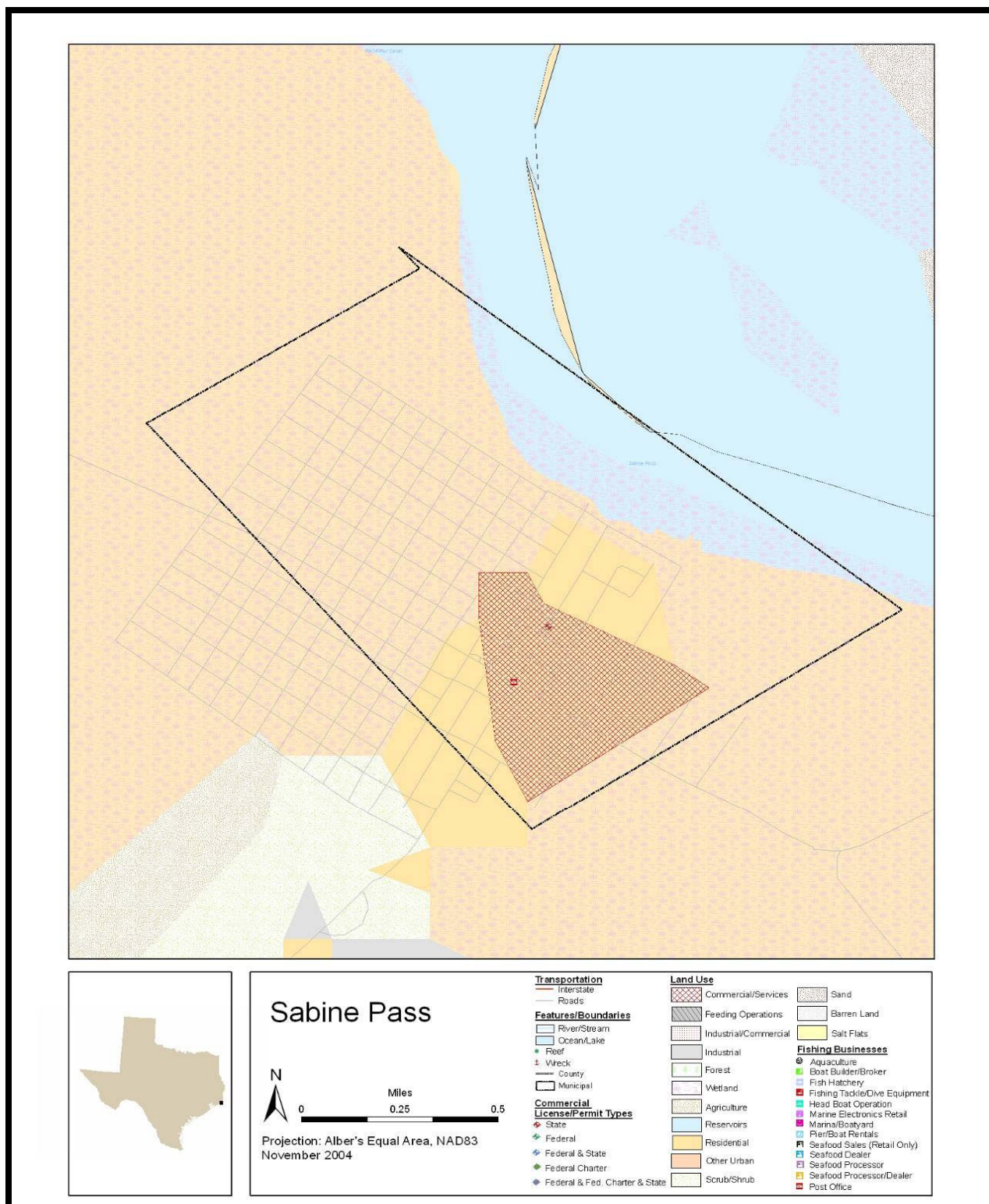
support infrastructure based along the industrial waterfront here. A significant trawl fleet is operated and supported by persons of Vietnamese industry, though most appear to reside in or hold post office box addresses in Port Arthur. In 2003, a single resident was known to hold a Gulf shrimp permit.



Sabine Pass Trawlers and Offshore Rigs



Sabine Pass Commercial Dock



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Sabine Pass Demographics

Factor	1990	2000
Total population	1,235	1,330
Gender Ratio M/F (Number)	639/596	698/632
Age (Percent of total population)		
Under 18 years of age	28.6	27.0
18 to 64 years of age	62.1	61.4
65 years and over	9.3	11.6
Ethnicity or Race (Number)		
White	1,164	1,237
Black or African American	40	29
American Indian and Alaskan Native	7	1
Asian	5	8
Native Hawaiian and other Pacific Islander	N/A	2
Some other race	19	43
Two or more races	N/A	10
Hispanic or Latino (any race)	73	83
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	9.3	9.1
Percent high school graduate or higher	67.9	72.7
Percent with a Bachelor's degree or higher	4.9	10.1
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	13.4	26.5
And Percent who speak English less than very well	4.8	4.1
Household income (Median \$)	28,125	38,850
Poverty Status (Percent of population with income below poverty line)	18.1	11.5
Percent female headed household	14.7	9.6
Home Ownership (Number)		
Owner occupied	349	489
Renter occupied	86	407
Value Owner-occupied Housing (Median \$)	41,900	1,300
Monthly Contract Rent (Median \$)	225	315
Employment Status (Population 16 yrs and over)		
Percent in the labor force	70.8	55.2
Percent of civilian labor force unemployed	3.8	7.0
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	30.8
Service occupations	N/A	8.3
Sales and office occupations	N/A	26.0
Farming, fishing, and forestry occupations	4.1	0.0
Construction, extraction, and maintenance occupations	N/A	19.3
Production, transportation, and material moving occupations	N/A	15.4
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	2.8	2.3
Mining (includes the offshore oil/gas industry workforce)	4.4	10.3
Manufacturing	10.6	15.9
Percent government workers	11.4	17.3
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	N/A
Percent worked outside of county of residence	12.3	7.7

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Sabine Pass in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	1-2
Fish processors, Wholesale fish house	1
Fisheries research laboratories	1
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	1
Net makers	0
NMFS or state fisheries office (port agent, etc.)	1
Public boat ramps	5
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	1
Recreational Fishing Tournaments	4
Sea Grant Extension office	0
Seafood restaurants	2
Seafood retail markets	1
Trucking operations	1-2
Site-seeing/pleasure tours	1
Charter/Head Boats	3-5
Commercial Boats	100+

Table 3. Primary Fishing-related Businesses Listed for Sabine Pass in 2003

None listed

Table 4. Sabine Pass Commercial Landings and Value Summary: 2002

No landings data may be attributed to commercial participants from Sabine Pass

Table 5. Sabine Pass License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
1	--	82
Total = 1		
% Households Holding Commercial Permit or License: 1/896 = 0.1		Average Number of Licenses per Household: 82/896 = 0.09

Please reference Table 3.2-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.3 Chambers County Community

This section describes Anahuac, the sole designated study community in Chambers County. Oak Island was not on the original list of study areas, but rapid appraisal fieldwork indicated extensive fishing-related activity was occurring there at the time of this study, with significant linkages to Anahuac, which is located about ten miles north. We provide only cursory description of Oak Island here, but recommend it as a candidate for future in-depth study.

Chambers County is located along the Gulf of Mexico and is part of the Houston Metropolitan area. It is bordered by Jefferson County to the north, Liberty County to the northwest, Harris County to the west, Galveston County to the south and east, and the Gulf of Mexico to the east.

Chambers County bounds encompass 599 square miles of land and some 269 square miles of water. The latter includes the Trinity, Galveston, and East Bays; Anahuac Lake; and other smaller lakes. Chambers is relatively flat, with its highest elevation culminating at 73 feet (Ramos et al. 2001:151). The region is part of what is known as the Gulf Coastal Plain, an area typified by sandy and sand-loam soils, extensive marshlands, and piney forests and scrub lands.

Early inhabitants of Chambers County subsisted on clams, oysters, fish, birds, and various mammals (Henson and Ladd 1988: 12). During the 18th and early 19th centuries, Spanish and French settlers occupied the region. Chambers County was formally established in 1858. During the early 20th century, oil discoveries led to new economic opportunities for residents (Kleiner 2002). Various forms of agribusiness, fish and oyster processing, and petroleum production are now of regional economic importance (Ramos et al. 2001:151).

There is an important commercial shrimp fishery in the Oak Island area. Oysters and crabs are also important, and the Smith Point area is particularly well known for its private-lease oyster beds. Table 1 below indicates decline in the harvesting and wholesale sectors with concurrent gains in the processing and retail sectors during the period 1990-1995.

Table 3.3-1 Chambers County Employment in Marine Fisheries

Sector	1990 Employment	1995 Employment	Percent Change
Commercial Harvesting	432	301	-30.3
Processing	35	75	114.3
Wholesale	30	17	-43.3
Retail	23	36	56.5

Source: Dokken et al. (1998:92)

The year 2000 population of Chambers County was 26,031 persons, making it the 94th most populous county in Texas that year (Bureau of Economic Analysis 2003). Despite close proximity to Houston, Chambers is a relatively rural and sparsely populated county. The racial composition of the population was approximately 78 percent Caucasian, 10 percent African-American, and 11 percent Hispanic. Anahuac, the county seat, had a year 2000 population of 2,210 residents (Ramos et al. 2001:151). According to the 2000 census, the median family income in Chambers County was \$47,964 (median state figure was \$39,927), and about 8.3 percent of all families lived in conditions of poverty.

Table 3.3-2 Earnings in Chambers County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share of 2000 Earnings	\$ Change 1990-2000	% Share of Change 1990-2000
	1990	2000			
Earnings	245,058	343,441	100.0	98,383	100.0
Farm earnings	10,182	7,070	2.1	-3,112	0
Ag. services, forestry, fish.	2,451	3,565	1.0	1,114	1.1
Fishing	NA	2,379	0.7	NA	NA
Mining	23,136	22,190	6.5	-946	0
Oil and gas extraction	NA	NA	NA	NA	NA
Construction	20,973	26,236	7.6	5,263	5.3
Special trade contractors	7,480	9,966	2.9	2,486	2.5
Manufacturing	80,704	130,467	38.0	49,763	50.1
Fabricated metal products	NA	NA	NA	NA	NA
Industrial mach. & equip.	NA	NA	NA	NA	NA
Food and kindred	NA	3,301	1.0	NA	NA
Chemicals and allied	69,888	NA	NA	NA	NA
Petroleum and coal	459	NA	NA	NA	NA
Transp./Public utilities	20,751	28,030	8.2	7,279	7.4
Trucking and warehousing	4,618	7,613	2.2	2,995	3.0
Water transportation	NA	NA	NA	NA	NA
Transportation by air	NA	NA	NA	NA	NA
Wholesale trade	5,182	14,590	4.2	9,408	9.6
Retail trade	14,213	17,030	4.9	2,817	2.9
Eating and drinking places	2,602	5,016	1.5	2,414	2.4
Finance, insur., real estate	4,729	11,800	3.4	7,071	7.2
Services	22,564	35,865	10.4	13,301	13.5
Business services	5,048	11,752	3.4	6,704	6.8
Health services	5,269	3,702	1.1	-1,567	0
Legal services	206	NA	NA	NA	NA
Engineer. & mngmt. serv.	3,478	4,325	1.2	847	0.9
Government	40,173	53,668	15.6	13,495	13.7

Source: Bureau of Economic Analysis, Regional Economic Information System



Aerial Imagery of Rollover Pass along the Bolivar Peninsula South of Anahuac
(Imagery courtesy of www.serf.tamus.edu)

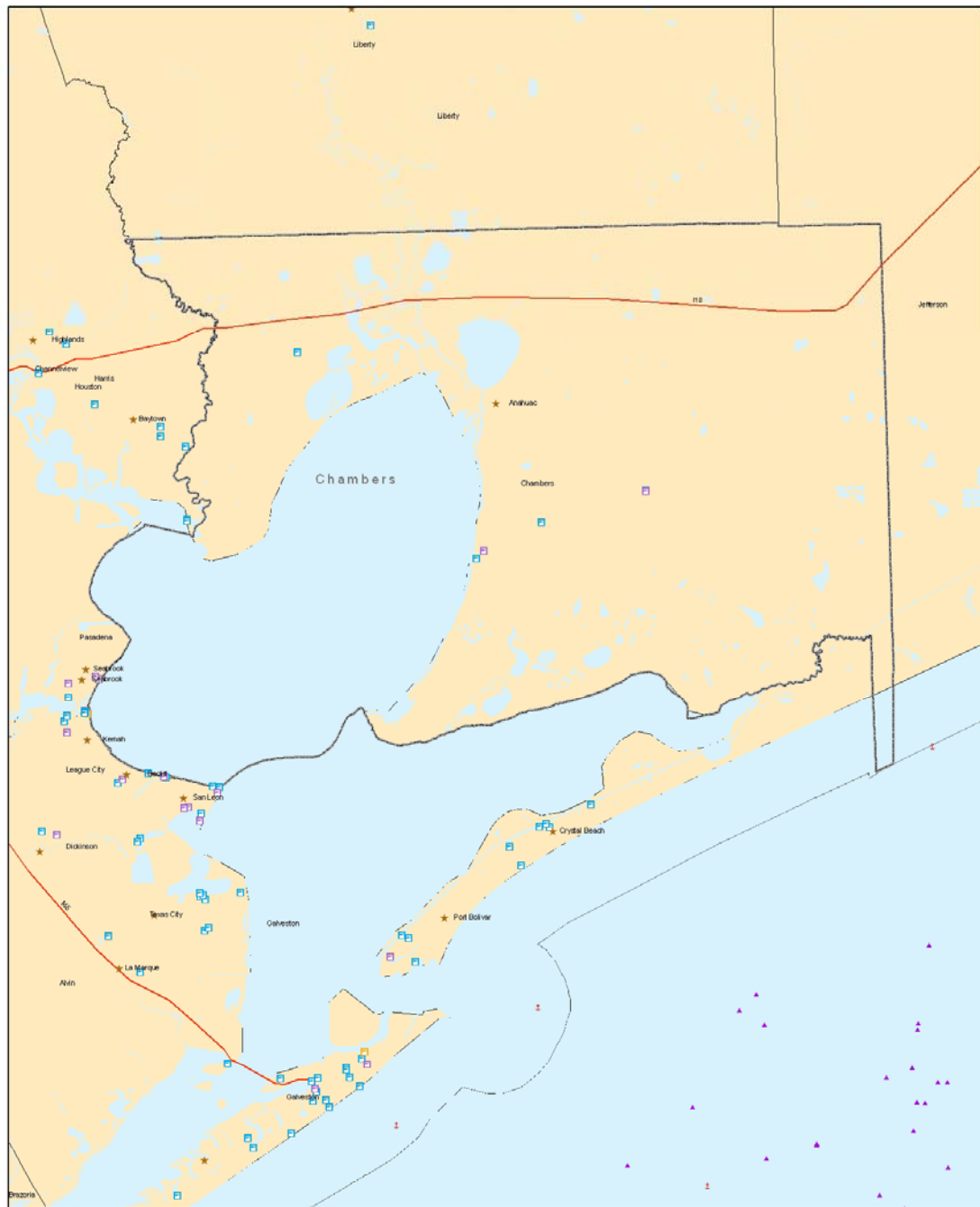
Table 3.3-3 Year 2000 Commercial Permits and Licenses, and 2003 Gulf Shrimp Permits: Chambers Co *

Permit Type	Study Communities
	Anahuac
Pelagic Charter	--
Swordfish	--
King Mackerel	1
Rock Shrimp	--
Red Snapper	1
Spiny Lobster	--
Spanish Mackerel	--
Gulf Reef Fish	1
Shark	--
South Atlantic Snapper Grouper	--
Total Federal Permits 2000	3
Total Federal Permit Holders 2000	1
Total State License Holders 2000	103
Gulf Shrimp Permits 2003 **	--

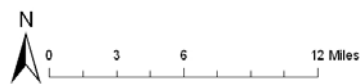
Includes all permits that can be attributed to the communities by *both* street and P.O. Box addresses; these data are subsequently refined to provide counts of permit holders for whom evidence suggests actual residence in the community in 2000. ** 2003 is the first year for which Gulf shrimp permit data are available.



Anglers of Vietnamese Ancestry near Oak Island, Fall 2003



Chambers



Legend

- | | |
|--------------------------------|----------------|
| ★ Study Community | ● Reef |
| □ Processor | ⚓ Wreck |
| ▣ Processor and Seafood Dealer | ▲ Platform |
| ■ Seafood Dealer | — County Lines |
| | — Interstate |

3.3.1 Anahuac (incorporated, pop. 2,210)

Location and Overview. Anahuac is located on the east bank of Trinity Bay and immediately south of Lake Anahuac, between Houston and Beaumont in Chambers County. The town lies between two major metropolitan areas: Houston, which is approximately 37 miles to the west, and Beaumont, which is about 45 miles to the northeast. The Gulf of Mexico is located approximately 40 miles south of Anahuac. The rural Oak Island area is about 10 mile south.

Access to the Gulf of Mexico is by way of Trinity Bay, which then opens into Galveston Bay and the Houston-Galveston Ship Channel. Gulf access is also available at Rollover Pass along the Bolivar Peninsula. The 24,536 acre Anahuac National Wildlife Refuge provides habitat for many species. There are numerous recreational fishing opportunities in the area, and commercial shellfishing and seafood processing are locally significant.

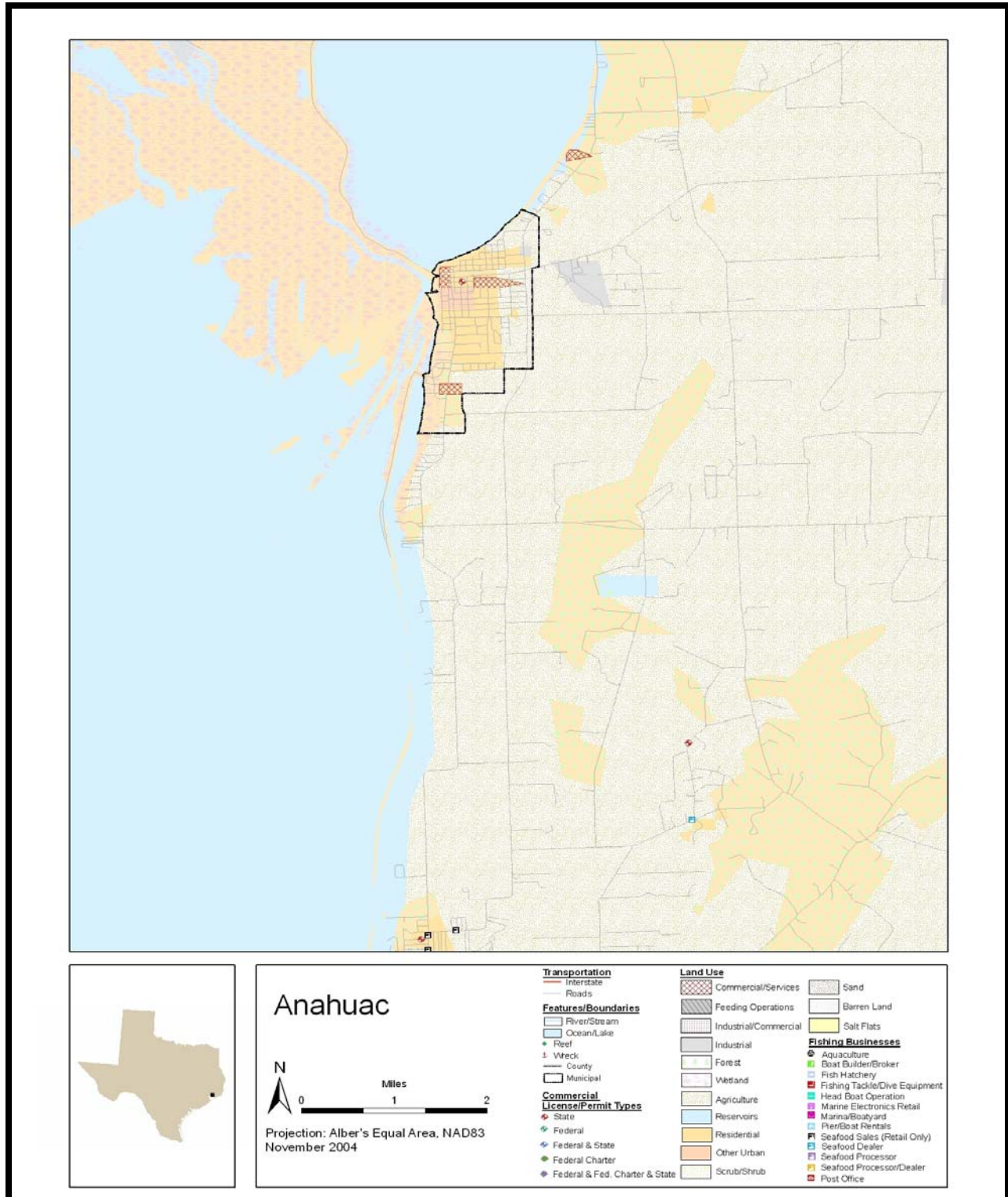
History. Anahuac is named after an ancient Aztec city. The Atakapan Indians are the earliest known inhabitants of the general area (Ladd 2002). The first permanent Anglo settlers arrived in 1821. Anahuac's first commercial endeavor was lumber manufacturing, and the first sawmill was established in 1894. The discovery of two oil fields in the area led to a measure of economic development (Ladd 2002). Anahuac incorporated in 1949.

Current Conditions and Trends. The 1990 Census enumerated 1,993 residents. By 2000, the population had risen to 2,210, an 11 percent increase. The agriculture, forestry, fishing and hunting and mining sectors declined somewhat during this period, while manufacturing and government sectors increased in importance. Nearly 40 percent of Anahuac residents worked outside the county, with many commuting to jobs in nearby Houston.

Several boat ramps in the Anahuac area facilitate recreational angling, and a small commercial fleet moors in the area. Fisheries participants harvest oysters, shrimp, and crab in Trinity Bay and adjacent estuaries. Moreover, there is a significant seafood processing industry here. Four processors based their operations in Anahuac in 2000, employing an average of 33 persons. These firms processed at total of 1,531,994 pounds of seafood in 2000, worth a total of \$6,128,005.



Anahuac Area Anglers



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Anahuac Demographics

Factor	1990	2000
Total population	1,993	2,210
Gender Ratio M/F (Number)	954/1,039	1,034/1,176
Age (Percent of total population)		
Under 18 years of age	27.2	29.7
18 to 64 years of age	56.6	55.3
65 years and over	16.2	15.0
Ethnicity or Race (Number)		
White	1,449	1,509
Black or African American	445	447
American Indian and Alaskan Native	4	3
Asian	5	15
Native Hawaiian and other Pacific Islander	N/A	0
Some other race	90	200
Two or more races	N/A	36
Hispanic or Latino (any race)	146	287
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	11.6	11.6
Percent high school graduate or higher	67.7	73.6
Percent with a Bachelor's degree or higher	14.5	15.5
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	9.3	13.7
And Percent who speak English less than very well	3.0	6.4
Household income (Median \$)	25,125	40,924
Poverty Status (Percent of population with income below poverty line)	17.3	13.5
Percent female headed household	13.7	15.7
Home Ownership (Number)		
Owner occupied	513	609
Renter occupied	195	194
Value Owner-occupied Housing (Median \$)	45,500	59,400
Monthly Contract Rent (Median \$)	\$234	\$488
Employment Status (Population 16 yrs and over)		
Percent in the labor force	57.1	59.2
Percent of civilian labor force unemployed	4.9	3.8
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	28.6
Service occupations	N/A	18.5
Sales and office occupations	N/A	21.9
Farming, fishing, and forestry occupations	4.2	1.8
Construction, extraction, and maintenance occupations	N/A	14.3
Production, transportation, and material moving occupations	N/A	14.9
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	5.2	3.8
Mining (includes the offshore oil/gas industry workforce)	2.2	0.2
Manufacturing	9.3	12.1
Percent government workers	23.7	24.8
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	26.3
Percent worked outside of county of residence	25.3	38.5

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Anahuac in 2003

Infrastructure or Service	Quantity
Boat yards/ Boat builders (recreational/commercial)	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	0
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	1
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	2-4
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	2
Recreational Fishing Tournaments	0
Seafood restaurants	1
Seafood retail markets	3
Site-seeing/pleasure tours	1
Charter/Party Boats	0
Commercial Boats	6-8

Table 3. Primary Fishing-related Businesses Listed for Anahuac in 2003

Type of Business	Frequency
Retail Seafood Dealer	4
Total	4

Table 4. Anahuac Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	3,054,738	5,374,862

Table 5. Anahuac License/Permit Summary: 2000

Commercial (based on physical address data)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
6	1	581
Total = 7		
% Households Holding Commercial Permit or License: 7/803 = 0.9		Average Number of Licenses per Household: 581/803 = 0.7

Please reference Table 3.3-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.3.2 Oak Island (unincorporated, pop. 1,304)

Location. Oak Island is a diffuse rural area with a small town center located on the eastern side of Trinity Bay, just eight miles south of Anahuac. The East and West branches of Double Bayou are located immediately to the south. Extensive shrimp and shellfish production occurs in this area, and field researchers noted extensive commercial and more limited recreational fishing activity here at the time of this study. However, this was occurring in the absence of extensive fishing infrastructure; linkages with processors, dealers, and distributors based in Anahuac facilitate commercial fishing activity.

History. Historical records dating to about 1880 report that a man named Joshua Harmon moved a cotton gin across Trinity Bay to work lands around now named Oak Island (Chambers County 1988: 204). Formally established in 1951, the town exists on land that had formerly been the site of a fish camp. By the mid-1960s, over 100 people were residing here, though the seasonal population would often increase to nearly 700 persons (Handbook of Texas Online 2001) during certain parts of the fishing season. The estuarine and bay areas surrounding Oak Island remain seasonally popular for shrimp harvesting and shellfish collecting.

Current Conditions and Trends. The year 2000 census enumerated 1,304 persons in Oak Island. This includes persons residing in both the small town center and in the larger rural surroundings. Many residents make their living by fishing, oyster harvesting, and/or boat manufacturing, though work in the offshore oil and gas industries and associated support services is also popular. Census data for the year 2000 indicate an extensive Caucasian population (74 percent), but fieldwork suggests numerous persons of Vietnamese ancestry are now also living in the area.

As there are no postal facilities in Oak Island, fisheries-specific secondary data to support this description are not available. Most residents receive their mail and various other goods and services in Anahuac. The situation is indicative of close historic and contemporary relationships between residents in these small Texas towns.



Sunset at Oak Island, Fall 2003

3.4 Liberty County Community

This section describes Liberty, the sole study community in Liberty County. Despite its patently rural characteristics, Liberty County is part of the Houston Metropolitan Area. The county is bordered on the north by Polk County, on the northeast by Hardin County, on the southeast by Jefferson and Chambers Counties, on the southwest by Harris County, and on the northwest by Montgomery and San Jacinto Counties. Liberty is the 47th most populous county in Texas.

Liberty County was established in 1836. Spanish missionaries settled in the region in the mid-1700s, with French settlers following soon thereafter. After the Louisiana Purchase, American immigration to the region increased. Cotton, sugarcane, tobacco, indigo, grains, and vegetables were important crops in the 1800s. By the 1900s, oil became an important industrial product (Kleiner 2002). By 2000, agribusiness, chemical production, various forms of manufacturing, tourism, and timber enterprise were the principal components of the economy. However, many residents commute to Houston for employment.

Liberty County had a year 2000 population of 70,154 persons, up 33 percent (or 17,428 residents) from 1990. The racial composition of the population was 75 percent Caucasian, 13 percent African American, and 11 percent Hispanic; the remaining one percent comprised of persons of various ethnicities. Liberty, the county seat, had a year 2000 population of 8,033 persons. The median family income was \$38,361 in 2000, slightly lower than the state median income of \$39,927. Some 14 percent of its residents lived in poverty, and 11 percent of families with children were headed by single mothers according to the 2000 census.



Rural Texas Fairgrounds

Table 3.4-1 Earnings in Liberty County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share of 2000 Earnings	\$ Change 1990-2000	% Share of Change 1990-2000
	1990	2000			
Earnings	429,679	600,462	100.0	170,783	100.0
Farm earnings	4,765	6,614	1.1	1,849	1.1
Ag. services, forestry, fish.	4,638	6,062	1.0	1,424	0.8
Fishing	NA	NA	NA	NA	NA
Mining	21,440	24,489	4.1	3,049	1.8
Oil and gas extraction	NA	23,319	3.9	NA	NA
Construction	28,018	43,476	7.2	15,458	9.0
Special trade contractors	18,004	24,384	4.1	6,380	3.7
Manufacturing	79,056	88,016	14.6	8,960	5.2
Fabricated metal products	10,017	4,191	0.7	-5,826	-3.4
Industrial mach. & equip.	NA	NA	NA	NA	NA
Food and kindred	NA	NA	NA	NA	NA
Chemicals and allied	8,295	NA	NA	NA	NA
Petroleum and coal	3,284	NA	NA	NA	NA
Transp.,Public Utilities	31,817	49,245	8.2	17,428	10.2
Trucking and warehousing	10,428	15,042	2.5	4,614	2.7
Water transportation	1,576	NA	NA	NA	NA
Transportation by air	NA	NA	NA	NA	NA
Wholesale trade	14,938	22,756	3.8	7,818	4.6
Retail trade	51,071	76,097	12.7	25,026	14.6
Eating and drinking places	9,296	11,692	1.9	2,396	1.4
Finance, insur., real estate	15,058	24,631	4.1	9,573	5.6
Services	89,893	129,525	21.6	39,632	23.2
Business services	29,294	30,387	5.1	1,093	0.6
Health services	25,518	40,976	6.8	15,458	9.0
Legal services	2,678	2,889	0.5	211	0.1
Engineer./Management serv.	4,887	13,044	2.2	8,157	4.8
Government	88,985	136,165	22.7	47,180	27.6

Source: Bureau of Economic Analysis, Regional Economic Information System

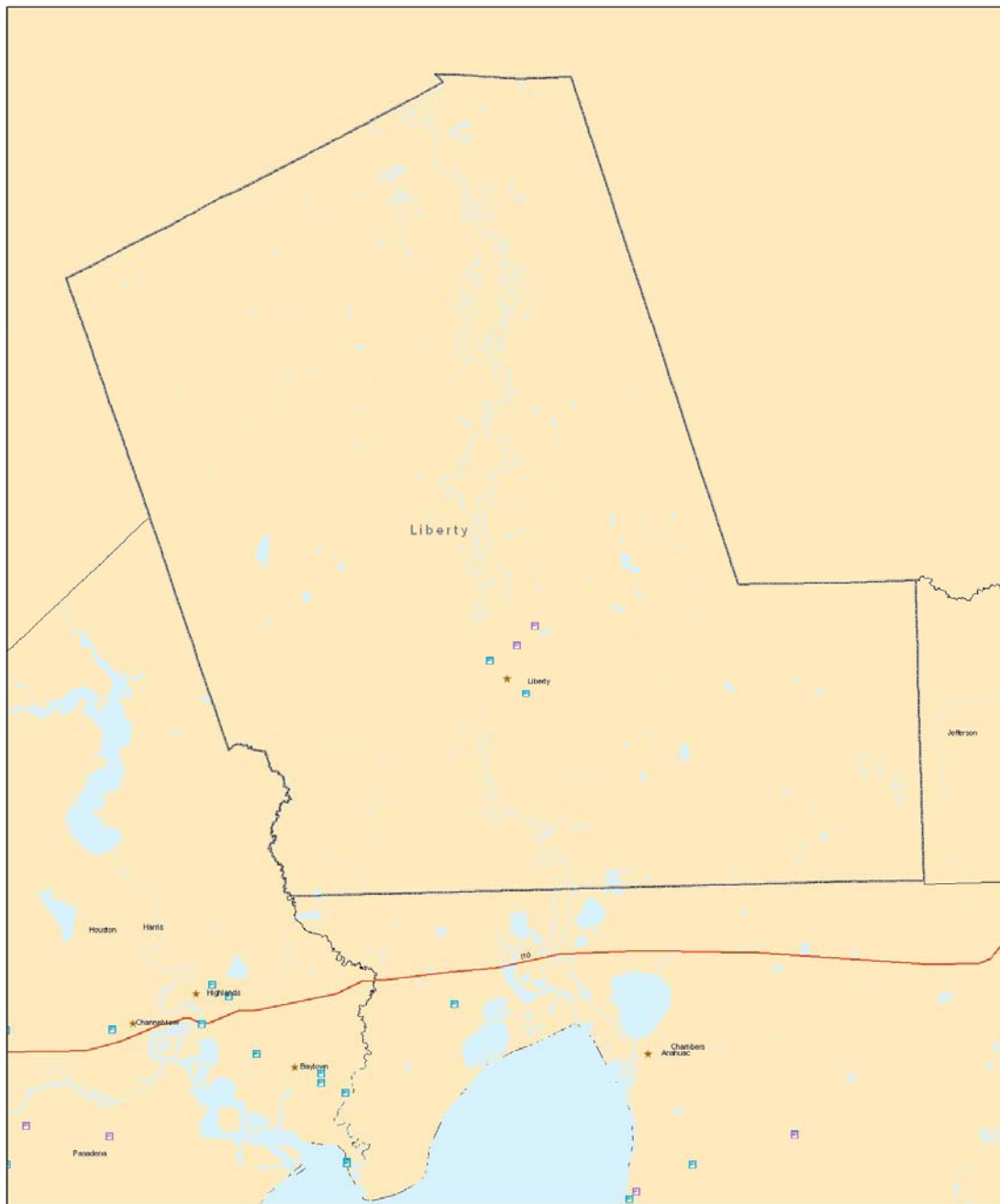
Table 3.4-2 Year 2000 Commercial Permits and Licenses, and 2003 Shrimp Permits: Liberty County*

Permit Type	Study Communities
	Liberty
Pelagic Charter	--
Swordfish	--
King Mackerel	--
Rock Shrimp	--
Red Snapper	--
Spiny Lobster	--
Spanish Mackerel	--
Gulf Reef Fish	--
Shark	--
South Atlantic Snapper Grouper	--
Total Federal Permits 2000	--
Total Federal Permit Holders 2000	--
Total State License Holders 2000	23
Gulf Shrimp Permits 2003 **	--

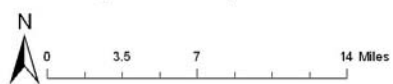
* Includes all permits that can be attributed to the communities by *both* street and P.O. Box addresses; these data are subsequently refined to provide counts of permit holders for whom evidence suggests actual residence in the community in 2000. ** 2003 is the first year for which shrimp permit data are available.



Train Depot in Liberty



Liberty County



Legend

- | | |
|--------------------------------|----------------|
| ★ Study Community | ● Reef |
| □ Processor | ⚓ Wreck |
| □ Processor and Seafood Dealer | ▲ Platform |
| □ Seafood Dealer | — County Lines |
| | — Interstate |

3.4.1 Liberty (incorporated, pop. 8,033)

Location and Overview. The incorporated town of Liberty is located some 20 mile inland along the banks of the Trinity River in south-central Liberty County. U.S. Highway 90, the main east/west thoroughfare in the area, connects Liberty to Beaumont and Houston.

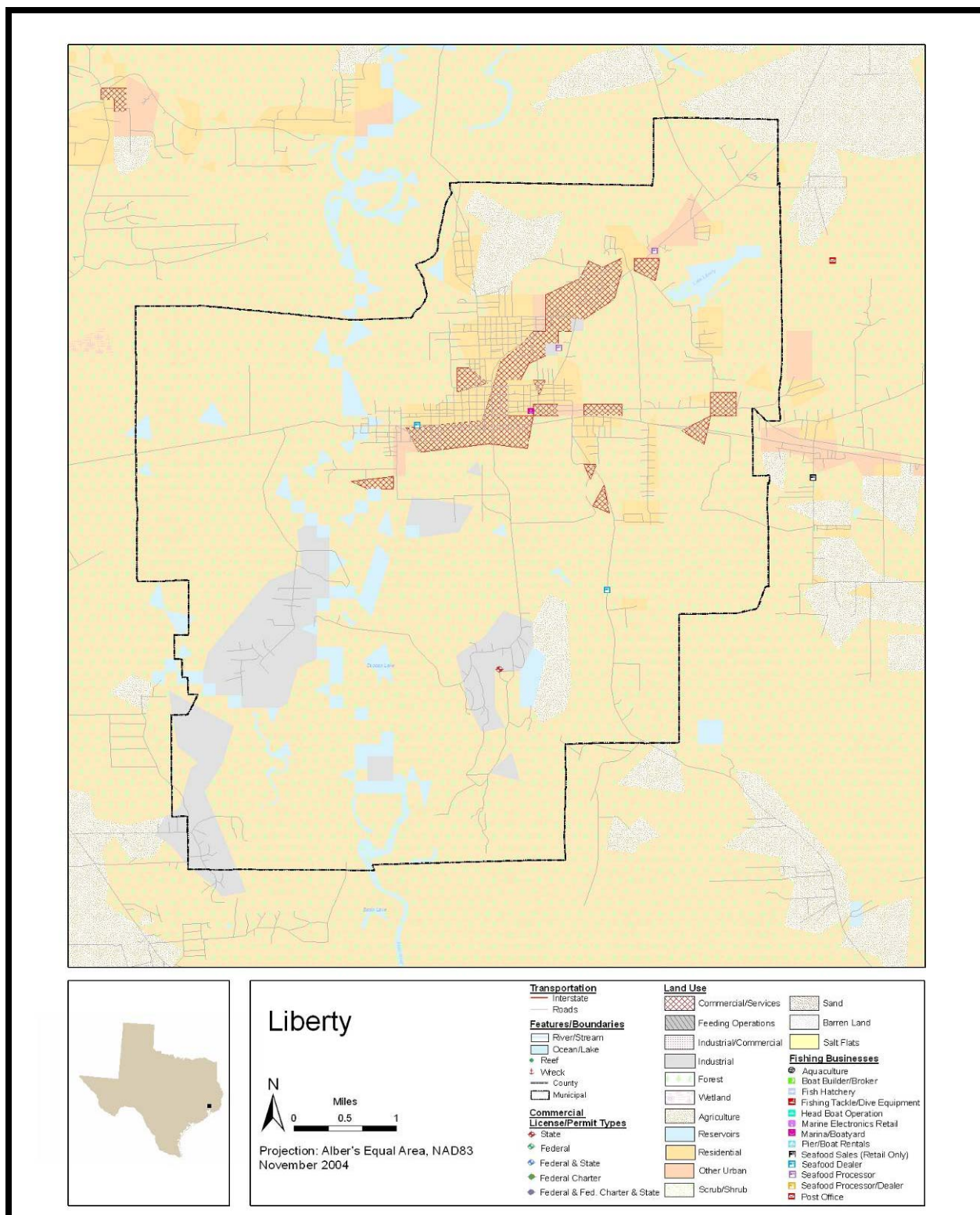
History. Liberty is the third oldest town in Texas, incorporated as the county seat in 1837. Cotton, cattle, and shipping were important industries during the early and mid-1800s. Between 1820 and 1830, Mexican land grants brought hundreds of American farmers into the area, eager to plant cotton (Texas Online 1998).

In 1840, the first meat-packing plant in Texas began operating here. The town became a leading trade center of commerce for lumber operations and agricultural products when in 1858 the Texas and New Orleans Railroad was constructed in the area (Kleiner 2002).

The discovery of oil at the Batson-Old oilfield in nearby Hardin County in 1903, and the development of the South Liberty oilfield brought many settlers to the area. Regional oil production continued to be significant through the 1980s, with 70 oil firms establishing offices in Liberty during the 1970s (Kleiner 2002). Today, Liberty is predominantly a farming/ranching/oil community, though some residents commute to jobs in Houston.

Current Conditions and Trends. The year 2000 population of Liberty was 8,033 persons, a 3.9 percent increase from the 1990 population of 7,733. Some 31 percent of workers commuted outside the county for employment in 2000, mostly to Houston and surrounding areas.

There is a fishing pier in Liberty, and several public boat ramps along the river. A handful of bait and tackle/fishing supply establishments and several retail seafood markets serve the community. There were two wholesale dealers in the area at the time of this research.



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Liberty Demographics

Factor	1990	2000
Total population	7,733	8,033
Gender Ratio M/F (Number)	3,806/3,927	3,962/4,071
Age (Percent of total population)		
Under 18 years of age	28.0	27.1
18 to 64 years of age	58.3	58.7
65 years and over	13.7	14.3
Ethnicity or Race (Number)		
White	6,130	6,068
Black or African American	1,143	1,053
American Indian and Alaskan Native	9	32
Asian	27	55
Native Hawaiian and other Pacific Islander	N/A	1
Some other race	424	743
Two or more races	N/A	81
Hispanic or Latino (any race)	656	1,191
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	15.6	13.3
Percent high school graduate or higher	66.7	72.0
Percent with a Bachelor's degree or higher	15.3	17.9
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	7.8	16.1
And Percent who speak English less than very well	4.7	8.4
Household income (Median \$)	21,231	36,325
Poverty Status (Percent of population with income below poverty line)	22.8	13.2
Percent female headed household	16.1	12.7
Home Ownership (Number)		
Owner occupied	1,827	1,932
Renter occupied	996	928
Value Owner-occupied Housing (Median \$)	51,100	69,100
Monthly Contract Rent (Median \$)	271	497
Employment Status (Population 16 yrs and over)		
Percent in the labor force	59.0	56.0
Percent of civilian labor force unemployed	13.0	7.8
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	28.1
Service occupations	N/A	19.0
Sales and office occupations	N/A	20.1
Farming, fishing, and forestry occupations	1.7	1.1
Construction, extraction, and maintenance occupations	N/A	16.1
Production, transportation, and material moving occupations	N/A	15.6
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	1.2	1.3
Mining (includes the offshore oil/gas industry workforce)	6.3	4.8
Manufacturing	11.6	8.1
Percent government workers	19.0	21.8
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	25.9
Percent worked outside of county of residence	22.3	31.7

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Liberty in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	2
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	1
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	2
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	2
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	4
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	3
Seafood retail markets	4
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats (freshwater)	Several

Table 3. Primary Fishing-related Businesses Listed for Liberty in 2003

Type of Business	Frequency
Boat Builder/Broker; Marina	1
Retail Seafood Dealer	1
Wholesale Seafood Dealer	1
Total	3

Table 4. Liberty Commercial Landings and Value Summary: 2002

Landings and ex-vessel value data may not be reported under the “Rule of Three.”

Table 5. Liberty License/Permit Summary: 2000

Commercial		Recreational
State License Holders	Federal Permit Holders	State Saltwater License Holders
1	--	858
Total = 1		
% Households Holding Commercial Permit or License: 1/2,860 = 0.03		Average Number of Licenses per Household: 858/2,860 = 0.3

Please reference Table 3.4-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.



Late Summer in Rural Liberty County, 2003

3.5 Galveston County Communities

This section describes the study communities in Galveston County. These are: Bacliff, Crystal Beach, Dickinson, Friendswood, Galveston, Kemah, La Marque, League City, Port Bolivar, San Leon, and Texas City.

Galveston County is located southeast of Houston and southwest of Beaumont. It is bordered on the north by Chambers County, on the northwest by Harris County, and the southwest by Brazoria County. This coastal county encompasses 399 square miles of land (including Galveston Island and the Bolivar Peninsula), and 478 square miles of water, the latter including West and East Bays. Maximum elevation is 35 feet above sea level (Ramos et al 2001:182).

The year 2000 population of Galveston County was 250,158 residents, making it the 15th most populous county in Texas that year (Bureau of Economic Analysis 2003). Galveston, the county seat, had a year 2000 population of 57,247 residents. The county's population increased in size by 15 percent between 1990 and 2000.

Galveston County was established in 1838, in large part through commerce enabled via the port at Galveston. The hurricane of 1900 had a dramatically challenging effect on the city and region, taking the lives of an estimated 6,000 persons in Galveston alone. Residents rebuilt the city and with tenacity it became a major point of entry for thousands of new immigrants. But Houston ultimately became the larger center of population and commerce. Oil development and petrochemical production became central to the economy of the entire region and remain so today (Kleiner 2002).

The contemporary Port of Galveston is of critical importance to the region. A variety of goods and services are provided through the port to towns and cities throughout East-Central Texas. As regards the commercial fishing industry, employment in the harvest sector diminished between 1990 and 1995, while the number of jobs in the remaining sectors increased during the period. Although participants often express concern about the future, commercial, charter, and recreational fishing continue to be important aspects of life in the Galveston area at the beginning of the 21st century.

Table 3.5-1 Galveston County Employment in Marine Fisheries

Sector	1990 Employment	1995 Employment	Percent Change
Commercial Harvesting	2,133	1,549	-27.4
Processing	118	147	24.6
Wholesale	75	141	88.0
Retail	809	1,035	27.9

Source: Dokken et al. (1998:93)

The racial composition of the year 2000 county population was approximately 64 percent Caucasian, 18 percent Hispanic, and 6 percent African-American. Year 2000 median family income in Galveston County was \$42,419, which was some six percent higher than the statewide median income. Approximately 13 percent of Galveston residents lived in poverty in 2000, and some 18 percent of households were headed by single females.

Table 3.5-2 Earnings Galveston County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share of 2000 Earnings	\$ Change 1990-2000	% Share of Change 1990-2000
	1990	2000			
Earnings	2,288,042	3,799,898	100.0	1,511,856	100.0
Farm earnings	-886	329	0	-557	0
Ag. services, forestry, fish.	10,042	23,805	0.6	13,763	0.9
Fishing	4,449	NA	NA	NA	NA
Mining	23,295	42,302	1.1	19,007	1.2
Oil and gas extraction	NA	39,351	1.0	NA	NA
Construction	171,798	213,003	5.6	41,205	2.7
Special trade contractors	68,204	121,326	3.2	53,122	3.5
Manufacturing	452,449	604,502	15.9	152,053	10.0
Fabricated metal products	15,648	32,436	0.8	16,788	1.1
Industrial mach. & equip.	9,516	12,584	0.3	3,068	0.2
Food and kindred	9,458	7,775	0.2	-1,683	-0.1
Chemicals and allied	208,833	220,789	5.8	11,956	0.8
Petroleum and coal	163,182	236,558	6.2	73,376	4.8
Transp.,Public utilities	165,203	217,045	5.7	51,842	3.4
Trucking and warehousing	19,631	23,519	0.6	3,888	0.2
Water transportation	39,503	46,268	1.2	6,765	0.4
Transportation by air	20,933	12,810	0.3	-8,123	-0.5
Wholesale trade	57,118	121,655	3.2	64,537	4.3
Retail trade	207,630	365,485	9.6	157,855	10.4
Eating and drinking places	58,128	123,030	3.2	64,902	4.3
Finance, insur., real estate	134,772	300,541	7.9	165,769	10.9
Services	389,165	758,439	19.9	369,274	24.4
Business services	52,602	103,531	2.7	50,929	3.4
Health services	130,477	227,606	6.0	97,129	6.4
Legal services	31,376	59,911	1.6	28,535	1.9
Engineer. & mgt. services	33,119	62,001	1.6	28,882	1.9
Government	676,570	1,153,121	30.3	476,551	31.5

Source: Bureau of Economic Analysis, Regional Economic Information System

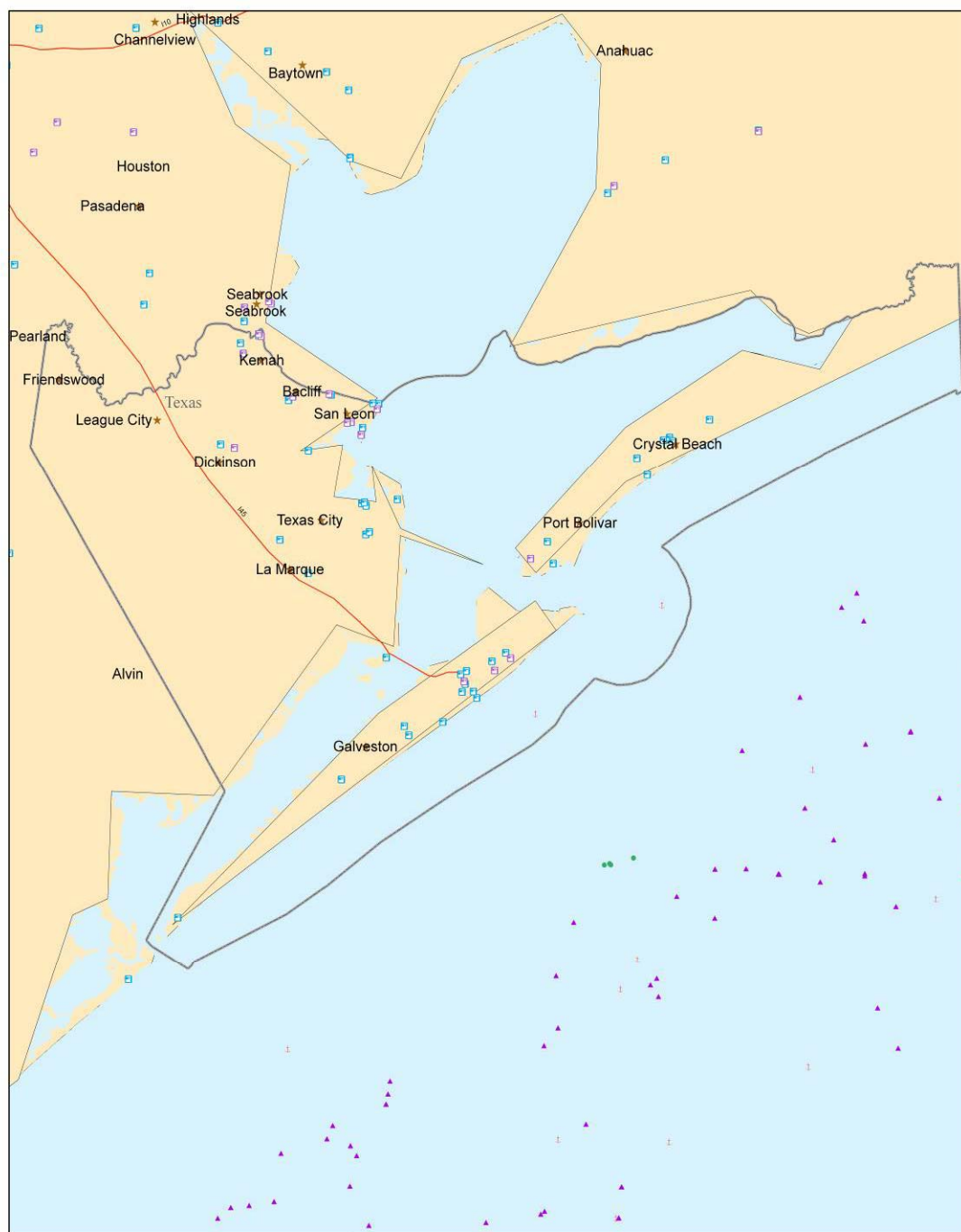
Table 3.5-3 Year 2000 Commercial Permits and Licenses, and 2003 Gulf Shrimp Permits: Galveston County*

Permit Type	Study Communities										
	Baciff	Crystal Beach	Dickinson	Friendswood	Galveston	Kemah	La Marque	League City	Port Bolivar	San Leon	Texas City
Pelagic Charter	--	--	5	4	17	1	1	--	--	2	1
Reef Fish Charter	--	--	5	4	16	2	1			2	1
Swordfish	--	--	--	1	--	1	--	--	--	--	--
King Mackerel	--	2	--	--	6	2	--	--	--	--	--
Rock Shrimp	--	--	--	--	--	--	--	--	--	--	--
Red Snapper	--	2	--	--	8	1	--	--	--	--	--
Spiny Lobster	--	--	--	--	--	--	--	--	--	--	--
Spanish Mackerel	--	1	--	--	2	--	--	--	--	--	--
Gulf Reef Fish	--	2	-	--	9	2	--	--	--	--	--
Shark	--	--	--	1	--	2	--	--	--	--	--
South Atlantic Snapper Grouper	--	--	--	--	--	--	--	--	--	--	--
Total Federal Permits 2000	--	7	10	6	58	16	2	--	--	4	2
Total Permit Federal Holders 2000	5	2	5	5	25	4	1	--	--	2	1
Total State License Holders 2000	86	30	59	13	69	21	3	19	35	60	54
Gulf Shrimp Permits 2003 **	8	2	3	1	3	--	--	3	--	--	--

* Includes all permits and licenses that can be attributed to the communities by *both* street and post office box addresses; these data are used to generate counts of permit and license holders for whom evidence indicates actual residence, as provided in the community descriptions. ** 2003 is the first year for which Gulf shrimp permit data are available.

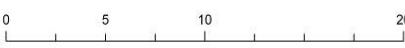


Plaque Commemorating the Confederacy, Galveston Courthouse, 2003



Galveston County

Legend



- ★ Study Community
- Processor
- Processor and Seafood Dealer
- Seafood Dealer

- Reef
- Wreck
- ▲ Platform
- County Boundaries
- Interstate

3.5.1 Bacliff (unincorporated, pop. 6,962)

Location and Overview. Bacliff is a seaside town located on the west side of Galveston Bay in north-central Galveston County. The metropolitan area of Houston is approximately 30 miles northwest. Seabrook, Clear Lake, and Kemah are just to the north. The Gulf of Mexico is about 20 nautical miles southeast, accessible through Galveston Bay.

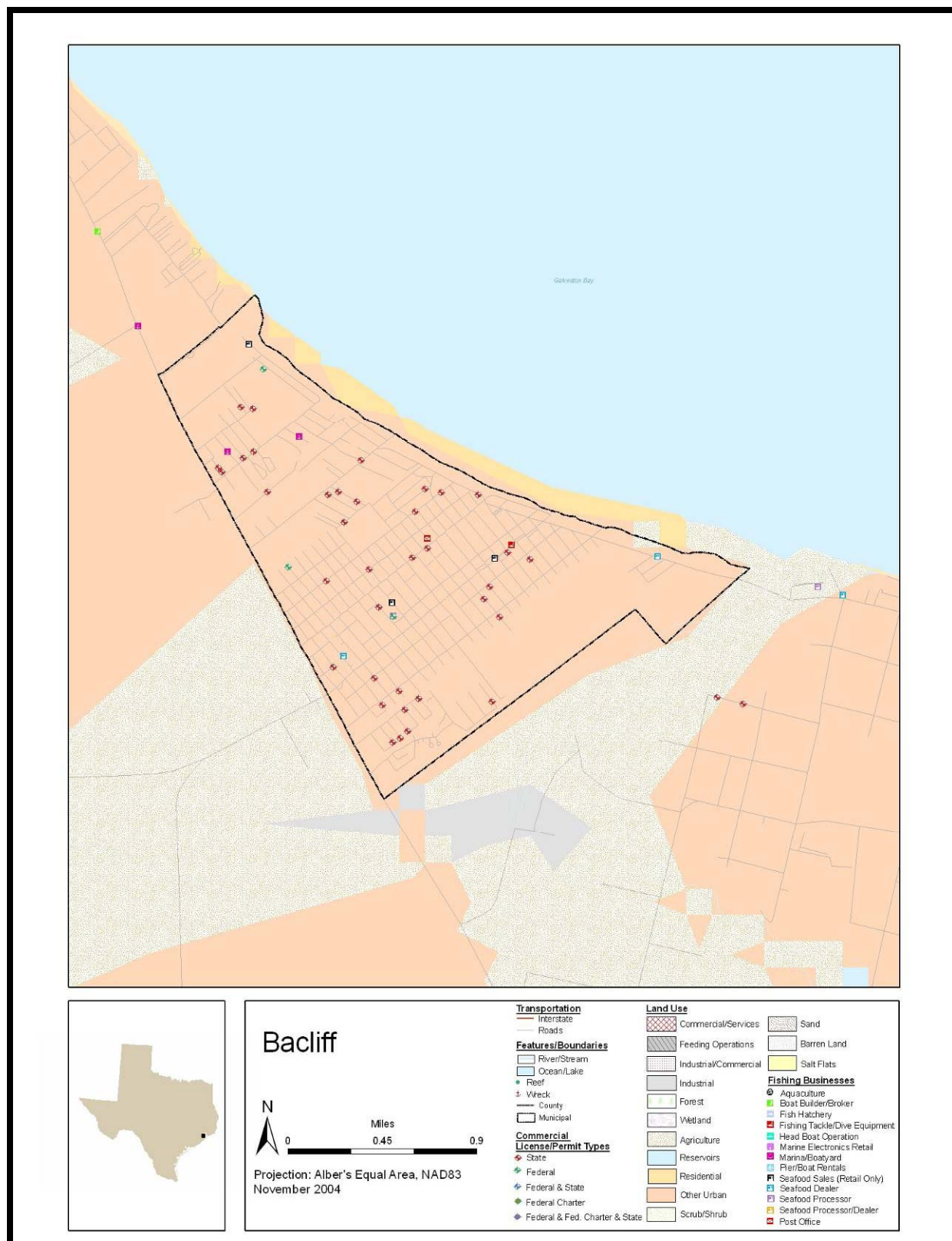
History. Bacliff was established sometime in the early 1900s as a summer resort community for Houston residents. The original name of Clifton-by-the-Sea was changed in 1961. The area continues to attract visitors from Houston and around the region (Kleiner 2002).

Current Conditions and Trends. The year 2000 population of Bacliff was 6,962 persons, a significant increase over the 1990 figure of 5,549. Many residents commute to jobs in and around Houston. There are close social and economic relationships between residents and businesses in Bacliff and San Leon.

There is a significant commercial fishing fleet based in Bacliff. According to informants, most participants harvest fish, shrimp, and crab in Galveston Bay and/or the Dickinson Bayou area. Fishery participants also harvest local oysters. Ideal anchorage is available; many owners moor their vessels in San Leon. But some captains and crew range more widely and operate from Galveston. For example, eight residents held Gulf shrimp permits in 2003. There are various fishing-related businesses and services in the area, including a number of seafood dealers. Shrimp and crab led local dealer landings figures in 2002.



Waterfront at Bacliff



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Bacliff Demographics

Factor	1990	2000
Total population	5,549	6,962
Gender Ratio M/F (Number)	2,829/2,720	3.634/3.328
Age (Percent of total population)		
Under 18 years of age	29.4	29.0
18 to 64 years of age	60.5	62.7
65 years and over	10.1	8.2
Ethnicity or Race (Number)		
White	5,209	5,754
Black or African American	26	124
American Indian and Alaskan Native	39	54
Asian	90	208
Native Hawaiian and other Pacific Islander	N/A	1
Some other race	185	673
Two or more races	N/A	148
Hispanic or Latino (any race)	464	1,622
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	9.4	6.3
Percent high school graduate or higher	67.6	69.9
Percent with a Bachelor's degree or higher	9.1	8.6
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	11.0	20.6
Percent who speak English less than very well	3.6	11.0
Household income (Median \$)	26,892	32,188
Poverty Status (Percent of population with income below poverty line)	14.3	21.7
Percent female headed household	12.5	12.0
Home Ownership (Number)		
Owner occupied	1,304	1,682
Renter occupied	679	841
Value Owner-occupied Housing (Median)	43,200	60,800
Monthly Contract Rent (Median)	297	576
Employment Status (Population 16 yrs and over)		
Percent in the labor force	63.6	66.5
Percent of civilian labor force unemployed	8.4	7.9
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	25.8
Service occupations	N/A	19.3
Sales and office occupations	N/A	20.4
Farming, fishing, and forestry occupations	1.7	1.0
Construction, extraction, and maintenance occupations	N/A	20.7
Production, transportation, and material moving occupations	N/A	12.8
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	2.4	1.4
Mining (includes the offshore oil/gas industry workforce)	2.6	0.8
Manufacturing	21.5	13.5
Percent government workers	10.6	11.1
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	29.6
Percent worked outside of county of residence	54.5	50.3

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Bacliff in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	2-3
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	6
Fish processors, Wholesale fish house	2-3
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	6
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	2-3
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	2
Recreational Fishing Tournaments	1
Sea Grant Extension office	0
Seafood restaurants	2-3
Seafood retail markets	2
Trucking operations	1
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	1

Table 3. Primary Fishing-related Businesses Listed for Bacliff in 2003

Type of Business	Frequency
Boat Builder/Broker; Diving & Fishing Equipment	1
Boat Builder/Broker; Marina	1
Marina	1
Retail Seafood Dealer	3
Wholesale Seafood Dealer	1
Total	7

Table 4. Bacliff Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	289,389	363,317

Table 5. Bacliff License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
54	--	482
Total = 54		
% Households Holding Commercial Permit or License: 54/2,523 = 2.1		Average Number of Licenses per Household: 482/2,523 = 0.2

Please reference Table 3.5-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.5.2 Crystal Beach (unincorporated, pop. 1,563)

Location and Overview. Crystal Beach is a small town located on the Gulf of Mexico waterfront along the narrow Bolivar Peninsula. The town is primarily a resort community, with privately-owned homes that serve as rentals to summer tourists (Crystal Beach). An estimated 80 percent of homeowners visit Crystal Beach recreationally but do not live there full time (Daniels 2002). Commercial fishing and tourism are the primary industries on the Peninsula (Crystal Beach).

History. Initially called “Patton” through the 1940s, Crystal Beach was settled in the early 20th century. Although the town incorporated in 1971, residents voted to become unincorporated in the mid-1980s (Daniels 2002).

Current Conditions and Trends. The year 2000 census enumerated 1,563 residents, up from 832 in 1990. Nearly half of the working population commutes outside of the county for employment.

While there are various fishing services and infrastructure in Port Bolivar, Gilcrest, and High Island, operations for a range of processors, net makers, fishing gear and supply stores, and retail and wholesale seafood markets are based in Crystal Beach. There were over 100 commercial fishing vessels moored here at the time of this study, though it should be kept in mind that captains from around the region moor here, and only a portion of this fleet and reported landings derive from residents. As of 2003, two residents held Gulf shrimp permits.



Oil Tanker Anchored off North Jetty at Crystal Beach



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Crystal Beach Demographics

Factor	1990	2000
Total population	832	1,563
Gender Ratio M/F (Number)	427/405	780/783
Age (Percent of total population)		
Under 18 years of age	13.9	13.3
18 to 64 years of age	60.4	62.3
65 years and over	25.7	24.4
Ethnicity or Race (Number)		
White	821	1,489
Black or African American	0	8
American Indian and Alaskan Native	1	14
Asian	7	12
Native Hawaiian and other Pacific Islander	N/A	0
Some other race	3	22
Two or more races	N/A	18
Hispanic or Latino (any race)	10	61
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	4.4	1.8
Percent high school graduate or higher	76.3	86.0
Percent with a Bachelor's degree or higher	15.1	20.6
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	3.9	6.2
And Percent who speak English less than very well	0.0	2.0
Household income (Median \$)	21,645	34,063
Poverty Status (Percent of population with income below poverty line)	20.8	10.0
Percent female headed household	2.6	6.9
Home Ownership (Number)		
Owner occupied	370	685
Renter occupied	54	91
Value Owner-occupied Housing (Median \$)	40,400	62,200
Monthly Contract Rent (Median \$)	272	394
Employment Status (Population 16 yrs and over)		
Percent in the labor force	43.1	50.8
Percent of civilian labor force unemployed	11.2	7.0
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	25.0
Service occupations	N/A	13.2
Sales and office occupations	N/A	26.8
Farming, fishing, and forestry occupations	7.0	1.9
Construction, extraction, and maintenance occupations	N/A	16.5
Production, transportation, and material moving occupations	N/A	16.5
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	7.0	2.0
Mining (includes the offshore oil/gas industry workforce)	6.6	3.0
Manufacturing	8.1	5.9
Percent government workers	21.1	23.8
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	N/A
Percent worked outside of county of residence	22.3	41.9

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services in Crystal Beach in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	1
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	2
Fishing associations (recreational/commercial)	1
Fish processors, Wholesale fish house	3
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	2
Hotels/Inns (dockside)	4
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	1
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	2
Recreational docks/marinas	2
Bait & Tackle/fishing supplies	6-8
Recreational Fishing Tournaments	4
Sea Grant Extension office	0
Seafood restaurants	4
Seafood retail markets	4
Trucking operations	0
Site-seeing/pleasure tours	1
Charter/Head Boats	2
Commercial Boats	100+

Table 3. Primary Fishing-related Businesses Listed for Crystal Beach in 2003

Type of Business	Frequency
Retail Seafood Dealer	2
Retail/Wholesale Seafood Dealer	1
Total	3

Table 4. Crystal Beach Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	679,865	1,589,792

Table 5. Crystal Beach License/Permit Summary: 2000

Commercial Based on physical address data)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
14	0	269
Total = 14		
% Households Holding Commercial Permit or License: 14/776 = 1.8		Average Number of Licenses per Household: 269/776 = .34

Please reference Table 3.5-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.5.3 Dickinson (incorporated, pop. 17,093)

Location and Overview. Dickinson is located midway between Galveston and Houston on State Highway 3 in the Galveston County Metropolitan area (City of Dickinson 2002). Both the Dickinson Bayou and Galveston Bay form its eastern perimeter. Dickinson is approximately 20 miles northwest of the Gulf of Mexico with easy access via Galveston Bay, approximately six miles east. A small canal enables access to the Bay.

This former agricultural community is now primarily residential in nature, serving an increasing number of persons who work in Houston (Rocap 2002). Local attractions include the Clear Lake Resort Area, Galveston Bay, the Johnson Space Center (NASA), and three major shopping malls (City of Dickinson 2002).

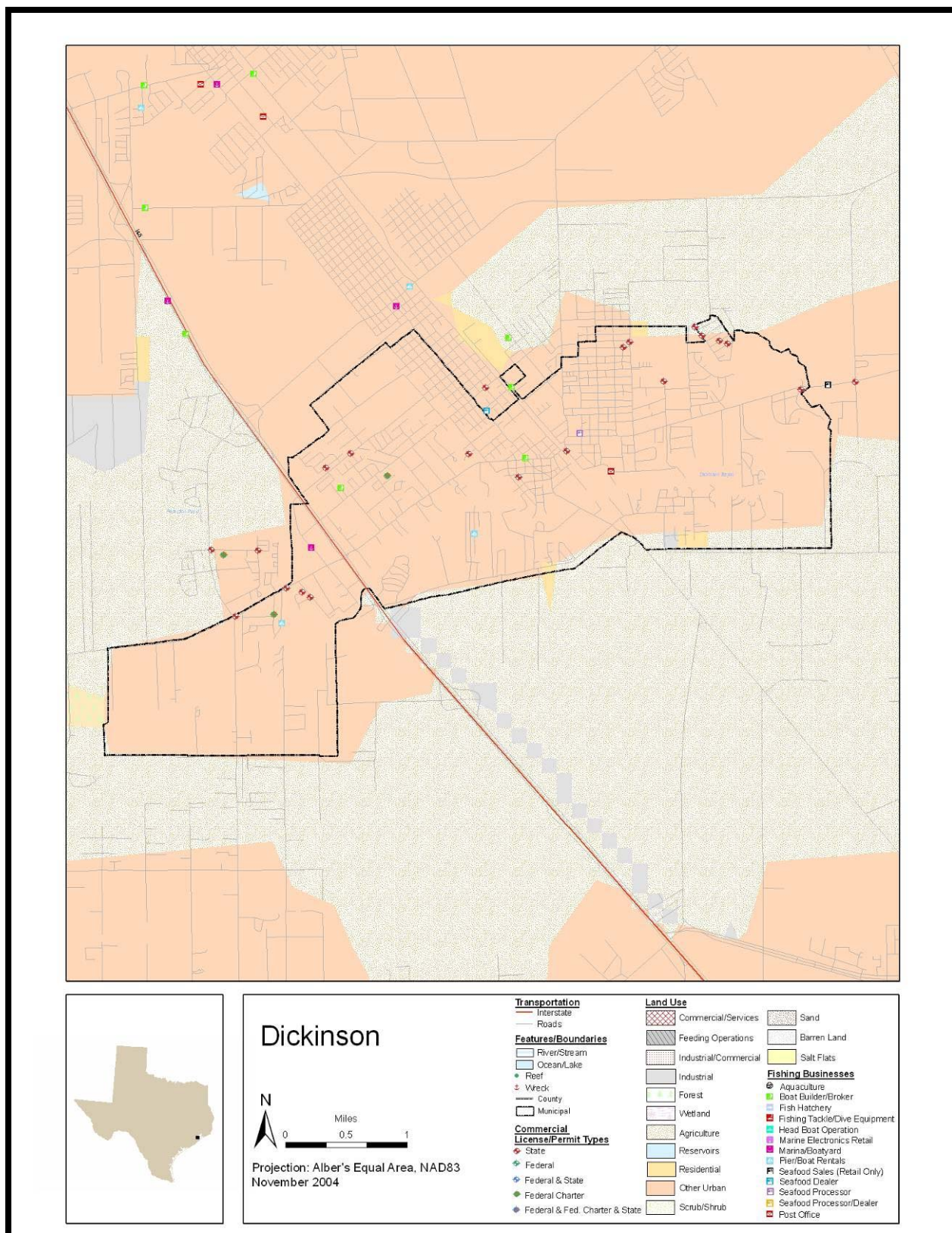
History. Dickinson is named after its founder, John Dickinson, who obtained the land through a Mexico land grant in the mid-1800s. For the next 50 years, the town's population grew slowly, with a rapid increase in the early 1900s when a large number of Italian immigrants settled here. Dickinson's next population surge coincided with the growth of the oil industry in the Houston-Galveston area during the mid-1900s. In 1962, another influx occurred with the establishment of NASA in nearby Webster (Rocap 2002). Dickinson was incorporated in 1977.

Current Conditions and Trends. Dickinson's year 2000 population was 17,093 persons, nearly double the 9,497 figure of 1990. In 2000, nearly half (47 percent) of Dickinson's residents traveled outside the county for work; downtown Houston is approximately 30 minutes to the northwest. Many of Dickinson's residents worked in management, professional, sales, and office occupations in the Greater Houston area.

While many residents travel to Texas City to meet their needs for fishing-related goods and services, some Dickinson residents remain active in commercial fishing and seafood processing. The local fleet is especially productive in shrimp and oysters. In 2000, three seafood processors in Dickinson employed 54 persons on average. Collectively, these companies processed 1,119,841 pounds of seafood for a total of \$8,821,750. As of 2003, three Gulf shrimp permit holders were resident here. Indicative of the apparent shift toward a more gentrified waterfront area (not readily visible on our map), a recreational marina is under construction in Dickinson, slated for completion in 2005.



Along the Waterfront near Dickinson



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Dickinson Demographics

Factor	1990	2000
Total population	9,497	17,093
Gender Ratio M/F (Number)	4,685/4,812	8,533/8,560
Age (Percent of total population)		
Under 18 years of age	28.0	28.5
18 to 64 years of age	62.9	62.0
65 years and over	9.1	9.6
Ethnicity or Race (Number)		
White	7,655	12,367
Black or African American	1,269	1,798
American Indian and Alaskan Native	37	109
Asian	64	206
Native Hawaiian and other Pacific Islander	N/A	6
Some other race	472	2,191
Two or more races	N/A	416
Hispanic or Latino (any race)	1,195	4,256
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	7.3	9.1
Percent high school graduate or higher	79.4	80.1
Percent with a Bachelor's degree or higher	22.7	21.0
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	11.3	21.8
And Percent who speak English less than very well	4.3	11.2
Household income (Median \$)	30,159	41,984
Poverty Status (Percent of population with income below poverty line)	10.5	13.1
Percent female headed household	17.4	13.0
Home Ownership (Number)		
Owner occupied	2,076	4,109
Renter occupied	1,434	2,053
Value Owner-occupied Housing (Median \$)	69,900	83,400
Monthly Contract Rent (Median \$)	302	564
Employment Status (Population 16 yrs and over)		
Percent in the labor force	67.2	67.1
Percent of civilian labor force unemployed	8.3	5.7
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	29.7
Service occupations	N/A	14.6
Sales and office occupations	N/A	28.6
Farming, fishing, and forestry occupations	1.2	0.5
Construction, extraction, and maintenance occupations	N/A	14.0
Production, transportation, and material moving occupations	N/A	12.6
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	0.8	0.7
Mining (includes the offshore oil/gas industry workforce)	2.2	0.8
Manufacturing	14.6	12.1
Percent government workers	20.9	19.4
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	29.7
Percent worked outside of county of residence	44.6	47.0

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Dickinson in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	0
Docking facilities (commercial)	3
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	4
Fisheries research laboratories	1
Fishing monuments	0
Fishing pier	1
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	1
Public boat ramps	2
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	0
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	2-4
Seafood retail markets	3
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	~25

Table 3. Primary Fishing-related Businesses Listed for Dickinson in 2003

Type of Business	Frequency
Boat Builder/Broker	5
Boat Rentals & Pier	3
Marina	4
Processor	1
Retail Seafood Dealer	1
Retail/Wholesale Seafood Dealer	1
Total	15

Table 4. Dickinson Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	855,332	1,667,804

Table 5. Dickinson License/Permit Summary: 2000

Commercial (based on physical address data)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
37	4	1,452
Total = 41		
% Households Holding Commercial Permit or License: 41/6,162 = 0.7		Average Number of Licenses per Household: 1,452/6,162 = 0.2

Please reference Table 3.5-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

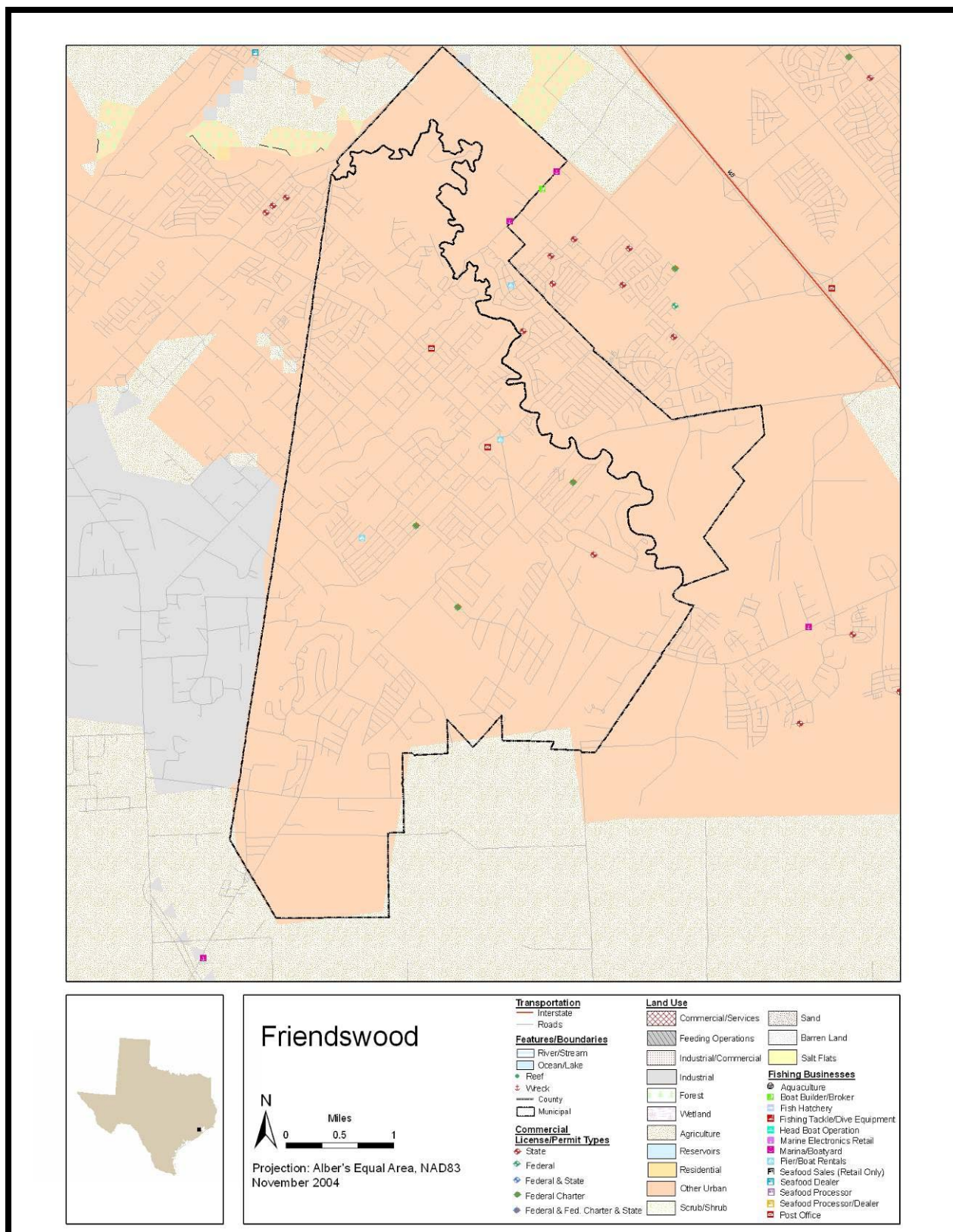
3.5.4 Friendswood (incorporated, pop. 29,037)

Location and Overview. Friendswood is located at the intersection of Farm Roads 2351 and 518 in Galveston County. The small city is part of Greater Houston. Downtown Houston is about 20 miles northwest. The Gulf of Mexico lies approximately 31 miles to the southeast. Initially an agricultural community, Friendswood now is largely residential in nature (Kleiner 2002). Many residents work in the aerospace industry, or commute to Houston (City of Friendswood). Galveston Bay, which is some 12 miles east of town, enables direct access to the Gulf.

History. Friendswood was founded by English Quakers in 1895. The town's name derives from the common synonym for Quakers – “friends.” It was developed as a farming community whose primary crops included Satsuma oranges, strawberries, figs, and rice (Friendswood Chamber of Commerce 2004; Kleiner 2002). The population expanded as more farmers and farm workers settled in the area. Growth continued as the oil industry (1930s) and NASA (1962) provided new employment opportunities. Consequently, many residents now work outside of the community (Friendswood Chamber of Commerce 2004).

Current Conditions and Trends. The year 2000 census enumerated 29,037 residents, a 27 percent increase over the 1990 figure. In 2000, nearly half of Friendswood residents were employed in management/professional and related occupations.

Although most residents travel to Seabrook, South Shore Harbor, Kemah, Galveston, and Texas City for their fishing needs and access to the bay system, there is some limited fishing-related infrastructure in the immediate area. A small contingent of federal permit and state license holders were residing here at the time of this study.



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Friendswood Demographics

Factor	1990	2000
Total population	22,814	29,037
Gender Ratio M/F (Number)	11,269/11,545	14,050/14,987
Age (Percent of total population)		
Under 18 years of age	29.9	30.0
18 to 64 years of age	64.4	61.3
65 years and over	5.7	8.6
Ethnicity or Race (Number)		
White	21,404	26,158
Black or African American	620	783
American Indian and Alaskan Native	68	115
Asian	385	695
Native Hawaiian and other Pacific Islander	N/A	4
Some other race	337	809
Two or more races	N/A	473
Hispanic or Latino (any race)	1,386	2,553
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	2.0	2.2
Percent high school graduate or higher	92.6	92.4
Percent with a Bachelor's degree or higher	34.9	36.6
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	7.3	10.4
And Percent who speak English less than very well	2.1	3.2
Household income (Median \$)	50,492	69,384
Poverty Status (Percent of population with income below poverty line)	2.9	3.3
Percent female headed household	9.9	8.7
Home Ownership (Number)		
Owner occupied	5,848	8,095
Renter occupied	1,908	2,012
Value Owner-occupied Housing (Median \$)	82,700	124,500
Monthly Contract Rent (Median \$)	477	855
Employment Status (Population 16 yrs and over)		
Percent in the labor force	75.8	70.6
Percent of civilian labor force unemployed	2.8	3.7
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	48.2
Service occupations	N/A	9.8
Sales and office occupations	N/A	25.8
Farming, fishing, and forestry occupations	0.6	0.2
Construction, extraction, and maintenance occupations	N/A	8.1
Production, transportation, and material moving occupations	N/A	7.9
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	1.0	0.4
Mining (includes the offshore oil/gas industry workforce)	2.3	1.2
Manufacturing	19.7	14.0
Percent government workers	13.7	18.1
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	29.2
Percent worked outside of county of residence	55.8	58.9

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Friendswood in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	2
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	2
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	1
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	0
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	0
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Friendswood in 2003

Type of Business	Frequency
Boat Builder/Broker	1
Boat Rentals & Pier	3
Marina	2
Total	6

Table 4. Friendswood Commercial Landings and Value Summary: 2002

Landings data cannot be accurately attributed to commercial operators based in Friendswood.

Table 5. Friendswood License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
10	5	2,077
Total = 15		
% Households Holding Commercial Permit or License: 15/10,107 = 0.1		Average Number of Licenses per Household: 2,077/10,107 = 0.2

Please reference Table 3.5-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.



Episcopal Church in Friendswood

3.5.5 Galveston (incorporated, pop. 57,247)

Location and Overview. Galveston is a 32-mile-long, two-mile-wide barrier island located directly west of the Gulf of Mexico and east of mainland Galveston County. Houston is approximately 50 miles north. The University of Texas Medical Branch is the leading employer (Galveston, Texas Chamber of Commerce). Tourism, commercial and recreational fishing, and various maritime industry at the Port of Galveston are also highly significant in economic terms.

History. Galveston Island was once home to Karankawa tribes, who hunted and fished in the area's resource-rich bays and sounds. The first non-indigenous settlement was established in 1817 by pirate Jean Laffite (Texas Online 1998). Galveston was incorporated in 1839 (McComb 2002).

Galveston's economy initially revolved around its port, with cotton as the principal export product. The area grew steadily until an outbreak of yellow fever killed approximately 75 percent of Galveston's population between 1867 and 1873. Another major setback occurred in 1900 when the Galveston hurricane flooded the island and 6,000 people died (McComb 2002). The population steadily increased over the course of the 20th century in large part in associated with immense growth around Houston.

Current Conditions and Trends. The year 2000 census enumerated 57,247 residents, a three percent decline from 1990. During that ten year period, employment in several major industries such as agriculture, forestry, fishing and hunting, mining, and manufacturing underwent some measure of decline. Jobs in the both the management and government sectors accounted for over 67 percent of jobs held by residents during the period. Many residents now work in tourism-related services, such as those provided by the numerous dockside inns and hotels that serve visitors along the Galveston waterfront.

