



NOAA Technical Memorandum NMFS-AFSC-259

Community Profiles for North Pacific Fisheries - Alaska

Volume 3

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

U.S. DEPARTMENT OF COMMERCE
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Alaska Fisheries Science Center
Resource Ecology and Fisheries Assessment Division
Economics and Social Sciences Research Program
7600 Sand Point Way N.E.
Seattle, WA 98115

www.afsc.noaa.gov

U.S. DEPARTMENT OF COMMERCE

Penny. S. Pritzker, Secretary

National Oceanic and Atmospheric Administration

Kathryn D. Sullivan, Under Secretary and Administrator

National Marine Fisheries Service

Samuel D. Rauch III, Acting Assistant Administrator for Fisheries

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Prince William Sound

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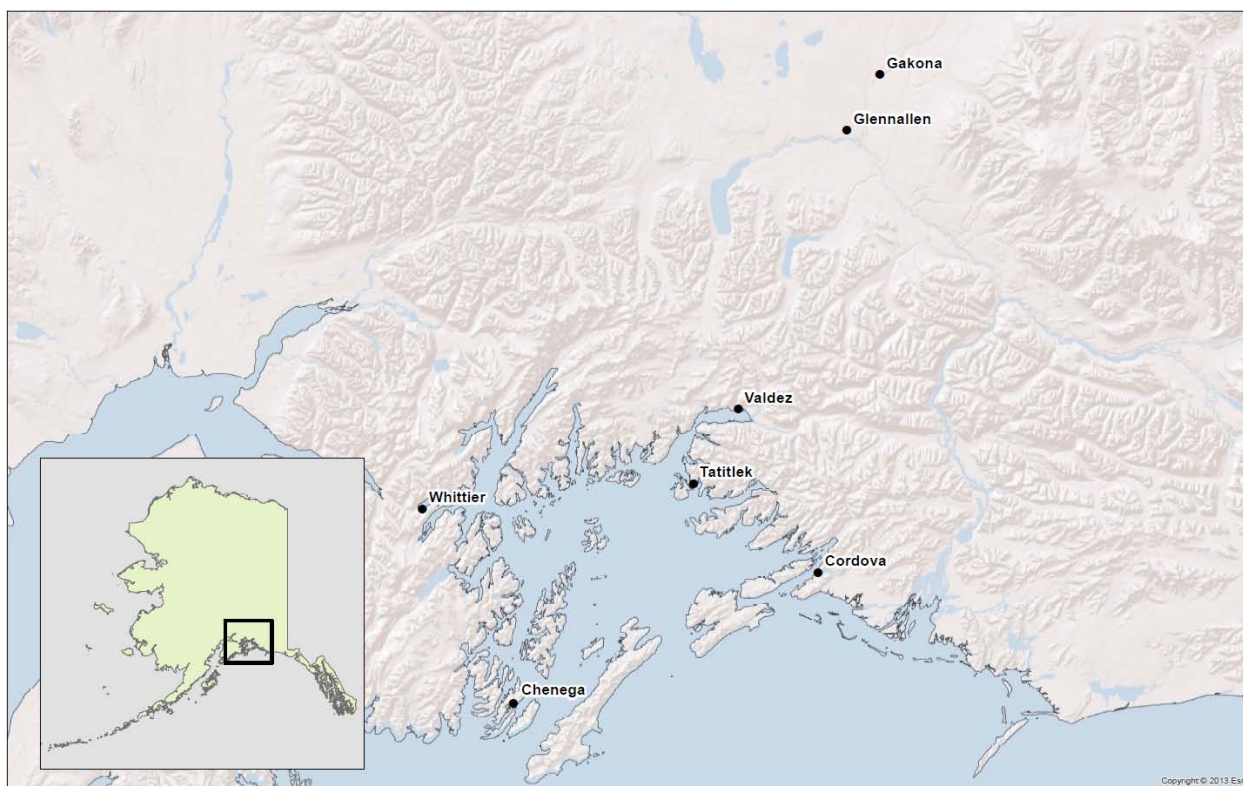
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Regional Introduction: Prince William Sound

Communities

Chenega
Cordova
Gakona
Glennallen

Tatitlek
Valdez
Whittier



People and Place

Location

The communities profiled in this section are located along the shores of Prince William Sound (PWS) and inland in the Copper River basin. All are located in the Valdez-Cordova Census Area. PWS is situated between the Kenai Peninsula to the west and Southeast Alaska to the east. PWS consists of a labyrinth of fjords at roughly 61° N. latitude. The Copper River valley stretches northeast from PWS, bordered by the Alaska Range and Talkeetna, Chugach, and Wrangell mountains.¹ The Copper River has its outlet just southeast of the City of Cordova, at the southeastern corner of PWS.

The climate of PWS is influenced by its coastal location. Temperatures are mild with average highs in the summer around 60° F and average winter lows around 20° F. Precipitation in the sound is quite heavy, averaging around 60 inches of rain annually. Valdez, located at the north edge of PWS, receives an incredible 325 inches (roughly 27 feet) of snow each year.²

Demographic Profile

In 2010, the total population of the Valdez-Cordova Census Area was 9,636. Of the seven PWS communities profiled in this document, two (Valdez and Cordova) had populations of greater than 2,000 in 2010, while the remaining five communities had between 76 and 485 residents. The population of Valdez accounted for 41.3% of the total regional population that year, while 23.3% resided in Cordova.³

In 2010, a majority of the residents of the Valdez-Cordova Census Area identified themselves as White (74%), along with 13.6% who identified as American Indian or Alaska Native, 3.7% who identified as Asian, 0.6% as Native Hawaiian or Other Pacific Islander, 0.5% as Black or African American, 0.5% as ‘Some Other Race’, and 7.2% that identified as two or more races. In addition, 3.6% of PWS residents identified themselves as Hispanic or Latino. Because of Cordova’s robust seafood processing sector, the community has a more highly diversified population in terms of race or ethnicity than other PWS communities. In 2010, 64% of residents identified themselves as White, 19% as Asian, 18% as Filipino, and 13% as Alaska Native or American Indian. It is also important to note that a majority of residents in both Tatitlek and Chenega identified themselves as Alaska Native or American Indian in 2010.⁴

¹ Copper River Native Association. 2009. *Comprehensive Economic Development Strategy, Copper River Region, Alaska, 2009 Update*. Retrieved October 22, 2012 from <http://commerce.alaska.gov/ded/dev/oedp/pubs/CVDA-CEDS2009-2011.pdf>.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³ U.S. Census Bureau (2010). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁴ Ibid.

In 2010, the overall regional per capita income of the Valdez-Cordova Census Area was estimated at \$30,703, while the estimated median household income was \$76,625, compared to statewide estimates of \$30,726 and \$77,886, respectively.⁵

History

PWS has been the home of Alutiiq (Sugpiaq) people for approximately 5,000 years. Athabascan and Tlingit groups, who migrated into the sound from other areas, have also been present since prehistory. Since the late 1700s, the region has been a crossroads for explorers, miners, fishermen, and the Native inhabitants of the region. In particular, the presence of a protected, deep-water port at Valdez has been a key ingredient in the development of the region, culminating in the construction of the Trans-Alaska oil pipeline terminus in the 1970s.^{6,7}

Today, most residents live within the larger communities of Valdez and Cordova; the other residents are scattered throughout a few dozen small communities. The demographics of the region have changed quite dramatically through time. The construction of the Trans-Alaska oil pipeline, the build-up and withdrawal of U.S. military personnel, particularly in Whittier, and the 1989 *Exxon Valdez* oil spill—all these factors have influenced the dramatic flux in the composition of PWS.⁸ Today, some 13% of residents are all or part Alaska Native.⁹

Natural Resources and Environment

Five of the communities profiled in this section lie on the shores of PWS, from Chenega Bay in the coastal islands to the southwestern, Whittier in the west, Valdez and Tatitlek on the northeastern shores, and Cordova in the southeastern portion of the Sound. This section also includes Gakona and Glennallen, inland communities in the heart of the Copper River Valley, northeast of PWS. The five communities directly bordering the Sound are located within the boundaries of the Chugach National Forest (except Valdez, which is just outside the border), while the communities in the Copper River Valley are located on the western border of Wrangell St. Elias National Park and Preserve.

The coastal communities profiled here are located within a maritime climate zone, characterized by cool summers and mild winters, while the climate of the inland communities is continental, with long, cold winters and relatively warm summers.¹⁰ The PWS region is characterized by complex coastlines, peninsulas and small islands, and glacial carved valleys and fjords. Uplands host coniferous forest and muskeg.¹¹ The Copper River Valley is surrounded by

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

⁶ Chugachmiut. (2009). *Chugach Region Comprehensive Economic Development Strategy*. Retrieved April 30, 2012 from <http://www.chugachmiut.org/services/enterprise/Chugach%20Region%20CEDS%20draft%20v5.pdf>.

⁷ Valdez, AK website. (n.d.). *Short History of Valdez*. Retrieved May 3, 2012 from <http://www.valdezalaska.org/discover-valdez-history/short-history-of-valdez>.

⁸ Prince William Sound Economic Development District. (2006). *Comprehensive Economic Development Strategy, Executive Summary*. Retrieved November 26, 2012 from <http://www.commerce.state.ak.us/dca/plans/PrinceWilliamSound-EDP-2006.pdf>.

⁹ See footnote 3.

¹⁰ See footnote 2.

¹¹ U.S. Forest Service. (2008). *East Prince William Sound Landscape Assessment*. Retrieved May 3, 2012 from http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5151500.pdf.

the mountains of the Alaska Range and Talkeetna, Chugach, and Wrangell Mountains. Forests of aspen, spruce, and balsam poplar cover much of the valley. Permafrost is found throughout the valley at varying depths.¹²

PWS and the Copper River Valley are located in a highly active tectonic zone, with high risk of earthquake and tsunami activity. The Denali Fault runs through the Copper River Valley, and more than 12 volcanoes are recognized in the Wrangell Mountains. Mt. Wrangell is considered to be an active volcano, with steam still venting from near its summit. There are 11 major active fault systems within 150 miles that are capable of producing earthquakes that can be felt in PWS.¹³ The Good Friday earthquake of 1964, or “Great Alaska Earthquake”, was the largest recorded earthquake in the country, with a magnitude of 9.2 on the Richter scale. It struck PWS on Good Friday, March 28th, 1964. The maximum wave height recorded was 67 m at Valdez Inlet.¹⁴ Shoup Bay near Valdez became infamous for the 150-foot tidal wave that surged in and out of the bay three times during the earthquake.¹⁵ In Cordova, tectonic uplifts were recorded from 6.5 to 7.5 feet.¹⁶ The tsunami generated by the earthquake destroyed the village of Chenega and killed 23 people.¹⁷ Other regional hazards include coastal erosion, avalanches, landslides, sea level rise, land subsidence, volcanoes, coastal flooding, and storm surges.¹⁸

Oil development plays a large role in the PWS region. Valdez hosts the terminus of the Trans-Alaska Pipeline, which carries crude oil south from oil fields on Alaska’s North Slope. As of 2006, Alyeska Pipeline Service Company employed approximately 300 people in Valdez. Oil industry jobs are concentrated in Valdez, while oil spill response has become an important economic driver throughout PWS. Following the 1989 *Exxon Valdez* Oil Spill, a Ship Escort/Response Vessel System was created. This System is the largest oil spill organization in the Western Hemisphere, and as of 2006, employed approximately 300 people, including staff, response specialists, vessel crews, material handlers, and mechanics. In 2006, approximately 325 private fishing vessels were also on contract by Alyeska Pipeline Service Company to provide response assistance in the event of an oil spill.¹⁹

In addition to oil, industries that provide employment in this region include fishing, tourism, and timber harvesting. Sporadic mining activity has also taken place in the region over the past century.²⁰ Valdez played a role in the history of mining in Alaska both as a launching point for gold prospectors bound for the Klondike or Copper River Basin in the late 1800s and early years of the 1900s, and later miners prospected for gold, copper and silver locally on the

¹² Copper River Native Association. (2009). *Comprehensive Economic Development Strategy, Copper River Region, Alaska, 2009 Update*. Retrieved October 22, 2012 from <http://commerce.alaska.gov/ded/dev/oedp/pubs/CVDA-CEDS2009-2011.pdf>.

¹³ City of Valdez. (2004). *Local Hazards Mitigation Plan*. Retrieved April 30, 2012 from http://www.commerce.state.ak.us/dera/planning/nfip/Hazard_Mitigation_Plans/Valdez_LHMP.pdf.

¹⁴ U.S. Geological Survey (n.d.). Historic Earthquakes: Prince William Sound, Alaska, 1964 March 28 03:36 UTC, Magnitude 9.2. Retrieved December 5, 2011 from <http://earthquake.usgs.gov/earthquakes/states/>.

¹⁵ Alaska Dept. of Natural Resources. 2010. *State Marine Parks near Valdez*. Retrieved May 3, 2012 from <http://dnr.alaska.gov/parks/units/pwssmp/smpvald.htm>.

¹⁶ City of Cordova. (1995). *Cordova Comprehensive Development Plan*. Retrieved February 23, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Cordova-CP-1994.pdf>.

¹⁷ Mason, R.. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

¹⁸ Alaska Dept. of Natural Resources. (n.d.). *Statewide Coastal Hazards*. Retrieved January 17, 2012 from: http://www.alaskacoast.state.ak.us/ACMPGrants/EGS_05/pdfs/CoastalHazards.pdf.

¹⁹ See footnote 8.

²⁰ Ibid.

islands and shores of PWS. The most profitable mines in the vicinity of Valdez were the Cliff Gold Mine and the Midas Mine. The Cliff Mine extracted about 51,740 ounces of gold and 8,153 ounces of silver. The Midas Mine, in nearby Solomon Gulch on the south shore of the Port, was the fourth largest producer of copper in the PWS area. Ellamar Mine, located near Tatitlek, was a large copper producer, and almost as much gold was produced as a byproduct of copper mining, as was produced at the Cliff Mine.²¹ Today, the Midas and Ellamar Mines still work some of the most significant copper deposits in Alaska, along with extracting some gold, zinc, lead, and silver.²² Copper and gold deposits were also found in the Copper River basin at the end of the 19th Century, and a copper mine was active there between 1910 and 1938.²³ Today, communities located inland in the Copper River valley, further from commercial fishing activity, depend largely on tourism, including visitors passing by on the Glenn Highway.²⁴

Governance

Communities in PWS belong to the Valdez-Cordova Census Area but are not under the jurisdiction of an organized borough. As a result, the communities themselves are responsible for basic services and tax administration. Of the seven communities profiled for the PWS region, three have incorporated city governments (Cordova, Valdez, and Whittier), and three are governed by federally-recognized tribal councils, including the Native Village of Tatitlek, Native Village of Chenega (Chenega Bay), and the Mount Sanford Tribal Consortium in Gakona. This Consortium is made up of the Tribal Councils of Chistochina and Mentasta Lake. Glennallen is unincorporated, and does not have a Tribal Council.²⁵ However, despite a lack of municipal governance in Glennallen, the community serves as a regional hub of state and federal administration offices.²⁶

The communities profiled in this section are divided between two regional Native corporations. The offices of the Ahtna, Inc., the regional Native corporation for the Copper River region, are headquartered in Glennallen.²⁷ The Copper River Native Association, with offices 16 miles south in Copper Center, provides health and tribal community services in the Copper Valley basin.²⁸ Tribal communities located on the shores of PWS and in Lower Cook Inlet are represented by the Chugach Alaska Corporation,²⁹ and are members of Chugachmiut, a tribal 501(c)(3) non-profit organization with the goal of advancing the overall economic, social, and cultural development of the people of the Chugach Region.³⁰

²¹ Valdez, AK website. (n.d.). *Short History of Valdez*. Retrieved May 3, 2012 from <http://www.valdezalaska.org/discover-valdez-history/short-history-of-valdez>.

²² Szumigala, D.J., L.A. Harbo, and J.N. Adleman. *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

²³ See footnote 12.

²⁴ Alaska Dept. of Transportation and Public Facilities. 2010. Interior Alaska Transportation Plan. Retrieved October 22, 2012 from <http://dot.alaska.gov/nreg/studies/iatp/documents.shtml>.

²⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁶ See footnote 23.

²⁷ Ahtna, Incorporated. 2012. *Welcome to Ahtna, Incorporated*. Retrieved October 23, 2012 from <http://www.ahtna-inc.com/>.

²⁸ See footnote 23.

²⁹ See footnote 25.

³⁰ Chugachmiut (2011). *About Us*. Retrieved December 26, 2011 from <http://www.chugachmiut.org/about.html>.

Involvement in North Pacific Fisheries

Fisheries resources provide a strong foundation for the regional economy in PWS, although variability in both the health of fish stocks and global markets has led to concerns about the stability of this industry.³¹ Vessel owners and permit holders residing in PWS communities have the highest rates of involvement in fisheries for salmon, halibut, shrimp, sablefish and other groundfish species, including lingcod, Pacific cod, and pollock.^{32,33} Cordova is a regional fisheries hub, with a fleet of 645 vessels and 7 shore-side processing facilities in 2010.³⁴ That year, almost half of Cordova households had at least one person working in commercial harvesting or processing.³⁵ Valdez serves as a smaller fisheries hub in northern PWS, with 80 vessels homeported and 3 shore-side processing facilities in 2010. Whittier also offers several processing facilities and hosts a small fishing fleet, and residents of each of the communities profiled in this document have participated to some degree in local PWS fisheries as well as fisheries around the State.^{36,37}

Salmon is the most important regional fishery resource in terms of participation, landings volume, and ex-vessel revenue.³⁸ The success of Copper River Chinook and sockeye salmon in international markets has provided for relatively high prices in this local fishery.^{39,40} In 2010, approximately 400 residents of the seven communities profiled in this document held state-issued Commercial Fisheries Entry Commission (CFEC) permits in PWS salmon fisheries. A majority of these (just over 350) were held by Cordova residents, while just under 40 were held in Valdez, and several were held by residents of Whittier and Tatitlek.⁴¹

Relatively high numbers of state permits are also held by residents of the profiled communities in PWS fisheries for herring and shrimp; however, in 2010, no PWS herring permits were actively fished. Although PWS historically had a productive herring fishery, in 1993, 4 years after the *Exxon Valdez* oil spill, the stock collapsed in conjunction with an outbreak of hemorrhagic septicemia virus. Since 1998, the PWS herring fishery has been closed. The

³¹ Prince William Sound Economic Development District. (2006). *Comprehensive Economic Development Strategy, Executive Summary*. Retrieved November 26, 2012 from <http://www.commerce.state.ak.us/dca/plans/PrinceWilliamSound-EDP-2006.pdf>.

³² Alaska Dept. of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³³ Alaska Dept. of Fish and Game. (2012). *Commercial Fisheries Overview: Prince William Sound Management Area*. Retrieved November 28, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyareapws.main>.

³⁴ Alaska Dept. of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³⁵ See footnote 25.

³⁶ Alaska Dept. of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³⁷ See footnote 34.

³⁸ Ibid.

³⁹ Knapp, G., C. Roheim, J. Anderson. 2007. *The Great Salmon Run: Competition Between Wild and Farmed Salmon*. TRAFFIC North America, World Wildlife Fund. Retrieved November 27, 2012 from http://www.iser.uaa.alaska.edu/people/knapp/personal/pubs/TRAFFIC/The_Great_Salmon_Run.pdf.

⁴⁰ See footnote 31.

⁴¹ See footnote 34.

relationship between the oil spill, the virus, and the stock collapse remain unclear, and the population has shown little sign of recovery.^{42,43} In contrast, spot shrimp (*Pandalus platyceros*) pot fisheries reopened in PWS in 2010 after two decades of closure due to low abundance.⁴⁴

Sport fishing is also an important component of regional fishery involvement. Sport license sales for the communities profiled in this section totaled more than the population of the communities combined. More than half of the sport fish licenses were sold to sport fishermen from outside the region. Major sport species include all five species of Pacific salmon, halibut, rockfish, and lingcod.^{45,46} Between 2000 and 2010, the greatest number of sport fish guide businesses and licensed sport fish guides were located in Valdez. A large number of guide businesses were also located in Cordova, Glennallen, and Gakona in 2000, but steep declines were evident in all three communities through the decade.⁴⁷ In Glennallen and Gakona, participation by local residents in sport fishing was relatively more important than participation in commercial fisheries compared to communities located on the coastline. The number of sport fishing licenses sold to local residents in these inland communities was equivalent to a higher percentage of the total local population compared to Cordova and Valdez between 2000 and 2010, while a much smaller percentage held commercial crew licenses, owned a fishing vessel, or held a state-issued commercial fishing permit.^{48,49}

Subsistence harvest of marine resources is important in communities throughout PWS and the Copper River basin, and particularly in communities located farther from major transportation networks, including Tatitlek and Chenega. In 2003, subsistence harvest surveys conducted by ADF&G found that 96% of Tatitlek households participated in halibut subsistence and 89% participated in salmon subsistence, with a per capita harvest of marine and terrestrial subsistence resources of 290 pounds. In Chenega, 94% of Chenega households were estimated to participate in halibut subsistence and 86% in salmon subsistence, with a per capita harvest of 406 pounds of marine and terrestrial resources in 2003. In addition to halibut and salmon, common marine invertebrate species utilized for subsistence purposes in PWS communities include Pacific littleneck, horse, razor, butter, and pinkneck clams, cockles, mussels, shrimp, chitons, limpets, Dungeness, Tanner, and king crab, snails, and octopus. Common species of non-salmon

⁴² Ibid.

⁴³ Alaska Dept. of Fish and Game. (2012). *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

⁴⁴ Alaska Dept. of Fish and Game. (2012). *Spot Shrimp Species Profile: Status, Trends and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=spotshrimp.main>.

⁴⁵ Alaska Dept. of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴⁶ Alaska Dept. of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁴⁷ Alaska Dept. of Fish and Game. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴⁸ Alaska Commercial Fisheries Entry Commission. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴⁹ Alaska Dept. of Fish and Game. (2011). *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

fish (not including halibut) harvested for subsistence purposes include herring, eulachon (hooligan candlefish), red and black rockfish, smelt, Dolly Varden, lingcod, sablefish, Pacific cod, rainbow, cutthroat, and lake trout, Pacific tomcod, skates, flounder, sea bass, greenling, shark, walleye pollock, grayling, whitefish, and burbot. Herring roe is also an important subsistence resource. Marine mammals harvested for subsistence purposes include harbor seal and Steller sea lion, as well as porpoise harvested by residents of Tatitlek.⁵⁰ Harvest of sea otters was also reported in Cordova, Valdez, Chenega, and Tatitlek between 2000 and 2010.⁵¹

Regional Challenges

This region faces several challenges, largely resulting from the March 1989 *Exxon Valdez* oil spill, which leaked some 11 million gallons of oil into PWS. Living marine resources were negatively impacted and continue to show effects of the spill. The spill affected the food chain that supports the PWS commercial fishery, and impacted shore birds, waterfowl, sea otters, harbor porpoises, harbor seals, Steller sea lions, and several species of whale, among other species.⁵² Harvest of shellfish declined dramatically due to petrochemical contamination. Sea otter mortality was as high as 40% immediately following the spill. The 50% decline in the PWS orca population in the decades following the spill has been attributed to direct oil exposure and consumption of oiled marine mammals. Many other fish, marine mammal, and bird populations declined following the spill, including marbled murrelets and black oyster catchers. Impacts on habitat and forage fishes created continued difficulties for recovery of many species.⁵³ In particular, the 1993 collapse of the PWS herring fishery has made recovery for many species difficult, as it is a primary food source for harbor seal, Steller sea lion, and marbled murrelet, among others. The relationship between the herring collapse and the oil spill remains unclear.^{54,55}

Tourism revenues were also impacted by the *Exxon Valdez* oil spill. Ecological damages and economic losses due to declines in fishing and tourism revenues were significant. Today, a major funding source for tourism development projects is the Exxon Valdez Oil Spill Trustee Council, which has contributed to the construction of museums and cultural centers in PWS.⁵⁶

Variability in fish stocks and market value of fisheries resources is another challenge faced by communities in PWS and throughout Alaska. With the importance of the salmon fishery

⁵⁰ Alaska Dept. of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁵¹ U.S. Fish and Wildlife Service. (2011). *Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear*. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

⁵² U.S. Environmental Protection Agency (n.d.). *Exxon Valdez*. Retrieved December 2, 2011 from <http://www.epa.gov/emergencies/content/learning/exxon.htm>.

⁵³ Chugachmiut. (2009). *Chugach Region Comprehensive Economic Development Strategy*. Retrieved April 30, 2012 from <http://www.chugachmiut.org/services/enterprise/Chugach%20Region%20CEDS%20draft%20v5.pdf>.

⁵⁴ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁵⁵ See footnote 43.

⁵⁶ Prince William Sound Economic Development District. (2006). *Comprehensive Economic Development Strategy, Executive Summary*. Retrieved November 26, 2012 from <http://www.commerce.state.ak.us/dca/plans/PrinceWilliamSound-EDP-2006.pdf>.

in PWS, a downward trend in salmon prices in the 1990s and early 2000s caused economic hardship,⁵⁷ although salmon ex-vessel prices and value have rebounded since 2002.⁵⁸ A number of salmon hatcheries are in operation in PWS to supplement wild runs. Declines in the statewide pollock fishery are of concern to PWS fishermen.⁵⁹

In addition to commercial fisheries, concerns about localized overharvest of Pacific halibut have led to limitations on the halibut charter industry.⁶⁰ In 2007, the North Pacific Fishery Management Council (NPFMC) approved implementation of a limited entry program for halibut charter fleets in Areas 2C and 3A (Southeast and Southcentral Alaska) and a daily halibut bag limit for each charter vessel angler of two halibut of any size per day per person. The limited entry program was implemented in 2010.^{61,62} Declining halibut availability and harvest limitations are reflected in steep declines in the number of sport fish guide businesses and licensed sport fish guides residing in PWS communities between 2000 and 2010.⁶³

⁵⁷ Gilbertson, Neal. (2003). “The global salmon industry and its impacts in Alaska.” *Alaska Economic Trends*, October 2003, 3-11.

⁵⁸ Knapp, Gunnar. (2012). *Trends in Alaska Salmon Markets*. Institute of Social and Economic Research, University of Alaska Anchorage. Power Point presentation prepared for the Northwest Fisheries Association meeting in Seattle, WA, March 7, 2012. Retrieved November 19, 2012 from http://www.iser.uaa.alaska.edu/Publications/presentations/2012_03-GunnarKnapp-TrendsInAlaskaSalmonMarkets.pdf.

⁵⁹ See footnote 56.

⁶⁰ Dean, Michael R. and Allen L. Howe. (1999). *Alaska Dept. of Fish and Game Sportfishing Guide and Business Registration and Saltwater Sportfishing Charter Vessel Logbook Program, 1998*. ADF&G Special Publication No. 99-1. Retrieved May 2, 2012 from <http://www.sf.adfg.state.ak.us/fedaidpdfs/Sp99-01.pdf>.

⁶¹ North Pacific Fishery Management Council. (2007). *News and Notes* Volume 2-07. Retrieved May 2, 2012 from <http://www.alaskafisheries.noaa.gov/npfmc/PDFdocuments/newsletters/NEWS407.pdf>.

⁶² Federal Register. March 22, 2012. Dept. of Commerce, NOAA, 50 CFR Part 300, Pacific Halibut Fisheries; Catch Sharing Plan. Retrieved May 2, 2012 from <http://www.fakr.noaa.gov/frules/77fr16740.pdf>.

⁶³ Alaska Dept. of Fish and Game. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]



Chenega Bay (chuh-NEE-guh)

People and Place

*Location*⁶⁴

Chenega Bay is located on Evans Island at Crab Bay, 42 mi southeast of Whittier in Prince William Sound (PWS). It is 104 mi southeast of Anchorage and 50 mi east of Seward. The community occupies 28.8 sq mi of land and 0.3 sq mi of water. Chenega Bay is unincorporated, located in the Valdez-Cordova Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*⁶⁵

In 2010, there were 76 residents ranking Chenega Bay 273rd of 352 Alaskan communities in terms of population size. Overall since 1990, the population has declined by 19.1%. Between 2000 and 2009, the population declined by 17.44% with an average annual growth rate of -0.23%; lower than the statewide average of 0.75% and indicative of a downward trend despite the large variation in annual Alaska Department of Labor (DOL) estimates.

In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there were 60 permanent and 10 to 15 seasonal or transient residents living in Chenega Bay according to a 2010 head count. On average, the number of seasonal workers living in the community peaks between April and September; however, the peak is only slightly driven by employment in the fishing sectors. Information regarding population trends can be found in Table 1.

Chenega Bay is predominately an Alutiiq community; however, in 2010 only 52.6% of the population identified themselves as American Indian or Alaska Native, compared to 73.3% in 2000. Also in 2010, 39.5% of the population identified themselves as White, compared to 22.1% in 2000; and 7.9% identified themselves as two or more races, compared to 4.7% in 2000. In addition, 2.6% of residents identified themselves as Hispanic or Latino, compared to 0.0% in 2000. The marked change in racial composition between 2000 and 2011 could coincide with the highly variable population, and might not reflect a long term trend. Information regarding trends in Chenega Bay's racial and ethnic composition can be found in Figure 1.

⁶⁴ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

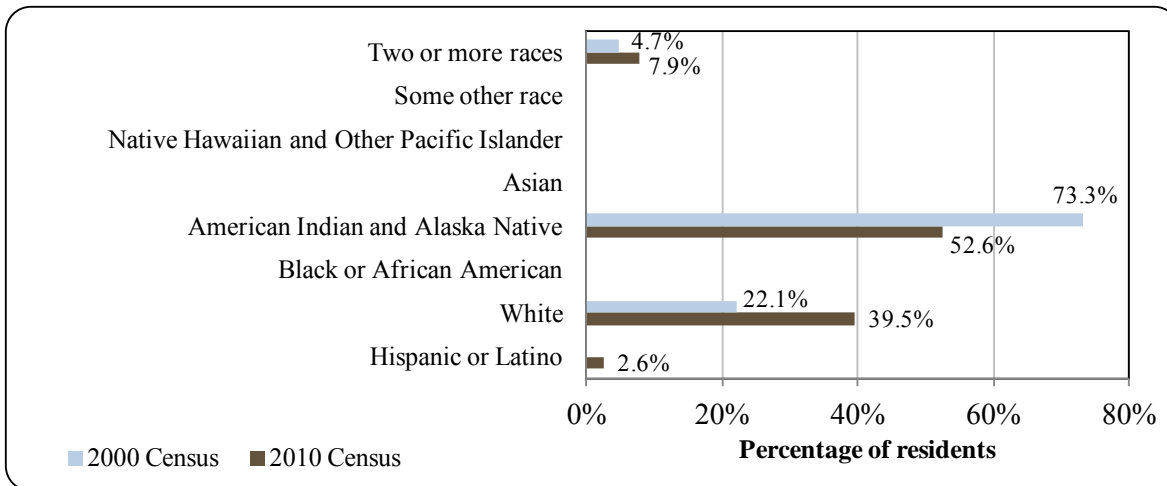
Table 1. Population in Chenega Bay from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	94	-
2000	86	-
2001	-	50
2002	-	59
2003	-	77
2004	-	49
2005	-	43
2006	-	85
2007	-	69
2008	-	77
2009	-	71
2010	76	-

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

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

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



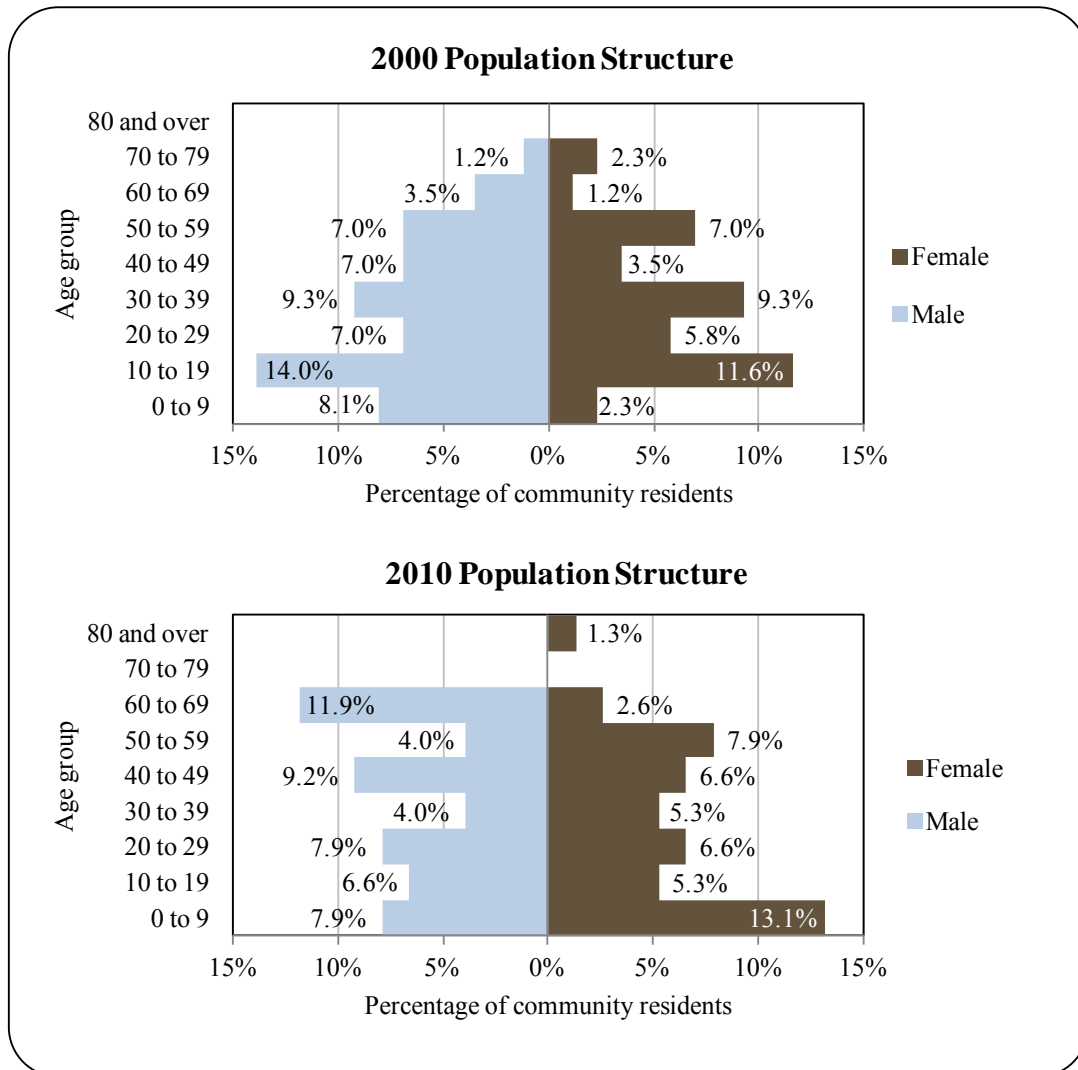
In 2010, the average household size was 2.45, compared to 3.0 in 1990 and 3.55 in 2000. In that year there were 51 total housing units, compared to 30 in 1990 and 27 in 2000. Of the households surveyed in 2010, 23.5% were owner-occupied, compared to 55.6% in 2000; 37.3% were renter-occupied, compared to 26% in 2000; 11.8% were vacant, compared to 11.1% in 2000; and 27.5% were occupied seasonally, compared to 7.4% in 2000. In 2010, there were no residents reported to be living in group quarters, compared to eight in 2000.