Both commercial and recreational fishing services and infrastructure are available in the area. For instance, eight public boat ramps provide convenient access to the Gulf and back bays, and several docks and marinas, ocean sightseeing tours, and charter fishing services provide

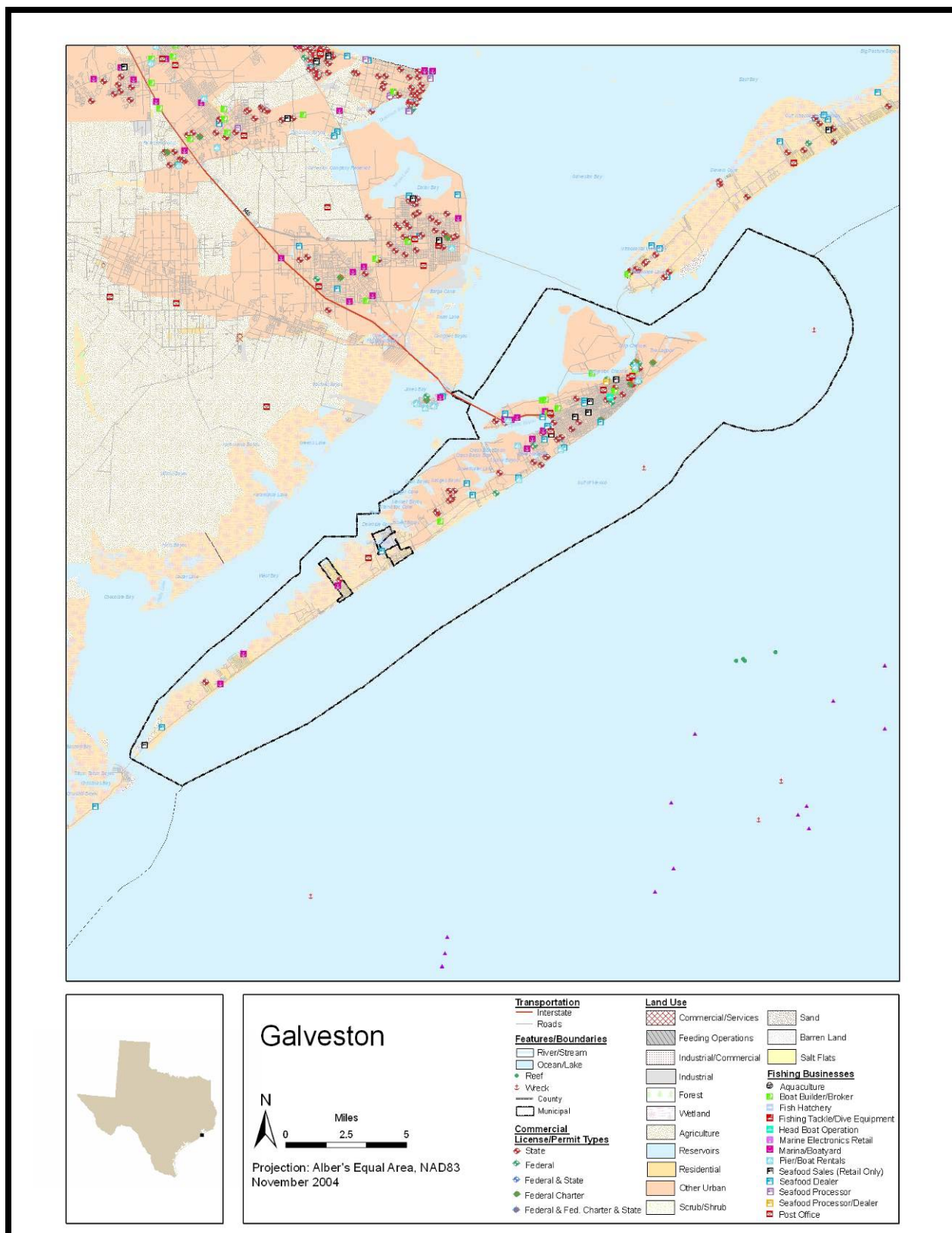
amenities for visitors. A highly productive shrimp and bottom fish fleet is also based here, with numerous commercial fishing vessels mooring along the waterfront. A number of seafood dealers and retailers, and boat builder and brokers are located in Galveston as well. As of 2003, three Galveston residents held Gulf shrimp permits.



Galveston-area Marina



Galveston Pier



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Galveston Demographics

Factor	1990	2000
Total population	59,070	57,247
Gender Ratio M/F (Number)	28,539/30,531	27,649/29,598
Age (Percent of total population)		
Under 18 years of age	24.7	23.4
18 to 64 years of age	61.9	62.9
65 years and over	13.4	13.7
Ethnicity or Race (Number)		
White	36,315	33,582
Black or African American	17,161	14,592
American Indian and Alaskan Native	144	243
Asian	1,387	1,839
Native Hawaiian and other Pacific Islander	N/A	42
Some other race	4,063	5,571
Two or more races	N/A	1,378
Hispanic or Latino (any race)	12,649	14,753
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	13.7	10.3
Percent high school graduate or higher	70.0	74.4
Percent with a Bachelor's degree or higher	21.1	23.7
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	19.8	26.5
And Percent who speak English less than very well	7.6	11.2
Household income (Median \$)	20,825	28,895
Poverty Status (Percent of population with income below poverty line)	24.2	22.3
Percent female headed household	16.3	16.9
Home Ownership (Number)		
Owner occupied	10,136	10,399
Renter occupied	14,021	13,443
Value Owner-occupied Housing (Median \$)	57,200	73,800
Monthly Contract Rent (Median \$)	309	531
Employment Status (Population 16 yrs and over)		
Percent in the labor force	62.7	59.7
Percent of civilian labor force unemployed	9.0	10.1
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	35.2
Service occupations	N/A	24.2
Sales and office occupations	N/A	24.0
Farming, fishing, and forestry occupations	1.8	0.3
Construction, extraction, and maintenance occupations	N/A	8.3
Production, transportation, and material moving occupations	N/A	8.0
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	1.5	0.3
Mining (includes the offshore oil/gas industry workforce)	1.0	0.5
Manufacturing	5.7	4.1
Percent government workers	32.1	31.5
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	19.1
Percent worked outside of county of residence	5.5	9.5

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Galveston in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	1
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	1
Docking facilities (commercial)	8
Fishing Gear, Electronics, Welding, and other repair	5
Fishing associations (recreational/commercial)	2
Fish processors, Wholesale fish house	3
Fisheries research laboratories	1
Fishing monuments	0
Fishing pier	20
Hotels/Inns (dockside)	~20
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	1
NMFS or state fisheries office (port agent, etc.)	1
Public boat ramps	8
Recreational docks/marinas	5
Bait & Tackle/fishing supplies	20
Recreational Fishing Tournaments	Numerous
Sea Grant Extension office	1
Seafood restaurants	~20
Seafood retail markets	8
Trucking operations	0
Site-seeing/pleasure tours	10
Charter/Head Boats	12
Commercial Boats	25

Table 3. Primary Fishing-related Businesses Listed for Galveston in 2003

Type of Business	Frequency
Boat Builder/Broker	10
Boat Builder/Broker; Marina	1
Boat Rentals & Pier	9
Boat Rentals & Pier; Retail Seafood Dealer	1
Marina	13
Processor; Retail Seafood Dealer	1
Retail Seafood Dealer	6
Retail/Wholesale Seafood Dealer	3
Wholesale Seafood Dealer	2
Total	46

Table 4. Galveston Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	5,491,872	13,476,895

Table 5. Galveston License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
56	19	2,551
Total =75		
% Households Holding Commercial Permit or License: 75/23,842 = 0.3		Average Number of Licenses per Household: 2,551/23,842 = 0.1

Please reference Table 3.5-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.5.6 Kemah (incorporated, pop. 2,330)

Location and Overview. Kemah is located in northeastern Galveston County on the western shores of Galveston Bay. State Highways 146 and 96 and Farm Road 518 intersect at this shorefront town, which is approximately 31 miles east of downtown Houston. The Gulf of Mexico is accessible from Kemah via Galveston Bay. Attractions include a 14-acre boardwalk complete with amusement rides, restaurants, entertainment, and a marina (Kemah State History).

History. Kemah, a Native American word for “wind in face,” was founded in 1898. Early trade in this area involved the export of shell from a local reef that extended several hundred feet into the bay. Farming and fishing were important endeavors during much of the subsequent decades. By the mid-1960s, the region's oil and gas industry was employing many residents, and the majority of local businesses were geared to support offshore operations.

Current Conditions and Trends. Kemah’s population grew by 112 percent between the 1990 and 2000 census years. Many residents are employed in tourism-related businesses and services in the small seaside town. The primary tourist attraction here is the boardwalk.

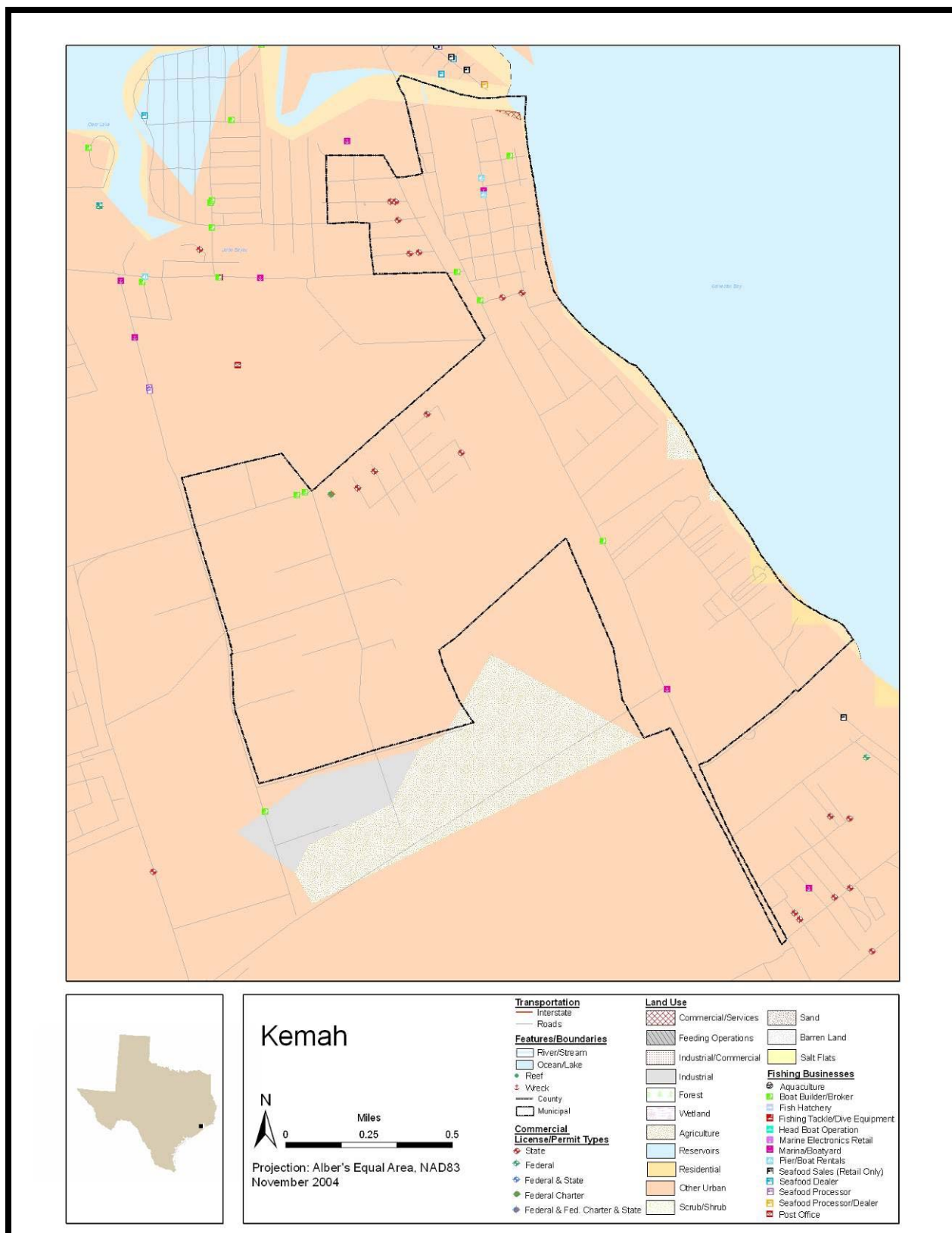
As for other communities along this stretch of Galveston Bay coastline, there are significant recreational fishing services and opportunities here. A small but productive commercial fleet is also based here, though there are close relationships with the fleet in Seabrook and it is difficult to clearly attribute landings to residents of either town. In any case, a wide variety of species are taken by the fleet(s) and in relatively high volumes. Shrimp was the primary species of landing in 2000.



Aerial View of Kemah Area (photo courtesy of www.texmaps.com)



Aerial View of Kemah Boardwalk (photo courtesy of www.kemahboardwalk.com)



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Kemah Demographics

Factor	1990	2000
Total population	1,094	2,330
Gender Ratio M/F (Number)	598/496	1,247/1,083
Age (Percent of total population)		
Under 18 years of age	24.0	27.4
18 to 64 years of age	67.1	66.5
65 years and over	8.9	6.1
Ethnicity or Race (Number)		
White	991	1,756
Black or African American	1	89
American Indian and Alaskan Native	3	20
Asian	61	81
Native Hawaiian and other Pacific Islander	N/A	0
Some other race	38	368
Two or more races	N/A	16
Hispanic or Latino (any race)	220	577
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	9.3	50.6
Percent high school graduate or higher	73.3	84.8
Percent with a Bachelor's degree or higher	11.2	28.1
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	23.0	25.1
And Percent who speak English less than very well	11.8	16.5
Household income (Median \$)	26,797	51,620
Poverty Status (Percent of population with income below poverty line)	20.5	8.2
Percent female headed household	12.0	9.4
Home Ownership (Number)		
Owner occupied	241	486
Renter occupied	169	406
Value Owner-occupied Housing (Median \$)	56,900	126,100
Monthly Contract Rent (Median \$)	284	682
Employment Status (Population 16 yrs and over)		
Percent in the labor force	70.8	69.7
Percent of civilian labor force unemployed	6.9	3.6
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	37.3
Service occupations	N/A	20.6
Sales and office occupations	N/A	20.4
Farming, fishing, and forestry occupations	3.7	1.4
Construction, extraction, and maintenance occupations	N/A	10.5
Production, transportation, and material moving occupations	N/A	9.9
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	3.0	0.9
Mining (includes the offshore oil/gas industry workforce)	1.7	1.0
Manufacturing	18.0	15.5
Percent government workers	7.0	8.8
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	30.4
Percent worked outside of county of residence	52.9	60.7

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Kemah in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	1
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	4
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	1
Fishing pier	5
Hotels/Inns (dockside)	5
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	1
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	3
Recreational docks/marinas	1
Bait & Tackle/fishing supplies	1
Recreational Fishing Tournaments	1
Sea Grant Extension office	0
Seafood restaurants	14
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	25
Charter/Head Boats	6
Commercial Boats	10

Table 3. Primary Fishing-related Businesses Listed for Kemah in 2003

Type of Business	Frequency
Boat Builder/Broker	27
Boat Rentals & Pier	5
Marina	11
Processor	1
Wholesale Seafood Dealer	1
Total	45

Table 4. Kemah Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	1,861,321	3,752,503

Table 5. Kemah License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
18	4	395
Total = 22		
% Households Holding Commercial Permit or License: 22/892 = 2.5		Average Number of Licenses per Household: 395/892 = 0.4

Please reference Table 3.5-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

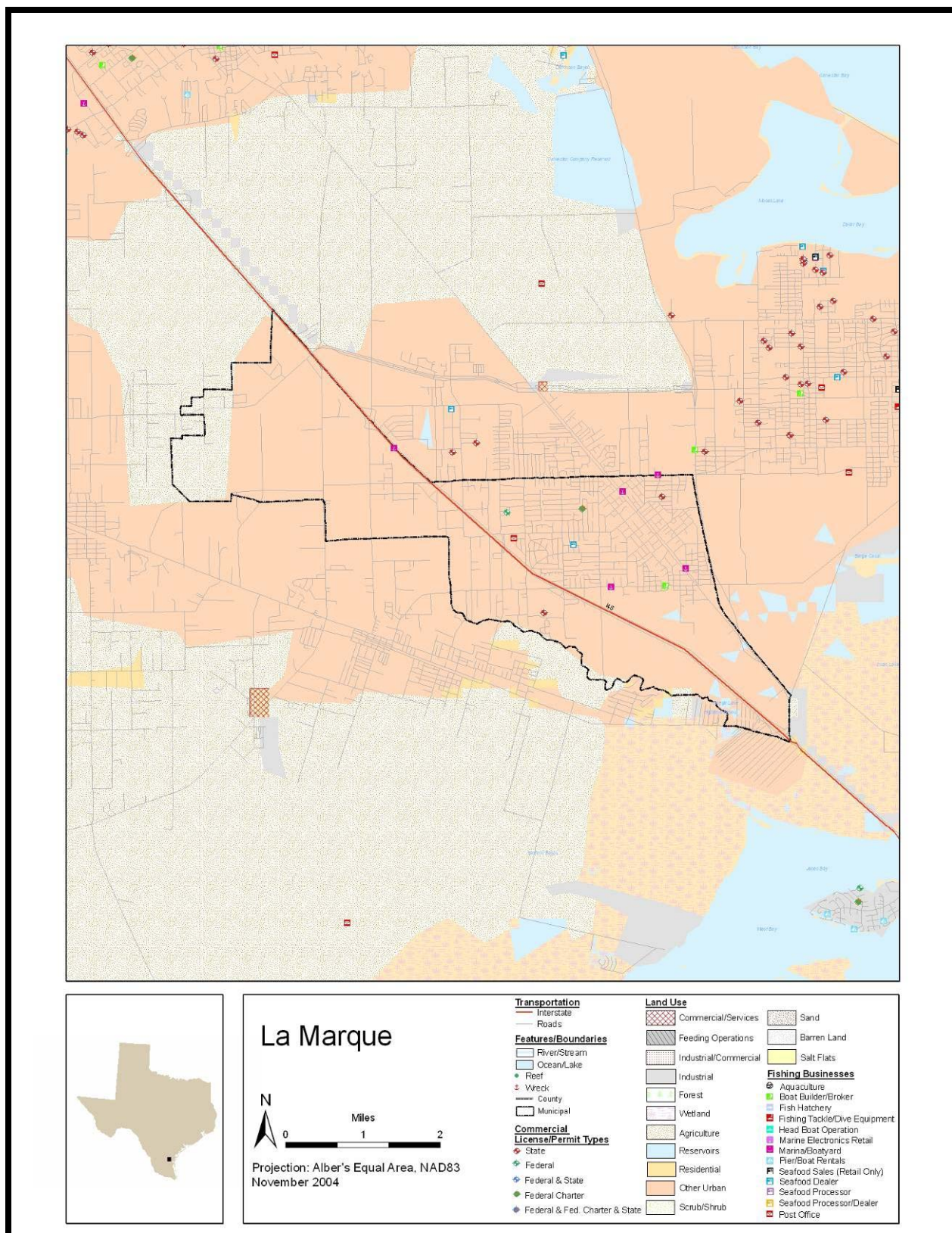
3.5.7 La Marque (incorporated, pop. 13,682)

Location and Overview. La Marque is located in northwestern Galveston County along Interstate Highway 45, State Highway 3, and Farm Roads 519, 1765, and 2004. Downtown Houston is approximately 40 miles northwest. The town was once known as “Highland” and “Buttermilk Station.” Originally a farming community, contemporary La Marque is now primarily residential in nature, with many residents employed at the Union Carbide plant in neighboring Texas City (Kleiner 2002). The town is some 12 miles west of the Gulf of Mexico. The Gulf is accessible through Galveston Bay, which is only five miles east of La Marque.

History. La Marque’s earliest known Anglo settler arrived around 1867, raising and trading cattle and rice. During the Civil War, soldiers referred to the town as Buttermilk Station, indicative of the pastoral nature of the area at that time. By 1914, four railroads served the area and there were various forms of commerce here. As noted above, La Marque has increasingly served as a place of residence for factory workers commuting to nearby Texas City (Kleiner 2002).

Current Conditions and Trends. The year 2000 census enumerated 13,682 persons in La Marque, a decrease of 3.1 percent from 1990. Over half of the working residents of La Marque claim management, professional, and sales as their primary occupation. Nearly a quarter worked outside of the county, primarily in the Houston metropolitan area. The average commute time of nearly 25 minutes.

There are relatively few fishing-related businesses located in La Marque, although there is a boat brokerage based here, and recreational anglers can enjoy a local public boat ramp and several marinas. According to one informant, most residents travel to nearby Texas City for fishing-related supplies and services. A handful of commercial fishery participants were living here in 2000, but again, it is difficult to attribute landings to this fleet as numerous commercial participants also reside in nearby Texas City and distribute their products to dealers in La Marque.



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. La Marque Demographics

Factor	1990	2000
Total population	14,120	13,682
Gender Ratio M/F (Number)	6,784/7,336	6,497/7,185
Age (Percent of total population)		
Under 18 years of age	27.7	25.7
18 to 64 years of age	58.4	58.7
65 years and over	13.9	15.6
Ethnicity or Race (Number)		
White	9,069	7,640
Black or African American	4,404	4,746
American Indian and Alaskan Native	42	63
Asian	83	64
Native Hawaiian and other Pacific Islander	N/A	4
Some other race	522	849
Two or more races	N/A	316
Hispanic or Latino (any race)	1,438	2,111
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	9.8	6.4
Percent high school graduate or higher	73.0	79.3
Percent with a Bachelor's degree or higher	12.2	13.2
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	9.6	11.2
And Percent who speak English less than very well	4.3	3.8
Household income (Median \$)	27,914	34,841
Poverty Status (Percent of population with income below poverty line)	15.5	17.5
Percent female headed household	19.1	17.2
Home Ownership (Number)		
Owner occupied	3,853	3,830
Renter occupied	1,426	1,407
Value Owner-occupied Housing (Median \$)	47,300	59,500
Monthly Contract Rent (Median \$)	310	552
Employment Status (Population 16 yrs and over)		
Percent in the labor force	62.1	62.2
Percent of civilian labor force unemployed	9.8	10.1
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	24.7
Service occupations	N/A	19.0
Sales and office occupations	N/A	26.4
Farming, fishing, and forestry occupations	0.9	0.3
Construction, extraction, and maintenance occupations	N/A	12.8
Production, transportation, and material moving occupations	N/A	16.8
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	0.9	0.2
Mining (includes the offshore oil/gas industry workforce)	1.3	0.6
Manufacturing	16.6	11.0
Percent government workers	22.0	20.7
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	24.4
Percent worked outside of county of residence	16.9	24.6

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in La Marque in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	0
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	several
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	1
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	0
Recreational Fishing Tournaments	1
Sea Grant Extension office	0
Seafood restaurants	3
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for La Marque in 2003

Type of Business	Frequency
Boat Builder/Broker	1
Boat Builder/Broker; Marina	1
Marina	3
Total	5

Table 4. La Marque Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	269,496	431,632

Table 5. La Marque License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
3	0	767
Total = 3		
% Households Holding Comm. Permit or License: 3/5,237 = .05		Average Number of Licenses per Household: 767/5,237 = 0.15

Please reference Table 3.5-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.



Highland Bayou in La Marque

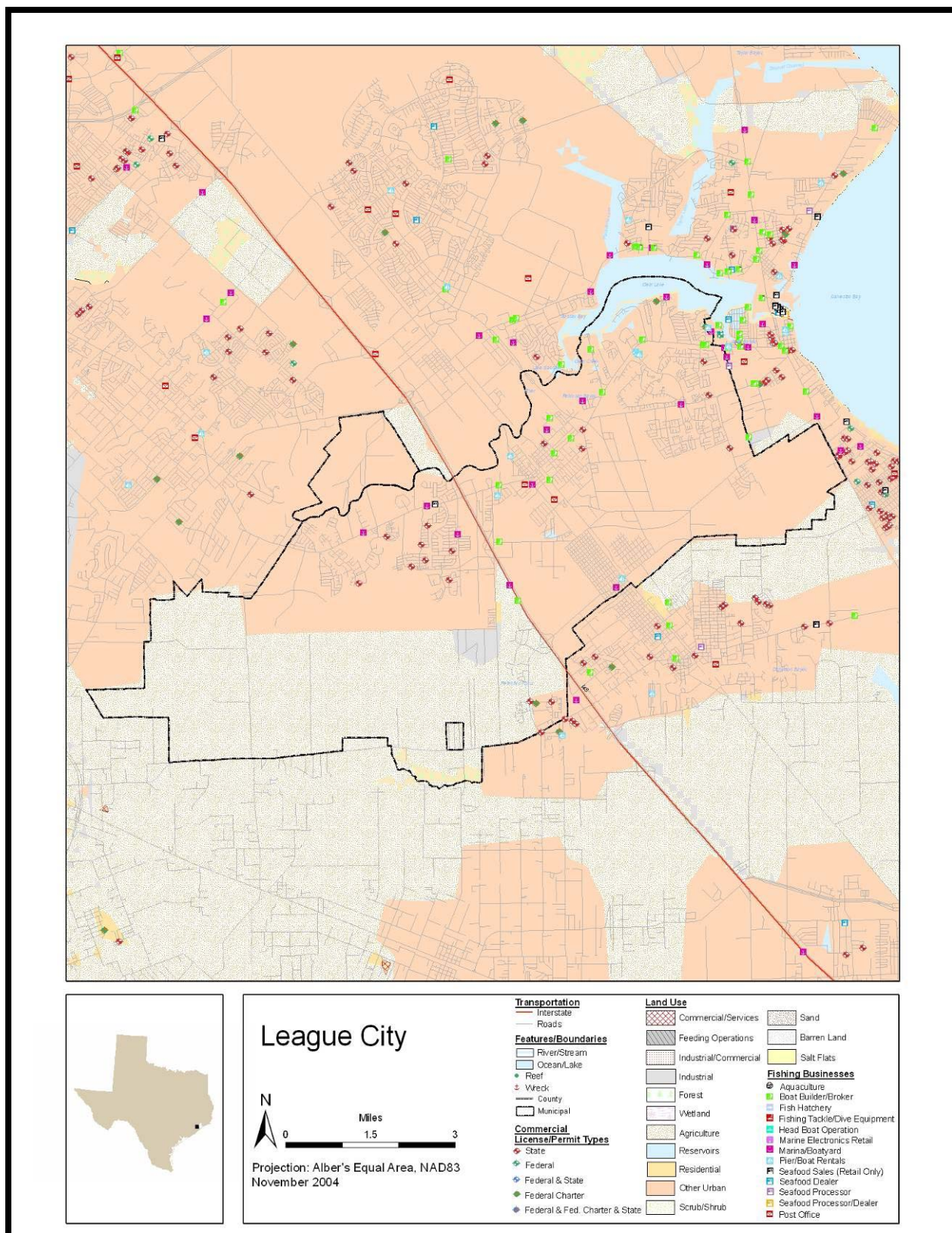
3.5.8 League City (incorporated, pop. 45,444)

Location and Overview. Situated midway between Houston and Galveston Island, League City sits on the southern shore of Clear Lake in Galveston County. League City is located approximately 25 miles from both Houston (to the northwest) and Galveston (to the southeast). The high-tech aerospace and petrochemical industries are League City's major employment sectors (League City 2001). The Gulf of Mexico is some 25 miles southeast of the city. Direct access to the Gulf is via Galveston Bay, which is approximately 12 miles east.

History. Karankawa tribes were the first known inhabitants in the region. Anglo settlers arrived in 1873. Cattle raising and farming were important early enterprises. Following World War II, the town became a service center for railroad shops and home to a Humble Oil tank farm (Kleiner 2002).

Current Conditions and Trends. The year 2000 census enumerated 45,444 residents, a 51 percent increase over 1990. Given its proximity to both Houston and Galveston, nearly 66 percent of League City's working residents travel outside the community for employment. The average commute time is 28 minutes. Management, professional and related occupations accounted for nearly half of all occupations among residents here.

League City has a large recreational fishing contingent, but relatively little involvement in commercial fishing or associated industries (with the exception of boatbuilding). There are three fishing piers in the community, one dockside inn, three recreational docks and marinas, and many public boat ramps. Residents maintain social and economic relationships with anglers and fishing-related businesses in Seabrook and Kemah. As of 2003, there were three resident Gulf shrimp permit holders residing here.



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. League City Demographics

Factor	1990	2000
Total population	30,159	45,444
Gender Ratio M/F (Number)	15,111/15,048	22,610/22,834
Age (Percent of total population)		
Under 18 years of age	30.2	29.4
18 to 64 years of age	65.2	64.7
65 years and over	4.6	5.9
Ethnicity or Race (Number)		
White	26,575	38,170
Black or African American	1,547	2,311
American Indian and Alaskan Native	103	168
Asian	699	1,439
Native Hawaiian and other Pacific Islander	N/A	24
Some other race	1,235	2,404
Two or more races	N/A	928
Hispanic or Latino (any race)	3,540	6,130
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	3.6	3.3
Percent high school graduate or higher	89.2	90.9
Percent with a Bachelor's degree or higher	32.3	35.5
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	13.0	15.7
And Percent who speak English less than very well	4.6	6.1
Household income (Median \$)	45,043	67,838
Poverty Status (Percent of population with income below poverty line)	4.9	4.8
Percent female headed household	10.0	8.2
Home Ownership (Number)		
Owner occupied	7,512	12,466
Renter occupied	3,074	3,723
Value Owner-occupied Housing (Median \$)	69,100	112,000
Monthly Contract Rent (Median \$)	457	768
Employment Status (Population 16 yrs and over)		
Percent in the labor force	76.4	73.5
Percent of civilian labor force unemployed	3.1	4.0
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	47.9
Service occupations	N/A	10.0
Sales and office occupations	N/A	24.0
Farming, fishing, and forestry occupations	0.9	0.3
Construction, extraction, and maintenance occupations	N/A	8.2
Production, transportation, and material moving occupations	N/A	9.6
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	0.6	0.4
Mining (includes the offshore oil/gas industry workforce)	1.8	1.4
Manufacturing	21.9	17.4
Percent government workers	16.7	17.8
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	28.7
Percent worked outside of county of residence	65.9	65.6

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in League City in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	0
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	3
Hotels/Inns (dockside)	1
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	many
Recreational docks/marinas	3
Bait & Tackle/fishing supplies	6
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	50
Seafood retail markets	2
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	1
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for League City in 2003

Type of Business	Frequency
Boat Builder/Broker	13
Boat Rentals & Pier	6
Marina	9
Retail Seafood Dealer	1
Total	29

Table 4. League City Commercial Landings and Value Summary: 2002

Landings data cannot be attributed to commercial participants based in League City.

Table 5. League City License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
17	0	2,371
Total = 17		
% Households Holding Commercial Permit or License: 17/16,189 = 0.1		Average Number of Licenses per Household: 2,371/16,189 = 0.1

Please reference Table 3.5-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.5.9 Port Bolivar (unincorporated, pop. 715)

Location and Overview. Port Bolivar is located on the westernmost tip of the Bolivar Peninsula in Galveston County. It is a short ferry ride away from Galveston, where motorists can then drive across the causeway to the mainland at Virginia Point. The Gulf of Mexico forms Port Bolivar's eastern perimeter, while Galveston Bay form its western border.

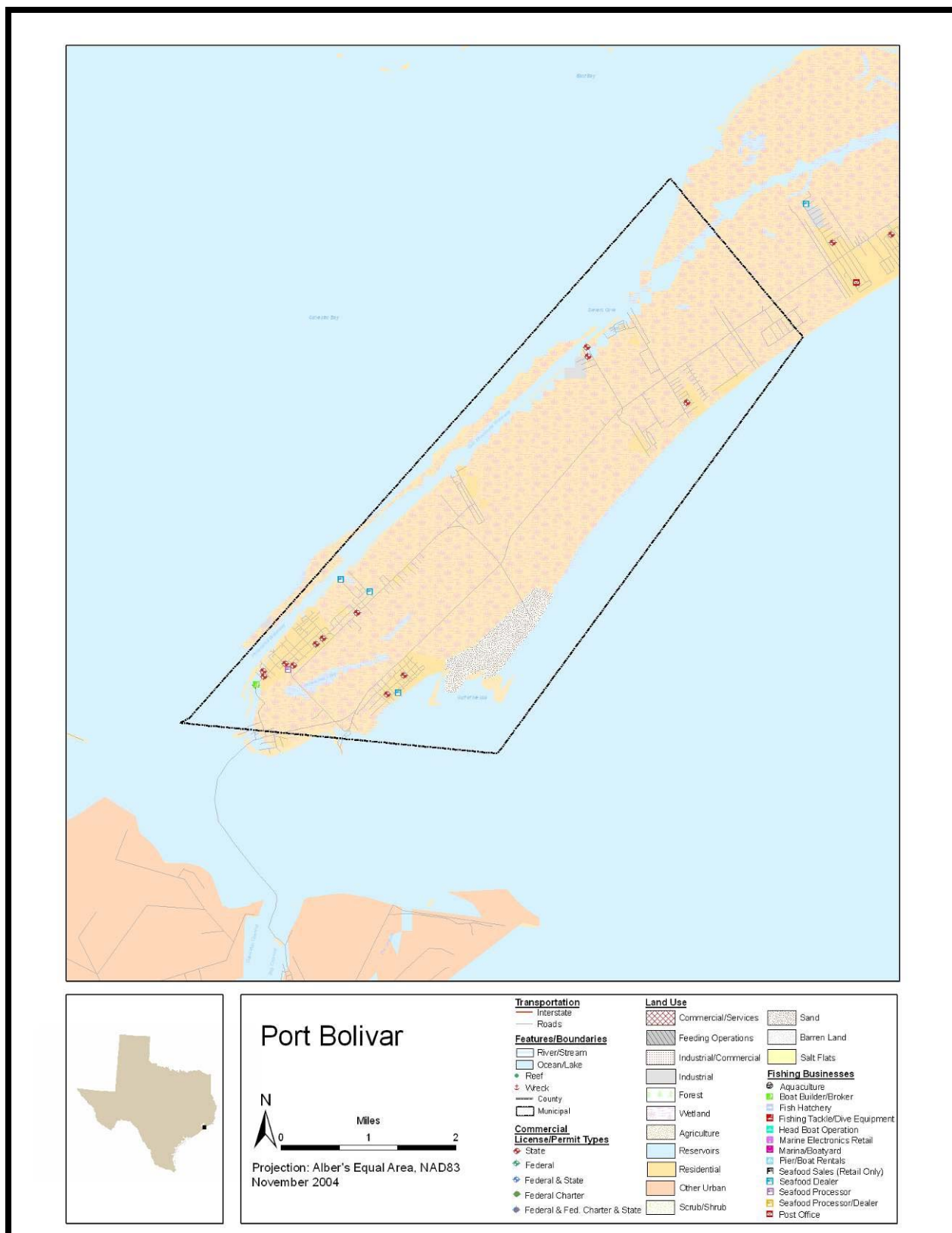
History. Anglo settlers arrived here in 1819. Port Bolivar was one of the first ports established in Texas. It also served as point of commerce for rail freight in the late 1800s. The fishing and seafood, lumber, and cattle industries also contributed significantly to Port Bolivar's early economy (Daniels 2002).

Current Conditions and Trends. The year 2000 census enumerated 715 persons in Port Bolivar, an increase of nearly ten percent from the 1990 census. Of the 54 percent of residents employed in 2000, production, transportation, and material moving comprised the lead employment sector. Given its size and lack of amenities, residents of Port Bolivar typically travel to nearby Galveston or Texas City to work and to acquire various goods and services. Some 21 percent of Port Bolivar's working population commuted outside the county for employment.

According to one informant, recreational fishing is increasingly important in the area. But scores of commercial fishing vessels are moored here, as captains and crew from around the region take advantage of close proximity to the bays and Gulf. Commercial shrimpers and other commercial participants offload at a local dealer, and in Galveston and the communities of Crystal Beach, Port Bolivar, Gilcrest, and High Island. A relatively small contingent of commercial operators actually resides here.



Port Bolivar Lighthouse



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Port Bolivar Demographics

Factor	1990	2000
Total population	651	715
Gender Ratio M/F (Number)	307/344	380/335
Age (Percent of total population)		
Under 18 years of age	25.3	24.7
18 to 64 years of age	60.0	59.5
65 years and over	14.7	15.8
Ethnicity or Race (Number)		
White	612	610
Black or African American	2	9
American Indian and Alaskan Native	0	4
Asian	0	2
Native Hawaiian and other Pacific Islander	N/A	0
Some other race	37	67
Two or more races	N/A	23
Hispanic or Latino (any race)	70	145
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	21.6	6.8
Percent high school graduate or higher	57.2	61.7
Percent with a Bachelor's degree or higher	7.3	4.1
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	10.2	6.9
And Percent who speak English less than very well	5.9	3.4
Household income (Median \$)	11,406	38,631
Poverty Status (Percent of population with income below poverty line)	47.1	11.6
Percent female headed household	9.9	8.9
Home Ownership (Number)		
Owner occupied	228	229
Renter occupied	35	64
Value Owner-occupied Housing (Median \$)	38,600	48,700
Monthly Contract Rent (Median \$)	206	353
Employment Status (Population 16 yrs and over)		
Percent in the labor force	45.8	53.5
Percent of civilian labor force unemployed	0.0	0.0
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	19.6
Service occupations	N/A	1.7
Sales and office occupations	N/A	22.7
Farming, fishing, and forestry occupations	17.7	1.7
Construction, extraction, and maintenance occupations	N/A	22.3
Production, transportation, and material moving occupations	N/A	31.9
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	6.2	4.1
Mining (includes the offshore oil/gas industry workforce)	4.8	3.4
Manufacturing	4.3	13.0
Percent government workers	11.9	17.2
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	N/A
Percent worked outside of county of residence	4.8	21.0

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Port Bolivar in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	1
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	2
Fishing associations (recreational/commercial)	1
Fish processors, Wholesale fish house	3
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	2
Hotels/Inns (dockside)	4
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	1
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	2
Recreational docks/marinas	1
Bait & Tackle/fishing supplies	6-8
Recreational Fishing Tournaments	4
Sea Grant Extension office	0
Seafood restaurants	4
Seafood retail markets	4
Trucking operations	0
Site-seeing/pleasure tours	1
Charter/Head Boats	2
Commercial Boats	100+

Table 3. Primary Fishing-related Businesses Listed for Port Bolivar in 2003

Type of Business	Frequency
Boat Builder/Broker	1
Wholesale Seafood Dealer	1
Total	2

Table 4. Port Bolivar Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	4,025,006	11,225,877

Table 5. Port Bolivar License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
13	0	129
Total = 13		
% Households Holding Commercial Permit or License: 13/293 = 4.4		Average Number of Licenses per Household: 129/293 = .44

Please reference Table 3.5-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.5.10 San Leon (incorporated, pop. 4,365)

Location and Overview. San Leon is located on the west banks of Galveston, Trinity, and Dickinson Bays in northeastern Galveston County. The town is nearly 40 miles southeast of Houston, ten miles north of Texas City, and about 20 miles northwest of Galveston. Although the nearby waters of the bay system are relatively productive for a variety of species, fishery participants can also access the Gulf of Mexico, some 13 miles to the southeast, via Galveston Bay.

San Leon is located on a 5,000 acre peninsula in a scenic area that draws many tourists. The area is a popular recreational fishing destination and a productive commercial fleet is also based here. Local catch includes redfish, speckled trout, and flounder (Campbell 2002). Oysters and shrimp are often harvested near the Houston Ship Channel. Both forms of industry contribute to the local economy (Gard 2002).

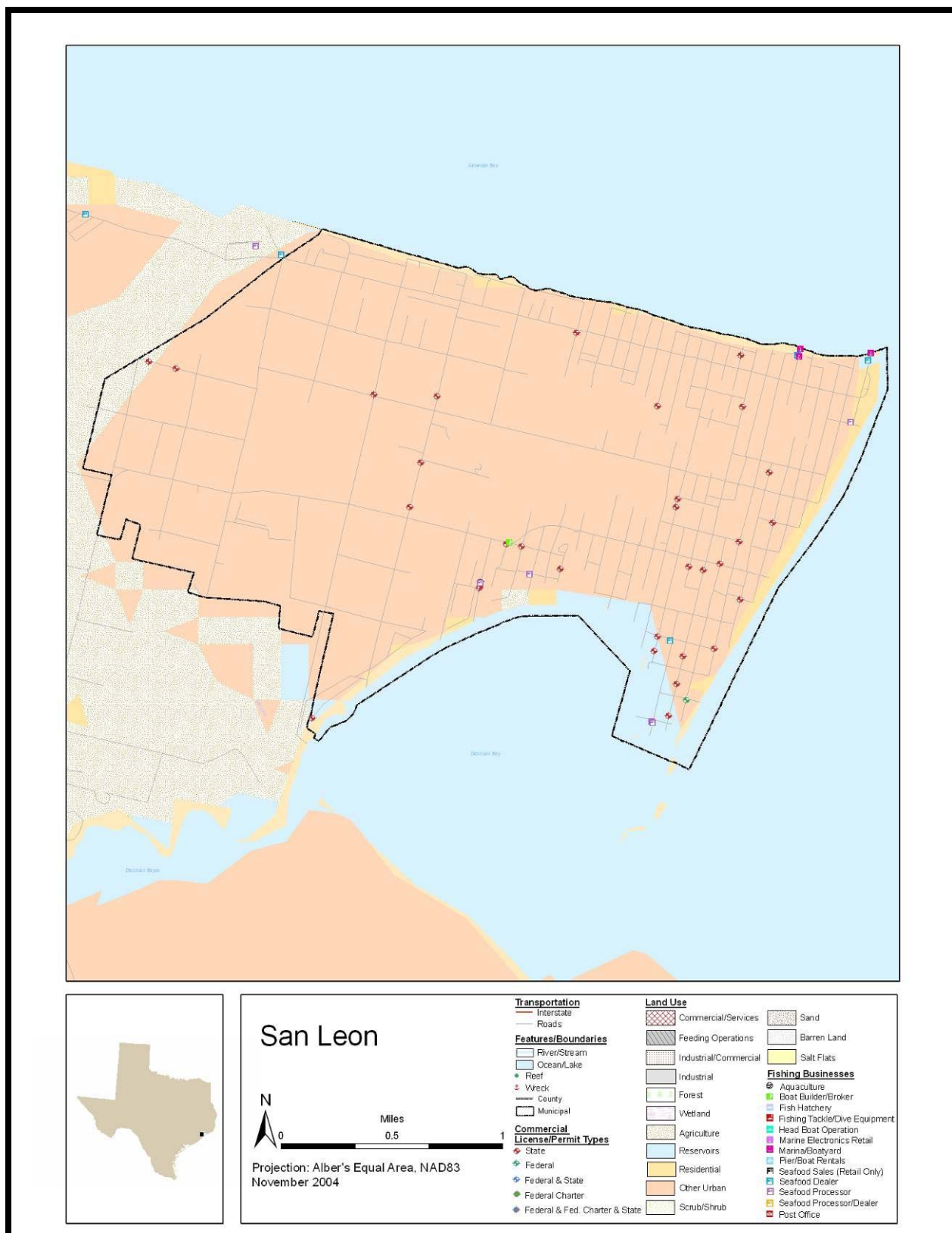
History. The North Galveston, Houston and Kansas City Railroads were a boon to development in the early years of settlement in this area (Campbell 2000). San Leon has been a tourist destination since the early 1900s (Gard 2002) and remains so today.

Current Conditions and Trends. The year 2000 census enumerated 4,365 persons in San Leon, an increase of 31 percent from 1990. Residents are employed in a variety of occupations, with nearly half of the workforce commuting outside the county for employment. The average commute time was over 30 minutes. Commercial fishing and associated businesses employ numerous residents, as do businesses associated with recreational angling.

There are several recreational docks, marinas, and fishing piers located here. Some 40 commercial fishing vessels are moored in the area. Many residents of San Leon are connected in social and economic terms to persons and businesses in Texas City.



Aerial View of San Leon Area (photo courtesy of www.texmaps.com)



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. San Leon Demographics

Factor	1990	2000
Total population	3,328	4,365
Gender Ratio M/F (Number)	1,766/1,562	2,290/2,075
Age (Percent of total population)		
Under 18 years of age	25.0	23.0
18 to 64 years of age	63.6	66.7
65 years and over	11.4	10.3
Ethnicity or Race (Number)		
White	2,927	3,510
Black or African American	5	35
American Indian and Alaskan Native	16	36
Asian	329	332
Native Hawaiian and other Pacific Islander	N/A	5
Some other race	51	361
Two or more races	N/A	86
Hispanic or Latino (any race)	133	627
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	7.8	7.8
Percent high school graduate or higher	71.8	76.0
Percent with a Bachelor's degree or higher	9.8	11.9
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	16.6	22.4
And Percent who speak English less than very well	6.6	11.6
Household income (Median \$)	24,904	31,687
Poverty Status (Percent of population with income below poverty line)	18.2	19.7
Percent female headed household	10.9	7.3
Home Ownership (Number)		
Owner occupied	1,017	1,324
Renter occupied	301	491
Value Owner-occupied Housing (Median \$)	50,800	71,400
Monthly Contract Rent (Median \$)	286	546
Employment Status (Population 16 yrs and over)		
Percent in the labor force	62.3	62.5
Percent of civilian labor force unemployed	4.1	11.4
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	28.3
Service occupations	N/A	14.4
Sales and office occupations	N/A	24.2
Farming, fishing, and forestry occupations	2.9	3.7
Construction, extraction, and maintenance occupations	N/A	15.6
Production, transportation, and material moving occupations	N/A	13.7
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	5.1	3.2
Mining (includes the offshore oil/gas industry workforce)	2.6	1.2
Manufacturing	13.5	12.2
Percent government workers	9.7	10.8
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	30.8
Percent worked outside of county of residence	51.3	46.4

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in San Leon in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	3
Churches with maritime theme	0
Docking facilities (commercial)	3
Fishing Gear, Electronics, Welding, and other repair	6
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	2-3
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	6-7
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	4
Recreational docks/marinas	6
Bait & Tackle/fishing supplies	6
Recreational Fishing Tournaments	1
Sea Grant Extension office	0
Seafood restaurants	6
Seafood retail markets	2
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	35-40

Table 3. Primary Fishing-related Businesses Listed for San Leon in 2003

Type of Business	Frequency
Boat Builder/Broker	1
Marina	2
Processor	1
Total	4

Table 4. San Leon Commercial Landings and Value Summary: 2002

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	5,579,065	10,120,558

Table 5. San Leon License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
32	0	387
Total = 32		
% Households Holding Commercial Permit or License: 32/1,815 = 1.8		Average Number of Licenses per Household: 387/1,815 = 0.2

Please reference Table 3.5-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.



Rural Galveston County Neighborhood

3.5.11 Texas City (incorporated, pop. 41,521)

Location and Overview. Texas City is located along the upper Texas Gulf Coast on the southwestern shore of Galveston Bay. Only eleven miles from the Gulf of Mexico, Texas City is home of the eleventh largest deepwater seaport in the nation. The retail trades contribute significantly to the local economy, with annual sales approaching approximately \$350,000,000 (Lamar 2002). Tin smelting, oil refineries, metal fabrication, and chemical plants are also economic mainstays (Texas Online 1998). Ten major petrochemical plants are located in the area (Benham 2002).

History. Anglo settlers began arriving in what was formerly called Shoal Point in the mid-1800s. These residents harvested fish and shrimp and raised cattle and various crops. As for the majority of coastal communities in the region, Texas City was also devastated by the Galveston Hurricane of 1900. The port and channel were eventually deepened and widened in an attempt to attract more commercial shipping to the area. By 1908, the Texas City Refining Company - the first of many oil and chemical industries that would define the city's future economy - had been established in the area. Texas City incorporated in 1911 (Lamar 2003).

Texas City flourished after the big hurricane of 1900s, and gambling halls and bars sprang up along the main streets of the city. However, the hurricane of 1915 led to another cycle of decline that lasted well into the 1930s (Lamar 2003).

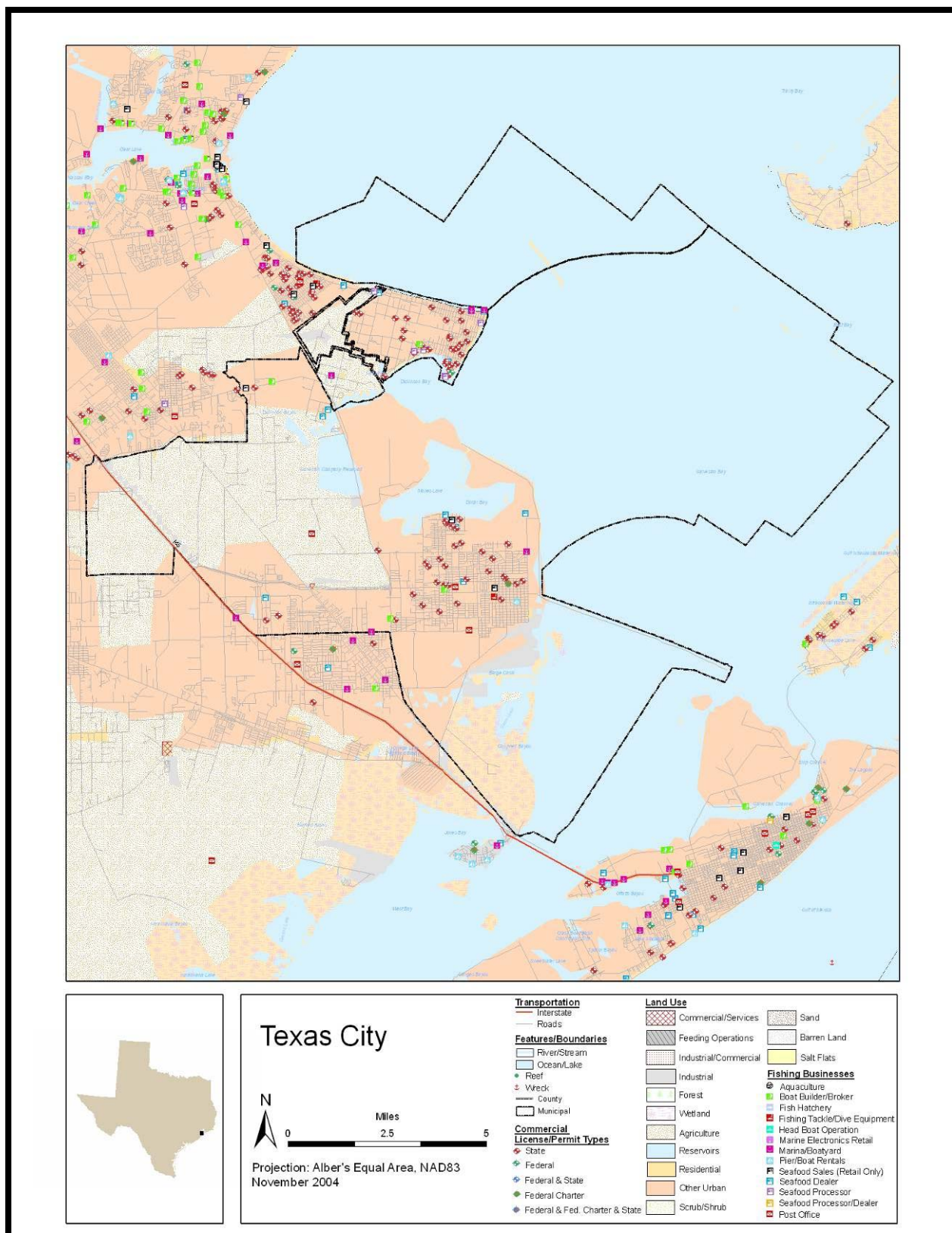
Lured by an abundance of cheap land and ease of shipping, oil industry representatives ushered in an era of renewed prosperity in the 1930s. Republic Oil (later Marathon) and Pan American Refinery (later Amoco) both established refineries here. Pan American provided the community with 1,400 new jobs. Union Carbide and Monsanto established plants here in the early 1940s, with Monsanto providing 3,000 new jobs. Both the petrochemical industry and the city continued to grow during the 1950s and 1960s. Despite setbacks suffered during the late 1970s, the oil industry (Amoco, in particular) once again expanded during the 1980s (Lamar 2003). Refinery activities led to various environmental problems in the area.

Current Conditions and Trends. The year 2000 population of Texas City was 41,521 persons, up from 40,822 in 1990. Twenty percent of the workforce commutes to jobs out of the county, primarily in the Greater Houston area. Petrochemical facilities continue to provide jobs for many residents in the area.

A productive fleet of commercial fishing vessels is moored in the Texas City area. Shellfish are harvested extensively by participants from around the area, and given linkages with the adjacent towns and cities, it can be difficult to distinguish local catch from that of other fleets in the region. But it is clear that the local fleet is quite active, and between 50 and 75 commercial vessels may be observed here at any given time. Two commercial docks and three marinas are located here. Further, several retail seafood markets and seafood restaurants are based in Texas City, as well as a fish processing facility and wholesale fish house.



Texas City Refinery at Night



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Texas City Demographics

Factor	1990	2000
Total population	40,822	41,521
Gender Ratio M/F (Number)	19,820/21,002	19,601/21,920
Age (Percent of total population)		
Under 18 years of age	28.4	26.7
18 to 64 years of age	60.3	59.9
65 years and over	11.3	13.4
Ethnicity or Race (Number)		
White	27,391	25,224
Black or African American	10,262	11,407
American Indian and Alaskan Native	165	207
Asian	468	365
Native Hawaiian and other Pacific Islander	N/A	20
Some other race	2,536	3,417
Two or more races	N/A	881
Hispanic or Latino (any race)	6,508	8,520
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	11.4	8.4
Percent high school graduate or higher	71.4	76.6
Percent with a Bachelor's degree or higher	9.9	11.5
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	13.0	15.4
And Percent who speak English less than very well	3.8	6.3
Household income (Median \$)	26,144	35,963
Poverty Status (Percent of population with income below poverty line)	16.7	14.9
Percent female headed household	20.1	17.3
Home Ownership (Number)		
Owner occupied	9,351	9,803
Renter occupied	5,759	5,676
Value Owner-occupied Housing (Median \$)	50,300	63,800
Monthly Contract Rent (Median \$)	296	533
Employment Status (Population 16 yrs and over)		
Percent in the labor force	63.1	59.2
Percent of civilian labor force unemployed	8.2	7.7
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	26.5
Service occupations	N/A	16.8
Sales and office occupations	N/A	27.9
Farming, fishing, and forestry occupations	0.9	0.2
Construction, extraction, and maintenance occupations	N/A	13.4
Production, transportation, and material moving occupations	N/A	15.2
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	1.0	0.4
Mining (includes the offshore oil/gas industry workforce)	1.3	0.6
Manufacturing	20.7	14.8
Percent government workers	17.9	20.5
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	22.7
Percent worked outside of county of residence	14.2	21.8

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Texas City in 2003

Infrastructure or Service	Quantity
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	0
Docking facilities (commercial)	2
Fishing Gear, Electronics, Welding, and other repair	2
Fishing associations (recreational/commercial)	1
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	1
Fishing pier	1
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	1
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	2-3
Recreational Fishing Tournaments	1
Sea Grant Extension office	0
Seafood restaurants	2
Seafood retail markets	5
Trucking operations	1
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	60

Table 3. Primary Fishing-related Businesses Listed for Texas City in 2003

Type of Business	Frequency
Boat Builder/Broker	2
Boat Builder/Broker; Diving & Fishing Equipment	1
Boat Rentals & Pier	1
Marina	3
Retail Seafood Dealer	2
Wholesale Seafood Dealer	1
Total	10

Table 4. Texas City Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	897,889	1,697,162

Table 5. Texas City License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
48	1	2,093
Total = 49		
% Households Holding Commercial Permit or License: 49/15,479 = 0.3		Average Number of Licenses per Household: 2,093/15,479 = 0.1

Please reference Table 3.5-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.6 Harris County Communities

This section describes the study communities in Harris County. These are Baytown, Channelview, Highlands, Houston, Pasadena, and Seabrook.

Harris County is bordered by Liberty County to the northeast, Montgomery County to the north, Waller County to the west, Fort Bend County to the southeast, Brazoria County to the south, Galveston County to the southeast, and Chambers County to the east. Harris County is the largest county in the state, with a year 2000 population of 3.4 million residents. Houston, the county seat, was the fourth largest city in the U.S. in 2000, with 2,012,626 residents.

Most of the 1,778 square miles that comprise Harris County are within the Greater Houston Metropolitan area. Indeed, only with 27 percent of the land mass is outside city limits. Elevations range between sea level and 300 feet (Ramos et al. 2001:193).

Harris County has a highly diversified economy. Extensive petrochemical manufacturing, corporate financing, and publishing firms are major employers. The county leads the nation in production of petroleum manufacturing equipment, agriculture chemicals, fertilizers, and pesticides. Its economy and nearly all of its industries are heavily dependent on oil and gas extraction and processing activities (Ramos et al 2001:193).

The county was formed in 1836, and Houston was named the capital of the Republic of Texas at that time. Development occurred primarily along the region's watercourses, and industry developed in earnest in 1911 upon completion of the Harris County Ship Channel Navigation District. Over time, bonds were issued to finance deepening and widening of the channel to facilitate entry of oceangoing ships. Petroleum refining facilities were developed along Buffalo Bayou and the San Jacinto River during the 1920s. Associated employment opportunities preceded dramatic population growth in the area (Henson 2002).

The racial composition of Harris County as of the year 2000 Census was 43 percent Caucasian, 33 percent Hispanic, and 19 percent African-American. The median family income of \$49,044 was significantly higher than the statewide median of \$39,927. Some 12 percent of residents were living in poverty, and single females headed almost 14 percent of families with children.



Houston Ship Channel Mosaic, 2004 (courtesy of www.serf.tamus.edu)

Table 3.6-1 Earnings in Harris County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share of 2000 Earnings	\$ Change 1990-2000	% Share of Change 1990-2000
	1990	2000			
Earnings	71,952,448	123,923,291	100.0	51,970,843	100.0
Farm earnings	22,281	25,134	0	2,853	0
Ag. services, forestry, fish.	232,619	435,166	0.3	202,547	3.9
Fishing	5,366	4,214	0	-1,152	0
Mining	6,373,336	12,768,847	10.3	6,395,511	12.3
Oil and gas extraction	6,307,038	12,635,900	10.2	6,328,862	12.2
Construction	5,809,187	8,858,091	7.1	3,048,904	5.9
Special trade contractors	2,480,624	4,647,734	3.7	2,167,110	4.2
Manufacturing	8,810,010	14,502,022	11.7	5,692,012	10.9
Fabricated metal products	1,004,118	1,601,601	1.3	597,483	1.1
Industrial mach. & equip.	1,967,062	3,345,851	2.7	1,378,789	2.6
Food and kindred	510,811	573,336	0.4	62,525	0.1
Chemicals and allied	2,266,678	4,207,111	3.4	1,940,433	3.7
Petroleum and coal	722,952	919,340	0.7	196,388	0.4
Transport.,Public Utilities	6,347,495	15,060,272	12.1	8,712,777	16.8
Trucking and warehousing	850,567	1,258,625	1.0	408,058	0.8
Water transportation	421,815	691,453	0.5	269,638	0.5
Transportation by air	884,584	1,919,974	1.5	1,035,390	2.0
Wholesale trade	6,040,197	8,759,093	7.1	2,718,896	5.2
Retail trade	5,513,968	8,241,837	6.6	2,727,869	5.2
Eating and drinking places	1,283,496	2,132,049	1.7	848,553	1.6
Finance, insur., real estate	4,793,801	11,172,961	9.0	6,379,160	12.3
Services	20,754,400	34,010,371	27.4	13,255,971	25.5
Business services	4,339,920	8,906,756	7.2	4,566,836	8.8
Health services	5,288,506	7,146,533	5.8	1,858,027	3.6
Legal services	2,803,887	3,878,156	3.1	1,074,269	2.1
Engineer./Management serv.	3,875,289	6,992,700	5.6	3,117,411	6.0
Government	7,255,157	10,114,631	8.1	2,889,474	5.6

Source: Bureau of Economic Analysis, Regional Economic Information System

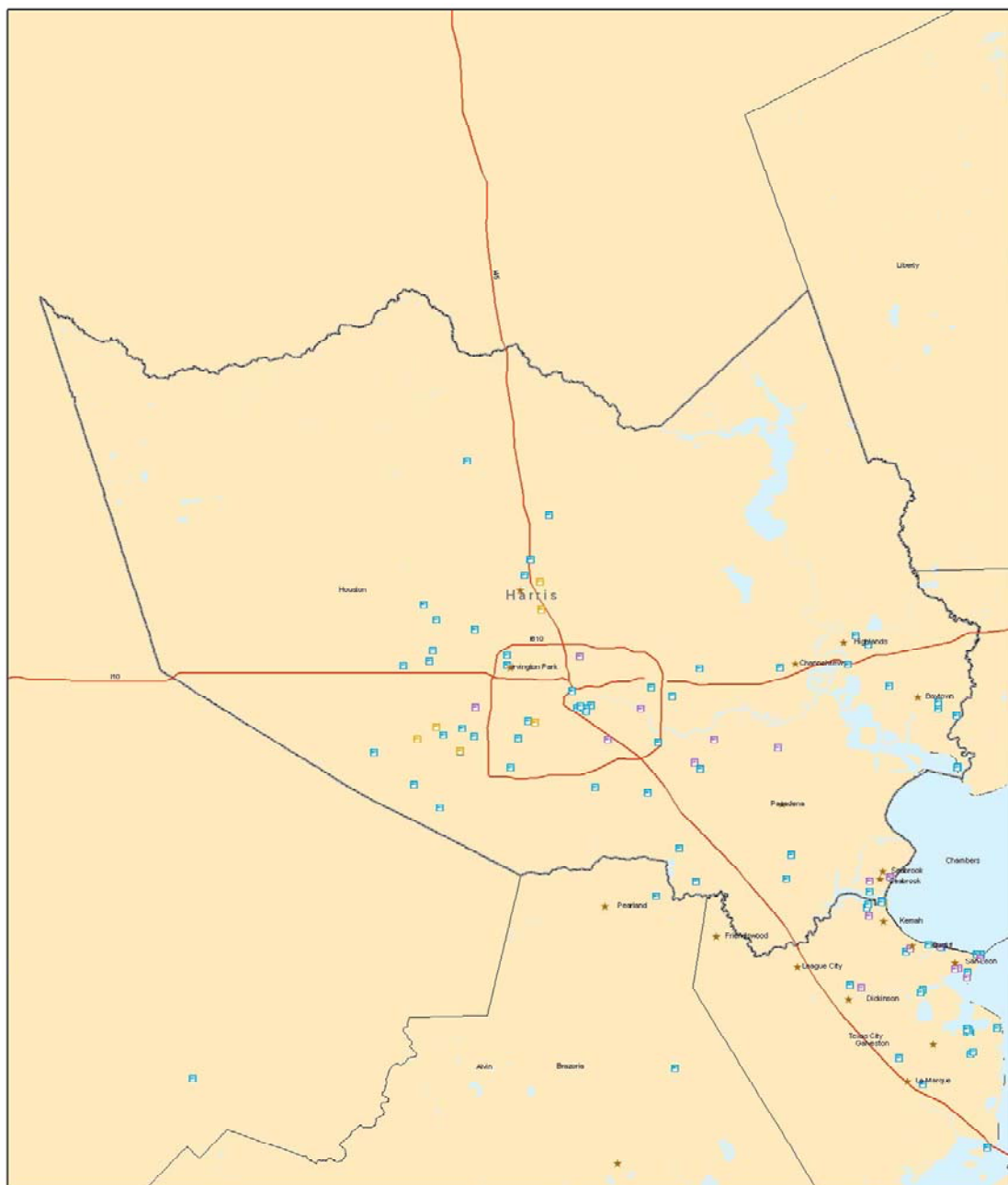
Table 3.6-2 Year 2000 Commercial Permits and Licenses, and 2003 Gulf Shrimp Permits: Harris County*

Permit Type	Study Communities					
	Baytown	Channelview	Highlands	Houston	Pasadena	Seabrook
Pelagic Charter	1	--	--	41	3	3
Reef Fish Charter	1	--	--	39	3	3
Swordfish	--	1	--	5	--	2
King Mackerel	--	1	--	6	--	3
Rock Shrimp	--	--	--	--	--	--
Red Snapper	--	1	--	6	--	2
Spiny Lobster	--	--	--	--	--	--
Spanish Mackerel	--	1	--	3	--	--
Gulf Reef Fish	--	1	--	8	--	3
Shark	--	1	--	5	--	4
South Atlantic Snapper Grouper	--	--	--	2	--	2
Total Federal Permits 2000	2	6	--	115	6	22
Total Federal Permit Holders 2000	1	1	--	51	3	8
Total State License Holders 2000	28	6	3	159	8	17
Gulf Shrimp Permits 2003 **	1	1	--	8	2	2

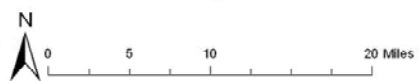
* Includes all permits and licenses that can be attributed to the communities by *both* street and post office box addresses; these data are used to generate counts of permit and license holders for whom evidence indicates actual residence, as provided in the community descriptions. ** 2003 is the first year for which Gulf shrimp permit data are available.



Downtown Houston Skyline



Harris County



Legend

- | | |
|--------------------------------|----------------|
| ★ Study Community | ● Reef |
| ■ Processor | ± Wreck |
| ■ Processor and Seafood Dealer | ▲ Platform |
| ■ Seafood Dealer | — County Lines |
| | — Interstate |

3.6.1 Baytown (incorporated, pop. 66,430)

Location and Overview. Baytown is located fifteen miles east of downtown Houston on State Highways 201 and 146 in southeastern Harris County. The Fred Hartman Bridge spans the Houston Ship Channel to link Baytown with La Port and Houston. Baytown is industry-oriented, and numerous highly productive petrochemical plants are located here (Young 2002). Exxon Mobil employs many residents. The Gulf of Mexico is located approximately 40 miles south, accessible via Trinity and Galveston Bays.

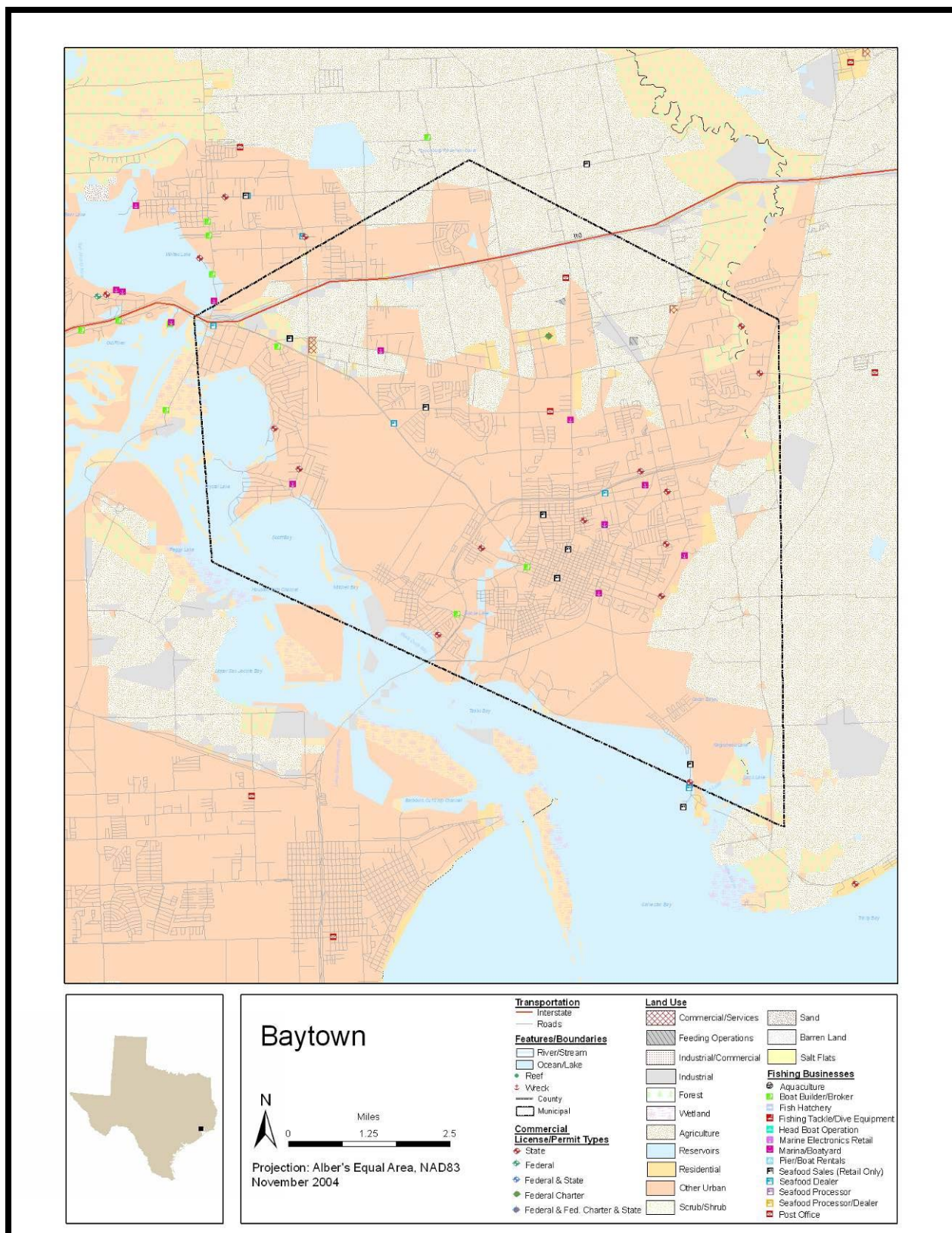
History. Settlers arrived in the region in the mid-1800s, but the Baytown area itself remained largely undeveloped and isolated until oil was discovered at Goose Creek in 1916 (Texas Online 1998; Young 2002). This oilfield was the first offshore drilling site in Texas. Local population growth coincided with establishment of the Humble Oil and Refining Company (Exxon) in 1917. Baytown was incorporated in 1948 (Young 2002).

Current Conditions and Trends. Baytown was home to 66,430 persons in 2000, a four percent increase over the 1990 figure of 63,850 persons. Although many residents work in petrochemical facilities in the area, the economy is relatively diversified, and the urban zone around Houston affords a variety of employment and education opportunities. The average commute time for workers in the area was nearly 24 minutes.

A small fleet of commercial shrimp trawl operators was based in Baytown in 2000, and one Gulf shrimp permit holder was resident in 2003. A commercial dock, several vessel repair facilities, and numerous retail and wholesale fish markets are located throughout the city. Various fishing piers, public boat ramps, bait and tackle stores, and recreation-oriented marinas facilitate recreational fishing in the area. Most fishing occurs in nearby Trinity and Galveston Bays.



The Fred Hartman Bridge (photo courtesy of Wikipedia.org)



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Baytown Demographics

Factor	1990	2000
Total population	63,850	66,430
Gender Ratio M/F (Number)	31,453/32,397	32,250/34,180
Age (Percent of total population)		
Under 18 years of age	30.6	30.0
18 to 64 years of age	59.7	60.0
65 years and over	9.7	10.0
Ethnicity or Race (Number)		
White	46,590	45,088
Black or African American	7,672	8,888
American Indian and Alaskan Native	211	337
Asian	479	651
Native Hawaiian and other Pacific Islander	N/A	51
Some other race	8,898	9,578
Two or more races	N/A	1,837
Hispanic or Latino (any race)	14,784	22,748
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	12.8	12.5
Percent high school graduate or higher	71.2	72.0
Percent with a Bachelor's degree or higher	14.7	13.6
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	21.6	30.9
Percent who speak English less than very well	9.0	13.9
Household income (Median \$)	30,151	40,559
Poverty Status (Percent of population with income below poverty line)	16.1	15.5
Percent female headed household	16.8	14.2
Home Ownership (Number)		
Owner occupied	12,710	13,988
Renter occupied	9,712	9,495
Value Owner-occupied Housing (Median \$)	50,400	66,800
Monthly Contract Rent (Median \$)	307	529
Employment Status (Population 16 yrs and over)		
Percent in the labor force	64.7	60.9
Percent of civilian labor force unemployed	8.5	7.6
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	26.8
Service occupations	N/A	13.4
Sales and office occupations	N/A	25.1
Farming, fishing, and forestry occupations	0.5	0.0
Construction, extraction, and maintenance occupations	N/A	17.4
Production, transportation, and material moving occupations	N/A	17.2
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	0.6	0.0
Mining (includes the offshore oil/gas industry workforce)	2.3	1.0
Manufacturing	20.7	19.1
Percent government workers	10.1	11.7
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	23.6
Percent worked outside of county of residence	10.9	13.4

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Baytown in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	4
Fishing associations (recreational/commercial)	3
Fish processors, Wholesale fish house	3
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	8
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	1
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	10
Recreational docks/marinas	2
Bait & Tackle/fishing supplies	10
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	10
Seafood retail markets	2
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	1
Commercial Boats	4-6

Table 3. Primary Fishing-related Businesses Listed for Baytown in 2003

Type of Business	Frequency
Boat Builder/Broker	4
Boat Builder/Broker; Marina	1
Marina	6
Retail Seafood Dealer	8
Wholesale Seafood Dealer	1
Total	20

Table 4. Baytown Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	492,640	827,497

Table 5. Baytown License/Permit Summary: 2000

Commercial (based on physical residence data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
23	1	--
Total = 24		
% Households Holding Commercial Permit or License: 24/23,483 = 0.1		Average Number of Licenses per Household: --

Please reference Table 3.6-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.6.2 Channelview (incorporated, pop. 29,685)

Location and Overview. Channelview is a small industry-oriented city located near the Houston Ship Channel and Interstate Highway 10 in eastern Harris County. The city is approximately ten miles east of downtown Houston and 15 miles northeast of Trinity Bay, the closest major body of water. Channelview is 50 miles northeast of the Gulf of Mexico.

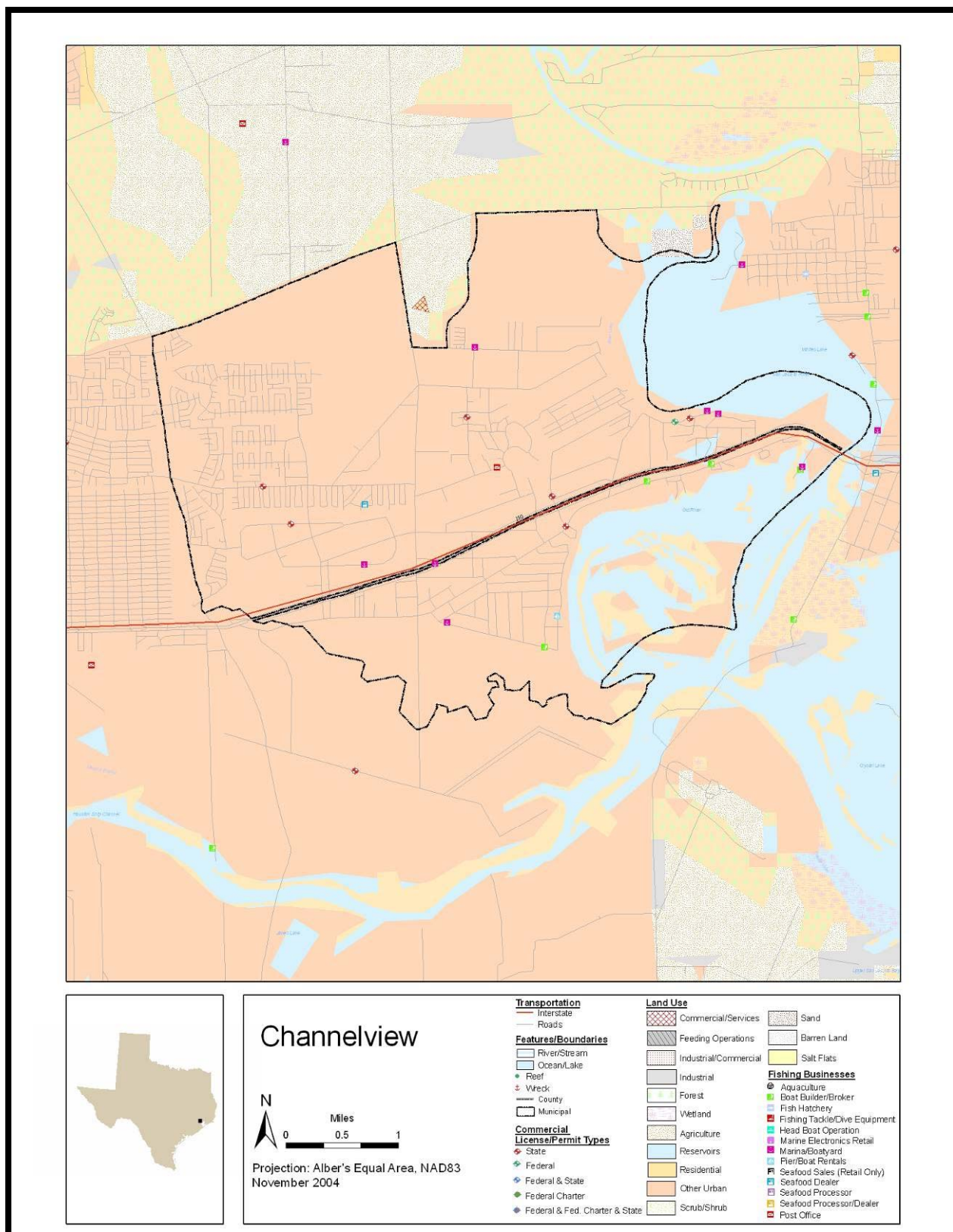
History. Channelview is named for its location along the ship channel. Oil workers and their families settled in the area after discovery of oil in 1916 (Hazelwood 2002).

Current Conditions and Trends. The population of Channelview increased over 16 percent between 1990 and 2000. The town was home to 25,564 persons in 1990 and 29,685 persons in 2000. Many residents are employed in nearby petrochemical manufacturing plants. But job options are relatively diverse as might be expected in this urbanized area, and numerous persons in the workforce commute to jobs in Houston.

There was a small commercial fleet active in the area in 2000. We cannot report all year 2002 landings for the local dealer as only one member of commercial fleet fishes in the offshore waters of the Gulf of Mexico. The majority of the small fleet pursues shrimp in the bays. Saltwater-specific recreational fishing services and infrastructure were limited to small marinas and associated services along the channel. Some freshwater angling occurs in the San Jacinto River.



The San Jacinto River near Channelview (photo courtesy of www.sjra.net)



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Channelview Demographics

Factor	1990	2000
Total population	25,564	29,685
Gender Ratio M/F (Number)	12,891/12,673	14,888/14,797
Age (Percent of total population)		
Under 18 years of age	32.8	33.7
18 to 64 years of age	62.6	61.1
65 years and over	4.6	5.2
Ethnicity or Race (Number)		
White	19,554	18,746
Black or African American	2,487	3,867
American Indian and Alaskan Native	94	163
Asian	564	40
Native Hawaiian and other Pacific Islander	N/A	19
Some other race	2,865	5,430
Two or more races	N/A	857
Hispanic or Latino (any race)	4,902	11,017
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	11.5	15.5
Percent high school graduate or higher	68.7	68.7
Percent with a Bachelor's degree or higher	8.8	7.4
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	21.0	35.1
Percent who speak English less than very well	8.5	15.8
Household income (Median \$)	36,166	42,968
Poverty Status (Percent of population with income below poverty line)	11.7	13.7
Percent female headed household	12.2	13.8
Home Ownership (Number)		
Owner occupied	5,899	6,565
Renter occupied	2,272	2,624
Value Owner-occupied Housing (Median \$)	47,800	65,900
Monthly Contract Rent (Median \$)	316	532
Employment Status (Population 16 yrs and over)		
Percent in the labor force	69.5	66.5
Percent of civilian labor force unemployed	7.0	6.9
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	20.1
Service occupations	N/A	11.4
Sales and office occupations	N/A	29.8
Farming, fishing, and forestry occupations	1.2	0.0
Construction, extraction, and maintenance occupations	N/A	17.6
Production, transportation, and material moving occupations	N/A	21.0
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	1.1	0.2
Mining (includes the offshore oil/gas industry workforce)	2.8	1.2
Manufacturing	19.7	17.4
Percent government workers	9.2	11.8
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	28.0
Percent worked outside of county of residence	2.7	4.7

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Channelview in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	0
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	1
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	0
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	1
Seafood retail markets	1
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Channelview in 2003

Type of Business	Frequency
Boat Builder/Broker	4
Boat Builder/Broker; Marina	2
Boat Rentals & Pier	1
Marina	6
Total	13

Table 4. Channelview Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	21,617	51,961

Table 5. Channelview License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
6	1	1,431
Total = 7		
% Households Holding Commercial Permit or License: 7/9,189 = 0.08		Average Number of Licenses per Household: 1,431/9,189 = 0.2

Please reference Table 3.6-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

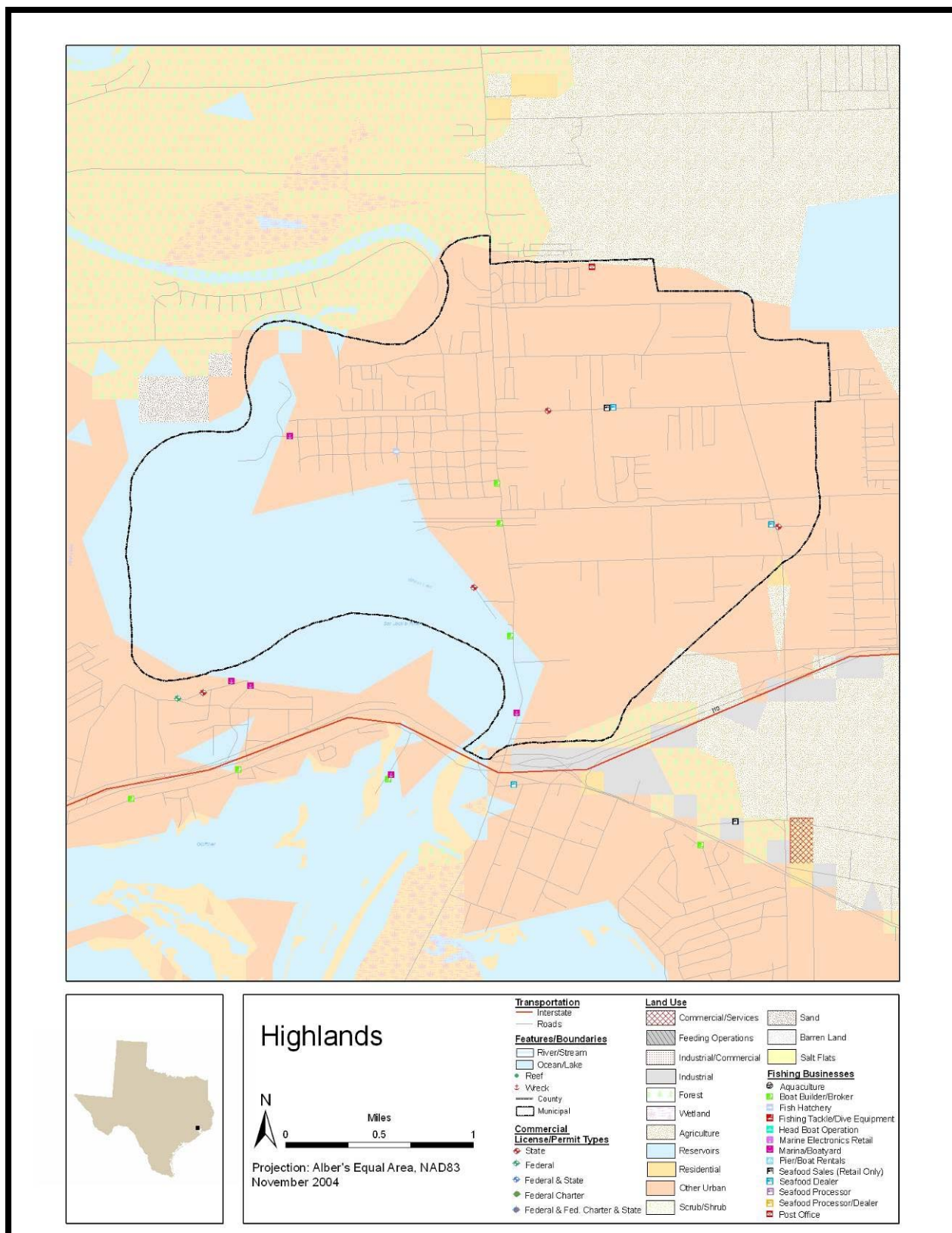
3.6.3 Highlands (unincorporated, pop. 7,089)

Location and Overview. Highlands is located in eastern Harris County just north of Interstate 10. This is primarily an industrial area (Hazelwood 2002). Downtown Houston is 16 miles west, and Baytown is about eight miles southeast. The Gulf of Mexico is about 50 miles southwest.

History. Highlands, also formerly known as Elena, became a station on the Beaumont, Sour Lake and Western Railway in the early 1900s. A post office was established here in 1929. By 1936 Highlands had two schools, two churches, a mill and factory, and a population of 200 residents. Military personnel were housed here during World War II (Hazelwood 2002). Population size fluctuated during the mid- and latter parts of the 20th century, but the area has grown steadily in recent decades in association with spillover from growth in the Houston Metro area.

Current Conditions and Trends. Highlands was home to 7,089 residents in 2000, up from 6,632 in 1990. Many residents work in petrochemical and other manufacturing facilities in the region, though an increasing number are employed in various jobs in the Houston area. There are close social and economic relationships between residents of Highland and Baytown.