The gender distribution in 2010 was relatively even at 51.3% male and 48.7% female. This was similar to the statewide distribution (52.0% male, 48.0% female) and more even than the distribution in 2000 (57.0% male, 43.0% female). The median age was 35.0 years, which similar to the statewide median of 33.8 years, and older than the 2000 median of 30.6 years.

Because of the small and variable population, the population structure was irregular in both 2000 and 2010 making it difficult to discern a trend. In 2010, 32.9% of residents were under the age of 20, compared to 26.0% in 2000; 15.8% were over the age of 59, compared to 8.2% in 2000; 37.0% were between the ages of 30 and 59, compared to 43.1% in 2000; and 14.5% were between the ages of 20 and 29, compared to 12.8% in 2000.

Gender distribution by age cohort was significantly less even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 60 to 69 range (11.9% male, 2.6% female), followed by the 0 to 9 (13.1% female, 7.9% male) and 50 to 59 (7.9% female, 5.0% male) ranges. Of those three, the greatest relative gender difference occurred in the 60 to 69 range. Information regarding Chenega Bay’s population structure can be found in Figure 2.

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



In terms of educational attainment, the 2006-10 American Community Survey (ACS)⁶⁶ estimated that 100% of Chenega Bay residents aged 25 years and older held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year, and estimated 33.3% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 59.3% had a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall, and an estimated 7.4% had a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*⁶⁷

Founded before Russian contact in the late eighteenth century, Chenega was the longest occupied community in PWS, before the original community was destroyed by a tsunami resulting from the 1964 “Good Friday” Earthquake. In that event, all of the buildings in the community were destroyed with the exception of a single house and the community school. Over a third of the residents lost their lives, and survivors were evacuated initially to Cordova and later resettled in the community of Tatitlek by the U.S. Bureau of Indian Affairs (BIA).

With the passage of the Alaska Native Claims Settlement Act (ANCSA), former residents of Chenega formed the Chenega Corporation, which selected 76,093 acres around the original Chenega township as part of the ANCSA lands settlement. This land was acquired in order to one day re-establish the community of Chenega. Shareholders selected their new community site at Crab Bay on Evans Island in March of 1977. The Chenega Corporation and the Chenega Indian Reorganization Act (IRA) Council worked to find funds for roads, water and sewer systems, electric generators, a boat and floatplane dock, and a school. The new Chenega “Chenega Bay” was finally occupied in 1984 after the construction of 21 Housing and Urban Development homes.

On March 24, 1989 Chenega Bay was impacted by another disaster. The *Exxon Valdez* Oil Spill released approximately 11 million gallons of crude oil into the waters of PWS and Chenega Bay became a major center for cleanup operations. The Chenega Corporation participated in cleanup of the oil spill, and in 1997, sold a large portion of its land holdings to the U.S. Forest Service and State of Alaska for \$34 million in hopes of using the funds to diversify its business plan following the spill.

Today, the community of Chenega Bay still relies on some subsistence and/or commercial fishing resources, but a cash economy has become more important in the wake of the oil spill and many jobs in the community are dependent on cleanup.

Natural Resources and Environment

Chenega Bay is located in dense coastal rain forests which extend from southeastern Alaska to Kodiak Island. The climate is marine influenced, with cool cloudy summers and relatively mild winters. Annual precipitation averages 66 in of rain and 80 in of snowfall.

⁶⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶⁷ GDM Inc. (2008). *Chenega Bay Masterplan*. Retrieved January 17, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ChenegaBay-MP-2008.pdf>.

Summer temperatures range from 49 to 63 °F (9 to 17 °C) and winter temperatures range from 17 to 28 °F (-8 to -2 °C).⁶⁸

Chenega Bay is located in the Chugach National Forest, which covers 5.4 million acres of south-central Alaska. The surface soils and geology surrounding the community are characterized by exposed and peat-covered bedrock. Tree stands are typically found in areas where peat is relatively shallow; while areas of deeper poorly drained peat tends to form bogs or muskegs.⁶⁹ Coastal forest vegetation includes mixed stands of Sitka spruce and western hemlock. Woodland lodge pole pine communities can be found in muskegs. Tidal areas and deltas are dominated by sedges and grass wet meadows.⁷⁰ The PWS area provides habitat for a wide range of aquatic and terrestrial wildlife. Coastal areas host seals, sea lions, sea otters, whales, and an abundance of waterfowl. Fisheries include all five species of Pacific salmon, halibut, rockfish, lingcod, sablefish, cutthroat trout, and Dolly Varden char. The Chugach National Forest and Kenai Fjords National Park host Dall sheep, moose, mountain goats, deer, wolves, brown and black bears, and a small caribou herd. Other resources in the area include an inactive copper/silver mine on Latouche Island to the east, as well as several salmon hatcheries in PWS.⁷¹

No offshore oil and gas lease sales were scheduled in the Gulf of Alaska (GOA) for the 2012-2017 leasing program.⁷² A 2000 assessment of conventionally recoverable oil and gas estimated the presence of between 360 million to 3.27 billion barrels of oil and gas in the GOA region. This was slightly higher than estimates in Cook Inlet. The Pacific Margin Subregion (including Cook Inlet, GOA and Shumagin-Kodiak) was estimated to hold only 6.3% of all conventionally recoverable oil and gas in Alaska's offshore regions, while the Arctic Subregion was estimated to hold 84.6% and the Bering Shelf subregion was estimated to hold 9.1%.⁷³

The community of Chenega Bay does not have a hazard mitigation plan; however, earthquakes and tsunamis have been hazards in the past and continue to impact the region as a whole. Other regional hazards include coastal erosion, avalanches, landslides, sea level rise, land subsidence, volcanoes, coastal flooding, and storm surges. Susceptibility and vulnerability to any one of these hazards on a community-specific level is not known.⁷⁴

Living marine resources in the Valdez area were negatively impacted and continue to show affects of the March 1989 *Exxon Valdez* Oil Spill, when 11 million gallons of crude oil spilled into PWS. The spill affected the food chain that supports the PWS commercial fishery, and impacted shorebirds, waterfowl, sea otters, harbor porpoises, harbor seals, Steller sea lions and several species of whale, among other species.⁷⁵ Harvest of shellfish declined dramatically

⁶⁸ Ibid.

⁶⁹ Ibid.

⁷⁰ U.S Forest Service. (1992). *Alaska Vegetation Classification*. Retrieved January 17, 2012 from <http://www.treesearch.fs.fed.us/pubs/6941>

⁷¹ Aurora Consulting. (2008). *Community of Chenega Bay Comprehensive Economic Development Strategies*. Retrieved January 17, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ChenegaBay-EDP-2008.pdf>.

⁷² U.S. Department of the Interior, Minerals Management Service. November, 2011. *Proposed Outer Continental Shelf Oil and Gas Leasing Program 2012-2017*. Retrieved February 2, 2012 from http://www.boem.gov/uploadedFiles/Proposed_OCS_Oil_Gas_Lease_Program_2012-2017.pdf.

⁷³ Bureau of Ocean Energy Management, Regulation and Enforcement. 2000. *Undiscovered Oil and Gas Resources, Alaska Federal Offshore, December 2000 Update*. Retrieved May 3, 2012 from <http://alaska.boemre.gov/re/uogr/uogr.pdf>.

⁷⁴ Alaska Department of Natural Resources. (n.d.). *Statewide Coastal Hazards*. Retrieved January 17, 2012 from: http://www.alaskacoast.state.ak.us/ACMPGrants/EGS_05/pdfs/CoastalHazards.pdf.

⁷⁵ United States Environmental Protection Agency. "Exxon Valdez." Retrieved December 2, 2011 from <http://www.epa.gov/emergencies/content/learning/exxon.htm>.

due to petrochemical contamination. Sea otter mortality was as high as 40% immediately following the spill. The 50% decline in the PWS orca population in the decades following the spill has been attributed to direct oil exposure and consumption of oiled marine mammals. Many other fish, marine mammals and bird populations declined following the spill, including harbor seals, Steller sea lions, marbled murrelets and black oyster catchers. Impacts on habitat and forage fishes created continued difficulties for recovery of many species.⁷⁶ In particular, the 1993 collapse of the PWS herring fishery has made recovery for many species difficult, as it is a primary food source for harbor seal, Steller sea lion, and marbled murrelet, among other species. The relationship between the herring collapse and the oil spill remains unclear.^{77,78}

Current Economy⁷⁹

Most residents of Chenega Bay still rely on some subsistence and commercial fishing resources; however, in the wake of the *Exxon Valdez* Oil Spill, fishing has declined and employment has shifted towards opportunities created by the spill.⁸⁰ In a survey conducted by the AFSC in 2011, community leaders reported that the local economy was dependant on sport hunting and fishing. Top employers in 2010⁸¹ included Chenega IRA Council, Chugachmiut, PWS Aquaculture Corp., Native Village of Chenega Bay Public Health, Chugach School District, and Chenega Corp.

In 2010,⁸² the estimated per capita income in Chenega Bay was \$26,092 and the estimated median household income was \$46,458, compared to \$13,382 and \$53,750 in 2000, respectively. After accounting for inflation by converting 2000 values into 2010 dollars,⁸³ the real per capita income (\$17,597) and real median household income (\$70,681) indicate that individual earnings increased while household earnings decreased. In 2010, Chenega Bay ranked 95th of 305 communities reporting per capita income, and 155th of 299 communities reporting median household income. It should be noted that ACS estimates are based on wage income and do not account for the value subsistence resources have within the community.

Chenega Bay's small population size may have prevented the ACS from accurately portraying economic conditions.⁸⁴ Another way of understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development.

⁷⁶ Chugachmiut. 2009. *Chugach Region Comprehensive Economic Development Strategy*. Retrieved April 30, 2012 from <http://www.chugachmiut.org/services/enterprise/Chugach%20Region%20CEDS%20draft%20v5.pdf>.

⁷⁷ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁷⁸ Alaska Department of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

⁷⁹ Unless otherwise noted, all monetary data are reported in nominal values.

⁸⁰ See footnote 71.

⁸¹ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁸² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁸³ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁸⁴ See footnote 66.

According to the ALARI database, residents earned \$740,349 in total wages in 2010.⁸⁵ When matched with the population in 2010, the per capita income equals \$9,741, suggesting that caution should be used when comparing 2010 ACS estimates with the 2000 Census.⁸⁶ However, it should be noted that Chenega Bay was not recognized as “distressed” by the Denali Commission indicating that less than 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁸⁷

Based on 2006-10 ACS estimates,⁸⁸ 62.3% of residents aged 16 years and over were in the civilian labor force in 2010. In the same year, unemployment was estimated at 0.0%, compared to an estimated 5.9% statewide; and no residents were estimated to be living below the poverty line, compared to 9.5% statewide. There is a possibility that these figures are inaccurate, as they conflict with ALARI wage estimates; however, DOLWD did estimate a low unemployment rate of 6.7% for that year.

Of those employed in 2010, an estimated 39.5% worked in the private sector, an estimated 36.8% worked in the public sector; and an estimated 23.7% were self-employed; which possibly explains the significant variation between ACS and ALARI estimates as DOLWD does not include self-employed workers in their estimates. By industry, most (26.3%) employed residents were estimated to work in education services, health care, and social assistance sectors in 2010; followed by other services sectors, other than public administration (26.3%); public administration sectors (23.7%); and agriculture, forestry, fishing, hunting, and mining sectors (10.5%). By occupation type, most (78.9%) employed residents were estimated to hold management or professional positions; followed by sales or office positions (13.2%); and service positions (7.9%). Overall, there was significant variation in employment by industry sector and occupation type between 2000 and 2010. Most notably, there was a significant decline in the public administration sector, and significant increase in management and professional positions. These variations may be attributed to either the significantly volatile population or sampling errors within the ACS. Information regarding employment trends can be found in Figures 3 and 4.

⁸⁵ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁸⁶ See footnote 81.

⁸⁷ Denali Commission. 2011. Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

⁸⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

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

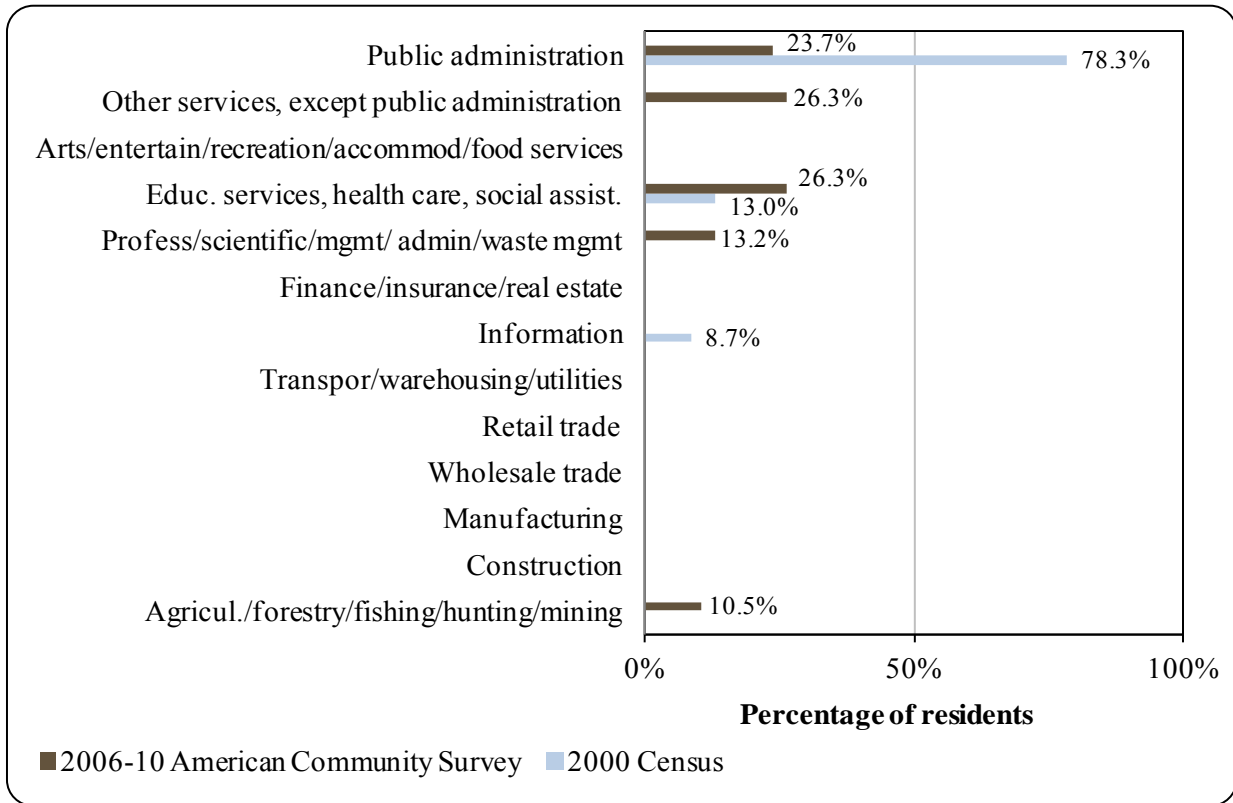
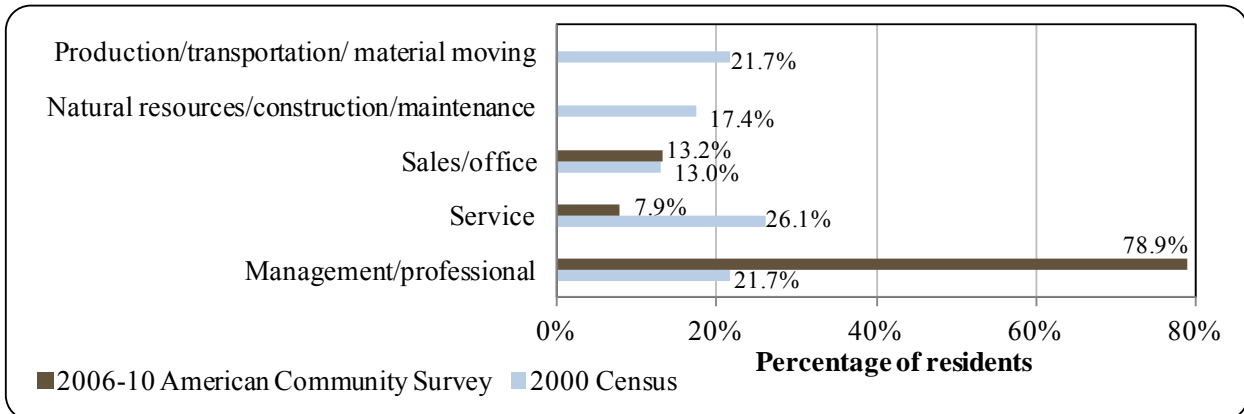


Figure 4. Local Employment by Occupation in 2000-2010, Chenega Bay (U.S. Census).



Governance

Chenega Bay is unincorporated and not under the jurisdiction of a municipal or borough government. There is however, a BIA recognized Tribal government (Native Village of Chenega), as well as an ANCSA chartered Native village corporation (Chenega Corporation). The regional ANCSA corporation representing Chenega Bay is the Chugach Alaska Corporation. The closest Alaska Department of Fish and Game (ADF&G) and National Marine Fisheries Service (NMFS) offices are located in Seward, 46 mi west. The closest U.S. Bureau of Citizenship and Immigration Services office is located in Anchorage, 104 mi northwest.

Since the community is unincorporated, the community is unable to collect revenue through taxes. However, there were several state and federal fisheries-related grants awarded to the community between 2000 and 2010 including \$109,402 for harbor upgrades in 2005 and \$1.1 million for a small boat harbor rehabilitation project in 2009. Information regarding community revenue streams can be found in Table 2.