Fishing-related businesses and services in the Highlands are limited to small seafood retailer/dealers, boat brokers and repair facilities, and a small marina. A fish hatchery is located in the area. A very small contingent of residents hold state commercial fishing licenses. We do not report landings for 2002 given uncertainty of the size of the fleet at that time (and associated concerns about compromising the rule of three).



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Highlands Demographics

Factor	1990	2000
Total population	6,632	7,089
Gender Ratio M/F (Number)	3,253/3,379	3,558/3,531
Age (Percent of total population)		
Under 18 years of age	29.2	27.8
18 to 64 years of age	60.3	61.4
65 years and over	10.5	10.8
Ethnicity or Race (Number)		
White	6,251	6,393
Black or African American	86	114
American Indian and Alaskan Native	23	36
Asian	18	28
Native Hawaiian and other Pacific Islander	N/A	2
Some other race	254	374
Two or more races	N/A	142
Hispanic or Latino (any race)	426	922
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	10.0	5.6
Percent high school graduate or higher	68.7	76.7
Percent with a Bachelor's degree or higher	8.4	7.2
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	7.3	14.6
Percent who speak English less than very well	2.5	5.1
Household income (Median \$)	34,566	41,288
Poverty Status (Percent of population with income below poverty line)	10.2	9.8
Percent female headed household	10.9	11.9
Home Ownership (Number)		
Owner occupied	1,841	2,069
Renter occupied	456	495
Value Owner-occupied Housing (Median \$)	48,600	66,300
Monthly Contract Rent (Median \$)	287	532
Employment Status (Population 16 yrs and over)		
Percent in the labor force	63.4	61.8
Percent of civilian labor force unemployed	6.7	6.4
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	22.2
Service occupations	N/A	12.1
Sales and office occupations	N/A	29.5
Farming, fishing, and forestry occupations	0.0	0.3
Construction, extraction, and maintenance occupations	N/A	15.8
Production, transportation, and material moving occupations	N/A	20.1
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	0.7	0.3
Mining (includes the offshore oil/gas industry workforce)	2.6	1.8
Manufacturing	19.8	17.6
Percent government workers	11.0	8.5
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	26.3
Percent worked outside of county of residence	4.7	4.3

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Highlands in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	2
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	0
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	1
Bait & Tackle/fishing supplies	0
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	0
Seafood retail markets	1
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Highlands in 2003

Type of Business	Frequency
Boat Builder/Broker	4
Fish Hatchery	1
Marina	2
Retail Seafood Dealer	1
Total	8

Table 4. Highlands Commercial Landings and Value Summary: 2002

Landings and Ex-vessel Value findings may not be reported under the “Rule of Three.”

Table 5. Highlands License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
3	--	762
Total = 3		
% Households Holding Commercial Permit or License: 3/2,564 = 0.1		Average Number of Licenses per Household: 762/2,564 = 0.3

Please reference Table 3.6-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.6.4 Houston (incorporated, pop. 1,953,631)

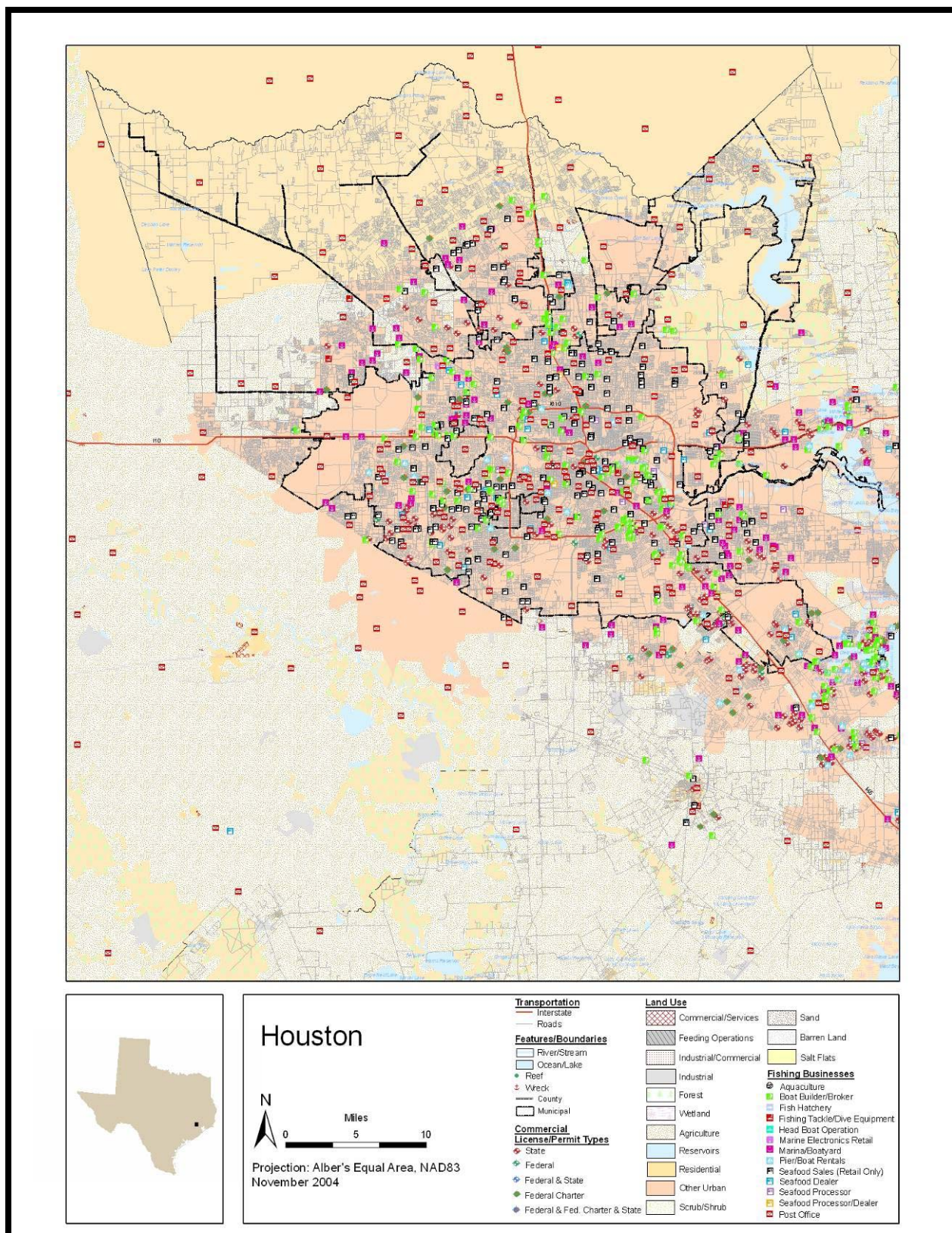
Location and Overview. Houston is the largest city in Texas and as of the year 2000 Census was the fourth largest city in the U.S. in terms of population size. While numerous residents are deeply involved in fishing-related businesses and services, the scope of the industry is quite small relative to that of the overall economy. For instance, Houston firms lead the nation in petrochemical-related services, and other forms of enterprise such as corporate financing and publishing-related businesses are particularly active here.

Buffalo Bayou bisects Houston east to west and Trinity Bay shapes Houston's southeastern perimeter. Commercial vessels access Galveston Bay via the Houston Ship Channel. The Gulf of Mexico is about 52 nautical miles from Houston via the channel.

History. Houston was named after Sam Houston, the first president of the Republic of Texas. Settlers arrived in the Houston area in the early 1820s. Houston was incorporated in 1837 and became the county seat in 1839. The city developed as a center of commerce in the mid-1800s after the introduction of several rail lines. The completion of the Houston Ship Channel in 1914 enabled development of a deepwater port facility and further increased the extent of regional commerce (McComb 2002). The channel required and requires continuous dredging. By 1929, 40 oil and natural gas firms had established offices in Houston. Increased demand for synthetic rubber, gasoline, and other petroleum-related products during World War II led Houston to become one of the largest petrochemical manufacturing centers in the United States. Decline of the oil and gas industry during the 1980s affected the trend of growth in the region. Population and spatial growth has since returned (Greater Houston Partnership 1995; McComb 2002).

Current Conditions and Trends. The population of Houston has increased by nearly 20 percent between 1990 and 2000. The city was home to 1,630,553 persons in 1990 and 1,953,631 persons in 2000. The majority of residents reported involvement in professional, management, sales, and related occupations in 2000, with an average commute time of nearly 28 minutes.

There are many fishing-related businesses and services located in the Houston area, despite its distance from the Gulf of Mexico. Numerous commercial license and permit holders reside in or maintain post office boxes in the city. But the fleets, including locally-based charter operators, tend to moor in and fish from Galveston and to a lesser extent in and from Freeport. Two Houston-based head boat firms operate from Galveston. Most recreation-oriented fishing is conducted in Galveston Bay, with Galveston the most popular point of entry into the Gulf of Mexico. While there is extensive maritime trade and vessel movement around Houston, relatively little fishing occurs in the region's bayous and channels.



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Houston Demographics

Factor	1990	2000
Total population	1,630,553	1,953,631
Gender Ratio M/F (Number)	809,048/821,505	975,551/978,080
Age (Percent of total population)		
Under 18 years of age	26.7	27.5
18 to 64 years of age	65.0	64.1
65 years and over	8.3	8.4
Ethnicity or Race (Number)		
White	859,069	962,610
Black or African American	457,990	494,496
American Indian and Alaskan Native	4,126	8,569
Asian	67,113	103,694
Native Hawaiian and other Pacific Islander	N/A	1,182
Some other race	242,255	321,603
Two or more races	N/A	61,478
Hispanic or Latino (any race)	450,483	730,865
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	14.2	14.8
Percent high school graduate or higher	70.5	70.4
Percent with a Bachelor's degree or higher	25.1	27.0
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	30.6	41.3
Percent who speak English less than very well	15.4	22.0
Household income (Median \$)	26,261	36,616
Poverty Status (Percent of population with income below poverty line)	20.7	19.2
Percent female headed household	14.6	15.3
Home Ownership (Number)		
Owner occupied	275,084	328,741
Renter occupied	341,793	389,204
Value Owner-occupied Housing (Median \$)	58,000	79,300
Monthly Contract Rent (Median \$)	328	575
Employment Status (Population 16 yrs and over)		
Percent in the labor force	69.3	63.2
Percent of civilian labor force unemployed	8.2	7.6
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	33.9
Service occupations	N/A	15.7
Sales and office occupations	N/A	26.4
Farming, fishing, and forestry occupations	1.1	0.1
Construction, extraction, and maintenance occupations	N/A	11.0
Production, transportation, and material moving occupations	N/A	12.9
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	1.1	0.1
Mining (includes the offshore oil/gas industry workforce)	3.0	1.8
Manufacturing	11.7	10.0
Percent government workers	11.1	11.1
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	27.4
Percent worked outside of county of residence	5.3	7.2

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Houston in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	18-20
Boat yards/ Boat builders (recreational/commercial)	10-20
Churches with maritime theme	1-2
Docking facilities (commercial)	12-15
Fishing Gear, Electronics, Welding, and other repair	20
Fishing associations (recreational/commercial)	4
Fish processors, Wholesale fish house	20+
Fisheries research laboratories	1
Fishing monuments	0
Fishing pier	~20
Hotels/Inns (dockside)	5+
Marine railways/haul out facilities	1
Museums—fishing/marine-related	3
Net makers	6
NMFS or state fisheries office (port agent, etc.)	1
Public boat ramps	~30
Recreational docks/marinas	~20
Bait & Tackle/fishing supplies	50
Recreational Fishing Tournaments	12-15
Sea Grant Extension office	0
Seafood restaurants	150+
Seafood retail markets	~200
Trucking operations	~50
Site-seeing/pleasure tours	12
Charter/Head Boats (operating from the Galveston area)	numerous
Commercial Boats	Many

Table 3. Primary Fishing-related Businesses Listed for Houston in 2003

Type of Business	Frequency
Boat Builder/Broker	180
Boat Builder/Broker; Diving & Fishing Equipment	5
Boat Builder/Broker; Marina	7
Boat Rentals & Pier	17
Boat Rentals & Pier; Retail Seafood Dealer	1
Fish Hatchery	3
GPS & Instrumentation	1
Marina	83
Processor	2
Processor; Retail/Wholesale Seafood Dealer	2
Processor; Wholesale Seafood Dealer	4
Retail Seafood Dealer	224
Retail/Wholesale Seafood Dealer	3
Wholesale Seafood Dealer	19
Total	551

Table 4. Houston Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	3,769,481	10,809,459

Table 5. Houston License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
132	47	63,379
Total = 179		
% Households Holding Commercial Permit or License: 179/717,945 = 0.02		Average Number of Licenses per Household: 63,379/717,945 = 0.1

Please reference Table 3.6-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.



Antique Postcard of Houston and Buffalo Bayou (photo courtesy of Carl Seiler at <http://ourworld.compuserve.com/homepages/lcseiler/houdown.htm>)

3.6.5 Pasadena (incorporated, pop. 141,674)

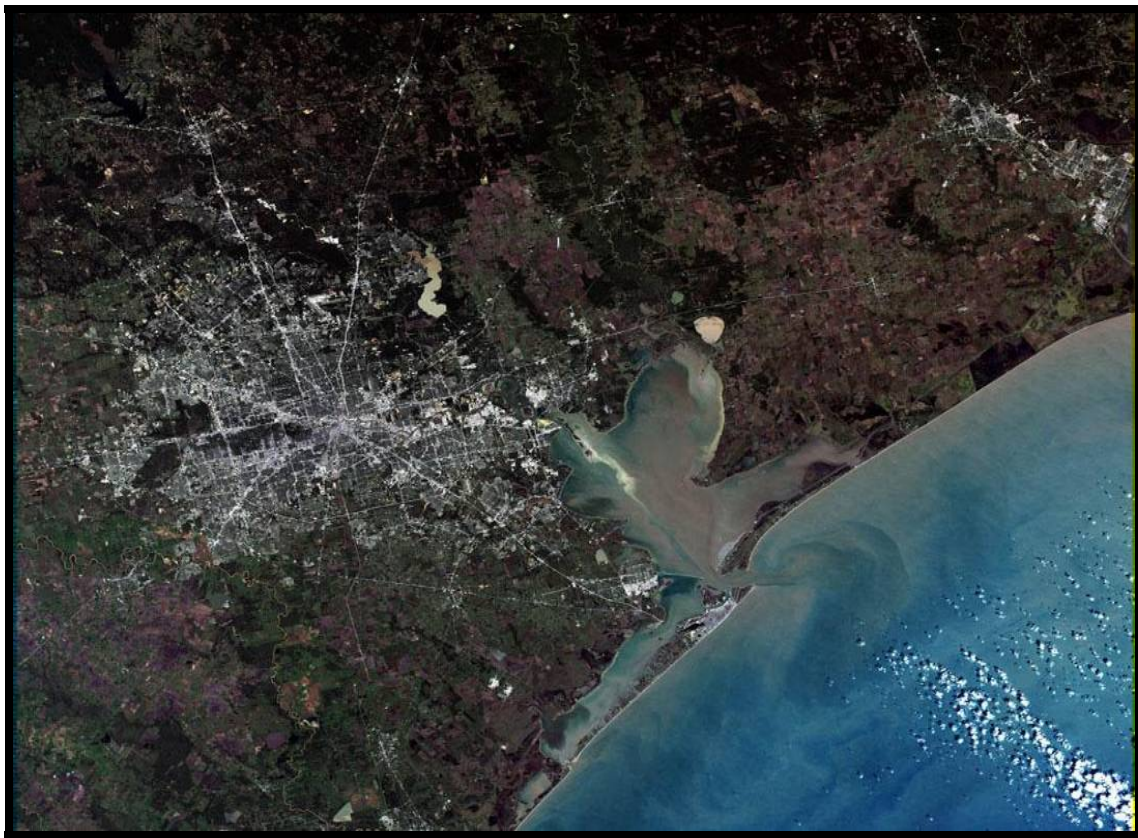
Location and Overview. Pasadena is an incorporated suburb of Houston, located six miles south of the downtown area on the south side of Buffalo Bayou. Its economy is based in petrochemical and maritime shipping industries. The Houston Ship Channel is immediately to the northeast.

History. Pasadena means “land of flowers” in Spanish. Farming and cattle ranching on open prairie land were the primary forms of local enterprise until the hurricane of 1900 destroyed crops and cattle. Needing a quick cash crop, farmers planted strawberries. The area subsequently became known as the strawberry capital of Texas. By the 1930s, Pasadena was more industrial in nature. Petrochemical manufacturing remains important today. The town was incorporated in 1928 (Pomeroy 2002).

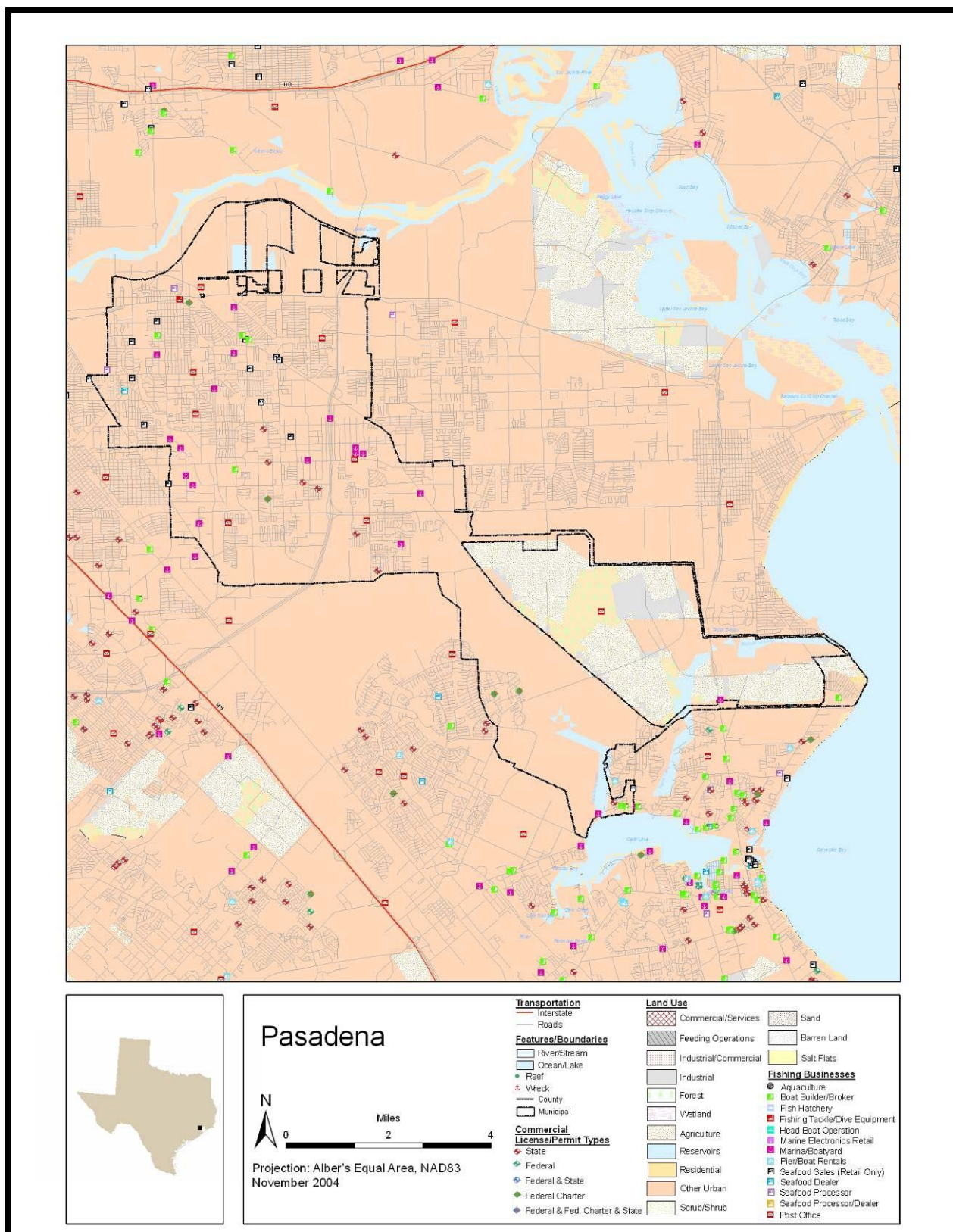
Current Conditions and Trends. While the population of the City of Houston increased by nearly 20 percent between the recent census years, the population of Pasadena decreased by a similar percentage during the period. Administrators attribute the change to sprawl and the tendency of residents to move into more distant suburban areas.

Residents are employed in a wide variety of occupations, as might be expected in this urban area. Although jobs in petrochemical manufacturing and maritime transportation firms are numerous, sales and office occupations were most commonly reported for the year 2000 Census. The average commute for persons in the Pasadena workforce was 25 minutes.

The municipal bounds of Pasadena extend to western Trinity Bay, and various fishing-related businesses serve the local populace. There are numerous small marinas, boat builders and brokers, and retail seafood establishments in the area. A small number of commercial fishery and charter operators reside here. But again, the tendency is to operate from the Galveston area. Dealer-derived landings data could not be attributed to these participants at the time of this study.



Aerial View of Greater Houston and Galveston, 2000 (USGS Landsat Image)



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Pasadena Demographics

Factor	1990	2000
Total population	119,363	141,674
Gender Ratio M/F (Number)	59,568/59,795	70,767/70,907
Age (Percent of total population)		
Under 18 years of age	30.0	31.6
18 to 64 years of age	62.4	60.5
65 years and over	7.6	7.9
Ethnicity or Race (Number)		
White	99,943	101,219
Black or African American	1,162	2,316
American Indian and Alaskan Native	579	957
Asian	1,873	2,589
Native Hawaiian and other Pacific Islander	N/A	58
Some other race	15,806	30,173
Two or more races	N/A	4,362
Hispanic or Latino (any race)	34,411	68,348
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	12.5	14.8
Percent high school graduate or higher	69.8	67.1
Percent with a Bachelor's degree or higher	10.9	12.7
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	26.3	43.1
Percent who speak English less than very well	11.7	22.2
Household income (Median \$)	28,729	38,522
Poverty Status (Percent of population with income below poverty line)	14.4	16.0
Percent female headed household	11.5	13.1
Home Ownership (Number)		
Owner occupied	21,659	26,385
Renter occupied	20,385	20,646
Value Owner-occupied Housing (Median \$)	49,000	70,300
Monthly Contract Rent (Median \$)	323	534
Employment Status (Population 16 yrs and over)		
Percent in the labor force	67.6	62.2
Percent of civilian labor force unemployed	5.0	7.1
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	23.5
Service occupations	N/A	13.3
Sales and office occupations	N/A	27.6
Farming, fishing, and forestry occupations	0.7	0.1
Construction, extraction, and maintenance occupations	N/A	18.6
Production, transportation, and material moving occupations	N/A	16.9
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	0.7	0.1
Mining (includes the offshore oil/gas industry workforce)	1.2	0.8
Manufacturing	19.2	16.2
Percent government workers	10.3	10.4
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	25.1
Percent worked outside of county of residence	3.7	5.8

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Pasadena in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	2
Boat yards/ Boat builders (recreational/commercial)	3-5
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	5
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	1
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	1
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	2
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	3
Recreational Fishing Tournaments	1-2
Sea Grant Extension office	0
Seafood restaurants	5
Seafood retail markets	numerous
Trucking operations	Several
Site-seeing/pleasure tours	0
Charter/Head Boats	Based elsewhere
Commercial Boats	several

Table 3. Primary Fishing-related Businesses Listed for Pasadena in 2003

Type of Business	Frequency
Boat Builder/Broker	4
Boat Builder/Broker; Diving & Fishing Equipment	1
Boat Builder/Broker; Marina	1
Marina	16
Retail Seafood Dealer	12
Retail/Wholesale Seafood Dealer	1
Total	35

Table 4. Pasadena Commercial Landings and Value Summary: 2002

Commercial landings cannot be attributed to fishery participants in Pasadena.

Table 5. Pasadena License/Permit Summary: 2000

Commercial (based on physical residence data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
8	3	5,288
Total = 11		
% Households Holding Commercial Permit or License: 11/47,031 = 0.02		Average Number of Licenses per Household: 5,288/47,031 = 0.1

Please reference Table 3.6-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.6.6 Seabrook (incorporated, pop. 9,443)

Location and Overview. Seabrook is a small seaside town located along the western shoreline of Galveston Bay about 18 miles southeast of downtown Houston and 22 miles northwest of Galveston. Pasadena is six miles north. The Gulf of Mexico is approximately 25 nautical miles southeast. The town is directly adjacent to Clear Lake Shores, a popular yachting and sailing area.

History. The first settlers began arriving in 1832. Proximity to Trinity Bay enabled commercial fishing and shrimping, maritime trade, and recreation. A rail line carried Houston residents to Seabrook for seaside rest and relaxation during the summer months. The 1900 hurricane that destroyed Galveston also damaged buildings in Seabrook. Town officials fearing annexation by nearby La Porte or Houston incorporated the town in 1961 (Hazelwood 2002).

Current Conditions and Trends. Seabrook grew rapidly between 1990 and 2000. The town was home to 6,685 persons in 1990, and 9,443 persons in 2000 - a 41 percent increase. Growth may be attributed to the attractions of bayside living and the short commute distance to sprawling Houston. Indeed, a growing number of residents are professional who commute to jobs in or around Houston, including the Johnson Space Center. About 15 percent of local workers commute to jobs in nearby Galveston County.

While involvement in commercial fishing has reportedly declined in recent years, captains of a small commercial fleet are still active and moor at the commercial docking facility in town. There is also extensive boat building and sales activity here. Most fishing and shrimp trawl operations occur in Galveston Bay, though two residents held Gulf shrimp permits in 2003. Shrimp led local dealer landings figures in 2002, followed by oyster and crab. A seafood processor is based here, as are several wholesale and retail seafood dealers, and trucking operations.

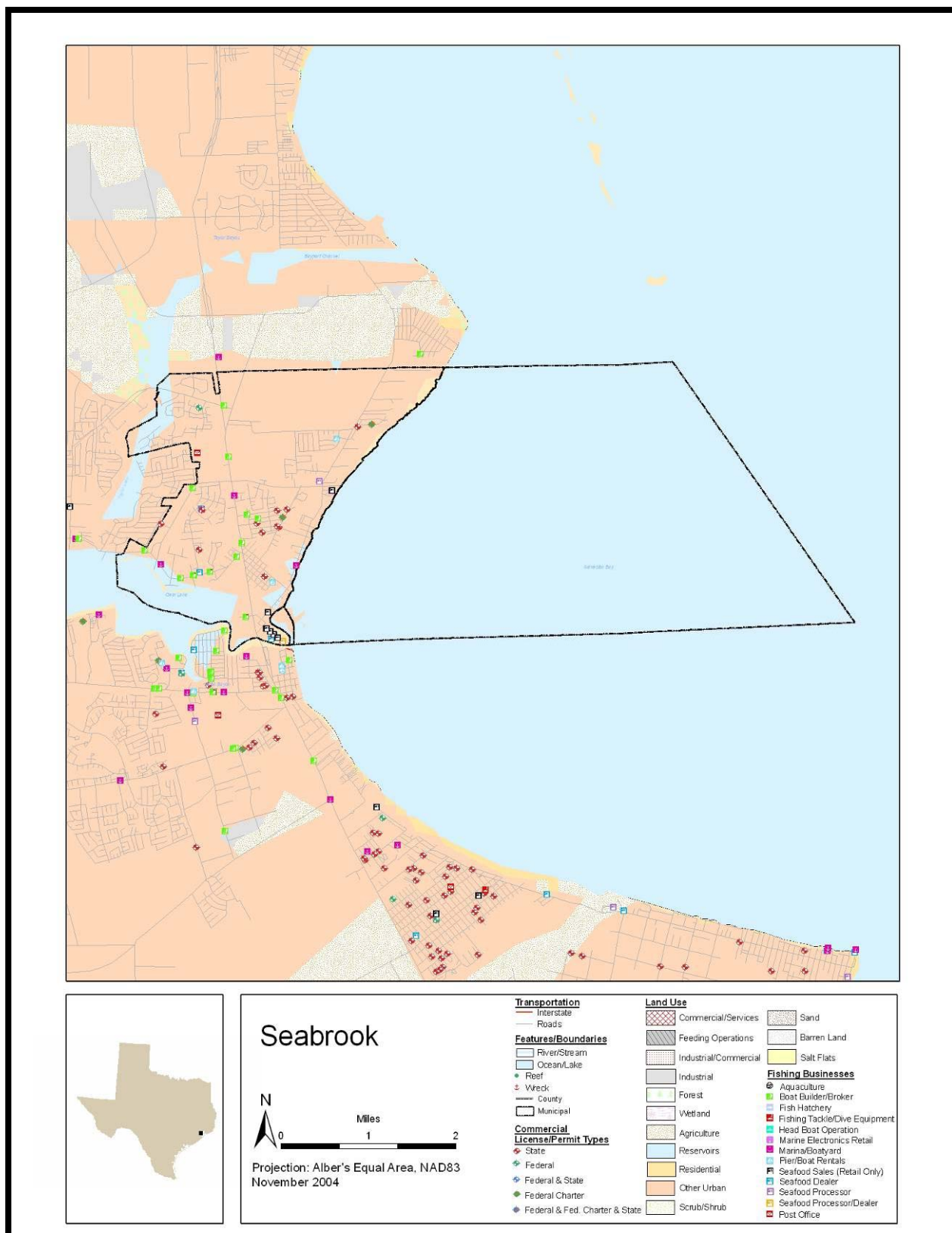
Recreational fishing and boating are also supported here and many residents hold saltwater recreational licenses. Three charter operators live or are based in the area, and several fishing piers, a public boat ramp, and recreation-oriented marinas provide angling opportunities for residents and visitors alike. There is increasing involvement in marine eco-tourism activities and opportunities in the area.



Aerial View of Seabrook (photo courtesy of www.texmaps.com)



Clear Lake Marina, near Seabrook



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Seabrook Demographics

Factor	1990	2000
Total population	6,685	9,443
Gender Ratio M/F (Number)	3,427/3,258	4,880/4,563
Age (Percent of total population)		
Under 18 years of age	21.6	23.9
18 to 64 years of age	73.6	70.4
65 years and over	4.8	5.7
Ethnicity or Race (Number)		
White	6,157	8,397
Black or African American	126	199
American Indian and Alaskan Native	34	48
Asian	209	313
Native Hawaiian and other Pacific Islander	N/A	2
Some other race	159	261
Two or more races	N/A	223
Hispanic or Latino (any race)	439	1,017
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	20.7	2.5
Percent high school graduate or higher	89.4	92.7
Percent with a Bachelor's degree or higher	34.2	41.2
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	12.0	14.6
Percent who speak English less than very well	3.5	5.9
Household income (Median \$)	34,658	54,175
Poverty Status (Percent of population with income below poverty line)	9.4	5.5
Percent female headed household	14.7	8.1
Home Ownership (Number)		
Owner occupied	1,106	2,126
Renter occupied	1,994	1,968
Value Owner-occupied Housing (Median \$)	72,500	118,600
Monthly Contract Rent (Median \$)	385	635
Employment Status (Population 16 yrs and over)		
Percent in the labor force	82.5	75.9
Percent of civilian labor force unemployed	4.8	3.0
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	46.2
Service occupations	N/A	10.3
Sales and office occupations	N/A	25.3
Farming, fishing, and forestry occupations	1.9	0.3
Construction, extraction, and maintenance occupations	N/A	8.5
Production, transportation, and material moving occupations	N/A	9.3
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	2.4	0.5
Mining (includes the offshore oil/gas industry workforce)	1.9	1.9
Manufacturing	23.3	19.0
Percent government workers	13.6	12.7
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	26.0
Percent worked outside of county of residence	12.2	15.8

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Seabrook in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	3
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	2
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	2
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	1
Recreational docks/marinas	several
Bait & Tackle/fishing supplies	6
Recreational Fishing Tournaments	1
Sea Grant Extension office	0
Seafood restaurants	5
Seafood retail markets	numerous
Trucking operations	3
Site-seeing/pleasure tours	1
Charter/Head Boats	3
Commercial Boats	30-35

Table 3. Primary Fishing-related Businesses Listed for Seabrook in 2003

Type of Business	Frequency
Boat Builder/Broker	21
Boat Builder/Broker; Marina	5
Boat Rentals & Pier	3
Marina	11
Processor	1
Processor; Wholesale Seafood Dealer	1
Retail Seafood Dealer	10
Wholesale Seafood Dealer	2
Total	54

Table 4. Seabrook Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	1,678,344	3,136,986

Table 5. Seabrook License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
17	4	1,273
Total = 21		
% Households Holding Commercial Permit or License: 21/4,094 = 0.5		Average Number of Licenses per Household: 1,273/4,094 = 0.3

Please reference Table 3.6-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.7 Brazoria County Communities

This section describes the study communities in Brazoria County. These are: Alvin, Brazoria, Clute, Freeport, Lake Jackson, Pearland, and Sweeny.

Brazoria County is located along the south-central coast of Texas. It is bordered on the northeast by Galveston County, on the north by Harris County, on the west by Fort Bend and Wharton Counties, and on the south by Matagorda County. The county encompasses 1,597 square miles of land and 211 square miles of water. The approximately 32 mile coastline is characterized by extensive marsh and estuary systems backing the beachfront. Much of the inland portion of the county is flat coastal plain, with some areas of higher elevation and richer alluvial soils.

The year 2000 population of Brazoria County was 241,767 persons, making it the 18th most populous county in Texas that year. Angleton, the county seat, had a year 2000 population of 18,130 persons.

Brazoria County was one of the original Texas Counties. It was formed in 1836 from a Mexican municipality of the same name, derived, in turn, from the broad Brazos River which bisects the area. This was the land of Stephen F. Austin's colony, various early Spanish missions, and the ancient homeland of the Karankawa tribes. Over 45 plantations produced sugar and cotton during the antebellum era, and Brazoria was one of the wealthiest counties in Texas at that time (Kleiner 2002). Oil and sulfur were discovered during the early part of the twentieth century, and residents became increasingly involved in petrochemical industry over time. Tourism and agribusiness are increasingly important (Ramos et. al 2001:141).

As noted in the following table, with the exception of the retail sector, 1990 to 1995 was a period of declining employment in commercial fisheries in Brazoria County. The trend is noted throughout coastal Texas during the period, and continues today.

Table 3.7-1 Brazoria County Employment in Marine Fisheries: 1990-1995

Sector	1990 Employment	1995 Employment	Percent Change
Commercial Harvesting	593	452	-23.8
Processing	103	0	-100
Wholesale	48	28	-41.7
Retail	472	515	9.1

Source: Dokken et al. (1998:89)

As of the year 2000 census, the racial composition of the population was 66 percent Caucasian, 23 percent was Hispanic, and nine percent African-American, and. Median family income in 2000 was \$48,632, significantly higher than the statewide median income of \$39,927. Some ten percent of county residents were living in poverty, and six percent of families with children under the age of 18 years were headed by single females.

Table 3.7-2 Earnings in Brazoria County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share 2000 Earnings	\$ Change 1990-2000	% Share Change 1990-2000
	1990	2000			
Earnings	2,964,056	3,604,302	100.0	3,310,246	100.0
Farm earnings	9,127	14,342	0.4	5,215	0.2
Ag. Services, frstry, fish.	11,351	27,986	0.8	16,635	0.5
Fishing	3,074	NA	NA	NA	NA
Mining	102,380	81,269	2.2	-21,111	0
Oil and gas extraction	100,548	78,273	2.2	-22,275	0
Construction	448,395	515,744	14.3	67,439	2.0
Special trade contractors	191,777	252,146	7.0	60,369	1.8
Manufacturing	1,115,931	1,119,442	31.0	3,511	0.1
Fabricated metal products	27,308	37,958	1.0	10,650	0.3
Industrial mach. & equip.	28,589	48,222	1.3	19,633	0.6
Food and kindred	15,692	10,586	0.3	-5,106	0
Chemicals/allied products	810,654	780,145	21.6	-30,509	0
Petroleum and coal	91,971	NA	NA	NA	NA
Transport.,public utilities	138,423	163,278	4.5	24,855	0.7
Trucking and warehousing	50,706	60,386	1.7	9,680	0.3
Water transportation	14,184	8,113	0.2	-6,071	0
Transportation by air	12,899	6,957	0.2	-5,942	0
Wholesale trade	78,555	148,230	4.1	69,675	2.1
Retail trade	209,695	293,265	8.1	83,570	2.5
Eating and drinking places	35,738	59,437	1.6	23,699	0.7
Finance, insur, real estate	60,874	120,877	3.3	60,003	1.8
Services	383,729	626,157	17.4	242,248	7.3
Business services	76,132	133,147	3.7	57,015	1.7
Health services	110,425	157,794	4.4	47,369	1.4
Legal services	24,448	23,450	0.6	-998	0
Engineer. & Mgmt. Serv.	62,244	94,614	2.6	32,370	1.0
Government	405,595	508,054	14.1	102,459	3.1

Source: Bureau of Economic Analysis, Regional Economic Information System

Table 3.7-3 Year 2000 Commercial Permits and Licenses, and 2003 Gulf Shrimp Permits: Brazoria County*

Permit Type	Study Communities with Permits or Licenses					
	Alvin	Brazoria	Clute	Freeport	Lake Jackson	Pearland
Pelagic Charter	2	2	6	23	5	4
Gulf Reef Charter	2	2	6	23	5	4
Swordfish	--	--	--	--	--	--
King Mackerel	--	--	--	1	--	1
Rock Shrimp	--	--	--	3	1	--
Red Snapper	--	--	5	6	--	1
Spiny Lobster	--	--	--	--	1	--
Spanish Mackerel	--	--	--	--	--	--
Gulf Reef Fish	--	--	4	8	--	1
Shark	--	--	1	--	--	1
South Atlantic Snapper Grouper	--	--	--	1	--	--
Total Federal Permits 2000	4	4	22	65	12	12
Total Federal Permit Holders 2000	2	2	6	29	7	5
Total State License Holders 2000	13	9	3	43	11	10
Gulf Shrimp Permits 2003**	2	1	--	70	--	3

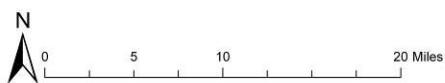
* Includes all permits and licenses that can be attributed to the communities by *both* street and post office box addresses; these data are used to generate counts of permit and license holders for whom evidence indicates actual residence, as provided in the community descriptions. ** 2003 is the first year for which Gulf shrimp permit data are available.



Fishing from the Rocks and Jetty near Freeport



Brazoria County



Legend

- ★ Study Community
- Processor
- Processor and Seafood Dealer
- Seafood Dealer
- Reef
- Wreck
- ▲ Platform
- County Boundaries
- Interstate

3.7.1 Alvin (incorporated, pop. 21,413)

Location and Overview. Alvin is a small city with extensive municipal bounds located along the central portion of the Texas Gulf coast in northeastern Brazoria County. Houston is about 20 miles northwest. Alvin is also in close proximity to the NASA Johnson Space Center and the beaches of Galveston Island. The Gulf of Mexico is about 32 miles east, accessible via Galveston Bay.

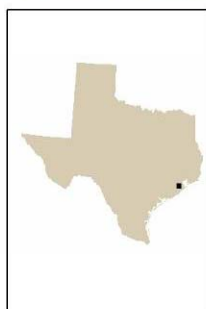
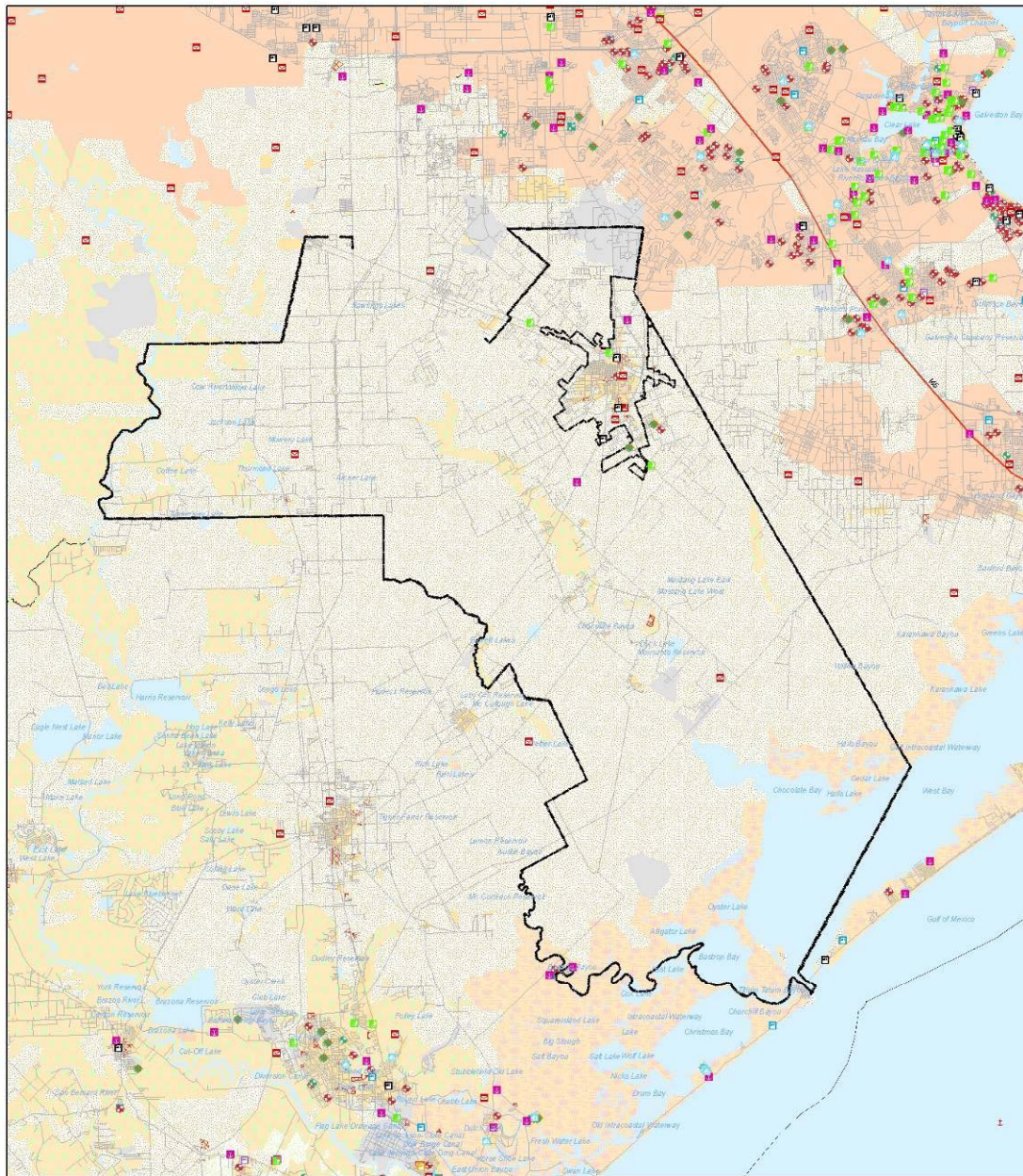
History. Karankawa tribes were the earliest known residents of the Alvin area. White settlers began arriving in 1879 after the Santa Fe Railroad established a flag station on the Richmond to Galveston connection (Blanchette 2002). The town was named after its founder, Alvin Morgan. The city was incorporated in 1893. Cattle-raising and fruit and vegetable farming were important forms of enterprise from early in the history of Alvin. By the mid-1900s, rice farming, poultry production, and production of natural gas and petrochemicals were increasingly important. The contemporary economy of Alvin is based largely in oil and gas production (City of Alvin, Texas; Texas Online 1995).

Current Conditions and Trends. The year 2000 census enumerated 21,413 residents, an 11 percent increase from the 1990 figure of 19,220. Nearly 50 percent of residents commuted outside of the county for employment, many of whom worked in management, professional, sales, and office occupations in nearby Houston and outlying urban areas. Many other residents worked in various positions in petrochemical manufacturing firms around the region.

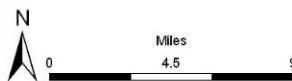
A small contingent of commercial fishery participants is based in Alvin, and two charter operators either reside in or hold post office boxes here. One Gulf shrimp permit holder was resident in 2003. Most commercial participants fish from the Galveston area, as do many resident recreational anglers. Most local fishing-related businesses and services in Alvin support recreational fisheries. These include several vessel and engine sales and repair services, and bait and tackle suppliers. There are also several seafood retail markets and restaurants in the area.



Aerial View of Alvin in 2004 (USGS)



Alvin



Projection: Alber's Equal Area, NAD83
November 2004

Transportation

Interstate
Roads

Features/Boundaries

River/Stream
Ocean/Lake

Reef
Wreck

County
Municipal

Commercial License/Permit Types

State
Federal
Federal & State
Federal Charter
Federal & Fed. Charter & State

Land Use

Commercial/Services
Feeding Operations
Industrial/Commercial
Industrial
Forest
Wetland
Agriculture
Reservoirs
Residential
Other Urban
Scrub/Shrub

Sand
Barren Land
Salt Flats

Fishing Businesses

Aquaculture
Boat Builder/Broker
Fish Hatchery
Fishing Tackle/Dive Equipment
Head Boat Operation
Marine Electronics Retail
Marina/Boatyard
Pier/Boat Rentals
Seafood Sales (Retail Only)
Seafood Dealer
Seafood Processor
Seafood Processor/Dealer
Post Office

Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Alvin Demographics

Factor	1990	2000
Total population	19,220	21,413
Gender Ratio M/F (Number)	9,396/9,824	10,516/10,897
Age (Percent of total population)		
Under 18 years of age	29.0	29.7
18 to 64 years of age	61.8	60.9
65 years and over	9.2	9.4
Ethnicity or Race (Number)		
White	16,311	17,618
Black or African American	351	452
American Indian and Alaskan Native	91	105
Asian	96	170
Native Hawaiian and other Pacific Islander	N/A	12
Some other race	4,182	2,329
Two or more races	N/A	727
Hispanic or Latino (any race)	4,182	6,014
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	10.8	8.8
Percent high school graduate or higher	73.8	77.1
Percent with a Bachelor's degree or higher	13.3	13.4
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	17.8	23.7
Percent who speak English less than very well	6.5	7.9
Household income (Median \$)	28,860	38,576
Poverty Status (Percent of population with income below poverty line)	14.0	13.3
Percent female headed household	15.5	13.6
Home Ownership (Number)		
Owner occupied	3,641	4,292
Renter occupied	3,327	3,534
Value Owner-occupied Housing (Median \$)	54,900	77,500
Monthly Contract Rent (Median \$)	314	564
Employment Status (Population 16 yrs and over)		
Percent in the labor force	67.4	64.2
Percent of civilian labor force unemployed	4.5	5.7
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	24.9
Service occupations	N/A	15.7
Sales and office occupations	N/A	24.7
Farming, fishing, and forestry occupations	1.4	0.5
Construction, extraction, and maintenance occupations	N/A	16.9
Production, transportation, and material moving occupations	N/A	17.3
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	2.0	0.7
Mining (includes the offshore oil/gas industry workforce)	3.5	3.2
Manufacturing	17.8	14.8
Percent government workers	13.6	14.2
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	29.1
Percent worked outside of county of residence	39.1	47.2

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Alvin in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	2
Fishing associations (recreational/commercial)	1
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	1
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	3
Seafood retail markets	2
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Alvin in 2003

Type of Business	Frequency
Boat Builder/Broker	4
Diving & Fishing Equipment	1
Marina	2
Retail Seafood Dealer	3
Wholesale Seafood Dealer	1
Total	11

Table 4. Alvin Commercial Landings and Value Summary: 2002

Landings and ex-vessel value data may not be reported under the “Rule of Three.”

Table 5. Alvin License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
2	1	3,105
Total = 3		
Households Holding Commercial Permit or License: $3/7,826 = 0.03$		Average Number of Licenses per Household: $3,105/7,826 = 0.4$

Please reference Table 3.7-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.7.2 Brazoria (incorporated, pop. 2,787)

Location and Overview. Brazoria is a small town located along State Highway 36 and Farm Road 521 in west-central Brazoria County. Houston is approximately 51 miles north, and Lake Jackson is about seven miles east. The Gulf of Mexico is approximately 20 miles east. Residents often travel to Lake Jackson or Freeport for various goods and services not available in Brazoria.

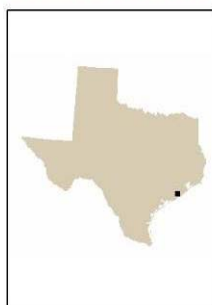
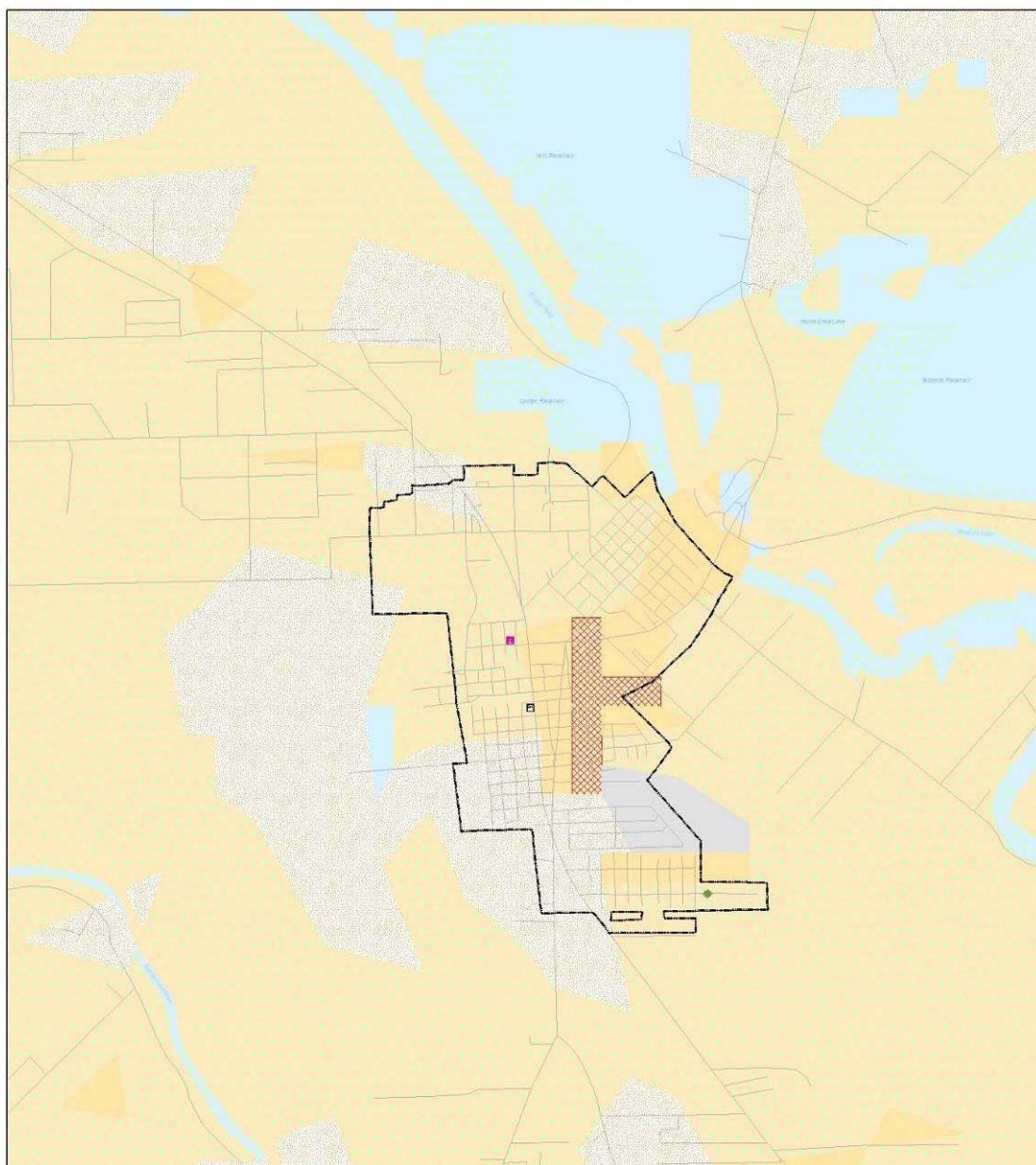
History. Brazoria was established in 1828. Most residents were involved in some form of agriculture from early in the town's history. A post office was established in 1846, and by 1884 there were 800 residents. Oil was discovered in the area in the mid-1930s (Hallstein 2002). The town has for many years served as a center of commerce for small farms operating in the area.

Current Conditions and Trends. The year 2000 population of Brazoria was 2,787 persons, a slight increase above the 1990 figure of 2,717 persons. While small farms continue to occupy many area residents, nearly 30 percent of persons in the workforce were employed in sales and office occupations in 2000. Many residents commute to jobs in the Lake Jackson and Freeport areas.

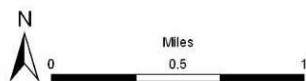
Freshwater fishing opportunities are available in the Brazos River to fish, where there are numerous piers, a marina, and docking facilities. Commercial operators and saltwater anglers generally travel to the Freeport area. Two charter captains and a small contingent of state license holders lived in the area in 2000, and one Gulf shrimp permit holder was resident in 2003. Fishing-related goods and services are limited.



The Brazos River with Industrial Zone in Background (photo courtesy of www.vonr.com)



Brazoria



Projection: Alber's Equal Area, NAD83
November 2004

Transportation

Interstate
Roads

Features/Boundaries

River/Stream
Ocean/Lake
Reef
Wreck
County
Municipal

Commercial License/Permit Types

State
Federal
Federal & State
Federal Charter
Federal & Fed. Charter & State

Land Use

Commercial/Services
Feeding Operations
Industrial/Commercial
Industrial
Forest
Wetland
Agriculture
Reservoirs
Residential
Other Urban
Scrub/Shrub

Sand
Barren Land
Salt Flats

Fishing Businesses

Aquaculture
Boat Builder/Broker
Fish Hatchery
Fishing Tackle/Dive Equipment
Head Boat Operation
Marine Electronics Retail
Marina/Boatyard
Pier/Boat Rentals
Seafood Sales (Retail Only)
Seafood Dealer
Seafood Processor
Post Office

Table 1. Brazoria Demographics

Factor	1990	2000
Total population	2,717	2,787
Gender Ratio M/F (Number)	1,309/1,408	1,335/1,452
Age (Percent of total population)		
Under 18 years of age	30.8	29.3
18 to 64 years of age	58.3	59.0
65 years and over	10.9	11.7
Ethnicity or Race (Number)		
White	2,244	2,284
Black or African American	327	287
American Indian and Alaskan Native	25	16
Asian	8	19
Native Hawaiian and other Pacific Islander	N/A	0
Some other race	113	150
Two or more races	N/A	31
Hispanic or Latino (any race)	194	317
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	9.9	6.8
Percent high school graduate or higher	64.4	75.3
Percent with a Bachelor's degree or higher	4.8	5.8
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	5.9	10.9
Percent who speak English less than very well	3.6	6.1
Household income (Median \$)	29,196	36,058
Poverty Status (Percent of population with income below poverty line)	13.3	13.3
Percent female headed household	16.9	11.5
Home Ownership (Number)		
Owner occupied	664	712
Renter occupied	328	351
Value Owner-occupied Housing (Median \$)	47,600	54,900
Monthly Contract Rent (Median \$)	243	428
Employment Status (Population 16 yrs and over)		
Percent in the labor force	60.4	60.8
Percent of civilian labor force unemployed	9.0	7.0
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	21.3
Service occupations	N/A	13.9
Sales and office occupations	N/A	29.4
Farming, fishing, and forestry occupations	0.4	1.2
Construction, extraction, and maintenance occupations	N/A	19.3
Production, transportation, and material moving occupations	N/A	14.9
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	0.4	0.8
Mining (includes the offshore oil/gas industry workforce)	1.3	1.3
Manufacturing	30.2	15.8
Percent government workers	12.0	12.3
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	25.0
Percent worked outside of county of residence	7.5	10.1

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Brazoria in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	0
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	6
Recreational Fishing Tournaments	0
Sea Grant Extension office	2
Seafood restaurants	1
Seafood retail markets	2
Trucking operations	3
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Brazoria in 2003

Type of Business	Frequency
Marina	1
Retail Seafood Dealer	1
Total	2

Table 4. Brazoria Commercial Landings and Value Summary: 2002

Landings and Value data may not be reported under the “rule of three.”

Table 5. Brazoria License/Permit Summary: 2000

Commercial (based on physical residence data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
2	1	1,588
Total = 3		
% Households Holding Commercial Permit or License: $3/1,063 = 0.3$		Average Number of Licenses per Household: $1,588/1,063 = 1.5$

Please reference Table 3.7-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

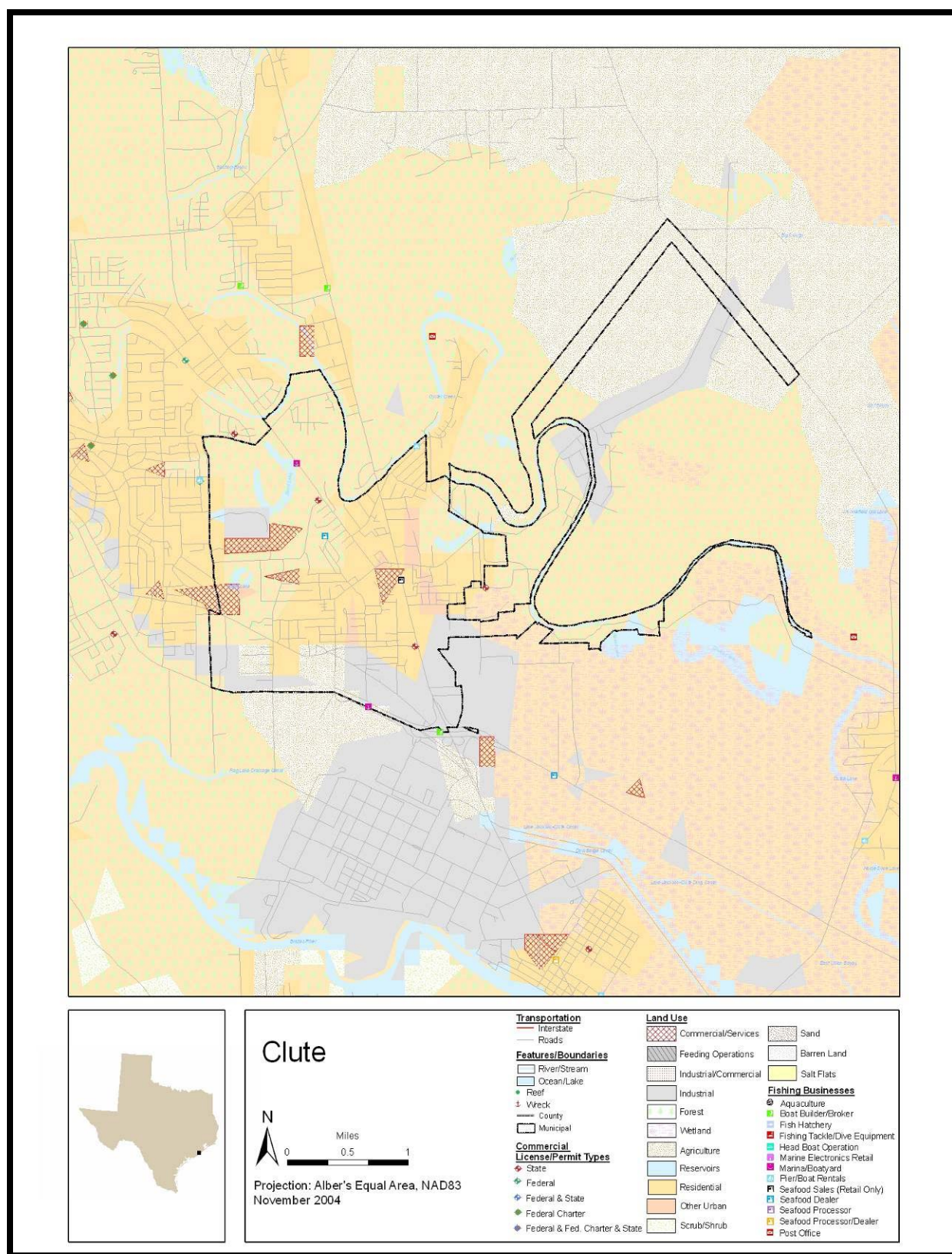
3.7.3 Clute (incorporated, pop. 10,424)

Location and Overview. Clute is located about six miles inland in an urban zone between Lake Jackson and Freeport in south-central Brazoria County. Houston is about 40 miles north, and the Brazos River is two miles south. Clute is a residential-industrial community and part of the Brazosport industrial and port area (Kleiner 2002).

History. Settlers began arriving in the Clute area as early as 1824. The town was named for property owner George Clute in 1881. Sugarcane production played a major role in the local economy. Petrochemical production became important in the 1940s, and continues as such today. Clute was incorporated in 1952 (City of Clute).

Current Conditions and Trends. Clute was home to 10,424 persons in 2000, an increase of 17 percent or 1,514 persons from 1990. This is an urbanized area, and the local economy is relatively diversified and closely associated with that of Lake Jackson and Freeport. Many residents work in petrochemical manufacturing, local retail and other services, and various government positions.

A small but active contingent of commercial fishery participants and charter operators resides in and/or holds post office box addresses in the Clute area. Snapper lead the commercial landings figures for local dealers in 2000, and there were some pelagic landings that year as well. Most participants moor their vessels closer to the Gulf, in or east of Freeport.



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Clute Demographics

Factor	1990	2000
Total population	8,910	10,424
Gender Ratio M/F (Number)	4,537/4,373	5,256/5,168
Age (Percent of total population)		
Under 18 years of age	30.2	31.4
18 to 64 years of age	61.8	61.0
65 years and over	8.0	7.6
Ethnicity or Race (Number)		
White	6,259	6,694
Black or African American	653	798
American Indian and Alaskan Native	42	79
Asian	57	100
Native Hawaiian and other Pacific Islander	N/A	1
Some other race	1,899	2,401
Two or more races	N/A	351
Hispanic or Latino (any race)	3,193	5,013
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	17.4	13.6
Percent high school graduate or higher	64.5	64.8
Percent with a Bachelor's degree or higher	8.6	8.2
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	33.5	41.8
Percent who speak English less than very well	14.5	17.7
Household income (Median \$)	26,975	32,622
Poverty Status (Percent of population with income below poverty line)	12.7	18.2
Percent female headed household	15.5	14.5
Home Ownership (Number)		
Owner occupied	1,372	1,605
Renter occupied	1,837	2,069
Value Owner-occupied Housing (Median \$)	42,500	48,400
Monthly Contract Rent (Median \$)	301	453
Employment Status (Population 16 yrs and over)		
Percent in the labor force	70.1	64.0
Percent of civilian labor force unemployed	4.7	9.0
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	16.7
Service occupations	N/A	17.5
Sales and office occupations	N/A	22.5
Farming, fishing, and forestry occupations	1.7	0.4
Construction, extraction, and maintenance occupations	N/A	24.2
Production, transportation, and material moving occupations	N/A	18.8
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	0.7	0.4
Mining (includes the offshore oil/gas industry workforce)	1.4	0.6
Manufacturing	26.1	18.9
Percent government workers	9.8	9.8
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	20.0
Percent worked outside of county of residence	6.5	10.3

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

† Year 2000 figures include mining in this group; 1990 figures do not. Mining includes the offshore oil industry workforce.

Table 2. Fishing Infrastructure and Services Observed in Clute in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	2
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	3
Fishing associations (recreational/commercial)	1
Fish processors, Wholesale fish house	1
Fisheries research laboratories	1
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	2
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	Several (in general area)
Recreational docks/marinas	1
Bait & Tackle/fishing supplies	Several
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	10
Seafood retail markets	5
Trucking operations	1-2
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Clute in 2003

Type of Business	Frequency
Boat Builder/Broker	3
Boat Builder/Broker; Marina	1
Boat Rentals & Pier	1
Marina	1
Retail Seafood Dealer	1
Total	7

Table 4. Clute Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	110,986	228,050

Table 5. Clute License/Permit Summary: 2000

Commercial (based on physical residence data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
2	0	778
Total = 2		
% Households Holding Commercial Permit or License: $2/3,674 = 0.05$		Average Number of Licenses per Household: $778/3,674 = 0.2$

Please reference Table 3.7-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.



Freeport Ship Channel in 2004 (courtesy of www.serf.tamus.edu)

3.7.4 Freeport (incorporated, pop. 12,708)

Location and Overview. Freeport is a small seaside city located along the Brazos River and Gulf Intracoastal Waterway in southern Brazoria County. Houston is about 45 miles north. This is a busy deepwater port, a center of commerce for an important shrimp fleet in the region, and home to a large petrochemical manufacturing complex. A large marina facility is also located here. While Freeport is part of the Brazosport industrial area, it is surrounded by large areas of protected marshlands and riverine areas. These include the Brazoria National Wildlife Refuge to the northeast, and the Peach Point Wildlife Management Area and San Bernard National Wildlife Refuge to the southwest.

History. Freeport was established in 1912 in association with a large sulfur mining operation. It was incorporated in 1917. Chemical manufacturing has long been an economic mainstay (Kleiner 2002). Quintana and Surfside Beach on the seaward side of the city have developed as attractive destinations for coastal tourists.

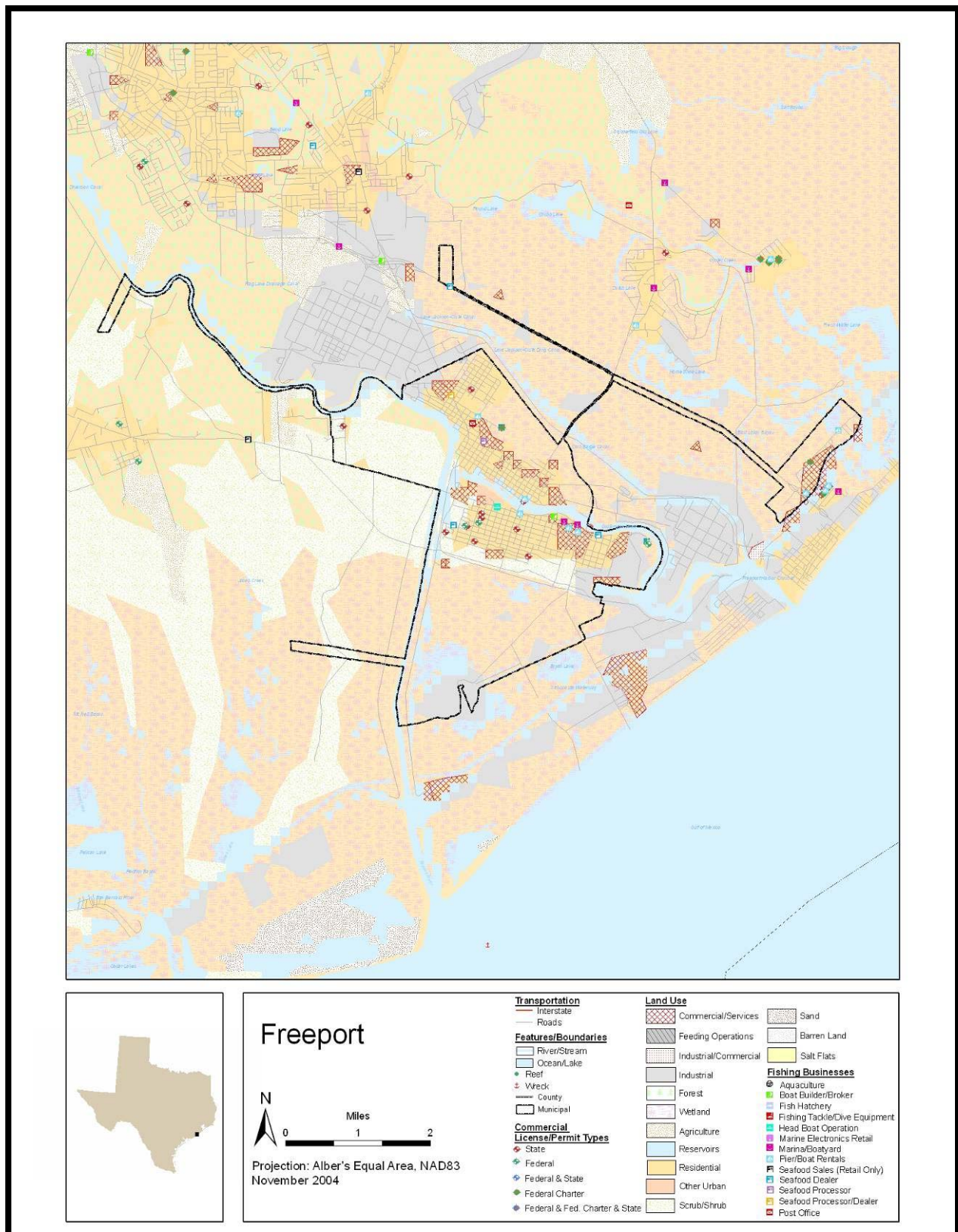
Current Conditions and Trends. The year 2000 census enumerated 12,708 persons in Freeport, an increase of 11 percent or 1,397 persons from 1990. The economy is highly diversified and there are extensive social and economic linkages between persons in Freeport and nearby Clute and Lake Jackson. Many local businesses also serve persons and businesses in the Houston area.

Numerous businesses and services in the Freeport area support both commercial and recreational fishing. A large seafood processor is located here, and there are commercial docking facilities, vessel repair facilities, and recreation-oriented marinas. While some fishing activities do occur in the inshore estuarine zones, the Gulf of Mexico is readily accessible and thus most fishing and shrimping occurs in the nearshore and offshore waters of the Gulf.

A large and productive shrimp trawl fleet is based in Freeport. As many as 70 Gulf shrimp permit holders may have been based here in 2000. There is a much smaller local pelagic fleet, but an extensive charter fleet operates from the area. As many as 22 charter operators were living in or held post office box addresses in Freeport in 2000, and numerous others were residing in adjacent town and cities such as Clute and Lake Jackson.



Trawlers Moored in the Freeport Area



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Freeport Demographics

Factor	1990	2000
Total population	11,389	12,708
Gender Ratio M/F (Number)	5,692/5,697	6,353/6,355
Age (Percent of total population)		
Under 18 years of age	34.2	35.7
18 to 64 years of age	56.7	56.2
65 years and over	9.1	8.1
Ethnicity or Race (Number)		
White	7,086	7,822
Black or African American	1,739	1,700
American Indian and Alaskan Native	41	71
Asian	32	45
Native Hawaiian and other Pacific Islander	N/A	1
Some other race	2,491	2,657
Two or more races	N/A	412
Hispanic or Latino (any race)	4,395	6,614
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	21.3	22.6
Percent high school graduate or higher	58.1	55.1
Percent with a Bachelor's degree or higher	6.4	5.4
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	31.9	45.3
Percent who speak English less than very well	13.7	23.5
Household income (Median \$)	21,483	30,245
Poverty Status (Percent of population with income below poverty line)	24.1	22.3
Percent female headed household	13.4	16.8
Home Ownership (Number)		
Owner occupied	2,163	2,373
Renter occupied	1,627	1,790
Value Owner-occupied Housing (Median \$)	35,800	5,700
Monthly Contract Rent (Median \$)	259	439
Employment Status (Population 16 yrs and over)		
Percent in the labor force	63.6	54.3
Percent of civilian labor force unemployed	9.5	7.5
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	16.4
Service occupations	N/A	16.8
Sales and office occupations	N/A	24.0
Farming, fishing, and forestry occupations	2.3	0.1
Construction, extraction, and maintenance occupations	N/A	20.5
Production, transportation, and material moving occupations	N/A	22.2
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	2.3	0.1
Mining (includes the offshore oil/gas industry workforce)	1.5	0.3
Manufacturing	24.9	17.7
Percent government workers	10.1	10.5
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	22.7
Percent worked outside of county of residence	6.3	7.1

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Freeport in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	1
Boat yards/ Boat builders (recreational/commercial)	1-2
Churches with maritime theme	2
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	2
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	2
Fisheries research laboratories	0
Fishing monuments	1
Fishing pier	3
Hotels/Inns (dockside)	2
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	1
Public boat ramps	6
Recreational docks/marinas	3
Bait & Tackle/fishing supplies	2
Recreational Fishing Tournaments	1
Sea Grant Extension office	0
Seafood restaurants	4
Seafood retail markets	2
Trucking operations	1
Site-seeing/pleasure tours	2
Charter/Head Boats	25+
Commercial Boats	35+

Table 3. Primary Fishing-related Businesses Listed for Freeport in 2003

Type of Business	Frequency
Boat Builder/Broker	2
Boat Builder/Broker; Marina	2
Boat Rentals & Pier	14
Marina	10
Processor	1
Processor; Wholesale Seafood Dealer	1
Retail Seafood Dealer	1
Wholesale Seafood Dealer	2
Total	33

Table 4. Freeport Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	7,445,090	22,597,464

Table 5. Freeport License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
33	19	1,309
Total = 52		
% Households Holding Commercial Permit or License: 52/4,163 = 1.2		Average Number of Licenses per Household: 1,309/4,163 = 0.3

Please reference Table 3.7-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

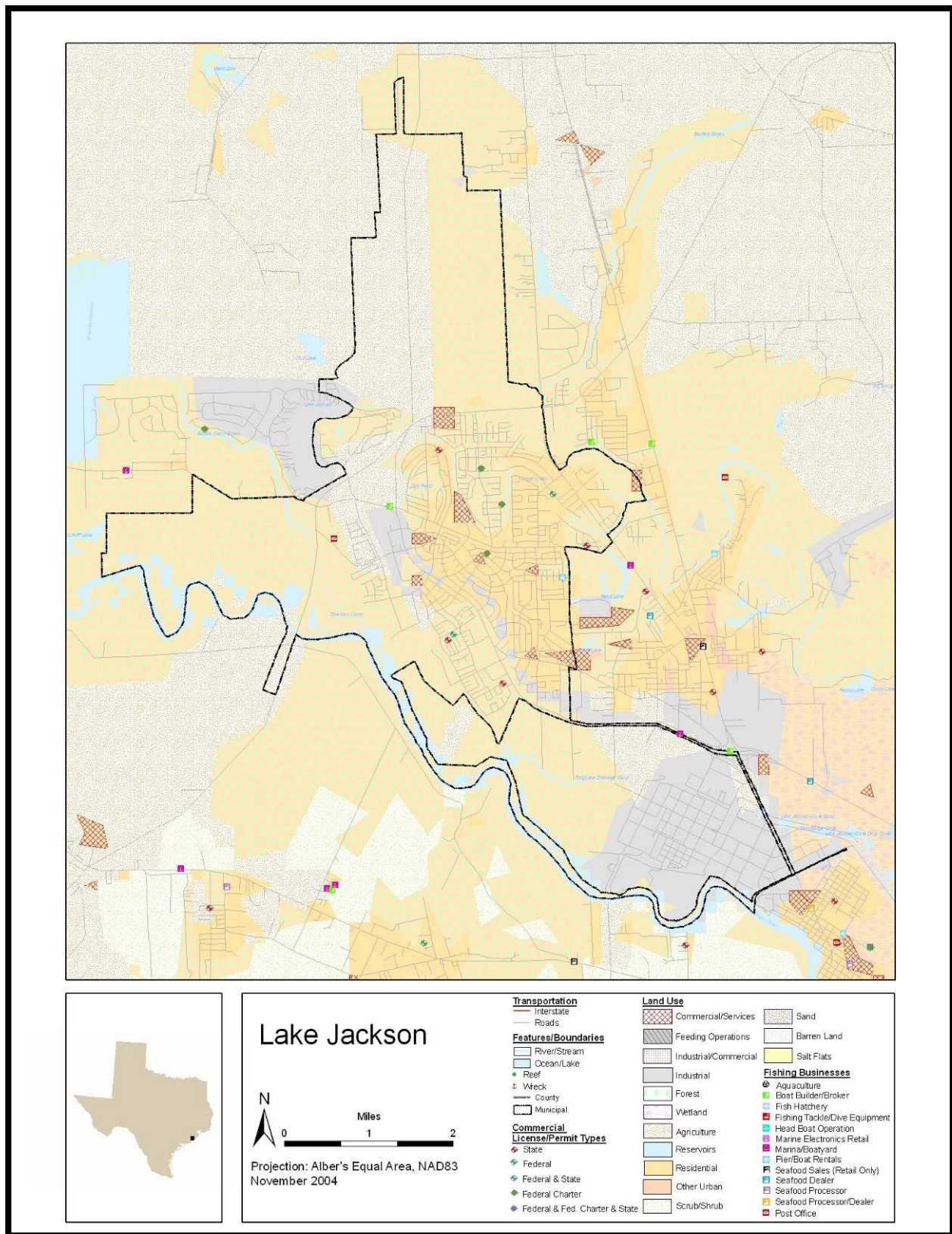
3.7.5 Lake Jackson (incorporated, pop. 26,386)

Location and Overview. Lake Jackson is the largest city in the Brazoria County. It is located immediately north of Freeport and about 40 miles south of Houston. The Gulf of Mexico is less than ten miles to the southeast. The area has developed in close association with petrochemical manufacturing and associated industries. These are facilitated in part by the port facilities at Freeport and close proximity to Houston and regional oil and natural gas resources.

History. The Lake Jackson area was a 3000-acre sugar and cotton plantation during the nineteenth century. The Dow Chemical Company purchased the plantation in 1942 and established Lake Jackson as a residential area for industrial workers during the war years. The town was incorporated in 1944 (Rice 2002; Texas Handbook Online 2005).

Current Conditions and Trends. Lake Jackson was home to 22,776 persons in 1990 and 26,386 persons in 2000, a 16 percent increase. Many residents work in the manufacturing industry and associated services, or at port-related facilities in Freeport. A small percentage travel to Angleton to work, and fewer still commute to jobs in the Houston area.

There are some limited fishing-related businesses and services in Lake Jackson. These tend to serve recreation-oriented clientele. Commercial gear and services are more readily available in the Freeport area. A small fleet of commercial fishery participants and charter operators reside in Lake Jackson but work from Freeport. Commercial participants land their products in Clute and Freeport. Local recreational saltwater anglers often fish from ramps along the nearby coastal zone.



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Lake Jackson Demographics

Factor	1990	2000
Total population	22,776	26,386
Gender Ratio M/F (Number)	11,366/11,410	12,879/13,507
Age (Percent of total population)		
Under 18 years of age	30.3	30.6
18 to 64 years of age	62.7	59.5
65 years and over	7.0	9.9
Ethnicity or Race (Number)		
White	20,376	22,754
Black or African American	728	1,023
American Indian and Alaskan Native	71	102
Asian	508	660
Native Hawaiian and other Pacific Islander	N/A	5
Some other race	1,093	1,370
Two or more races	N/A	472
Hispanic or Latino (any race)	2,458	3,879
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	2.9	1.6
Percent high school graduate or higher	90.2	91.9
Percent with a Bachelor's degree or higher	33.3	35.3
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	11.4	14.0
Percent who speak English less than very well	3.6	3.1
Household income (Median \$)	46,007	60,901
Poverty Status (Percent of population with income below poverty line)	3.4	6.4
Percent female headed household	8.2	8.5
Home Ownership (Number)		
Owner occupied	5,433	6,821
Renter occupied	2,708	2,767
Value Owner-occupied Housing (Median \$)	76,100	95,600
Monthly Contract Rent (Median \$)	364	595
Employment Status (Population 16 yrs and over)		
Percent in the labor force	71.9	66.2
Percent of civilian labor force unemployed	3.3	4.1
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	44.9
Service occupations	N/A	11.1
Sales and office occupations	N/A	22.4
Farming, fishing, and forestry occupations	0.2	0.2
Construction, extraction, and maintenance occupations	N/A	10.0
Production, transportation, and material moving occupations	N/A	11.4
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	0.5	0.3
Mining (includes the offshore oil/gas industry workforce)	0.5	0.5
Manufacturing	38.2	28.6
Percent government workers	9.4	13.7
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	20.2
Percent worked outside of county of residence	8.1	11.9

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Lake Jackson in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	1
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	0
Fisheries research laboratories	1
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	1
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	0
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	3
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	1
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Lake Jackson in 2003

Type of Business	Frequency
Boat Builder/Broker	1
Boat Rentals & Pier	1
Marina	1
Total	3

Table 4. Lake Jackson Commercial Landings and Value Summary: 2002

Commercial landings cannot be attributed to fishery participants in Lake Jackson.

Table 5. Lake Jackson License/Permit Summary: 2000

Commercial (based on physical residence data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
11	5	2,148
Total = 16		
% Households Holding Commercial Permit or License: 16/9,588 = 0.2		Average Number of Licenses per Household: 2,148/9,588 = 0.2

Please reference Table 3.7-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

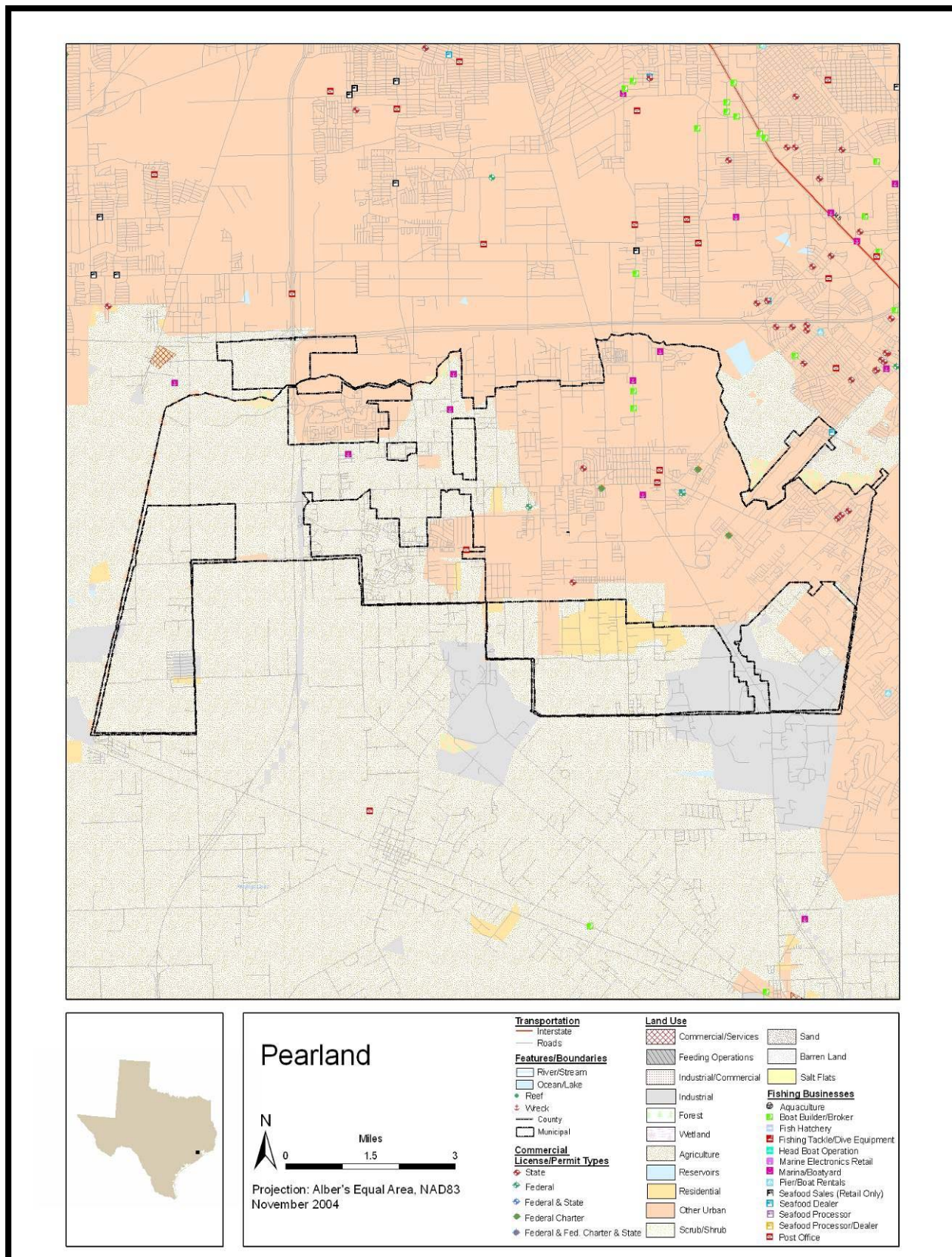
3.7.6 Pearland (incorporated, pop. 37,640)

Location and Overview. Pearland is located in an urbanized zone in northern Brazoria County, just south of downtown Houston. Education/administration and retail sales are Pearland's major employment sectors (Pearland Chamber of Commerce). Galveston Bay is approximately 20 miles east of the city, with access to the Gulf of Mexico another 25 miles to the southeast, through a channel known as Bolivar Roads.