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

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	\$109,402
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	\$1,138,813
2010	n/a	n/a	n/a	n/a

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

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

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

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

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

Infrastructure

*Connectivity and Transportation*⁸⁹

Chenega Bay has a state-owned 3,000-ft gravel airstrip and floatplane landing area in the harbor. Charter flights are available from Anchorage, Cordova, Seward, and Valdez. The community has a small boat harbor and dock and freight is brought in by air or barge. The Alaska Maine Highway System maintains a dock facility in the community. Ferry service departing from Seward arrives in Chenega Bay monthly during the winter and three times a month in the summer. Ferry service from Valdez arrives in Chenega Bay once a month. Skiffs, cars, trucks, ATVs, and snow machines are used for local transportation. Alaska Air Transit operates scheduled flights between Anchorage and Chenega Bay for \$225 one-way.⁹⁰

*Facilities*⁹¹

Chenega Bay Utilities operates three diesel generators which distribute power via underground powerlines at a maximum capacity of 217 kW. As of 2008, the residential rate was 19 cents per kW hour and the commercial rate was 40 cents per kW hour. Piped water service is provided via a surface water collection system with dam, treatment, and 50,000 gal storage capacity. Sewage is piped to a 20,000 gal community septic tank, and some homes maintain private septic systems. In 2001, a new landfill was completed and refuse is collected twice a week. Fuel is typically purchased twice annually from Valdez and distributed to households directly as well as the local tank farm. Internet is only provided at the school. Visitor accommodations include the Chenega Bay Hotel. Public safety services are provided by state troopers based in Seward. Fire and rescue services are provided by Chenega Bay Emergency Medical Services. Additional public facilities include a youth center, community center, school gym, and school library. Communications services include state and long distance telephone, internet (at the school only), local television, and local radio.

In a survey conducted by the AFSC in 2011, community leaders reported that infrastructure projects completed between 2000 and 2010 included new dock space, existing dock improvements, dockside water and power service, port road access, pilings, airport improvements, water treatment improvements, and landfill improvements. Projects which were under development in 2010 included broadband internet infrastructure and road improvements. There is 20 ft of public dock space available for permanent moorage. Regulated vessels which Chenega Bay is capable of handling include ferries and fuel barges. During the fishing season, vessels using the community as a base of operations are typically less than 60 ft in length. The community has seen a lot less vessels over 60 ft in length since 2005, while seeing more private vessels, commercial fishing vessels, and vessels less than 60 ft in length. Fisheries-related businesses and services include a machine shop, and commercial and recreational fishing moorage.

⁸⁹ Aurora Consulting. (2008). *Community of Chenega Bay Comprehensive Economic Development Strategies*. Retrieved January 17, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ChenegaBay-EDP-2008.pdf>.

⁹⁰ Alaska Air Transit. (n.d.). Retrieved June 21, 2012 from: <http://www.alaskaairtransit.com/>.

⁹¹ Ibid.

Medical Services

Arch Priest Nicholas Kompkoff Clinic is a Primary Health Care facility and Community Health Aid Program (CHAP) site. Acute, long-term, and specialized care is provided in Seward and Anchorage.

Educational Opportunities

Chenega Bay School provides preschool through 12th grade instruction. As of 2011, there were 24 students enrolled and three teachers employed.⁹²

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Chenega Bay's character as a fishing-based community dates back thousands of years; however, both the 1964 Good Friday Earthquake and 1989 *Exxon Valdez* Oil Spill have dramatically reshaped the community and its participation in North Pacific Fisheries. Although local participation in commercial fishing has been in decline in recent years, participation in subsistence and sport fisheries is still an important part of Chenega Bay's identity. In a survey conducted by the AFSC in 2011, community leaders reported that Chenega Bay is not involved nor does it advocate for itself in the fishery management process in Alaska.

However, the community is eligible to participate in the Community Quota Entity (CQE) program, and its interests are represented by the non-profit Chenega Heritage Incorporated. The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead to decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf. As of Fall 2013, Chenega Heritage Incorporated had not yet purchased any commercial halibut Individual Fishing Quota (IFQ) or non-trawl groundfish License Limitation Program permits. However, the non-profit had acquired seven halibut charter permits for lease to community members.⁹³

⁹² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁹³ NOAA Fisheries. (2013). Community Quota and License Programs and Community Quota Entities. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

ADF&G manages the PWS salmon fishery. The PWS salmon management area is divided into 11 commercial fishing districts, covering the coastal area from Cape Suckling (northwest of Yakutat) to Cape Fairfield (east of Seward), and the inland waters of PWS. Valdez is located in the Eastern district. Purse seine gear is the most common gear type, and is allowed in eight of the nine inland fishing districts. Drift gillnet gear is allowed in three districts, and set gillnet gear is only allowed in the Eshamy District. It is important to note that a salmon hatchery program was initiated in PWS in the early 1970s, and hatchery returns have consistently contributed to harvests since the 1980s.⁹⁴

Groundfish and crab fisheries that occur within 3 nmi of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nmi in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. PWS is located in Federal Statistical and Reporting Area 649 and Pacific Halibut Fishery Regulatory Area 3A. The outlet of PWS is at the boundary between the Central GOA and Eastern GOA federal Sablefish Regulatory Areas.

In addition to federal groundfish fisheries that take place in the Central and Eastern GOA, state groundfish fisheries take place in the inland waters of PWS for rockfish, lingcod, pollock, sablefish, and Pacific cod. The PWS Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal cod fishery. The Total Allowable Catch (TAC) set by NMFS applies to both fisheries. Beginning in 1997, an additional ‘state-waters fishery’ for Pacific cod was initiated in PWS. A pelagic trawl fishery for pollock began in PWS in 1995, and is managed under a guideline harvest limit (GHL) determined by ADF&G, and is not conducted as a parallel fishery. Typically, state-waters fisheries are opened once federal and parallel fisheries close. The PWS limited entry sablefish fishery is also managed separately under a GHL.⁹⁵

A majority of lingcod are found in nearshore rocky reef habitat from 10-100 m in depth. ADF&G manages all lingcod fisheries in state and EEZ waters off Alaska. Lingcod in PWS are primarily harvested as incidental catch in longline fisheries, although lingcod fisheries have increased in importance in recent decades. The state manages rockfish harvest in PWS, and since 1998 also has jurisdiction of blue and black shelf rockfish in the western GOA, and all rockfish in the eastern GOA.⁹⁶

PWS historically had a productive herring fishery. However, in 1993, 4 years after the Exxon Valdez, the stock collapsed in conjunction with an outbreak of hemorrhagic septicemia virus. Since 1998, the PWS herring fishery has been closed. The relationships between the oil spill, the virus and the stock collapse remain unclear, and the population has shown little sign of recovery.^{97,98} PWS was also a historical center for Dungeness crab fisheries, but this stock has also collapsed. Possible causes for the Dungeness collapse include overfishing, sea otter

⁹⁴ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” Alaska Fisheries Research Bulletin 12(1):1-146. Alaska Department of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁹⁵ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁹⁶ Ibid.

⁹⁷ Ibid.

⁹⁸ Alaska Department of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

predation, and adverse climatic changes. Red king crab and Tanner crab fisheries in PWS are also closed due to low stock abundance.⁹⁹ In contrast to the closures of herring and crab fisheries, spot shrimp (*Pandalus platyceros*) pot fisheries reopened in PWS in 2010 after almost two decades of closure due to low abundance.¹⁰⁰

Chenega Bay is located in Federal Reporting Area 649, International Pacific Halibut Commission (IPHC) regulatory area 3A, and the Central GOA Sablefish Regulatory District.

Processing Plants

According to the 2010 Alaska Department of Fish and Game's Intent to Operate list, Chenega Bay does not have a registered processing plant. The closest seafood processor is located in Whittier.

Fisheries-Related Revenue

Between 2000 and 2010, there was no reported fisheries-related revenue collected in Chenega Bay.

Commercial Fishing

In 2010, no residents held crew licenses or owned majority share of any vessels. In addition, no vessels made landings in Chenega Bay that year. Participation in commercial fisheries has declined in recent years with no residents holding any fisheries permits between 2007 and 2010. In 2006, 1 resident held 1 salmon permit issued by the Commercial Fisheries Entry Commission (CFEC); however, that permit was not fished. Permit activity peaked in 2000 when 3 residents held 3 CFEC salmon permits, all of which were fished that year. Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits. Between 2000 and 2010, 1 account held 628 halibut quota shares. No residents held sablefish or crab quota between 2010 and when the programs began. In a survey conducted by the AFSC in 2011, community leaders reported that commercial vessels that use Chenega Bay as a base of operations typically use pots, longline, gill net, purse seine, and troll gear types.

Between 2000 and 2010, no landings were made in the community. Landings were made by residents between 2000 and 2005; however, reports for these landings are considered confidential. No landings were made by residents between 2006 and 2010. Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁹⁹ See footnote 95.

¹⁰⁰ Alaska Department of Fish and Game. 2012. *Spot Shrimp Species Profile: Status, Trends and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=spotshrimp.main>.

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

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

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

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

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

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

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

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	1	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	0%	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	1	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	1	1	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	0%	0%	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	1	1	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	3	4	3	2	2	2	1	0	0	0	0
	Fished permits	3	3	2	1	1	1	0	0	0	0	0
	% of permits fished	100%	75%	67%	50%	50%	50%	0%	n/a	n/a	n/a	n/a
	Total permit holders	3	5	3	2	2	3	1	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>3</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>4</i>	<i>2</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Fished permits</i>	<i>3</i>	<i>3</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>100%</i>	<i>75%</i>	<i>67%</i>	<i>33%</i>	<i>25%</i>	<i>50%</i>	<i>0%</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
	<i>Permit holders</i>	<i>3</i>	<i>5</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

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

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

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

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Chenega Bay ²	Total Net Lbs Landed In Chenega Bay ^{2,5}	Total Ex-Vessel Value Of Landings In Chenega Bay ^{2,5}
2000	0	0	0	6	5	0	0	\$0
2001	2	0	0	4	4	0	0	\$0
2002	1	0	0	3	3	0	0	\$0
2003	1	0	0	3	3	0	0	\$0
2004	1	0	0	3	3	0	0	\$0
2005	1	0	0	2	2	0	0	\$0
2006	1	0	0	0	0	0	0	\$0
2007	2	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	1	0	0	0	1	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

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

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

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

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

⁵ Totals only represent non-confidential data.

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

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	1	628	62
2001	1	628	74
2002	1	628	76
2003	1	628	76
2004	1	628	85
2005	1	628	86
2006	1	628	85
2007	1	628	88
2008	1	628	82
2009	1	628	73
2010	1	628	67

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

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

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

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

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

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

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

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

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

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

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

² Totals only represent non-confidential data.

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

	<i>Total net pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	0	0	0	0	0
Finfish	--	--	--	--	--	--	0	0	0	0	0
Halibut	--	--	--	--	--	--	0	0	0	0	0
Herring	--	--	--	--	--	--	0	0	0	0	0
Other Groundfish	--	--	--	--	--	--	0	0	0	0	0
Other Shellfish	--	--	--	--	--	--	0	0	0	0	0
Pacific Cod	--	--	--	--	--	--	0	0	0	0	0
Pollock	--	--	--	--	--	--	0	0	0	0	0
Sablefish	--	--	--	--	--	--	0	0	0	0	0
Salmon	--	--	--	--	--	--	0	0	0	0	0
<i>Total²</i>	--	--	--	--	--	--	0	0	0	0	0
	<i>Ex-vessel value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Halibut	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Herring	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Other Groundfish	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Other Shellfish	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Pacific Cod	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Pollock	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Sablefish	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Salmon	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0

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

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

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

² Totals only represent non-confidential data.

Recreational Fishing

Chenega Bay is located in North Gulf Coast/PWS ADF&G Harvest Survey Area which includes all drainages from east of Cape Suckling, through PWS to Gore Point. In 2010, there was 41 sport fishing licenses sold in the community and 30 sold to residents, compared to 0 and 5 in 2000, respectively. The number of sport fishing licenses sold to both the community and residents increased steadily between 2000 and 2010, with each peaking in 2010. There was never more than one active sport fish guide businesses registered in Chenega Bay at any given year between 2000 and 2010. During 2000 and 2009 there were no active sport fish guide businesses registered. In addition, there was never more than one sport fish guide license held in the community during those years, with the exception of 2007 when there were two.

In 2010, there were a total of 212,793 saltwater angler days fished, compared to 122,459 in 2000; representing a 74% increase. Non-Alaska residents accounted for 30.4% of total saltwater angler days fished in 2010, compared to 32.3% in 2000. Saltwater angler days fished peaked at 300,205 in 2007. There was a total of 22,979 freshwater angler days fished in 2010, compared to 12,108 in 2000; an increase of 90%. Non-Alaska residents accounted for 57% of freshwater angler days fished in 2010, compared to 26% in 2000. Total freshwater angler days fished peaked in 2010.

According to ADF&G Harvest Survey data, species targeted by private anglers in Chenega Bay include coho, sockeye, and pink salmon, rainbow trout, Dolly Varden char, Pacific halibut, rockfish, lingcod, hardshell clams, and shrimp. In a survey conducted by the AFSC in 2011, community leaders reported that local private anglers target all five species of Pacific salmon, halibut, rockfish, crab, sablefish, shrimp, clams, and octopus.

Chenega Bay hopes to boost its sport fishing and tourism economy through the development of lodging facilities, cultural activities, and improvements to recreational fishing infrastructure, businesses, and services.¹⁰¹ Information regarding sport fishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Chenega Bay: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Chenega Bay ²
2000	0	1	5	0
2001	1	1	14	0
2002	1	1	13	5
2003	1	1	17	19
2004	1	1	16	18
2005	1	1	14	14
2006	1	1	19	16
2007	1	2	18	40
2008	1	1	17	31
2009	0	0	21	18
2010	1	1	30	41

¹⁰¹ Ibid.

Table 11 cont'd. Sport Fishing Trends, Chenega Bay: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	39,551	82,908	3,168	8,940
2001	66,450	135,248	8,587	8,610
2002	67,698	133,508	5,132	8,126
2003	70,549	150,086	10,657	10,235
2004	76,173	184,492	9,199	10,349
2005	87,033	165,559	6,894	6,187
2006	79,313	157,194	8,886	5,655
2007	90,002	210,203	8,446	9,944
2008	67,410	181,381	8,056	5,489
2009	59,505	189,563	8,730	10,938
2010	64,776	148,017	13,118	9,861

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

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

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

Subsistence Fishing

Subsistence hunting, fishing, and gathering are essential components to Chenega Bay's economy and culture. The community's participation in subsistence fisheries was severely impacted following the 1989 *Exxon Valdez* Oil Spill, and residents continue to be concerned over the long-term impacts on subsistence resources. In a survey conducted by the AFSC in 2011, community leaders expressed concern over the impacts commercial fishing has on local access to subsistence resources. Community leaders also reported that residents depend mostly on deer, salmon, crab, and shrimp for subsistence purposes. According to the ADF&G *Community Subsistence Information System*,¹⁰² species which residents of Chenega Bay harvest or use include chitons, butter clams, Dungeness crab, horse clams, king crab, limpets, octopus, littleneck clams, razor clams, shrimp, snails, Tanner crab, harbor seal, Steller sea lion, rockfish, Dolly Varden, eel, eulachon, grayling, herring, lake trout, lingcod, Pacific cod, tom cod, rainbow trout, sablefish, sea bass, skates, flounder, greenling, Irish lord, shark, whitefish, and walleye pollock.

Information on subsistence participation is limited; however, in a 2003 ADF&G household survey, 86% of households participated in subsistence salmon activities, 94%

¹⁰² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

participated in subsistence halibut activities, 44% participated in subsistence marine mammal activities, 60% participated in subsistence marine invertebrate activities, and 39% participated in subsistence non-salmon fish activities; totaling approximately 406 lbs harvested per capita.

In 2008, ADF&G¹⁰³ reported 277 salmon harvested by residents, a significant decrease from 722 in 2004. Of the species documented, sockeye salmon was harvested most often, although the number of fish harvested dropped significantly between 2004 and 2008. In 2010, an estimated 3,440 lbs of halibut was harvested using 6 Subsistence Halibut Registration Certificates (SHARC), compared to an estimated 5,644 lbs harvested using 13 SHARC in 2003. Subsistence halibut harvests peaked in 2006 at an estimated 8,260 lbs harvested on 11 SHARC. Between 2000 and 2010, an estimated 23 sea otters were harvested. Sea otter harvests peaked in 2000 at an estimated 11 otters. Finally, an estimated 180 harbor seals and 4 Steller sea lions were harvested between 2000 and 2008. Estimated harbor seal harvests peaked in 2003 at 45 seals. Estimated Steller sea lion harvests peaked in 2007 at 3 sea lions. Information regarding subsistence trends can be found in Tables 12 through 15.

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

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	86%	94%	44%	60%	39%	406.12
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

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

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

¹⁰³ Ibid.

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

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	353	2,282
2004	8	5	3	84	44	56	535	n/a	n/a
2005	9	5	6	174	84	124	469	n/a	n/a
2006	5	5	n/a	111	1	28	155	n/a	n/a
2007	3	3	2	55	27	4	293	n/a	n/a
2008	10	3	4	30	75	70	97	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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

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

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

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

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	13	13	5,644
2004	17	14	5,434
2005	18	13	6,237
2006	19	11	8,260
2007	19	15	5,134
2008	11	8	5,462
2009	8	4	959
2010	8	6	3,440

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

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

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

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	11	n/a	n/a	n/a	15	n/a
2001	n/a	n/a	n/a	n/a	1	13	n/a
2002	n/a	n/a	n/a	n/a	n/a	9	n/a
2003	n/a	n/a	n/a	n/a	n/a	45	n/a
2004	n/a	7	n/a	n/a	n/a	21	n/a
2005	n/a	n/a	n/a	n/a	n/a	5	n/a
2006	n/a	n/a	n/a	n/a	n/a	21	n/a
2007	n/a	n/a	n/a	n/a	3	40	n/a
2008	n/a	2	n/a	n/a	n/a	11	n/a
2009	n/a	3	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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

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

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

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

Cordova (*core-DOH-vuh*)



People and Place

*Location*¹⁰⁴

Cordova is located at the southeastern end of Prince William Sound (PWS) in the Gulf of Alaska. The community was built on Orca Inlet at the base of Eyak Mountain. It lies 52 mi southeast of Valdez and 150 mi southeast of Anchorage. The area encompasses 61.4 sq mi of land and 14.3 sq mi of water. Cordova is a Home Rule city and was first incorporated in 1909. It is located in the Valdez-Cordova Census Area and is not under the jurisdiction of a borough.

*Demographic Profile*¹⁰⁵

In 2010, there were 2,239 residents, ranking Cordova 42nd of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population increased by 6.1%. Between 2000 and 2009, the population fell by 13.4% with an average annual growth rate of -1.03%, which was less than the statewide average of 0.75% and indicative of a steady rate of decline in those years. In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that 1,800 seasonal or transient workers lived in Cordova in 2010. On average, seasonal workers live in the city from April to September, and annual peaks in seasonal population is typically seen from May through August. Peaks in population are thought to be mostly driven by employment in fishing and construction sectors. Information regarding population trends can be found in Table 1.

Cordova is a racially diverse community. In 2010, 70.3% of residents identified themselves as White, 10.9% as Asian, 8.8% as American Indian or Alaska Native, 0.4% as Black or African American, and 0.5% as some other race. In addition, 9% identified themselves as two or more races. Residents identifying themselves as Hispanic or Latino made up 4.2% of the population that year. Between 2000 and 2010, there was very little change in the racial and ethnic composition of Cordova. The most significant change was in those identifying themselves as two or more races (2.3 percentage points). Information regarding trends in race and ethnicity can be found in Figure 1.

¹⁰⁴ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

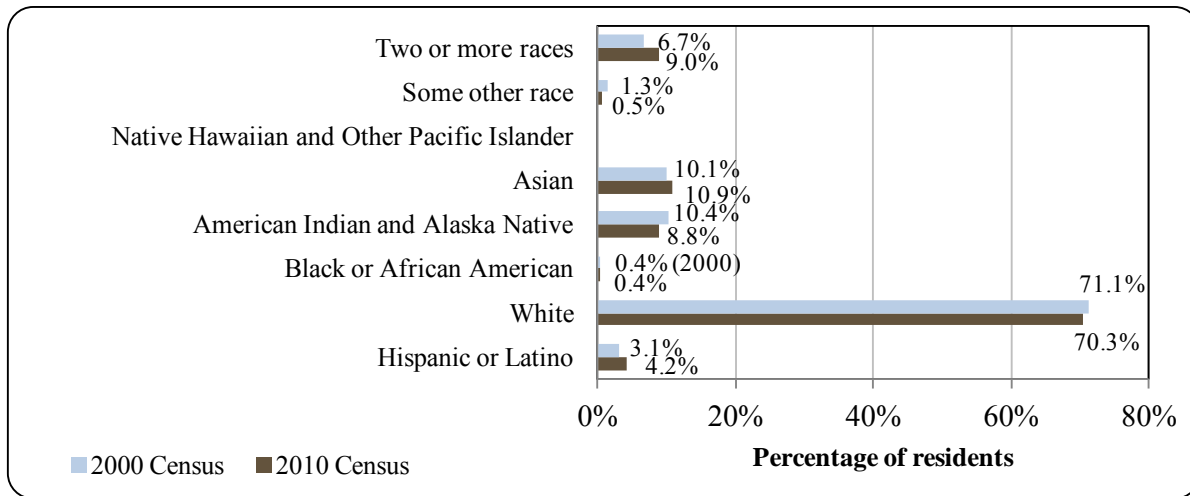
Table 1. Population in Cordova from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	2,110	-
2000	2,454	-
2001	-	2,382
2002	-	2,302
2003	-	2,291
2004	-	2,300
2005	-	2,292
2006	-	2,236
2007	-	2,180
2008	-	2,155
2009	-	2,126
2010	2,239	-

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

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

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



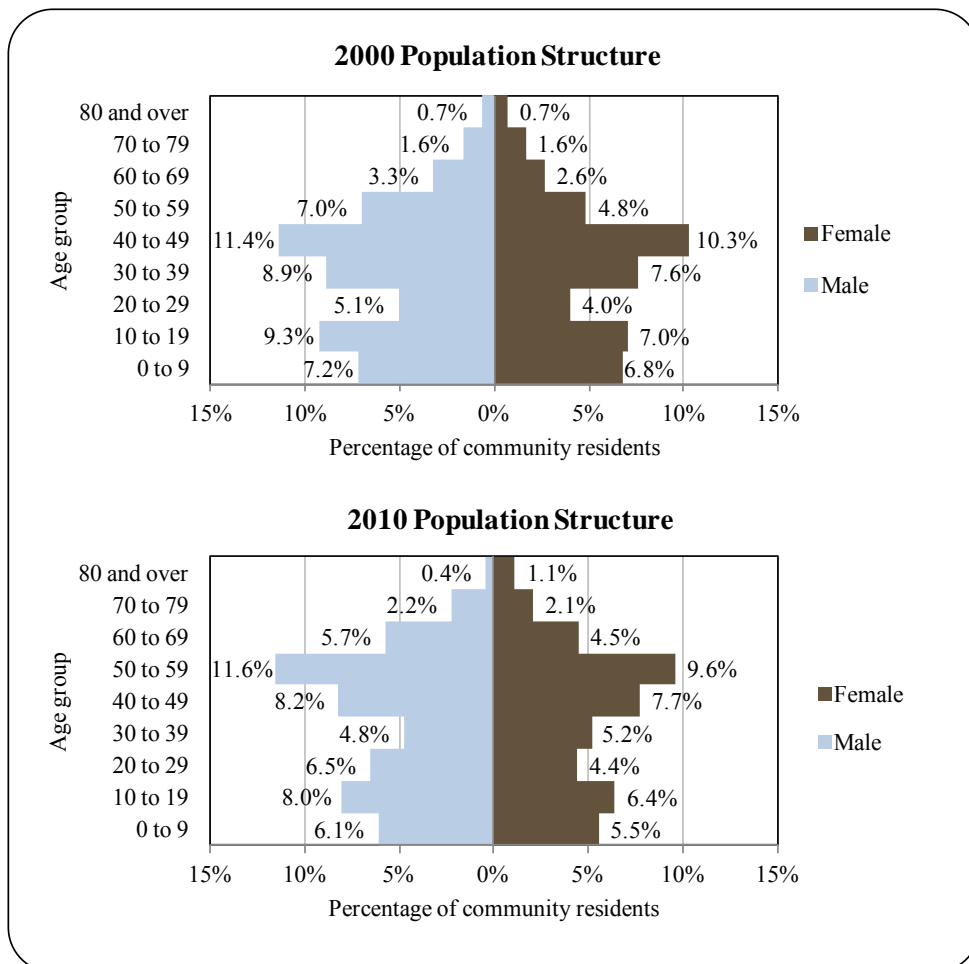
In 2010, the average household size was 2.41, compared to 2.6 in 1990 and 2.48 in 2000. In that year, there were a total of 1,100 housing units, compared to 883 in 1990 and 1,099 in 2000. Of the households surveyed in 2010, 52% were owner-occupied, compared to 52% in 2000; 32% were renter-occupied, compared to 35% in 2000; 10% were vacant, compared to 7% in 2000; and 7% were occupied seasonally, compared to 6% in 2000. There were a total of 18 residents living in group quarters in 2010, compared to 77 in 2000.

The gender distribution in 2010 was slightly skewed at 53.6% male and 46.4% female. This was similar to both the statewide distribution (52% male, 48% female) and 2000 distribution (54.4% male, 45.6% female). The median age that year was 42.2 years, which was somewhat older than both the statewide median of 33.8 years and 2000 median of 36.9 years.

Compared with 2000, the 2010 population structure showed age transitions consistent with a stable population, meaning that cohorts aged while still mostly retaining their structural character. In 2010, 26% of residents were under the age of 20, compared to 30.3% in 2000; 16% were over the age of 59, compared to 10.5% in 2000; 47.1% were between the ages of 30 and 59, compared to 50% in 2000; and 10.9% were between the ages of 20 and 29, compared to 9.1% in 2000. In 2010, the population aged 50 to 59 represented the largest (21.2%) proportion of the population; while those aged 30 to 39 represented the smallest proportion (10%).

Overall gender distribution by age cohort was similar in both 2000 and 2010. In 2010, the greatest absolute gender difference occurred within the 20 to 29 range (6.5% male, 4.4% female), followed by the 50 to 59 (11.6% male, 9.6% female) and 10 to 19 (8.0% male, 6.4% female) ranges. Of those three, the greatest relative gender difference occurred within the 20 to 29 range. Information regarding trends in Cordova’s population structure can be found in Figure 2.

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



In terms of educational attainment, the U.S. Census 2006-2010 American Community Survey (ACS)¹⁰⁶ estimated that 87.9% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 6.2% had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 5.9% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 33.7% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 8.8% held an Associate's degree, compared to an estimated 8% of Alaska residents overall; an estimated 16.4% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 7% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*¹⁰⁷

Historically, the area around Cordova was populated by Alutiiq and migrating Athabascan and Tlingit Natives who called themselves Eyaks. The most prominent Native group in the area was the Chugachigmuit, who occupied most of PWS to the west of Cordova. The Eyaks, while never numerous in recorded times, occupied the nearby village sites of Alakganik and Eyak, as well as a site on what is now Old Town in Cordova. Both Alakganik and the historic village of Eyak were abandoned by the end of the nineteenth century, and many moved to what would later become Cordova.

Kayak Island, southeast of the Copper River Delta, was the first point of Alaska sighted by Vitus Bering in 1741. Bering was followed in 1778 by Captain James Cook, who anchored in Snug Corner Cove northwest of Cordova. No major settlements were established by the Russians in the PWS area, although a fur gathering post was established west of Cordova, on Hinchinbrook Island in 1793. After the purchase of Alaska by the U.S. Government, oil was discovered in the Katalla area in 1902, which became Alaska's first producing well. By 1905, a port and facilities were needed to serve 5,000 oil workers, as well as developers of the nearby Bering River coal fields. An attempt to build a deep-water port at Katalla was unsuccessful, and the site of present day Cordova was chosen instead. At the same time, the Kennecott Copper Company was organized to develop new copper claims in the Chitina River valley. Before development could begin, a transportation link to the coast was needed and Cordova was selected as the coastal terminus of the Copper River and Northwestern railroads.

By 1908, the city of Cordova was incorporated and by the time of the 1910 Census, the city had a population of 1,152 people. At that time, Cordova was the fifth largest community in Alaska, exceeded in population only by Nome, Fairbanks, Juneau, and Ketchikan. In the years between 1910 and 1938, Cordova primarily served as a transportation and service center for the Kennecott copper mines. However, as the city grew, its economy diversified. Although there had been canneries in the PWS area since 1889, it was after its establishment as a company town that fishing and fish processing gained in economic importance in Cordova. The 1907 establishment

¹⁰⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁰⁷ City of Cordova. (1995). *Cordova Comprehensive Development Plan*. Retrieved February 23, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Cordova-CP-1994.pdf>.

of the Chugach National Forest also encouraged a local timber industry. The local Kennecott mines, arguably the largest economic contributor of its time, had produced approximately \$175 million worth of copper by 1925. However, by 1927 production began to decline and by 1938 the mines closed. The Katalla oil fields also closed in the 1930s after their refinery burned in 1933. By 1940, Cordova's economy switched to fishing and fish processing to replace lost mining jobs. With the exception of a brief spike in construction during World War II, including the construction of the city's airport, fishing has remained a main economic driving force in Cordova to this day. The population of Cordova has steadily grown since 1940 as the commercial fishing industry has become more community-based. The Cordova post office and courthouse are listed on the National Register of Historic Places (NRHP) as significant properties.¹⁰⁸

Natural Resources and Environment

Cordova has a maritime climate which is characterized by cool summers and mild winters. Winter temperatures average from 17 to 28 °F (-8 to -2 °C). Summer temperatures average from 49 to 63 °F (9 to 17 °C). Average annual precipitation is 167 inches, and average annual snowfall is 80 inches.¹⁰⁹

Cordova is located in the Chugach National Forest and is backed by the Chugach Mountains, characterized by rugged peaks from 7,000 to 13,000 ft high and expansive icefields which feed valley and piedmont glaciers. Inundated glacial valleys create steep coastlines, and much of the level surfaces comprise of glacial outwash and alluvial plains. The 1964 "Good Friday" earthquake dramatically altered the physical landscape with tectonic uplifts ranging from 6.5 to 7.5 ft in areas around Cordova. Mudflats, beaches, and reefs that were formally only exposed during low tides became permanently exposed. Several canneries were forced to extend their docks and extensive dredging and harbor repairs were needed to make port facilities usable again. Essentially, Cordova lost its deep-water port capabilities following the earthquake.¹¹⁰

Vegetation surrounding Cordova is dominated by mixed Sitka spruce and western hemlock stands, with limited amounts of mountain hemlock, yellow cedar, and black cottonwood. Pure Sitka spruce stands occur along river banks and on glacier flats. The Copper River Delta flats consist of brackish marsh vegetation populated by a mix of grasses, willow, alder, and scattered Sitka spruce and cottonwood.¹¹¹

The 700,000 acre Copper River Delta Game Management Area serves as important habitat for a wide range of wildlife. Local large terrestrial animals include black and brown bear, mountain goat, deer, and moose. Furbearers present in the area include wolf, wolverine, lynx, beaver, mink, muskrat, marten, land otter, and coyote. The waters of PWS support all five species of Pacific salmon, Pacific halibut, rockfish, herring, lamprey, lingcod, Atka mackerel, walleye pollock, and sablefish.¹¹² Marine mammals present in the area include harbor seal, Steller sea lion, porpoise, and whales.¹¹³

¹⁰⁸ U.S. National Park Service. (n.d.). *National Register of Historic Places*. Retrieved February 28, 2012 from: <http://www.nps.gov/nr/research/>.

¹⁰⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁰ See footnote 107.

¹¹¹ Ibid.

¹¹² Alaska Department of Fish and Game. (n.d.). *Species: Animals*. Retrieved February 23, 2012 from: <http://www.adfg.alaska.gov/index.cfm?ADFG=animals.main>.

¹¹³ Ibid.

Economically important fish resources in the Cordova Coastal District include all five species of Pacific salmon, Dolly Varden char, rainbow trout, Pacific herring, halibut, Pacific cod, rockfish, sablefish, Tanner crab, Dungeness crab, king crab, shrimp, mussels, razor clams, and hardshell clams. While timber and mineral resources were of importance in Cordova's past, currently there are no large-scale developments for either. The Eyak Corporation holds timber interests in the area and may begin harvests once timber becomes profitable. In addition, Chugach Alaska Corporation and Eyak Corporation both hold mineral rights on lands they own in the area, and both have indicated an intention to continue exploration activities. Finally, coastal habitats provide a range of ecosystem services to Cordova and the region as a whole. Estuaries, barrier islands, wetlands, tidal flats, and coastlines throughout the Copper River Delta area provide important habitat for a wide range of aquatic and terrestrial wildlife. The Copper River is one of the most productive salmon habitats in Alaska, producing salmon which have become a globally recognized brand. Deeper offshore areas provide important halibut rearing habitat while coastal estuaries, wetlands, and sea cliffs are important to seabird nesting.¹¹⁴

According to the City of Cordova's Hazard Mitigation Plan¹¹⁵, potential natural hazards include severe weather, flooding, earthquake, tsunami, erosion, avalanches, and wildfires. Flood hazards can occur from storm surges, heavy rainfall, heavy snowmelt, and glacial outbursts. Flood events can in turn, contribute to local sediment deposition and erosion. Eyak Lake and River present the greatest flood risk to Cordova, as the River does not have the capacity to handle seasonal flows. In addition, outburst floods occasionally occur on the Scott Glacier, although these are not thought to contribute significantly to flooding. Major coastal flooding events in the Cordova Coastal District occur every 60 to 100 years. Severe weather comes in the form of heavy snowfall and high winds. Cordova gets an average of 80 inches of snow per year, and heavy and potentially damaging snowfall events are common. Cordova has a moderate probability of wildfire occurrence; however, the city is located in a critical protection area and wildfires can potentially threaten high-value properties, as well as natural and cultural resource sites. Cordova has a moderate vulnerability to tsunami damage, with the most serious threat coming from earthquakes occurring in the Gulf of Alaska. All coastal areas are less than 100 ft in elevation and should a tsunami occur, port and harbor facilities, public works facilities, transportation facilities, and public equipment would be affected. Finally, the area surrounding Cordova has a high probability of avalanche or landslide occurrence due to high relief topography, coupled with high levels of precipitation.

According to the Alaska Department of Environmental Conservation (DEC), there were no significant environmental remediation sites active in 2010.¹¹⁶

¹¹⁴ Alaska Department of Natural Resources. (2008). *Cordova Coastal District Management Plan*. Retrieved February 24, 2012 from:

http://www.alaskacoast.state.ak.us/District/DistrictPlans_Final/Cordova/Final_Draft_Plan_February20.pdf.

¹¹⁵ City of Cordova, WHPacific, and Bechtol Planning and Development. (2008). *City of Cordova Local Hazards Mitigation Plan*. Retrieved February 23, 2012 from:

http://www.dced.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Cordova_LHMP.pdf.