History. Pearland was named for involvement of its early residents in pear production when it was little more than a railroad switching station in the late 1800s. The first post office was established in 1893. Like many towns and cities in the area, Pearland was devastated by the hurricane of 1900. Clear distinctions from Houston have diminished as the large city has grown in terms of population and spatial area (Pearland Chamber of Commerce; Allbright 2002).

Current Conditions and Trends. Comparison of 1990 and 2000 census figures make clear the extent of spillover from the Greater Houston metropolitan area. The town was home to 18,697 persons in 1990 and 37,640 persons in 2000, a 100 percent increase. During both census periods, the majority of Pearland residents worked in management, professional, and related occupations in Houston. The average commute time was 30 minutes.

There are numerous retail fish markets and a small store that sells fishing gear in Pearland, but few other fishing-related businesses or services. A small fleet of commercial operators is based here, but sell their products to dealers near Galveston. Four charter operators lived in or maintained post office boxes in Pearland in 2000. Three persons in the area held Gulf shrimp permits in 2003.



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Pearland Demographics

Factor	1990	2000
Total population	18,697	37,640
Gender Ratio M/F (Number)	9,168/9,529	18,468/19,172
Age (Percent of total population)		
Under 18 years of age	28.8	28.8
18 to 64 years of age	63.3	62.8
65 years and over	7.9	8.4
Ethnicity or Race (Number)		
White	17,001	31,100
Black or African American	312	2,006
American Indian and Alaskan Native	64	157
Asian	270	1,373
Native Hawaiian and other Pacific Islander	N/A	14
Some other race	1,050	2,305
Two or more races	N/A	685
Hispanic or Latino (any race)	2,311	6,107
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	5.5	4.2
Percent high school graduate or higher	85.0	87.9
Percent with a Bachelor's degree or higher	22.1	29.1
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	11.0	16.1
Percent who speak English less than very well	4.4	5.2
Household income (Median \$)	42,565	64,156
Poverty Status (Percent of population with income below poverty line)	4.7	4.7
Percent female headed household	11.5	9.7
Home Ownership (Number)		
Owner occupied	4,629	10,480
Renter occupied	1,962	2,712
Value Owner-occupied Housing (Median \$)	75,000	117,700
Monthly Contract Rent (Median \$)	371	672
Employment Status (Population 16 yrs and over)		
Percent in the labor force	74.5	72.5
Percent of civilian labor force unemployed	3.1	3.9
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	40.9
Service occupations	N/A	9.3
Sales and office occupations	N/A	29.7
Farming, fishing, and forestry occupations	0.8	0.1
Construction, extraction, and maintenance occupations	N/A	9.6
Production, transportation, and material moving occupations	N/A	10.5
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	0.9	0.2
Mining (includes the offshore oil/gas industry workforce)	3.7	1.8
Manufacturing	18.1	14.5
Percent government workers	14.2	15.2
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	30.0
Percent worked outside of county of residence	69.6	70.4

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Pearland in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	2
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	2
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	0
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	2
Seafood retail markets	several
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Pearland in 2003

Type of Business	Frequency
Boat Builder/Broker	2
Marina	6
Wholesale Seafood Dealer	1
Total	9

Table 4. Pearland Commercial Landings and Value Summary: 2002

Commercial landings cannot be attributed to fishery participants in Pearland.

Table 5. Pearland License/Permit Summary: 2000

Commercial (based on physical residence data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
5	5	3,457
Total = 10		
% Households Holding Commercial Permit or License: 10/13,192 = 0.07		Average Number of Licenses per Household: 3,457/13,192 = 0.3

Please reference Table 3.7-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

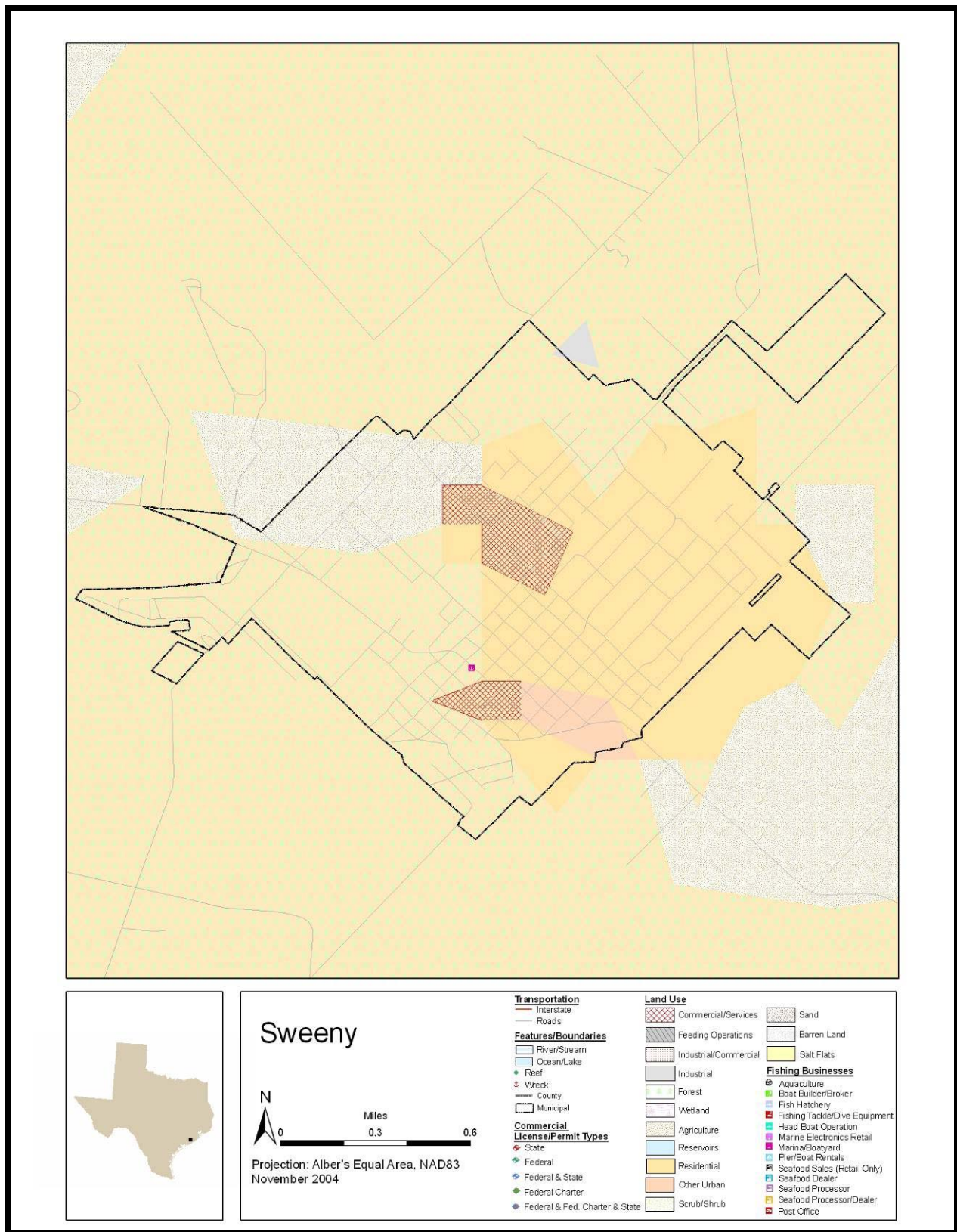
3.7.7 Sweeny (incorporated, pop. 3,624)

Location and Overview. Sweeny is a small inland town located along Farm Road 524 and the Missouri Pacific Railroad in west-central Brazoria County. The town is about 40 miles south of Houston and 25 miles north of the Gulf of Mexico. Brazoria is about eight miles west. Freshwater recreational anglers often fish in the nearby San Bernard River.

History. The town is named after John Sweeny, a slave holder who came to the area in 1833. Sweeny's early economy was based in agriculture. The discovery of the *Old Ocean* oilfield in the mid-1930s and the subsequent establishment of several petrochemical refineries in the area in the 1940s were highly significant for residents in Sweeny and surrounding towns. Phillips Petroleum and the Pan American Petroleum Company were the town's major employers in the 1990s. Sweeny incorporated in 1945 (Kleiner 2002).

Current Conditions and Trends. The year 2000 census enumerated 3,624 persons in Sweeny, an increase of 327 persons from 1990. Many residents worked in petrochemical manufacturing, while others commuted to jobs in Bay City, Lake Jackson, or Freeport.

Phillips Petroleum Company has a commercial docking facility on the nearby San Bernard River. Our data indicate that residents of the town are minimally involved in commercial marine fisheries, or charter operations. Numerous residents do hold recreational saltwater fishing licenses.



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Sweeny Demographics

Factor	1990	2000
Total population	3,297	3,624
Gender Ratio M/F (Number)	1,581/1,716	1,739/1,885
Age (Percent of total population)		
Under 18 years of age	30.8	29.7
18 to 64 years of age	54.0	54.2
65 years and over	15.2	16.1
Ethnicity or Race (Number)		
White	2,594	2,727
Black or African American	464	572
American Indian and Alaskan Native	6	37
Asian	5	15
Native Hawaiian and other Pacific Islander	N/A	0
Some other race	228	217
Two or more races	N/A	56
Hispanic or Latino (any race)	353	497
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	9.8	6.7
Percent high school graduate or higher	69.0	78.1
Percent with a Bachelor's degree or higher	14.4	13.1
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	6.1	12.8
Percent who speak English less than very well	1.5	5.3
Household income (Median \$)	28,788	36,497
Poverty Status (Percent of population with income below poverty line)	17.3	9.9
Percent female headed household	12.6	14.9
Home Ownership (Number)		
Owner occupied	868	901
Renter occupied	281	437
Value Owner-occupied Housing (Median \$)	48,800	65,300
Monthly Contract Rent (Median \$)	240	502
Employment Status (Population 16 yrs and over)		
Percent in the labor force	55.3	52.0
Percent of civilian labor force unemployed	7.0	6.7
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	24.5
Service occupations	N/A	13.5
Sales and office occupations	N/A	20.1
Farming, fishing, and forestry occupations	0.7	0.9
Construction, extraction, and maintenance occupations	N/A	17.9
Production, transportation, and material moving occupations	N/A	23.1
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	0.7	0.9
Mining (includes the offshore oil/gas industry workforce)	3.0	0.0
Manufacturing	23.5	21.6
Percent government workers	16.3	15.5
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	24.7
Percent worked outside of county of residence	11.7	12.8

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Sweeny in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	0
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	1
Recreational docks/marinas	1
Bait & Tackle/fishing supplies	0
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	0
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Sweeny in 2003

Type of Business	Frequency
Marina	1
Total	1

Table 4. Sweeny Commercial Landings and Value Summary: 2002

Data not available.

Table 5. Sweeny License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
--	--	764
Total = --		
% Households Holding Commercial Permit or License: --		Average Number of Licenses per Household: 764/1,338 = 0.6

Please reference Table 3.7-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

Identifying Communities Associated with the Fishing Industry in Texas

-Final Report-



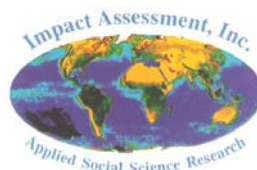
Volume II

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NOAA Fisheries, Southeast Region
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By



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3.8 Matagorda County Communities

This section describes the study communities in Matagorda County. These are: Bay City, Matagorda, Palacios, and Sargent.

Matagorda is a sparsely populated county located along the northern portion of the Coastal Bend region. It is bordered on the northeast by Brazoria County, on the north and west by Jackson County, and on the southwest by Calhoun County. Bay City, the county seat, is roughly 57 miles south-southwest of downtown Houston, and about 250 miles north of the Mexican border.

Matagorda County was home to some 38,000 persons in 2000, making it the 72nd most populous county in Texas that year. The county comprises 1,597 square miles of land, and 211 square miles of water.

Matagorda County was incorporated in 1837 as one of the original 23 counties of the Texas Republic. Cotton, sugarcane, and corn were important crops early in the history of the county (Hyde 2002:7). Rice became an increasingly important as production of cotton declined during the early 20th century. Cattle ranching and related activities have long been important forms of enterprise in the county (Kleiner 2002).

As indicated in the table below, employment in commercial fishing declined significantly in essentially all sectors during the early 1990s. This replicates a trend noted in counties throughout coastal Texas during the period.

Table 3.8-1 Matagorda County Employment in Marine Fisheries: 1990-1995

Sector	1990 Employment	1995 Employment	Percent Change
Commercial Harvesting	1,778	1,356	-23.7
Processing	1	2	100
Wholesale	220	133	-39.5
Retail	907	409	-54.9

Source: Dokken et al. (1998: 96)

The racial composition of the year 2000 population was 53 percent Caucasian, 31 percent Hispanic, and 13 percent African-American. Median family income was 32,174, which was somewhat below the state median income of \$39,927. Some 19 percent of residents lived in poverty, and seven percent of families with children were headed by single females.



Matagorda Ship Channel, 2004

Table 3.8-2 Earnings in Matagorda County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share of 2000 Earnings	\$ Change 1990-2000	% Share of Change 1990-2000
	1990	2000			
Earnings	541,423	510,556	100.0	-30,867	100.0
Farm earnings	23,239	29,477	5.8	6,238	20.2
Ag. services, forestry, fish.	9,421	13,723	2.7	4,302	13.9
Fishing	5,168	6,465	1.3	1,297	4.2
Mining	17,200	12,318	2.4	-4,882	-15.8
Oil and gas extraction	17,200	12,318	2.4	-4,882	-15.8
Construction	95,854	46,204	9.0	-49,650	-1.61
Special trade contractors	9,404	7,100	1.4	-2,304	-7.4
Manufacturing	47,999	36,076	7.0	-11,923	-38.6
Fabricated metal products	NA	NA	NA	NA	NA
Industrial mach. & equip.	NA	1,208	0.2	NA	NA
Food and kindred	2,694	636	0.1	-2,058	-6.7
Chemicals and allied	40,608	NA	NA	NA	NA
Petroleum and coal	0	0	0	0	0
Transport.,Public Utilities	NA	152,837	29.9	NA	NA
Trucking and warehousing	3,126	4,510	0.9	1,384	4.5
Water transportation	NA	295	0	NA	NA
Transportation by air	NA	NA	NA	NA	NA
Wholesale trade	14,162	11,110	2.2	-3,052	-9.9
Retail trade	47,437	42,472	8.3	-4,965	-16.1
Eating and drinking places	7,105	10,043	2.0	2,938	9.5
Finance, insur., real estate	13,471	16,062	3.1	2,591	8.4
Services	NA	96,710	18.9	NA	NA
Business services	NA	10,407	2.0	NA	NA
Health services	12,516	16,050	3.1	3,534	11.4
Legal services	3,324	4,658	0.9	1,334	4.3
Engineer./Management serv.	11,613	24,090	4.7	12,477	40.3
Government	79,623	83,044	16.3	3,421	11.1

Source: Bureau of Economic Analysis, Regional Economic Information System

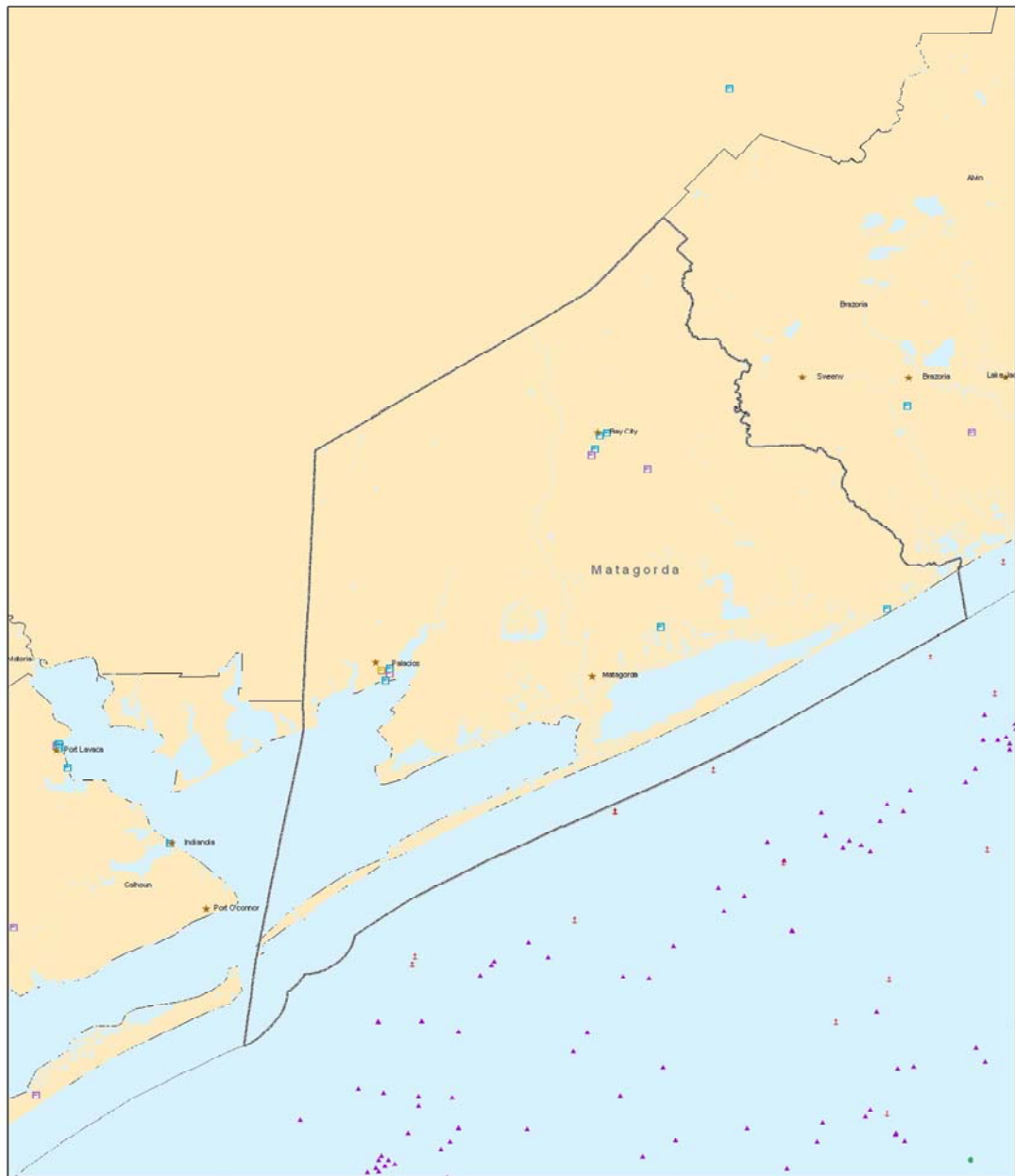
Table 3.8-3 Year 2000 Commercial Permits and Licenses, and 2003 Gulf Shrimp Permits: Matagorda Co.*

Permit Type	Study Communities			
	Bay City	Matagorda	Palacios	Sargent
Pelagic Charter	--	3	--	--
Reef Fish Charter	--	3	--	--
Swordfish	--	--	--	--
King Mackerel	--	1	3	--
Rock Shrimp	--	--	2	--
Red Snapper	--	6	3	--
Spiny Lobster	--	--	--	--
Spanish Mackerel	--	--	2	--
Gulf Reef Fish	--	9	3	--
Shark	--	--	--	--
South Atlantic Snapper Grouper	--	--	--	--
Total Federal Permits 2000	--	22	9	--
Total Federal Permit Holders 2000	--	9	5	--
Total State License Holders 2000	19	33	170	4
Gulf Shrimp Permits 2003 **	--	4	95	--

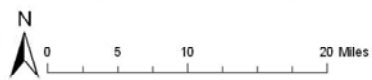
* Includes all permits and licenses that can be attributed to the communities by *both* street and post office box addresses; these data are used to generate counts of permit and license holders for whom evidence indicates actual residence, as provided in the community descriptions. ** 2003 is the first year for which Gulf shrimp permit data are available.



Coastal Wetlands in Matagorda County



Matagorda County



Legend

- | | |
|--------------------------------|----------------|
| ★ Study Community | ● Reef |
| □ Processor | ⚓ Wreck |
| □ Processor and Seafood Dealer | ▲ Platform |
| □ Seafood Dealer | — County Lines |
| | — Interstate |

3.8.1 Bay City (incorporated, pop. 18,667)

Location and Overview. Bay City is a small city located central Matagorda County. Houston is 75 miles northeast, and the Matagorda Bay system and Gulf of Mexico are approximately 25 miles south. Bay City is the seat of government for Matagorda County. The Colorado River is just two miles west of Bay City. Important forms of enterprise in the area include farming, ranching, oil development, and services associated with the nearby South Texas Nuclear Project.

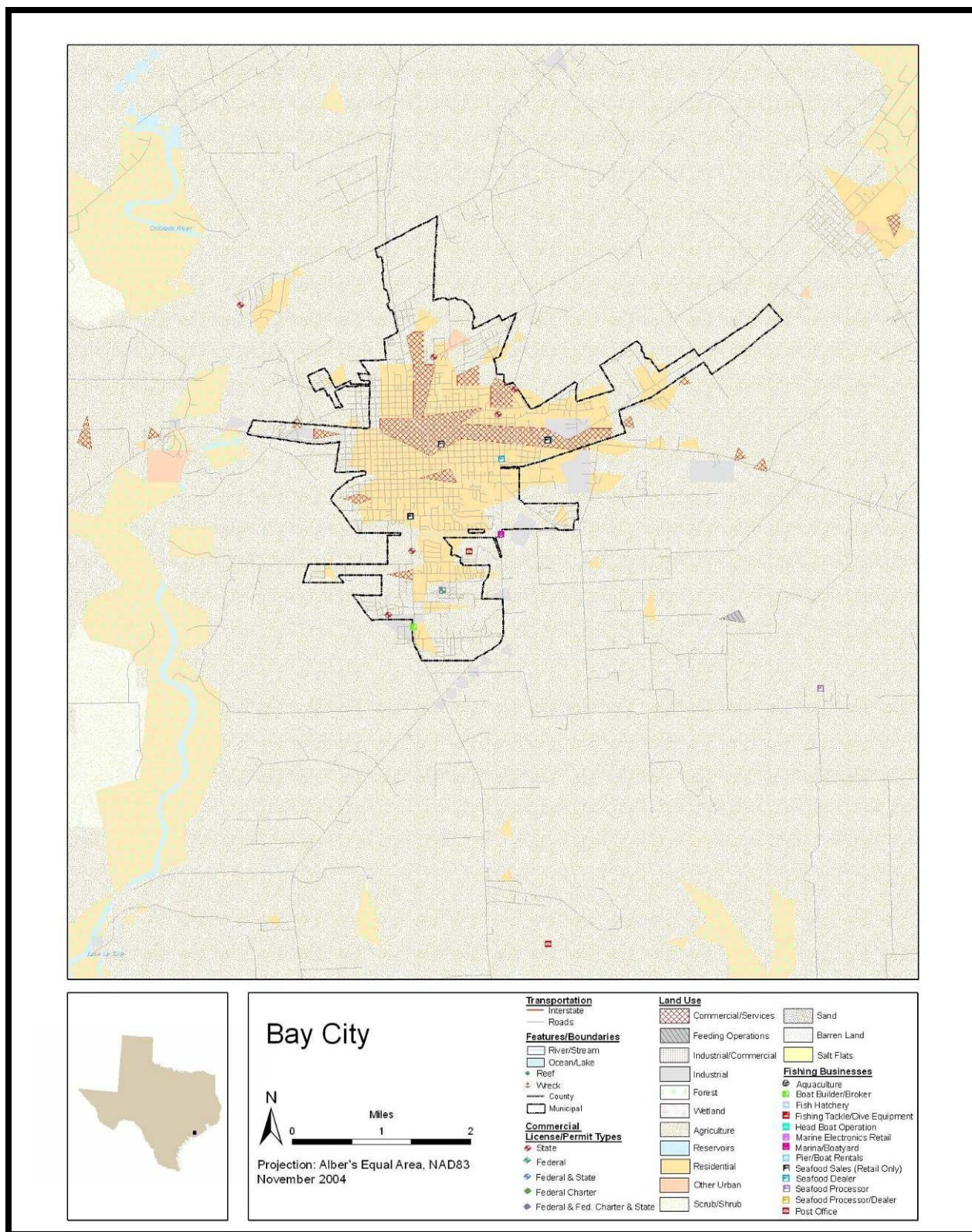
History. Bay City was founded and incorporated in 1894. Its name derives from its location on the Bay Prairie. Oil was discovered in Matagorda County in 1904, and its production has long been of economic significance to residents. Rice production has been important, and Bay City was one of the largest rice-producing regions in the United States in the mid-1900s. The establishment of the Celanese Chemical Corporation in the 1960s, and the South Texas Nuclear Project in the 1980s brought new job opportunities to residents in Bay City (Kleiner 2002).

Current Conditions and Trends. The population of Bay City increased slightly from 18,170 persons in 1990 to 18,667 residents in 2000 (U.S. Census Bureau). Many residents work in professional and managerial positions or in manufacturing jobs at the petrochemical and nuclear facilities. A small number of residents work in tourism-related positions associated with freshwater fishing on the Colorado River. Just over 20 percent of residents commute to jobs in Angleton, Lake Jackson, or Freeport.

Bay City is located a considerable distance inland, and while the Colorado flows adjacent to Bay City, it is shallow in parts and a dam precludes river traffic between the town and the bay areas. As such, involvement of residents in the commercial fishing industry is limited relative to that occurring in the seaside towns of Palacios, Sargent, and Matagorda. There is, however, a local seafood dealer and a small but active contingent of shrimp trawl captains who moor in the coastal areas. Some commercial fishery participants trailer small vessels to access points along the bay. A few local businesses serve recreational anglers and consumers of seafood. The Port of Bay City Authority administers the Matagorda Harbor and an upriver industrial facility in Bay City proper. Matagorda Harbor is used extensively by Bay City residents and others in the region, as described in the Matagorda community section that follows.



Downtown Bay City



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Bay City Demographics

Factor	1990	2000
Total population	18,170	18,667
Gender Ratio M/F (Number)	8,815/9,355	9,092/9,575
Age (Percent of total population)		
Under 18 years of age	31.7	30.9
18 to 64 years of age	57.7	58.0
65 years and over	10.6	11.1
Ethnicity or Race (Number)		
White	12,045	11,502
Black or African American	3,182	3,221
American Indian and Alaskan Native	49	139
Asian	259	165
Native Hawaiian and other Pacific Islander	N/A	13
Some other race	2,635	3,143
Two or more races	N/A	484
Hispanic or Latino (any race)	4,809	6,484
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	15.6	15.5
Percent high school graduate or higher	70.6	69.4
Percent with a Bachelor's degree or higher	15.3	12.4
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	21.5	28.1
Percent who speak English less than very well	7.7	12.1
Household income (Median \$)	25,452	30,446
Poverty Status (Percent of population with income below poverty line)	22.2	18.3
Percent female headed household	14.4	16.1
Home Ownership (Number)		
Owner occupied	3,479	6,912
Renter occupied	3,170	1,201
Value Owner-occupied Housing (Median \$)	57,300	62,900
Monthly Contract Rent (Median \$)	280	407
Employment Status (Population 16 yrs and over)		
Percent in the labor force	62.0	59.9
Percent of civilian labor force unemployed	7.8	8.5
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	25.7
Service occupations	N/A	17.7
Sales and office occupations	N/A	23.3
Farming, fishing, and forestry occupations	2.1	2.8
Construction, extraction, and maintenance occupations	N/A	16.7
Production, transportation, and material moving occupations	N/A	13.8
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	2.1	3.6
Mining (includes the offshore oil/gas industry workforce)	2.0	1.7
Manufacturing	11.9	9.6
Percent government workers	11.2	15.3
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	22.5
Percent worked outside of county of residence	13.2	21.3

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Bay City in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	1
Boat yards/ Boat builders (recreational/commercial)	2-3
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	2
Recreational Fishing Tournaments	2
Sea Grant Extension office	1
Seafood restaurants	10
Seafood retail markets	2
Trucking operations	1
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Bay City in 2003

Type of Business	Frequency
Boat Builder/Broker	1
Boat Builder/Broker; Marina	1
Marina	1
Retail Seafood Dealer	3
Total	6

Table 4. Bay City Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	128,510	111,944

Table 5. Bay City License/Permit Summary: 2000

Commercial (based on physical residence data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
11	--	26
Total = 11		
% Households Holding Commercial Permit or License: 11/6,912 = 0.2		Average Number of Licenses per Household: 26/6,912 = 0.03

Please reference Table 3.8-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.8.2 Matagorda (unincorporated, pop. 1,690)

Location and Overview. Matagorda is a small town located along the Gulf Intracoastal Waterway at the terminus of State Route 60 in southern Matagorda County. The Mad Island Wildlife Management Area lies to the west, East Matagorda Bay to the east, and Matagorda Bay to the southwest. The Matagorda Peninsula is roughly nine miles south. The Colorado River continues its flow to the Gulf of Mexico across this undeveloped, narrow sandy spit of land, which itself is accessible via rural route 2031. Channel maintenance at and above the Colorado River jetties enables vessels to access to the Gulf of Mexico and enhances commercial and recreational fishing and related businesses in the area. Ranching and tourism are also primary forms of local industry (Man 2002).

History. Matagorda was established in 1827 as a military outpost designated to protect newly arriving settlers. The town was incorporated in 1830 and as such is the third oldest in Texas. Early industries included cotton production, shipping, and ranching. Oil production and the Texas Gulf Sulphur Company brought new employment opportunities to Matagorda in the 1920s. Commercial and subsistence-oriented fishing have long been of significance for residents (Kleiner 2002; Man 2002).

Current Conditions and Trends. The year 2000 census enumerated 1,690 residents, up slightly from 1,612 in 1990. Nearly 20 percent of Matagorda residents held jobs outside of Matagorda County. Given distances to towns and cities in adjacent counties, this requires significant commuting time. But Matagorda residents maintain close social and economic ties with persons, businesses, and services in Bay City, and thus the typical commute for work, pleasure, school, or other reasons is the 20 mile ride into Bay City.

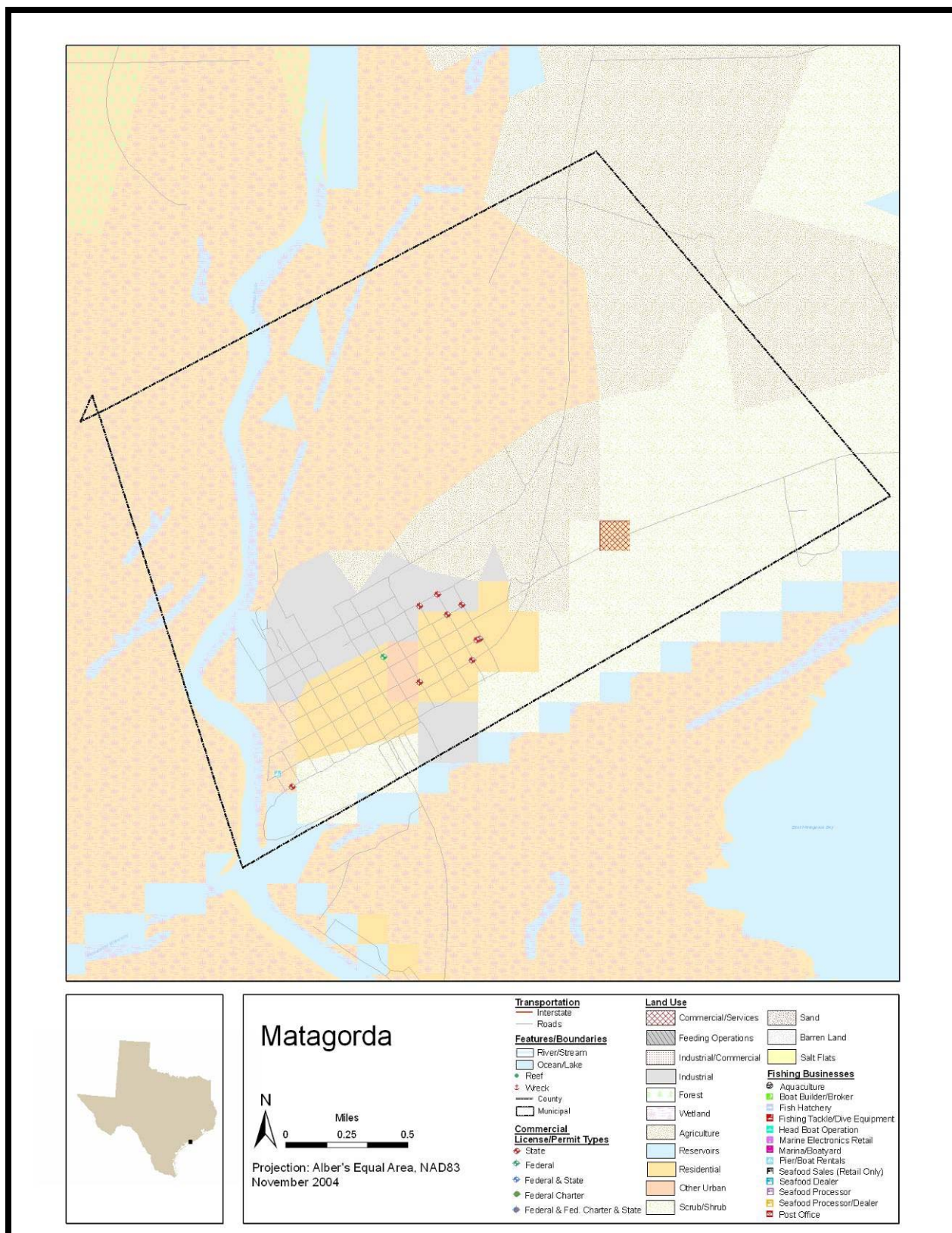
Fishing-related business and service activities figure prominently in the lives of many Matagorda residents. The harbor administered by the Bay City Authority includes over 200 boat slips, and commercial docking facilities. Several public boat ramps and bait and tackle supply stores support fishing in the area. Local civic and fishing associations host numerous fishing tournaments each year. There are also several wholesale and retail fish markets in town. Fishing and shrimp harvesting occurs in both the bay areas and in the Gulf of Mexico

Informants residing in the Matagorda area report that commercial fishing here is in a state of decline, and that some participants are becoming increasingly involved in commercial aquaculture. Given seafood harvesting and marketing challenges, some town officials report they perceive a need to establish new eco-tourism services in the area, specifically those associated with “birding.”

A small but productive commercial fleet persists, however, and a charter fleet is also active in the area. Our landings data for Matagorda are indicative of only a portion of landings by residents or persons maintaining post office boxes in Matagorda, as some interact with seafood dealers in neighboring towns such as Palacios and Sargent. A number of locally-moored charter operators reside not only in Matagorda, but also in neighboring towns such as Wadsworth and Bay City.



The Colorado River Jetties South of Matagorda



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Matagorda Demographics

Factor	1990	2000
Total population	1,612	1,690
Gender Ratio M/F (Number)	834/778	862/828
Age (Percent of total population)		
Under 18 years of age	25.0	22.5
18 to 64 years of age	61.0	63.8
65 years and over	14.0	13.7
Ethnicity or Race (Number)		
White	1,497	1,504
Black or African American	55	19
American Indian and Alaskan Native	8	17
Asian	0	4
Native Hawaiian and other Pacific Islander	N/A	0
Some other race	51	120
Two or more races	N/A	26
Hispanic or Latino (any race)	122	206
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	17.8	8.9
Percent high school graduate or higher	67.9	76.7
Percent with a Bachelor's degree or higher	5.8	15.0
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	7.8	12.1
Percent who speak English less than very well	5.3	4.7
Household income (Median \$)	29,105	28,376
Poverty Status (Percent of population with income below poverty line)	8.8	16.6
Percent female headed household	3.5	7.8
Home Ownership (Number)		
Owner occupied	473	339
Renter occupied	152	68
Value Owner-occupied Housing (Median \$)	55,560	55,950
Monthly Contract Rent (Median \$)	266	272
Employment Status (Population 16 yrs and over)		
Percent in the labor force	64.0	56.6
Percent of civilian labor force unemployed	7.7	6.1
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	28.0
Service occupations	N/A	11.1
Sales and office occupations	N/A	20.8
Farming, fishing, and forestry occupations	16.7	7.8
Construction, extraction, and maintenance occupations	N/A	16.6
Production, transportation, and material moving occupations	N/A	15.5
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	18.1	13.2
Mining (includes the offshore oil/gas industry workforce)	2.2	1.1
Manufacturing	7.3	11.0
Percent government workers	16.9	11.0
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	N/A
Percent worked outside of county of residence	15.0	18.8

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Matagorda in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	2
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	2
Fish processors, Wholesale fish house	3
Fisheries research laboratories	1
Fishing monuments	0
Fishing pier	1
Hotels/Inns (dockside)	5
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	1
Public boat ramps	4
Recreational docks/marinas	1
Bait & Tackle/fishing supplies	6
Recreational Fishing Tournaments	Numerous
Sea Grant Extension office	1
Seafood restaurants	3
Seafood retail markets	1
Trucking operations	1
Site-seeing/pleasure tours	Numerous
Charter/Head Boats	Numerous
Commercial Boats	15+

Table 3. Primary Fishing-related Businesses Listed for Matagorda in 2003

Type of Business	Frequency
Boat Rentals & Pier	1
Total	1

Table 4. Matagorda Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	3,631	4,850

Table 5. Matagorda License/Permit Summary: 2000

Commercial (based on physical residence data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
18	6	3
Total = 24		
% Households Holding Commercial Permit or License: 24/407 = 5.8		Average Number of Licenses per Household: 3/407 = .01

Please reference Table 3.8-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.8.3 Palacios (unincorporated, pop. 4,207)

Location and Overview. Palacios is small town located in the extreme southwest portion of Matagorda County. Houston is 90 miles northeast, Victoria is 45 miles northwest, and Bay City is 30 miles northeast. Matagorda is about 14 miles east by air, but the trip by road or water would require a more lengthy and circuitous trip.

Palacios was built along the banks of Tres Palacios Bay, and its residents have long been involved in commercial shrimp trawling and various types of fishing. Although the South Texas Project Nuclear Operating Company and Formosa Plastic are now the area's two largest employers (City of Palacios 2000), the town is home to the second largest commercial fishing fleet in Texas, and the eleventh largest in the United States. The Port of Palacios is also the state's largest producer of shrimp (City of Palacios Economic Development Corporation 2000). The Matagorda County Navigation District Number One facilities are also located here. These facilities housed 380 boats and 16 seafood businesses in 1990 (Griffin 2002). Palacios vessels typically access the Gulf of Mexico via a 14-mile voyage through Matagorda Bay to Matagorda Ship Channel.

History. Palacios was established in the early 1900s. Fishing and oyster harvesting quickly became, and remain, significant aspects of the local economy. Other early forms of enterprise included cotton, rice, and fruit and vegetable production. Petrochemical manufacturing and nuclear energy production facilities in the region led to increased economic opportunity and growth in Palacios in the 1960s. Jobs in manufacturing, agriculture, aquaculture, and marine fisheries helped offset employment losses when the nuclear power facility shifted from construction to operation during the 1990s (Griffin 2002).

Current Conditions and Trends. The year 2000 population of Palacios was 4,207 persons, an increase of eight percent above the 1990 figure of 3,904. Many residents work in seafood-related businesses. As noted above, employment opportunities at the nuclear power facility near Bay City and at petrochemical facilities in the region are also significant. Nearly 20 percent of persons in the local workforce commute to jobs outside of Matagorda County.

There are numerous well-established fishing-related businesses and services in Palacios. The majority are associated with the shrimp harvesting, processing, and distribution sectors. Commercial docking facilities accommodate a large and productive trawl fleet. Persons of Vietnamese ancestry have, over recent decades, complemented local seafood operations with highly successful efforts of their own. Unfortunately, marketing challenges have reportedly led to numerous layoffs across the fleet, and many vessels were sitting idle at the time of this study. The fleet here is quite large. We were able to prove actual physical residence for 118 of 170 state commercial license holders in the area in 2000, and 95 Gulf shrimp permits holders maintained post office boxes or lived in Palacios in 2003.

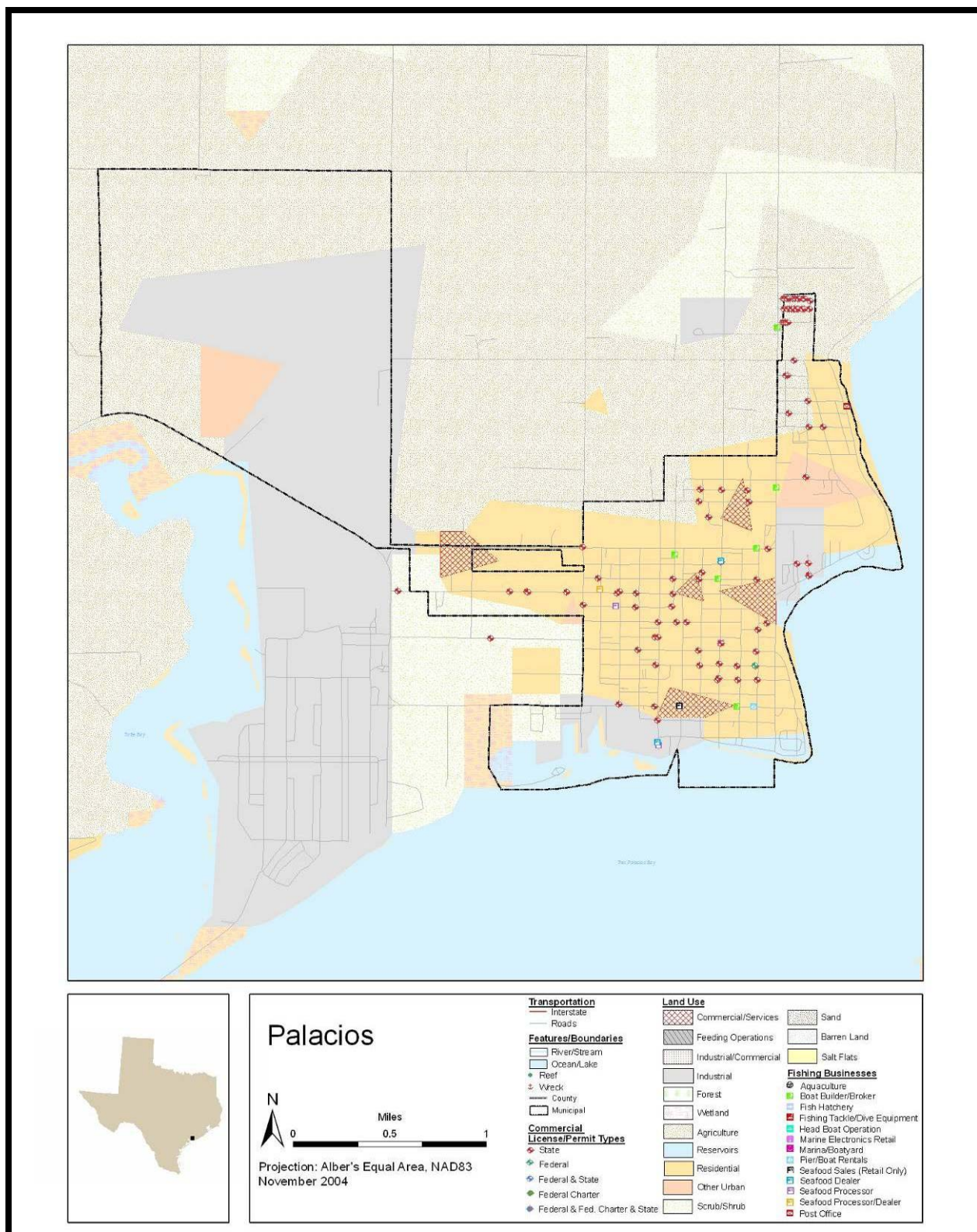
Numerous fishing piers, public boat ramps, bait and tackle shops, and other businesses wholesale fish houses/processors also served residents at the time of this study. In 2003, there were 95 Gulf shrimp permit holders in Palacios.



Palacios Harbor at Night



Palacios Trawl Rigs



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Palacios Demographics

Factor	1990	2000
Total population	3,904	4,207
Gender Ratio M/F (Number)	1,948/1956	2,111/2,096
Age (Percent of total population)		
Under 18 years of age	35.1	34.8
18 to 64 years of age	51.9	60.7
65 years and over	13.0	4.5
Ethnicity or Race (Number)		
White	2,708	2,475
Black or African American	252	214
American Indian and Alaskan Native	4	33
Asian	257	289
Native Hawaiian and other Pacific Islander	N/A	0
Some other race	683	1,064
Two or more races	N/A	132
Hispanic or Latino (any race)	1,836	2,342
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	23.0	26.3
Percent high school graduate or higher	40.9	55.9
Percent with a Bachelor's degree or higher	11.8	12.5
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	43.6	43.5
Percent who speak English less than very well	14.5	19.1
Household income (Median \$)	25,833	28,350
Poverty Status (Percent of population with income below poverty line)	32.9	23.2
Percent female headed household	14.8	13.9
Home Ownership (Number)		
Owner occupied	848	948
Renter occupied	403	438
Value Owner-occupied Housing (Median \$)	40,700	43,750
Monthly Contract Rent (Median \$)	231	289
Employment Status (Population 16 yrs and over)		
Percent in the labor force	58.7	51.2
Percent of civilian labor force unemployed	13.0	9.5
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	22.6
Service occupations	N/A	11.5
Sales and office occupations	N/A	24.3
Farming, fishing, and forestry occupations	9.0	9.1
Construction, extraction, and maintenance occupations	N/A	8.5
Production, transportation, and material moving occupations	N/A	16.6
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	10.2	12.2
Mining (includes the offshore oil/gas industry workforce)	0.0	0.4
Manufacturing	10.4	12.6
Percent government workers	20.1	19.8
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	N/A
Percent worked outside of county of residence	11.1	19.6

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Palacios in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	1
Boat yards/ Boat builders (recreational/commercial)	2
Churches with maritime theme	0
Docking facilities (commercial)	2
Fishing Gear, Electronics, Welding, and other repair	0
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	8
Fisheries research laboratories	1
Fishing monuments	0
Fishing pier	5
Hotels/Inns (dockside)	1
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	3
NMFS or state fisheries office (port agent, etc.)	1
Public boat ramps	7
Recreational docks/marinas	1
Bait & Tackle/fishing supplies	4
Recreational Fishing Tournaments	2-3
Sea Grant Extension office	0
Seafood restaurants	2-4
Seafood retail markets	1
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	30

Table 3. Primary Fishing-related Businesses Listed for Palacios in 2003

Type of Business	Frequency
Boat Builder/Broker	6
Boat Rentals & Pier	1
Processor	2
Processor; Wholesale Seafood Dealer	1
Retail Seafood Dealer	1
Wholesale Seafood Dealer	2
Total	13

Table 4. Palacios Commercial Landings and Value Summary: 2002 (based on dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	15,342,562	43,968,991

Table 5. Palacios License/Permit Summary: 2000

Commercial (based on physical residence data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
118	3	15
Total = 121		
% Households Holding Commercial Permit or License: 121/1,661 = 7.3		Average Number of Licenses per Household: 15/1,661= 0.01

Please reference Table 3.8-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

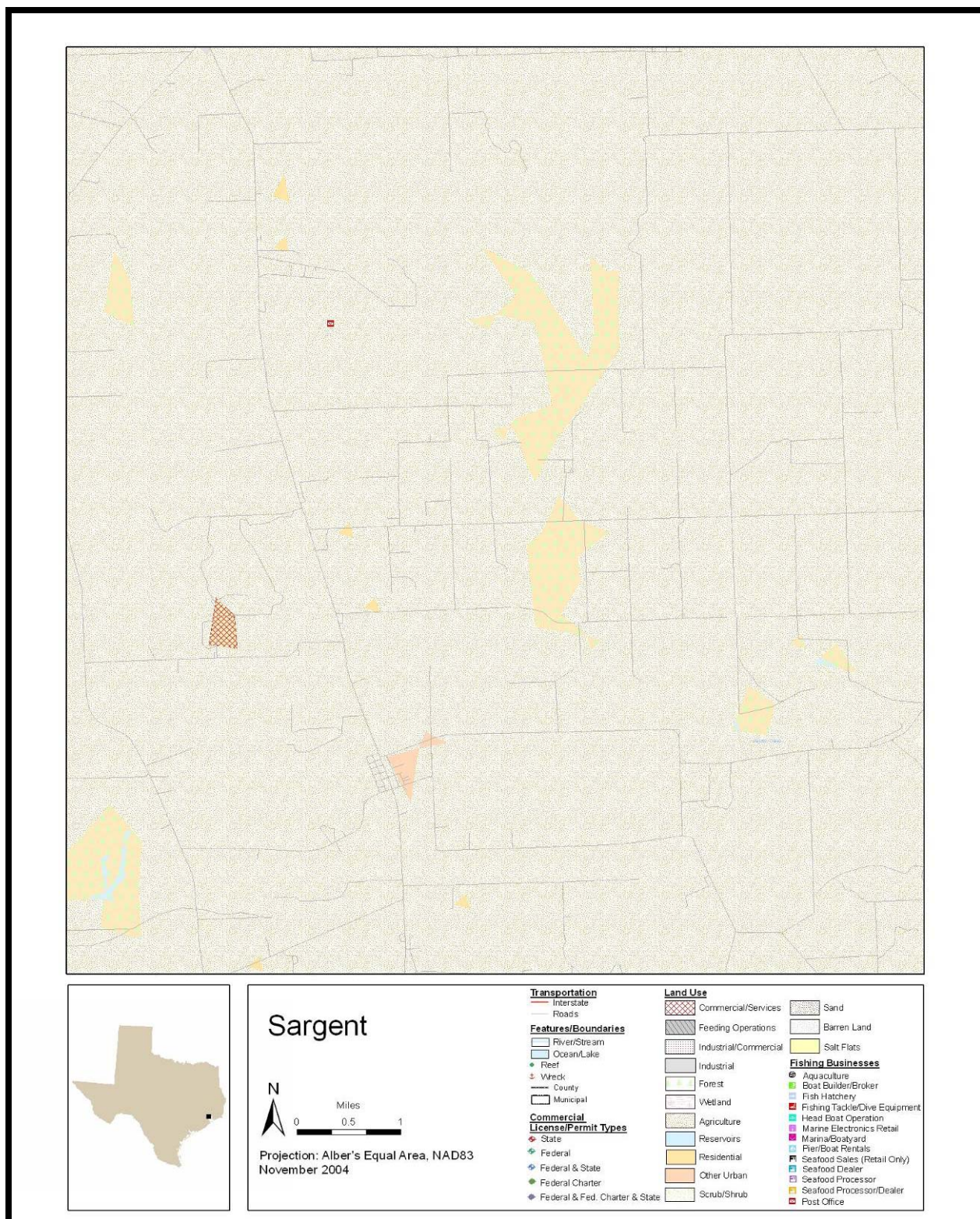
3.8.4 Sargent (unincorporated, pop. 858)

Location and Overview. Sargent is a small town located along Caney Creek approximately five miles northwest of the Gulf of Mexico in southeastern Matagorda County. Sargent is approximately 60 miles south of Houston, and about 22 miles northeast of Bay City.

History. The town was named after George Sargent, an Englishman who immigrated to Texas and settled the area in 1844. During the Civil War, Sargent was able to ship food and other commodities up Caney Creek undetected by Union blockade forces. Cattle-raising and fishing have been important from early in the town's history. Sargent has been hit by numerous hurricanes, including devastating Hurricane Carla in 1961 (Handbook of Texas Online 2002).

Current Conditions and Trends. The year 2000 population of Sargent was 858 persons, up from 786 persons in 1990. Most residents in the workforce commute to jobs in Lake Jackson and Freeport, approximately 30 minutes northeast in adjacent Brazoria County.

Several part-time shrimp harvesters were living in or held post office boxes in Sargent at the time of this study. A small contingent of charter operators and commercial fishing captains moor their vessels here, but live elsewhere. Various small fishing-related businesses were based here in 2003. The Gulf Intracoastal Waterway is adjacent to the town, enabling commercial and recreational fishing captains and crew ready access to waters in and around East Matagorda Bay.



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Sargent Demographics

Factor	1990	2000
Total population	786	858
Gender Ratio M/F (Number)	400/386	432/426
Age (Percent of total population)		
Under 18 years of age	22.2	19.3
18 to 64 years of age	56.1	58.6
65 years and over	21.7	22.1
Ethnicity or Race (Number)		
White	369	484
Black or African American	410	344
American Indian and Alaskan Native	2	2
Asian	0	2
Native Hawaiian and other Pacific Islander	N/A	0
Some other race	5	13
Two or more races	N/A	13
Hispanic or Latino (any race)	15	32
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	23.0	8.4
Percent high school graduate or higher	56.1	75.1
Percent with a Bachelor's degree or higher	0.0	10.6
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	0.0	0.8
Percent who speak English less than very well	0.0	0.0
Household income (Median \$)	16,323	26,964
Poverty Status (Percent of population with income below poverty line)	22.9	17.6
Percent female headed household	7.1	9.3
Home Ownership (Number)		
Owner occupied	288	364
Renter occupied	35	43
Value Owner-occupied Housing (Median \$)	31,750	43,700
Monthly Contract Rent (Median \$)	175	254
Employment Status (Population 16 yrs and over)		
Percent in the labor force	43.6	44.2
Percent of civilian labor force unemployed	12.9	8.1
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	35.9
Service occupations	N/A	21.4
Sales and office occupations	N/A	18.5
Farming, fishing, and forestry occupations	0.0	0.0
Construction, extraction, and maintenance occupations	N/A	10.1
Production, transportation, and material moving occupations	N/A	14.1
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	5.5	8.0
Mining (includes the offshore oil/gas industry workforce)	0.0	0.0
Manufacturing	23.0	10.1
Percent government workers	11.8	23.2
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	N/A
Percent worked outside of county of residence	48.6	67.0

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Sargent in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	2
Fishing associations (recreational/commercial)	1
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	1
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	1
Recreational docks/marinas	3
Bait & Tackle/fishing supplies	5
Recreational Fishing Tournaments	Several
Sea Grant Extension office	0
Seafood restaurants	5
Seafood retail markets	1
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	several
Commercial Boats	12

Table 3. Primary Fishing-related Businesses Listed for Sargent in 2003

None listed.

Table 4. Sargent Commercial Landings and Value Summary: 2002

No data available.

Table 5. Sargent License/Permit Summary: 2000

Commercial (based on physical residence data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
--	--	2
Total = --		
% Households Holding Commercial Permit or License: --		Average Number of Licenses per Household: 2/407 = .005

Please reference Table 3.8-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.9 Calhoun County Communities

This section describes the study communities located in Calhoun County. These are: Indianola, Port Lavaca, Port O'Connor, and Seadrift.

Calhoun County is part of the Coastal Bend region of the Texas Coast. It is bordered by Jackson County to the north, Aransas County to the southwest, Refugio County to the west, and Victoria County to the northwest. An undeveloped 35-mile stretch of coastline on Matagorda Island, within the Aransas National Wildlife Refuge, forms the county's eastern perimeter.

The year 2000 population of Calhoun County was 20,647 persons, making it the 113th most populous county in Texas that year. Port Lavaca is the county seat and was home to 12,035 residents in 2000.

Much of the county is flat and low-lying. Elevation ranges from sea level to 50 feet in the interior portions. Approximately half of the 1,032 square mile area is tidal marsh and saltwater. Fishing and hunting are popular recreational activities (Ramos et al. 2001:147).

Calhoun County was established in 1846. It was originally occupied by Karankawa Indians, followed by Mexican settlements in the early 19th century. Anglo settlers arrived shortly thereafter. Much of the economic history of the county is related to cattle ranching and commerce at Port Lavaca (Kleiner 2002).

Production of aluminum, plastics, and petroleum, and agribusiness, tourism, and fish processing are important industries in contemporary Calhoun County. Various offshore oil industry support services are now based in Port Lavaca.

Calhoun County residents have been deeply involved in the fishing and seafood industry for many years. Port O'Connor has a long history of involvement both in commercial shrimp harvesting and offshore charter fishing. Numerous tug pilots, vessel mechanics, and participants in other maritime trades are employed in Port O'Connor and Port Lavaca. As noted in Table 3.9-1 below, employment in the harvest sector of the commercial fishing industry diminished significantly between 1990 and 1995, though there was a similar percentage increase in retail sector jobs.

Table 3.9-1 Calhoun County Employment in Marine Fisheries: 1990-1995

Sector	1990 Employment	1995 Employment	Percent Change
Commercial Harvesting	1,269	902	-28.9
Processing	0	0	0
Wholesale	72	65	-9.7
Retail	45	56	24.4

Source: Dokken et al. (1998:90)

As indicated in the year 2000 Census, the population of Calhoun County was 52 percent Caucasian, 41 percent Hispanic, and three percent African-American. Median family income was \$39,900 in 2000. The poverty rate dropped from 19 percent in 1990 to 16 percent in 2000. Single women acted as heads of household for nearly six percent of families in 2000, significantly lower than the 1990 figure of 12 percent.

Table 3.9-2 Earnings in Calhoun County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share of 2000 Earnings	\$ Change 1990-2000	% Share of Change 1990-2000
	1990	2000			
Earnings	435,679	591,822	100.0	156,143	100.0
Farm earnings	2,998	7,758	1.3	4,760	3.0
Ag. Services, forestry, fish.	3,992	4,878	0.8	886	0.6
Fishing	3,291	3,178	0.5	-113	0
Mining	6,398	9,697	1.6	3,299	2.1
Oil and gas extraction	6,398	NA	NA	NA	NA
Construction	64,072	118,110	20.0	54,038	34.6
Special trade contractors	14,253	55,476	9.4	41,223	26.4
Manufacturing	211,210	306,564	51.8	95,354	61.0
Fabricated metal products	NA	0	0	0	0
Industrial mach. & equip.	4,268	1,666	0.3	-2,604	0
Food and kindred	648	1,799	0.3	1,151	0.7
Chemicals and allied products	126,836	220,219	37.2	93,383	59.8
Petroleum and coal	7,982	NA	NA	NA	NA
Transport.,Public utilities	12,377	15,788	2.7	3,411	2.2
Trucking and warehousing	3,122	799	0.1	-2,323	0
Water transportation	NA	1,848	0.3	NA	NA
Transportation by air	NA	NA	NA	NA	NA
Wholesale trade	20,521	9,574	1.6	-10,947	0
Retail trade	23,342	26,034	4.4	2,692	1.7
Eating and drinking places	4,617	7,390	1.2	2,773	1.8
Finance, insur., real estate	9,197	12,593	2.1	3,396	2.2
Services	40,149	37,516	6.3	-2,633	0
Business services	9,073	7,137	1.2	-1,936	0
Health services	7,808	9,662	1.6	1,854	1.2
Legal services	1,280	1,461	0.2	181	0.1
Engineer. & mngmt. serv.	8,164	6,224	1.0	-1,940	0
Government	41,423	51,068	8.6	9,645	0.6

Source: Bureau of Economic Analysis, Regional Economic Information System



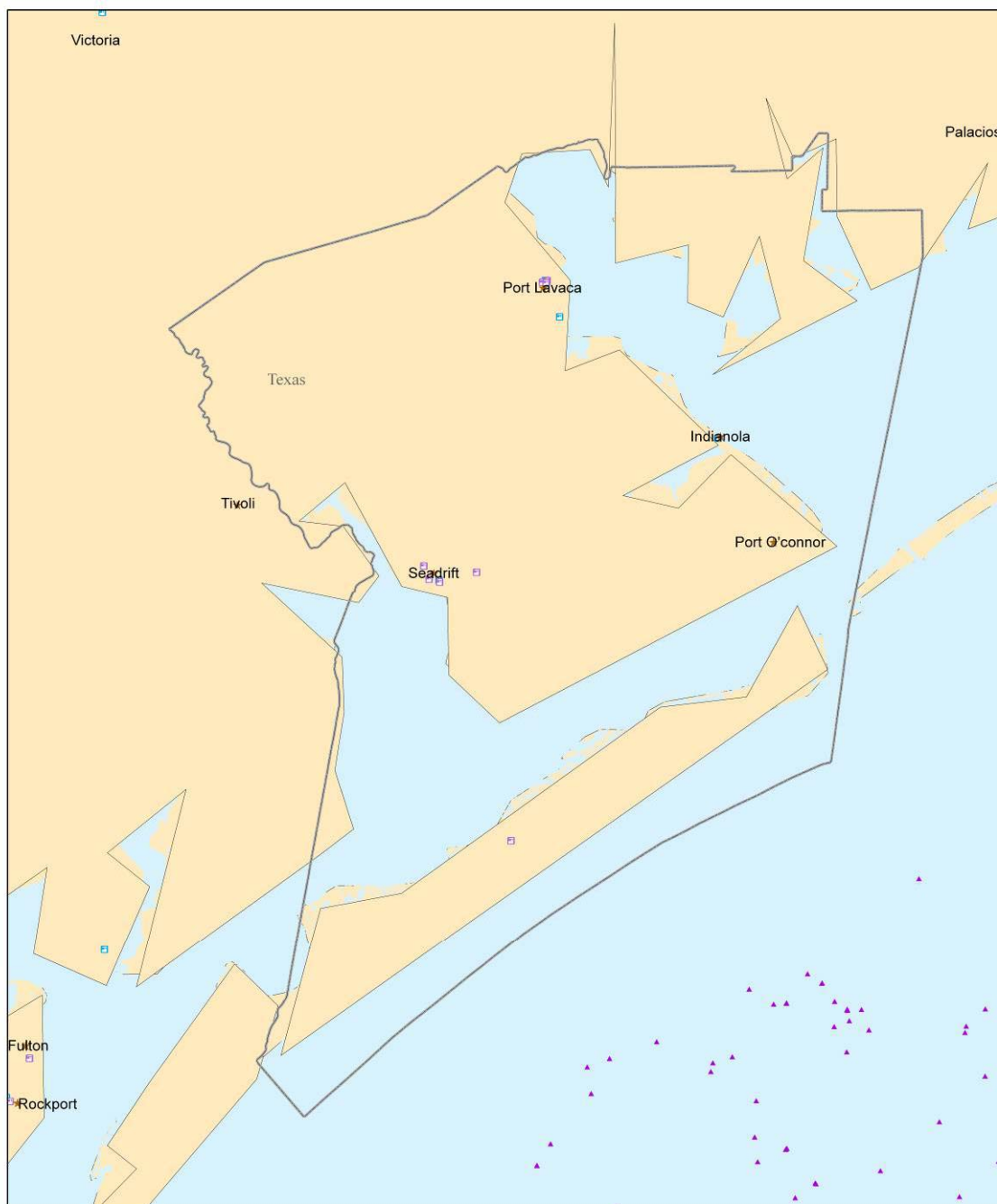
Pass Cavallo in 2004 (courtesy of www.serf.tamus.edu)

Table 3.9-3 Year 2000 Commercial Permits and Licenses, and 2003 Gulf Shrimp Permits: Calhoun County *

Permit Type	Study Communities			
	Indianola	Port Lavaca	Port O'Connor	Seadrift
Pelagic Charter	--	1	11	--
Reef Fish Charter		1	10	1
Swordfish	--	--	--	--
King Mackerel	--	--	1	2
Rock Shrimp	--	--	2	--
Red Snapper	--	--	--	--
Spiny Lobster	--	--	--	--
Spanish Mackerel	--	--	--	--
Gulf Reef Fish	--	--	2	2
Shark	--	--	--	--
South Atlantic Snapper Grouper	--	--	1	--
Total Federal Permits 2000	--	2	27	3
Total Federal Permit Holders 2000	--	3	12	2
Total State License Holders 2000	--	118	32	127
Gulf Shrimp Permits 2003 **	--	49	5	1

* Includes all permits and licenses that can be attributed to the communities by *both* street and post office box addresses; these data are used to generate counts of permit and license holders for whom evidence indicates actual residence, as provided in the community descriptions. ** 2003 is the first year for which Gulf shrimp permit data are available.

**Halfmoon Reef Lighthouse near Indianola in the Late 19th Century** (photo courtesy of [Lighthouses of Texas](#))



Calhoun County



Legend

- | | |
|--------------------------------|---------------------|
| ★ Study Community | ● Reef |
| □ Processor | ⚓ Wreck |
| □ Processor and Seafood Dealer | ▲ Platform |
| □ Seafood Dealer | — County Boundaries |
| | — Interstate |

3.9.1 Indianola (unincorporated, pop. 1,186)

Location and Overview. Destroyed by a hurricane in 1875, Indianola is now a "ghost town." Scattered homes and seasonal dwellings in the area now comprise Magnolia Beach. The area is about 40 miles southeast of Victoria and sixteen miles southeast of Port Lavaca. Powderhorn Lake lies to the west and Matagorda Bay to the east. Gulf of Mexico access is roughly ten miles southeast at Pass Cavallo, which makes the area an attractive point of departure for captains trailering small boats from around the region.

History. Indianola or Indian Point was established in 1846 and served as an important deepwater port during the war with Mexico. The port was the second largest in Texas and the principal point of entry for Europeans and Americans settling in western Texas during the mid-nineteenth century (Malsch 2002). After the devastating hurricane of 1875, Port Lavaca became the principal port in the region. Little evidence of the historic community now remains.

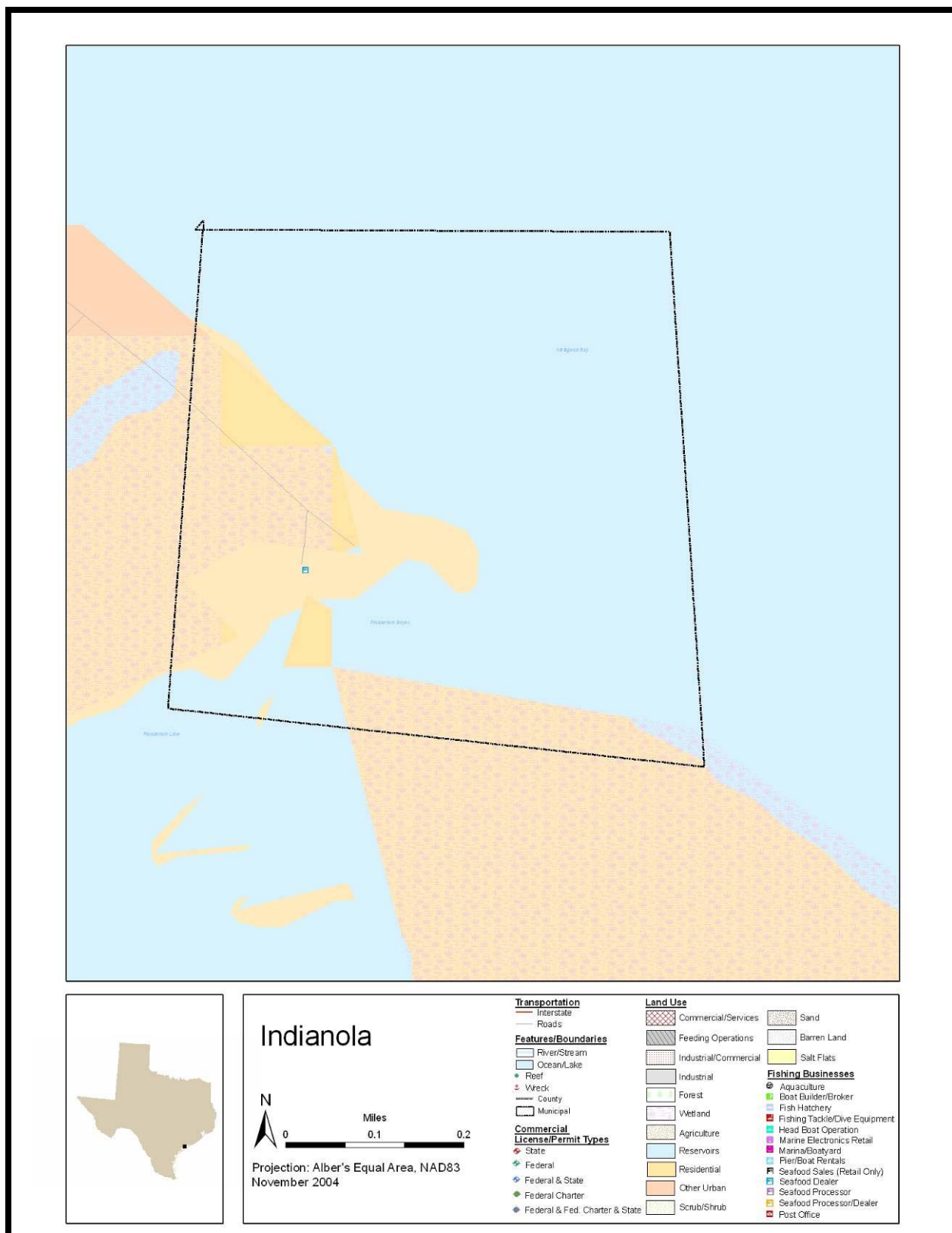


Indianola in the Nineteenth Century (courtesy of texasoldphotos.com)

Current Conditions and Trends. The year 2000 Census enumerated 1,186 residents in the study area, a significant increase above the 290 counted in 1990. However, due to redistricting between 1990 and 2000, the enumeration district now encompasses a larger rural area and hence more residents. Most residents living in the general area in 2000 reported holding service sector jobs, and 27 percent reported holding jobs outside of Calhoun County. A pier, marina, and public boat ramp serve resident and visiting recreational anglers and commercial fishers. There are otherwise few seasonally occupied structures and fewer permanent residences here.



Aerial View of Indian Point and Magnolia Beach in 2005 (photo courtesy of www.ziegenhals.org)



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Indianola (Magnolia Beach Area) Demographics

Factor	1990	2000
Total population	290	1,186
Gender Ratio M/F (Number)	154/136	602/584
Age (Percent of total population)		
Under 18 years of age	18.9	24.6
18 to 64 years of age	65.3	61.5
65 years and over	15.8	13.9
Ethnicity or Race (Number)		
White	274	1,037
Black or African American	4	4
American Indian and Alaskan Native	3	5
Asian	1	9
Native Hawaiian and other Pacific Islander	N/A	3
Some other race	8	104
Two or more races	N/A	24
Hispanic or Latino (any race)	42	395
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	10.8	16.6
Percent high school graduate or higher	68.7	62.8
Percent with a Bachelor's degree or higher	0.0	10.8
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	11.7	33.1
Percent who speak English less than very well	0.0	15.4
Household income (Median \$)	19,722	32,243
Poverty Status (Percent of population with income below poverty line)	19.0	5.3
Percent female headed household	7.7	6.5
Home Ownership (Number)		
Owner occupied	95	369
Renter occupied	22	73
Value Owner-occupied Housing (Median \$)	38,800	47,600
Monthly Contract Rent (Median \$)	200	317
Employment Status (Population 16 yrs and over)		
Percent in the labor force	41.9	50.1
Percent of civilian labor force unemployed	18.6	8.7
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	19.8
Service occupations	N/A	16.1
Sales and office occupations	N/A	16.9
Farming, fishing, and forestry occupations	15.7	5.1
Construction, extraction, and maintenance occupations	N/A	21.1
Production, transportation, and material moving occupations	N/A	20.8
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	13.7	7.4
Mining (includes the offshore oil/gas industry workforce)	0.0	1.2
Manufacturing	0.0	17.7
Percent government workers	22.8	15.1
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	N/A
Percent worked outside of county of residence	15.9	27.4

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Indianola (Magnolia Beach Area) in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	0
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	1
Hotels/Inns (dockside)	1
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	1
Recreational docks/marinas	1
Bait & Tackle/fishing supplies	1
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	0
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	6

Table 3. Primary Fishing-related Businesses Listed for Indianola (Magnolia Beach Area) in 2003

None listed.

Table 4. Indianola Commercial Landings and Value Summary: 2002

No landings data were available for the study area.

Table 5. Indianola (Magnolia Beach Area) License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
--	--	--
--		--
% Households Holding Commercial Permit or License:		Average Number of Licenses per Household:
--		--

Please reference Table 3.9-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.9.2 Port Lavaca (incorporated, pop. 12,035)

Location and Overview. Port Lavaca is the seat of government for Calhoun County. The small city is located on a bluff overlooking Lavaca Bay along U.S. Highway 87. Victoria is roughly 25 miles northwest. With its deepwater port facilities, Port Lavaca is a small but important center of commerce. The Gulf of Mexico is approximately 20 miles east via Pass Cavallo.

History. Port Lavaca was established in 1841 by residents of Linnville residents who fled their burning town in the wake of an attack by Comanches. During the period of the Republic of Texas, Lavaca, which means “the cow” in Spanish, was an important center of trade for cattle and other products. The town was incorporated in 1909. By the 1920s, firms involved in the harvesting, processing, and distribution of shrimp employed many residents. Coastal tourism developed around this time, and sports fishing enthusiasts, hunters, and oyster-lovers from around the region traveled to the town. Discovery of natural gas and oil in the mid-1930s, and the advent of petrochemical manufacturing in the 1940s led to a period of growth that continues today (Maywald 2002).

Current Conditions and Trends. According to the year 2000 census, the population of Port Lavaca increased nearly 11 percent between the most recent census years; from 10,889 residents in 1990 to 12,035 in 2000. Port Lavaca’s historical development and contemporary economics relate to its location along a natural harbor adjacent to the navigable and protected waters of Chocolate Bay. Port employment and associated services such as tug pilots, vessel mechanics, and other maritime trades are well-represented here. Many residents are also employed by firms that provide oil industry support services, and by companies involved in petrochemical production.

There are numerous fishing-related businesses here, though one local fisherman indicated diminishing activity in support of commercial fishing. He reported that there used to be many more career shrimp net makers in Port Lavaca but that as “old timers” retire, fewer youth are learning the craft.

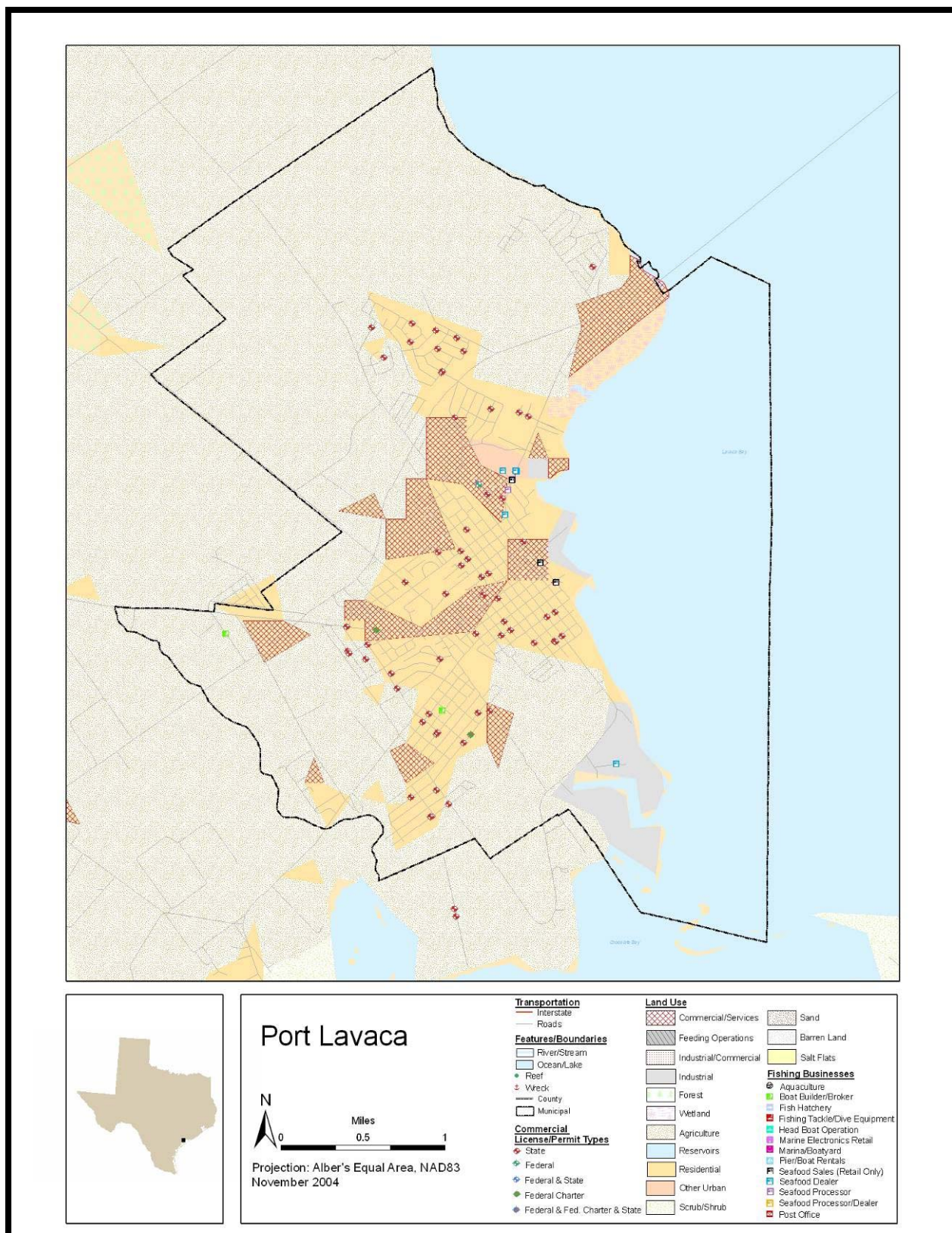
While its economic significance is in decline, commercial fishing does contribute to the local economy and is experientially significant for many participants. Nearly 50 persons with physical or post office box addresses in Port Lavaca held Gulf shrimp permits in 2003, and 93 residents held state commercial fishing licenses. Recreational fishing is also popular here, and the Port Lavaca Park and fishing pier is a popular facility for local and visiting recreational anglers.



Shrimp Trawlers at Moorings in Port Lavaca



Round-the-clock Petrochemical Production near Port Lavaca



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Port Lavaca Demographics

Factor	1990	2000
Total population	10,886	12,035
Gender Ratio M/F (Number)	5,301/5,585	5,992/6,043
Age (Percent of total population)		
Under 18 years of age	30.8	30.3
18 to 64 years of age	59.0	57.6
65 years and over	10.2	12.1
Ethnicity or Race (Number)		
White	7,762	8,659
Black or African American	509	488
American Indian and Alaskan Native	19	56
Asian	330	476
Native Hawaiian and other Pacific Islander	N/A	10
Some other race	2,266	2,036
Two or more races	N/A	310
Hispanic or Latino (any race)	5,076	6,272
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	19.3	15.1
Percent high school graduate or higher	64.5	68.1
Percent with a Bachelor's degree or higher	10.8	12.7
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	38.8	58.8
Percent who speak English less than very well	16.6	11.4
Household income (Median \$)	21,946	33,626
Poverty Status (Percent of population with income below poverty line)	20.4	20.1
Percent female headed household	11.6	13.7
Home Ownership (Number)		
Owner occupied	2,386	2,743
Renter occupied	1,397	1,446
Value Owner-occupied Housing (Median \$)	45,500	56,600
Monthly Contract Rent (Median \$)	255	430
Employment Status (Population 16 yrs and over)		
Percent in the labor force	61.2	58.8
Percent of civilian labor force unemployed	10.0	8.2
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	26.3
Service occupations	N/A	15.9
Sales and office occupations	N/A	17.2
Farming, fishing, and forestry occupations	3.1	1.9
Construction, extraction, and maintenance occupations	N/A	16.7
Production, transportation, and material moving occupations	N/A	22.0
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	3.6	2.4
Mining (includes the offshore oil/gas industry workforce)	0.8	0.9
Manufacturing	21.1	25.4
Percent government workers	13.0	16.0
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	17.1
Percent worked outside of county of residence	7.5	14.0

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Port Lavaca in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	4-5
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	5
Fishing associations (recreational/commercial)	4
Fish processors, Wholesale fish house	1-2
Fisheries research laboratories	0
Fishing monuments	2
Fishing pier	2
Hotels/Inns (docksides)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	8-10
NMFS or state fisheries office (port agent, etc.)	2
Public boat ramps	5
Recreational docks/marinas	7
Bait & Tackle/fishing supplies	6
Recreational Fishing Tournaments	4
Sea Grant Extension office	1
Seafood restaurants	5
Seafood retail markets	4-6
Trucking operations	1-2
Site-seeing/pleasure tours	0
Charter/Head Boats	27-30
Commercial Boats	15-20

Table 3. Primary Fishing-related Businesses Listed for Port Lavaca in 2003

Type of Business	Frequency
Boat Builder/Broker	5
Boat Builder/Broker; Marina	1
Retail Seafood Dealer	4
Wholesale Seafood Dealer	4
Total	14

Table 4. Port Lavaca Commercial Landings and Value Summary: 2002 (based on all address fields)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	1,303,639	3,124,462

Table 5. Port Lavaca License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
93	2	1,540
Total = 95		
% Households Holding Commercial Permit or License: 95/4,189 = 2.3		Average Number of Licenses per Household: 1,540/4,189 = 0.4

Please reference Table 3.9-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

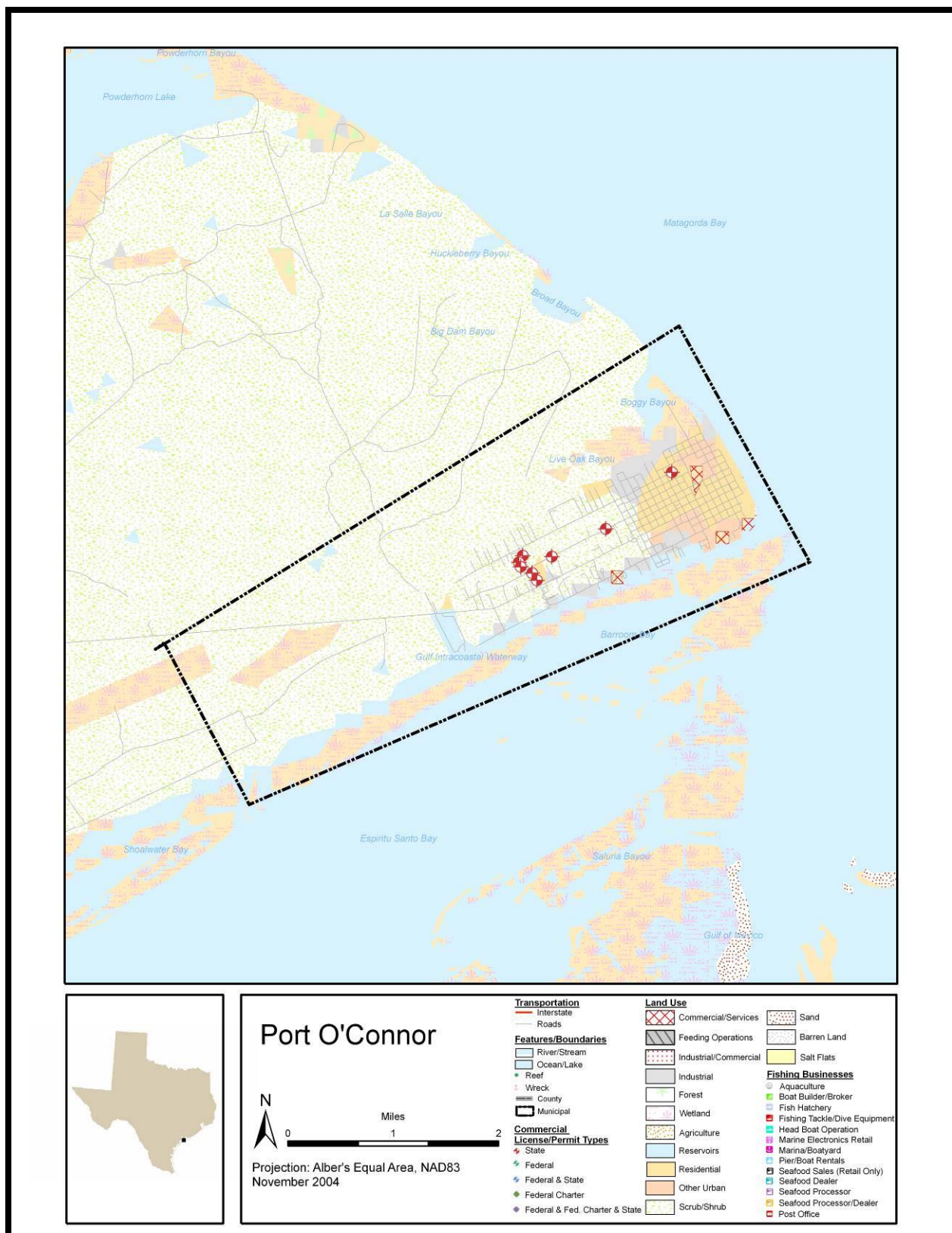
3.9.3 Port O'Connor (unincorporated, pop. 1,233)

Location and Overview. Port O'Connor is a small town located on the banks of Matagorda Bay in eastern Calhoun County. Victoria is approximately 44 miles northwest. Indianola is about six miles north. The bay system around Port O'Connor area is one of the largest and deepest in Texas, and the town is in close proximity to Pass Cavallo, which leads to the open waters of the Gulf of Mexico between Matagorda Island and Matagorda Peninsula. As such, a small fleet of commercial fishing, shrimp trawl, and charter fishing operations are based here, and the area is popular among visiting and resident recreational anglers.

History. Port O'Connor was established in the late 1800s. Many residents were involved in fishing from early in the town's history. The area became a seaside destination for tourists in the early 1900s. Although growth was undermined by numerous hurricanes during the first half of the 20th century, an increase in military personnel at nearby Matagorda Island Air Force Base helped revive the town. That base is now defunct, and the area is reverting toward its natural condition within the Matagorda Island State Park. The park provides some limited employment opportunities for residents.

Current Conditions and Trends. The year 2000 census enumerated 1,233 residents, up from 1,198 in 1990. Residents were employed in a wide variety of jobs and employment sectors in 2000. Of the working population, only six percent held positions outside of Calhoun County, indicating its relative isolation in easternmost Calhoun County. The number of retirees coming to live in the area has also reportedly increased in recent years (Rubert 2002).

A productive commercial fleet and a seafood processor are based in Port O'Connor. Informants report that the fleet is struggling given high fuel costs and market challenges. Most commercial shrimp trawling and fishing occurs in the bay areas. Our data indicate that a total of 32 persons held state commercial licenses in 2000, and five persons held federal Gulf shrimp permits in 2003. We were able to prove actual residence for only 13 state license holders. Five marinas and three boat ramps serve recreational anglers, and 11 charter operators either lived in the town or held post office boxes here in 2000. While commercial pelagic landings are limited, and charter operators often focus on bottom fishing, the latter sometimes pursue pelagic species in the offshore waters. Over 20 support service-related establishments, such as fishing gear and supply stores, electronics, welding, and other repair facilities were based here in 2002.



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Port O'Connor Demographics

Factor	1990	2000
Total population	1,198	1,233
Gender Ratio M/F (Number)	607/591	640/593
Age (Percent of total population)		
Under 18 years of age	31.1	29.7
18 to 64 years of age	59.9	57.5
65 years and over	10.0	12.8
Ethnicity or Race (Number)		
White	992	1,049
Black or African American	0	11
American Indian and Alaskan Native	1	9
Asian	10	14
Native Hawaiian and other Pacific Islander	N/A	0
Some other race	195	128
Two or more races	N/A	22
Hispanic or Latino (any race)	288	375
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	15.1	15.7
Percent high school graduate or higher	63.0	58.4
Percent with a Bachelor's degree or higher	3.4	8.0
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	18.5	24.9
Percent who speak English less than very well	2.4	13.1
Household income (Median \$)	21,161	26,923
Poverty Status (Percent of population with income below poverty line)	19.3	16.8
Percent female headed household	4.1	9.4
Home Ownership (Number)		
Owner occupied	371	394
Renter occupied	64	50
Value Owner-occupied Housing (Median \$)	42,300	38,800
Monthly Contract Rent (Median \$)	204	243
Employment Status (Population 16 yrs and over)		
Percent in the labor force	58.9	44.8
Percent of civilian labor force unemployed	2.1	7.4
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	23.2
Service occupations	N/A	14.6
Sales and office occupations	N/A	18.2
Farming, fishing, and forestry occupations	22.5	8.8
Construction, extraction, and maintenance occupations	N/A	18.5
Production, transportation, and material moving occupations	N/A	16.3
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	21.0	10.5
Mining (includes the offshore oil/gas industry workforce)	3.2	4.8
Manufacturing	15.6	9.4
Percent government workers	16.5	14.1
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	N/A
Percent worked outside of county of residence	6.1	6.3

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Port O'Connor in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	2
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	8
Fishing associations (recreational/commercial)	1
Fish processors, Wholesale fish house	2
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	1
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	1
Recreational docks/marinas	5
Bait & Tackle/fishing supplies	8
Recreational Fishing Tournaments	Numerous
Seafood restaurants	6
Seafood retail markets	3
Trucking operations	1
Site-seeing/pleasure tours	1
Charter/Head Boats	10
Commercial Boats	20+

Table 3. Primary Fishing-related Businesses Listed for Port O'Connor in 2003

None listed.

Table 4. Port O'Connor Commercial Landings and Value Summary: 2002 (based on all address fields)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	564,981	1,034,705

Table 5. Port O'Connor License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
13	3	214
Total = 16		
% Households Holding Commercial Permit or License: 16/444 = 3.6		Average Number of Licenses per Household: 214/444 = .48

Please reference Table 3.9-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.9.4 Seadrift (incorporated, pop. 1,352)

Location and Overview. Seadrift is located along State Route 185 on the eastern banks of Guadalupe and San Antonio Bays. The nearest urban area is Victoria, which is 32 miles northwest. Port Lavaca is about 15 miles north, and Port O'Connor roughly the same distance east. The Gulf of Mexico is approximately 22 miles east, accessible through Pass Cavallo via Guadalupe, San Antonio, or Espiritu Santo Bays.

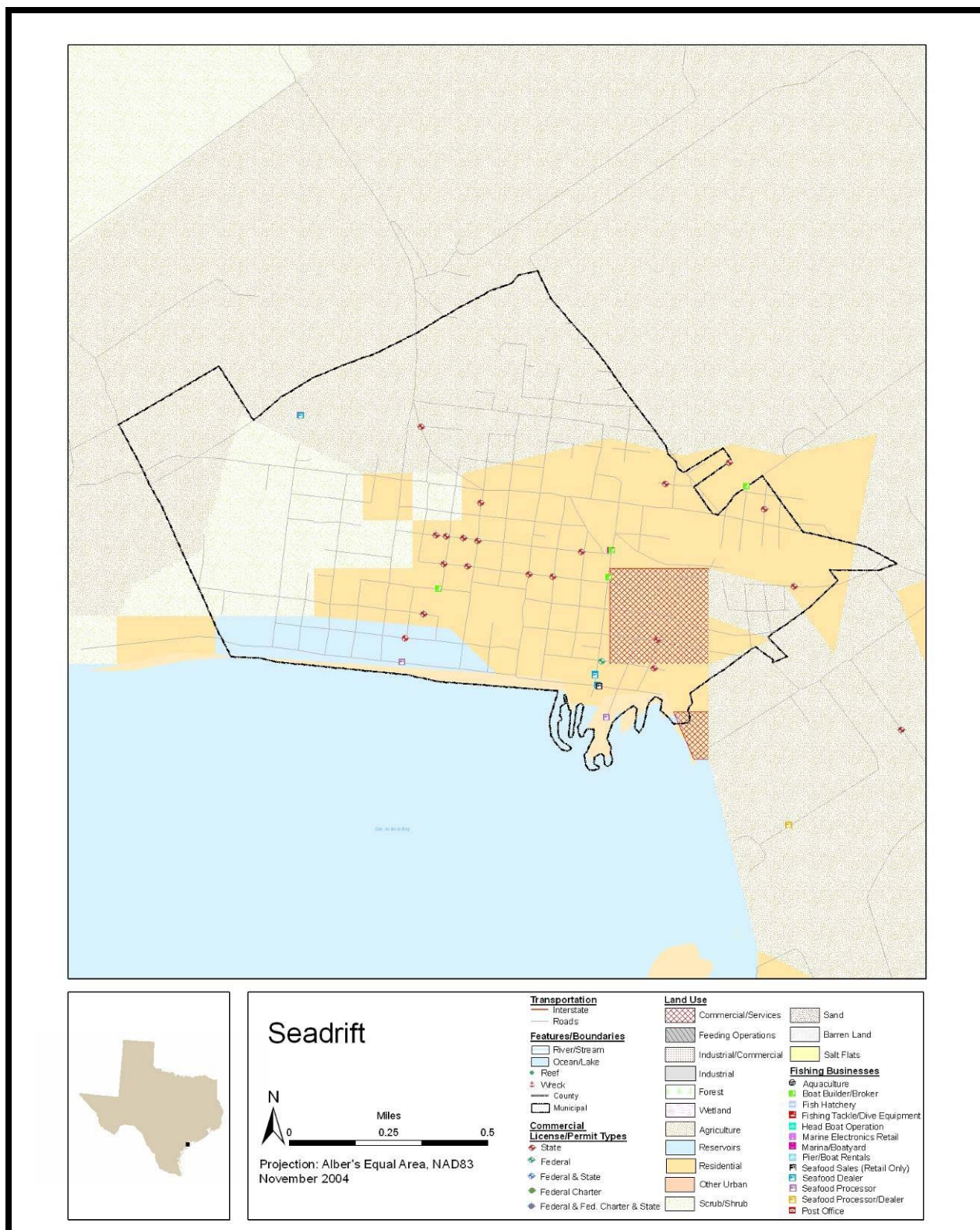
History. Seadrift was established in the late 1800s and incorporated in 1912. Its close proximity to the bays and Gulf of Mexico has long been associated with local involvement in marine fisheries and maritime transportation (Rupert 2002). In the 1970s and 1980s, numerous families of Vietnamese ancestry came to Seadrift to engage in commercial fisheries.

Current Conditions and Trends. Seadrift was home to 1,352 residents in 2000, up from 1,277 in 1990. Some 22 percent of the workforce in Seadrift held construction, extraction, and maintenance occupations in 2000; 20 percent claimed production, transportation, and material moving occupations. About 16 percent held jobs outside Calhoun County, with an average commute time of 29 minutes - the approximate travel time to Victoria.

Participation in commercial fisheries is of significant scope for a town of this size. While we could prove physical residence for only 30 state commercial license holders, 127 such persons held post office boxes or maintained a residence in the area. There is extensive involvement in shrimp harvesting in the bay areas, and the crab and oyster fisheries are productive as well. Three seafood processors were located here in 2000. These produced a total of 137,930 pounds of product that year. Two trucking operations transport commercial and retail fish products from Seadrift to elsewhere in the region. Three public boat ramps and two marinas help facilitate recreational fishing. Only one resident held a charter fishing permit in 2000.



Mural on Building in Seadrift



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Seadrift Demographics

Factor	1990	2000
Total population	1,277	1,352
Gender Ratio M/F (Number)	644/633	664/688
Age (Percent of total population)		
Under 18 years of age	31.9	32.8
18 to 64 years of age	56.0	53.7
65 years and over	12.1	13.5
Ethnicity or Race (Number)		
White	908	1,051
Black or African American	2	12
American Indian and Alaskan Native	1	3
Asian	171	138
Native Hawaiian and other Pacific Islander	N/A	0
Some other race	195	107
Two or more races	N/A	41
Hispanic or Latino (any race)	320	366
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	19.9	20.1
Percent high school graduate or higher	50.3	58.2
Percent with a Bachelor's degree or higher	6.2	6.7
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	28.6	32.4
Percent who speak English less than very well	15.5	18.5
Household income (Median \$)	18,011	26,339
Poverty Status (Percent of population with income below poverty line)	30.2	25.1
Percent female headed household	12.0	9.2
Home Ownership (Number)		
Owner occupied	327	387
Renter occupied	120	101
Value Owner-occupied Housing (Median \$)	30,000	34,100
Monthly Contract Rent (Median \$)	217	455
Employment Status (Population 16 yrs and over)		
Percent in the labor force	54.4	48.3
Percent of civilian labor force unemployed	7.7	5.8
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	17.7
Service occupations	N/A	15.6
Sales and office occupations	N/A	17.0
Farming, fishing, and forestry occupations	16.8	8.0
Construction, extraction, and maintenance occupations	N/A	22.0
Production, transportation, and material moving occupations	N/A	19.7
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	17.7	11.0
Mining (includes the offshore oil/gas industry workforce)	1.3	3.0
Manufacturing	17.7	21.8
Percent government workers	8.6	12.4
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	28.9
Percent worked outside of county of residence	13.6	15.9

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Seadrift in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	3
Fisheries research laboratories	0
Fishing monuments	--
Fishing pier	0
Hotels/Inns (dockside)	2
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	1
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	3
Recreational docks/marinas	2
Bait & Tackle/fishing supplies	1
Recreational Fishing Tournaments	Several
Sea Grant Extension office	0
Seafood restaurants	2
Seafood retail markets	3
Trucking operations	2
Site-seeing/pleasure tours	0
Charter/Head Boats	2-3
Commercial Boats	~30

Table 3. Primary Fishing-related Businesses Listed for Seadrift in 2003

Type of Business	Frequency
Boat Builder/Broker	5
Marina	1
Processor; Retail/Wholesale Seafood Dealer	1
Retail Seafood Dealer	1
Wholesale Seafood Dealer	2
Total	10

Table 4. Seadrift Commercial Landings and Value Summary: 2002 (based on all address fields)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	1,704,855	2,029,276

Table 5. Seadrift License/Permit Summary: 2000

Commercial (based on physical residence data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
30	1	290
Total = 31		
% Households Holding Commercial Permit or License: 31/488 = 6.4		Average Number of Licenses per Household: 290/488 = 0.6

Please reference Table 3.9-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

**Aerial View of Seadrift** (USGS image)

3.10 Victoria County Communities

This section describes Victoria. This small city is the sole study community in Victoria County.

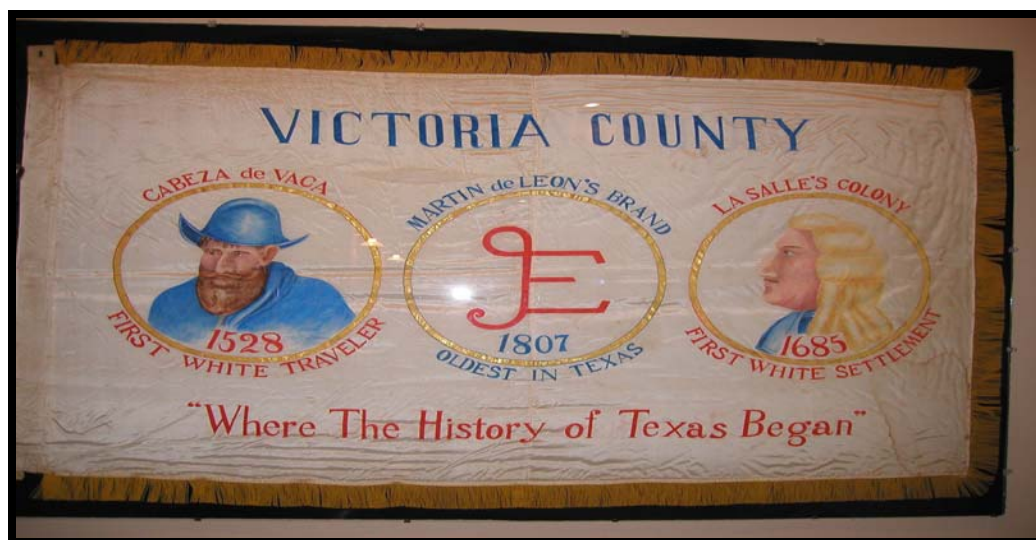
Victoria County encompasses 887 square miles of land along the Coastal Bend Region of Texas. It is bordered on the north by Lavaca County, on the northeast by Jackson County, on the southeast by Calhoun County, on the southwest by Refugio and Goliad counties, and on the northwest by DeWitt County. Although the City of Victoria is located well inland, a canal enables access through Green Lake to San Antonio Bay, and ultimately to the Gulf of Mexico.

Victoria County is one of the 23 original counties of Texas. The Karankawas were the earliest identified inhabitants of the region. The French inhabited the area in the late sixteenth century and Spanish ranchers followed them in the mid-eighteenth century. Anglo settlers came to the area in 1836. Residents named the county in honor of Mexican president, Guadalupe Victoria (Ramos et al. 2001:274).

Cattle ranching and cotton farming were historically important in Victoria County. In the 1930s, the discovery of oil in the area brought new industries and prosperity (Roell 2002). Today, oil development, petrochemical manufacturing, agribusiness, and tourism are important forms of local and regional enterprise.

Victoria County had a year 2000 population of 84,088 persons, making it the 40th most populous county in Texas. Most residents live in Victoria, the county seat. Victoria had a year 2000 population of 60,603 persons.

The racial composition of the population was approximately 53 percent Caucasian, 39 percent Hispanic, and six percent African-American (Ramos et al. 2001: 274). The median family income was \$44,443 in 2000, which was ten percent higher than the state median. Nearly 13 percent of County residents were living in conditions of poverty in 2000. Some ten percent of families with children lived in households maintained by females, down six percent from 1990.



Flag Exhibit in Victoria County Courthouse

Table 3.10-1 Earnings in Victoria County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share of 2000 Earnings	\$ Change 1990-2000	% Share of Change 1990-2000
	1990	2000			
Earnings	1,021,938	1,506,583	100.0	484,645	100.0
Farm earnings	254	2,191	0.1	1,937	0.4
Ag. Services, forestry, fish.	3,838	6,208	0.4	2,370	0.5
Fishing	177	328	0	151	0
Mining	77,957	140,638	9.3	62,681	12.9
Oil and gas extraction	NA	NA	NA	NA	NA
Construction	70,633	124,161	8.2	53,204	11.0
Special trade contractors	35,305	48,294	3.2	12,989	2.7
Manufacturing	147,322	164,985	10.9	17,663	3.6
Fabricated metal products	NA	NA	NA	NA	NA
Industrial mach. & equip.	10,883	15,568	1.0	4,685	1.0
Food and kindred	8,389	1,693	0.1	-6,696	-1.4
Chemicals and allied	93,756	NA	NA	NA	NA
Petroleum and coal	0	NA	NA	NA	NA
Transportation, Public utilities	62,062	92,720	6.1	30,658	6.3
Trucking and warehousing	14,524	23,116	1.5	8,592	1.8
Water transportation	0	NA	NA	NA	NA
Transportation by air	NA	NA	NA	NA	NA
Wholesale trade	52,990	87,583	5.8	34,593	7.1
Retail trade	126,761	193,290	12.8	66,529	13.7
Eating and drinking places	24,351	37,149	2.4	12,798	2.6
Finance, insurance, and real estate	56,736	94,362	6.3	37,626	7.8
Services	259,323	377,787	25.1	118,464	24.4
Business services	30,676	70,235	4.7	39,559	8.2
Health services	118,461	145,038	9.6	26,577	5.5
Legal services	12,990	14,183	0.9	1,193	0.2
Engineer. & mngmt. serv.	15,512	29,994	2.0	14,482	3.0
Government	164,061	224,849	14.9	60,788	12.5

Source: Bureau of Economic Analysis, Regional Economic Information System

Table 3.10-2 Year 2000 Commercial Permits and Licenses, and 2003 Gulf Shrimp Permits: Victoria County *

Permit Type	Study Communities
	Victoria
Pelagic Charter	4
Reef Fish Charter	4
Swordfish	--
King Mackerel	--
Rock Shrimp	--
Red Snapper	--
Spiny Lobster	--
Spanish Mackerel	--
Gulf Reef Fish	3
Shark	--
South Atlantic Snapper Grouper	--
Total Federal Permits 2000	8
Total Federal Permit Holders 2000	4
Total State License Holders 2000	24
Gulf Shrimp Permits 2003 **	--

* Includes all permits and licenses that can be attributed to the communities by *both* street and post office box addresses; these data are used to generate counts of permit and license holders for whom evidence indicates actual residence, as provided in the community descriptions. ** 2003 is the first year for which Gulf shrimp permit data are available.



Low-Lying Land Characteristic of much of Victoria County



Victoria County



Legend

- | | |
|--------------------------------|----------------|
| ★ Study Community | ● Reef |
| ■ Processor | ✕ Wreck |
| ■ Processor and Seafood Dealer | ▲ Platform |
| ■ Seafood Dealer | — County Lines |
| | — Interstate |

3.10.1 Victoria (incorporated, pop. 60,603)

Location and Overview. Victoria, the county seat, is located in central Victoria County at the intersection of U.S. Highways 59, 77 and 87, and State Route 185. Petrochemical manufacturing are firms are the principal employers in the region. Matagorda Bay is the nearest point of access.

History. Don Martin de Leon and 41 Spanish families established Victoria in 1824 and named it after Mexico's first president, General Guadalupe Victoria. Officially established as part of the Republic of Texas in 1839, Victoria is the second-oldest incorporated city in the state. In the mid-1800s, Victoria was a regional center of commerce for cotton farmers and cattle ranchers (Victoria Texas Online 2001). The city grew following development of oil in the region. Manufacturing has become central to the local and regional economy.

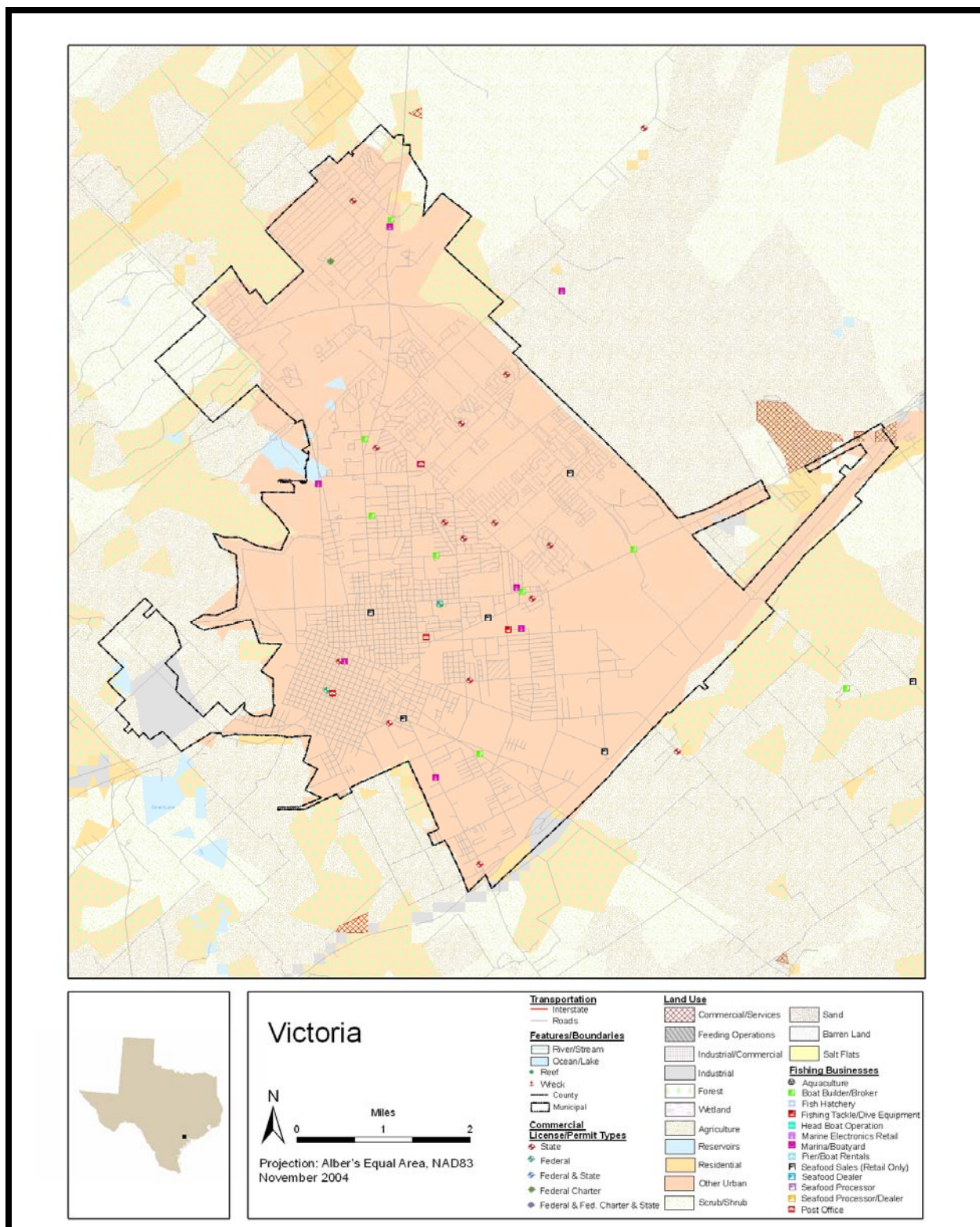
Current Conditions and Trends. The year 2000 census enumerated 60,603 residents, up from 55,076 in 1990. Some 30 percent of the workforce held management, professional, and related positions in 2000, while 27 percent reported sales and office positions. About 13 percent held positions outside their county of residence, primarily in nearby Port Lavaca.

The Victoria Barge Canal connects Victoria to the deep-water port of Port Lavaca-Point Comfort. In 1999, barge canal traffic hauled 5.5 million tons of freight, a 49 percent increase in tonnage hauled through the channel over 1990 figures. This amounts to about one percent of freight hauled in all Texas ports in 1999 (Texas Handbook 2001: 582).

There are some established fishing-related businesses and services in Victoria, and members of a small commercial fleet reside here. Most commercial fishery participants operate from Port Lavaca. Seafood landed by the fleet is tendered in other locations, especially Port Lavaca, and thus we cannot describe landings or ex-vessel value for the fleet. Recreational fishing is popular with many Victoria residents, and numerous fishing tournaments are held in the region each year. Four charter operators were living in or maintained post office boxes in Victoria at the time of this study. These participants reportedly moor their vessels in Rockport, Port Aransas, and Port Lavaca.



Victoria County Courthouse in 2002



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Victoria Demographics

Factor	1990	2000
Total population	55,076	60,603
Gender Ratio M/F (Number)	26,480/28,596	29,140/31,463
Age (Percent of total population)		
Under 18 years of age	30.1	28.8
18 to 64 years of age	58.6	58.6
65 years and over	11.3	12.6
Ethnicity or Race (Number)		
White	42,362	43,140
Black or African American	4,373	4,599
American Indian and Alaskan Native	142	312
Asian	227	612
Native Hawaiian and other Pacific Islander	N/A	24
Some other race	7,972	10,490
Two or more races	N/A	1,426
Hispanic or Latino (any race)	20,847	26,012
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	15.2	11.8
Percent high school graduate or higher	70.7	75.6
Percent with a Bachelor's degree or higher	15.8	18.5
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	29.1	29.2
Percent who speak English less than very well	9.9	9.4
Household income (Median \$)	25,576	36,829
Poverty Status (Percent of population with income below poverty line)	18.9	14.7
Percent female headed household	17.3	14.3
Home Ownership (Number)		
Owner occupied	11,506	13,461
Renter occupied	8,271	8,668
Value Owner-occupied Housing (Median \$)	54,400	72,600
Monthly Contract Rent (Median \$)	278	512
Employment Status (Population 16 yrs and over)		
Percent in the labor force	64.6	65.0
Percent of civilian labor force unemployed	6.8	4.9
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	30.1
Service occupations	N/A	16.0
Sales and office occupations	N/A	27.1
Farming, fishing, and forestry occupations	1.8	0.2
Construction, extraction, and maintenance occupations	N/A	12.1
Production, transportation, and material moving occupations	N/A	14.4
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	1.7	0.4
Mining (includes the offshore oil/gas industry workforce)	4.5	3.1
Manufacturing	14.1	13.5
Percent government workers	12.2	13.5
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	19.2
Percent worked outside of county of residence	12.3	13.2

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Victoria in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	4
Fishing associations (recreational/commercial)	2
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	1
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	1
Recreational docks/marinas	1
Bait & Tackle/fishing supplies	4
Recreational Fishing Tournaments	Numerous
Sea Grant Extension office	0
Seafood restaurants	4
Seafood retail markets	1
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	4
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Victoria in 2003

Type of Business	Frequency
Boat Builder/Broker	8
Boat Builder/Broker; Diving & Fishing Equipment	1
Boat Builder/Broker; Marina	1
Marina	9
Retail Seafood Dealer	6
Total	25

Table 4. Victoria Commercial Landings and Value Summary: 2002

Commercial landings cannot be attributed to fishery participants in Victoria.

Table 5. Victoria License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
21	4	63
Total = 25		
% Households Holding Commercial Permit or License: $25/22,129 = 0.1$		Average Number of Licenses per Household: $63/22,129 = 0.002$

Please reference Table 3.10-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.



Historic and Contemporary Architecture in Victoria

3.11 Refugio County Communities

This section describes the study communities in rural Refugio County. These are Bayside and Tivoli.

Refugio is a very sparsely populated county located along the south-central coast of Texas, or what is commonly known as the Coastal Bend Region. The county is bordered on the north by Victoria County, on the east by Calhoun County, on the southeast by Aransas County, on the southwest by San Patricio County, on the west by Bee County, and on the northwest by Goliad County.

The county encompasses 771 square miles of land and 48 square miles of water. It is predominantly flat, with an elevation range of sea level to 100 feet. Most land is used for farming and ranching. Land resources include petroleum, natural gas, and industrial sand (Leffler 2002). There are small stretches of coastline on Copano, San Antonio, and Hynes Bays.

The year 2000 population of Refugio County was 7,828 persons, making it the 182nd most populous county in Texas that year. Refugio is the county seat, with a year 2000 population of 2,941 persons.

The original inhabitants of Refugio County were Karankawa tribal peoples. The earliest explorers were Spanish. Refugio was one of the original counties of the Republic of Texas. In the 1870s, the county lost most of its coastline through re-designation of boundaries. Aransas County became what had been the eastern part of Refugio. Cattle ranching and farming were historically important and continue to be so. Natural gas was discovered in the 1920s (Leffler 2002). Today, petroleum and natural gas production, petrochemical production, agribusiness, and tourism-related services provide jobs for many residents (Ramos et al. 2001:251).

Dokken et al. report that 51 persons were employed in the seafood harvesting sector in Refugio County in 1990, but that only 38 were so employed in 1995. The seafood retail sector employed 22 persons in 1990, and 19 persons in 1995 (Dokken et al. 1998:98).

At the time of the year 2000 census, the population of Refugio County was 48 percent Caucasian, 45 percent Hispanic, and seven percent African American. Median family income was \$36,162 in 2000, slightly below the state median of \$39,927. Some 18 percent of families lived in poverty, and five percent of families with children were headed by single females.

Table 3.11-1 Earnings in Refugio County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share of 2000 Earnings	\$ Change 1990-2000	% Share of Change 1990-2000
	1990	2000			
Earnings	80,401	80,257	100.0	-144	100.0
Farm earnings	-3,986	4,465	5.6	479	33.3
Ag. services, forestry, fish.	1,045	1,993	2.5	948	65.8
Fishing	287	391	0.5	104	13.8
Mining	28,504	28,701	35.8	197	13.7
Oil and gas extraction	28,504	28,701	35.8	197	13.7
Construction	1,429	2,244	2.8	815	56.6
Special trade contractors	1,201	1,376	1.7	175	12.1
Manufacturing	3,064	865	1.1	-2,199	-152.7
Fabricated metal products	0	0	0	0	0
Industrial mach. & equip.	NA	766	0.9	NA	NA
Food and kindred	NA	0	0	NA	NA
Chemicals and allied	0	0	0	0	0
Petroleum and coal	NA	NA	NA	NA	NA
Transportation/Public Utilities	7,191	4,861	6.0	-2,330	-161.8
Trucking and warehousing	1,319	1,561	1.9	242	16.8
Water transportation	NA	0	0	0	0
Transportation by air	NA	NA	NA	NA	NA
Wholesale trade	3,089	1,664	2.1	-1,425	-98.9
Retail trade	8,815	8,304	10.3	-511	-35.5
Eating and drinking places	2,420	2,995	3.7	575	39.9
Finance, insurance, real estate	4,775	3,314	4.1	-1,461	-101.4
Services	7,979	7,939	9.9	-40	-27.7
Business services	1,719	NA	NA	NA	NA
Health services	1,310	1,598	2.0	288	20.0
Legal services	416	NA	NA	NA	NA
Engineer./Management serv.	996	393	0.5	-603	-18.1
Government	18,494	20,372	25.8	1,878	-13.0

Source: Bureau of Economic Analysis, Regional Economic Information System

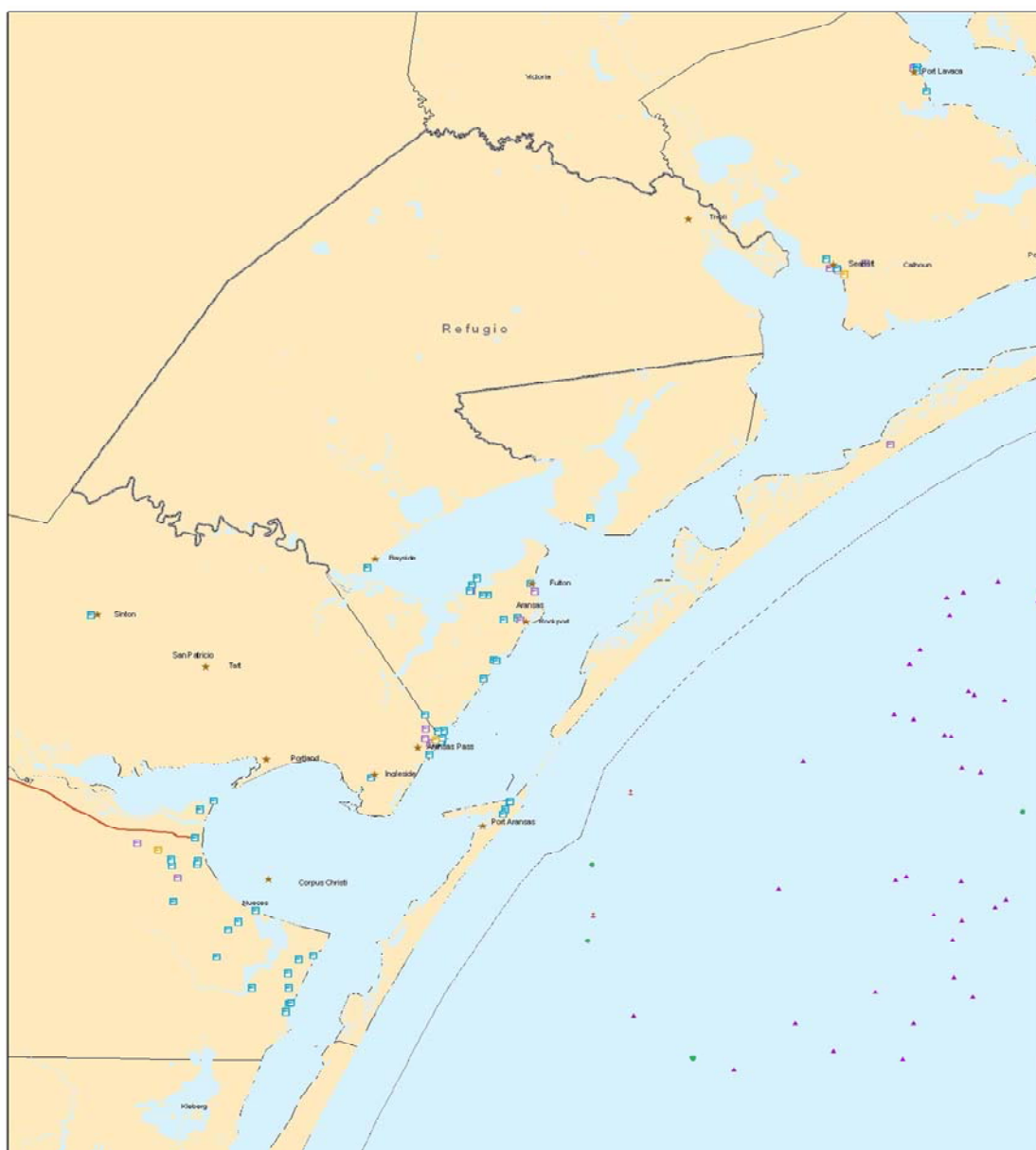
Table 3.11-2 Year 2000 Commercial Permits and Licenses, and 2003 Gulf Shrimp Permits: Refugio County *

Permit Type	Study Communities	
	Bayside	Tivoli
Pelagic Charter	--	--
Reef Fish Charter		
Swordfish	--	--
King Mackerel	--	--
Rock Shrimp	--	--
Red Snapper	--	--
Spiny Lobster	--	--
Spanish Mackerel	--	--
Gulf Reef Fish	--	--
Shark	--	--
South Atlantic Snapper Grouper	--	--
Total Federal Permits 2000	--	--
Total Federal Permit Holders 2000	--	--
Total State License Holders 2000	9	3
Gulf Shrimp Permits 2003 **	--	--

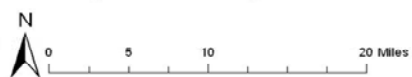
* Includes all permits and licenses that can be attributed to the communities by *both* street and post office box addresses; these data are used to generate counts of permit and license holders for whom evidence indicates actual residence, as provided in the community descriptions. ** 2003 is the first year for which Gulf shrimp permit data are available



Pastoral Scene in Rural Southeast Texas



Refugio County



Legend

- | | |
|--------------------------------|----------------|
| ★ Study Community | ● Reef |
| ■ Processor | ✚ Wreck |
| ■ Processor and Seafood Dealer | ▲ Platform |
| ■ Seafood Dealer | — County Lines |
| | — Interstate |

3.11.1 Bayside (incorporated, pop. 360)

Location and Overview. Bayside is a small town located along Farm Route 136 in southern Refugio County. The nearest metropolitan area is Corpus Christi, 25 miles to the southwest. The Aransas River is just west of town, and Copano Bay lies to the east. The waters around Bayside are quite shallow and distant from more productive areas to the east. As such there has historically been relatively little commercial fishing activity in the area.

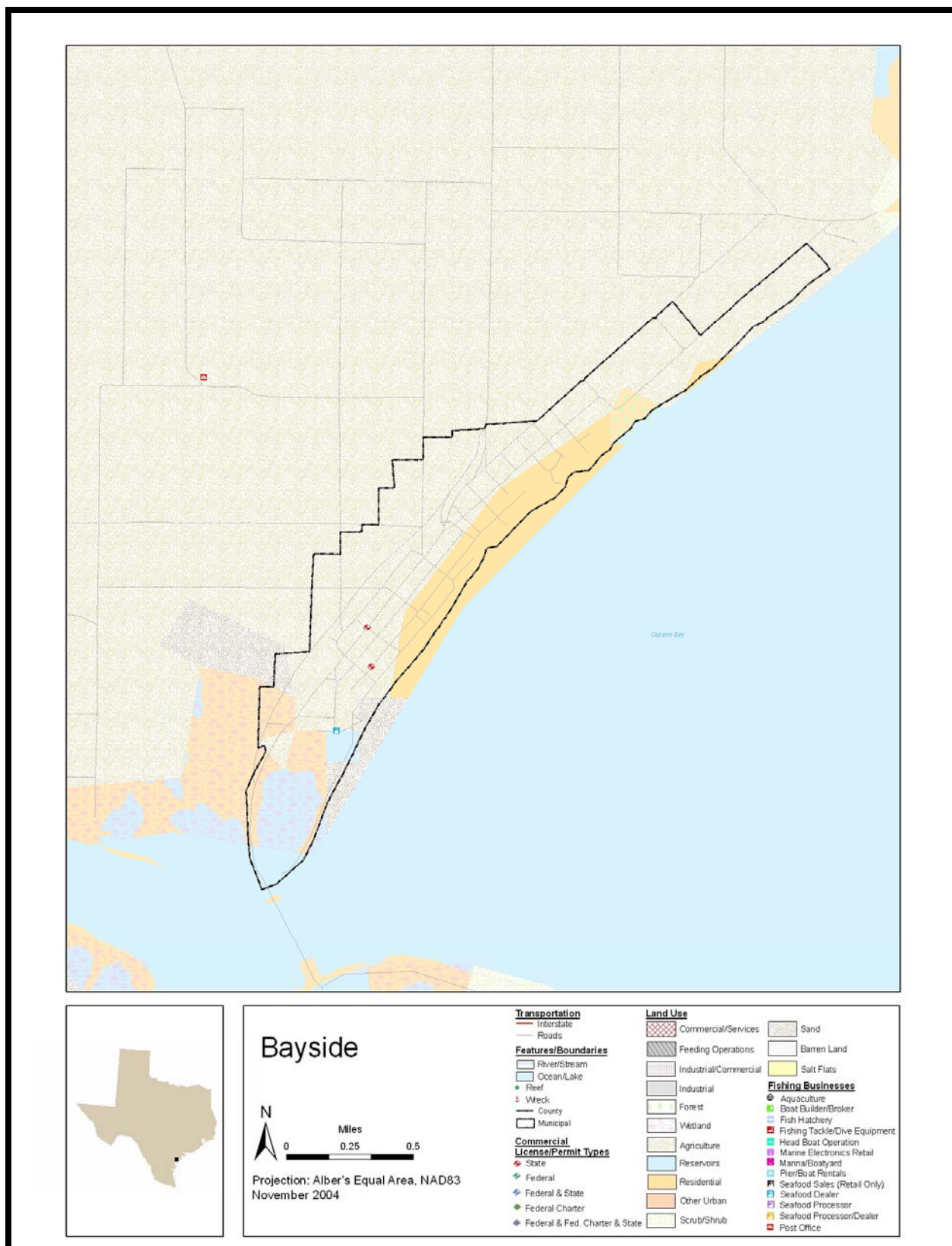
History. Bayside was founded in 1908. Its name is derived from its location on the banks of Copano Bay. The town was incorporated in 1977 (Benowitz 2002).

Current Conditions and Trends. The year 2000 census enumerated 360 persons in Bayside, a ten percent decrease from 400 enumerated in 1990. Agriculture is clearly important in this rural part of Texas. Employment in agriculture increased between Census years, though residents in the workforce were employed in a variety of sectors. Many commute to jobs outside of Refugio County, primarily to Corpus Christi or Rockport.

A marina, pier, and public boat ramp facilitate recreational fishing in the nearby bays. A long time resident claimed just one part-time commercial crabber was residing in town, though our data suggest as many as nine commercial operators may have been working from or near Bayside in 2000. One seafood dealer was operating in the area at the time of this study.



Aerial View of Bayside and the Mouth of the Aransas River (photo courtesy of www.texmaps.com)



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Bayside Demographics

Factor	1990	2000
Total population	400	360
Gender Ratio M/F (Number)	200/200	182/178
Age (Percent of total population)		
Under 18 years of age	29.2	22.5
18 to 64 years of age	54.8	61.7
65 years and over	16.0	15.8
Ethnicity or Race (Number)		
White	359	322
Black or African American	4	7
American Indian and Alaskan Native	2	2
Asian	0	0
Native Hawaiian and other Pacific Islander	N/A	0
Some other race	35	27
Two or more races	N/A	2
Hispanic or Latino (any race)	115	99
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	19.3	8.9
Percent high school graduate or higher	66.2	73.7
Percent with a Bachelor's degree or higher	13.5	17.8
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	27.0	26.0
Percent who speak English less than very well	15.3	7.5
Household income (Median \$)	16,442	26,875
Poverty Status (Percent of population with income below poverty line)	26.6	22.3
Percent female headed household	13.6	3.9
Home Ownership (Number)		
Owner occupied	121	118
Renter occupied	28	35
Value Owner-occupied Housing (Median \$)	35,400	44,600
Monthly Contract Rent (Median \$)	208	313
Employment Status (Population 16 yrs and over)		
Percent in the labor force	58.6	56.6
Percent of civilian labor force unemployed	18.9	3.1
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	26.6
Service occupations	N/A	18.4
Sales and office occupations	N/A	9.5
Farming, fishing, and forestry occupations	3.4	8.2
Construction, extraction, and maintenance occupations	N/A	22.2
Production, transportation, and material moving occupations	N/A	15.2
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	3.4	8.2
Mining (includes the offshore oil/gas industry workforce)	6.8	4.4
Manufacturing	2.7	11.4
Percent government workers	14.4	14.6
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	28.8
Percent worked outside of county of residence	45.1	57.1

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Bayside in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	0
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	1
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	1
Recreational docks/marinas	1
Bait & Tackle/fishing supplies	2
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	0
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	1

Table 3. Primary Fishing-related Businesses Listed for Bayside in 2002

None listed.

Table 4. Bayside Commercial Landings and Value Summary: 2002

Landings and value data may not be reported under the “Rule of Three.”

Table 5. Bayside License/Permit Summary: 2000

Commercial (based on physical residence data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
2	--	--
Total = 2		
% Households Holding Commercial Permit or License: 2/153 = 1.3		Average Number of Licenses per Household: --

Please reference Table 3.11-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.11.2 Tivoli (unincorporated, pop. 1,098)

Location and Overview. Tivoli is located at the junction of State Highways 239 and 35, near the mouth of the Guadalupe River in northeastern Refugio County. The town is approximately 25 miles south of Victoria. The Gulf of Mexico is accessible at Cavallo Pass, some 34 miles southeast of Tivoli.

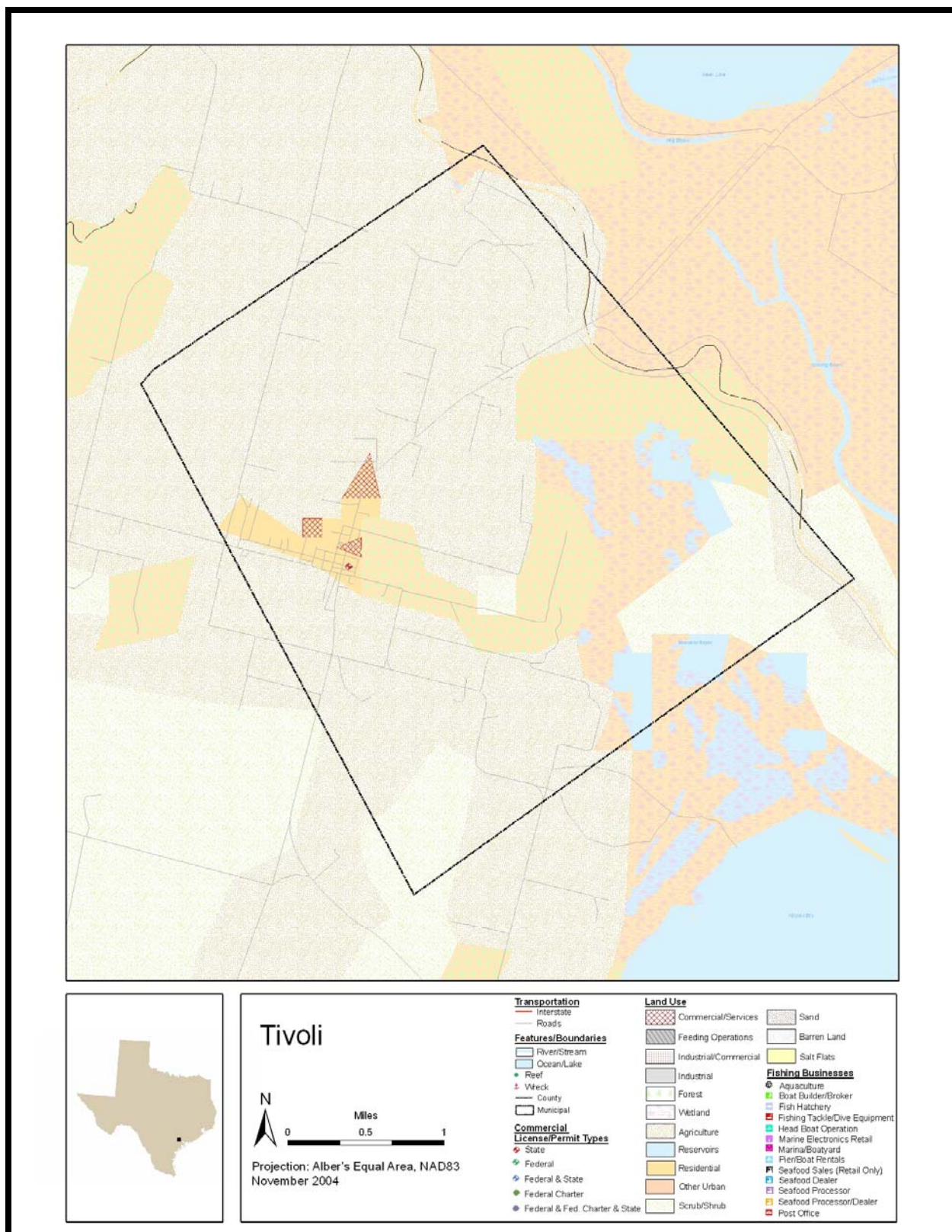
History. Founded in 1907, the town grew substantially in 1912 when service on the St. Louis, Brownsville, and Mexico Railway became available in town. Local ranchers and cotton farmers used rail services to ship products across the region. Today, many residents are involved in ranching and oil and gas production (Long 2002).

Current Conditions and Trends. The population of Tivoli increased from 965 residents in 1990 to 1,098 in 2000. Some 23 percent of persons in the local workforce were employed in the service sector. Nearly nine percent of residents claimed farming, fishing, and forestry as their primary occupation, with farming as the leading employment sector. Of the working population, 43 percent held positions outside their county of residence. Most were commuting to work in Victoria.

There are no established fishing-related businesses or services in Tivoli. A resident explains that Tivoli's location is not amenable marine fishing, and that anglers must travel to Hynes or San Antonio Bays. The closest public boat ramp and pier is located seven miles south in Austwell. Some residents reportedly also travel to Rockport to fish.



Football Stadium in Refugio County



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Tivoli Demographics

Factor	1990	2000
Total population	965	1,098
Gender Ratio M/F (Number)	468/497	562/536
Age (Percent of total population)		
Under 18 years of age	28.0	25.6
18 to 64 years of age	54.9	57.3
65 years and over	17.1	17.1
Ethnicity or Race (Number)		
White	719	918
Black or African American	31	25
American Indian and Alaskan Native	0	4
Asian	0	4
Native Hawaiian and other Pacific Islander	N/A	0
Some other race	215	132
Two or more races	N/A	15
Hispanic or Latino (any race)	552	691
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	27.4	23.9
Percent high school graduate or higher	51.7	61.6
Percent with a Bachelor's degree or higher	10.3	9.1
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	46.0	44.3
Percent who speak English less than very well	19.8	16.3
Household income (Median \$)	22,031	29,375
Poverty Status (Percent of population with income below poverty line)	18.4	25.4
Percent female headed household	11.3	12.1
Home Ownership (Number)		
Owner occupied	275	310
Renter occupied	88	120
Value Owner-occupied Housing (Median \$)	34,400	33,400
Monthly Contract Rent (Median \$)	179	235
Employment Status (Population 16 yrs and over)		
Percent in the labor force	47.3	54.4
Percent of civilian labor force unemployed	6.9	2.6
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	17.0
Service occupations	N/A	23.3
Sales and office occupations	N/A	16.3
Farming, fishing, and forestry occupations	20.6	8.6
Construction, extraction, and maintenance occupations	N/A	12.6
Production, transportation, and material moving occupations	N/A	15.9
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	19.7	21.0
Mining (includes the offshore oil/gas industry workforce)	4.3	0.4
Manufacturing	18.6	16.1
Percent government workers	26.0	15.1
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	N/A
Percent worked outside of county of residence	36.5	43.1

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Tivoli in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	0
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	0
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	2
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Tivoli in 2003

None listed.

Table 4. Tivoli Commercial Landings and Value Summary: 2002

Landings and value data may not be reported under the “Rule of Three.”

Table 5. Tivoli License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
1	--	--
Total = 1		
% Households Holding Commercial Permit or License: 1/430 = .2		Average Number of Licenses per Household: --

Please reference Table 3.11-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.12 Aransas County Communities

This section describes the study communities in Aransas County. These are Fulton and Rockport.

Aransas County is bordered on the north and northwest by Refugio County, on the northeast by Calhoun County, on the south by San Patricio and Nueces Counties, and on the west by San Patricio County. San Jose and Matagorda Islands, and the Gulf of Mexico lie to the east.

Aransas encompasses 252 square miles of land and 276 square miles of water. The land area is characteristically low and marshy. Elevation ranges from sea level to 25 feet (Ramos et al. 2001:131). Expansive Aransas National Wildlife Refuge is located in the northern part of the county.

The year 2000 population of Aransas County was 22,497 persons, making it the 106th most populous county in the state that year. Rockport is the county seat, with a year 2000 population of 7,385 persons.

Aransas County was established in 1871 from neighboring Refugio County. The area was settled by pioneering individuals from the South and immigrants from Europe. Farming and fishing were and continue to be important. Oil was discovered in the county in 1936. The modern economy is based primarily in oil and gas extraction and offshore support services,

Aransas County may be best characterized in terms of its estuarine and marine environment and resources, and its connections to maritime industry. Numerous commercial fishing operations are based in Rockport and Fulton, and recreational fishing is increasingly important throughout the region. As noted in Table 5.12-1, however, employment in the harvesting and processing sectors diminished significantly during the 1990s.

Table 3.12-1 Aransas County Employment in Marine Fisheries: 1990-1995

Sector	1990 Employment	1995 Employment	% Change
Commercial Harvesting	1,300	939	-27.8
Processing	34	2	-94.1
Wholesale	10	9	-10
Retail	47	70	48.9

Source: Dokken et al. (1998:88)

The 2000 population of Aransas County was predominantly Caucasian, accounting for 74 percent of the population. African Americans constituted little more than 1 percent, Hispanics were 20 percent, and Asian Americans were 3 percent of the population for that census year. The remaining two percent was comprised of other ethnic groups.

The year 2000 median family income was \$34,915, slightly higher than the statewide median of \$34,706. Some 15 percent of county residents had incomes below the poverty line in 2000, and single females headed eight percent of families with children.

Table 3.12-2 Earnings in Aransas County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share of 2000 Earnings	\$ Change 1990-2000	% Share of Change 1990-2000
	1990	2000			
Earnings	126,950	199,140	100.0	72,190	100.0
Farm earnings	-362	-619	0	0	0
Ag. services, forestry, fish.	12,968	13,955	7.0	987	1.4
Fishing	12,619	13,011	6.5	392	0.5
Mining	6,822	19,532	9.8	12,710	17.6
Oil and gas extraction	6,776	19,125	9.6	12,349	17.1
Construction	8,671	17,440	8.7	8,769	12.1
Special trade contractors	7,513	9,714	4.9	2,201	3.0
Manufacturing	12,653	7,738	3.9	-4,915	0
Fabricated metal products	0	0	0	0	0
Industrial mach. & equip.	NA	NA	NA	NA	NA
Food and kindred	6,251	NA	NA	NA	NA
Chemicals and allied	3,283	NA	NA	NA	NA
Petroleum and coal	0	0	0	0	0
Transport., Public utilities	9,136	14,263	7.2	5,127	7.1
Trucking and warehousing	510	435	0.2	-75	0
Water transportation	4,020	6,554	3.3	2,534	3.5
Transportation by air	NA	NA	NA	NA	NA
Wholesale trade	3,747	3,196	1.6	-551	0
Retail trade	23,211	31,846	16.0	8,635	12.0
Eating and drinking places	6,699	11,070	5.5	4,371	6.0
Finance, insur., real estate	6,462	12,021	6.0	5,559	7.7
Services	20,732	44,539	22.4	23,807	33.0
Business services	4,696	8,245	4.1	3,549	4.9
Health services	2,126	7,468	3.7	5,342	7.4
Legal services	489	649	0.3	160	0.2
Engineer. & mgt. services	2,264	6,217	3.1	3,953	5.5
Government	22,909	34,610	17.4	11,701	16.2

Source: Bureau of Economic Analysis, Regional Economic Information System

Table 3.12-3 Year 2000 Commercial Permits and Licenses, and 2003 Gulf Shrimp Permits: Aransas County*

Permit Type	Study Communities	
	Fulton	Rockport
Pelagic Charter	--	2
Reef Fish Charter		2
Swordfish	--	--
King Mackerel	--	--
Rock Shrimp	--	--
Red Snapper	--	1
Spiny Lobster	--	--
Spanish Mackerel	--	--
Gulf Reef Fish	--	2
Shark	--	--
South Atlantic Snapper Grouper	--	1
Total Federal Permits 2000	--	8
Total Federal Permit Holders 2000	--	4
Total State License Holders 2000	60	152
Gulf Shrimp Permits 2003 **	1	9

* Includes all permits and licenses that can be attributed to the communities by *both* street and post office box addresses; these data are used to generate counts of permit and license holders for whom evidence indicates actual residence, as provided in the community descriptions. ** 2003 is the first year for which Gulf shrimp permit data are available.



Texas Maritime Museum at Rockport



Aransas



Legend

- | | |
|--------------------------------|----------------|
| ★ Study Community | ● Reef |
| □ Processor | ⚓ Wreck |
| □ Processor and Seafood Dealer | ▲ Platform |
| □ Seafood Dealer | — County Lines |
| | — Interstate |

3.12.1 Fulton (incorporated, pop. 1,153)

Location and Overview. Fulton is a small town located along Aransas Bay in east-central Aransas County. Copano Bay lies to the west. Corpus Christi is approximately 35 miles southwest. Although residents consider Fulton as a distinct community, there are strong social and economic linkages with nearby Rockport. In fact, the general area is sometime referred to as “Rockport-Fulton,” and much of the seafood harvested in the region is then processed and distributed through Fulton. The Gulf of Mexico is accessible at Aransas Pass, some 13 miles south of Fulton.

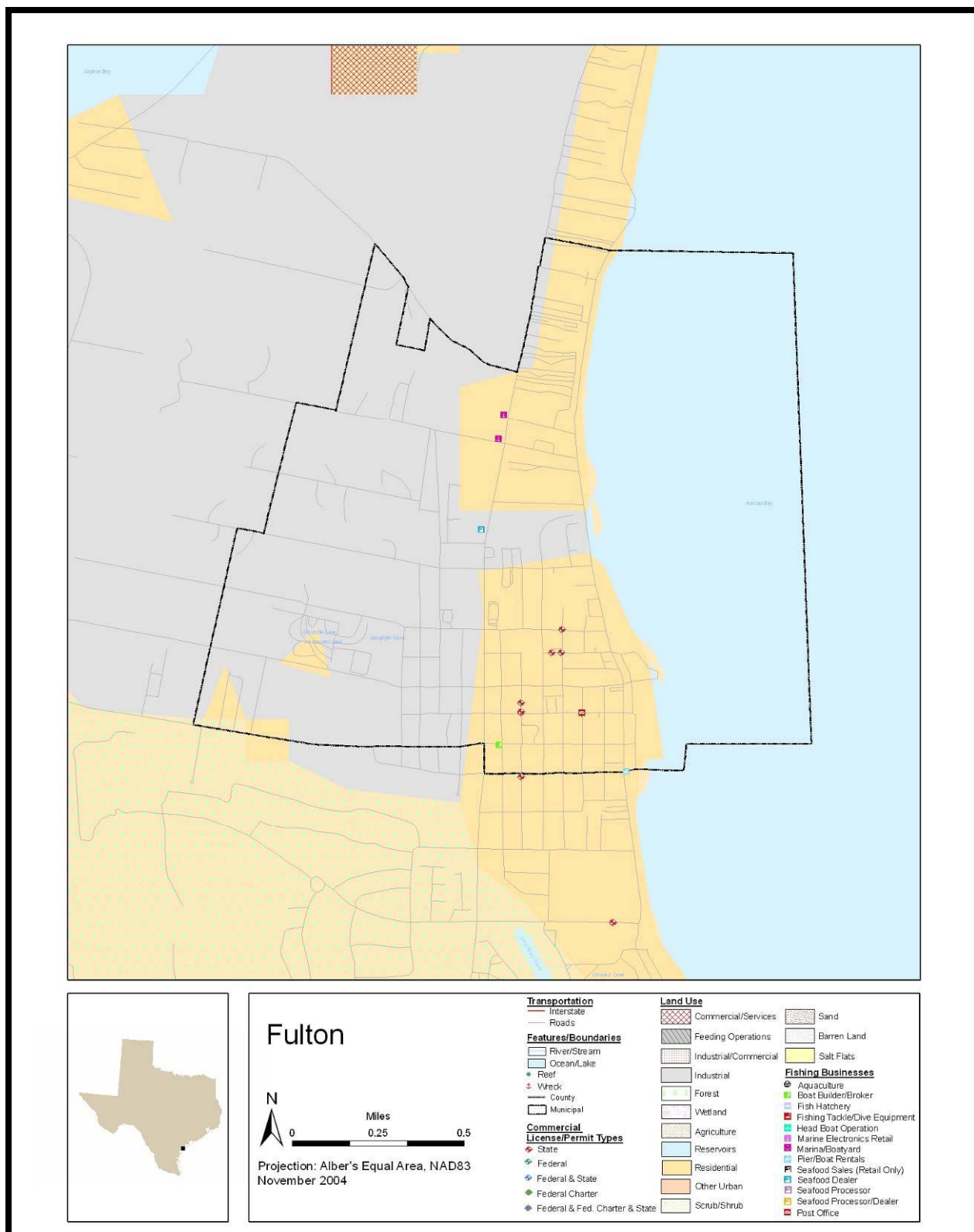
History. Karankawa tribal groups long ago used the area's rich marine resources. The modern name of Fulton derives from early resident George Fulton who helped establish the town in 1866. Early residents were primarily involved in cattle-ranching and meat-packing. Turtle-canning and deep-water fishing became important in the early part of the twentieth century (Long 2002). Fulton was incorporated in the 1970s.

Current Conditions and Trends. The year 2000 Census enumerated 1,153 residents, an increase of 51 percent from 1990. Although many Fulton residents remain involved in marine fisheries, more than 50 percent of the workforce reported employment in sales/office positions and service occupations in 2000, with evidence of commuting to nearby urban areas. It appears this is a period of “gentrification” in Fulton. Involvement in commercial fishing is in a pattern of slow decline, recreational-oriented fishing and ecotourism are increasingly popular, and urban professionals are moving to the area to enjoy seaside living. The 25 dockside hotels and inns and 15 seafood restaurants in Fulton reflect the local importance of seaside tourism and seafood.

While current trends appear to be a departure from the working waterfront, commercial fishing is still quite important in the area. Indeed, the local fleet is particularly productive in shrimp, crab, and various inshore and nearshore finfish. Although we could prove residence for only seven license holders, as many as 60 captains moor their vessels and/or base their operations in the area. Extensive harvesting is done in the bays and nearshore waters. Various trucking operations, a seafood processor, and two marine railways support the industry. Of note, while there were a few charter vessels active in 2003, no federally-permitted charter operators were living in the immediate area in 2000.



Sign at the Fulton Pier (photo courtesy of www.storeart.freesevers.com)



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only. Numerous commercial fishing license holders maintain post office boxes in the Fulton area, but only a handful of license holders with physical residences in the town could be accurately identified.

Table 1. Fulton Demographics

Factor	1990	2000
Total population	763	1,153
Gender Ratio M/F (Number)	387/376	799/764
Age (Percent of total population)		
Under 18 years of age	18.7	18.8
18 to 64 years of age	50.4	54.7
65 years and over	30.9	26.5
Ethnicity or Race (Number)		
White	644	1,314
Black or African American	17	18
American Indian and Alaskan Native	3	14
Asian	79	138
Native Hawaiian and other Pacific Islander	N/A	1
Some other race	20	35
Two or more races	N/A	33
Hispanic or Latino (any race)	66	175
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	17.8	13.1
Percent high school graduate or higher	63.7	70.6
Percent with a Bachelor's degree or higher	12.6	11.3
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	17.6	21.0
Percent who speak English less than very well	12.0	8.2
Household income (Median \$)	16,569	26,857
Poverty Status (Percent of population with income below poverty line)	19.0	15.4
Percent female headed household	6.0	7.1
Home Ownership (Number)		
Owner occupied	259	529
Renter occupied	91	178
Value Owner-occupied Housing (Median \$)	44,000	74,700
Monthly Contract Rent (Median \$)	288	429
Employment Status (Population 16 yrs and over)		
Percent in the labor force	42.6	45.5
Percent of civilian labor force unemployed	2.4	3.6
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	19.7
Service occupations	N/A	22.3
Sales and office occupations	N/A	22.9
Farming, fishing, and forestry occupations	9.7	2.8
Construction, extraction, and maintenance occupations	N/A	18.6
Production, transportation, and material moving occupations	N/A	13.7
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	7.5	3.7
Mining (includes the offshore oil/gas industry workforce)	3.5	2.2
Manufacturing	4.4	7.5
Percent government workers	14.6	15.9
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	20.6
Percent worked outside of county of residence	17.6	24.7

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Fulton in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	1
Boat yards/ Boat builders (recreational/commercial)	2-3
Churches with maritime theme	1
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	2-3
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	2
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	1
Hotels/Inns (docksides)	25
Marine railways/haul out facilities	2
Museums—fishing/marine-related	0
Net makers	2
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	1
Recreational docks/marinas	2
Bait & Tackle/fishing supplies	2
Recreational Fishing Tournaments	1
Sea Grant Extension office	0
Seafood restaurants	15
Seafood retail markets	3
Trucking operations	1
Site-seeing/pleasure tours	1
Charter/Party Boats	4
Commercial Boats	40+

Table 3. Primary Fishing-related Businesses Listed for Fulton in 2003

None listed (many local businesses use/advertise Rockport or Rockport-Fulton addresses).

Table 4. Fulton Commercial Landings and Value Summary: 2002 (based on all address fields)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	2,372,180	4,134,322

Table 5. Fulton License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
7	0	324
Total = 7		
% Households Holding Commercial Permit or License: 7/707 = 0.1		Average Number of Licenses per Household: 324/707 = 0.5

Please reference Table 3.12-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

5.12.2 Rockport (incorporated, pop. 7,385)

Location and Overview. The town of Rockport is located on State Route 35 along the western shoreline of Aransas Bay. Fulton is directly adjacent to the north. Copano Bay lies to the west, and Corpus Christi is approximately 35 miles southwest. Rockport is the seat of government of Aransas County. Commercial fishing and shrimp harvesting are important industries (Shukalo 2002), though coastal tourism is increasingly significant in economic terms. Local fishing vessels may access the Gulf of Mexico through Aransas Pass, some nine miles to the south. Much of the seafood landed in the area is processed and distributed just outside municipal bounds, and in Fulton and adjacent areas.

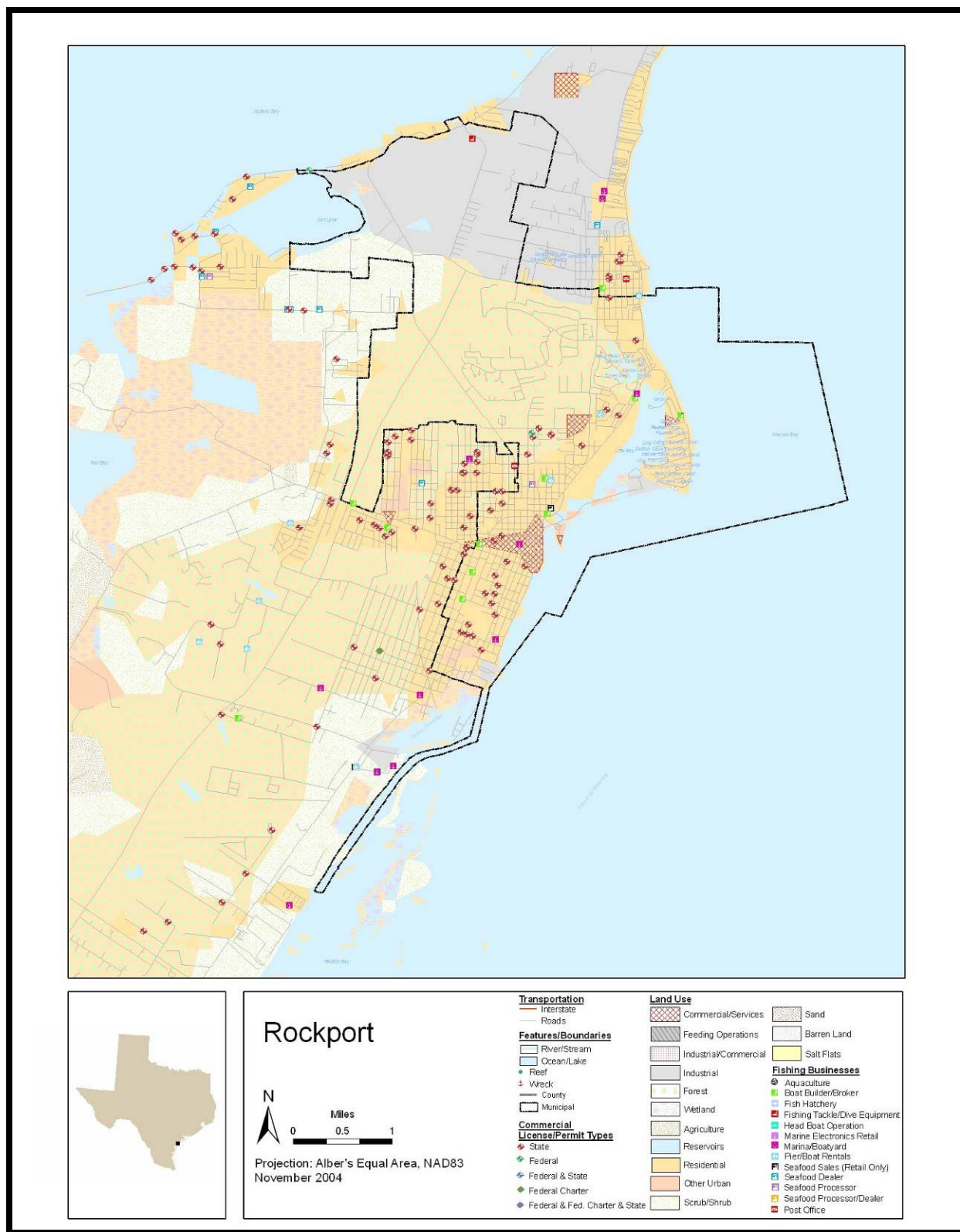
History. Rockport was established in 1867 as an ideal port for shipping cattle-related products. Fishing, boatbuilding, and maritime tourism were locally significant forms of enterprise as early as the late 1800s. Shrimp harvesting became a particularly important source of local revenue in the mid-1900s (Shukalo 2002).

Current Conditions and Trends. The year 2000 population of Rockport was 7,385 persons, up significantly from 4,753 residents in 1990. As noted above, the Rockport-Fulton area has a long and continuing history of involvement in commercial shrimp trawling and fishing center, and numerous vessels and operations area based in the area. But the area is also increasingly popular among professionals, many of whom live adjacent to the bays and commute to jobs in nearby Corpus Christi. Rockport is home to the Texas Maritime Museum, which is frequently visited by tourists from around the region.

Small boat commercial fishing and recreational angling is common here. Since waters are characteristically shallow here, knowledge of shoals and other obstructions is critical. Trawl captains necessarily are highly knowledgeable of bottom conditions throughout the region. The local shrimp fleet is particularly productive. While we could prove physical residence for 122 state commercial license holders, as many as 152 captains moor their vessels and/or base their operations here. Nine persons held federal shrimp permits in 2003. While only two charter operators with physical or post office box addresses in Rockport held federal permits in 2000, many charter operations are based here.



Rockport Residential Area



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Rockport Demographics

Factor	1990	2000
Total population	4,753	7,385
Gender Ratio M/F (Number)	2,274/2,479	3,556/3,829
Age (Percent of total population)		
Under 18 years of age	26.4	21.4
18 to 64 years of age	53.5	53.9
65 years and over	20.1	24.7
Ethnicity or Race (Number)		
White	3,862	6,549
Black or African American	92	97
American Indian and Alaskan Native	28	37
Asian	265	269
Native Hawaiian and other Pacific Islander	N/A	0
Some other race	506	251
Two or more races	N/A	182
Hispanic or Latino (any race)	1,132	1,440
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	16.6	8.1
Percent high school graduate or higher	67.7	80.5
Percent with a Bachelor's degree or higher	18.6	24.5
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	26.8	16.2
Percent who speak English less than very well	11.4	6.3
Household income (Median \$)	22,346	32,741
Poverty Status (Percent of population with income below poverty line)	32.1	20.4
Percent female headed household	13.1	11.0
Home Ownership (Number)		
Owner occupied	1,055	3,157
Renter occupied	782	1,376
Value Owner-occupied Housing (Median \$)	60,100	103,600
Monthly Contract Rent (Median \$)	275	493
Employment Status (Population 16 yrs and over)		
Percent in the labor force	53.5	50.1
Percent of civilian labor force unemployed	3.6	3.1
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	30.6
Service occupations	N/A	20.2
Sales and office occupations	N/A	25.9
Farming, fishing, and forestry occupations	5.6	1.8
Construction, extraction, and maintenance occupations	N/A	12.8
Production, transportation, and material moving occupations	N/A	8.7
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	6.8	3.3
Mining (includes the offshore oil/gas industry workforce)	5.0	1.5
Manufacturing	7.6	3.8
Percent government workers	15.8	17.4
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	19.7
Percent worked outside of county of residence	21.1	27.3

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Rockport in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	1
Boat yards/ Boat builders (recreational/commercial)	6
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	2-3
Fish processors, Wholesale fish house	6
Fisheries research laboratories	1
Fishing monuments	2-3
Fishing pier	5
Hotels/Inns (dockside)	7
Marine railways/haul out facilities	1
Museums—fishing/marine-related	1
Net makers	8-10
NMFS or state fisheries office (port agent, etc.)	1
Public boat ramps	3
Recreational docks/marinas	4
Bait & Tackle/fishing supplies	6
Recreational Fishing Tournaments	Numerous
Sea Grant Extension office	1
Seafood restaurants	25
Seafood retail markets	6-8
Trucking operations	6
Site-seeing/pleasure tours	1
Charter/Party Boats	27
Commercial Boats	60-75

Table 3. Primary Fishing-related Businesses Listed for Rockport in 2003

Type of Business	Frequency
Boat Builder/Broker	11
Boat Builder/Broker; Boat Rentals & Pier; Marina	1
Boat Builder/Broker; Diving & Fishing Equipment	1
Boat Builder/Broker; Marina	3
Boat Rentals & Pier	9
Marina	10
Retail Seafood Dealer	2
Retail/Wholesale Seafood Dealer	1
Wholesale Seafood Dealer	2
Total	49

Table 4. Rockport Commercial Landings and Value Summary: 2002 (based on all address fields)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	155,711	237,018

Table 5. Rockport License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
122	3	2,522
Total = 125		
% Households Holding Commercial Permit or License: 125/3,157 = 4.0		Average Number of Licenses per Household: 2,522/3,157 = 0.8

Please reference Table 3.12-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.13 San Patricio County Communities

This section describes the study communities located in San Patricio County. These are: Aransas Pass, Ingleside, Portland, Sinton, and Taft.

San Patricio County is part of the Coastal Bend Region of Texas. The county is bordered by Refugio County and Aransas County to the north and northeast, by Nueces County to the east and south, by Jim Wells County to the southwest, and by Live Oak and Bee Counties to the northwest.

The year 2000 population of San Patricio County was 67,138 persons, making it the 44th most populous in Texas that year. Sinton is the county seat and was home to 5,676 persons in 2000. San Patricio County is considered part of the Corpus Christi Metropolitan Area (Bureau of Economic Analysis 2004).

The landscape of this largely rural county is grassy coastal prairie, with small watersheds that drains into the Nueces and Aransas Rivers. The county encompasses nearly 692 square miles of land. Its elevation rises from sea level to 200 feet (Ramos et al. 2001:255).

San Patricio County was originally established in 1834 as part of the Mexican State of Coahuila. First settled by Irish Catholic immigrants from New York, the county lost many of its citizens during the Texas Revolution. Ranching has long been important, as has agriculture. Development of oil resources, various forms of manufacturing, and shrimp production added to the economy in the latter part of the twentieth century (Guthrie 2003).

Residents of Aransas Pass, located on Redfish Bay, have been deeply involved in commercial fishing for generations. A large fleet of shrimp trawlers and numerous shrimp processing plants are based in Conn Brown Harbor in Aransas Pass. As noted in the table below, employment in commercial fisheries diminished significantly in the harvest and wholesale sectors during the early 1990s, with a concomitant increase in retail sector jobs.

Table 3.13-1 San Patricio County Employment in Marine Fisheries: 1990-1995

Sector	1990 Employment	1995 Employment	Percent Change
Commercial Harvesting	1,142	862	-24.5
Processing	0	0	0
Wholesale	0	6	-92.4
Retail	104	125	20.2

Source: Dokken et al. (1998: 96)

The 2000 population of San Patricio County was comprised of nearly equal proportions of Caucasians and Hispanics. Some three percent were African-Americans, while Native Americans and Asians comprised less than one percent of the population.

The year 2000 median family income \$40,002 was slightly higher in San Patricio County than the statewide median of \$39,927. Eighteen percent of county residents were living in poverty in 2000, and seven percent of families with children were headed by single females.

Table 3.13-2 Earnings in San Patricio County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share of 2000 Earnings	\$ Change 1990-2000	% Share of Change 1990-2000
	1990	2000			
Earnings	453,048	774,382	100.0	321,334	100.0
Farm earnings	-1,605	20,557	2.6	18,952	5.9
Ag. Services, forestry, fish.	8,897	11,008	1.4	2,111	0.6
Fishing	2,910	1,650	0.2	-1,260	-0.4
Mining	18,484	19,073	2.5	589	0.2
Oil and gas extraction	18,455	NA	NA	NA	NA
Construction	51,741	58,475	7.5	6,734	2.1
Special trade contractors	10,921	26,831	3.5	15,910	4.9
Manufacturing	115,379	172,508	22.2	57,129	17.8
Fabricated metal products	NA	3,163	0.4	NA	NA
Industrial mach. & equip.	NA	1,279	0.2	NA	NA
Food and kindred	0	NA	NA	NA	NA
Chemicals and allied	83,105	99,750	12.9	16,645	5.2
Petroleum and coal	0	NA	NA	NA	NA
Transport., Public Utilities	21,692	23,588	3.0	1,896	0.6
Trucking and warehousing	3,354	3,452	0.4	98	0
Water transportation	1,632	1,034	0.1	-598	-0.2
Transportation by air	NA	NA	NA	NA	NA
Wholesale trade	10,827	8,842	1.1	-1,985	-0.6
Retail trade	43,493	49,456	6.4	5,963	1.8
Eating and drinking places	9,078	10,573	1.4	1,495	0.5
Finance, insur., real estate	11,929	17,780	2.3	5,851	1.8
Services	76,660	97,665	12.6	21,005	6.5
Business services	17,784	12,314	1.6	-5,470	-1.7
Health services	23,541	33,783	4.4	10,242	3.2
Legal services	1,847	2,373	0.3	526	0.2
Engineer./Management serv.	11,957	17,885	2.3	5,928	1.8
Government	95,552	315,897	40.8	220,345	68.6

Source: Bureau of Economic Analysis, Regional Economic Information System

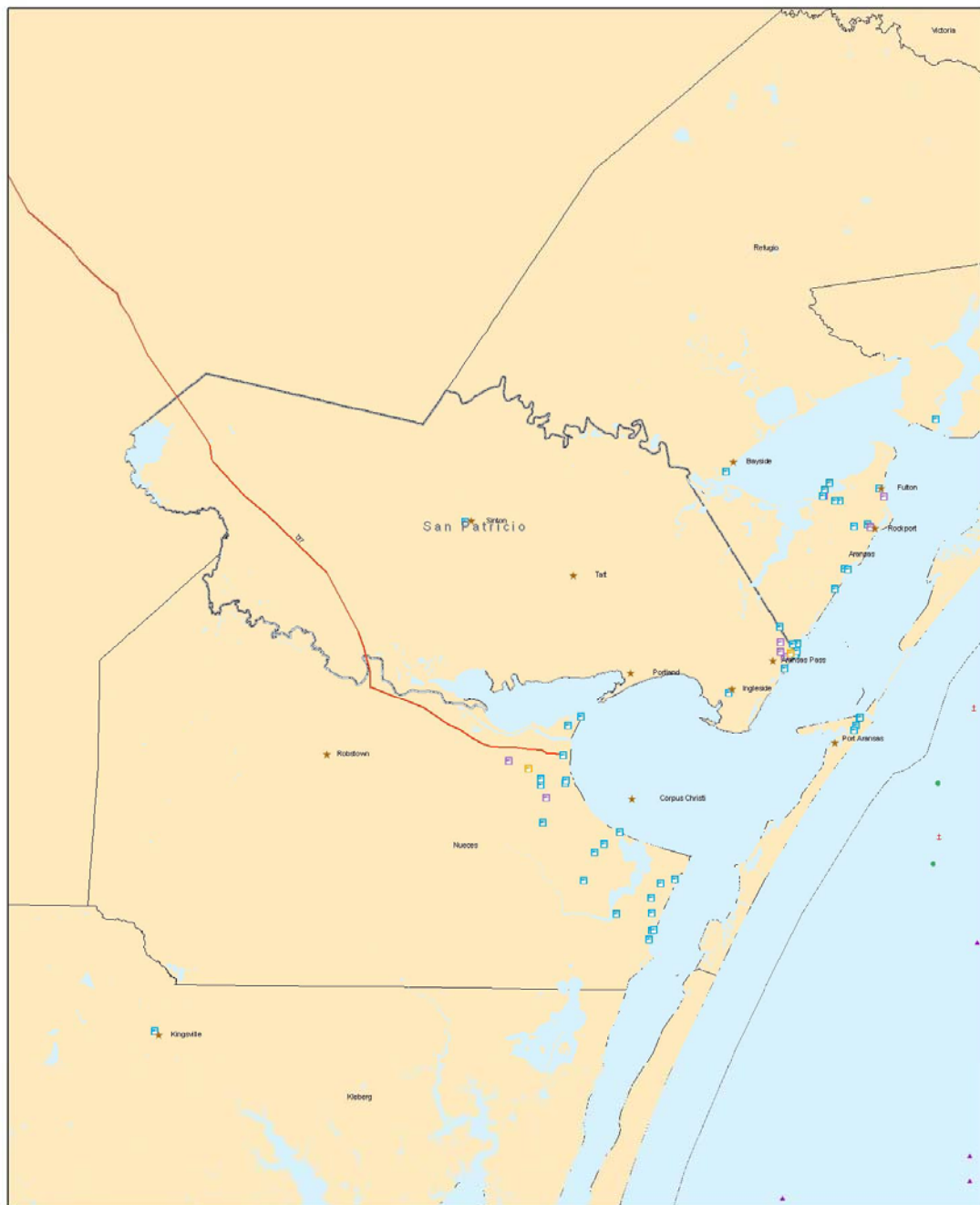
Table 3.13-3 Year 2000 Commercial Permits and Licenses, and 2003 Gulf Shrimp Permits: San Patricio Co *

Permit Type	Study Communities				
	Aransas Pass	Ingleside	Portland	Sinton	Taft
Pelagic Charter	4	--	2	--	--
Reef Fish Charter	4	--	2		
Swordfish	--	--	--	--	--
King Mackerel	3	--	--	--	--
Rock Shrimp	--	--	--	--	--
Red Snapper	2	--	--	--	--
Spiny Lobster	--	--	--	--	--
Spanish Mackerel	1	--	--	--	--
Gulf Reef Fish	4	--	2	--	--
Shark	-	--	--	--	--
South Atlantic Snapper Grouper	--	--	--	--	--
Total Federal Permits 2000	18	--	4	--	--
Total Federal Permit Holders 2000	9	2	3	--	--
Total State License Holders 2000	99	34	8	3	1
Gulf Shrimp Permits 2003 **	37	2	--	--	--

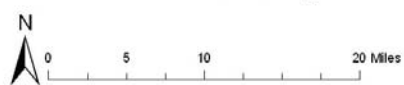
*Includes all permits and licenses that can be attributed to the communities by *both* street and post office box addresses; these data are used to generate counts of permit and license holders for whom evidence indicates actual residence, as provided in the community descriptions. ** 2003 is the first year for which Gulf shrimp permit data are available



Trawlers at Aransas Pass



San Patricio County



Legend

- | | |
|--------------------------------|----------------|
| ★ Study Community | ● Reef |
| ■ Processor | ✕ Wreck |
| ■ Processor and Seafood Dealer | ▲ Platform |
| ■ Seafood Dealer | — County Lines |
| | — Interstate |

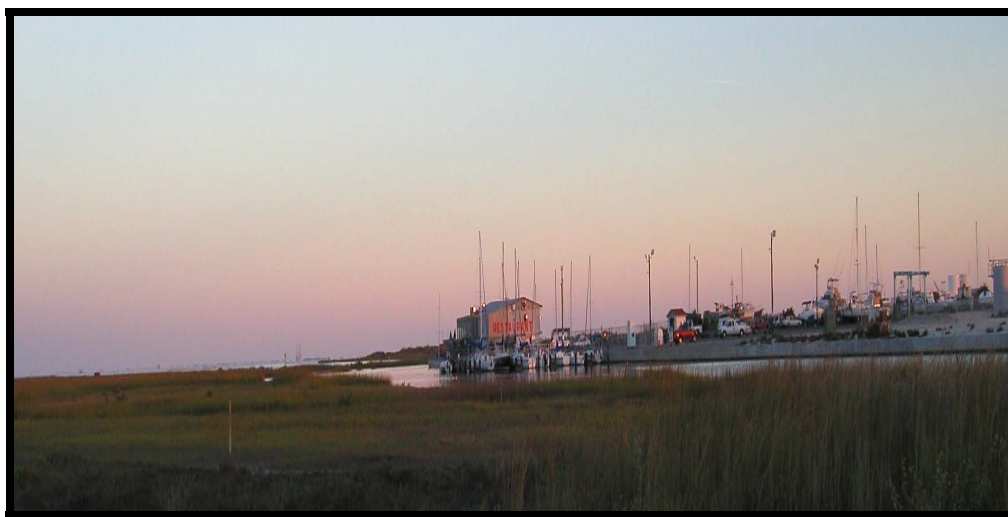
3.13.1 Aransas Pass (incorporated, pop. 8,138)

Location and Overview. Aransas Pass is located on the mainland shoreline of Redfish Bay, just west of Mustang Island in eastern San Patricio County. The town is approximately 25 miles northeast of Corpus Christi. Aransas Pass and the Gulf of Mexico are roughly six miles east. There is a long history of local involvement in commercial fishing and close social and economic association with residents of nearby Rockport and Port Aransas. A long causeway and bridges connect Aransas Pass to Mustang Island and Port Aransas.