¹¹⁶ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved June 27, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy¹¹⁷

In a survey conducted by the AFSC in 2011, community leaders reported that Cordova's economy is dependent on commercial and recreational fishing, eco-tourism, and mineral exploration. Since the decline of the oil and mineral industries in the mid-twentieth Century, Cordova has strived to develop a diverse economy, supporting year-round employment. This has centered on commercial fishing, recreational fishing, tourism, and entrepreneurship. While the *Exxon Valdez* oil spill in 1989 contributed to a decline in PWS commercial fisheries, the salmon drift and gill net fisheries recovered quite well, and Copper River salmon are now in high demand. Robust growth has led to strong construction, transportation, and materials service industries as well as growth in professional and retail services. Tourism has been growing at a heightened pace since focus was turned to developing tourism services and infrastructure in the late 1990s. These services included sportfishing charter operations, sightseeing businesses, visitor accommodations, and other visitor related industries. Finally, state and federal agencies are strong employers given Cordova's involvement in resource extraction, relatively high population size, and proximity to publically managed lands.¹¹⁸ Top employers in 2010 included:¹¹⁹ Trident Seafoods Corp., Cordova School District, City of Cordova, Native Village of Eyak, State of Alaska, Cordova Community Medical Center, AK Commercial Co., Reluctant Fisherman LLC., Ocean Beauty Seafoods LLC., and Cordova Electric Coop Inc.

In 2010,¹²⁰ the estimated per capita income was \$30,630 and the estimated median household income was \$72,125, compared to \$25,256 and \$50,114 in 2000, respectively. After accounting for inflation by converting 2000 values to 2010 dollars,¹²¹ the real per capita income (\$33,211) and real median income (\$65,899) indicate a slight decrease in individual earnings and moderate increase in household earnings. In 2010, Cordova ranked 58th of 305 communities from which per capita income was estimated, and 41st of 299 communities from which median household income was estimated.

Cordova's small population size may have prevented the ACS from accurately portraying economic conditions.¹²² Another way of understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$31.96 million in total wages in 2010.¹²³ When matched with the population in 2010, the per capita income equals \$14,275, which is

¹¹⁷ Unless otherwise noted, all monetary data are reported in nominal values.

¹¹⁸ City of Cordova. (2008). *City of Cordova Comprehensive Plan*. Retrieved February 24, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Cordova-CP-2008.pdf>.

¹¹⁹ Alaska Department of Labor (n.d.). *Alaska Local and Regional Information Network*. Retrieved January 20, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

¹²⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹²¹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹²² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹²³ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

significantly less than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Census figures.¹²⁴

According to the 2006-10 ACS estimates,¹²⁵ 67.9% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 9.9%, compared to 5.9% estimated statewide; and an estimated 1.8% of residents were living below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed in 2010, an estimated 49.7% worked in the private sector, an estimated 35.6% worked in the public sector, an estimated 13.0% were self-employed, and an estimated 1.6% were unpaid family workers. If accurate, the high proportion of self-employed residents estimated by the 2010 ACS may have impacted the accuracy of ALARI estimates, which do not account for self-employed workers.

By industry, sector employment was relatively diverse in 2010. In that year, most (24.4%) employed residents were estimated to be working in education services, health care, and social assistance sectors; followed by agriculture, forestry, fishing, hunting, and mining sectors (14.2%); and arts, entertainment, recreation, accommodation, and food service sectors (10.8%). Compared with 2000, significant increases occurred in education services, health care, and social assistance sectors while significant decreases occurred in public administration and non-public administrative service sectors. By occupation type, most (29.7%) residents held management or professional positions in 2010; followed by natural resources, construction, or maintenance positions (25.5%); service positions (18.3%); sales or office positions (15.9%); and production, transportation, or material moving positions (10.7%). Compared with 2000, production, transportation, material moving, sales, and office positions declined, while all other occupation types increased in 2010. According to 2010 ALARI estimates, most (27.2%) employed residents worked in local government sectors; followed by trade, transportation, and utilities sectors (18.7%); and manufacturing sectors (15.1%).¹²⁶ Information regarding employment trends can be found in Figures 3 and 4.

¹²⁴ See footnote 119.

¹²⁵ See footnote 122.

¹²⁶ See footnote 119.

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

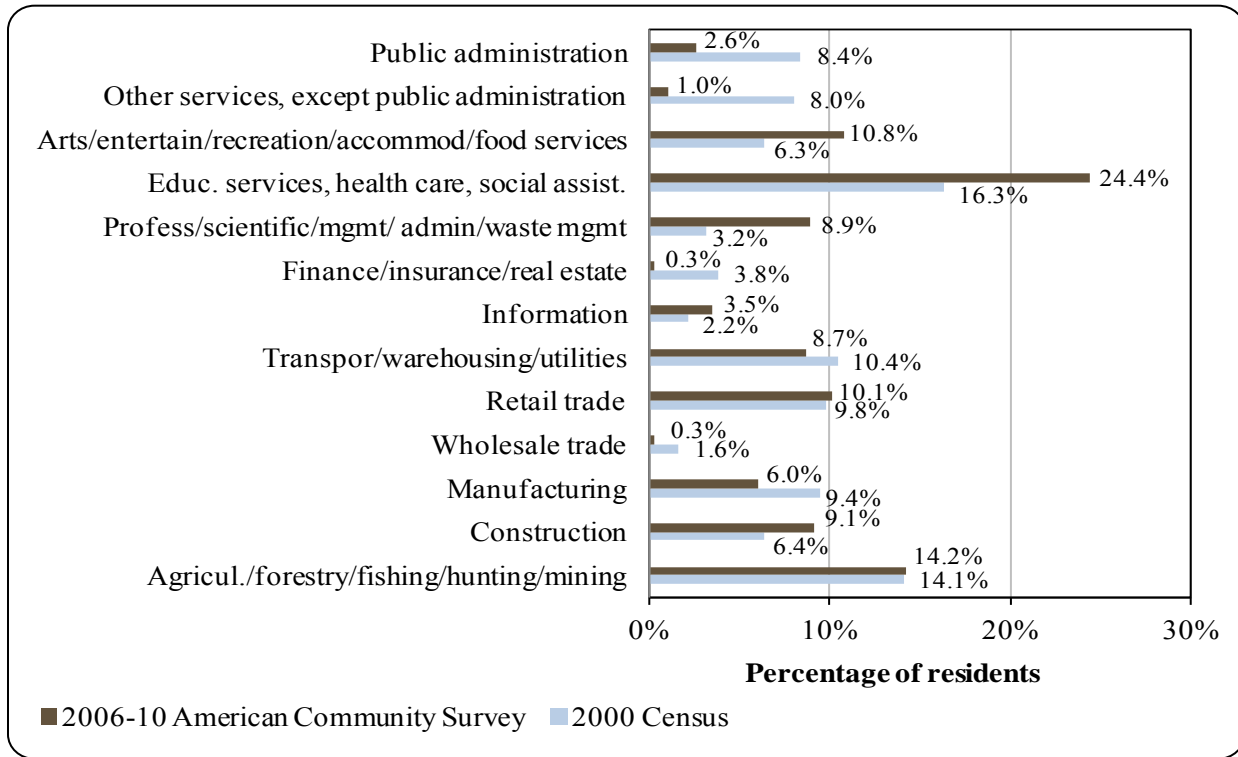
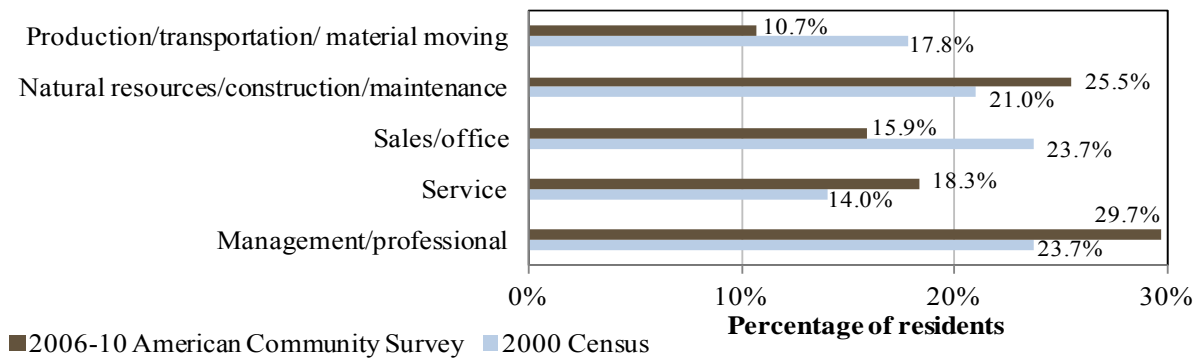


Figure 4. Local Employment by Occupation in 2000-2010, Cordova (U.S. Census).



Governance

Cordova is a Home Rule city with a mayoral form of government. The city has a seven-member city council, five-member school board, seven member planning and zoning commission, and six municipal employees. Cordova was not included in the Alaska Native Claims Settlement Act (ANCSA) and does not a U.S. Bureau of Indian Affairs recognized Tribal government. The Alaska Department of Fish and Game (ADF&G) has a field office located in Cordova. The closest National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services offices are located in Anchorage, 150 mi northwest.

In 2010, Cordova administered a 6% sales tax, 13.9 mills property tax, 6% accommodations tax, and 6% car rental tax. Total municipal revenues for 2010 were \$10.31 million, compared to \$5.75 million in 2000; a 38.7% increase after accounting for inflation.¹²⁷ Total sales tax revenue that year accounted for 27.9% of total municipal revenues; compared to 37.5% in 2000. State allocated Community Revenue Sharing accounted for 2.0% of total municipal revenues in 2010, compared to 2.2% in 2000 from State Revenue Sharing. Sales and use taxes accounted for most locally generated tax revenue, followed by property taxes and payments in lieu of taxes (federal). Outside revenues came primarily from forest service receipts and raw fish taxes. State and federal fisheries-related grants awarded to Cordova include \$1.2 million for a breakwater expansion project, \$9.75 million for harbor repair and renovation, \$16 million for improvements to the old Coast Guard dock, \$924,000 for a boat haulout facility, and \$1 million for marine pollution abatement for the haul-out facility. Information regarding municipal finances can be found in Table 2.

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

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$5,747,827	\$2,157,441	\$129,078	\$9,176,000
2001	\$5,683,228	\$2,348,268	\$109,686	\$9,176,000
2002	\$5,660,755	\$2,320,200	\$110,767	\$4,300,000
2003	\$5,035,346	\$2,124,800	\$106,714	\$4,335,000
2004	\$5,746,680	\$2,033,859	-	n/a
2005	\$6,437,229	\$2,325,235	-	n/a
2006	\$6,456,225	\$2,469,977	-	n/a
2007	\$6,666,635	\$2,605,167	-	n/a
2008	\$7,363,347	\$2,745,924	-	n/a
2009	\$9,508,883	\$2,669,455	\$206,242	\$1,889,000
2010	\$10,307,738	\$2,875,479	\$202,622	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from

http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from

http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

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

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

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

¹²⁷ Inflation calculated using the 2010 Anchorage CPI from the Alaska Department of Labor: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Infrastructure

*Connectivity and Transportation*¹²⁸

Cordova is accessible by plane and boat. It is linked directly to the North Pacific Ocean shipping lanes through the Gulf of Alaska. It receives year-round barge services and state ferry service. The Merle K. "Mudhole" Smith Airport is state-owned and -operated, with a 7,500-ft long by 150-ft wide asphalt runway and 1,899-ft long by 30-ft wide gravel crosswind runway. The state-owned and city-operated Cordova Municipal Airport has a 1,800 ft-long by 60-ft wide gravel runway. Daily scheduled jet flights and air taxis are available. Float planes land at the Lake Eyak seaplane base or the boat harbor. Harbor facilities include a breakwater, dock, small boat harbor with 850 berths, boat launch, boat haulout, ferry terminal, and marine repair services. A 48-mi gravel road provides access to the Copper River Delta to the east. The price of roundtrip airfare between Anchorage and Cordova in June 2012 was \$208.¹²⁹

Facilities

Cordova utilizes water from Murcheson Falls, Heney Creek Dam, Meals Reservoir, Orca Reservoir, and Eyak Lake. The water is treated, but only the Eyak Lake water is filtered. Water storage capacity is 2.1 million gal. The city operates a piped water and sewer system. Sewage is treated before discharge. Over 90% of homes are fully plumbed. Some homes use individual wells and septic systems. A class 2 landfill and sludge disposal is available. The community participates in recycling and a household hazardous waste program. Cordova Electric Cooperative operates the Humpback Creek Hydro Facility and two diesel-powered plants at Eyak and Orca.

Public safety is provided by the local police department, state troopers, and state fish and wildlife protection. Fire and rescue services are provided by the local volunteer fire department, Emergency Medical Services (EMS), and local search and rescue services. Broadband internet, cable, local television, and long distance telephone services are all available. Additional public infrastructure includes a youth center, local gym and pool, museum and cultural center, moose lodge, jail, several libraries, and numerous visitor accommodations and attractions.¹³⁰

Cordova's existing port facilities include three docks for large vessels, two boat ramps, a three-tier dock, a small boat harbor, and a few piers associated with local canneries. All three docks are city-owned, as are the small boat harbor facilities. The Municipal Dock (Ocean Dock) is Cordova's main commercial port facility. The outside face of the dock is 408 ft long and the inside face is 325 ft long. The dock is equipped with water, gasoline, and diesel services. The dock is primarily used for cargo, freight, and ferry passengers. Next to the Ocean Dock is a staging and container storage area, as well as a 150-ton haulout and maintenance facility. The City Dock is used for the transfer of fishing gear and light cargo. The outside face is 280 ft long and is equipped with electricity and water utilities. The North Containment Dock is used primarily for Coast Guard moorage. The outside face is 213 ft long. The Cordova Small Boat Harbor has 727

¹²⁸ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁹ Airfare was calculated using lowest fare available from www.travelocity.com. Retrieved November 22, 2011.

¹³⁰ See footnote 128.

slips available and covers approximately 30 acres. Electricity, telephone, and water are provided to all floats.¹³¹

In a survey conducted by the AFSC in 2011, community leaders reported that infrastructure projects completed or in progress as of 2010 included a fish cleaning station, new dock space, dock improvements, dockside electrical and water utilities, sewage and water treatment facilities, a new landfill, a new community center, school improvements, and telephone improvements. As of 2010 there were plans to construct additional dock space, expand dockside utilities, construct new pilings and a breakwater, build more dry dock space, expand haulout facilities, and improve police and fire services by 2020. According to community leaders, there is 900 ft of dock space available for transient vessel moorage, and vessels up to 90 ft long can use moorage in Cordova. Coast Guard regulated vessels which Cordova is capable of handling include rescue vessels, cruise ships, ferries, fuel barges, and hazardous materials (HAZMAT). Fisheries support businesses and services located in Cordova include fish processing plants, fishing gear sales, boat repair (electrical, welding, mechanical services, machine shop, hydraulics), small vessel haulout (<60 tn), large vessel haulout (>60 tn), tidal grid for small vessels (<60 tn), tidal grid for large vessels (>60 tn), commercial fishing vessel moorage, recreational fishing vessel moorage, tackle sales, bait sales, commercial cold storage facilities, dry dock storage, marine refrigeration, fish lodges, fishing business attorneys, fishing related bookkeeping, boat fuel sales, fishing gear repair, fishing gear storage, ice sales, water taxi, seaplane service, and air taxi. Public services available include medical services, food bank, publicly subsidized housing, public library, and mental health services.

Medical Services

Cordova Community Medical Center provides acute care, emergency care, laboratory and radiology services, physical therapy, mental health services, crisis support, long-term care, and a wide range of specialized services.¹³² Ilanka Community Health Center provides elder care, alcohol and substance abuse, youth, and wellness programs.¹³³

*Educational Opportunities*¹³⁴

Mount Eccles Elementary provides preschool through 6th grade instruction. As of 2011, there were 173 students enrolled and 13 teachers employed. Cordova Junior and Senior High School provides 7th through 12th grade instruction. As of 2011 there were 173 students enrolled and 15 teachers employed. An extension of PWS Community College is located in Cordova, offering opportunities for Associate's and Bachelor's degrees.

¹³¹ City of Cordova. (2008). *City of Cordova Comprehensive Plan*. Retrieved February 24, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Cordova-CP-2008.pdf>.

¹³² Cordova Community Medical Center. (n.d.). Retrieved June 27, 2012 from: <http://www.cdvcmc.com/>.

¹³³ Native Village of Eyak. (n.d.). *Ilanka Community Health Center*. Retrieved June 27, 2012 from: <http://www.nveyak.com/pages/ilankahealthclinic.html>.

¹³⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Commercial fishing started at the mouth of the Copper River in 1887 when the region's first cannery was built by the Pacific Packing Company near the village of Eyak. Early fishing at the mouth of the Copper River was done by essentially barricading the mouth, which although very efficient, did not allow enough salmon through to spawn. Soon after Alaska became a territory in 1912, measures were taken to regulate gear types in the Cooper River area due to a proliferation of many different catch methods, and subsequent concerns of local Native groups regarding decreased subsistence harvests. Between 1914 and 1923, 14 new canneries were established in the PWS area. In the 1930s, the Alaska Fish Cannery Workers Union was formed, representing cannery workers, clam diggers, and fishermen in Cordova. That organization eventually evolved into present day Cordova District Fishermen United. Herring, which had been fished in the PWS since 1914, peaked in 1936 at over 56,000 tn landed.

By the 1940s, over 40 fish traps were built in the PWS area which operated 6 days a week for 24 hours a day during seasons. Canneries processed not only salmon, but also crab, clams, and shrimp. Fish stocks began to crash in the late 1940s and early 1950s because of the overuse of fishtraps. Upon gaining statehood, Alaska was given the authority to manage its fisheries, including gear types used in prosecuting them, which lead to the abolishment of commercial traps in the Copper River Delta.