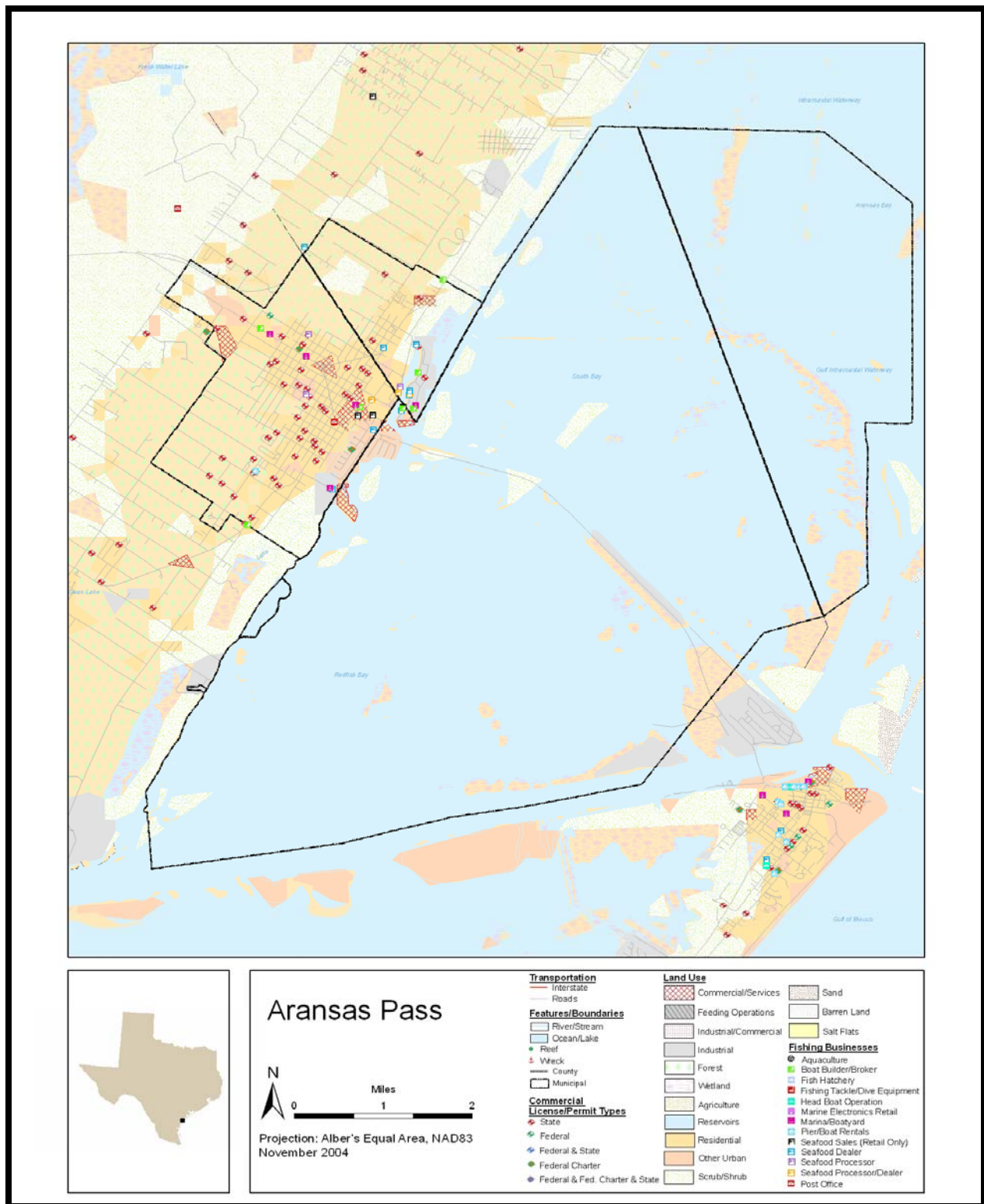
History. Aransas Pass is named for the regionally important channel between Mustang and St. Joseph Islands. Safe anchorage and navigable waters enhanced shipment of commodities such as cotton in the early part of the twentieth century. The town incorporated in 1910. Growth of the port was limited by hurricane damage, particularly that of the hurricane of 1919. The Aransas Pass shrimp fleet became the largest on the Texas Gulf Coast by the mid-1900s, however, and the advent of quick-freezing techniques enhanced success among local shrimp processing firms (Guthrie 2002).

Current Conditions and Trends. Aransas Pass was home to 8,138 persons in 2000, a 13 percent increase from the 1990 figure of 7,180 persons (U.S. Census Bureau). Seafood production and sports fishing are very important to the local economy. Major employers in Aransas Pass include: Sherwin Alumina Company, Gulf Marine Fabricators-Technip/Coflexnip, Kiewit Offshore Services, Ltd., DuPont duMours, and Air Liquide. Each company employs more than 500 workers (Aransas Pass Chamber of Commerce 2003). Numerous residents commute to jobs in Corpus Christi.

The local shrimp trawl fleet is extensive and productive, and 37 persons holding Gulf shrimp permits either lived in the town or maintained post office boxes here in 2003. A small pelagic fleet is based here as well. Recreational fishing is also important, and numerous charter operations operate in the area. Trout, redfish, flounder, black drum, and sheepshead and popularly pursued species in the nearshore waters, though offshore fishing is also available. Fishing-related tourism is important to the Aransas Pass economy. Five dockside hotels, various seafood restaurants, three public boat ramps, marinas, and recreational fishing tournaments support this industry.



Aransas Pass Marina at Twilight



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Aransas Pass Demographics

Factor	1990	2000
Total population	7,180	8,138
Gender Ratio M/F (Number)	3,486/3,694	4,018/4,120
Age (Percent of total population)		
Under 18 years of age	30.6	28.3
18 to 64 years of age	54.8	57.2
65 years and over	14.6	14.5
Ethnicity or Race (Number)		
White	5,903	6,558
Black or African American	349	280
American Indian and Alaskan Native	31	62
Asian	38	37
Native Hawaiian and other Pacific Islander	N/A	1
Some other race	859	918
Two or more races	N/A	282
Hispanic or Latino (any race)	2,541	3,068
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	21.3	11.6
Percent high school graduate or higher	53.2	67.1
Percent with a Bachelor's degree or higher	8.7	8.2
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	26.9	28.7
Percent who speak English less than very well	11.1	8.8
Household income (Median \$)	15,024	27,376
Poverty Status (Percent of population with income below poverty line)	34.5	18.3
Percent female headed household	13.4	13.4
Home Ownership (Number)		
Owner occupied	1,489	1,874
Renter occupied	1,015	1,087
Value Owner-occupied Housing (Median \$)	40,800	53,700
Monthly Contract Rent (Median \$)	240	475
Employment Status (Population 16 yrs and over)		
Percent in the labor force	59.9	52.9
Percent of civilian labor force unemployed	7.6	4.7
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	20.4
Service occupations	N/A	24.2
Sales and office occupations	N/A	24.4
Farming, fishing, and forestry occupations	5.9	1.9
Construction, extraction, and maintenance occupations	N/A	14.0
Production, transportation, and material moving occupations	N/A	15.1
Industry ** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	5.4	2.4
Mining (includes the offshore oil/gas industry workforce)	1.9	1.4
Manufacturing	7.0	6.4
Percent government workers	12.1	16.0
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	24.0
Percent worked outside of county of residence	35.5	44.4

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Aransas Pass in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	2
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	2
Fishing associations (recreational/commercial)	1
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	1
Fishing pier	0
Hotels/Inns (dockside)	5
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	1
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	3
Recreational docks/marinas	2
Bait & Tackle/fishing supplies	5
Recreational Fishing Tournaments	3
Sea Grant Extension office	0
Seafood restaurants	4-6
Seafood retail markets	5
Trucking operations	1
Site-seeing/pleasure tours	2-3
Charter/Head Boats	6
Commercial Boats	Numerous

Table 3. Primary Fishing-related Businesses Listed for Aransas Pass in 2003

Type of Business	Frequency
Boat Builder/Broker	7
Boat Builder/Broker; Marina	1
Boat Builder/Broker; Wholesale Seafood Dealer	1
Boat Rentals & Pier	1
Marina	4
Processor	2
Processor; Wholesale Seafood Dealer	3
Retail Seafood Dealer	4
Retail/Wholesale Seafood Dealer	2
Wholesale Seafood Dealer	3
Total	28

Table 4. Aransas Pass Commercial Landings and Value Summary: 2002 (based on seafood dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	4,852,536	14,684,596

Table 5. Aransas Pass License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
66	9	18
Total = 75		
% Households Holding Commercial Permit or License: 75/2,961 = 2.5		Average Number of Licenses per Household: 18/2,961 = 0.06

Please reference Table 3.13-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

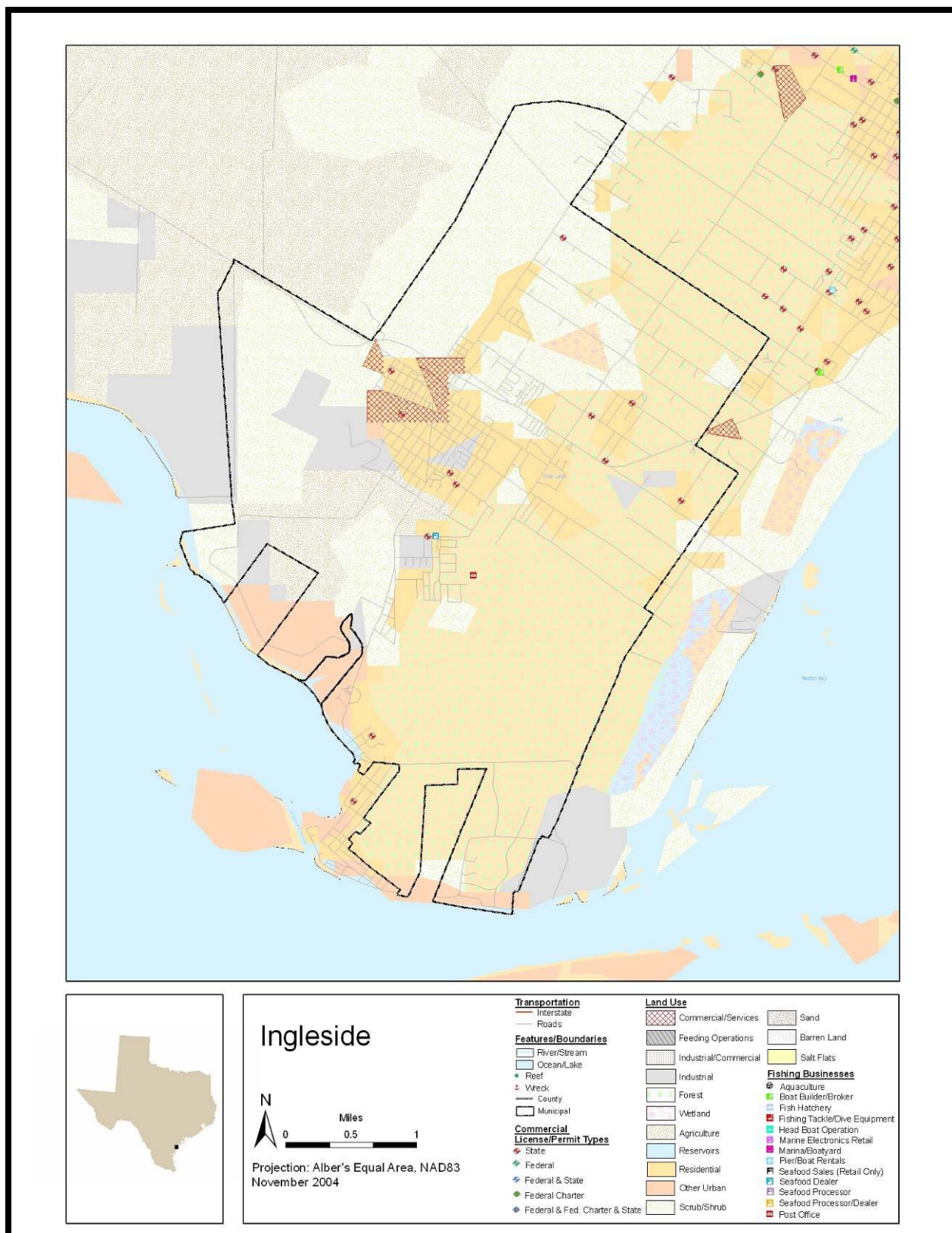
3.13.2 Ingleside (incorporated, pop. 9,388)

Location and Overview. Ingleside is located just south of the community of Aransas Pass at the intersection of State Highways 35 and 361 in southeastern San Patricio County. Corpus Christi is about 20 miles southwest. Corpus Christi Bay borders Ingleside to the west, south, and east, and the Corpus Christi ship channel enables movement of large vessels to and from Naval Station Ingleside. The channel at Aransas Pass is the nearest point of access to the Gulf of Mexico, some 12 miles east. Residents interact closely with persons and services in the adjacent communities.

History. Ingleside was established in 1855 by settlers engaged in farming and ranching. Grape production was important in the 1920s, vegetable production between 1920 and 1950, and oil development occurred in the area between 1927 and 1945. An aluminum fabrication plant was established in 1948, a metal production plant in 1950, and a DuPont chemical plant in 1973. Ingleside incorporated in 1951. A large population increase occurred when the U.S. Navy opened a large base here in the mid-1990s. Some 3,200 active duty naval personnel became residents at that time.

Current Conditions and Trends. Ingleside was home to 9,388 persons in 2000, a 65 percent increase from the 1990 census figure of 5,696 persons. Establishment of the Naval Station had a significant and positive effect on the local economy. Of the community's working population, 26 percent held positions outside their county of residence; most commuting to jobs in Corpus Christi. Many residents are employed by local industrial firms, and now by the U.S. Navy.

Ingleside's fishing-related businesses and services tend to be oriented to recreational fishing and boating enthusiasts, though captains of the few local commercial fishing vessels can utilize moorings at the commercial harbor. A few charter fishing operations are based here, although the permit holders themselves reside elsewhere.



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Ingleside Demographics

Factor	1990	2000
Total population	5,696	9,388
Gender Ratio M/F (Number)	2,810/2,886	5,115/4,273
Age (Percent of total population)		
Under 18 years of age	33.3	29.8
18 to 64 years of age	58.3	64.3
65 years and over	8.4	5.9
Ethnicity or Race (Number)		
White	4,764	7,281
Black or African American	69	526
American Indian and Alaskan Native	33	83
Asian	15	175
Native Hawaiian and other Pacific Islander	N/A	25
Some other race	845	956
Two or more races	N/A	342
Hispanic or Latino (any race)	1,712	2,601
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	16.5	4.3
Percent high school graduate or higher	59.9	84.7
Percent with a Bachelor's degree or higher	9.7	13.9
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	26.0	20.1
Percent who speak English less than very well	11.0	4.7
Household income (Median \$)	24,942	37,789
Poverty Status (Percent of population with income below poverty line)	15.8	10.2
Percent female headed household	13.8	9.5
Home Ownership (Number)		
Owner occupied	1,155	1,843
Renter occupied	712	1,137
Value Owner-occupied Housing (Median \$)	48,900	76,600
Monthly Contract Rent (Median \$)	298	598
Employment Status (Population 16 yrs and over)		
Percent in the labor force	62.8	70.2
Percent of civilian labor force unemployed	8.6	6.5
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	29.1
Service occupations	N/A	13.8
Sales and office occupations	N/A	27.1
Farming, fishing, and forestry occupations	3.7	0.8
Construction, extraction, and maintenance occupations	N/A	13.9
Production, transportation, and material moving occupations	N/A	15.3
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	3.1	1.5
Mining (includes the offshore oil/gas industry workforce)	1.7	2.4
Manufacturing	10.9	12.3
Percent government workers	15.1	21.6
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	20.4
Percent worked outside of county of residence	25.6	26.4

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Ingleside in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	2
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	1
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	1
Hotels/Inns (docksides)	1
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	1
Recreational docks/marinas	1
Bait & Tackle/fishing supplies	3
Recreational Fishing Tournaments	1
Sea Grant Extension office	0
Seafood restaurants	2
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	1
Charter/Head Boats	5-6
Commercial Boats	4

Table 3. Primary Fishing-related Businesses Listed for Ingleside in 2003

None listed.

Table 4. Ingleside Commercial Landings and Value Summary: 2002 (based on seafood dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	4,044	12,346

Table 5. Ingleside License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
13	1	21
Total = 14		
% Households Holding Commercial Permit or License: 14/2,980 = 0.5		Average Number of Licenses per Household: 21/2,980 = 0.01

Please reference Table 3.13-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.



Aerial View of Ingleside (courtesy of coastalbendtexas.com)

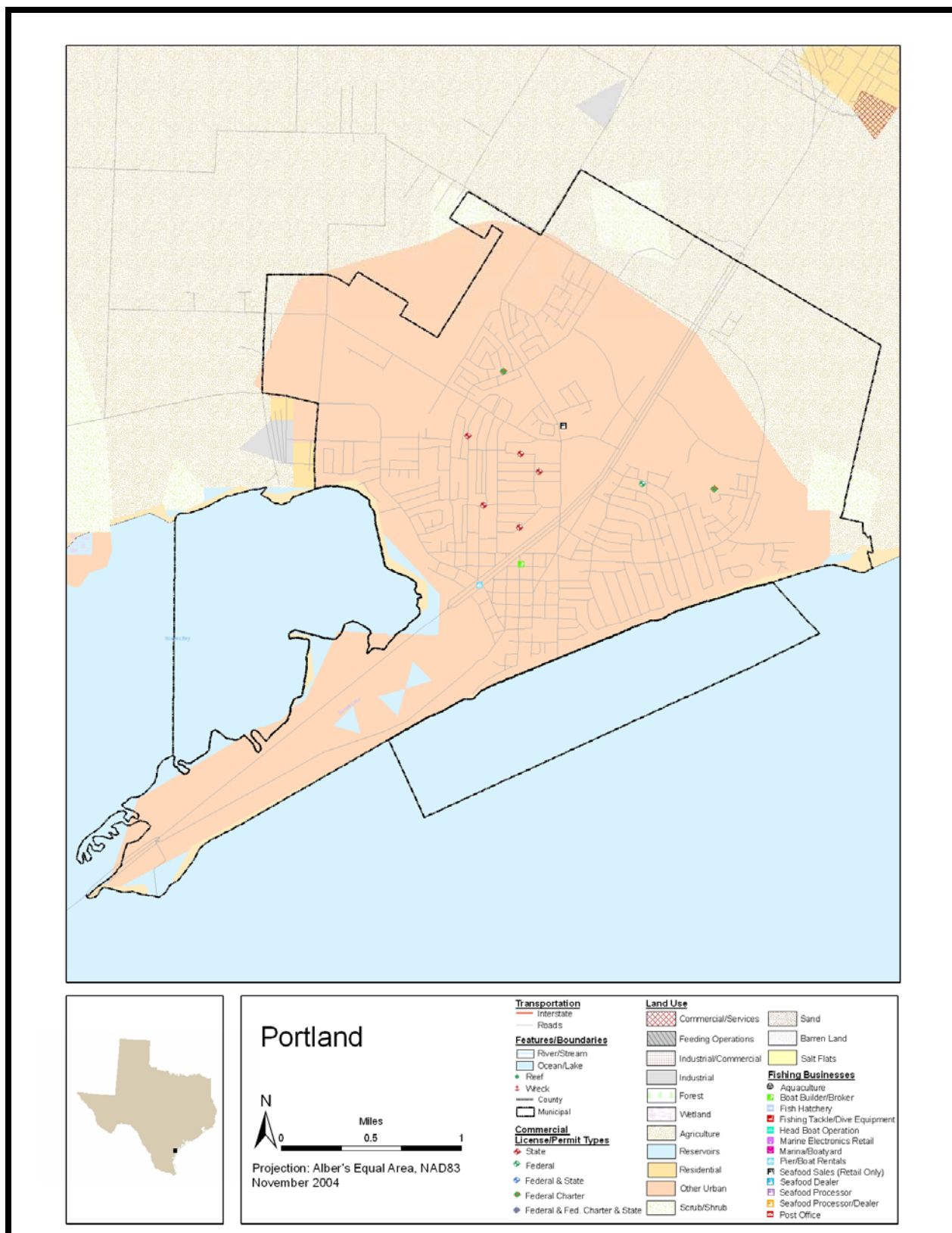
3.13.3 Portland (unincorporated, pop. 14,827)

Location and Overview. Portland is located along U.S. Route 181 in the South Texas coastal plain in southern San Patricio County. It is primarily a residential area closely associated with nearby Corpus Christi, located less than ten miles from town across Corpus Christi Bay. Portland's location on Corpus Christi and Nueces Bays make it a logical point of departure for recreational fishing enthusiasts. The channel at Aransas Pass is some 20 miles east of the city.

History. Portland was named after Portland, Maine, the hometown of its original settlers. The city was established around 1890 in association with shipping and rail facilities, and export of cotton and vegetables. Unfortunately, hurricanes destroyed the original port, and re-growth on the scale of Corpus Christi never occurred. The city did grow significantly after the Reynolds Metal Company opened an industrial complex here in 1952 (Guthrie 2002). Portland was incorporated in 1949.

Current Conditions and Trends. The year 2000 census enumerated 14,827 persons in Portland, an increase of 21 percent (2,603 persons) from 1990. Some 67 percent of the workforce in Portland held management/professional and sales and office positions in 2000, and 52 percent held positions outside their county of residence. Most commuters travel across the bay to jobs in nearby Corpus Christi. The average commute time was 21 minutes in 2000. Many other residents now work at Naval Station Ingleside, at the nearby aluminum manufacturing plant, or at one of the two major petrochemical plants in the area.

There is a small fleet of commercial fishing vessels in the area, and two charter fishing operations are based here. But the predominant waterfront uses are primarily urban-industrial in nature. Most local fishing-related businesses and services are oriented toward recreational anglers.



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Portland Demographics

Factor	1990	2000
Total population	12,224	14,827
Gender Ratio M/F (Number)	6,079/6,145	7,344/7,483
Age (Percent of total population)		
Under 18 years of age	31.4	32.6
18 to 64 years of age	62.8	59.4
65 years and over	5.8	7.9
Ethnicity or Race (Number)		
White	11,215	12,424
Black or African American	100	610
American Indian and Alaskan Native	51	84
Asian	60	156
Native Hawaiian and other Pacific Islander	N/A	30
Some other race	798	1,102
Two or more races	N/A	421
Hispanic or Latino (any race)	2,931	3,870
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	3.1	2.6
Percent high school graduate or higher	87.7	90.4
Percent with a Bachelor's degree or higher	24.1	25.5
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	21.2	19.4
Percent who speak English less than very well	6.5	5.0
Household income (Median \$)	37,952	48,574
Poverty Status (Percent of population with income below poverty line)	7.0	7.4
Percent female headed household	10.5	9.2
Home Ownership (Number)		
Owner occupied	2,716	3,179
Renter occupied	1,404	1,842
Value Owner-occupied Housing (Median \$)	68,700	89,800
Monthly Contract Rent (Median \$)	352	686
Employment Status (Population 16 yrs and over)		
Percent in the labor force	69.9	68.2
Percent of civilian labor force unemployed	5.3	4.7
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	39.5
Service occupations	N/A	11.6
Sales and office occupations	N/A	26.6
Farming, fishing, and forestry occupations	1.2	0.2
Construction, extraction, and maintenance occupations	N/A	10.5
Production, transportation, and material moving occupations	N/A	11.6
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	1.4	0.8
Mining (includes the offshore oil/gas industry workforce)	6.2	3.6
Manufacturing	11.3	14.0
Percent government workers	15.9	19.1
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	20.6
Percent worked outside of county of residence	55.6	52.5

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Portland in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	2
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	1
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	1
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	2
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	1
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Portland in 2003

Type of Business	Frequency
Boat Builder/Broker	1
Boat Rentals & Pier	1
Retail Seafood Dealer	1
Total	3

Table 4. Portland Commercial Landings and Value Summary: 2002

Commercial landings cannot be attributed to fishery participants in Portland.

Table 5. Portland License/Permit Summary: 2000

Commercial (based on physical residence data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
8	2	8
Total = 10		
% Households Holding Commercial Permit or License: 10/5,021 = 0.2		Average Number of Licenses per Household: 8/5,021 = 0.002

Please reference Table 3.13-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

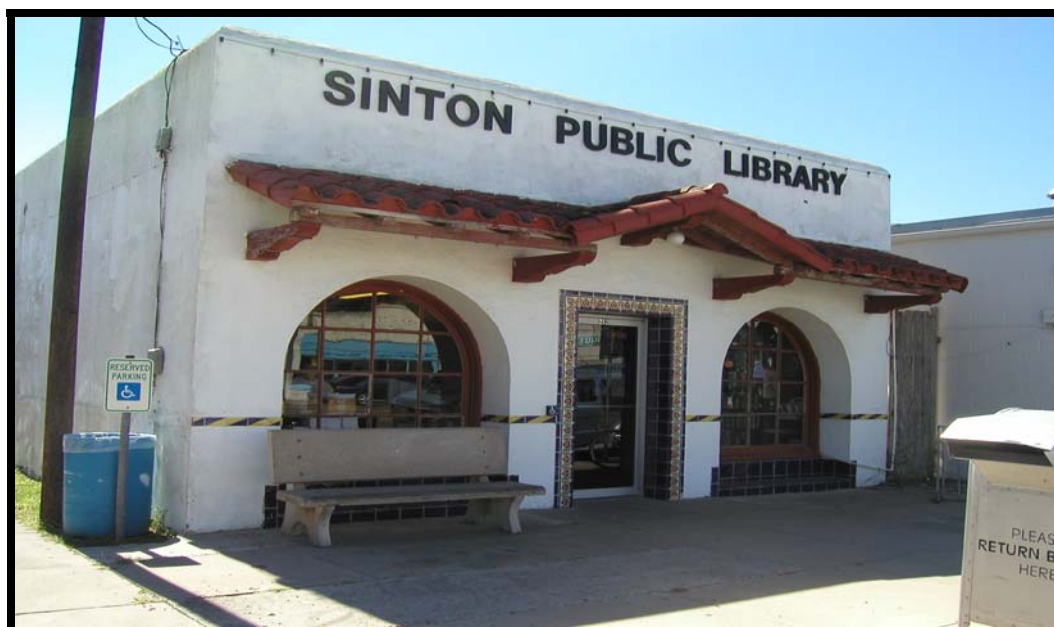
3.13.4 Sinton (incorporated, pop. 5,676)

Location and Overview. Sinton is a small town and county seat located at the crossroads of U.S. Highway 77 and State Route 188 in central San Patricio County. Corpus Christi is 28 miles south. The town is well inland, and the nearest point of access to the Gulf of Mexico is at the channel at Aransas Pass, some 33 miles east of the city.

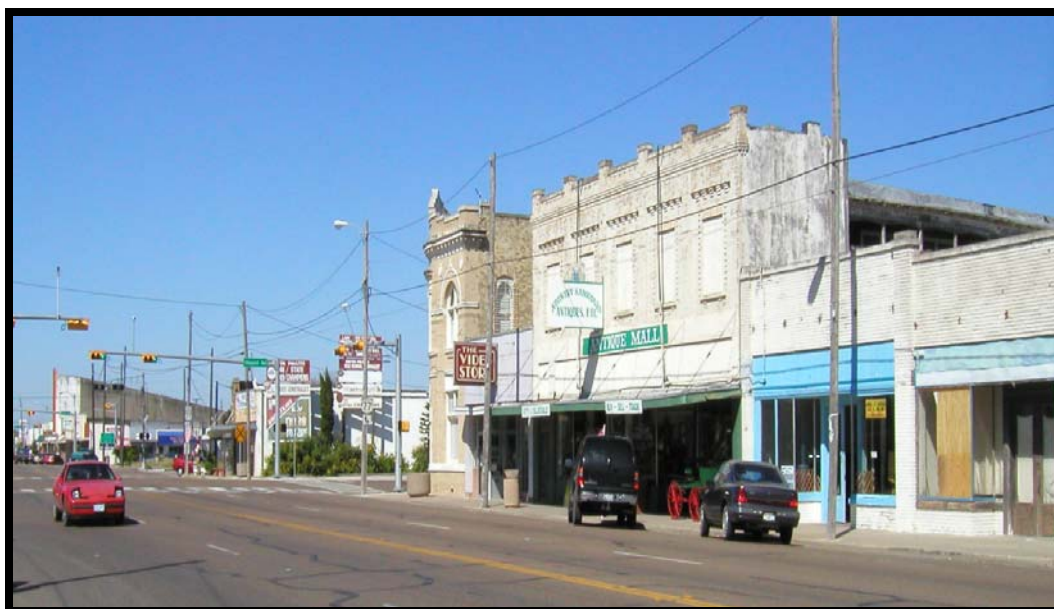
History. Sinton was founded in 1886 and incorporated in 1916. It was named after the majority stockholder in the Coleman-Fulton Pasture Company. The economy has historically been based primarily in cattle ranching and production of sorghum, cotton and corn. Oil was discovered in the area in 1935, and oil and petrochemical production are locally important forms of enterprise (Guthrie 2002).

Current Conditions and Trends. The year 2000 census enumerated 5,676 persons in Sinton, up from 5,549 persons in 1990. Many residents continue work on farms and ranches in the area, though census data indicate some 54 percent of the workforce held management/professional and sales and office positions in 2000. Many such residents commute to Corpus Christi for employment and various goods and services.

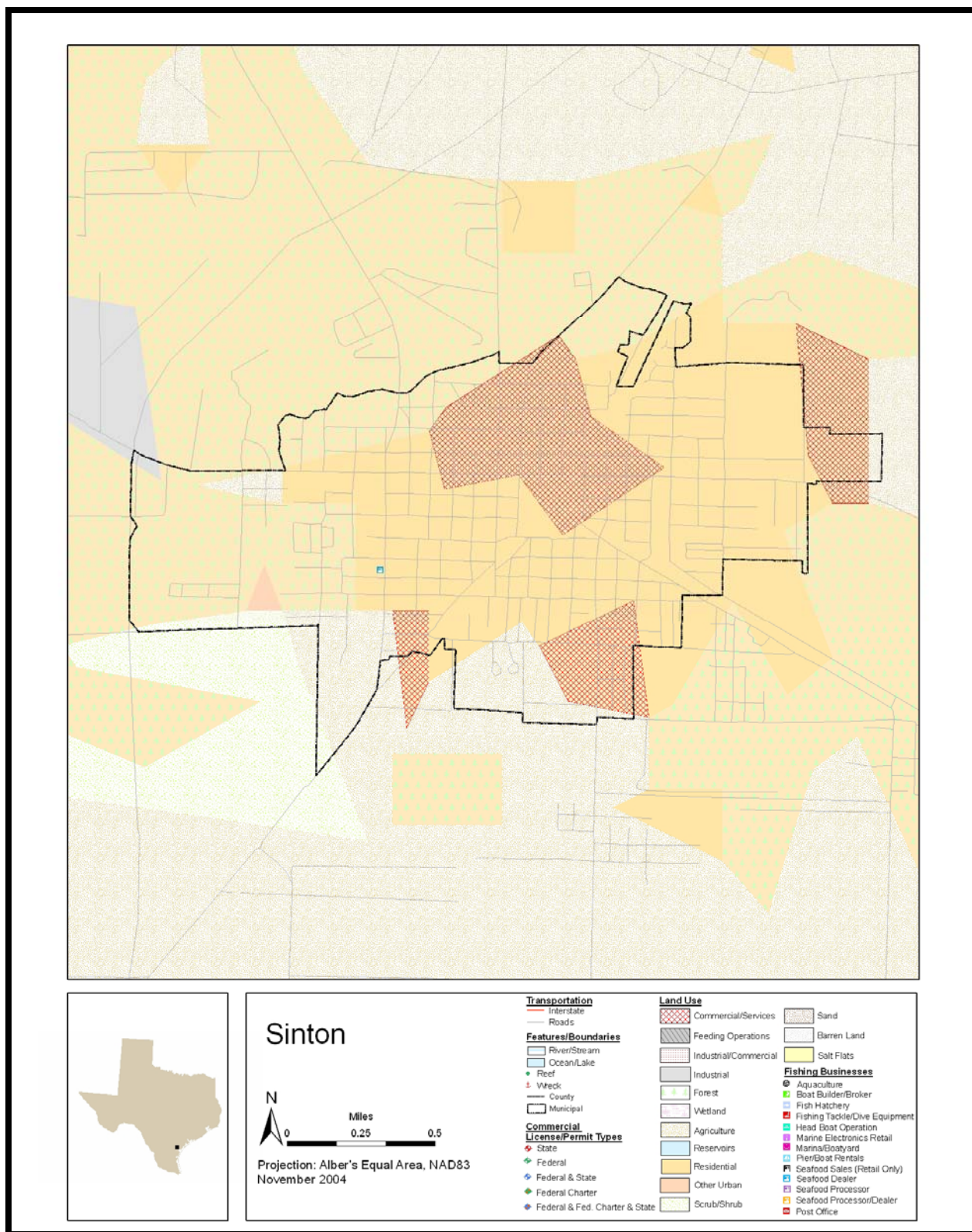
There are few marine fishing-related businesses or services in Sinton, and analysis of fishing permit and license data do not indicate that commercial participants live in Sinton. A wholesale seafood dealer was operating in the town in 2000, but was not buying from locally based operators. Resident recreational anglers often fish in the Nueces and Corpus Christi Bay areas, accessible approximately eight miles south.



Sinton Library



Main Street, Sinton, 2003



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Sinton Demographics

Factor	1990	2000
Total population	5,549	5,676
Gender Ratio M/F (Number)	2,653/2,896	2,847/2,829
Age (Percent of total population)		
Under 18 years of age	30.3	30.0
18 to 64 years of age	55.6	56.5
65 years and over	14.1	13.5
Ethnicity or Race (Number)		
White	3,628	4,170
Black or African American	210	206
American Indian and Alaskan Native	7	53
Asian	16	2
Native Hawaiian and other Pacific Islander	N/A	5
Some other race	1,688	1,049
Two or more races	N/A	191
Hispanic or Latino (any race)	3,760	4,032
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	28.4	20.4
Percent high school graduate or higher	54.4	60.3
Percent with a Bachelor's degree or higher	9.0	9.1
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	63.1	59.1
Percent who speak English less than very well	29.9	20.0
Household income (Median \$)	18,952	27,911
Poverty Status (Percent of population with income below poverty line)	28.4	28.0
Percent female headed household	21.1	18.9
Home Ownership (Number)		
Owner occupied	1,156	1,136
Renter occupied	653	709
Value Owner-occupied Housing (Median \$)	37,500	44,900
Monthly Contract Rent (Median \$)	196	376
Employment Status (Population 16 yrs and over)		
Percent in the labor force	51.0	52.3
Percent of civilian labor force unemployed	11.0	8.4
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	27.5
Service occupations	N/A	17.4
Sales and office occupations	N/A	26.3
Farming, fishing, and forestry occupations	7.3	0.1
Construction, extraction, and maintenance occupations	N/A	16.8
Production, transportation, and material moving occupations	N/A	11.8
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	6.9	1.4
Mining (includes the offshore oil/gas industry workforce)	4.7	3.2
Manufacturing	7.3	3.6
Percent government workers	28.8	28.5
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	21.6
Percent worked outside of county of residence	25.8	32.3

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Sinton in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	1
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	2
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	5
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Sinton in 2003

None listed.

Table 4. Sinton Commercial Landings and Value Summary: 2002

No landings data were available for Sinton.

Table 5. Sinton License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
--	--	9
Total --		
% Households Holding Commercial Permit or License: --		Average Number of Licenses per Household: 9/1,845 = 0.004

Please reference Table 3.13-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.13.5 Taft (incorporated, pop. 3,396)

Location and Overview. Taft is located about 27 miles inland along U.S. Highway 181 and Farm Route 631 in south-central San Patricio County. The town is about 25 road miles north of Corpus Christi. Agriculture and light industry have been the primary forms of economic activity in the area over recent decades. Most residents are bilingual persons of Hispanic ancestry.

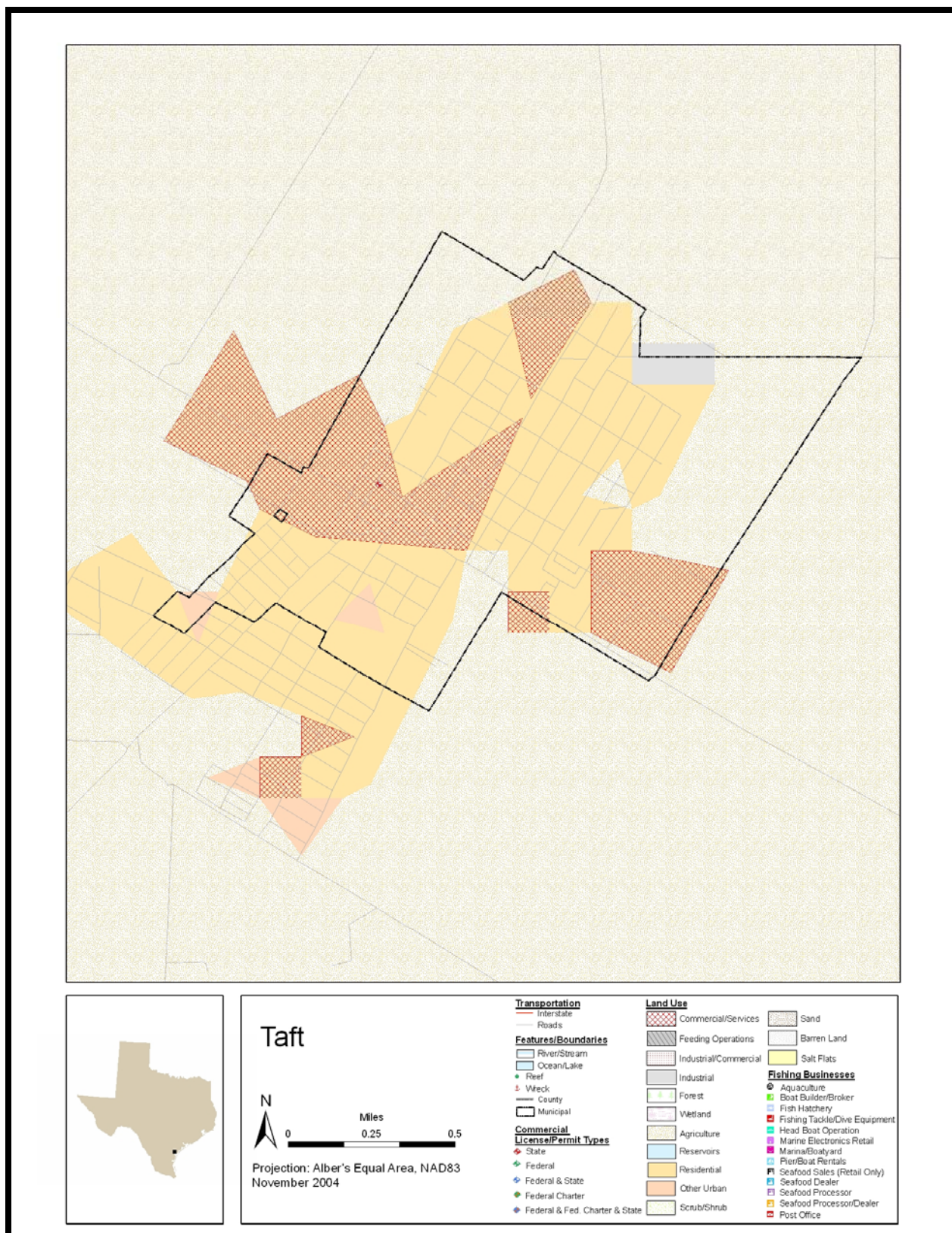
History. Taft was established in the early 1900s as a company town for the Coleman-Fulton Pasture Company. Cotton and vegetable production were historically significant. Oil was discovered in the area in 1935, contributing to local economic growth. Taft was incorporated in 1929 (Guthrie 2002).

Current Conditions and Trends. Taft was home to 3,396 persons in 2000, up slightly from the 3,222 persons enumerated in 1990. While many residents continue to work in agriculture or local service businesses, some commute to jobs in Corpus Christi.

Taft residents have historically had relatively little involvement with commercial fisheries and this situation appears to be continuing into the new century. There were no significant fishing-related businesses or services in the area at the time of this study. Marine anglers must travel elsewhere to obtain fishing-related goods and services.



Nueces Bay South of Taft (photo courtesy of www.tpwd.state.tx.us)



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Taft Demographics

Factor	1990	2000
Total population	3,222	3,396
Gender Ratio M/F (Number)	1,556/1,666	1,664/1,732
Age (Percent of total population)		
Under 18 years of age	30.9	33.5
18 to 64 years of age	54.3	54.7
65 years and over	14.8	11.8
Ethnicity or Race (Number)		
White	2,336	2,412
Black or African American	143	113
American Indian and Alaskan Native	8	7
Asian	5	2
Native Hawaiian and other Pacific Islander	N/A	1
Some other race	730	779
Two or more races	N/A	82
Hispanic or Latino (any race)	1,978	2,276
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	25.6	21.8
Percent high school graduate or higher	55.0	62.8
Percent with a Bachelor's degree or higher	6.5	9.1
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	56.1	47.5
Percent who speak English less than very well	25.7	14.1
Household income (Median \$)	16,328	24,622
Poverty Status (Percent of population with income below poverty line)	37.0	25.8
Percent female headed household	18.5	15.0
Home Ownership (Number)		
Owner occupied	652	711
Renter occupied	359	373
Value Owner-occupied Housing (Median \$)	39,900	45,500
Monthly Contract Rent (Median \$)	207	373
Employment Status (Population 16 yrs and over)		
Percent in the labor force	54.2	55.4
Percent of civilian labor force unemployed	12.2	6.1
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	25.9
Service occupations	N/A	24.1
Sales and office occupations	N/A	21.1
Farming, fishing, and forestry occupations	7.8	1.4
Construction, extraction, and maintenance occupations	N/A	15.9
Production, transportation, and material moving occupations	N/A	11.5
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	6.1	3.6
Mining (includes the offshore oil/gas industry workforce)	4.3	1.5
Manufacturing	10.2	9.0
Percent government workers	20.4	19.9
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	23.7
Percent worked outside of county of residence	37.0	13.2

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Taft in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	0
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	0
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	0
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Taft in 2003

None listed.

Table 4. Taft Commercial Landings and Value Summary: 2002

Landings and value data may not be reported under the “rule of three.”

Table 5. Taft License/Permit Summary: 2000

Commercial (based on physical residence data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
1	--	3
Total = 1		
% Households Holding Commercial Permit or License: 1/1,084 = 0.1		Average Number of Licenses per Household: 3/1,084 = 0.002

Please reference Table 3.13-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.14 Nueces County Communities

This section describes the study communities located in Nueces County. These are: Corpus Christi, Port Aransas, and Robstown.

Nueces County is bordered on the north by San Patricio County, on the southwest by Kleberg County, and on the west by Jim Wells County. The northern portions of Padre Island and the Gulf of Mexico lie to the east.

The year 2000 population of Nueces County was 313,645 persons, making it the 12th most populous county in Texas that year. Corpus Christi is the seat of government and the largest city in Nueces. Its year 2000 population was 277,454 persons.

Nueces County encompasses 847 square miles of the Coastal Prairies region. Elevation ranges from sea level to 129 feet (Ramos et al. 2001:240).

Ranching was the mainstay of the Nueces County economy from its inception in 1846 until the end of the 19th century. Corpus Christi served as long been the county's center of commerce, facilitated by its deepwater port, and rail connections to cities as distant as Laredo and San Antonio. Agriculture became important in the 20th century, with extensive production of cotton and sorghum. Oil and gas were discovered in the region in the 1920s (Long 2002).

Employment in commercial fisheries harvesting dropped almost 32 percent during the first five years of the 1990s, with 69 persons employed in 1995. Seafood processing and wholesale activities were not extensive in Nueces County during this period. Seafood retail firms employed 1,092 persons in 1990 and 1,354 persons in 1995 (Dokken et al. 1998:97).

The racial composition of the Nueces County population was 56 percent of Hispanic ancestry, 38 percent Caucasian, and four percent African American in 2000. Median family income was \$41,066 in 2000, higher than the state median of \$39,927. Some 18 percent of residents lived in poverty and nine percent of families with children were headed by single females.



Corpus Christi Ship Channel in 2004

Table 3.14-1 Earnings in Nueces County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share of 2000 Earnings	\$ Change 1990-2000	% Share of Change 1990-2000
	1990	2000			
Earnings	4,637,954	6,027,093	100.0	1,389,139	100.0
Farm earnings	-6,568	32,754	0.5	19,618	1.4
Ag. services, forestry, fish.	12,367	22,949	0.4	10,582	0.8
Fishing	1,143	NA	NA	NA	NA
Mining	223,625	198,082	3.3	-25,543	-1.8
Oil and gas extraction	215,631	190,520	3.2	-25,111	-1.8
Construction	355,237	575,173	9.5	219,936	15.8
Special trade contractors	153,904	249,147	4.1	95,243	6.8
Manufacturing	538,064	625,283	10.4	87,219	6.3
Fabricated metal products	22,546	34,505	0.6	11,959	0.9
Industrial mach. & equip.	25,792	55,996	0.9	30,204	2.2
Food and kindred	52,699	49,576	0.8	-3,123	-0.2
Chemicals and allied	165,796	144,106	2.4	-21,690	-1.5
Petroleum and coal	202,362	236,210	3.9	33,848	2.4
Transport., Public Utilities	279,515	392,633	6.5	113,118	8.1
Trucking and warehousing	44,406	69,306	1.1	24,900	1.8
Water transportation	8,902	10,414	0.2	1,512	0.1
Transportation by air	37,440	49,327	0.8	11,887	0.8
Wholesale trade	202,363	274,513	4.5	72,150	5.2
Retail trade	470,347	595,863	9.9	125,516	9.0
Eating and drinking places	128,438	179,641	3.0	51,203	3.7
Finance, insur., real estate	193,522	327,129	5.4	133,607	9.6
Services	1,172,750	1,742,122	28.9	569,372	41.0
Business services	173,367	283,172	4.7	109,805	7.9
Health services	472,358	720,681	11.9	248,323	17.9
Legal services	160,236	184,009	3.0	23,773	1.7
Engineer/Management serv.	111,142	148,838	2.5	37,696	2.7
Government	1,196,732	1,273,346	21.1	76,614	5.5

Source: Bureau of Economic Analysis, Regional Economic Information System

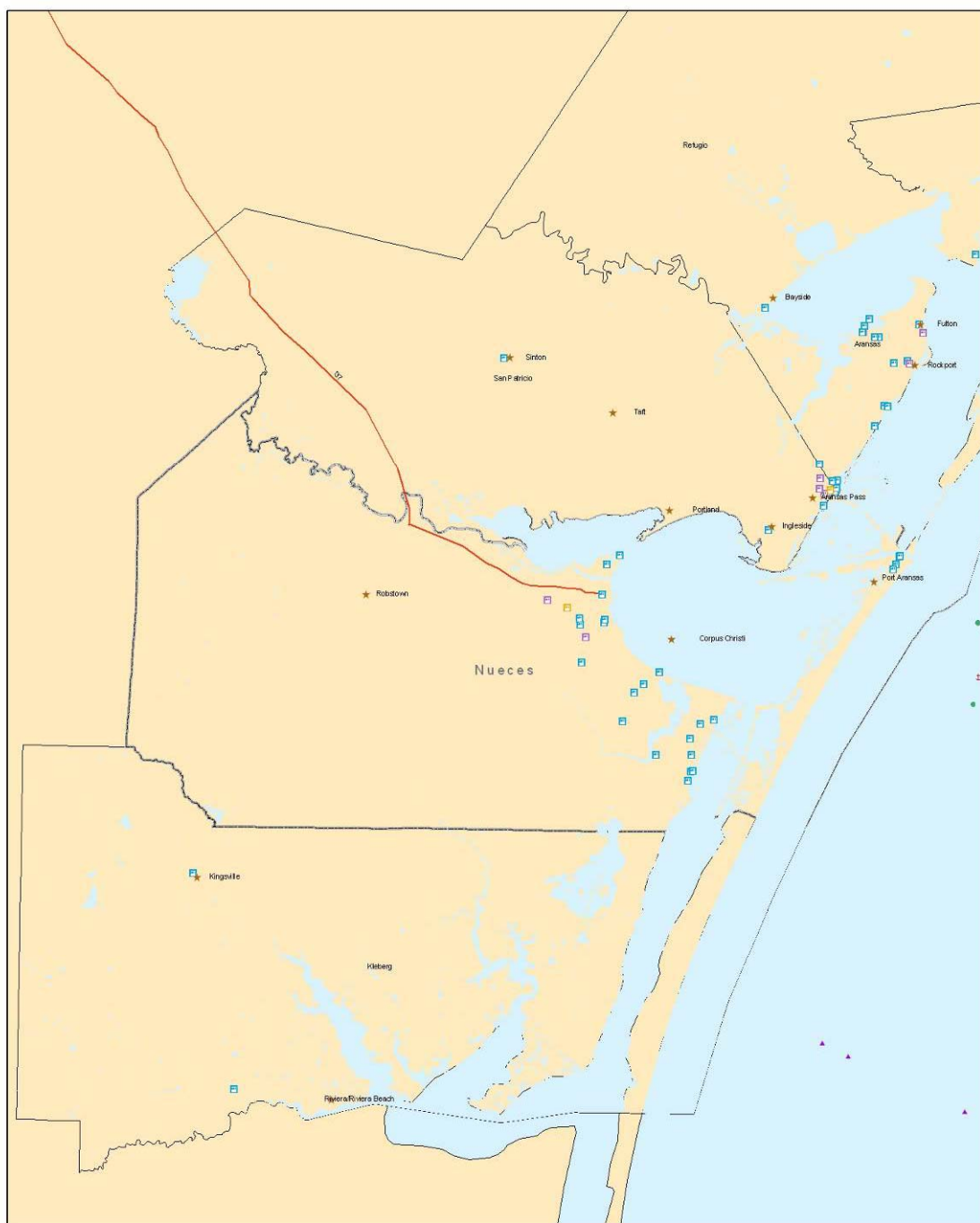
Table 3.14-2 Year 2000 Permits and Licenses, and 2003 Gulf Shrimp Permits: Nueces County*

Permit Type	Study Communities		
	Corpus Christi	Port Aransas	Robstown
Pelagic Charter	16	32	--
Reef Fish Charter	16	31	--
Swordfish	--	1	--
King Mackerel	--	--	--
Rock Shrimp	--	--	--
Red Snapper	--	1	--
Spiny Lobster	--	--	--
Spanish Mackerel	--	--	--
Gulf Reef Fish	2	2	--
Shark	2	2	--
South Atlantic Snapper Grouper	2	2	--
Total Permits 2000	38	71	--
Total Permit Holders 2000	18	35	--
Total State License Holders 2000	118	28	4
Gulf Shrimp Permits 2003 **	1	2	--

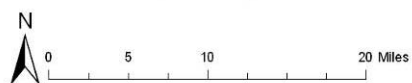
* Includes all permits and licenses that can be attributed to the communities by *both* street and post office box addresses; these data are used to generate counts of permit and license holders for whom evidence indicates actual residence, as provided in the community descriptions. ** 2003 is the first year for which Gulf shrimp permit data are available.



Mustang Island and Intracoastal Waterway near Corpus Christi (courtesy of www.texmaps.com)



Nueces County



Legend

- | | |
|--------------------------------|----------------|
| ★ Study Community | ● Reef |
| □ Processor | ⚓ Wreck |
| ▣ Processor and Seafood Dealer | ▲ Platform |
| ▢ Seafood Dealer | — County Lines |
| | — Interstate |

3.14.1 Corpus Christi (incorporated, pop. 277,454)

Location and Overview. Corpus Christi is located at the mouth of the Nueces River in northeastern Nueces County. This port city and county seat is bordered by Nueces Bay to the north and Corpus Christi Bay to the east. The nearest point of access to the Gulf of Mexico is at Aransas Pass, some 20 miles east across Corpus Christi Bay.

Corpus Christi is a regional center of commerce and home to Texas A & M University – Corpus Christi. The city's economy is based largely in petroleum and natural gas production, various forms of manufacturing, agriculture, and tourism. Twenty-two docks at the Port of Corpus Christi deal solely with petrochemicals and petroleum products. Various forms of maritime trade and fishing-related industry occur in the city and surrounding coastal zone.

History. Members of the Karankawa tribal group are the first known inhabitants of the region. Anglo settlers arrived in 1839 and established Corpus Christi, or “body of Christ,” as a frontier trading post. The city was incorporated in 1852. Although yellow fever and navigation problems in the shallow waters of the bay initially impeded growth, many residents prospered through cattle ranching and wool production. Arrival of rail service in the late 1800s facilitated growth. By 1914, four railroads served the area (Long 2002).

Completion of Corpus Christi’s deepwater port in 1926 had a significant effect on the region's economy, and the population more than doubled between 1920 and 1930. Although growth slowed during the Depression, petroleum and natural gas production and refinement quickly became and today remain critically important to the Corpus Christi economy (Long 2002).

Current Conditions and Trends. According to the U.S. Census Bureau, the population of Corpus Christi increased eight percent between 1990 and 2000. The city is now home to 277,454 persons. Oil and gas industry support services, petrochemical production, and other forms of manufacturing are leading employment sectors. Some 59 percent of the local workforce held positions in management/professional and sales/office occupations. The Port of Corpus Christi is a source of numerous maritime-oriented jobs. The Port maintains 125 acres of open storage and fabrication sites, and 295,500 square feet of dockside storage.

There are many fishing-related businesses and services in Corpus Christi. There is a major commercial harbor, numerous marinas, over twenty bait and tackle/fishing supply shops, three marine rails, several vessel repair facilities, various wholesale and retail seafood establishments, and many boat builders and brokers. A fisheries research lab is also located in Corpus Christi.

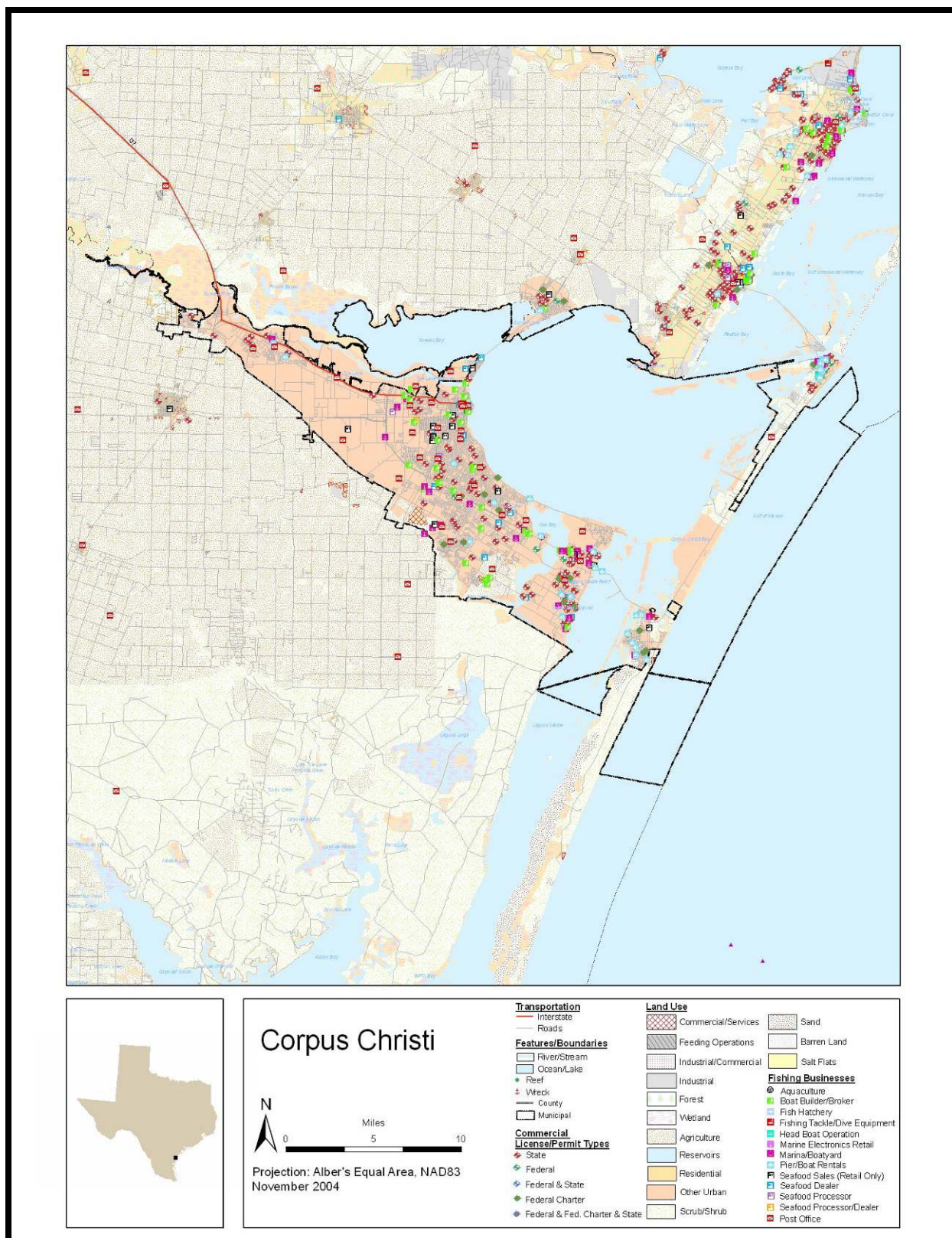
The commercial fishing fleet based in Corpus Christi tends to focus on drum, shrimp, and various inshore and offshore bottomfish. Black drum led the landings figures for 2002. Numerous federally-permitted charter vessels have been operating from Corpus Christi in recent years.



Corpus Christi Skyline (photo courtesy of www.uscgaux.org)



Recreational Marina in Corpus Christi (photo courtesy of www.img.photobucket.com)



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Corpus Christi Demographics

Factor	1990	2000
Total population	257,453	277,454
Gender Ratio M/F (Number)	125,716/131,737	135,572/141,882
Age (Percent of total population)		
Under 18 years of age	30.1	28.1
18 to 64 years of age	59.9	60.8
65 years and over	10.0	11.1
Ethnicity or Race (Number)		
White	196,019	198,714
Black or African American	12,347	12,964
American Indian and Alaskan Native	1,112	1,766
Asian	2,390	3,551
Native Hawaiian and other Pacific Islander	N/A	212
Some other race	45,585	51,552
Two or more races	N/A	8,690
Hispanic or Latino (any race)	129,708	150,737
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	14.9	11.1
Percent high school graduate or higher	70.9	75.8
Percent with a Bachelor's degree or higher	17.8	19.6
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	41.9	41.2
Percent who speak English less than very well	15.0	12.8
Household income (Median \$)	25,773	36,414
Poverty Status (Percent of population with income below poverty line)	19.9	17.6
Percent female headed household	13.8	15.4
Home Ownership (Number)		
Owner occupied	50,633	58,912
Renter occupied	38,838	39,879
Value Owner-occupied Housing (Median \$)	56,500	72,100
Monthly Contract Rent (Median \$)	305	555
Employment Status (Population 16 yrs and over)		
Percent in the labor force	64.8	62.6
Percent of civilian labor force unemployed	8.4	7.3
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	30.7
Service occupations	N/A	17.3
Sales and office occupations	N/A	28.2
Farming, fishing, and forestry occupations	1.1	0.2
Construction, extraction, and maintenance occupations	N/A	12.2
Production, transportation, and material moving occupations	N/A	11.4
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	1.2	0.4
Mining (includes the offshore oil/gas industry workforce)	2.5	1.2
Manufacturing	9.3	7.3
Percent government workers	19.1	18.4
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	19.7
Percent worked outside of county of residence	5.5	5.8

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Corpus Christi in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	5
Fishing associations (recreational/commercial)	1
Fish processors, Wholesale fish house	Numerous
Fisheries research laboratories	1
Fishing monuments	2
Fishing pier	5
Hotels/Inns (dockside)	8
Marine railways/haul out facilities	3
Museums—fishing/marine-related	0
Net makers	1-2
NMFS or state fisheries office (port agent, etc.)	1
Public boat ramps	2
Recreational docks/marinas	1
Bait & Tackle/fishing supplies	20
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	50
Seafood retail markets	30
Trucking operations	0
Site-seeing/pleasure tours	1
Charter/Head Boats	10
Commercial Boats	20 +

Table 3. Primary Fishing-related Businesses Listed for Corpus Christi in 2003

Type of Business	Frequency
Boat Builder/Broker	35
Boat Builder/Broker; Boat Rentals & Pier	1
Boat Builder/Broker; Marina	10
Boat Rentals & Pier	24
Marina	24
Processor	1
Processor; Wholesale Seafood Dealer	1
Retail Seafood Dealer	14
Wholesale Seafood Dealer	2
Total	112

Table 4. Corpus Christi Commercial Landings and Value Summary: 2002 (based on seafood dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	949,943	1,229,851

Table 5. Corpus Christi License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
123	19	170
Total = 142		
% Households Holding Commercial Permit or License: 142/98,791 = 0.1		Average Number of Licenses per Household: 170/98,791 = 0.001

Please reference Table 3.14-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.14.2 Port Aransas (incorporated, pop. 3,370)

Location and Overview. Port Aransas is a small seaside town located on the northern tip of Mustang Island in northeastern Nueces County. It is bordered by Corpus Christi Bay on the west, Aransas Pass to the northeast, and the Gulf of Mexico to the east. Corpus Christi, the nearest urban center, is approximately 32 miles southwest of Port Aransas. The general area around Port Aransas is one of the most popular tourist destinations on the Gulf Coast. Indeed, its population frequently surges to over 20,000 during the peak summer tourist season (Upchurch 2002).

History. Karankawa tribal groups are believed to have been the earliest inhabitants of Mustang Island. These early settlers took advantage of the rich estuarine and marine resources in the area. "Mustang Island" derives horses let loose on the island in the 1800s. The first known Anglo settlers arrived in 1855. Port Aransas was formerly known as "Ropesville" and "Tarpon," but assumed its present name in the early 1900s. Most early residents were involved in fishing, and the now federally-protected sea turtle was at one time an economically important export commodity (Port Aransas Chamber of Commerce 2000; Texas Online 1998)

Current Conditions and Trends. The year 2000 census enumerated 3,370 persons in Port Aransas, an increase of 51 percent or 1,137 persons above the 1990 figure. Administrators and informed observers suggest that the growth has occurred in conjunction with a period of coastal "gentrification." This is supported by census figures indicating that some 57 percent of the workforce held management/professional and sales-related occupations in 2000, while only three percent of residents reported farming, fishing, or forestry as their primary occupation. Unlike years past when many residents fished for a living on the waters of Corpus Christi and Aransas Bays, and the Gulf of Mexico, many residents now commute to professional and managerial positions in Rockport and Corpus Christi.

Port Aransas is now a popular destination for recreational anglers. Many target the popular redfish, speckled and sand trout, sheepshead, flounder, croaker, skipjack, and drum. Shoreline, jetty, and boat fishing are all very popular. Many charter boats are available for deep sea fishing.

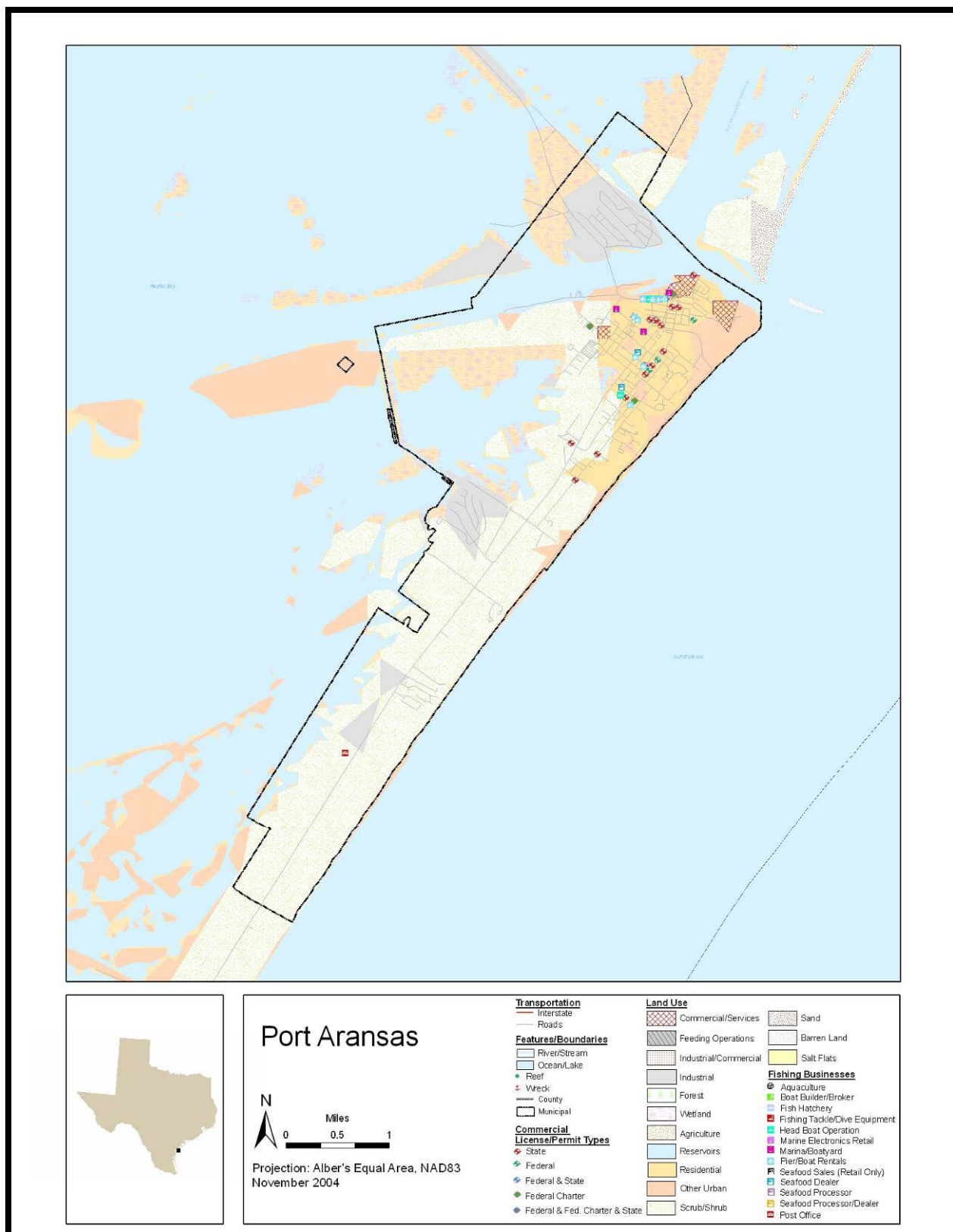
There are various fishing-related businesses and services in Port Aransas. Both recreational and commercial fishing activities are supported in some fashion. The local commercial fleets were productive in terms of shrimp and finfish landings in 2002, and there were many pelagic and reef fish charter vessels operating from the area that year.



Anglers on the Jetty at Port Aransas in 2003



Cast-netting for Bait near Port Aransas: Spring 2003



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Port Aransas Demographics

Factor	1990	2000
Total population	2,233	3,370
Gender Ratio M/F (Number)	1,146/1,087	1,753/1,617
Age (Percent of total population)		
Under 18 years of age	21.6	18.9
18 to 64 years of age	64.5	65.4
65 years and over	13.9	15.7
Ethnicity or Race (Number)		
White	2,147	3,165
Black or African American	4	14
American Indian and Alaskan Native	10	42
Asian	30	19
Native Hawaiian and other Pacific Islander	N/A	1
Some other race	42	73
Two or more races	N/A	46
Hispanic or Latino (any race)	138	205
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	3.7	2.5
Percent high school graduate or higher	81.2	87.4
Percent with a Bachelor's degree or higher	23.9	27.9
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	8.3	9.0
Percent who speak English less than very well	3.1	2.2
Household income (Median \$)	23,396	39,432
Poverty Status (Percent of population with income below poverty line)	15.8	11.3
Percent female headed household	8.1	7.3
Home Ownership (Number)		
Owner occupied	576	1,542
Renter occupied	401	2,252
Value Owner-occupied Housing (Median \$)	67,100	110,500
Monthly Contract Rent (Median \$)	317	571
Employment Status (Population 16 yrs and over)		
Percent in the labor force	65.6	61.5
Percent of civilian labor force unemployed	4.6	2.5
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	36.4
Service occupations	N/A	21.0
Sales and office occupations	N/A	20.3
Farming, fishing, and forestry occupations	6.3	2.8
Construction, extraction, and maintenance occupations	N/A	11.8
Production, transportation, and material moving occupations	N/A	7.7
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	5.0	2.6
Mining (includes the offshore oil/gas industry workforce)	2.3	1.1
Manufacturing	5.0	1.0
Percent government workers	20.6	21.4
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	15.9
Percent worked outside of county of residence	8.2	9.0

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Port Aransas in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	5-6
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	3-4
Fishing associations (recreational/commercial)	1
Fish processors, Wholesale fish house	Several
Fisheries research laboratories	1
Fishing monuments	3
Fishing pier	5
Hotels/Inns (dockside)	20
Marine railways/haul out facilities	0
Museums—fishing/marine-related	1
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	3-4
Recreational docks/marinas	6
Bait & Tackle/fishing supplies	10
Recreational Fishing Tournaments	Several
Sea Grant Extension office	0
Seafood restaurants	20
Seafood retail markets	2
Trucking operations	0
Site-seeing/pleasure tours	4
Charter/Head Boats	20
Commercial Boats	15+

Table 3. Primary Fishing-related Businesses Listed for Port Aransas in 2003

Type of Business	Frequency
Boat Builder/Broker	2
Boat Rentals & Pier	13
Boat Rentals & Pier; Marina	1
Marina	6
Marina; Retail Seafood Dealer	1
Retail Seafood Dealer	1
Total	24

Table 4. Port Aransas Commercial Landings and Value Summary: 2002 (based on seafood dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	117,983	316,866

Table 5. Port Aransas License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
45	10	12
Total = 55		
% Households Holding Commercial Permit or License: 55/1,542 = 3.6		Average Number of Licenses per Household: 12/1,542 = 0.01

Please reference Table 3.14-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.14.3 Robstown (incorporated, pop. 12,727)

Location and Overview. Robstown is located at the intersection of U.S. Highway 77, State Highway 44, and Farm Route 1889 in north-central Nueces County. Corpus Christi is approximately eighteen miles east. The Gulf of Mexico is nearly 40 miles east. Resident fishery participants typically fish in Nueces or Corpus Christi Bays and use Aransas Pass as their point of Gulf access. Most residents of Robstown are bilingual speakers of Hispanic ancestry.

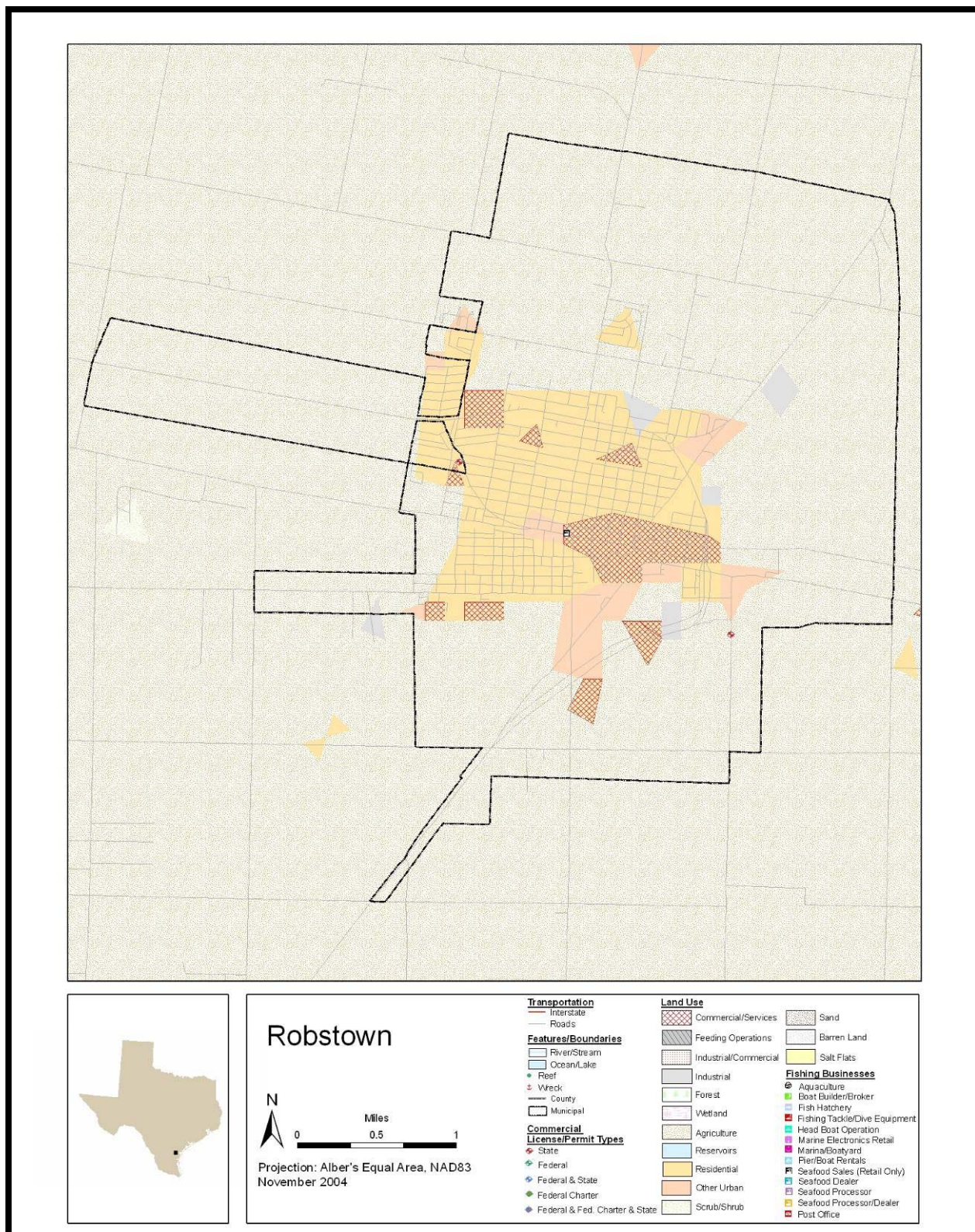
History. Robstown was founded in 1906 and incorporated in 1912. Residents have long been involved in agricultural pursuits. Discovery of oil in the 1930s was a significant event in the economic history of the town (Troesser 2003).

Current Conditions and Trends. The population of Robstown decreased just slightly from 12,849 persons in 1990 to 12,727 persons in 2000. Primary industries here are agriculture and services related to oil and natural gas production development (Long 2002; Troesser 2003). Some residents commute roughly 20 minutes east to work in Corpus Christi, or about the same time and distance to Kingsville in neighboring Kleberg County.

There are few established fishing services in Robstown, and participation in commercial fishing is minimal. Recreational saltwater anglers typically access the bays and ocean near Corpus Christi.



Evidence of Diminished Participation in Commercial Fisheries in Rural Southeast Texas



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Robstown Demographics

Factor	1990	2000
Total population	12,849	12,727
Gender Ratio M/F (Number)	6,190/6,659	6,150/6,577
Age (Percent of total population)		
Under 18 years of age	35.0	33.5
18 to 64 years of age	53.5	55.0
65 years and over	11.5	11.5
Ethnicity or Race (Number)		
White	7,970	8,523
Black or African American	238	180
American Indian and Alaskan Native	16	76
Asian	24	19
Native Hawaiian and other Pacific Islander	N/A	8
Some other race	4,601	3,452
Two or more races	N/A	469
Hispanic or Latino (any race)	11,701	11,848
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	42.3	33.2
Percent high school graduate or higher	38.2	48.3
Percent with a Bachelor's degree or higher	6.3	5.1
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	84.8	78.6
Percent who speak English less than very well	41.3	28.1
Household income (Median \$)	16,180	22,774
Poverty Status (Percent of population with income below poverty line)	37.0	32.1
Percent female headed household	19.1	24.3
Home Ownership (Number)		
Owner occupied	2,470	2,479
Renter occupied	1,111	1,165
Value Owner-occupied Housing (Median \$)	30,700	33,300
Monthly Contract Rent (Median \$)	179	337
Employment Status (Population 16 yrs and over)		
Percent in the labor force	50.3	51.3
Percent of civilian labor force unemployed	12.3	13.7
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	13.2
Service occupations	N/A	29.3
Sales and office occupations	N/A	24.7
Farming, fishing, and forestry occupations	2.8	0.8
Construction, extraction, and maintenance occupations	N/A	15.0
Production, transportation, and material moving occupations	N/A	17.0
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	2.2	1.3
Mining (includes the offshore oil/gas industry workforce)	1.6	0.7
Manufacturing	16.6	5.6
Percent government workers	20.8	16.9
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	21.7
Percent worked outside of county of residence	7.1	7.3

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Robstown in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	2
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	1
Bait & Tackle/fishing supplies	1
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	1
Seafood retail markets	1
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Robstown in 2003

Type of Business	Frequency
Retail Seafood Dealer	1
Total	1

Table 4. Robstown Commercial Landings and Value Summary: 2002

Data may not be reported under the “Rule of Three.”

Table 5. Robstown Permit and License Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
1	--	12
Total = 1		
% Households Holding Commercial Permit or License: 1/3,644 = 0.03		Average Number of Licenses per Household: 12/3,644 = 0.003

Please reference Table 3.14-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.15 Kleberg County Communities

This section describes the study communities in Kleberg County. These are Kingsville and Riviera Beach.

Kleberg is a rural county bordered by Nueces County to the north, by Kenedy County to the south, by Brooks County to the southwest, and by Jim Wells County to the west/northwest. The eastern part of the county is bounded by Alazan Bay, Baffin Bay, Laguna Madre, and the Gulf of Mexico.

Large vessel access to the Gulf of Mexico is problematic throughout the region given the uninterrupted length of Padre Island. As such, inshore recreational and commercial fisheries predominate.

The year 2000 population of Kleberg County was 31,549 persons, making it the 87th most populous parish in Texas that year. Kingsville, the county seat, was home to 25,575 persons in 2000 (Ramos et al. 2001: 215).

The area now called Kleberg County was first inhabited by Karankawa and Cohuiletecan tribal groups. Spanish explorers later frequented the area. The area was originally part of Kings Ranch and Nueces County, but was later parceled out as Kleberg County. The county was named for Robert Kleberg, a veteran of the battle of San Jacinto, and a manager of the King Ranch. Rail service reached the county in the early 1900s, increasing commerce associated with agricultural and ranching activities in the region (Coalson 2002).

Employment in the harvest sector of the fishing industry in Kleburg County diminished significantly during the first five years of the 1990s. Employment was down 32 percent during that period. The seafood processing and wholesale sectors experienced little change, however, and employment in the retail sector increased by nearly four percent (Dokken et al. 1998:95).

The year 2000 population of Kleberg County was predominantly Hispanic (65 percent). Caucasians comprised 29 percent, and African Americans four percent of the total population. The median family income was \$33,055 in 2000, which was somewhat below the state median income of \$39,927. Some 27 percent of residents lived in poverty, and single females headed 11 percent of families with children.