The 1964 “Good Friday” earthquake radically changed the landscape of Cordova, causing coastal uplift of 6.5 to 7.5 ft in some areas. This event, coupled with over-exploitation and an expanding sea otter population, essentially ended the commercial clamming industry in Cordova which had previously been renowned for its razor clams. The 1989 *Exxon Valdez* Spill had lasting impacts on PWS, particularly on the herring fishery. The perception of tainted fish by consumers along with a flood of cheap farm raised fish resulted in steep declines in local incomes, boat values, and permit values. Since then, salmon, halibut, and sablefish have lead in the recovery of the local commercial fishing economy.¹³⁵

In a survey conducted by the AFSC in 2011, community leaders reported that Cordova currently participates in the fisheries management process in Alaska through representatives that participate in North Pacific Fisheries Management Council (NPFMC) committees or advisory groups, ADF&G regional fisheries advisory groups or working groups, and Federal Subsistence Board or Federal Subsistence Regional Advisory Council processes. In addition, Cordova relies on regional organizations including the Cordova District Fishermen United and other industry related organizations. Current challenges for the portion of Cordova's economy based on fishing include current state management of fisheries, resource allocation, other user groups on the Copper River, fish farming, and international competition.

Cordova is located in Federal Reporting Area 649, International Pacific Halibut Commission (IPHC) Regulatory Area 3A, and the Central Gulf of Alaska (GOA) Sablefish Regulatory District.

¹³⁵ Cordova District Fishermen United. (n.d). *A Historical Narrative of Fishing in the PWS/Copper River Area*. Retrieved February 24, 2012 from: <http://www.cdfu.org>.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, a number of processing plants are operating in Cordova.

Copper River Seafoods was formed in 1996 by three Alaska fishermen with three formerly competing companies. Beginning in May, the facility in Cordova processes Copper River king and sockeye salmon. The plant shuts down for the year after the Copper River coho salmon season comes to an end in late September. Copper River Seafood has 10 year-round employees who work at their two offices in Cordova and Anchorage and the Cordova plant employs a maximum of 120 seasonal workers (including foreign students with J-1 visas) during the salmon season.¹³⁶ The plant relies on public docks, water services, power/electricity, and waste management services.¹³⁷

Ocean Beauty's Cordova production facility is located on the waterfront in Orca Inlet, and began operations in 1978. The plant operates from February to September and is one of the largest producers and shippers of Copper River king and sockeye salmon. In addition to Copper River king and sockeye salmon, the facility also processes pink, chum and coho salmon, as well as halibut, black cod, Pacific cod and herring. Ocean Beauty's Cordova facility provides free laundry machines and work-related clothing to its fish processing workers, as well as room and board at a nominal fee if workers fulfill their contractual obligations.¹³⁸

The Prime Select Seafoods facility in Cordova opened in 2011 and is a small family company that processes various fish species from the Copper River, PWS and the Gulf of Alaska. Beginning in early May, Prime Select Seafoods begins processing Copper River king salmon. Throughout the summer and into early fall the facility processes Copper River king, sockeye and coho as well as pink and chum salmon caught in PWS. During this time halibut is also processed at the facility. During the winter the plant receives deliveries of lingcod, rockfish, Pacific cod, and Pollock from boats fishing in PWS and the Gulf of Alaska.¹³⁹ The plant mostly smokes fish and purchases from fisherman that have IFQs. The plant relies on public docks, water services, power/electricity, and waste management services. There are between 3 and 15 employees each year.¹⁴⁰

Trident Seafoods Corporation has two processing facilities in Cordova. Trident was founded in 1973, and by the year 2000 was employing 4,000 people annually throughout Alaska and the Pacific Northwest. The Cordova plants combined employ a maximum of 560 workers during the summer months.¹⁴¹ According to its website, throughout Alaska Trident processes cod, pollock and crab in the winter and herring and salmon in the summer. Both Cordova facilities provides room and board at a nominal cost, as well as air transportation to Cordova from Seattle and back, to its seafood processors.¹⁴² Both plants also rely on public water

¹³⁶ Copper River Seafoods. (n.d.). *Homepage*. Retrieved from: <http://www.copperriverseafood.com>.

¹³⁷ This information is based on the results of a processing plant survey conducted by the Alaska Fisheries Science Center in 2011.

¹³⁸ Ocean Beauty Seafoods. (n.d.). *About: Production Locations – Cordova, Alaska*. Retrieved from: <http://www.oceanbeauty.com/about/cordova.htm>.

¹³⁹ Prime Select Seafoods. (n.d.). *Wholesale: Fishermen specializing in Copper River wild salmon*. Retrieved from: <http://www.pssifish.com/wholesale.html>.

¹⁴⁰ This information is based on the results of a processing plant survey conducted by the Alaska Fisheries Science Center in 2011.

¹⁴¹ Ibid.

¹⁴² Trident Seafoods. (n.d.). *Homepage*. Retrieved from: <http://tridentseafoods.com/>.

services, power/electricity, gas (only the Cordova North facility), and waste management services.¹⁴³

Wild by Nature is a seafood processing plant in Cordova which is owned and operated by two husband and wife teams. Between mid-May and October they catch and process fresh, frozen and smoked Copper River salmon (Chinook, sockeye and coho) that they sell on the Internet.¹⁴⁴

Fisheries-Related Revenue

Between 2000 and 2010, Cordova raised fisheries-related revenue through raw fish taxes, Shared Fisheries Business Taxes, Fisheries Resource Landing Taxes, harbor usage fees, and port/dock usage fees. In 2010, \$1.81 million was collected in fisheries-related revenue, compared to \$1.59 million in 2000, representing an approximate 12% decline in revenues after accounting for inflation.¹⁴⁵ Fisheries-related income peaked in 2009 at \$4.68 million. In a survey conducted by the AFSC in 2011, community leaders reported that there are not any fishing-related fee programs charged to the fishing industry that specifically support public services or infrastructure. Information regarding fisheries-related income trends can be found in Table 3.

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

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that on average, Pacific cod season starts in February, salmon season runs from May through September, and halibut and sablefish seasons run from March through November. Gear types used by locals in Cordova include purse seines, pots, long lines, and gill nets.

In 2010, 392 residents, or 15.5% of the population, held 654 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC); which represented 3.1% of statewide CFEC permit holders and 3.7% of total CFEC permits issued that year. In 2000, 406 residents held 692 CFEC permits, which represented 3% of statewide CFEC permit holders and 3.3% of CFEC permits issued that year. Of the CFEC permits issued in 2010, 60% were for salmon, compared to 62% in 2000; 13% were for herring, compared to 18% in 2000; 9% were for “other” shellfish, compared to less than 1% in 2000; 8% were for halibut, compared to 9% in 2000; 4% were for groundfish, compared to 8% in 2000; 3% were for sablefish, compared to 2% in 2000; and 1% were for crab, compared to less than 1% in 2000. Also in 2010, 34 residents held 37 License Limitation Program (LLP) groundfish permits, of which 35% were actively fished; and 4 residents held 4 LLP crab permits, of which none were actively fished. In addition, 25 residents held 27 Federal Fisheries Permits (FFP), of which 70% were actively fished. In 2000, 34 residents held 35 LLP groundfish permits, of which 37% were actively fished; 6 residents held 6 LLP crab permits, of which 16% were actively fished; and 23 residents held 24 FFP, of which none were active. In 2010, 63 halibut quota share accounts held 7.88 million

¹⁴³ See footnote 140.

¹⁴⁴ Wild By Nature. (n.d.). Retrieved from: <http://www.wild-by-nature.com/WhoAreWe.htm>.

¹⁴⁵ Inflation calculated using the 2010 Anchorage CPI from the Alaska Department of Labor: <http://labor.alaska.gov/research/cpi/cpi.htm>.

shares or 3.8% of total halibut quota statewide. Also in that year, 10 sablefish quota share accounts held 3.39 million shares or 2.6% of total sablefish quota statewide, and one crab quota share account held 382,422 shares or 1% of state crab quota statewide.

There were 320 residents who held commercial crew licenses in 2010, compared to 409 in 2000. In addition, residents held majority ownership of 448 vessels that year, compared to 520 in 2000. Of the CFEC permits issued in 2010, 72% were actively fished, compared to 67% in 2000. This varied by fishery ranging from 100% of sablefish permits to 3% of herring permits. Fisheries prosecuted by residents of Cordova in 2010 include Bristol Bay pot king crab, Bering Sea pot Tanner crab, Kodiak pot Tanner crab, statewide longline halibut, Kodiak purse seine herring roe, statewide longline ling cod, statewide and GOA longline miscellaneous finfish, GOA pot miscellaneous finfish, southeast Alaska dive geoduck, PWS pot shrimp, southeast Alaska dive sea cucumber, statewide longline sablefish, PWS fixed gear sablefish, statewide pot sablefish, southeast Alaska purse seine salmon, PWS purse seine salmon, Kodiak purse seine salmon, southeast Alaska drift gillnet salmon, Bristol Bay drift gillnet salmon, PWS set gillnet salmon, Cook Inlet set gillnet salmon, and Bristol Bay set gillnet salmon.¹⁴⁶

In 2010, a total of 162.1 million pounds of fish were landed in Cordova with an ex-vessel value of \$92 million, compared to 160.1 million pounds landed in 2000, which was valued at \$46.8 million ex-vessel. This represented a 43% increase in total ex-vessel revenues between 2000 and 2010, after accounting for inflation.¹⁴⁷ In that year, Cordova ranked 4th of 67 communities in terms of total pounds landed, and 3rd of 67 communities in terms of ex-vessel revenue derived from landings. By fishery, salmon was the most profitable species landed in Cordova in 2010, with 157.7 million pounds landed valued at \$82.8 million ex-vessel, compared to 151.3 million pounds valued at \$39.8 million in 2000. After accounting for inflation,¹⁴⁸ this represented an increase of approximately \$0.16 per overall pound landed.¹⁴⁹ Halibut landings in Cordova totaled slightly over 1.0 million pounds in 2010, and were valued at \$4.7 million, compared to 1.1 million pounds valued at \$2.8 million in 2000; which represented an approximate increase of \$1.01 per pound landed after accounting for inflation.¹⁵⁰ Sablefish landings totaled 862,622 lb valued at \$3.6 million ex-vessel, compared to 739,402 lb valued at \$2.8 million in 2000; representing a decrease of \$1.07 per pound landed after accounting for inflation.¹⁵¹ Finally, 1.9 million pounds of Pacific cod was landed in 2010, valued at \$684,639, compared to 640,455 lb valued at \$242,481 in 2000; which represented a decrease of \$0.17 per pound landed after accounting for inflation.¹⁵² Other groundfish landings in 2010 totaled 549,991 and were valued at \$211,545 total, compared to 71,547 lb valued at \$47,441 in 2000. Information regarding commercial fishing trends can be found in Tables 4 through 10.

¹⁴⁶ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁴⁷ Inflation calculated using the 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics. Retrieved March 15, 2011 from <http://www.bls.gov/ppi/#data>.

¹⁴⁸ Ibid.

¹⁴⁹ Does not account for individual species composition.

¹⁵⁰ See footnote 147.

¹⁵¹ Ibid.

¹⁵² Ibid.

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

Revenue Source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$516,438	\$549,830	\$437,955	\$386,605	\$448,958	\$591,749	\$610,916	\$631,642	\$750,000	\$900,000	n/a
Shared Fisheries Business Tax ¹	\$510,169	\$525,236	\$570,167	\$462,409	\$409,256	\$487,516	\$617,209	\$658,137	\$654,039	\$954,629	\$1.11 M
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$78	\$61	\$46	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$549,429	\$540,856	\$587,202	\$620,618	\$699,455	\$766,673	\$843,614	\$800,000	\$830,000	\$2.82 M	\$700,000*
Port/dock usage ²	\$13,565	\$14,000	\$14,000	n/a	n/a	\$45	\$620	\$420	\$600	\$600	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$1.59 M	\$1.63 M	\$1.61 M	\$1.47 M	\$1.56 M	\$1.85 M	\$2.07 M	\$2.09 M	\$2.23 M	\$1.86 M	\$1.81 M
Total municipal revenue⁵	\$5.75 M	\$5.68 M	\$5.66 M	\$5.04 M	\$5.75 M	\$6.44 M	\$6.46 M	\$6.67 M	\$7.36 M	\$9.51 M	\$10.31 M

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

*Source: AFSC 2011 Community Survey

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

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

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

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

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

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	35	33	33	33	35	34	35	36	36	36	37
	Active permits	13	12	11	9	11	10	9	9	12	10	13
	% of permits fished	37%	36%	33%	27%	31%	29%	25%	25%	33%	27%	35%
	Total permit holders	34	31	31	31	32	30	31	32	33	32	34
Crab (LLP) ¹	Total permits	6	6	6	5	5	4	4	4	4	4	4
	Active permits	1	1	1	1	1	0	0	0	0	0	0
	% of permits fished	16%	16%	16%	20%	20%	0%	0%	0%	0%	0%	0%
	Total permit holders	6	6	6	5	5	4	4	4	4	4	4
Federal Fisheries Permits ¹	Total permits	24	28	28	31	37	38	29	30	32	24	27
	Fished permits	0	0	0	14	16	15	16	18	17	15	19
	% of permits fished	0%	0%	0%	45%	43%	39%	55%	60%	53%	63%	70%
	Total permit holders	23	25	25	27	33	34	27	28	29	22	25
Crab (CFEC) ²	Total permits	2	7	8	2	5	4	5	4	4	5	7
	Fished permits	0	4	4	2	3	1	3	2	2	1	3
	% of permits fished	0%	57%	50%	100%	60%	25%	60%	50%	50%	20%	43%
	Total permit holders	2	6	6	2	4	4	5	4	4	5	6
Other shellfish (CFEC) ²	Total permits	3	2	2	6	7	4	5	4	4	4	62
	Fished permits	0	0	1	2	4	3	2	1	2	3	34
	% of permits fished	0%	0%	50%	33%	57%	75%	40%	25%	50%	75%	54%
	Total permit holders	3	2	2	4	5	3	3	3	3	3	58
Halibut (CFEC) ²	Total permits	65	67	66	69	67	64	65	61	62	54	54
	Fished permits	51	55	56	58	59	59	58	58	55	48	47
	% of permits fished	78%	82%	85%	84%	88%	92%	89%	95%	89%	89%	87%
	Total permit holders	63	65	65	68	65	64	64	61	62	54	54
Herring (CFEC) ²	Total permits	127	117	98	99	95	91	90	88	88	82	88
	Fished permits	14	14	2	3	2	2	2	2	2	2	3
	% of permits fished	11%	12%	2%	3%	2%	2%	2%	2%	2%	2%	3%
	Total permit holders	96	90	85	86	84	80	81	77	78	74	78

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	13	18	20	20	22	21	19	21	19	20	19
	Fished permits	11	16	19	20	22	19	17	20	18	19	19
	% of permits fished	85%	89%	95%	100%	100%	90%	89%	95%	95%	95%	100%
	Total permit holders	15	17	20	21	23	20	18	21	18	19	18
Groundfish (CFEC) ²	Total permits	55	49	32	28	30	27	29	26	36	31	29
	Fished permits	19	7	5	8	10	11	11	15	13	12	14
	% of permits fished	35%	14%	16%	29%	33%	41%	38%	58%	36%	39%	48%
	Total permit holders	42	38	26	25	27	26	24	22	27	26	25
Other Finfish (CFEC) ²	Total permits	1	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	426	412	401	412	408	401	407	410	404	390	395
	Fished permits	368	353	325	321	329	319	327	338	344	332	351
	% of permits fished	86%	86%	81%	78%	81%	80%	80%	82%	85%	85%	89%
	Total permit holders	364	348	334	343	339	344	346	346	348	340	350
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>692</i>	<i>672</i>	<i>627</i>	<i>636</i>	<i>634</i>	<i>612</i>	<i>620</i>	<i>614</i>	<i>617</i>	<i>586</i>	<i>654</i>
	<i>Fished permits</i>	<i>463</i>	<i>449</i>	<i>412</i>	<i>414</i>	<i>429</i>	<i>414</i>	<i>420</i>	<i>436</i>	<i>436</i>	<i>417</i>	<i>471</i>
	<i>% of permits fished</i>	<i>67%</i>	<i>67%</i>	<i>66%</i>	<i>65%</i>	<i>68%</i>	<i>68%</i>	<i>68%</i>	<i>71%</i>	<i>71%</i>	<i>71%</i>	<i>72%</i>
	<i>Permit holders</i>	<i>406</i>	<i>394</i>	<i>377</i>	<i>387</i>	<i>387</i>	<i>388</i>	<i>386</i>	<i>387</i>	<i>388</i>	<i>375</i>	<i>392</i>

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

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

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

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Cordova ²	Total Net Pounds Landed in Cordova ^{2,5}	Total Ex-Vessel Value of Landings in Cordova ^{2,5}
2000	409	50	9	520	656	729	160,147,624	\$46,809,522
2001	406	28	6	528	655	682	51,874,135	\$26,457,165
2002	328	30	9	492	632	658	44,584,549	\$23,415,751
2003	347	34	7	471	611	608	48,174,542	\$27,082,150
2004	298	33	7	464	602	607	28,869,503	\$26,365,226
2005	299	44	6	438	597	610	84,467,984	\$37,500,795
2006	317	38	6	428	592	586	46,411,757	\$38,945,950
2007	300	39	7	438	610	610	157,340,858	\$67,065,004
2008	299	29	7	453	628	659	117,520,444	\$71,121,072
2009	294	34	8	435	636	685	61,472,264	\$45,703,878
2010	320	33	7	448	645	704	162,097,746	\$92,042,916

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

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

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

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

⁵ Totals only represent non-confidential data.