Table 3.15-1 Earnings in Kleberg County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share of 2000 Earnings	\$ Change 1990-2000	% Share of Change 1990-2000
	1990	2000			
Earnings	336,682	366,003	100.0	29,321	100.0
Farm earnings	3,627	6,868	1.9	3,241	11.0
Ag. services, forestry, fish.	3,435	2,130	0.6	-1,305	0
Fishing	239	NA	NA	NA	NA
Mining	23,949	20,510	5.6	-3,439	0
Oil and gas extraction	19,665	20,046	5.5	381	1.3
Construction	9,330	13,018	3.5	3,688	12.6
Special trade contractors	4,277	7,519	2.0	3,242	11.0
Manufacturing	20,716	7,574	2.1	-13,142	0
Fabricated metal products	NA	0	0	0	0
Industrial mach. & equip.	0	NA	NA	NA	NA
Food and kindred	3,697	NA	NA	NA	NA
Chemicals and allied	NA	NA	NA	NA	NA
Petroleum and coal	0	0	0	0	0
Transport., Public utilities	15,610	20,273	5.5	4,663	15.9
Trucking and warehousing	3,544	2,625	0.5	-919	0
Water transportation	NA	NA	NA	NA	NA
Transportation by air	NA	NA	NA	NA	NA
Wholesale trade	7,398	3,761	1.0	-3,637	0
Retail trade	35,235	38,731	10.6	3,496	11.9
Eating and drinking places	9,760	11,236	3.1	1,476	5.0
Finance, insurance, real estate	8,871	12,228	3.3	3,357	11.4
Services	57,138	64,923	17.7	7,785	26.5
Business services	6,578	7,561	2.0	983	3.3
Health services	18,202	27,122	7.4	8,920	30.4
Legal services	871	802	0.2	-69	0
Engineer./Management serv.	6,608	5,275	1.4	-1,333	0
Government	151,371	182,855	49.9	31,484	1.07

Source: Bureau of Economic Analysis, Regional Economic Information System

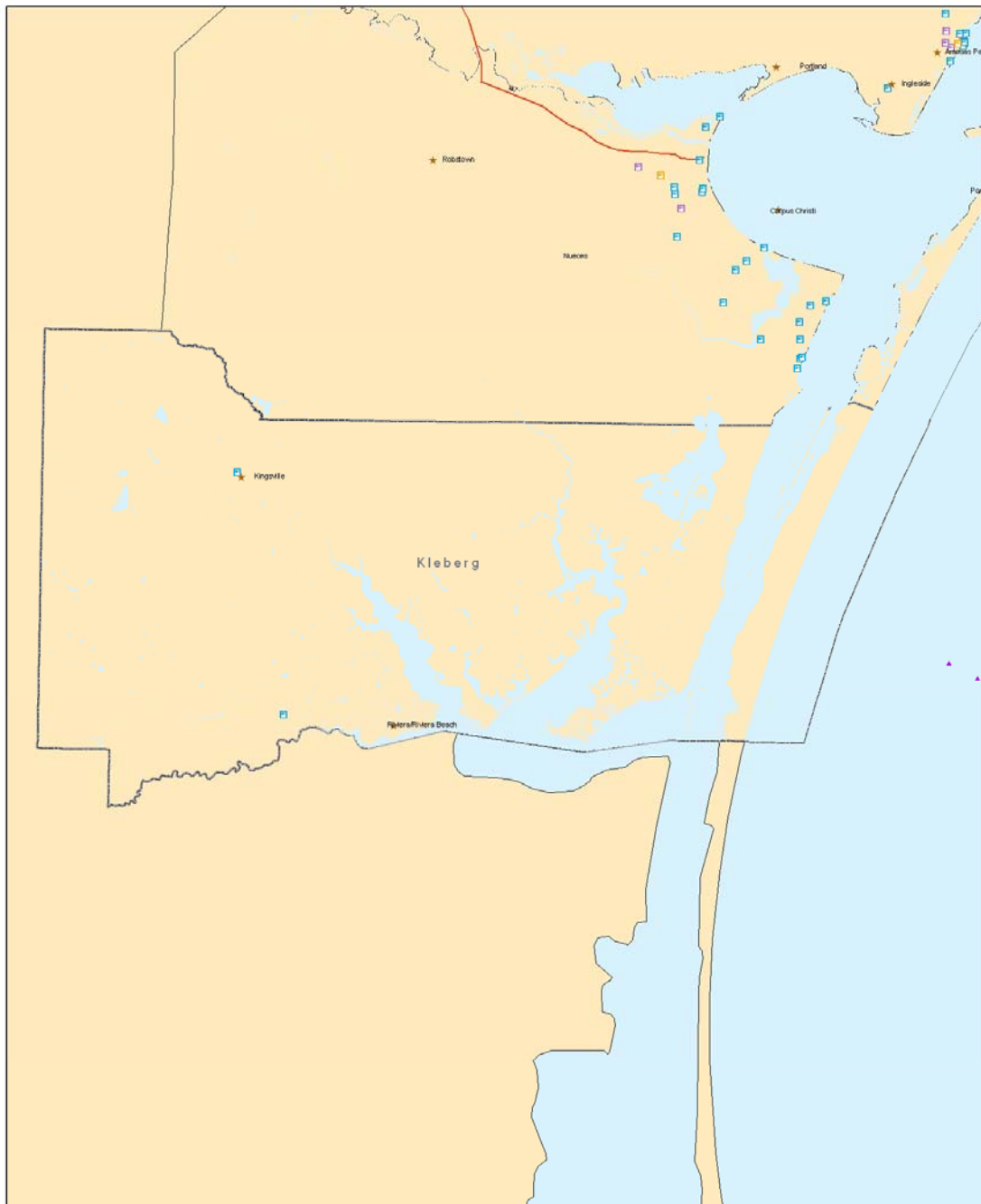
Table 3.15-2 Year 2000 Commercial Permits and Licenses, and 2003 Gulf Shrimp Permits: Kleberg Co. *

Permit Type	Study Communities	
	Kingsville	Riviera/Riviera Beach
Pelagic Charter	--	--
Reef Fish Charter		
Swordfish	--	--
King Mackerel	--	--
Rock Shrimp	--	--
Red Snapper	--	--
Spiny Lobster	--	--
Spanish Mackerel	--	--
Gulf Reef Fish	--	--
Shark	--	--
South Atlantic Snapper Grouper	--	--
Total Federal Permits 2000	--	--
Total Federal Permit Holders 2000	--	--
Total State License Holders 2000	17	45
Gulf Shrimp Permits 2003 **	--	--

* Includes all permits and licenses that can be attributed to the communities by *both* street and post office box addresses; these data are used to generate counts of permit and license holders for whom evidence indicates actual residence, as provided in the community descriptions. ** 2003 is the first year for which Gulf shrimp permit data are available.



Riviera Beach and Baffin Bay (courtesy of www.texmaps.com)



Kleberg County



Legend

- ★ Study Community
- Processor
- Processor and Seafood Dealer
- Seafood Dealer
- Reef
- ⚓ Wreck
- ▲ Platform
- County Lines
- Interstate

3.15.1 Kingsville (incorporated, pop. 25,575)

Location and Overview. Kingsville is a small city and seat of government for Kleburg County. It is located along U.S. Highway 77 and State Route 141 in the north-central part of the county. Corpus Christi is approximately 30 miles northeast. Fernando Creek, on Kingsville's eastern perimeter, wends southward into Baffin Bay. Baffin Bay then leads into the Laguna Madre and Intracoastal Waterway. There are therefore various inshore fishing opportunities in the area. Many fishing enthusiasts and commercial operators fish from the Riviera Beach area, or from the Corpus Christi area.

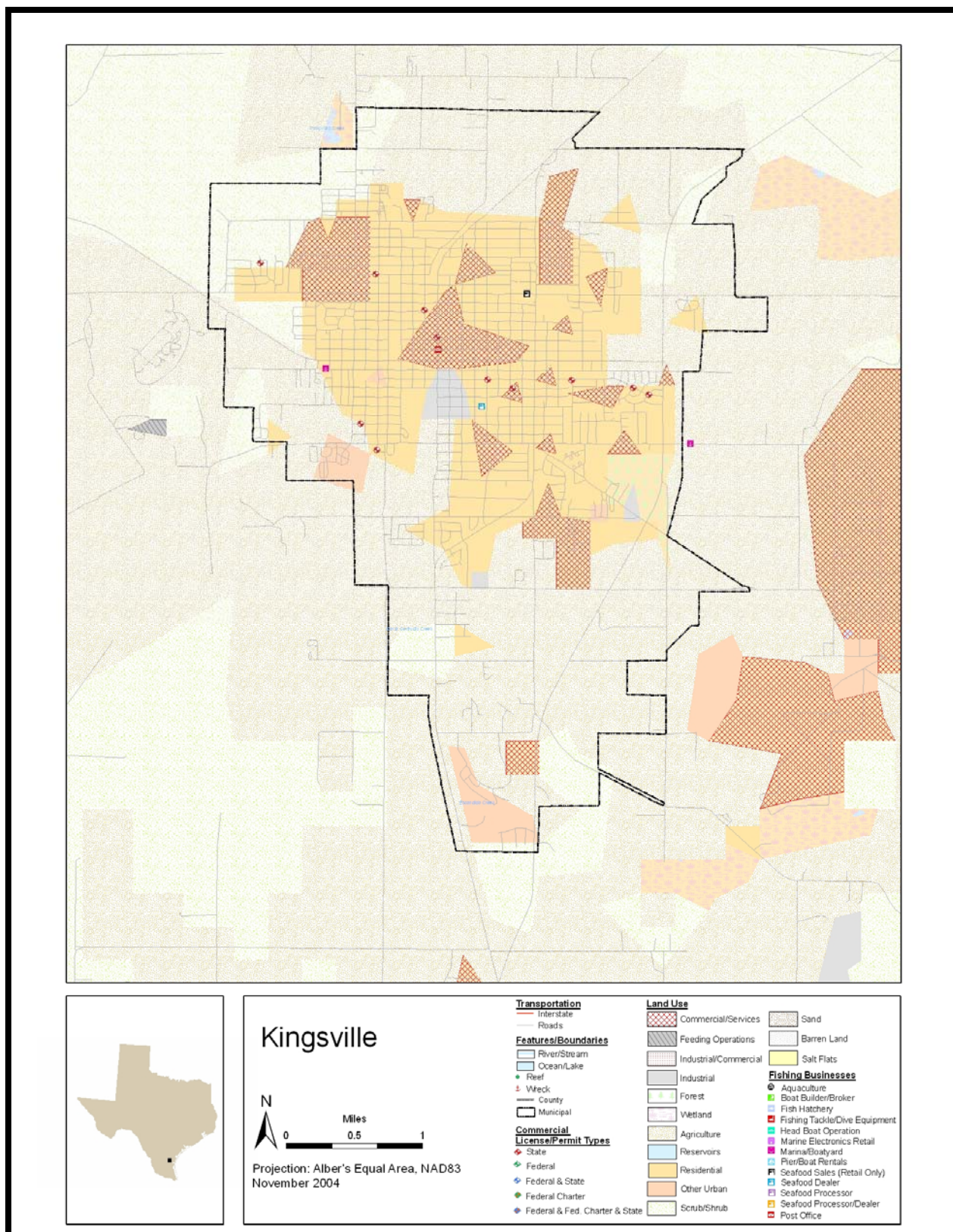
History. Kingsville was founded in 1904 and incorporated in 1911. It was named after regional land magnate and rancher Richard King, and developed in association with regional rail lines, first established in 1906. By 1931, railroad employees and their families comprised approximately 30 percent of Kingsville's population. Farming, ranching, dairy production, and oil and natural gas production were economically significant during this period. Oil production became increasingly important in the 1960s when the Humble Oil and Refining Company (now Exxon) established its district office in Kingsville. This office closed in 1985 (Coalson 2002).

Current Conditions and Trends. Kingsville was home to 25,575 persons in 2000, up slightly from 25,276 residents in 1990 (U.S. Census Bureau). Some 32 percent of the workforce claimed management, professional, and related occupations in 2000; 24 percent held sales and office positions. Of the community's working population, 22 percent held positions outside their county of residence, many in Corpus Christi. The average commute time was 18 minutes in 2000. Many residents are employed in local government agencies, area school districts, at Texas A&M-Kingsville, or at the Kingsville Naval Air Station

There are a few established fishing businesses in the Kingsville area. These include: one seafood wholesale operation, one bait and tackle supply shop, and five retail establishments that sell fishing gear or related supplies. There is a small fleet of commercial operators, though none hold federal permits. Many more residents engage in saltwater fishing on a recreational basis.



Downtown Kingsville in 2003



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Kingsville Demographics

Factor	1990	2000
Total population	25,276	25,575
Gender Ratio M/F (Number)	12,475/12,801	12,771/12,804
Age (Percent of total population)		
Under 18 years of age	28.7	26.8
18 to 64 years of age	61.3	62.7
65 years and over	10.0	10.5
Ethnicity or Race (Number)		
White	16,886	18,185
Black or African American	951	1,111
American Indian and Alaskan Native	64	160
Asian	395	443
Native Hawaiian and other Pacific Islander	N/A	17
Some other race	6,980	4,811
Two or more races	N/A	848
Hispanic or Latino (any race)	15,765	17,151
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	20.2	15.2
Percent high school graduate or higher	64.2	67.6
Percent with a Bachelor's degree or higher	20.4	20.5
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	54.1	56.7
Percent who speak English less than very well	21.1	16.7
Household income (Median \$)	22,053	27,624
Poverty Status (Percent of population with income below poverty line)	27.2	28.3
Percent female headed household	13.5	14.9
Home Ownership (Number)		
Owner occupied	4,855	4,919
Renter occupied	3,674	4,024
Value Owner-occupied Housing (Median \$)	40,800	50,500
Monthly Contract Rent (Median \$)	277	446
Employment Status (Population 16 yrs and over)		
Percent in the labor force	59.3	59.9
Percent of civilian labor force unemployed	10.6	12.0
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	31.7
Service occupations	N/A	20.3
Sales and office occupations	N/A	24.0
Farming, fishing, and forestry occupations	2.7	1.1
Construction, extraction, and maintenance occupations	N/A	11.5
Production, transportation, and material moving occupations	N/A	11.5
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	2.7	3.4
Mining (includes the offshore oil/gas industry workforce)	3.9	2.1
Manufacturing	10.2	6.7
Percent government workers	30.4	27.4
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	18.3
Percent worked outside of county of residence	21.2	22.4

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Kingsville in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	5
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	1
Recreational Fishing Tournaments	1
Sea Grant Extension office	0
Seafood restaurants	5
Seafood retail markets	1
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Kingsville in 2003

Type of Business	Frequency
Boat Builder/Broker; Marina	1
Marina	1
Retail Seafood Dealer	1
Total	3

Table 4. Kingsville Commercial Landings and Value Summary: 2002

Commercial landings cannot be attributed to fishery participants in Kingsville.

Table 5. Kingsville License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
10	--	2,455
Total = 10		
% Households Holding Commercial Permit or License: 10/8,943 = 0.1		Average Number of Licenses per Household: 2,455/8,943 = 0.3

Please reference Table 3.15-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.15.2 Riviera/Riviera Beach (incorporated, pop. 5,400)

Location and Overview. Riviera is located at the intersection of U.S. Highway 77, State Highway 285, and Farm Route 771 in south-central Kleberg County. Kingsville is the closest urban area, some 16 miles north of town. Direct access to the Gulf of Mexico is not available here, and thus fishery participants in the area travel the additional five miles to Riviera Beach to access Baffin and Alazon Bays. Gulf of Mexico waters are not readily accessible.

Riviera Beach is situated on the eastern banks of Baffin Bay approximately five miles east of Riviera at the terminus of Farm Route 771. Kingsville is some 23 miles to the northwest.

History. Riviera was established in 1907 and incorporated in 1964. The original property owner, Theodore Koch, had plans to transform Riviera Beach into a major resort community. However, a hurricane in 1916 destroyed most of the structures in the region, and Koch's plans never materialized (Troesser 2004). The one hotel that remained reopened briefly after World War II, but was destroyed by fire in 1952. In 1990, some 50 families lived at least part of the year in Riviera Beach. The boat launch and pier are still operational, and there is a small seafood-oriented restaurant here.

Current Conditions and Trends. The communities of Riviera and Riviera Beach share the same census tracts; thus the enumeration and occupation statistics we provide combine data for both towns. According to the year 2000 census, the population of Riviera/Riviera Beach increased in 2000 to 5,400 residents from 1,839 residents in 1990 to 5,400 persons in 2000. The increase may be associated with what are now commonly perceived as attractive attributes of coastal living in this region of Texas.

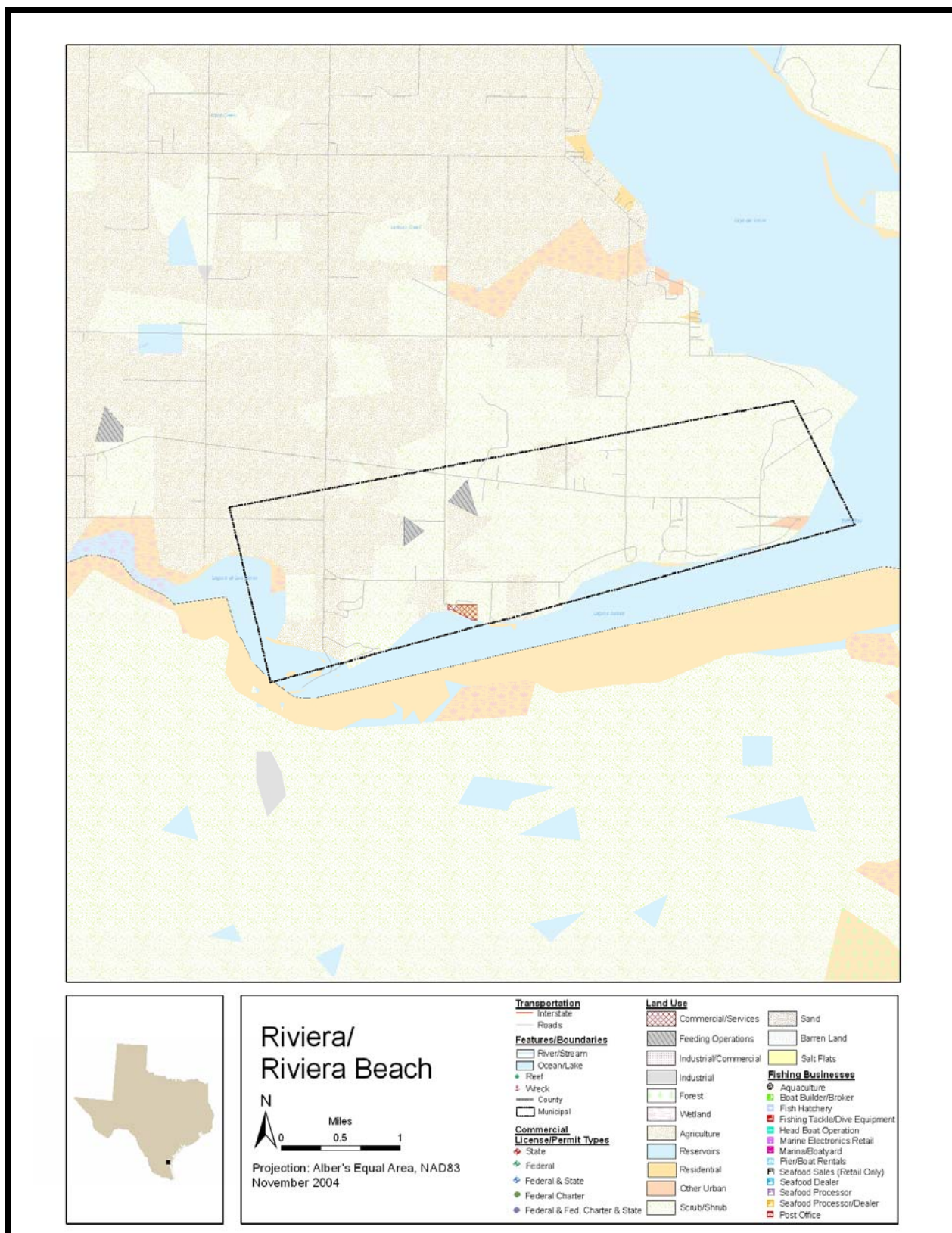
But employment opportunities are limited in this rural area. Some small service and retail establishments derive business partly in association with traffic along U.S. 77, and many residents work at nearby ranches. Still others commute to jobs in Kingsville and to a lesser extent in Corpus Christi. There was a notable decrease in employment in farming, fishing, and forestry between 1990 and 2000, reportedly due in part to the gradual effects of extensive commercial fishing regulations established in the 1980s.

Fishing-related services and businesses in the area include two piers, a marina, commercial docking facilities, and a few small retail establishments. Most businesses now tend to do the bulk of their business with recreational anglers, many of whom are visitors. A local charter boat captain explained that many boat guides who launch from Riviera Beach actually live in Riviera, Kingsville, Robstown, and Sarita. Riviera Beach guides and fishery participants also put in at nearby Kaufer-Hurbert Memorial Park, Baffin Bay, or Loyola Beach (some three miles north of Riviera Beach). The guide further asserted that locals typically think of Loyola Beach and Riviera Beach as a single community. Resources and infrastructure not present in Riviera Beach (such as a boat ramp) are accessible at Loyola Beach and the Memorial Park.

Anglers here often focus on redfish and trout. There also is an active fleet of nearshore commercial harvesters in the area. Most maintain post office boxes, however, and thus we were unable to map their patterns of residence, or enumerate those who demonstrably reside in Riviera or Riviera Beach. It is clear, however, that the fleet tends to target shrimp during season. No federal permit holders were identified in the area, likely the outcome of distance to points of access for the Gulf of Mexico.



Desert Environment near Riviera



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Riviera/Riviera Beach Demographics

Factor	1990	2000
Total population	1,839	5,400
Gender Ratio M/F (Number)	944/895	2,781/2,619
Age (Percent of total population)		
Under 18 years of age	31.0	29.6
18 to 64 years of age	56.2	59.0
65 years and over	12.8	11.4
Ethnicity or Race (Number)		
White	1,514	4,094
Black or African American	1	49
American Indian and Alaskan Native	4	31
Asian	2	19
Native Hawaiian and other Pacific Islander	N/A	14
Some other race	318	1,061
Two or more races	N/A	132
Hispanic or Latino (any race)	930	3,158
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	28.2	17.0
Percent high school graduate or higher	53.8	70.5
Percent with a Bachelor's degree or higher	10.0	19.9
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	45.7	50.0
Percent who speak English less than very well	24.2	22.2
Household income (Median \$)	19,213	35,662
Poverty Status (Percent of population with income below poverty line)	29.7	20.1
Percent female headed household	5.8	9.4
Home Ownership (Number)		
Owner occupied	483	1,464
Renter occupied	138	290
Value Owner-occupied Housing (Median \$)	36,100	61,000
Monthly Contract Rent (Median \$)	214	315
Employment Status (Population 16 yrs and over)		
Percent in the labor force	54.5	59.6
Percent of civilian labor force unemployed	8.4	4.1
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	31.0
Service occupations	N/A	17.0
Sales and office occupations	N/A	20.6
Farming, fishing, and forestry occupations	16.1	5.6
Construction, extraction, and maintenance occupations	N/A	13.7
Production, transportation, and material moving occupations	N/A	11.9
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting, (and mining)	16.1	10.7†
Manufacturing	5.5	10.4
Percent government workers	25.9	22.2
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	N/A
Percent worked outside of county of residence	21.7	19.5

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years. † Year 2000 figures include mining in this group; 1990 figures do not. Mining includes the offshore oil industry workforce.

Table 2. Fishing Infrastructure and Services Observed in Riviera/Riviera Beach in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	4
Fishing associations (recreational/commercial)	2
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	1
Fishing pier	2
Hotels/Inns (dockside)	1
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	1
Bait & Tackle/fishing supplies	1
Recreational Fishing Tournaments	Numerous
Sea Grant Extension office	0
Seafood restaurants	2
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	1-2
Charter/Head Boats	~30
Commercial Boats	~30

Table 3. Primary Fishing-related Businesses Listed for Riviera/Riviera Beach in 2003

None listed.

Table 4. Riviera/Riviera Beach Commercial Landings and Value Summary: 2002

Commercial landings cannot be attributed to fishery participants in Riviera or Riviera Beach.

Table 5. Riviera/Riviera Beach License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
--	--	283
Total --		
% Households Holding Commercial Permit or License: --		Average Number of Licenses per Household: 283/1,754 = 0.16

Please reference Table 3.15-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.16 Willacy County Communities

This section describes the town of Port Mansfield, the sole study community in Willacy County. Willacy County is very rural, with an undeveloped barrier island coastline. Port Mansfield is a small town located along the mainland coast of the Laguna Madre about eight miles west of San Padre Island in the northeast portion of the county.

Willacy County is located adjacent to the Gulf of Mexico in the far southeast corner of Texas, some 21 miles north of the Mexican border. It is characterized by large areas of open desert and large cattle ranches. Kenedy County lies to the north, the more urbanized areas of Hidalgo County lie to the west and southwest, and Cameron County is directly south.

Willacy encompasses 489 square miles of flat, low-lying territory. Maximum elevation is 50 feet above sea level. The Gulf of Mexico coastline includes a privately-owned portion of South Padre Island, and a smaller portion of the island that is administered by the National Park Service. Fishing and other vessels can access the Gulf of Mexico through the Gulf Intracoastal Waterway at Port Mansfield Channel.

Various Paleo-Indian tribes once occupied what is now called Willacy County. European explorers visited the area as early as 1519. The earliest Spanish land grants were made in the 1790s, and the first cattle ranch was established in 1792. In 1911, Willacy County was organized from sections of Cameron and Hidalgo Counties. Sarita was originally designated as the county seat, but Raymondville later became the seat of government (Garza 2002; Miller et al. 1977: 164).

Ranching and agriculture have long been important activities for residents of Willacy County. Production of cattle, hogs, and poultry continue as important forms of enterprise. Citrus fruits were introduced by the mid-twentieth entry and became important products. Onshore oil production began with the establishment of the Willamar oilfield in 1940 (Garza 2002).

As noted in Table 5.16-1, employment in commercial seafood harvesting in the county diminished significantly during the 1990s. Retail-related employment increased during the period.

Table 3.16-1 Willacy County Employment in Marine Fisheries: 1990-1995

Sector	1990 Employment	1995 Employment	Percent Change
Commercial Harvesting	69	48	-30.4
Processing	0	0	0
Wholesale	0	0	0
Retail	18	27	50

Source: Dokken et al. (1998: 91)

The year 2000 population of Willacy County was 20,082 persons, a 13 percent increase from 17,705 persons enumerated in 1990. Raymondville was home to 9,733 persons in 2000. In 2000, 86 percent of residents in Willacy County were of Hispanic ancestry, 12 percent were Caucasian, and two percent were African American. Some 33 percent of residents were living in conditions of poverty in 2000.

Table 3.16-2 Earnings in Willacy County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share of 2000 Earnings	\$ Change 1990-2000	% Share of Change 1990-2000
	1990	2000			
Earnings	79,011	109,923	100.0	30,912	100.0
Farm earnings	-405	14,429	13.1	14,834	48.0
Ag. Services, forestry, fish.	4,668	7,141	6.5	2,473	8.0
Fishing	256	629	0.6	373	1.2
Mining	986	2,602	2.4	1,616	5.2
Oil and gas extraction	986	2,602	2.4	1,616	5.2
Construction	3,195	909	0.8	-2,286	-7.4
Special trade contractors	1,157	558	0.5	-599	-1.9
Manufacturing	3,233	1,792	1.6	-1,441	-4.7
Fabricated metal products	NA	0	0	NA	NA
Industrial mach. & equip.	NA	0	0	NA	NA
Food and kindred	NA	NA	NA	NA	NA
Chemicals and allied	0	0	0	0	0
Petroleum and coal	0	0	0	0	0
Transportation, Public utilities	6,583	12,148	11.0	5,565	18.0
Trucking and warehousing	2,789	5,399	4.9	2,610	8.4
Water transportation	NA	NA	NA	NA	NA
Transportation by air	0	0	0	0	0
Wholesale trade	2,448	3,440	3.1	992	3.2
Retail trade	11,146	11,944	10.8	798	2.6
Eating and drinking places	1,534	2,209	2.0	675	2.2
Finance, insurance, and real estate	3,697	5,157	4.7	1,460	4.7
Services	10,199	22,952	20.9	12,753	41.2
Business services	812	NA	NA	NA	NA
Health services	2,477	5,819	5.3	3,342	10.8
Legal services	262	360	0.3	98	0.3
Engineering & management services	646	NA	NA	NA	NA
Government	33,261	41,838	38.1	8,577	27.7

Source: Bureau of Economic Analysis, Regional Economic Information System



Port Mansfield Pass (courtesy of www.serf.tamus.edu)

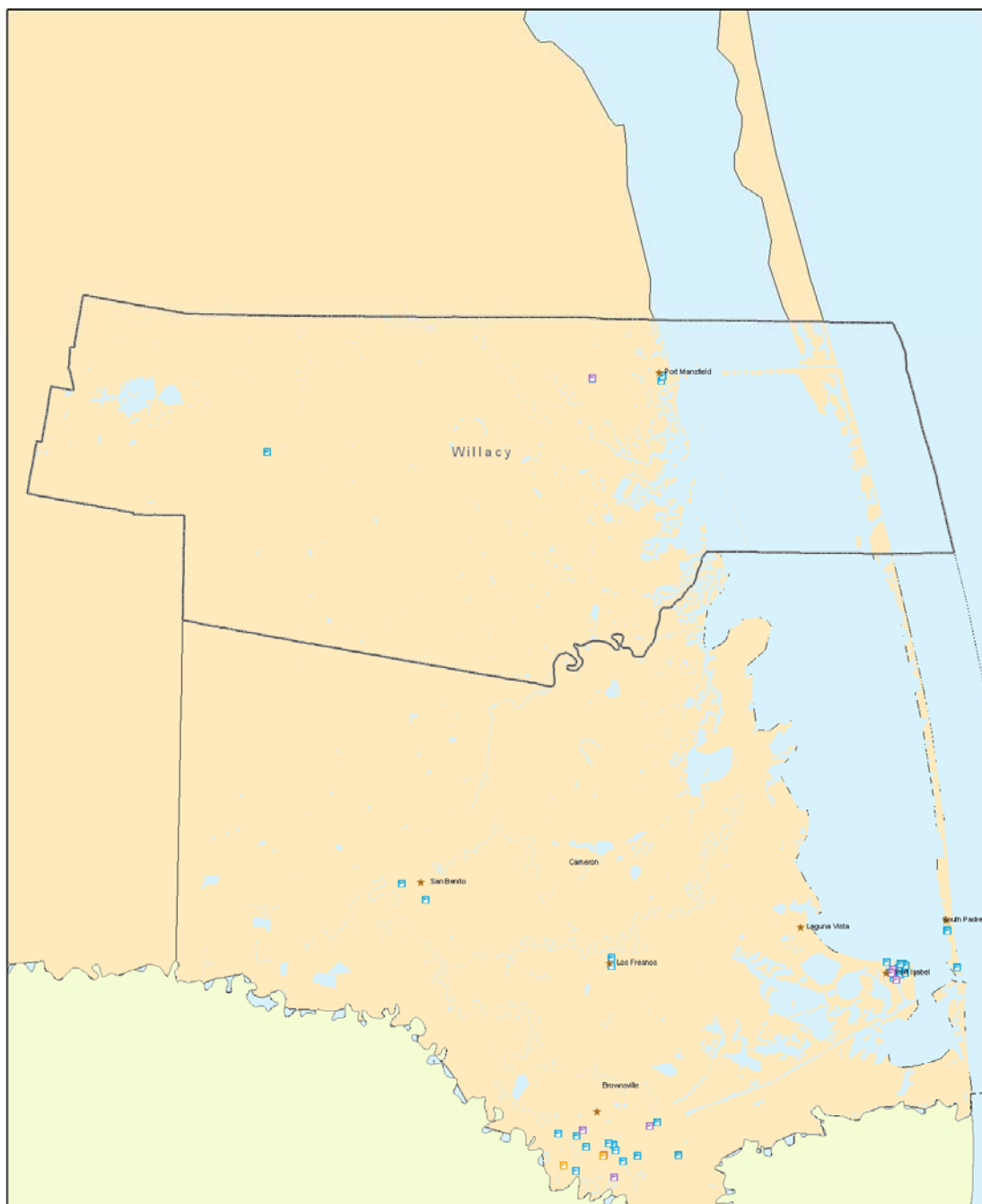
Table 3.16-3 Year 2000 Commercial Permits and Licenses, and 2003 Gulf Shrimp Permits: Willacy County *

Permit Type	Study Communities
	Port Mansfield
Pelagic Charter	2
Reef Fish Charter	2
Swordfish	--
King Mackerel	--
Rock Shrimp	--
Red Snapper	1
Spiny Lobster	--
Spanish Mackerel	--
Gulf Reef Fish	1
Shark	--
South Atlantic Snapper Grouper	--
Total Federal Permits 2000	6
Total Federal Permit Holders 2000	2
Total State License Holders 2000	27
Gulf Shrimp Permits 2003 **	--

* Includes all permits and licenses that can be attributed to the communities by *both* street and post office box addresses; these data are used to generate counts of permit and license holders for whom evidence indicates actual residence, as provided in the community descriptions. ** 2003 is the first year for which Gulf shrimp permit data are available.



Boat Basin in Port Mansfield



Willacy County



0 5 10 20 Miles

Legend

- ★ Study Community
- Processor
- Processor and Seafood Dealer
- Seafood Dealer

- Reef
- ⊥ Wreck
- ▲ Platform
- County Lines
- Interstate

3.16.1 Port Mansfield (unincorporated, pop. 415)

Location and Overview. Port Mansfield is located at the terminus of State Highway 186 on the eastern shore of Laguna Madre in northeastern Willacy County. Harlingen, the nearest urban area, is approximately 45 miles southwest. Port Mansfield is nine sea miles from the Gulf of Mexico and as such is a popular point of departure and arrival for sea-going recreational anglers. Shrimp, speckled trout, redfish, flounder, sailfish, marlin, tarpon, mackerel, and snapper are commonly pursued species.

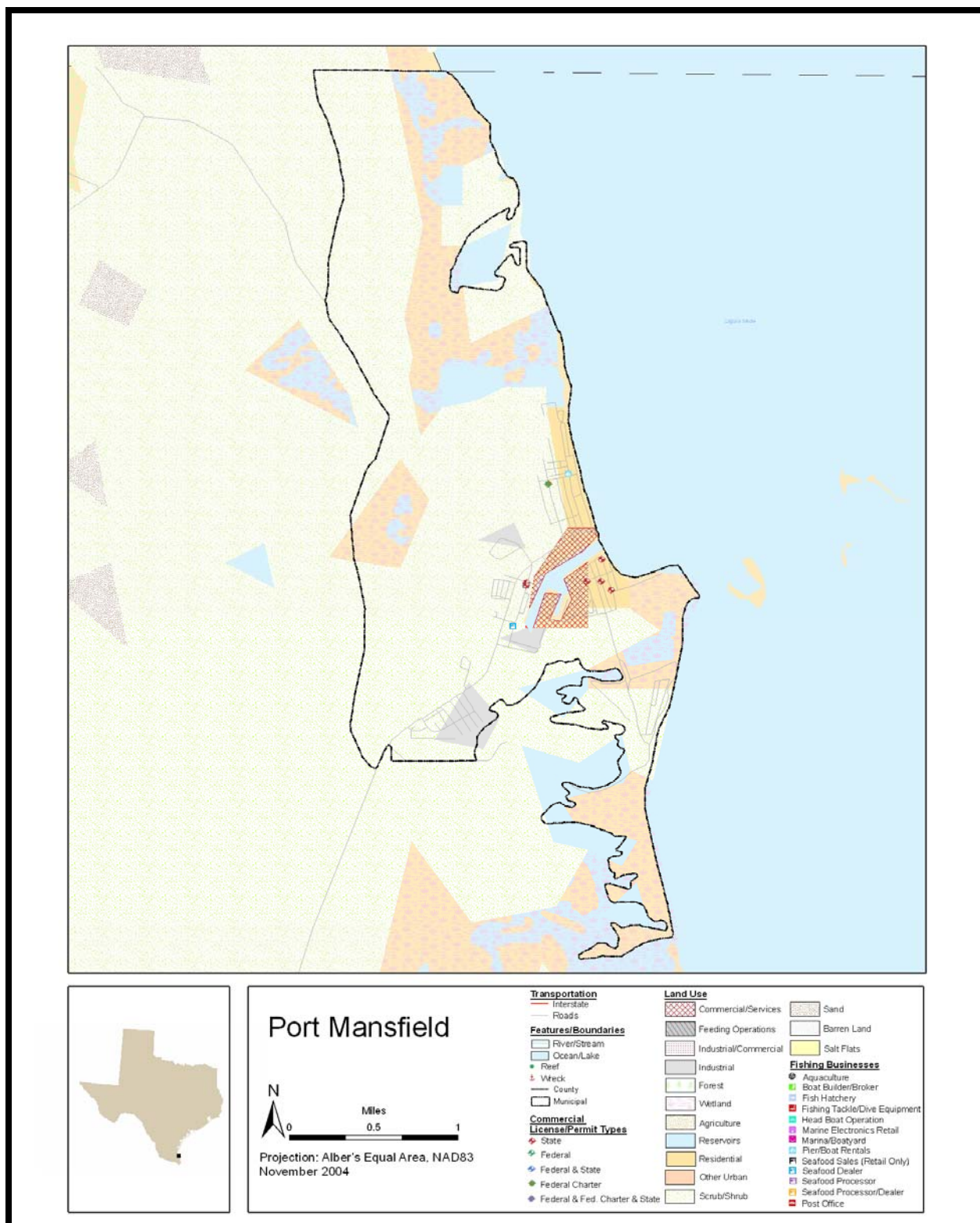
History. Previously known as “Red Fish Landing,” Port Mansfield was established in 1950 by the United States Army of Corps Engineers to provide a safe channel and anchorage between Corpus Christi and Brownsville. Private owners have never opted to develop their portion of San Padre Island to the southeast, and the northeast portion is owned by the National Park Service. The immediate area is also largely undeveloped and relatively isolated (Leatherwood 2002).

Current Conditions and Trends. The year 2000 population of Port Mansfield was 415 persons, a decrease from the 648 persons who reported residence in 1990. Apart from a few local retail and service-related jobs and limited opportunities with the port and offshore oil and gas industry, there are relatively few employment options in this small town. Many in the work force travel to service and construction jobs in or around Raymondville or other more populated areas. Nearly 20 percent of residents held management, professional, and related positions, also typically requiring some commuting.

Close proximity of Port Mansfield to the Laguna Madre and Gulf of Mexico, and ease of passage through the deep draft channel enable commercial and recreational fisheries in this remote area. One resident fishery participant asserted that participation in recreational fishing has come to surpass that of commercial fishing. He explained that commercial fishing has declined since the ban on nets and commercial take of speckled trout and redfish were enacted in the 1980s. Since commercial participants reportedly cannot now earn a living solely by fishing, many now fish on a part-time basis. One public official claimed that diminished participation in commercial fisheries and relative lack of other opportunities in the area may in part account for the population change noted between 1990 and 2000.

There are various established fishing-related businesses and services in Port Mansfield. Participants have access to two marinas, two public boat ramps, and numerous piers. There are also two bait and tackle stores and three boat builders in town. Commercial docking facilities are available at the Port, and a licensed wholesale dealer is available to purchase seafood and distribute it elsewhere in the region.

Shrimp was the high volume commercial landing in the area in 2002. Analysis of street and post office box data for the year 2000 indicates 27 persons held state commercial licenses and six persons held federal permits, but we were able to determine physical residence for only nine license holders and two permit holders.



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Port Mansfield Demographics

Factor	1990	2000
Total population	648	415
Gender Ratio M/F (Number)	330/318	210/205
Age (Percent of total population)		
Under 18 years of age	25.6	13.5
18 to 64 years of age	57.3	58.6
65 years and over	17.1	28.0
Ethnicity or Race (Number)		
White	600	386
Black or African American	2	0
American Indian and Alaskan Native	2	4
Asian	0	0
Native Hawaiian and other Pacific Islander	N/A	0
Some other race	44	19
Two or more races	N/A	6
Hispanic or Latino (any race)	294	59
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	25.2	6.0
Percent high school graduate or higher	57.8	81.2
Percent with a Bachelor's degree or higher	6.9	14.0
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	58.7	15.0
Percent who speak English less than very well	44.3	4.5
Household income (Median \$)	21,250	26,500
Poverty Status (Percent of population with income below poverty line)	26.4	26.8
Percent female headed household	3.0	5.3
Home Ownership (Number)		
Owner occupied	165	84.5
Renter occupied	65	15.5
Value Owner-occupied Housing (Median \$)	39,500	53,100
Monthly Contract Rent (Median \$)	260	506
Employment Status (Population 16 yrs and over)		
Percent in the labor force	41.3	34.7
Percent of civilian labor force unemployed	23.6	6.6
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	18.6
Service occupations	N/A	25.7
Sales and office occupations	N/A	10.6
Farming, fishing, and forestry occupations	33.8	12.4
Construction, extraction, and maintenance occupations	N/A	26.5
Production, transportation, and material moving occupations	N/A	6.2
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	47.4	11.5
Mining (includes the offshore oil/gas industry workforce)	8.5	2.6
Manufacturing	0.0	2.7
Percent government workers	16.2	18.6
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	21.2
Percent worked outside of county of residence	25.0	15.6

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Port Mansfield in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	3
Churches with maritime touch	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	2
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	Numerous
Hotels/Inns (docksides)	5+
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	2
Recreational docks/marinas	2
Bait & Tackle/fishing supplies	2
Recreational Fishing Tournaments	1
Sea Grant Extension office	0
Seafood restaurants	4
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	1
Charter/Party Boats	Numerous
Commercial Boats	1

Table 3. Primary Fishing-related Businesses Listed for Port Mansfield in 2003

Type of Business	Frequency
Boat Rentals & Pier	1
Marina	1
Total	2

Table 4. Port Mansfield Commercial Landings and Value Summary: 2002 (based on seafood dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	8,287	18,847

Table 5. Port Mansfield License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
9	2	No data available
Total = 11		
% Households Holding Commercial Permit or License: 11/187 = 5.8		Average Number of Licenses per Household: --

Please reference Table 3.16-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.



Public Boat Ramp in Port Mansfield (courtesy of www.portofmansfield.com)



Breakers at Port Mansfield (note offshore platform in background; photo courtesy of www.surflife.com)

3.17 Cameron County Communities

This section provides descriptions of the study communities in Cameron County. These are Brownsville, Laguna Vista, Los Fresnos, Port Isabel, San Benito, and South Padre Island.

Cameron County is bordered by Willacy County on the north and Hidalgo County on the west. The Gulf of Mexico lies to the east and Mexico to the south. The year 2000 population of Cameron County was 335,227 persons, making it the 11th most populous county in Texas that year. The county seat of Brownsville was home to 139,772 persons in 2000. It is located 140 miles south of Corpus Christi.

The county encompasses 906 square miles of land area and 371 square miles of water; a total area of 1,276 square miles. Much of the water within the county is within the Laguna Madre. This body of water separates the mainland from South Padre Island. The Rio Grande River forms the Cameron County's border with Mexico (Ramos et al. 2001:148).

Early inhabitants of the area include the Coahuiltecan and Karankawa tribal groups. These societies disappeared from the region in the 17th century. Cameron County was incorporated in 1848.

The Port of Brownsville is critically important to the region's economy, and was associated with more than \$180 million in sales and 2,802 jobs in the early 1990s (Kearney et al. 1995:173). The port also supports one of the largest shrimp trawl fleets in the country. The harvesting, wholesale, and retail sectors of the region's fishing economy faltered in the 1990s, though the processing sector increased production during that period (Table 1).

Table 3.17-1 Cameron County Employment in Marine Fisheries: 1990-1995

Sector	1990 Employment	1995 Employment	Percent Change
Commercial Harvesting	2,152	1,715	-20.3
Processing	481	541	12.5
Wholesale	220	133	-39.5
Retail	907	409	-54.9

Source: Dokken et al. (1998: 91)

The population of Cameron County was 15 percent Caucasian and .3 percent African American in 2000. Hispanics constituted more than 84 percent of the population. Median family income was \$27,853 in 2000, which was significantly below the state median of \$39,927. Some 28 percent of residents lived in poverty and single females headed ten percent of families with children.

Table 3.17-2 Earnings in Cameron County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share of 2000 Earnings	\$ Change 1990-2000	% Share of Change 1990-2000
	1990	2000			
Earnings	1,748,677	3,332,707	100.0	1,584,030	100.0
Farm earnings	46,834	53,924	1.6	7,090	0.4
Ag. Services, forestry, fish.	42,512	39,302	1.2	-3,532	0
Fishing	32,118	NA	NA	NA	NA
Mining	820	2,029	0	1,209	0
Oil and gas extraction	817	NA	NA	NA	NA
Construction	78,511	130,998	3.9	52,487	3.3
Special trade contractors	53,371	89,619	2.7	36,248	2.3
Manufacturing	296,210	392,748	11.8	96,538	6.1
Fabricated metal products	12,738	21,440	0.6	8,702	0.5
Industrial mach. & equip.	27,816	17,340	0.5	-10,476	0
Food and kindred	41,306	42,042	1.3	736	0
Chemicals and allied products	8,093	4,545	0.1	-3,548	0
Petroleum and coal	381	NA	NA	NA	NA
Transport., Public utilities	134,367	240,724	7.2	106,357	6.7
Trucking and warehousing	33,655	77,834	2.3	44,179	2.8
Water transportation	NA	7,813	0.2	NA	NA
Transportation by air	10,581	14,119	0.4	3,538	0.2
Wholesale trade	112,440	148,369	4.4	35,929	2.3
Retail trade	312,101	398,550	12.0	86,449	5.5
Eating and drinking places	70,151	104,038	3.1	33,887	2.1
Finance, insur., real estate	104,599	173,923	5.2	69,324	4.4
Services	566,388	886,736	26.6	320,348	20.2
Business services	52,323	112,181	3.4	59,858	3.8
Health services	241,554	413,495	12.4	171,941	10.8
Legal services	34,820	48,762	1.4	13,942	0.9
Engineer. & management serv.	51,919	43,075	1.3	-8,844	0
Government	568,073	919,328	27.6	351,255	22.2

Source: Bureau of Economic Analysis, Regional Economic Information System

Table 3.17-3 Year 2000 Commercial Permits and Licenses, and 2003 Gulf Shrimp Permits: Cameron Co. *

Permit Type	Study Communities					
	Brownsville	Laguna Vista	Los Fresnos	Port Isabel	San Benito	South Padre Island
Pelagic Charter	--	1	--	7	--	6
Reef Fish Charter	--	1	--	6	--	6
Swordfish	--	--	--	2	--	--
King Mackerel	--	--	--	2	--	--
Rock Shrimp	--	--	--	--	--	--
Red Snapper	1	1	--	1	--	2
Spiny Lobster	--	--	--	--	--	--
Spanish Mackerel	--	--	--	5	--	--
Gulf Reef Fish	1	1	--	5	--	2
Shark	--	--	--	3	--	--
South Atlantic Snapper Grouper	--	--	--	--	--	--
Total Federal Permits 2000	2	4	--	31	--	16
Total Federal Permit Holders 2000	1	2	--	9	--	8
Total State License Holders 2000	168	6	13	168	7	1
Gulf Shrimp Permits 2003 **	100	2	2	110	--	--

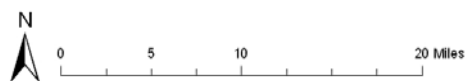
* Includes all permits and licenses that can be attributed to the communities by *both* street and post office box addresses; these data are used to generate counts of permit and license holders for whom evidence indicates actual residence, as provided in the community descriptions. ** 2003 is the first year for which Gulf shrimp permit data are available.



Shrimp Trawler in Brazos-Santiago Pass, near South Padre Island (courtesy of www.spadre.com)



Cameron County



Legend

- | | |
|--------------------------------|----------------|
| ★ Study Community | ● Reef |
| ■ Processor | ✝ Wreck |
| ■ Processor and Seafood Dealer | ▲ Platform |
| ■ Seafood Dealer | — County Lines |
| | — Interstate |

3.17.1 Brownsville (incorporated, pop. 139,722)

Location and Overview. Brownsville is the seat of government of Cameron County. The area is a major port of entry to Mexico, and is the sixth fastest growing manufacturing region in the nation. Agriculture, petrochemicals, and shrimp harvesting and processing are vital components of the Brownsville economy. Brownsville is located 25 miles west of the Gulf of Mexico. The Brownsville ship channel provides direct access to the Gulf via Port Isabel.

History. Originally part of Mexico, Brownsville was established in 1846 as “Fort Brown” by U.S. troops seeking to define the Texas national boundary (Texas Online 1998). However, Mexico protested this demarcation and the U.S.-Mexico War (1846-1848) ensued. Brownsville officially became part of the State of Texas following the signing of the Treaty of Guadalupe Hildago in 1848. Soon thereafter, the city developed as a center of commerce for northern Mexico. It was incorporated in 1853 (Garza and Long 2002). The town grew slowly until the arrival of the St. Louis, Brownsville and Mexico Railway in the early 1900s.

Brownsville developed as the shipping center for the lower Rio Grande Valley and northeastern Mexico after the Port of Brownsville (located in the Brownsville Ship Channel) opened in 1936. With its Gulf location and easy access to shrimp, Brownsville soon became one of the nation’s leading shrimp exporters.

The Industrial Development Council and the Border Industrialization Program were established in the 1960s to encourage American industries and Mexican businesses and laborers to locate in Brownsville and along the border area. More than 100 industrial firms offering in excess of 13,600 jobs came to Brownsville between 1966 and 1978 as a result of these programs. Various manufacturing and petrochemical industries provided new sources of employment in the 1990s (Garza & Long 2002).

Current Conditions and Trends. Brownsville grew by 41 percent between 1990 and 2000. The city was home to 98,962 persons in 1990 and 139,722 in 2000. Some 28 percent of the workforce in Brownsville claimed management, professional, and related occupations in 2000; 27 percent reported holding sales and office positions. One percent of residents reported farming, fishing, or forestry as their primary occupation, with fishing as the leading employment sector in this category. Of the community’s working population, only four percent held positions outside their county of residence. Average reported commute time was 20 minutes.

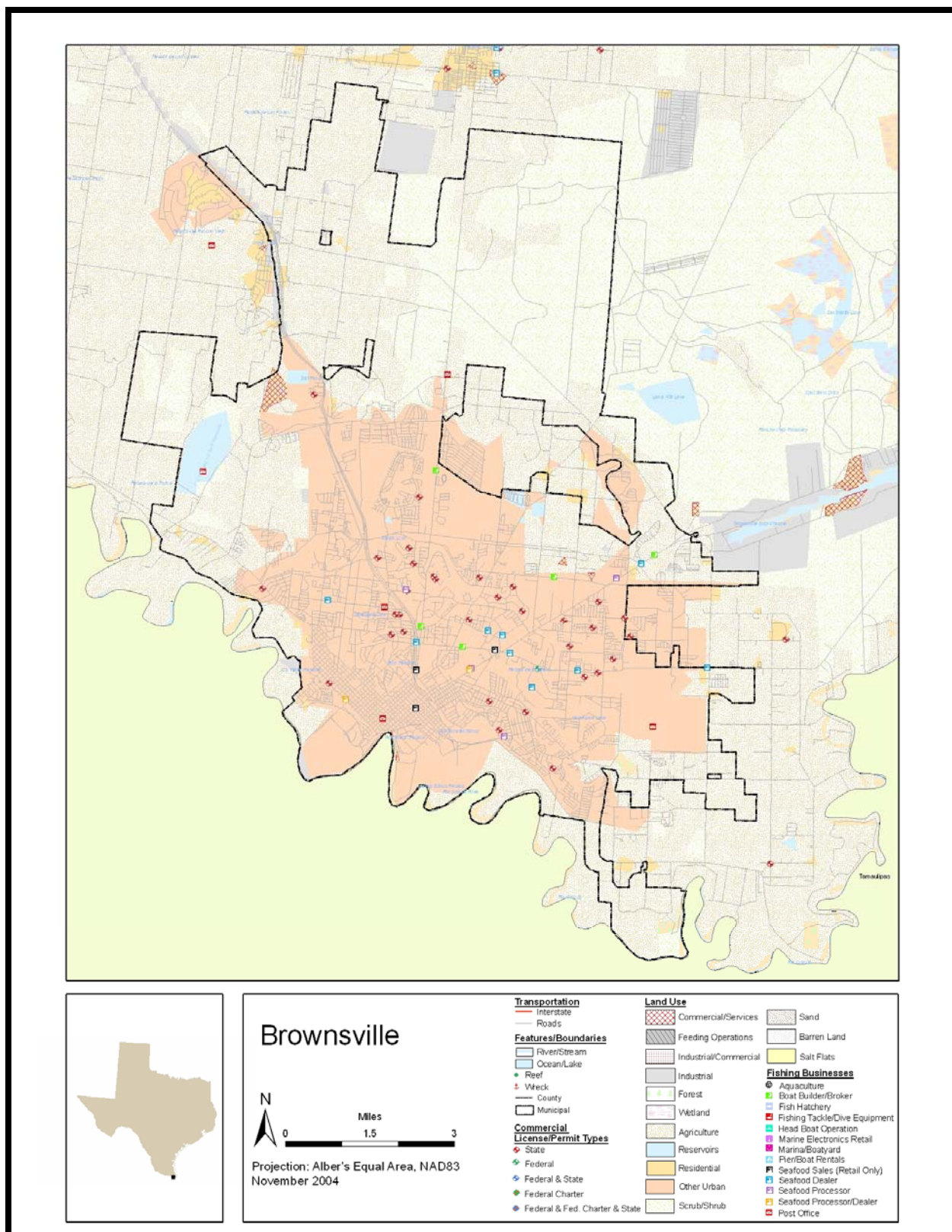
There are numerous established fishing-related businesses in Brownsville, including a large shrimp trawl fleet and associated support services. The latter include various fishing gear suppliers, electronic retailers, welding and other repair shops, ten net makers, two fish processing and wholesale fish houses, two boat yards, and a seafood trucking operation. Most shrimp boats moor at the Port of Brownsville, while the smaller commercial pelagic fleet typically operates from Port Isabel. Our 2000 federal permit data do not indicate the presence of the large and productive shrimp fleet, though there were 100 Gulf shrimp permit holders with local residences or post office boxes in the area in 2003.



Brownsville Business District in 2003



Aerial View of Western Brownsville in 2002 (photo courtesy of www.texmaps.com)



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Brownsville Demographics

Factor	1990	2000
Total population	98,962	139,722
Gender Ratio M/F (Number)	46,714/52,248	65,783/73,939
Age (Percent of total population)		
Under 18 years of age	36.5	34.6
18 to 64 years of age	54.8	55.9
65 years and over	8.7	9.5
Ethnicity or Race (Number)		
White	83,895	114,083
Black or African American	193	575
American Indian and Alaskan Native	140	580
Asian	301	752
Native Hawaiian and other Pacific Islander	N/A	46
Some other race	14,433	20,486
Two or more races	N/A	3,200
Hispanic or Latino (any race)	89,206	127,535
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	40.2	31.8
Percent high school graduate or higher	45.5	51.7
Percent with a Bachelor's degree or higher	12.2	13.4
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	87.3	87.2
Percent who speak English less than very well	47.2	42.0
Household income (Median \$)	15,890	24,468
Poverty Status (Percent of population with income below poverty line)	43.8	36.0
Percent female headed household	20.2	20.9
Home Ownership (Number)		
Owner occupied	14,681	23,361
Renter occupied	11,641	14,813
Value Owner-occupied Housing (Median \$)	39,000	53,000
Monthly Contract Rent (Median \$)	236	405
Employment Status (Population 16 yrs and over)		
Percent in the labor force	55.9	52.4
Percent of civilian labor force unemployed	15.3	13.0
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	27.6
Service occupations	N/A	18.5
Sales and office occupations	N/A	26.7
Farming, fishing, and forestry occupations	2.3	1.0
Construction, extraction, and maintenance occupations	N/A	9.4
Production, transportation, and material moving occupations	N/A	16.9
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	2.3	1.3
Mining (includes the offshore oil/gas industry workforce)	0.0	0.2
Manufacturing	14.1	12.2
Percent government workers	21.6	19.5
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	20.4
Percent worked outside of county of residence	2.1	3.5

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Brownsville in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	2
Churches with maritime theme	0
Docking facilities (commercial)	1
Fishing Gear, Electronics, Welding, and other repair	3
Fishing associations (recreational/commercial)	1
Fish processors, Wholesale fish house	2
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	8
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	2
Recreational Fishing Tournaments	2
Sea Grant Extension office	0
Seafood restaurants	8
Seafood retail markets	1
Trucking operations	1
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	~150

Table 3. Primary Fishing-related Businesses Listed for Brownsville in 2003

Type of Business	Frequency
Boat Builder/Broker	5
Processor	1
Processor; Wholesale Seafood Dealer	2
Retail Seafood Dealer	3
Wholesale Seafood Dealer	5
Total	16

Table 4. Brownsville Commercial Landings and Value Summary: 2002 (based on seafood dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	14,019,241	42,632,180

Table 5. Brownsville License/Permit Summary: 2000

Commercial (based on physical residence data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
50	1*	4,285
Total = 51		
% Households Holding Commercial Permit or License: $51/38,174 = 0.5$		Average Number of Licenses per Household: $4,285/38,174 = 0.1$

* Please note that this figure does not include Gulf shrimp permit holders (no such data are available for 2000), though many such persons likely were residing in or held post office boxes in the Brownsville area in 2000. Please reference Table 3.17-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.17.2 Laguna Vista (incorporated, pop. 1,658)

Location and Overview. Laguna Vista is a small town located along Farm Route 510 and just north of State Route 100 in eastern Cameron County. The town is located approximately 22 miles northeast of Brownsville and about seven miles west of South Padre Island. The area is surrounded by water - the Laguna Madre to the east, Laguna Larga to the north, and the Bahia Grande to the southwest. Residents may access the Gulf of Mexico via a roughly ten mile voyage south through the Intracoastal Waterway.

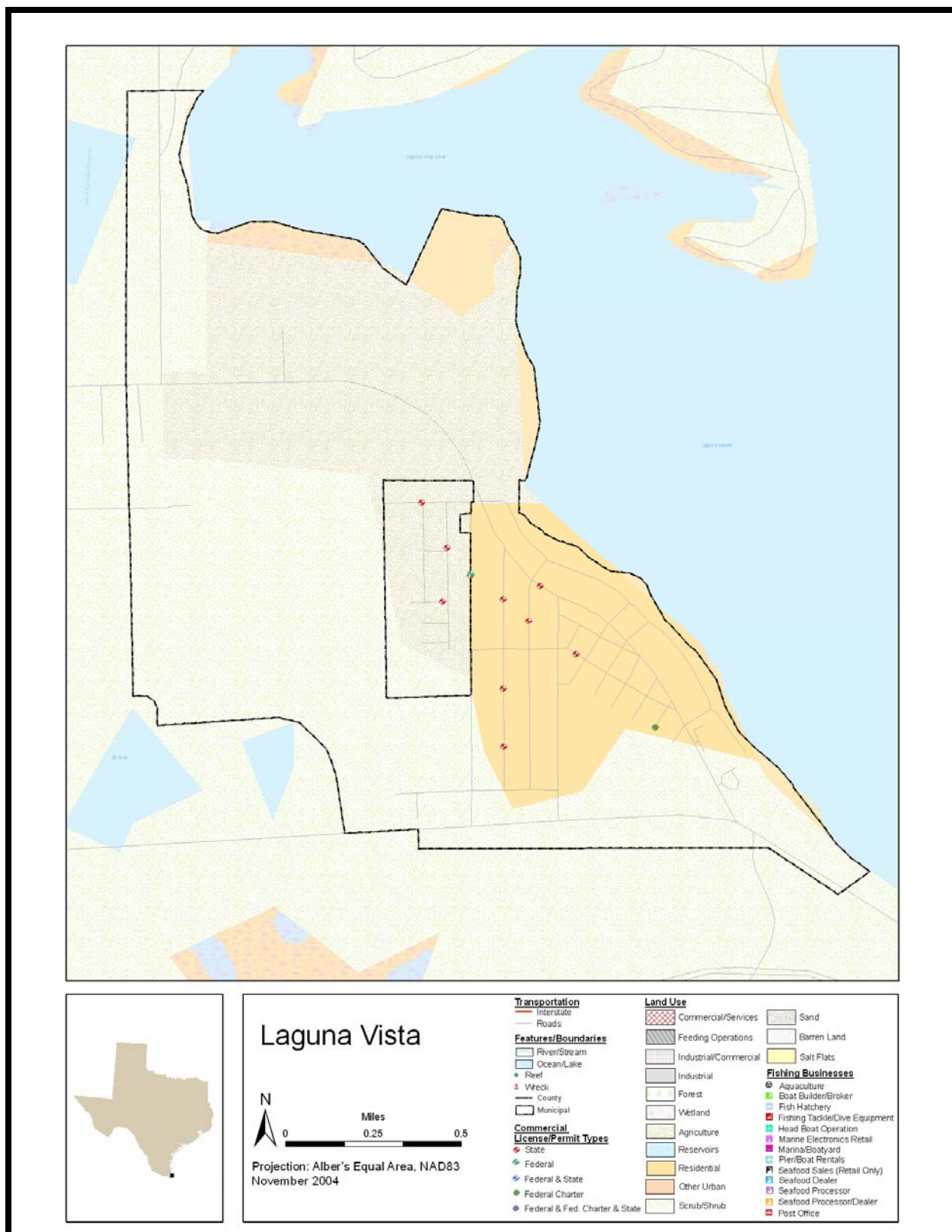
History. Laguna Vista, or “lake view,” was settled in the early 1800s by Mexican salt traders. Ranching became important later in the century. Laguna Vista incorporated in 1958 (Garza 2002).

Current Conditions and Trends. The year 2000 census enumerated 1,658 persons in Laguna Vista, an increase of 42 percent from 1990. Residents in the workforce were primarily employed in management, professional, and related occupations in 2000, with evidence that many commute to nearby urban areas for employment. A relatively high percentage of government workers reside in Laguna Vista.

Although many residents fish on a recreational basis in the nearby waters, there are relatively few fishing-related business services in Laguna Vista. A privately-owned marina is available for use by club members and their guests. Most residents acquire fishing-related goods and services and many fish from Port Isabel and South Padre Island.



Aerial View of Laguna Vista and Laguna Madre (courtesy of www.texmaps.com)



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Laguna Vista Demographics

Factor	1990	2000
Total population	1,166	1,658
Gender Ratio M/F (Number)	567/599	784/874
Age (Percent of total population)		
Under 18 years of age	28.6	30.6
18 to 64 years of age	60.7	60.4
65 years and over	10.7	9.0
Ethnicity or Race (Number)		
White	1,105	1,394
Black or African American	4	5
American Indian and Alaskan Native	1	5
Asian	5	10
Native Hawaiian and other Pacific Islander	N/A	0
Some other race	51	201
Two or more races	N/A	43
Hispanic or Latino (any race)	475	816
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	5.7	4.7
Percent high school graduate or higher	87.3	87.6
Percent with a Bachelor's degree or higher	28.2	31.2
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	38.1	44.4
Percent who speak English less than very well	10.8	6.6
Household income (Median \$)	28,553	43,641
Poverty Status (Percent of population with income below poverty line)	12.7	30.9
Percent female headed household	8.5	12.4
Home Ownership (Number)		
Owner occupied	253	407
Renter occupied	162	172
Value Owner-occupied Housing (Median \$)	78,200	102,600
Monthly Contract Rent (Median \$)	424	607
Employment Status (Population 16 yrs and over)		
Percent in the labor force	65.7	69.0
Percent of civilian labor force unemployed	2.6	5.3
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	40.8
Service occupations	N/A	19.0
Sales and office occupations	N/A	26.7
Farming, fishing, and forestry occupations	3.8	1.7
Construction, extraction, and maintenance occupations	N/A	6.8
Production, transportation, and material moving occupations	N/A	4.9
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	4.8	1.6
Mining (includes the offshore oil/gas industry workforce)	0.4	0.0
Manufacturing	6.7	4.3
Percent government workers	19.9	28.7
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	21.4
Percent worked outside of county of residence	1.1	4.5

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Laguna Vista in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	0
Fishing associations (recreational/commercial)	1
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	1
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	1
Bait & Tackle/fishing supplies	0
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	0
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	2-3
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Laguna Vista in 2003

None listed.

Table 4. Laguna Vista Commercial Landings and Value Summary: 2002

Commercial landings cannot be attributed to fishery participants in Laguna Vista.

Table 5. Laguna Vista License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
6	7	135
Total = 7		
% Households Holding Commercial Permit or License: 7/579 = 1.2		Average Number of Licenses per Household: 135/579 = 0.2

Please reference Table 3.17-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.17.3 Los Fresnos (unincorporated, pop. 4,512)

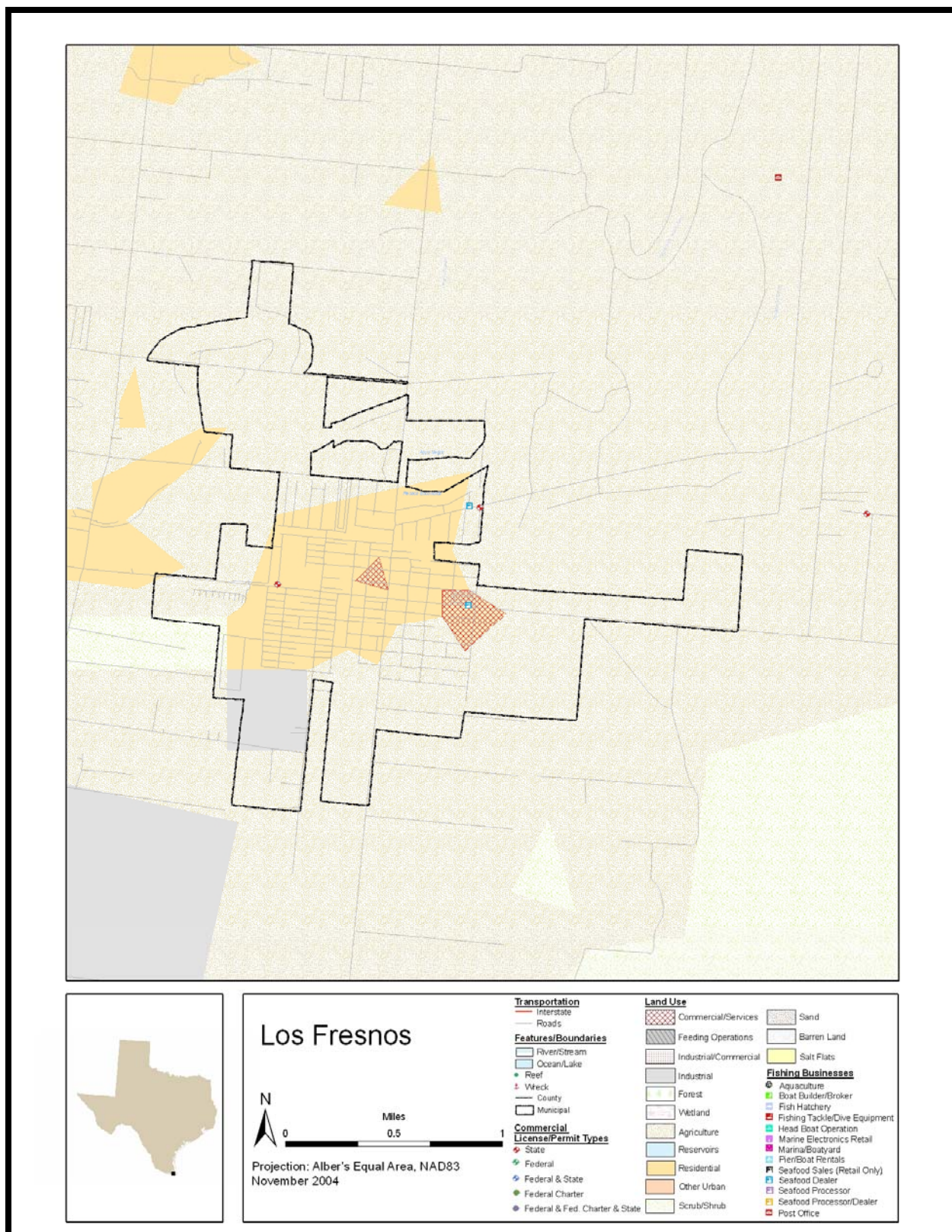
Location and Overview. Los Fresnos is located at the intersection of State Highway 100 and Farm Route 1847 in south-central Cameron County. The town is approximately five miles east of Bahia Grande and Laguna Madre in the Rio Grande Valley. The metropolitan areas of Brownsville and Harlingen are within a 20 minute commute, and many residents are employed in the urban areas. The nearest point of access to the Gulf of Mexico is through South Bay, approximately 21 miles east.

History. Los Fresnos is named for the abundance of ash trees in the area (Garza 2002). The town was officially established in the early 1900s. An early settler formed a company to build canals from the Rio Grande to irrigate farmland, thus providing a fertile environment for the many crops that flourished in the extended growing season of southern Texas (Lone Star Internet 2004). The economy was based largely on ranching and farming throughout much of the twentieth century, and ranching and citrus production continue to be important forms of local enterprise.

Current Conditions and Trends. The population of Los Fresnos increased from 2,473 persons in 1990 to 4,512 in 2000. New opportunities have encouraged many residents to commute to jobs in surrounding urban areas. There are few established fishing-related businesses in the Los Fresnos area. Most residents of this small town travel to Port Isabel for their fishing-related needs.



Offshore Oil and Gas Support Business in Cameron County



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Los Fresnos Demographics

Factor	1990	2000
Total population	2,473	4,512
Gender Ratio M/F (Number)	1,195/1,278	2,184/2,328
Age (Percent of total population)		
Under 18 years of age	37.1	36.4
18 to 64 years of age	41.9	55.5
65 years and over	21.0	8.1
Ethnicity or Race (Number)		
White	2,060	3,698
Black or African American	5	19
American Indian and Alaskan Native	8	6
Asian	5	1
Native Hawaiian and other Pacific Islander	N/A	4
Some other race	395	649
Two or more races	N/A	135
Hispanic or Latino (any race)	1,850	3,818
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	31.8	25.5
Percent high school graduate or higher	53.3	59.6
Percent with a Bachelor's degree or higher	13.6	12.7
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	66.9	78.8
Percent who speak English less than very well	29.4	32.8
Household income (Median \$)	21,641	25,793
Poverty Status (Percent of population with income below poverty line)	37.8	34.2
Percent female headed household	18.5	17.7
Home Ownership (Number)		
Owner occupied	508	1,007
Renter occupied	181	289
Value Owner-occupied Housing (Median \$)	39,300	56,000
Monthly Contract Rent (Median \$)	277	426
Employment Status (Population 16 yrs and over)		
Percent in the labor force	56.2	57.6
Percent of civilian labor force unemployed	7.6	7.0
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	28.1
Service occupations	N/A	23.9
Sales and office occupations	N/A	21.1
Farming, fishing, and forestry occupations	2.6	0.8
Construction, extraction, and maintenance occupations	N/A	9.3
Production, transportation, and material moving occupations	N/A	16.9
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	3.1	1.6
Mining (includes the offshore oil/gas industry workforce)	0.5	0.0
Manufacturing	16.1	12.2
Percent government workers	22.1	23.6
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	25.6
Percent worked outside of county of residence	4.2	7.3

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Los Fresnos in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	0
Fishing associations (recreational/commercial)	0
Fish processors, Wholesale fish house	0
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	0
Recreational Fishing Tournaments	0
Sea Grant Extension office	0
Seafood restaurants	0
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Los Fresnos in 2003

Type of Business	Frequency
Wholesale Seafood Dealer	1
Total	1

Table 4. Los Fresnos Commercial Landings and Value Summary: 2002 (based on seafood dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	1,182,175	3,620,493

Table 5. Los Fresnos License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
3	--	433
Total = 3		
% Households Holding Commercial Permit or License: 3/1,296 = 0.2		Average Number of Licenses per Household: 433/1,296 = 0.3

Please reference Table 3.17-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.17.4 Port Isabel (incorporated, pop. 4,865)

Location and Overview. Port Isabel is adjacent to the Laguna Madre on the easternmost tip of Cameron County. The area is also considered the eastern terminus of the Rio Grande Valley. Harlingen is 35 miles to the northwest and Brownsville is 22 miles to the west-southwest. State Highways 100 and 48 are the main thoroughfares. The Queen Isabella Parkway connects Port Isabel to South Padre Island by a series of bridges, and there are close economic and social ties between residents in both towns. The Gulf of Mexico is easily reached from Port Isabel via the Brazos-Santiago Pass, some three miles to the east.

The contemporary economy of Port Isabel is based in tourism, commercial fisheries, and petroleum industry support services (Garza 2002). The surrounding estuarine and nearshore marine waters are popular destinations for recreational anglers. Speckled trout, redfish, drum, sheepshead, sand trout, and snook are some of the more popular species found in local waters. Port Isabel residents stage an annual “Shrimp Fiesta,” which includes a blessing of the fleets.

History. Spanish explorers found safe anchorage in the area in the early eighteenth century and named their settlement Punta de Santa Isabel after their queen. Spanish and Mexican ranchers and farmers later established a lucrative cotton-farming operation here in the 1830s. In 1859, Port Isabel exported \$10 million dollars worth of cotton. Port Isabel was incorporated in 1928. The shrimp industry became a viable enterprise in the 1950s (Port Isabel Chamber of Commerce 2003). Port Isabel captains and crew harvested 7,136,000 pounds of shrimp in 1960 alone. About 41 million pounds of shrimp were harvested in the 1990s (Garza 2002).

Current Conditions and Trends. The year 2000 census enumerated 4,865 persons in Port Isabel, an increase of 398 persons from 1990. Residents in the workforce were primarily employed in service and sales/office positions in 2000, with indication that many commuted to jobs in Brownsville and other cities. Four percent of residents reported farming, fishing, or forestry as their primary occupation, with fishing as the leading employment sector in this category.

Numerous Port Isabel businesses support recreational and commercial fishing activities. Commercial fishing vessels have access to various docking facilities, two seafood trucking operations, seafood processors, wholesalers, and boat yards. Two fishing piers, eight marinas, a public boat ramp, six bait and tackle shops, and 18 charter/head boats and sight-seeing boats sustain Port Isabel’s recreational fishing industry. A fisheries research laboratory is based in Port Isabel. Residents and visitors may purchase seafood from a variety of retail markets, and there are numerous seafood restaurants in the area.

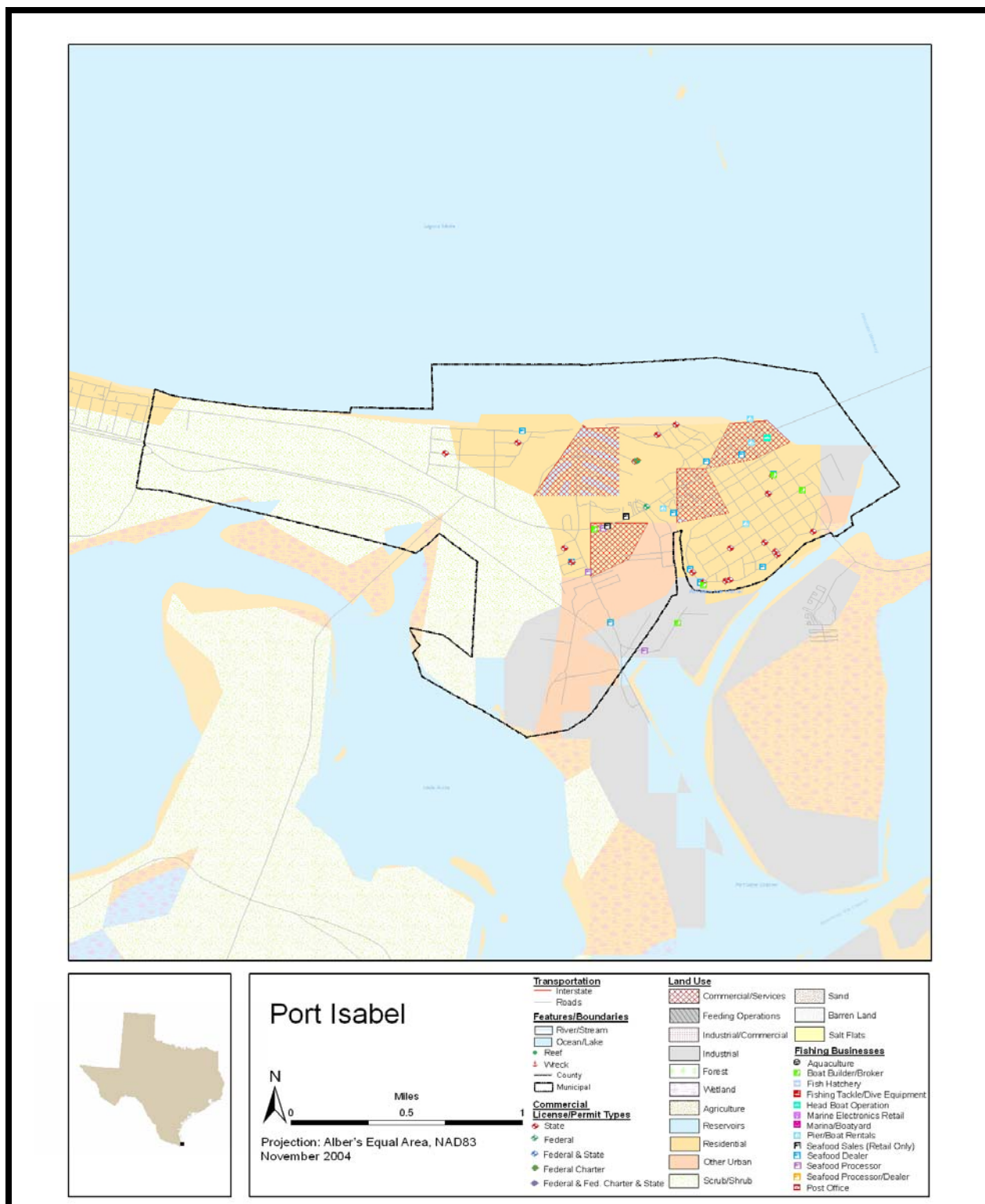
Port Isabel seafood processing firms handle a large percentage of the shrimp catch that is landed in the Gulf of Mexico each year. But informants report that the industry is struggling. While some local shrimp businesses are as much as three generations old, the viability of shrimp harvesting, processing, and distribution in future years is reportedly uncertain.

Seafood business owners implicate a variety of problems. Many assert that the region's seafood market is being flooded with shrimp from other countries, and that this is depressing local prices. Such general statements are sometimes followed with specific examples. For instance, one participant asserted that that few boat builders remain active in Port Isabel - a result of what he considered overly stringent gear requirements associated with turtle by-catch (TEDS). He also blamed high fuel prices and low prices being paid for seafood at the marketplace. He stated that some shrimp trawl captains have sold their boats in recent years, and few new vessels are being constructed in the region. Finally, some captains report having trouble finding crew members.

Despite this range of problems, a sizeable Port Isabel-based shrimp fleet was active in the offshore waters of the Gulf at the beginning of the decade. Some 110 persons residing in or maintaining post office boxes in Port Isabel held Gulf shrimp permits in 2003.



Historic Port Isabel Lighthouse



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Port Isabel Demographics

Factor	1990	2000
Total population	4,467	4,865
Gender Ratio M/F (Number)	2,136/2,331	2,358/2,507
Age (Percent of total population)		
Under 18 years of age	33.2	30.4
18 to 64 years of age	56.5	57.4
65 years and over	10.3	12.2
Ethnicity or Race (Number)		
White	3,938	3,876
Black or African American	25	50
American Indian and Alaskan Native	6	16
Asian	10	12
Native Hawaiian and other Pacific Islander	N/A	5
Some other race	488	756
Two or more races	N/A	150
Hispanic or Latino (any race)	3,337	3,619
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	29.8	24.3
Percent high school graduate or higher	49.1	59.1
Percent with a Bachelor's degree or higher	7.3	12.3
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	73.7	71.3
Percent who speak English less than very well	39.2	28.9
Household income (Median \$)	15,275	25,323
Poverty Status (Percent of population with income below poverty line)	39.0	27.3
Percent female headed household	14.6	16.6
Home Ownership (Number)		
Owner occupied	808	984
Renter occupied	555	665
Value Owner-occupied Housing (Median \$)	48,300	58,900
Monthly Contract Rent (Median \$)	229	405
Employment Status (Population 16 yrs and over)		
Percent in the labor force	62.9	57.2
Percent of civilian labor force unemployed	5.5	4.4
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	17.7
Service occupations	N/A	29.6
Sales and office occupations	N/A	27.6
Farming, fishing, and forestry occupations	4.7	3.8
Construction, extraction, and maintenance occupations	N/A	9.8
Production, transportation, and material moving occupations	N/A	11.5
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	4.7	6.1
Mining (includes the offshore oil/gas industry workforce)	0.0	0.0
Manufacturing	3.6	3.5
Percent government workers	16.1	13.5
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	16.8
Percent worked outside of county of residence	0.1	4.3

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Port Isabel in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	1
Boat yards/ Boat builders (recreational/commercial)	1
Churches with maritime theme	1
Docking facilities (commercial)	3
Fishing Gear, Electronics, Welding, and other repair	7-8
Fishing associations (recreational/commercial)	2
Fish processors, Wholesale fish house	1
Fisheries research laboratories	1
Fishing monuments	1
Fishing pier	2
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	1
Net makers	1
NMFS or state fisheries office (port agent, etc.)	1
Public boat ramps	1
Recreational docks/marinas	8
Bait & Tackle/fishing supplies	5-6
Recreational Fishing Tournaments	1
Sea Grant Extension office	0
Seafood restaurants	2-4
Seafood retail markets	3
Trucking operations	2
Site-seeing/pleasure tours	8
Charter/Head Boats	10
Commercial Boats	50 +

Table 3. Primary Fishing-related Businesses Listed for Port Isabel in 2003

Type of Business	Frequency
Boat Builder/Broker	5
Boat Rentals & Pier	6
Processor	1
Retail Seafood Dealer	2
Wholesale Seafood Dealer	3
Total	17

Table 4. Port Isabel Commercial Landings and Value Summary: 2002 (based on seafood dealer data)

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	8,735,808	26,681,330

Table 5. Port Isabel License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
45	3	509
Total = 48		
Households Holding Commercial Permit or License: 48/1,649 = 3.7		Average Number of Licenses per Household: 509/1,649 = 0.3

Please reference Table 3.17-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.17.5 San Benito (incorporated, pop. 23,444)

Location and Overview. San Benito is located along U.S. Highway 77/83 in the heart of the Rio Grande Valley in central Cameron County. The small city lies between two major metropolitan areas. Harlingen is approximately five miles to the northwest; and Brownsville is 17 miles to the southeast. The Gulf of Mexico is 32 miles east, with no direct access by water from San Benito. The closest major body of water is the Intracoastal Waterway, some 25 miles east. The local economy is based primarily in agriculture and light industry (Robinson 2002).

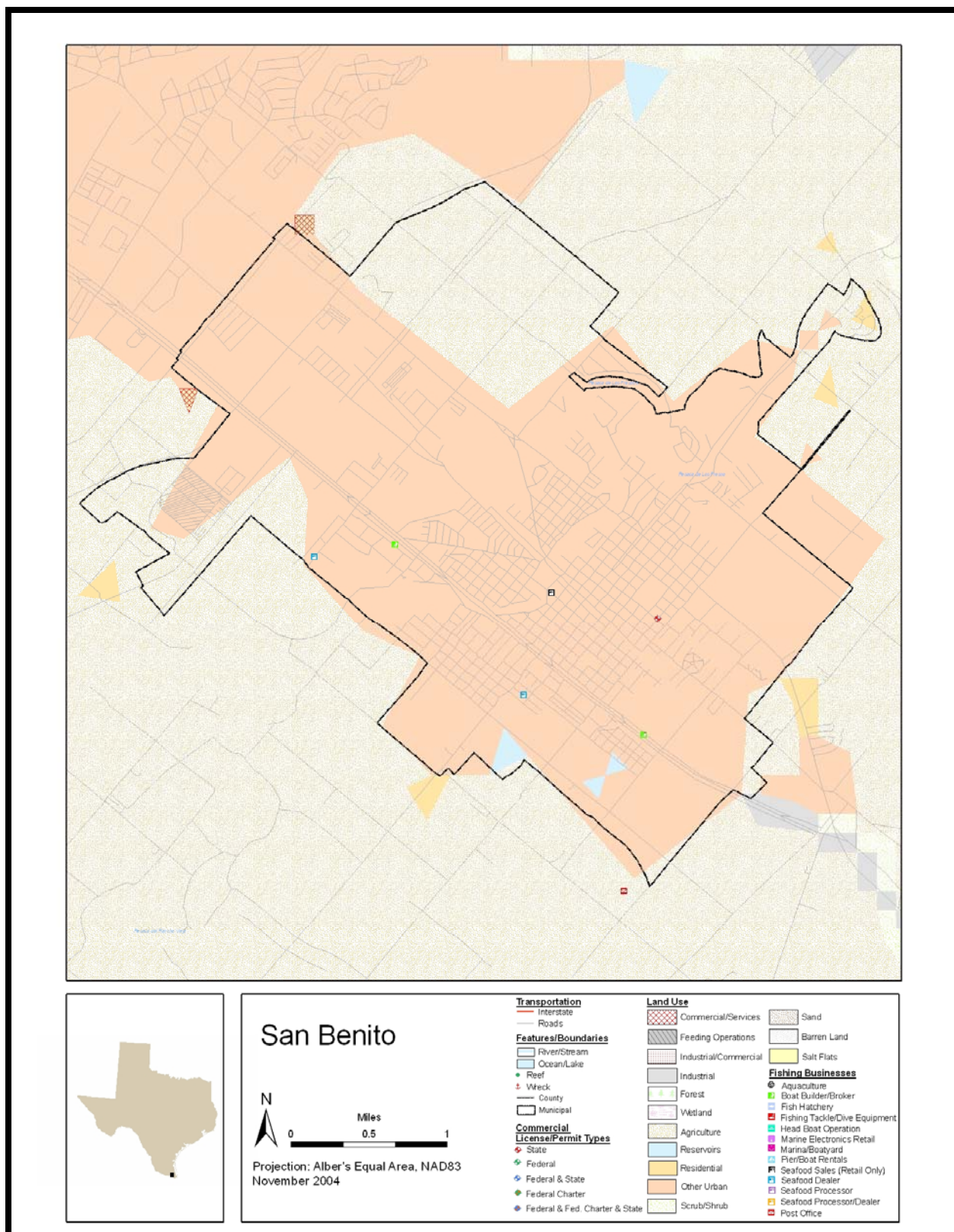
History. San Benito was originally called “Diaz” after Porfirio Diaz, the president of Mexico between 1880 and 1911. The town was eventually named after Saint Benjamin. The majority of early settlers were from Mexico. Anglo settlers did not arrive until 1906, after completion of the area’s first canal or “Resaca.” Farming and ranching were enabled by the canal, with citrus crops proving particularly successful through the 1960s. When San Benito incorporated in 1911, the town consisted of 1,280 acres. Today, it encompasses 4,092 acres (Robinson 2002).

Current Conditions and Trends. The population of San Benito increased from 20,125 persons in 1990 to 23,444 persons in 2000 (U.S. Census Bureau). Nearly half of working residents were employed in management and professional and related occupations and sales and office positions in 2000. Major employers in the immediate vicinity include the region's school district, a Wal-Mart superstore, and city and county government agencies.

Given its distance from the Gulf of Mexico, there are relatively few well-established marine fishing-related businesses or services in San Benito. There are, however, two boat builder-brokers in town, and a licensed seafood dealer. Residents tend to travel to Port Isabel or South Padre to fish and/or obtain fishing-specific services and supplies.



Resaca or Canal in the San Benito Area (photo courtesy of www.johnstonsarchive.net)



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. San Benito Demographics

Factor	1990	2000
Total population	20,125	23,444
Gender Ratio M/F (Number)	9,504/10,621	11,117/12,327
Age (Percent of total population)		
Under 18 years of age	35.4	33.3
18 to 64 years of age	52.8	53.1
65 years and over	11.8	13.6
Ethnicity or Race (Number)		
White	15,256	17,854
Black or African American	42	74
American Indian and Alaskan Native	29	97
Asian	23	58
Native Hawaiian and other Pacific Islander	N/A	1
Some other race	4,775	4,802
Two or more races	N/A	558
Hispanic or Latino (any race)	17,627	20,380
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	40.7	33.0
Percent high school graduate or higher	46.6	51.8
Percent with a Bachelor's degree or higher	9.2	9.8
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	82.1	77.9
Percent who speak English less than very well	41.9	34.7
Household income (Median \$)	16,553	24,027
Poverty Status (Percent of population with income below poverty line)	36.8	32.7
Percent female headed household	22.9	19.5
Home Ownership (Number)		
Owner occupied	3,871	4,905
Renter occupied	1,888	2,160
Value Owner-occupied Housing (Median \$)	30,000	39,500
Monthly Contract Rent (Median \$)	193	374
Employment Status (Population 16 yrs and over)		
Percent in the labor force	55.5	51.7
Percent of civilian labor force unemployed	13.9	12.0
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	26.0
Service occupations	N/A	21.7
Sales and office occupations	N/A	23.1
Farming, fishing, and forestry occupations	1.7	1.5
Construction, extraction, and maintenance occupations	N/A	10.2
Production, transportation, and material moving occupations	N/A	17.5
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	1.8	1.6
Mining (includes the offshore oil/gas industry workforce)	0.4	0.2
Manufacturing	12.4	10.2
Percent government workers	22.3	20.4
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	19.1
Percent worked outside of county of residence	4.2	7.3

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in San Benito in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	3
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	2
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	0
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	1
Recreational Fishing Tournaments	1
Sea Grant Extension office	1
Seafood restaurants	3
Seafood retail markets	2
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for San Benito in 2003

Type of Business	Frequency
Boat Builder/Broker	2
Marina	1
Retail Seafood Dealer	1
Total	4

Table 4. San Benito Commercial Landings and Value Summary: 2002

Landings and ex-vessel values may not be reported under the “Rule of Three.”

Table 5. San Benito License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
1	--	1,801
Total = 1		
Households Holding Commercial Permit or License: 1/7,065 = 0.01		Average Number of Licenses per Household: 1,801/7,065 = 0.3

Please reference Table 3.17-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.17.6 South Padre Island (incorporated, pop. 2,422)

Location and Overview. South Padre Island is a small beach town and seasonal resort destination in easternmost Cameron County. It is located at the southern end of the long barrier island known as Padre Island. The elevated Queen Isabella Causeway and its series of bridges span the stretch of the Laguna Madre between Port Isabel and South Padre Island, enabling motorists to reach island's white sand beaches, and the broad waters of the Gulf of Mexico to the east. Brownsville, the nearest metropolitan area, is approximately 25 miles southwest. South Padre Island is indeed a popular tourist destination, with as many as 200,000 visitors arriving during the summer months. Recreational fishing is an important activity for many.

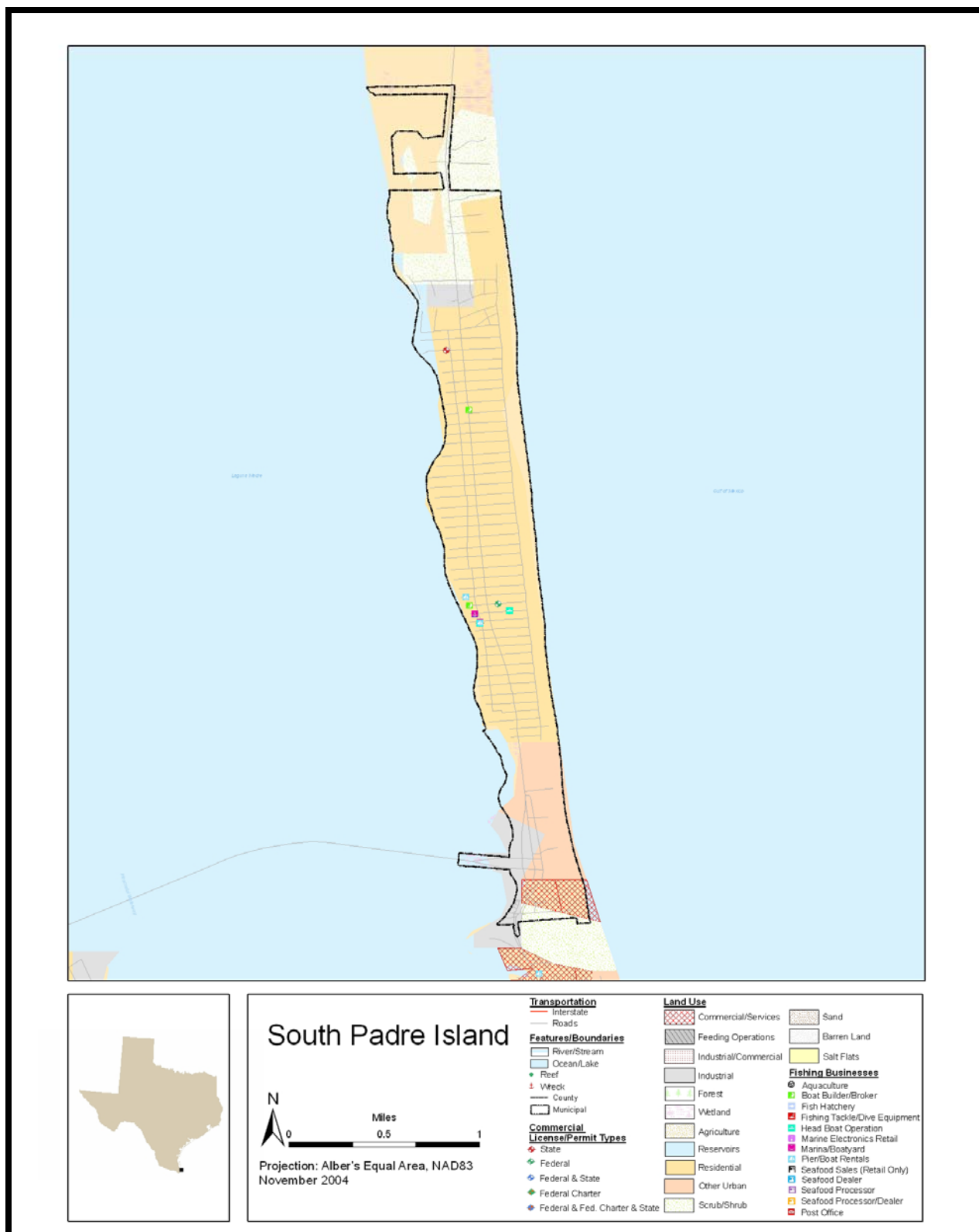
History. Spanish explorers reached the area in the early sixteenth century. Early settlers were challenged by isolation and the ongoing threat of hurricanes on this low-lying island. The first permanent settlement was established in 1804 by Padre Nicolas Balli. Padre Island was accessible only by ferry even into the mid-twentieth century. Social and economic relationships between island residents and Port Isabel residents were enhanced upon completion of the causeway in the 1950s. South Padre Island incorporated in 1973 (Garza 2002).

Current Conditions and Trends. The population of South Padre Island grew significantly between 1990 and 2000. The year 2000 census enumerated 2,422 residents, while the 1990 census enumerated 1,677. There are dramatic shifts in population and business activity over the course of the year in this area. Although local business owners report some tourism-related activity during the winter months, this period is said to be relatively slow compared with the highly active summer months when families and individuals come to visit the beach from around the region and nation. Hotel, restaurant, and retail business owners report extensive activity during this time. South Padre is also an increasingly popular place of residence for professional and managerial workers who commute to work in adjacent urban areas (or who work from their homes).

There are numerous established fishing-related businesses in and around South Padre Island. Although there is a small shrimp trawl fleet based here, most businesses are oriented to the recreational fishing contingent, and offshore charter fishing is popular. There are many seafood restaurants, three dockside inns, three public boat ramps and marinas, a fishing pier, and a wholesale-retail seafood market. A fisheries research laboratory is also based in South Padre Island.



Boat Ramp in Laguna Madre Area



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. South Padre Island

Factor	1990	2000
Total population	1,677	2,422
Gender Ratio M/F (Number)	826/851	1,289/1,133
Age (Percent of total population)		
Under 18 years of age	13.5	12.9
18 to 64 years of age	69.6	68.7
65 years and over	16.9	18.4
Ethnicity or Race (Number)		
White	1,606	2,291
Black or African American	4	17
American Indian and Alaskan Native	11	11
Asian	4	5
Native Hawaiian and other Pacific Islander	N/A	1
Some other race	52	67
Two or more races	N/A	30
Hispanic or Latino (any race)	229	553
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	3.1	2.2
Percent high school graduate or higher	90.2	92.4
Percent with a Bachelor's degree or higher	31.9	35.5
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	19.6	32.2
Percent who speak English less than very well	4.9	10.9
Household income (Median \$)	30,256	45,417
Poverty Status (Percent of population with income below poverty line)	9.7	12.0
Percent female headed household	4.3	4.2
Home Ownership (Number)		
Owner occupied	418	769
Renter occupied	395	442
Value Owner-occupied Housing (Median \$)	120,800	175,400
Monthly Contract Rent (Median \$)	428	702
Employment Status (Population 16 yrs and over)		
Percent in the labor force	64.4	58.6
Percent of civilian labor force unemployed	2.7	2.0
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	45.1
Service occupations	N/A	18.4
Sales and office occupations	N/A	24.5
Farming, fishing, and forestry occupations	2.3	0.7
Construction, extraction, and maintenance occupations	N/A	6.2
Production, transportation, and material moving occupations	N/A	5.0
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	2.3	1.5
Mining (includes the offshore oil/gas industry workforce)	0.2	0.4
Manufacturing	5.8	3.9
Percent government workers	11.5	19.0
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	22.5
Percent worked outside of county of residence	4.5	2.7

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in South Padre Island in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	1
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	1
Fish processors, Wholesale fish house	0
Fisheries research laboratories	1
Fishing monuments	1
Fishing pier	1
Hotels/Inns (dockside)	3
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	3
Recreational docks/marinas	3
Bait & Tackle/fishing supplies	2
Recreational Fishing Tournaments	numerous
Sea Grant Extension office	0
Seafood restaurants	25
Seafood retail markets	1
Trucking operations	0
Site-seeing/pleasure tours	10-12
Charter/Head Boats	10-12
Commercial Boats	5

Table 3. Primary Fishing-related Businesses Listed for South Padre Island in 2003

None listed.

Table 4. South Padre Island Commercial Landings and Value Summary: 2002

Species	Pounds Reported	Ex-Vessel Value (\$)
Total Combined	29,379	72,880

Table 5. South Padre Island License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
1	5	300
Total = 6		
Households Holding Commercial Permit or License: 6/1,211 = 0.5		Average Number of Licenses per Household: 300/1,211 = 0.2

Please reference Table 3.17-3 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.18 Dallas County Community

This section provides descriptions of the sole study community in Dallas County. The community is Carrollton.

Dallas County is located in north central Texas, bordered by Kaufman and Rockwall Counties to the east, Tarrant County to the west, Denton and Collin Counties to the north, and Ellis County to the south. The City of Dallas is the county seat. Dallas County is 300 miles north of the Gulf of Mexico. It encompasses 902 square miles of undulating landscape, with elevations ranging from 382 to 584 feet above sea level (Ramos et al. 2002:164).

Interaction between Anadarkos tribal groups and European explorers began in 1542. By the eighteenth century, French explorers and Spanish missionaries had entered the region. Cherokees emigrated here from Arkansas in the 1820s, but after three years of fighting with settlers they left the region. The first Euro-American to settle extensive land in the area was John Neely Bryan who arrived in 1841. In 1843, a treaty was signed with the tribal groups. This served the purposes of settlers who wished to keep potential invaders west of Fort Worth. The county became part of the United States in 1845.

The early economy of Dallas County was based in agriculture. Farming remained the primary endeavor through 1920. Wheat and oats were important crops, as well as hogs, horses, and cattle farming. By the 1920s, manufacturing had become an important economic sector. That year, there were 492 manufacturers, producing over 116 million dollars worth of products (Maxwell: 2002). Dallas was designated a U.S. Customs port of entry and foreign trade zone, and Dallas–Fort Worth International Airport has become one of the largest such facilities in the nation (Ramos et al. 2002:164).

The year 2000 population of Dallas County was 2,218,899 persons, making it the second most populous county in Texas that year. Dallas had a year 2000 population of 1,188,580 persons. The median household income for Dallas County in 2000 was \$43,324. In 2000, 58 percent of the population was Caucasian, 20 percent was African American, four percent was of Asian ancestry, and the remaining 18 percent was comprised of numerous other ethnic-racial groups. The percentage of residents living in poverty in 2000 was just under 13 percent.

Table 3.18-1 Earnings Dallas County: 1990-2000

Industry	Earnings (Constant 2000 \$1000s)		% Share of 2000 Earnings	\$ Change 1990-2000	% Share of Change 1990-2000
	1990	2000			
Earnings	45,670,724	101,427,440	100.0	55,756,716	100.0
Farm earnings	5,643	17,825	0	12,182	0
Ag. services, forestry, fish.	136,038	339,846	0.3	203,808	0.4
Fishing	NA	NA	NA	NA	NA
Mining	2,108,672	4,219,014	4.1	2,110,342	3.8
Oil and gas extraction	2,067,508	4,145,156	4.1	2,077,648	3.7
Construction	1,880,428	5,035,042	4.9	3,154,614	5.7
Special trade contractors	1,212,001	3,226,152	3.2	2,014,151	3.6
Manufacturing	7,623,469	13,447,296	13.2	5,823,827	10.4
Fabricated metal products	457,703	836,374	0.8	378,671	0.7
Industrial mach. & equip.	619,031	816,308	0.8	197,277	0.3
Food and kindred	482,421	552,121	0.5	69,700	0.1
Chemicals and allied	480,033	757,917	0.7	277,884	0.5
Petroleum and coal	100,148	73,911	0	-26,237	0
Transport., Public utilities	3,665,669	11,009,428	10.8	7,343,759	13.2
Trucking and warehousing	NA	1,742,680	1.7	NA	NA
Water transportation	1,279	11,154	0	9,875	0
Transportation by air	462,739	1,138,794	1.1	676,055	1.2
Wholesale trade	4,793,367	10,878,672	10.7	6,085,305	10.9
Retail trade	4,107,633	7,534,112	7.4	3,426,479	6.1
Eating and drinking places	931,599	2,017,175	2.0	1,085,576	1.9
Finance, insur., real estate	4,705,576	11,663,492	11.5	6,957,916	12.5
Services	12,359,017	30,233,841	29.8	17,874,824	32.1
Business services	3,203,652	11,022,272	10.9	7,818,620	14.0
Health services	2,830,073	5,122,210	5.1	2,292,137	4.1
Legal services	1,664,982	2,821,327	2.8	1,156,345	2.1
Engineer. & mgt. services	1,762,585	5,432,164	5.4	3,669,579	6.6
Government	4,290,855	7,066,697	7.0	2,775,842	5.0

Source: Bureau of Economic Analysis, Regional Economic Information System

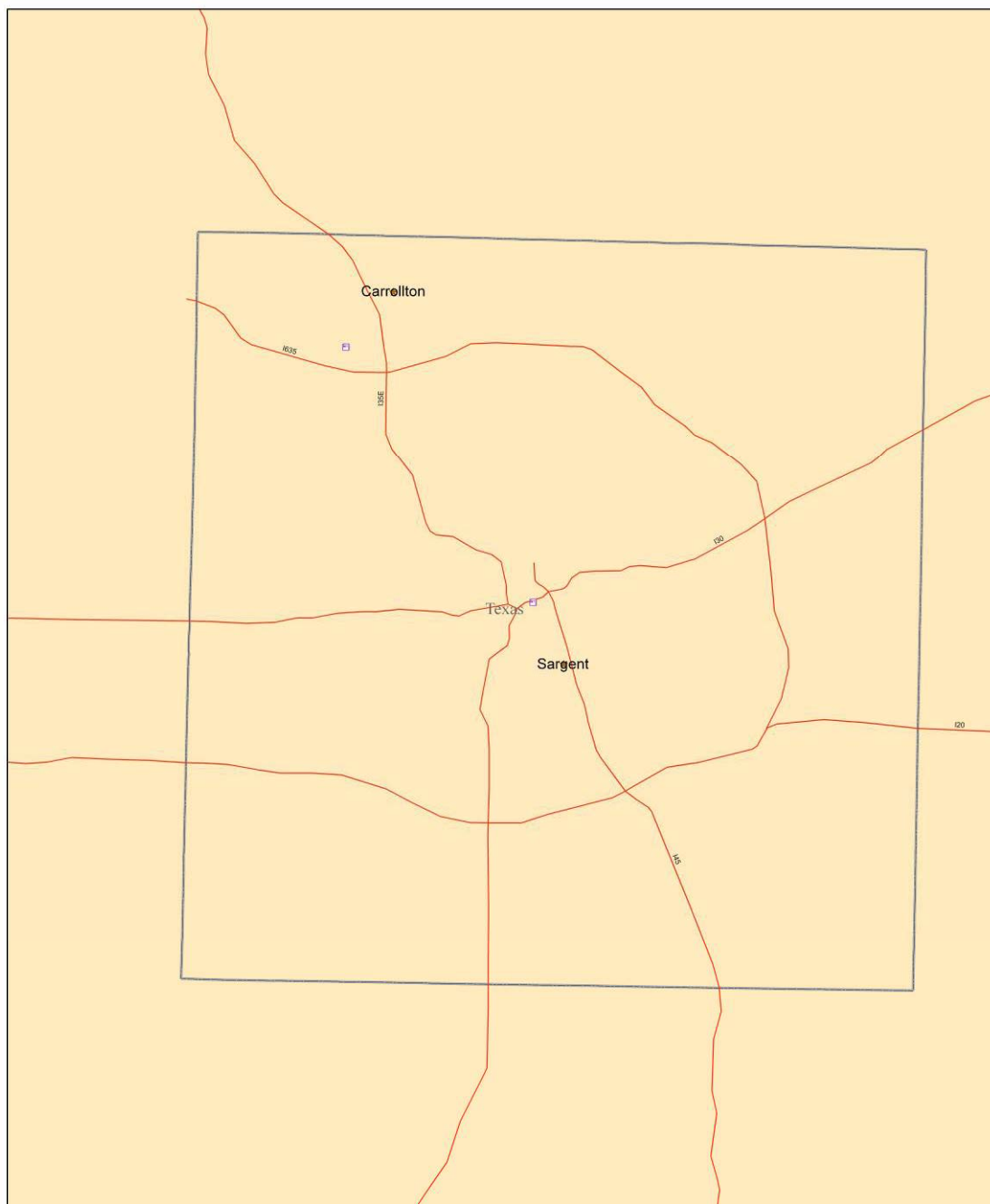
Table 3.18-2 Year 2000 Commercial Permits and Licenses, and 2003 Gulf Shrimp Permits: Dallas County*

Permit Type	Study Communities
	Carrollton
Pelagic Charter	--
Swordfish	--
King Mackerel	--
Rock Shrimp	--
Red Snapper	--
Spiny Lobster	--
Spanish Mackerel	--
Gulf Reef Fish	--
Shark	--
South Atlantic Snapper Grouper	--
Total Federal Permits 2000	--
Total Federal Permit Holders 2000	--
Total State License Holders 2000	--
Shrimp Permits 2003 **	--

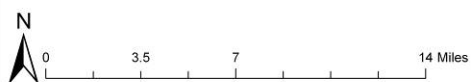
* Includes all permits that can be attributed to the communities by *both* street and P.O. Box addresses; these data are subsequently refined to provide counts of permit holders for whom evidence suggests actual residence in the community in 2000. ** 2003 is the first year for which Gulf shrimp permit data are available.



Dallas County Courthouse



Dallas County



Legend

- | | |
|--------------------------------|---------------------|
| ★ Study Community | ● Reef |
| ■ Processor | ⚓ Wreck |
| ■ Processor and Seafood Dealer | ▲ Platform |
| ■ Seafood Dealer | — County Boundaries |
| | — Interstate |

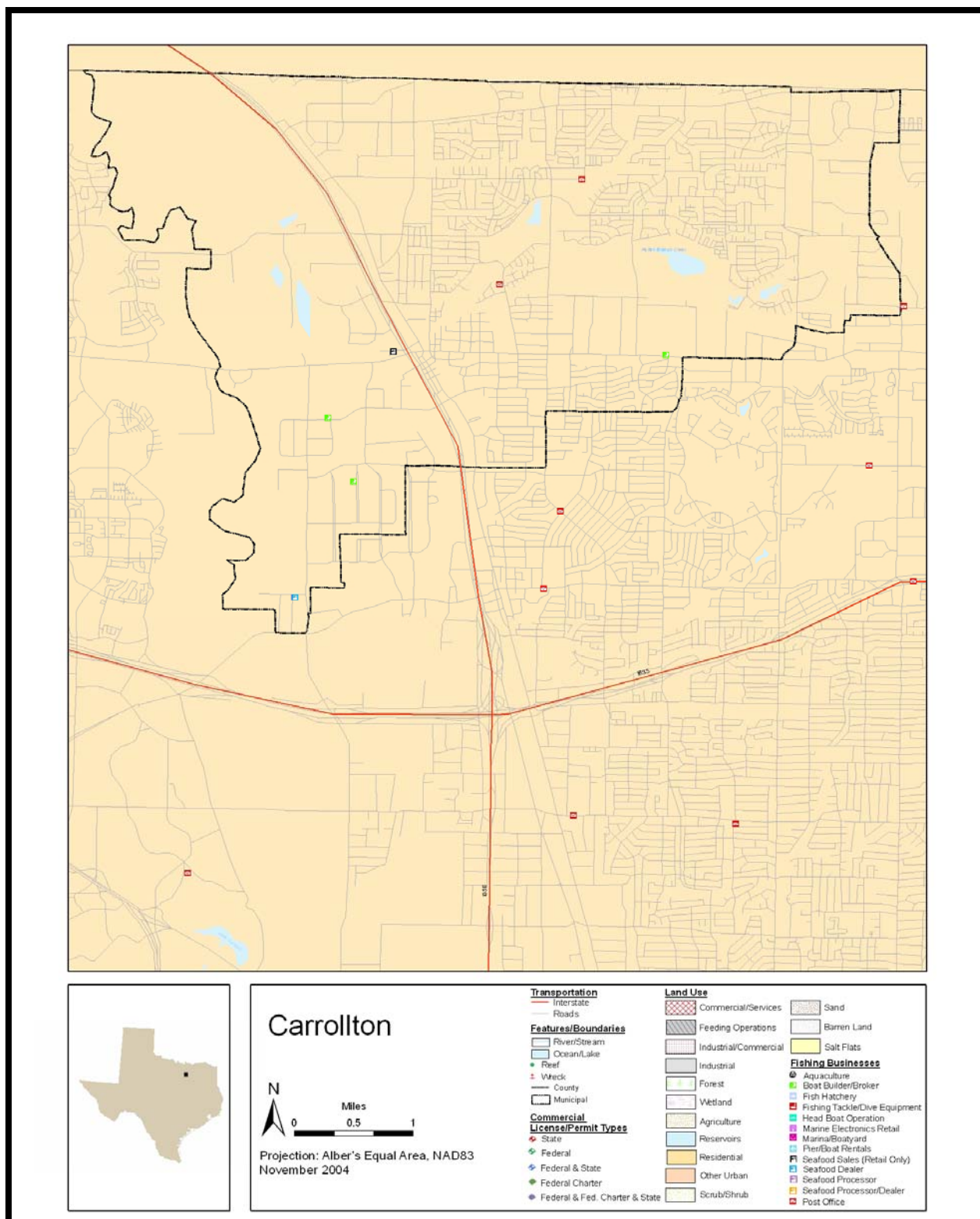
3.18.1 Carrollton (incorporated, pop. 109,576)

Location and Overview. Located in the “Metrocrest” region of the Dallas metropolitan area, Carrollton spans portions of Dallas, Denton, and Collin Counties. The Metrocrest area is a four-city cluster that includes Carrollton, Addison, Coppell, and Farmers Branch. These four cities are served by a single Chamber of Commerce (Perez 2002). Carrollton is fourteen miles north of downtown Dallas.

History. Established in 1872 as a stop along the MK&T Railroad, farmers in the region gradually capitalized on the rail system to market their products. The Carrollton developed as an agricultural community (Perez 2002; Texas Online 1998). By 1888, Carrollton was a significant point of commerce for livestock, grain, cotton, and cottonseed. By the late 1940s, Carrollton had gained distinction for being a distribution center of grain, gravel, and dairy products. Manufacturing of auto-parts, semiconductors, computers, and electronic components led to economic growth in the 1980's. Carrollton was incorporated in 1913.

Current Conditions and Trends. The year 2000 census enumerated 109,576 persons in Carrollton, an increase of 33 percent from 1990. Some 74 percent of the workforce in Carrollton was employed in management/professional and sales and office positions in 2000. Due to its proximity to the many urban areas and their amenities in this three-county metropolis, Carrollton residents have access to a variety of employment opportunities. Of the community's working population, 51 percent held positions outside their county of residence.

There are few established freshwater fishing services and opportunities in and around Carrollton. These include a fishing pier, and seafood restaurant. A wholesale seafood dealer is also based in the area. Numerous residents hold saltwater fishing licenses.



Note: This map depicts spatial distribution of fishing-related entities at the street-level of resolution and thus derives from physical address data only.

Table 1. Carrollton Demographics

Factor	1990	2000
Total population	82,169	109,576
Gender Ratio M/F (Number)	40,461/41,708	54,275/55,301
Age (Percent of total population)		
Under 18 years of age	28.0	28.3
18 to 64 years of age	68.6	66.5
65 years and over	3.4	5.2
Ethnicity or Race (Number)		
White	68,300	78,758
Black or African American	4,014	6,862
American Indian and Alaskan Native	348	503
Asian	5,598	11,944
Native Hawaiian and other Pacific Islander	N/A	75
Some other race	3,909	8,451
Two or more races	N/A	2,983
Hispanic or Latino (any race)	8,420	21,400
Educational Attainment (Population 25 and over)		
Percent with less than 9th grade	4.1	6.5
Percent high school graduate or higher	89.9	86.4
Percent with a Bachelor's degree or higher	37.4	37.0
Language Spoken at Home (Population 5 years and over)		
Percent who speak a language other than English at home	17.2	29.1
And Percent who speak English less than very well	7.7	14.6
Household income (Median \$)	45,787	62,406
Poverty Status (Percent of population with income below poverty line)	4.5	5.6
Percent female headed household	12.1	9.9
Home Ownership (Number)		
Owner occupied	18,474	25,710
Renter occupied	11,978	13,426
Value Owner-occupied Housing (Median \$)	99,700	125,900
Monthly Contract Rent (Median \$)	466	781
Employment Status (Population 16 yrs and over)		
Percent in the labor force	82.8	77.6
Percent of civilian labor force unemployed	3.8	3.0
Occupation** (Percent in workforce)		
Management, professional, and related occupations	N/A	42.3
Service occupations	N/A	9.8
Sales and office occupations	N/A	31.5
Farming, fishing, and forestry occupations	0.5	0.2
Construction, extraction, and maintenance occupations	N/A	6.2
Production, transportation, and material moving occupations	N/A	10.0
Industry** (Percent in workforce)		
Agriculture, forestry, fishing and hunting	0.7	0.2
Mining (includes the offshore oil/gas industry workforce)	1.6	0.3
Manufacturing	18.8	5.0
Percent government workers	7.5	8.0
Commuting to Work (Workers 16 yrs and over)		
Mean travel time to work (minutes)	N/A	26.6
Percent worked outside of county of residence	49.2	51.3

**Differences in the types of data the U.S. Census Bureau used to generate Occupation and Industry percentages in 1990 and 2000 preclude valid comparisons between those census years.

Table 2. Fishing Infrastructure and Services Observed in Carrollton in 2003

Infrastructure or Service	Quantity
Air fill stations (diving)	0
Boat yards/ Boat builders (recreational/commercial)	0
Churches with maritime theme	0
Docking facilities (commercial)	0
Fishing Gear, Electronics, Welding, and other repair	1
Fishing associations (recreational/commercial)	1
Fish processors, Wholesale fish house	1
Fisheries research laboratories	0
Fishing monuments	0
Fishing pier	1
Hotels/Inns (dockside)	0
Marine railways/haul out facilities	0
Museums—fishing/marine-related	0
Net makers	0
NMFS or state fisheries office (port agent, etc.)	0
Public boat ramps	0
Recreational docks/marinas	0
Bait & Tackle/fishing supplies	1
Recreational Fishing Tournaments	1
Sea Grant Extension office	0
Seafood restaurants	1
Seafood retail markets	0
Trucking operations	0
Site-seeing/pleasure tours	0
Charter/Head Boats	0
Commercial Boats	0

Table 3. Primary Fishing-related Businesses Listed for Carrollton in 2003

Type of Business	Frequency
Boat Builder/Broker	3
Retail Seafood Dealer	1
Wholesale Seafood Dealer	1
Total	5

Table 4. Carrollton Commercial Landings and Value Summary: 2002

Not applicable.

Table 5. Carrollton License/Permit Summary: 2000

Commercial (based on physical address data only)		Recreational (based on all address fields)
State License Holders	Federal Permit Holders	State Saltwater License Holders
--	--	464
Total --		
% Households Holding Commercial Permit or License: --		Average Number of Licenses per Household: 464/39,136 = 0.01

Please reference Table 3.18-2 above for the total number of commercial permit and license holders attributable to this community as based on both street *and* post office box address data.

3.19 Summary and Conclusions

This final section provides summary discussion of basic research findings, project scope, associated data issues, and prospects for further description and analysis. An empirically-driven typology of the study communities is provided as the concluding material for the section and report.

3.19.1 Overview of Findings

The principal goal of this project has been to provide the sponsor with information needed to identify communities associated with the fishing industry in Texas. While extensive information was required to elucidate the most pertinent characteristics of the study towns and cities in fulfillment of that goal, in reality the effort has to be seen as an initial phase in a more comprehensive process of identification and analysis. As the previous sections make clear, this initial effort should be seen not so much as an effort to identify fishing communities in total, but as one identifying the range and configuration of the characteristics of such communities under existing federal definitions.

Mixed Economies. This report does, indeed, reveal variability in the nature of the study communities, and the relationship of their residents to fishing and its related industries. Some of the study communities are small towns, where residents are deeply involved primarily in fishing, while others are larger towns and cities whose residents participate in many forms of urban and suburban enterprise. Involvement in petrochemical industries was quite common across much of the Texas study region, as might be expected in this, the nation's leader in oil and gas production. In many places, various types of manufacturing are significant. Residents of many rural towns are characteristically involved in agricultural pursuits, especially cattle farming. Research in many of the study communities revealed varying degrees of involvement in fishing, oil and gas industry and associated support services, and agriculture; often with some measure of involvement in tourism services that capitalize on proximity to scenic coastal environments and/or local history.

Challenges for Texas's Commercial Fisheries. With specific regard to fishing and associated industry itself- and of particular significance to this study - there was a definite consensus among informants that Texas's commercial fishing fleets and support services are struggling with problems in the seafood market. Informants often explained that imports of shrimp from Asian ports are flooding the domestic market, and driving prices so low as to seriously undermine the economic incentives for Texas's all-important shrimp fleets. Many assert that the effects of the problem are experienced in a collective sense; that is, in the surrounding "community." The reality of the situation may call for detailed economic analysis, but it should be noted that these widespread reports preceded recent collaboration of domestic shrimp interests, who seek legislation to obviate saturation of the domestic market with foreign product.

On Reported Perception of Fishing Community Status. With regard to the central issue of “fishing community” status, our notes also include remarks from informants about their perceptions of whether their place of residence may or may not, legitimately, be considered a fishing community. We are reluctant to widely report such perspectives, since presentation of individual perspective on the issue tends to shadow in semantic terms the many other forms of evidence we have objectively developed and provided in this report. In reality, valid assessment of reported perceptions about this core issue call for survey methods and more adequate sampling than that involved in the rapid appraisal methods employed during the course of the present research. Thus, we adhere to the prescribed objective of leaving decisions about what constitutes a fishing community in Texas in the hands of the sponsor, as based on the myriad forms of indicative information provided. As provided below, we do, however, advance a means for preliminary categorization of the study communities, based on the full range of information provided in the body of this report.

3.19.2 Review of Project Scope and Associated Data Issues

As noted at the outset, given the number of study communities involved, this research effort has been primarily descriptive and limited to key indicators, rather than highly analytical and inclusive of the full range of factors that might addressed in a full ethnographic study of one community or a few communities over a sustained period. Again, the current effort may be accurately seen as a first tier effort to identify the range of involvement in fishing industry among a broad range of community types. Consistency and uniformity in description was sought to facilitate ease of comparison by reviewers.

Commercial Focus Unavoidable. While we have sought to address both commercial and recreational aspects of fishing industry in this study, our efforts have necessarily focused primarily on the commercial. This is reflective of: (a) the relative abundance of secondary source data pertinent to commercial components of marine fisheries in Texas, (b) the relative lack of valid and reliable secondary source data relevant to its recreational components, and (c) the almost ubiquitous nature of recreational angling, shrimping, and crabbing in the region.

As regards (c) above, we report our observations of recreational fishing activity in the study communities, including basic fishing-related infrastructure and services associated with recreational activity, and we provide qualitative description of community-wide involvement in recreational angling, shellfishing, and shrimping. But, as noted at the outset of this report, the truth of the matter is that non-commercial and mixed recreational-commercial-subsistence fishing, shrimping, oystering, and crabbing are so common in Texas that full community-specific description of such activities requires volumes of research on par with the current project. Residents of some of the study communities do exhibit a particular emphasis on the recreational component, and these cases have been duly noted and described to the extent possible in the previous pages. The scope of recreational marine fisheries in Texas is immense, and comprehensive description, in reality, demands a research effort highly focused solely on that broad component of Texas’ fisheries.

Finally, while undoubtedly important to participants, subsistence fishing (defined here as fishing for food to supplement the household diet) in the study communities is also very common. Given the scope of the current mission to address fishing-related industry in the study communities, description of subsistence activities (which cannot be considered industrial in nature) exceeds the scope of this report. The topic must await a more in-depth phase of community-level research of fishing in Texas.

3.19.3 Toward a Typology of Coastal and Fishing-Oriented Communities in Texas

The community descriptions comprising Section 3.0 of this report are intended as sources of descriptive information and means for comparative analysis by NOAA Fisheries staff. Again, per the descriptive nature of the prescribed research mission, we do not attempt extensive analysis here. This section is intended, rather, as a means for organizing concepts about the range of community types, and the nature and degree of involvement in fishing-related industry. As such, we provide here only a loosely-developed assessment of degree of community-level involvement in Texas marine fisheries and associated industry.

In most cases, residents in the study communities are involved in multiple forms of industry and enterprise. There are few communities in which fishing and associated industry can be considered primary forms of economic activity and the main venues through which social interaction occurs. Though such places do exist, it is more common that emphasis on fishing occurs within a sub-population or sub-component of a larger, mixed economy and set of social relations. In other study areas, fishing is often tangential to the general social and economic life in most communities. Table 3-19-1, below, depicts this range of situations.

Table 3.19-1 Study Community Summary Matrix

Community by County	Licenses/ Permits			Geographic Type	Primary Local Economy					Level of Engagement in Fishing Industry			Extent of Fishing Infrastructure and Services		
	Federal Permits*	State Com. Lic.*	St. Rec. Salt Lic.		Fishing	Oil	Farming	Tourism	Other/Mixed	Extensive	Moderate	Minimal	Extensive	Moderate	Minimal
Aransas															
Fulton	0/0	7/60	324	Urban Centralized	•		•	•		•				•	
Rockport	3/4	122/152	2,522	Urban Centralized	•		•	•		•				•	
Brazoria															
Alvin	2/1	2/13	3,105	Urban Centralized		•	•					•			•
Brazoria	2/1	2/9	1,588	Rural Centralized		•	•					•			•
Clute	0/6	2/3	778	Urban Centralized		•			•			•		•	
Freeport	19/29	33/43	1,309	Urban Centralized	•	•		•		•			•		
Lake Jackson	5/7	11/11	2,148	Urban Centralized					•			•			
Pearland	5/5	5/10	3,457	Urban Centralized					•			•			
Sweeny	0/0	0/0	764	Region Centralized					•			•			

* Physical address data only/all address data types

Community by County	Licenses/ Permits			Geographic Type	Primary Local Economy					Level of Engagement in Fishing Industry			Extent of Fishing Infrastructure and Services		
	Federal Permits *	State Com. Lic.*	St. Rec. Salt Lic.		Fishing	Oil	Farming	Tourism	Other/Mixed	Extensive	Moderate	Minimal	Extensive	Moderate	Minimal
Calhoun															
Indianola	0/0	0/0	0	Rural Centralized					•			•			•
Port Lavaca	2/3	93/118	1,540	Urban Centralized	•	•	•	•						•	
Port O'Connor	3/12	13/32	214	Rural Linear	•	•	•	•					•		
Seadrift	1/2	30/127	290	Rural Centralized	•				•				•		
Cameron															
Brownsville	1/1	50/168	4,285	Urban Centralized	•	•		•	•	•			•		
Laguna Vista	1/2	6/6	135	Rural Centralized				•	•			•			•
Los Fresnos	0/0	3/13	433	Urban Centralized; Brownsville Suburb			•		•			•			•
Port Isabel	3/9	45/168	509	Urban Centralized	•			•	•	•			•		
San Benito	0/0	1/7	1,801	Urban Centralized					•			•			•
South Padre Island	5/8	1/1	300	Urban Linear	•			•	•		•			•	
Chambers															
Anahuac	1/1	6/103	581	Urban Centralized		• •	•		•		•			•	
Oak Island	N/A	N/A	N/A	Rural	•				•	•					
Dallas															
Carrollton	0/0	0/0	464	Urban Centralized; Dallas Suburb			•		•			•		•	•

* Physical address data only/all address data types

Community by County	Licenses/Permits			Geographic Type	Primary Local Economy					Level of Engagement in Fishing Industry			Extent of Fishing Infrastructure and Services		
	Federal Permits*	State Com. Lic.*	St. Rec. Salt Lic.		Fishing	Oil	Farming	Tourism	Other/Mixed	Extensive	Moderate	Minimal	Extensive	Moderate	Minimal
Galveston															
Bacliff	0/5	54/86	482	Urban Centralized	•				•		•			•	
Crystal Beach	0/2	14/30	269	Rural Linear	•			•		•				•	
Dickinson	4/5	37/59	1,452	Urban Centralized, Houston Suburb	•				•		•			•	
Friendswood	5/5	10/13	2,077	Urban Centralized, Houston Suburb					•						
Galveston	19/25	56/69	2,551	Urban Linear	•	•		•	•		•			•	
Kemah	4/4	18/21	395	Urban Centralized, Houston Suburb	•			•	•		•			•	
La Marque	0/1	3/3	767	Urban Centralized, Houston Suburb					•						
League City	0/0	17/19	2,371	Urban Centralized, Houston Suburb					•		•			•	
Port Bolivar	0/0	13/35	129	Rural Linear	•					•			•		
San Leon	0/2	32/60	387	Urban Centralized	•			•	•	•			•		
Texas City	1/1	48/54	2,093	Urban Centralized, Houston Suburb	•	•			•		•			•	

* Physical address data only/all address data types

Community by County	Licenses/ Permits			Geographic Type	Primary Local Economy					Level of Engagement in Fishing Industry			Extent of Fishing Infrastructure and Services		
	Federal Permit Holders*	State Com. Lic. Holders*	St. Rec. Salt Lic. Holders		Fishing	Oil	Farming	Tourism	Other/Mixed	Extensive	Moderate	Minimal	Extensive	Moderate	Minimal
Harris															
Baytown	1/1	23/28	--	Urban Centralized, Houston Suburb		•		•	•		•			•	
Channelview	1/1	6/6	1,431	Urban Centralized, Houston Suburb		•			•			•			•
Highlands	0/0	3/3	762	Urban Centralized, Houston Suburb					•			•			•
Houston	47/51	132/159	63,379	Urban Centralized	•	•		•	•	•			•		
Pasadena	3/3	8/8	5,288	Urban Centralized, Houston Suburb	•	•	•							•	
Seabrook	4/8	17/17	1,273	Urban Centralized, Houston Suburb	•			•	•	•				•	
Jefferson															
Beaumont	3/7	27/35	7,709	Urban Centralized	•	•			•	•				•	
Groves	0/0	17/19	1,593	Urban Centralized			•	•	•						
Nederland	3/3	14/19	2,154	Urban Centralized		•			•			•			•
Port Acres	0/0	0/0	7	Urban Centralized				•	•			•			•
Port Arthur	3/5	103/119	3,177	Urban Centralized	•	•				•			•		
Port Neches	1/1	5/6	1,361	Urban Centralized		•			•			•			•
Sabine Pass	0/1	1/10	82	Rural Centralized					•			•			•

* Physical address data only/all address data types

Community by County	Licenses/Permits			Geographic Type	Primary Local Economy					Level of Engagement in Fishing Industry			Extent of Fishing Infrastructure and Services		
	Federal Permits Holders*	State Com. Lic. Holders*	St. Rec. Salt Lic. Holders		Fishing	Oil	Farming	Tourism	Other/Mixed	Extensive	Moderate	Minimal	Extensive	Moderate	Minimal
Kleberg															
Kingsville	0/0	10/17	2,455	Rural Centralized		•	•	•	•			•			•
Riviera/Riviera Beach	0/0	0/45	283	Rural Dispersed							•				•
Liberty															
Liberty	0/0	1/23	858	Urban Centralized		•	•	•	•			•			•
Matagorda															
Bay City	0/0	11/19	26	Urban Centralized		•	•		•	•			•		
Matagorda	6/9	18/33	3	Rural Centralized				•	•		•			•	
Palacios	3/5	118/170	15	Rural Centralized	•				•	•			•		
Sargent	0/0	0/4	2	Rural Centralized	•				•			•			•
Nueces															
Corpus Christi	16/18	107/118	170	Urban Centralized		•	•	•	•	•			•		
Port Aransas	10/35	18/28	12	Rural Centralized	•			•	•	•			•		
Robstown	0/0	1/4	12	Urban Centralized; Corpus Christi Suburb			•								
Orange															
Bridge City	0/0	13/16	12	Urban Centralized	•				•		•	•		•	•
Orange	0/0	19/28	31	Urban Centralized		•			•						•
Vidor	1/1	6/6	37	Urban Centralized											•
Refugio															
Bayside	0/0	2/9	0	Rural Linear			•	•	•		•	•			•
Tivoli	0/0	1/3	0	Rural Dispersed		•	•					•			•

* Physical address data only/all address data types

Community by County	Licenses/Permits			Geographic Type	Primary Local Economy					Level of Engagement in Fishing Industry			Extent of Fishing Infrastructure and Services		
	Federal Permit Holders*	State Com. Lic. Holders*	St. Rec. Salt Lic. Holders		Fishing	Oil	Farming	Tourism	Other/Mixed	Extensive	Moderate	Minimal	Extensive	Moderate	Minimal
San Patricio															
Aransas Pass	9/9	66/99	18	Urban Centralized; Corpus Christi Suburb	•	•		•	•	•			•		
Ingleside	1/2	13/34	21	Urban Centralized; Corpus Christi Suburb				•	•		•			•	
Portland	2/3	8/8	8	Urban Centralized; Corpus Christi Suburb		•			•			•			•
Sinton	0/0	0/3	9	Urban Centralized		•	•	•				•			•
Taft	0/0	1/1	3	Urban Centralized			•		•			•			•
Victoria															
Victoria	4/4	21/24	63	Urban Centralized		•	•	•			•			•	
Willacy															
Port Mansfield	2/2	9/27	--	Rural Centralized				•	•		•			•	

* Physical address data only/all address data types

By virtue of being selected for description, each of the study communities examined in this report exhibits some degree and manner of association with fishing industry in Texas. However, as noted in the table(s) above and as clearly indicated throughout, the attributes of each community vary significantly, as does the nature of that involvement. We seek, here, to review those empirically identified attributes, and that manner of involvement against the definition of fishing community provided in National Standard 8. Under the parameters of this definition, fishing communities are to have some or all of the following components:

- (a) Presence of fishing owners;
- (b) Presence of fishing operators;
- (c) Presence of fishing crew;
- (d) Presence of fish processors;
- (e) Presence of a social group (related to fishing, processing, etc.);
- (f) Presence of an economic group (related to fishing, processing, etc.);
- (g) Residence in a specific location;
- (h) Substantial dependence/engagement in harvesting and/or processing;
- (i) Sharing of common dependence on various types of fishing;
- (j) Dependency on fisheries services;
- (k) Dependency on fisheries industries;
- (l) Meeting social needs; and
- (m) Meeting economic needs.

As discussed in earlier sections, the current research has involved dedication of extensive resources, in order to determine and report with confidence for each community elements (a) through (h) above. While specific project findings may serve as preliminary indicators for understanding (i) through (m) above, these issues cannot yet be adequately addressed, since truly thorough understanding will require: (1) some as-yet-to-be-subjectively determined definition and threshold of dependence and meeting social and economic needs, and (2) in-depth research to collect the full range of data needed to assess the degree to which communities, and the behaviors of their residents, approach those definitions and thresholds. Thus, for the moment, the previous sections of this report provide data to support understanding of the range of community types, based on the presence and spatial distribution of fishing operators and operations, and supporting services and infrastructure. More comprehensive analysis awaits determination of subjectively established and agreed upon criteria for the remaining factors.

At this juncture it may be worth stating the obvious; that “community” and hence “fishing community” are social constructs, requiring subjectively formulated agreement about definition. The elemental and commonly-agreed-upon requisite components of community (people interacting in a specific place) do exist, and, as such, are empirically identifiable. But, theoretical extension of those simple components into the realm of *communitas* requires collective agreement about the very concept. In other words, although the actors and actions essential to a community are real enough, “community” itself is as much a subjectively defined and agreed-upon idea as it is an empirical reality, as is “dependence,” and as is “engagement.”

In the spirit of heuristic review of definitions, thresholds, and criteria relevant to the concepts of “fishing community,” “dependence,” and “engagement” in Texas, it may be useful here, to organize and present select empirical findings for the Texas study communities in scaled and summary form. Thus, we provide

Table 3.19-2, which depicts the top 20 study towns and cities as ranked in terms of total landings and total commercial permits and licenses held by residents. The figures are provided as rudimentary indicators, and preliminary means for conceptualizing and defining community, involvement, and dependence among the relatively most active of the study towns and cities in Texas's marine fisheries.

Presentation of such figures begs the issue of their meaning, in both relative and absolute terms. While a given place may be highly ranked in terms of production, it may be that only some of its residents are involved in fishing-related industry and those who *are* involved may be to greater and lesser degrees. Some may be involved full-time and produce significant amounts of seafood, while others may be involved only part of their days and produce relatively little (and all gradations between). Meanwhile, the economic contribution, or focus of social interaction of any given group of participants, may or may not be eclipsed by the larger (or smaller) population that surrounds them.

This point is central to the entire process of identifying fishing communities. If it is true that (a) few, if any, towns or cities in the United States are occupied entirely by persons devoted to fishing and related industry, and (b) "fishing community" is defined in terms of the experience of those persons who are involved in fishing and related industry *relative* to the surrounding population, then, as such, few fishing communities *per se* can be identified. This is the current state of affairs under the existing (exclusive) federal definition. If, however (again, heuristically), the definition were based in whole or in some part upon the absolute experience of those persons who are involved in fishing-related activities, regardless of the activities of the surrounding populace, then the potential field of prospective fishing communities is immensely broadened, as is the field of research needed to adequately assess the experiences of participants in those specific fleets, sub-groups, and sub-communities. Alternatively, if communities are to be identified as fishing communities based on the requirement that fishing and related industry predominates the local human experience relative to other forms of economic activity and social interaction, then research may appropriately be applied to the finer levels of that behavior.

Table 3.19-2 Community Rankings for Total Landings, Ex-Vessel Value, and Dealer Permits

Rank	Total Landings and Value (based on all address types)				Dealer Permits	
	Community	Total Pounds	Community	Total Value	Community	# Permits
1	Palacios	15,342,562	Palacios	43,968,991	Galveston	54
2	Brownsville	14,019,241	Brownsville	42,632,180	Corpus Christi	44
3	Port Isabel	8,735,808	Port Isabel	26,681,330	Houston	30
4	Freeport	7,445,090	Freeport	22,597,464	Freeport	28
5	Port Arthur	6,574,094	Port Arthur	18,800,645	Aransas Pass	26
6	San Leon	5,579,065	Aransas Pass	14,684,596	Port Isabel	24
7	Galveston	5,491,872	Galveston	13,476,895	Anahuac	22
8	Sabine Pass	5,052,274	Port Bolivar	11,225,877	Port Arthur	21
9	Aransas Pass	4,852,536	Houston	10,809,458	Rockport	21
10	Port Bolivar	4,025,006	San Leon	10,120,558	Texas City	18
11	Anahuac	3,054,738	Anahuac	5,374,862	San Leon	17
12	Fulton	2,372,180	Port Neches	4,770,455	Crystal Beach	16
13	Kemah	1,861,321	Fulton	4,134,322	Fulton	16
14	Seadrift	1,704,855	Kemah	3,752,503	Seadrift	16
15	Seabrook	1,678,344	Seabrook	3,136,986	Dickinson	15
16	Port Neches	1,563,161	Port Lavaca	3,124,462	Port Bolivar	15
17	Port Lavaca	1,303,639	Seadrift	2,029,276	Port Aransas	14
18	Los Fresnos	1,182,175	Texas City	1,697,162	Brownsville	13
19	Port Acres	1,160,492	Corpus Christi	1,229,851	Seabrook	13
20	Corpus Christi	949,943	Port O'Connor	1,034,705	Baytown	12

Table 3.19-3 Community Rankings for Licenses and Permits

Rank	State License Holders 2000*		Federal Permit Holders 2000*		Gulf Shrimp Permits 2003		Recreational Licenses 2000	
	Community	# Licensees	Community	# Permittees	Community	# Permits	Community	# Licenses
1	Houston	132/159	Houston	47/51	Port Isabel	110	Houston	63,379
2	Rockport	122/152	Freeport	19/29	Brownsville	100	Beaumont	7,709
3	Palacios	118/170	Galveston	19/25	Palacios	95	Pasadena	5,285
4	Corpus Christi	107/118	Corpus Christi	16/18	Freeport	70	Brownsville	4,285
5	Port Arthur	103/119	Port Aransas	10/35	Port Lavaca	49	Pearland	3,457
6	Port Lavaca	93/118	Aransas Pass	9/9	Aransas Pass	37	Kingsville	3,445
7	Aransas Pass	66/99	Matagorda	6/9	Port Arthur	35	Port Arthur	3,177
8	Galveston	56/69	So. Padre Island	5/8	Rockport	9	Alvin	3,105
9	Bacliff	54/86	Lake Jackson	5/7	Bacliff	8	Friendswood	3,077
10	Brownsville	50/168	Pearland	5/5	Houston	8	Galveston	2,551
11	Port Isabel	45/168	Seabrook	4/8	Port O'Connor	5	Rockport	2,522
12	Dickinson	37/59	Dickinson	4/5	Vidor	5	League City	2,371
13	Freeport	33/43	Kemah	4/4	Beaumont	4	Nederland	2,154
14	San Leon	32/60	Victoria	4/4	Bridge City	4	Lake Jackson	2,148
15	Seadrift	30/127	Port O'Connor	3/12	Groves	4	Texas City	2,093
16	Beaumont	27/35	Beaumont	3/5	Matagorda	4	San Benito	1,801
17	Baytown	23/28	Palacios †	3/5	Nederland	4	Brazoria	1,589
18	Victoria	21/24	Port Arthur	3/5	Dickinson	3	Groves	1,539
19	Orange	19/28	Rockport	3/4	Galveston	3	Dickinson	1,452
20	Matagorda	18/33	Nederland	3/3	League City	3	Channelview	1,431

*Physical address data only/All address data types; although we provide data for both physical and all address types, the rankings are based on physical address data only.

3.19.4 Summary Conclusions

With due attention to the above qualifications of relative and absolute experience, but with a model based on the existing federal definition of fishing community, we arrive, in anticipation of need for more exacting and in-depth research, at a step just prior to a preliminary typology of fishing-involved communities in Texas. In order to adequately organize and assess the degree to which each study community does or does not reveal the fishing community attributes we have assessed in this study (per the National Standard 8 definition), we have developed Table 3.19-3. The table provides a Guttman scale index score for each study community. The index is mathematically formulated so that a score of 1 indicates (in this exercise) that all such attributes are present, and a score of zero indicates that no measured attributes are present. The score is derived through the following formula: $1 - (\text{number of errors} / \text{number of entries})$. In this case, errors are departures from the model community that possesses all measured fishing community attributes, and the number of entries represents the number of measured attributes – in this case 13.

We note, again, the need for caution in interpreting the scores. For instance, many of the measures derive from address fields in permit, license, and other data files, and because those fields were problematic in some cases, some communities that might have scored higher achieve spuriously low scores. Moreover, we note with emphasis that the scoring does not address extent or intensity of any given attribute. Indeed, the presence of a single license holder in a community would, for example, allow a community to achieve a positive score for presence of license holders in the same manner as would a community with hundreds of resident permit holders. With those caveats in place, we provide this final piece of analysis to assist in conceptualizing and organizing the study communities given the variable nature of their association with fishing industry in Texas.

Table 3.19-3 Fishing-Specific Community Attributes and Guttman Index Score

Community	Attributes													
	Fed. Permit Holder	State Lic. Holder	State Rec. Saltwater Lic. Holder	Charter Boat Ops	Head Boat Ops	Comm. Boats	Rec. Boats	Seafood Whlsl	Seafood Processor	Seafood Retail	Harbor or Marina	Comm. Fish Support Business	Rec. Fish Support Business	Index Score
Aransas Pass	+	+	+	+	+	+	+	+	+	+	+	+	+	1.0
Corpus Christi	+	+	+	+	+	+	+	+	+	+	+	+	+	1.0
Dickenson	+	+	+	+	+	+	+	+	+	+	+	+	+	1.0
Houston	+	+	+	+	+	+	+	+	+	+	+	+	+	1.0
Port Arthur	+	+	+	+	+	+	+	+	+	+	+	+	+	1.0
Port Isabel	+	+	+	+	+	+	+	+	+	+	+	+	+	1.0
Freeport	+	+	+	+	-	+	+	+	+	+	+	+	+	0.92
Fulton	-	+	+	+	+	+	+	+	+	+	+	+	+	0.92
Galveston	+	+	+	+	+	+	+	+	-	+	+	+	+	0.92
Port Bolivar	-	+	+	+	+	+	+	+	+	+	+	+	+	0.92
Rockport	+	+	+	+	+	+	+	+	+	-	+	+	+	0.92
Seabrook	+	+	+	-	+	+	+	+	+	+	+	+	+	0.92
Bacliff	+	+	+	-	-	+	+	+	+	+	+	+	+	0.85
Beaumont	+	+	+	-	-	+	+	+	+	+	+	+	+	0.85
Crystal Beach	-	+	+	+	+	+	+	+	-	+	+	+	+	0.85
Matagorda	+	+	+	+	+	+	+	+	-	+	+	-	+	0.85
Palacios	+	+	+	-	-	+	+	+	+	+	+	+	+	0.85
Port Aransas	+	+	+	+	+	+	+	+	-	-	+	+	+	0.85
Port Lavaca	+	+	+	+	+	+	+	+	+	+	+	+	+	0.85
Port O'Connor	+	+	+	+	+	+	+	-	-	+	+	+	+	0.85
Seadrift	+	+	+	+	-	+	+	+	+	+	+	-	+	0.85
Anahuac	+	+	+	-	+	+	+	+	+	+	-	-	+	0.77
Clute	-	+	+	+	-	+	+	+	-	+	+	+	+	0.77
Ingleside	+	+	+	+	+	+	+	-	-	-	+	+	+	0.77
So. Padre Island	+	+	+	+	+	-	+	-	-	+	+	+	+	0.77
Baytown	+	-	-	-	+	+	+	-	+	+	+	+	+	0.69
Kemah	+	+	+	-	-	-	+	+	+	-	+	+	+	0.69
Pasadena	+	+	+	-	-	-	+	+	+	+	+	-	+	0.69
Port Mansfield	+	+	-	+	+	+	+	-	-	-	+	+	+	0.69
San Leon	-	+	+	-	-	+	+	-	+	+	+	+	+	0.69
Texas City	+	+	+	-	-	+	+	+	-	+	-	+	+	0.69
Alvin	+	+	+	-	-	-	+	+	-	+	+	-	+	0.62

Community	Fed. Permit Holder	State Lic. Holder	State Rec. Saltwater Lic. Holder	Charter Boat Ops	Head Boat Ops	Comm. Boats	Rec. Boats	Seafood Whlsl	Seafood Processor	Seafood Retail	Harbor or Marina	Comm. Fish Support Business	Rec. Fish Support Business	Index Score
Bay City	+	+	+	+	-	-	+	-	-	+	+	-	+	0.62
Brownsville	+	+	+	-	-	+	-	+	-	+	-	+	+	0.62
Liberty	-	+	+	-	-	+	+	+	-	+	+	-	+	0.62
Orange	-	+	+	+	-	-	+	-	-	+	+	+	+	0.62
Pearland	+	+	+	-	-	-	+	+	-	+	+	-	+	0.62
Sabine Pass	-	+	+	+	-	+	+	+	-	+	-	-	+	0.62
Victoria	+	+	+	+	-	-	+	-	-	+	+	-	+	0.62
Brazoria	+	+	+	-	-	-	+	-	-	+	+	-	+	0.54
Highlands	-	+	+	-	-	-	+	-	-	+	+	+	+	0.54
League City	-	+	+	+	-	-	+	-	-	+	+	-	+	0.54
Nederland	+	+	+	-	-	-	+	-	-	+	+	-	+	0.54
Portland	+	+	+	-	+	-	+	-	-	+	-	-	+	0.54
Sargent	-	-	+	+	-	+	+	-	-	+	+	-	+	0.54
Vidor	+	+	+	-	-	-	+	+	-	+	+	-	-	0.54
Bridge City	-	+	+	-	-	-	+	-	-	+	+	-	+	0.46
Channelview	+	+	+	-	-	-	+	-	-	-	+	-	+	0.46
Kingsville	-	+	+	-	-	-	+	-	-	+	+	-	+	0.46
Laguna Vista	+	+	+	+	-	-	+	-	-	-	+	-	-	0.46
Lake Jackson	+	+	+	+	-	-	+	-	-	-	+	-	-	0.46
Port Neches	+	+	+	+	-	+	-	-	-	+	-	-	-	0.46
San Benito	-	+	+	-	-	-	-	+	-	+	-	+	+	0.46
Friendswood	+	+	+	-	-	-	+	-	-	-	+	-	-	0.38
Indianola	-	-	-	-	-	+	+	-	-	+	+	-	+	0.38
La Marque	+	+	+	-	-	-	+	-	-	-	+	-	-	0.38
Los Fresnos	-	+	+	-	-	-	-	+	-	-	-	+	+	0.38
Robstown	-	+	+	-	-	-	+	-	-	+	+	-	-	0.38
Carrollton	-	-	+	-	-	-	-	+	-	+	-	-	+	0.31
Groves	-	+	+	-	-	-	-	-	-	+	-	-	+	0.31
Bayside	-	+	-	-	-	-	-	-	-	-	+	-	+	0.23
Port Acres	-	-	+	-	-	-	-	-	-	+	-	-	+	0.23
Taft	-	+	+	-	-	-	-	-	-	-	-	-	+	0.23
Sinton	-	-	+	-	-	-	-	-	-	-	-	-	+	0.15
Riviera/Riviera Bch	-	-	+	-	-	-	-	-	-	-	-	-	-	0.08
Sweeny	-	-	+	-	-	-	-	-	-	-	-	-	-	0.08
Tivoli	-	-	+	-	-	-	-	-	-	-	-	-	-	0.08

Based on the *full range* of descriptive information and analyses provided in the previous pages, we are able to develop in Table 3.19-4 below, a basic and preliminary typology of the study communities and the nature of their involvement in Texas marine fisheries. The table and discussion are provided as the concluding summary material for the study. Again, *we stress that the typology should be seen and used as a working tool for organizing and conceptualizing a complex array of factors, rather than a concrete pronouncement on community status.* Indeed, until issues regarding absolute and relative involvement and dependence are resolved, and issues associated with sub-¹ and supra-communities² are addressed, the typology must be viewed as preliminary.

However, it is now possible to offer some informed summary insight into basic categorical types, and to identify areas and topics for further investigation. Based on what is now known about the attributes of the Texas study communities, there are but a few in which residents clearly exhibit primary involvement in fishing and related industry. These are typed here as *Primarily-Involved*. While the economies and primary foci of social interaction in such places may be mixed to greater and lesser degrees, there remains an observable collective focus on fishing and its industries. We suggest that this group would deserve more in-depth investigation should the sponsor desire further insight into: (a) the absolute extent of dependence on, or involvement of residents in place on fishing-related industry, (b) social and economic relationships within and across these and other communities in the region, and/or (c) more specific issues such as historic or potential future changes related to changes in resource, market, or regulatory factors.

More communities are typed as *Secondarily-Involved*. Residents of these towns and cities are, quite often, primarily involved in oil industry support services, agriculture, tourism, and/or petrochemical and other manufacturing enterprises. Commercial fishing and associated industry are important, but, demonstrably, secondary (in relative terms) to these pursuits. Included in this type are places in which resident sub-groups or sub-communities are very active in fishing and related industry, but eclipsed in economic scale, and focus of collective social interaction, by those activities of the surrounding populace that are not related to fishing. Here we recommend in-depth investigation to: (a) explore concepts of community rooted in the absolute experience of persons who interact (in a fishery-related context), but without overt regard for the larger society or place within which such interaction occurs, and (b) the dynamic socio-political and economic interplay between groups of persons working in commercial fishing-related industry in a given community, and groups of persons active in the recreational fishing sector in that community.

Finally, we suggest a type called *Tangentially-Involved* communities. Fishing-related industry is subsidiary to other economic and social activity in such places. While there may be small sub-groups of residents active in fishing and related industry, the scope of those activities relative to the social mainstream and economic mainstay, suggests relatively minor collective involvement in Texas marine fisheries. In this case, we recommend research that would (a) examine historic changes that may have led to decline in local involvement, and (b) generate insight into measures for avoiding such decline elsewhere in Texas and the United States.

Table 3.19-4 Typological Characterization of Texas Study Communities

Primarily-Involved	Secondarily-Involved	Tangentially-Involved
Aransas Pass	Anahuac	Alvin
Bacliff	Bayside	Bay City
Brownsville	Beaumont	Baytown
Crystal Beach	Brazoria	Carrollton
Freeport	Bridge City	Channelview
Fulton	Clute	Corpus Christi
Palacios	Dickinson	Friendswood
Port Aransas	Groves	Galveston
Port Arthur	Highlands	Houston
Port Bolivar	Ingleside	Indianola
Port Isabel	Kemah	Irvington Park
Port Lavaca	Laguna Vista	Kingsville
Port Mansfield	League City	La Marque
Port O'Connor	Matagorda	Lake Jackson
Rockport	Nederland	Liberty
San Leon	Orange	Los Fresnos
Seabrook	Pasadena	Pearland
Seadrift	Portland	Port Acres
--	Sabine Pass	Port Neches
--	South Padre Island	Riviera
--	Texas City	Robstown
--	Vidor	San Benito
--	--	Sargent
--	--	Sinton
--	--	Sweeny
--	--	Taft
--	--	Tivoli
--	--	Victoria

References

- Allbright, Lori. 2002. Pearland, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/PP/hep3.html.
- Alvin Economic Development Foundation. No Date. Community. Available online at: www.aedf.org/aedf/index-.htm.
- Aransas Pass. 2003. Welcome to Aransas Pass. Available online at: www.aransaspass.org.
- Aransas Pass. 2003. Aransas Pass, Texas: Community Profile. Available online at: www.aransaspass.org/profile8.pdf.
- Bay City. 2002. Bay City. Available online at: www.man-net.org/info/baycity.html.
- Bay City, Texas. 1998. Bay City. Available online at: www.lone-star.net/mall/txtrails/baycity.htm.
- Benham, Pricilla Myers. 2002. Texas City, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/TT/hdt3.html.
- Beaumont Chamber of Commerce. 2003. Beaumont: Community Profile. Available online at: www.bmtcoc.org/unique.asp.
- Benowitz, June M. 2002. Liberty, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/LL/hfl3.html
- Blanchette, Ida M. 2002. Alvin, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/AA/hea2.html.
- Block, W.T., Fleming, M.R., and W.D. Quick. 2002. Nederland, Texas, in The Handbook of Texas Online: Digital Gateway to Texas History, U. of Texas at Austin. Available online www.tsha.utexas.edu/handbook/online/articles/view/NN/hen1.html
- Branch, Will. 2002. Sargent, Texas,” in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/SS/hns21.html.
- Bridge City Chamber of Commerce. 2003. Available online at: www.cityofbridgecity.org.

Brownsville Chamber of Commerce. No Date. Business & Industry. Available online at: www.brownsvillechamber.com/business.htm.

Bureau of Economic Analysis, Regional Economic Information System

Campbell, Ed, and Cindy Campbell. *Campbell's Cruising Guide to Texas*. Second Edition. Rockport: The Walter Eden Company, Inc.

Campbell, Jim. 2000. San Leon, Texas. Available online at: www.geocities.com/SouthBeach/7739/index3.html.

City of Alvin, Texas. No Date. The History of Alvin. Available online at: www.alvin.tx.citygovt.org.

City of Bay City. No Date. Bay City History. Available online at: www.cityofbaycity.org/index.asp.

City of Baytown. 2003. City of Baytown, Texas. Available online at: www.baytown.org

City of Beaumont. No date. Festivals. Available online at: www.cityofbeaumont.com/index.htm.

City of Clute No Date. City History. www.ci.clute.tx.us.

City of Dickinson. 2002. City of Dickinson. Available online at: www.ci.dickinson.tx.us.

City of Freeport. 2004. Demographics. Available online at: www.freeport.tx.us/citydemographics.htm.

City of Friendswood. No Date. Major Employers & Labor Analysis. Available online at: www.ci.friendswood.tx.us/contentpages/EconDev/Demographics/CommunityProfile.asp.

City of Groves. 2003. Available online at: www.cigrovestx.com

City of Ingleside. No Date. A Short History of Ingleside. Available online at: www.ci-ingleside-tx.us

City of Kemah. No Date. Kemah, Texas History. Available online at: www.kemah.net/history/history.html.

City of Liberty. No date. Available online at: www.cityofliberty.org

City of Palacios Economic Development Corporation. 2000. Community Profile.
Available online at: www.palacios.org/community_profile.htm.

City of Vidor. 1999. Community Profile. Available online at:
www.ci.vidor.tx.us/ComProf.htm.

Coalson, George O. 2002. Riviera, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/RR/hlr24.html.

Coalson, George O. 2002. Kingsville, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/KK/hdk2.html

Crystal Beach. No date. About Crystal Beach & Bolivar Peninsula. Available online at: www.crystalbeach.com/newpage.htm.

Daniels, A. Pat. 2002. Crystal Beach, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/CC/hvcba.html

Dokken, Quenton, et al. 1998 *Texas Fisheries Economic Development Report*. Center for Coastal Studies, Texas A&M University. Corpus Christi.

Exploring Texas
http://www.tpwd.state.tx.us/expltx/eft/gulf/habitats/bays_corpuschristibayabout.htm

Franklin, Rogayle. 2000. A Peek at History in Liberty Museum. Houston Chronicle, July 2, 2000. Online at: www.chron.com/cs/CDA/story.hts/travel/tx/piney/584653.

Freeport, Texas. No Date. Available online at: www.lone-star.net/mall/txtrails.

Friendswood Chamber of Commerce. 2004. Our Heritage. Available online at: www.friendswood-chamber.com/index.asp.

Galveston, Texas Chamber of Commerce. No Date. Demographics. Available online at: www.galvestonchamber.com/facts.asp.

Gard, Leigh. 2002. San Leon, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/SS/hls12.html

Garza Alicia A. and Christopher Long. 2002. Brownsville, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/BB/hdb4.html.

Garza, Alicia A. 2002. Laguna Vista, Texas,” in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/LL/hll8.html.

Garza, Alicia A. 2002. “Port Isabel, Texas,” in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. www.tsha.utexas.edu/handbook/online/articles/view/LL/hfl3.html.

Garza, Alicia A. 2002. South Padre Island, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/SS/hlsus.html.

Garza, Alicia A. 2002. Los Fresnos, Texas,” in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/LL/hjl1.html

Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/BB/hdb1.html

Greater Houston Partnership. No Date. Houston History: 167 Years of Historic Houston. Available online at: www.houstonhistory.com/legacy/history6e.htm.

Greater Port Arthur Chamber of Commerce. 2002. History of Port Arthur. Available online at: www.portarthurtexas.com/history.cfm.

Griffin, Mary L. 2002. Palacios, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/PP/hfp1.html.

Guthrie, Keith. 2002. Aransas Pass, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/AA/hfa6.html.

Guthrie, Keith. 2002. Ingleside, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/II/hfi1.html.

Guthrie, Keith. 2002. Liberty, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/PP/hep9.html.

Guthrie, Keith. 2002. Sinton, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/SS/hfs8.html.

Guthrie, Keith. 2002. Taft, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/TT/hgt1.html.

Hallstein, Anna. 2002. Brazoria, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/BB/hgb10.html.

Hazelwood, Claudia. 2002. Channelview, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. www.tsha.utexas.edu/handbook/online/articles/view/CC/hfc6.html.

Hazelwood, Claudia. 2002. Highlands, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/HH/hfh4.html

Hazelwood, Claudia. 2002. Seabrook, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/SS/hgs4.html

Henson, Margaret Swett. 2002. "Harris County." The Handbook of Texas Online. Texas State Historical Association and University of Texas, Austin. Online at <http://www.tsha.utexas.edu/handbook/online>

Henson, Margaret, and Kevin Ladd. 1988. *A Pictorial History of Chamber County*. Norfolk: Donning Publishers.

Ingleside Chamber of Commerce. No Date. Available online at: www.inglesidetxchamber.org/index.htm.

Isaac, Paul E. 2002. Beaumont, Texas, in The Handbook of Texas Online. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/BB/hdb2.html.

Jacob, John S., D. W Moulton, and R.A. Lopez. *Texas Coastal Wetlands Guidebook*. SeaGrant Publication TAMU-SG-00-605®

Kearney, Milo Kearney, Anthony Knopp, and Antonio Zavaleta (editors). 1995. *Studies in Brownsville and Matamoros History*. Brownsville: The University of Texas at Brownsville.

Kleiner, Diana J. 2002. Bacliff, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/BB/hjbur.html.

Kleiner, Diana J. 2002. Bay City, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/BB/heb2.html.

Kleiner, Diana J. 2002. Clute, Texas. The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/CC/hfc9.html.

Kleiner, Diana J. 2002. Freeport, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/FF/hef3.html

Kleiner, Diana J. 2002. Friendswood, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/FF/hef4.html

Kleiner, Diana J. 2002. La Marque, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/LL/hel1.html.

Kleiner, Diana J. 2002. League City, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/LL/hel6.html

Kleiner, Diana J. 2002. Liberty, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/LL/hfl3.html.

Kleiner, Diana J. 2002. Matagorda, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/MM/hlm35.html.

Kleiner, Diana J. 2002. Orange, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/OO/heo1.html

Ladd, Kevin. 2002. Anahuac, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/AA/hja8.html

Laguna Vista, Texas. 2002. Available online at: www.lagunavista.org.

Lamar, Terry. 2003. Texas City: History. Available online at: www.texas-city-tx.org/docs/history.htm. 2002. Texas City: Demographics. Available online at: www.texas-city-tx.org/docs/demo.htm.

League City. 2001. Available online at: www.leaguecity.com.

Leatherwood, Art. 2002. Port Mansfield, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/PP/hrpaq.html.

Leffler, John. 2002 "Refugio County. The Handbook of Texas Online. Texas State Historical Association and University of Texas, Austin. Online at <http://www.tsha.utexas.edu/handbook/online>

Long, Christopher. 2002. Corpus Christi, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/CC/hdc3.html.

Long, Christopher. "Fulton, Texas," in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. www.tsha.utexas.edu/handbook/online/articles/view/FF/hlf35.html.

Long, Christopher. 2002. Robstown, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/RR/her1.html

Long, Christopher. 2002. Tivoli, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/TT/htl21.html.

Malsch, Brownson. 2002. Indianola, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. www.tsha.utexas.edu/handbook/online/articles/view/II/hvi11.html.

Man. 2002. Matagorda History. Available online at: www.man-net.org/info/baycity.html.

Maywald, Lonnie F. 2002. Port Lavaca, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/PP/hep7.html

McComb, David G. 2000. *Galveston - A History and a Guide*. Austin: Texas State Historical Association.

McComb, David G. 2002. Galveston, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/GG/hdg1.html.

McComb, David G. 2002. Houston, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online www.tsha.utexas.edu/handbook/online/articles/view/HH/hdh3.html

Miller, Ray, Gary James, and Bob Brandon. 1977. *The Eyes of Texas*. Travel Guide, Gulf Coast Edition. Houston: Cordovan Corporation Publishers.

Nederland Economic Development Corporation. No date. Employment. Available online at: www.nededc.com/index.php.

Pasadena, Texas Chamber of Commerce. No date. About Pasadena. Available online at: www.pasadenachamber.org.ap.htm.

Pearland Chamber of Commerce. No Date. Community Profile. Available online at: www.pearlandchamber.com/profile.asp.

Perez, Joan Jenkins. 2002. Carrollton, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/CC/hdc1.html.

Pomeroy, Jr., C. David. 2002. Pasadena, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/PP/hdp2.html

Port Aransas, Texas. 1998. Port Aransas. Available online at: www.lone-star.net/mall/txtails/portaransas.htm.

Port Aransas, Texas Chamber of Commerce. 2000. About Port Aransas. Available online at: www.portaransas.org/About.asp.

Port Isabel Chamber of Commerce. Available online at: www.portisabel.org.

Port O'Connor, Texas. No Date. Fishing. Available online at: www.portoconnor.com

Port of Brownsville. 2003. Maritime Facilities. Brownsville.

Port Neches Chamber of Commerce. 2003. About Our City. Available online at: www.portnecheschamber.com/go/pncc/content/liveandwork/portneches.cfm.

Portland, Texas. 2004. About Portland. Available online at: www.portlandtx.com.

Portland, Texas Chamber of Commerce. No Date. Available online at: www.portlandtx.org.

Port Mansfield. 2003. Port Mansfield. Available online at: www.port-mansfield.com.

Ramos, Mary G., ed. 2001. Texas Almanac 2000-2001. Dallas: The Dallas Morning News.

Rice, Margaret R. 2002. Lake Jackson, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/LL/hel3.html.

Robinson III, Charles M. 2002. San Benito, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/LL/hfl3.html.

Rocap, Pember W. 2002. Dickinson, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/DD/hfd3.html

Rubert, Rebecca. 2002. Port O'Connor, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/PP/hlp41.html.

San Benito Consolidated Independent School District (San Benito CISD). No Date. San Benito History. Available online at: www.sanbenito.k12.tx.us/information/history.html.

Shook, Robert. 2002. Victoria, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/VV/hdv1.html.

Shukalo, Alice M. "Rockport, Texas," in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. www.tsha.utexas.edu/handbook/online/articles/view/RR/hgr5.html.

Storey, John W. 2002. Port Arthur, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/PP/hdp5.html

Texas Economic Development. No date. Community Profiles: Baytown. Available online at: <http://community.txed.state.tx.us/communities/commpages/6.htm>.

Texas Economic Development. No date. Beaumont. Available online at: <http://community.txed.state.tx.us/communities/commpages/7.htm>.

Texas Economic Development. No Date. "Rockport-Fulton". <http://community.txed.state.tx.us/communities/commpages/333.htm>. [Accessed April 9, 2004].

Texas Economic Development. No Date Texas City. Available online at: <http://community.txed.state.tx.us/communities/commpages/334.htm>.

Texas Environmental Profiles. Available online at:
http://www.texasep.org/html/wql/wql_5cst_wtInd.html

Texas Escapes. 2003. "Seadrift, Texas. Available online at:
www.texasescapes.com/TexasGulfCoastTowns/SeadriftTexas/SeadriftTx.htm.

Texas Online. 1995. Alvin. Available online at: <http://texas-online.com/graphic/alvin.htm>

Texas Online. 1998. Anahuac. Available online at: <http://texas-online.com/graphic/anahuac.htm>.

Texas Online. 1998. Aransas Pass. Available online at: <http://texas-online.com/graphic/aransasp.htm>.

Texas Online. 1998. Baytown. Available online at: <http://texas-online.com/graphic/baytown.htm>.

Texas Online. 1998. Brownsville. Available online at: <http://texas-online.com/graphic/brownsvl.htm>.

Texas Online. 1998. Carrollton. Available online at: <http://texas-online.com/graphic/caroltn.htm>.

Texas Online. 1995 Clute. Available online at: <http://texas-online.com/graphic/clute.htm>.

Texas Online. 1998. Corpus Christi. Available online at: <http://texas-online.com/graphic/corpusch.htm>.

Texas Online. 1998. Galveston. Available online at: <http://texas-online.com/graphic/galvesto.htm>.

Texas Online. 1998. Houston. Available online at: <http://texas-online.com/graphic/houston.htm>.

Texas Online. 1998. Orange. Available online at: <http://texas-online.com/graphic/orange.htm>

Texas Online.Fulton. 1998. <http://texas-on-line.com/graphic/fulton.htm>.

Texas Online. 1995. Lake Jackson. Available online at: <http://texas-online.com/graphic/lakejack.htm>.

Texas Online. 1998. Liberty. Available online at: <http://texas-online.com/graphic/liberty.htm>.

Texas Online. 1998. Nederland. Available online at: <http://texas-online.com/graphic/nederlnd.htm>.

Texas Online. 1998. Pasadena. Available online at: <http://texas-online.com/graphic/pasadena.htm>.

Texas Online. 1998. Port Aransas. Available online at: <http://texas-online.com/graphic/portaran.htm>.

Texas Online. 1998. Port Lavaca. Available online at: <http://texas-online.com/graphic/lavaca.htm>.

Texas Online. 1998. Port O'Connor. Available online at: <http://texas-online.com/graphic/connor.htm>.

Texas Online. 1998. Portland. Available online at: <http://texas-online.com/graphic/portland.htm>.

Texas Online. 1998. "Rockport." <http://texas-online.com/graphic/rockport.htm>

Texas Online. 1998. Sabine Pass. Available online at: <http://texas-online.com/graphic/sabinep.htm>.

Texas Online. 1998. South Padre Island. Available online at: <http://texas-online.com/graphic/southpad.htm>.

Texas Online. 1998. Taft. Available online at: <http://texas-online.com/graphic/taft.htm>.

Texas Online. 1998. Texas City. Available online at: <http://texas-online.com/graphic/tx-city.htm>.

Texas Online. 1998. Victoria. Available online at: <http://texas-online.com/graphic/victoria.htm>.

The City of Seabrook. No date. History. Available online at: www.seabrook-tx.com/html/history.html.

Troesser, John. "Riviera, Texas: History in a Seashell."
www.texasescapes.com/TexasGulfCoastTowns/RivieraTexas.htm

Troesser, John. 2003. Robstown, Texas. Available online at:
www.texasescapes.com/TexasGulfCoastTowns/RobstownTexas.htm.

Upchurch, Alice G. 2002. Port Aransas, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/PP/hjp11.html.

Victoria Economic Development Corporation. No Date. Labor: Victoria Area Major Employers. Available online at: www.victoriaedc.com/labor/

Victoria Texas Online. 2001. Victoria, Texas: History. Available online at: www.victoriatexasonline.com/history.html.

Wooster, Robert. 2002. Beaumont, Texas, The Handbook of Texas Online. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/BB/hdb2.html.

Wooster, Robert. 2002. Bridge City, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/BB/hfb6.html.

Wooster, Robert. 2000. Port Acres, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/PP/htp18.html.

Wooster, Robert. 2002. Port Neches, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/PP/hep8.html.

Wooster, Robert. 2002. Sabine Pass, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/SS/hjs2.html.

Wooster, Robert. 2002. Vidor, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/view/VV/hev2.html.

Young, Buck A. 2002. Baytown, Texas, in The Handbook of Texas Online: A Digital Gateway to Texas History at the University of Texas at Austin. Available online at: www.tsha.utexas.edu/handbook/online/articles/.