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

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	80	5,623,735	557,379
2001	80	6,087,501	721,176
2002	80	7,342,002	1,048,053
2003	82	7,518,562	1,085,642
2004	83	8,034,178	1,192,368
2005	78	7,929,008	1,169,054
2006	75	7,594,327	1,087,058
2007	69	7,373,086	1,067,573
2008	64	7,586,522	1,043,332
2009	60	7,681,844	949,051
2010	63	7,881,097	898,079

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

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

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	5	1,326,901	109,319
2001	6	1,427,724	110,049
2002	7	3,275,765	282,077
2003	8	3,916,780	414,401
2004	11	4,016,274	451,458
2005	11	3,410,553	352,649
2006	11	3,581,073	344,849
2007	10	3,384,441	325,799
2008	10	3,403,025	301,292
2009	10	3,415,732	267,305
2010	10	3,386,595	249,802

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

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

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	1	382,422	16,512
2008	1	382,422	15,351
2009	1	382,422	12,493
2010	1	382,422	13,502

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

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

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	1,056,499	1,384,370	1,386,819	1,506,774	1,521,775	1,559,652	1,421,806	1,423,412	1,317,887	1,074,648	1,024,207
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	71,547	250,384	121,324	774,059	431,624	571,616	95,833	96,015	221,360	638,792	549,991
Other Shellfish	--	--	--	--	--	--	--	--	--	--	1,337
Pacific Cod	640,455	20,125	6,261	19,282	49,673	--	73,673	135,939	609,139	--	1,941,890
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	739,402	--	921,463	1,165,656	1,256,076	1,631,763	920,719	796,531	838,224	1,043,699	862,622
Salmon	151,319,856	45,217,421	38,577,807	41,873,232	25,600,347	80,600,506	43,899,726	154,888,961	114,532,272	56,986,019	157,717,461
<i>Total²</i>	<i>153,827,759</i>	<i>46,872,300</i>	<i>41,013,674</i>	<i>45,339,003</i>	<i>28,859,495</i>	<i>84,363,537</i>	<i>46,411,757</i>	<i>157,340,858</i>	<i>117,518,882</i>	<i>59,743,158</i>	<i>162,097,508</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$2,767,688	\$2,796,373	\$3,165,427	\$4,230,817	\$4,542,426	\$4,725,364	\$5,062,496	\$6,106,469	\$5,769,152	\$3,529,300	\$4,720,658
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$47,441	\$45,139	\$38,930	\$92,132	\$97,508	\$132,313	\$60,981	\$52,035	\$117,300	\$279,586	\$211,545
Other Shellfish	--	--	--	--	--	--	--	--	--	--	\$6,193
Pacific Cod	\$242,481	\$4,113	\$1,022	\$4,965	\$13,798	--	\$28,059	\$72,202	\$391,971	--	\$684,639
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	\$2,831,533	--	\$2,942,234	\$4,332,028	\$4,034,664	\$4,532,524	\$2,885,472	\$2,527,437	\$2,760,678	\$4,021,245	\$3,620,401
Salmon	\$39,839,520	\$19,650,950	\$16,874,081	\$18,212,285	\$17,670,155	\$27,815,915	\$30,908,942	\$58,306,861	\$62,073,991	\$37,257,972	\$82,799,478
<i>Total²</i>	<i>\$45,728,661</i>	<i>\$22,496,576</i>	<i>\$23,021,693</i>	<i>\$26,872,226</i>	<i>\$26,358,551</i>	<i>\$37,206,116</i>	<i>\$38,945,950</i>	<i>\$67,065,004</i>	<i>\$71,113,092</i>	<i>\$45,088,103</i>	<i>\$92,042,914</i>

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

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

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

² Totals only represent non-confidential data.

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

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	122,994	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	565,235	926,224	1,038,636	1,150,133	1,140,947	1,015,823	996,844	1,115,460	1,048,164	911,938	844,830
Herring	1,969,308	2,276,120	--	--	--	--	--	--	--	674,696	-
Other Groundfish	33,786	33,362	49,674	95,863	179,066	97,709	50,049	72,711	142,390	106,643	87,426
Other Shellfish	--	--	--	--	42,882	--	--	--	--	14,005	34,192
Pacific Cod	979,010	40,212	8,443	149,646	625,314	543,882	41,607	63,097	480,533	508,525	751,426
Pollock	3,860	--	--	--	--	--	--	--	--	--	898
Sablefish	133,184	191,982	302,817	437,949	421,487	329,704	306,461	416,516	499,532	401,287	347,967
Salmon	58,690,739	47,591,133	31,152,859	41,240,800	29,700,792	68,897,205	27,883,608	78,113,796	55,489,635	26,532,977	86,814,305
<i>Total²</i>	<i>62,375,122</i>	<i>51,182,027</i>	<i>32,552,429</i>	<i>43,074,391</i>	<i>32,110,488</i>	<i>70,884,323</i>	<i>29,278,569</i>	<i>79,781,580</i>	<i>57,660,254</i>	<i>29,150,071</i>	<i>88,881,044</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	\$317,763	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$1,482,991	\$1,847,227	\$2,361,924	\$3,261,898	\$3,406,680	\$3,071,916	\$3,575,754	\$4,781,383	\$4,565,577	\$2,899,675	\$3,900,495
Herring	\$194,524	\$218,415	--	--	--	--	--	--	--	\$187,433	-
Other Groundfish	\$22,503	\$18,344	\$29,294	\$49,133	\$46,257	\$39,337	\$36,040	\$47,464	\$81,668	\$58,704	\$43,355
Other Shellfish	--	--	--	--	\$82,420	--	--	--	--	\$28,931	\$102,556
Pacific Cod	\$357,229	\$13,849	\$1,289	\$45,115	\$166,675	\$168,688	\$12,424	\$30,308	\$301,518	\$174,530	\$201,964
Pollock	\$283	--	--	--	--	--	--	--	--	--	\$77
Sablefish	\$510,494	\$607,488	\$968,614	\$1,565,101	\$1,215,838	\$760,465	\$972,175	\$1,179,881	\$1,547,865	\$1,394,254	\$1,392,832
Salmon	\$18,168,465	\$16,340,140	\$12,247,396	\$15,909,820	\$14,278,794	\$18,894,602	\$17,966,454	\$30,406,059	\$32,212,101	\$19,123,615	\$45,392,516
<i>Total²</i>	<i>\$20,736,490</i>	<i>\$19,363,226</i>	<i>\$15,608,517</i>	<i>\$20,831,067</i>	<i>\$19,196,664</i>	<i>\$22,935,008</i>	<i>\$22,562,847</i>	<i>\$36,445,095</i>	<i>\$38,708,729</i>	<i>\$23,867,142</i>	<i>\$51,033,796</i>

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

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

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

² Totals only represent non-confidential data.

Recreational Fishing

Although not connected to a highway system, Cordova’s developed tourism infrastructure and location make it very appealing to recreational fishermen. Recreational fishing based from Cordova fish by charter boats, private boats owned by local residents, private boats owned by non-residents, and by shore and dock. In 2010, there were a total of 3 active sportfishing businesses registered in Cordova, and 13 residents had sport fish guide licenses; a decrease from 9 and 32 in 2000, respectively. Also in that year, 2,966 sportfishing licenses were sold in the community, compared to 2,275 in 2000; and 1,010 sportfishing licenses were issued to residents, compared to 1,199 in 2000.

Cordova is located in North Gulf Coast/PWS Statewide Harvest Survey Area which includes all drainages from east of Cape Suckling, through PWS to Gore Point. In 2010, there were a total of 212,793 saltwater angler days fished in the region, compared to 122,459 in 2000, representing a 74% increase. Non-residents made up 30.4% of total saltwater angler days fished in 2010 in the region, compared to 32.3% in 2000. Regional saltwater angler days fished peaked at 300,205 in 2007. Total freshwater angler days fished was 22,979 in 2010, compared to 12,108 in 2000; an increase of 90%. Non-residents made up 57% of freshwater angler days fished in 2010 in the region, compared to 26% in 2000. Total freshwater angler days fished in the region peaked in 2010. Information regarding these sportfishing trends can be found in Table 11.

According to harvest survey data,¹⁵³ local private anglers target all five species of Pacific salmon, rainbow trout, Dolly Varden char, cutthroat trout, Pacific halibut, rockfish, lingcod, Pacific cod, shark, smelt, Dungeness crab, Tabber crab, razor clams, hardshell clams, and other finfish. According to 2010 harvest survey records, charter boats kept 3 king salmon, 66 coho salmon, 304 halibut, 47 lingcod, and 410 rockfish. In a survey conducted by the AFSC in 2011, community leaders reported that recreational fishermen based in Cordova target all five species of Pacific salmon, halibut, rockfish, shrimp, and clams.

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

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Cordova²
2000	9	32	1,199	2,275
2001	10	37	1,187	2,870
2002	9	57	1,227	3,901
2003	8	44	1,147	3,611
2004	7	44	1,158	3,629
2005	8	21	1,143	3,607
2006	7	19	1,083	3,470
2007	7	19	1,088	3,182
2008	4	15	965	3,012
2009	3	10	990	2,674
2010	3	13	1,010	2,966

¹⁵³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Cordova: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	39,551	82,908	3,168	8,940
2001	66,450	135,248	8,587	8,610
2002	67,698	133,508	5,132	8,126
2003	70,549	150,086	10,657	10,235
2004	76,173	184,492	9,199	10,349
2005	87,033	165,559	6,894	6,187
2006	79,313	157,194	8,886	5,655
2007	90,002	210,203	8,446	9,944
2008	67,410	181,381	8,056	5,489
2009	59,505	189,563	8,730	10,938
2010	64,776	148,017	13,118	9,861

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

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

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

Subsistence Fishing

Although Cordova’s economy and culture are not dependent on subsistence activities like many other rural communities, subsistence harvesting is still widely practiced by residents. In a survey conducted by the AFSC in 2011, community leaders reported that the three most important marine subsistence resources to residents in Cordova are sockeye, coho, and king salmon. In a 2003 survey by ADF&G measuring household subsistence participation, 74% of households surveyed were found to be harvesting salmon, 74% were harvesting halibut, 9% were harvesting marine mammals, 17% were harvesting marine invertebrates, and 17% were harvesting non-salmon fish. In that year, surveyed residents were harvesting 112.89 lbs of those resources per capita. Of the species listed by ADF&G, sockeye salmon was harvested the most often between 2000 and 2008, followed by king and coho salmon (Table 12). According to ADF&G’s *Community Subsistence Information System*,¹⁵⁴ species which Cordova residents harvest or use include: chitons, butter clams, Dungeness crab, limpets, octopus, littleneck clams,

¹⁵⁴ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

pinkneck clams, razor clams, shrimp, cockles, king crab, mussels, Tanner crab, harbor seal, Steller sea lion, black rockfish, cutthroat trout, Dolly Varden, eulachon, grayling, herring, lake trout, lingcod, Pacific cod, Pacific tom cod, rainbow trout, red rockfish, sablefish, sea bass, skates, starry flounder, steelhead, greenling, Irish lord, smelt, sole, sturgeon, and wolf fish.

In 2003, residents reported that 35,047 lbs of non-salmon fish were harvested, which exceeded harvests for all salmon species combined between 2000 and 2008. However, information is only available for that year and it is unknown whether other years result in similar harvest sizes. In 2008, residents reported harvesting 3,799 salmon total, a significant increase from 94 in 2000. Reported salmon harvests peaked in 2007 at 5,959 fish. In 2010, 557 residents were issued Subsistence Halibut Registration Certificates (SHARC) by NMFS, compared to 358 residents in 2003. In that year, and estimated 28,339 lbs of halibut was harvested on 167 SHARC, compared to 15,498 lbs on 102 SHARC in 2003. Halibut subsistence harvests peaked in 2005 at 45,751 lbs harvested on 281 SHARC.

In 2010, 134 sea otters were reported harvested, compared to 213 in 2000. In that decade, an estimated total of 1,747 sea otters were harvested. Reported sea otter harvests peaked in 2004 at 298. Finally, an estimated 602 harbor seals and 15 Steller sea lions were harvested between 2000 and 2008. Estimated harbor seal harvests peaked in 2001 and 2002 at 103 seals each year. Estimated Steller sea lion harvests peaked in 2001 and 2002 at four sea lions each year (Table 15).

Table 12. Subsistence Participation By Household And Species, Cordova: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	74%	74%	9%	17%	17%	112.89
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

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

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

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

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	3	2	32	n/a	n/a	n/a	62	n/a	n/a
2001	5	6	15	n/a	n/a	n/a	443	n/a	n/a
2002	4	7	10	n/a	n/a	n/a	403	n/a	n/a
2003	323	315	583	n/a	37	n/a	1,502	3,596	35,047
2004	426	407	989	5	48	3	1,797	n/a	n/a
2005	216	205	222	n/a	15	1	805	n/a	n/a
2006	349	332	668	10	1	n/a	3,549	n/a	n/a
2007	390	368	1,005	2	11	6	4,935	n/a	n/a
2008	406	388	378	n/a	49	21	3,318	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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

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

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

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

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	358	102	15,498
2004	526	262	54,186
2005	602	281	45,751
2006	607	248	29,027
2007	615	282	28,716
2008	587	254	27,547
2009	599	234	23,364
2010	557	167	28,339

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

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

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

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	213	n/a	n/a	n/a	88	n/a
2001	n/a	108	n/a	n/a	4	103	n/a
2002	n/a	171	n/a	n/a	4	103	n/a
2003	n/a	96	n/a	n/a	3	78	n/a
2004	n/a	298	n/a	n/a	3	78	n/a
2005	n/a	294	n/a	n/a	n/a	57	n/a
2006	n/a	174	n/a	n/a	n/a	31	n/a
2007	n/a	68	n/a	n/a	1	32	n/a
2008	n/a	173	n/a	n/a	n/a	32	n/a
2009	n/a	138	n/a	n/a	n/a	n/a	n/a
2010	n/a	134	n/a	n/a	n/a	n/a	n/a

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

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

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

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

Gakona (guh-KOH-nuh)



People and Place

*Location*¹⁵⁵

Gakona is at the confluence of the Copper and Gakona Rivers, 15 miles northeast of Glennallen. It lies at mile 2 on the Tok cutoff to the Glenn Highway, just east of the Richardson Highway. Gakona is located in the Valdez-Cordova Census Area and the Chitina Recording District.

*Demographic Profile*¹⁵⁶

In 2010, there were 218 residents in Gakona, ranking it the 189th largest community in Alaska. Overall, between 1990 and 2010, the population has increased by 772%, yet since 2000 the population has changed very little (Table 1). The majority (79.4%) of Gakona residents identified themselves as White, compared to 74.3% in 2000. Also in that year, 0.9% identified themselves as Hispanic or Latino, compared to 1.4% in 2000. The biggest changes over this decade included an increase in the population of Native Alaskans and a decrease in the population with two or more races (Figure 1; 19.7% as American Indian or Alaskan Native, compared to 12.1% in 2000; and 0.9% identified themselves as two or more races, compared to 10.7% in 2000).

The overall population structure of Gakona in 2000 and 2010 is shown in Figure 2. In 2010, there was a relatively even spread of males and females across each age category, though the 70 to 79, 20 to 29, and 0 to 9 age groups show the greatest difference in the spread of males and females. For example, in 2010, the 70 to 79 age group was 5.1% males and 0.9% females, and the 20 to 29 age group was 4.6% males and 2.3% females. In 2000, there were relatively few residents in the 50 to 59 age range (13%), whereas in 2010, 22.9% of residents were in this age category. Further changes in population and in racial and ethnic composition from 2000 to 2010 can be found in Table 1 and Figures 1 and 2.

In 2010, the gender makeup was 52.2% male and 47.7% female, and somewhat similar to the gender makeup of the state as a whole (52% male, 48% female; see Figure 2). The median age was 40.7 years, which is slightly higher than the U.S. national average of 36.8 years and significantly higher than the median age for Alaska, 33.8 years.

¹⁵⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

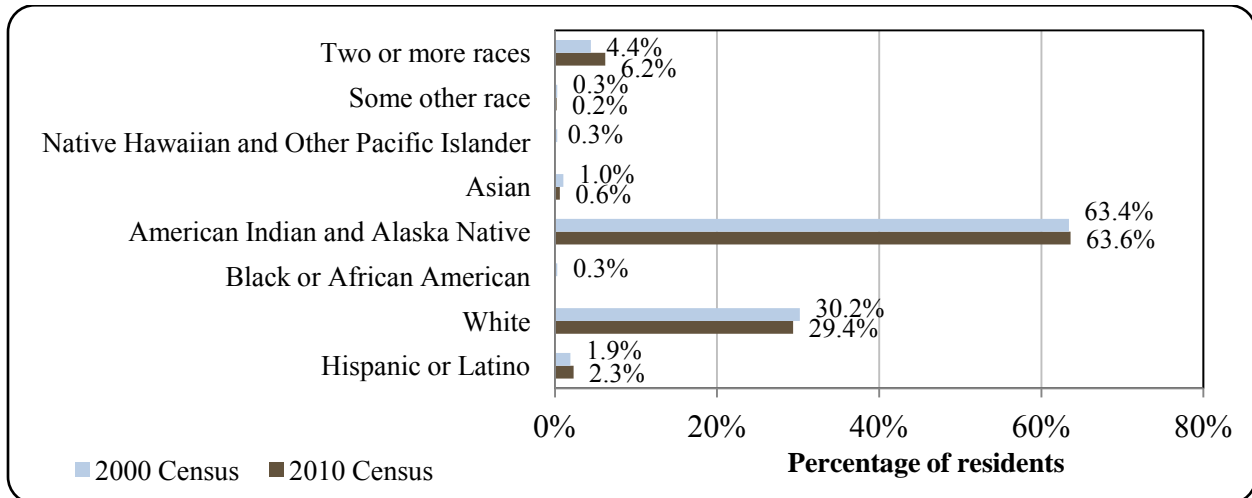
Table 1. Population in Gakona from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	25	-
2000	215	-
2001	-	218
2002	-	241
2003	-	222
2004	-	228
2005	-	218
2006	-	240
2007	-	231
2008	-	216
2009	-	202
2010	218	-

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

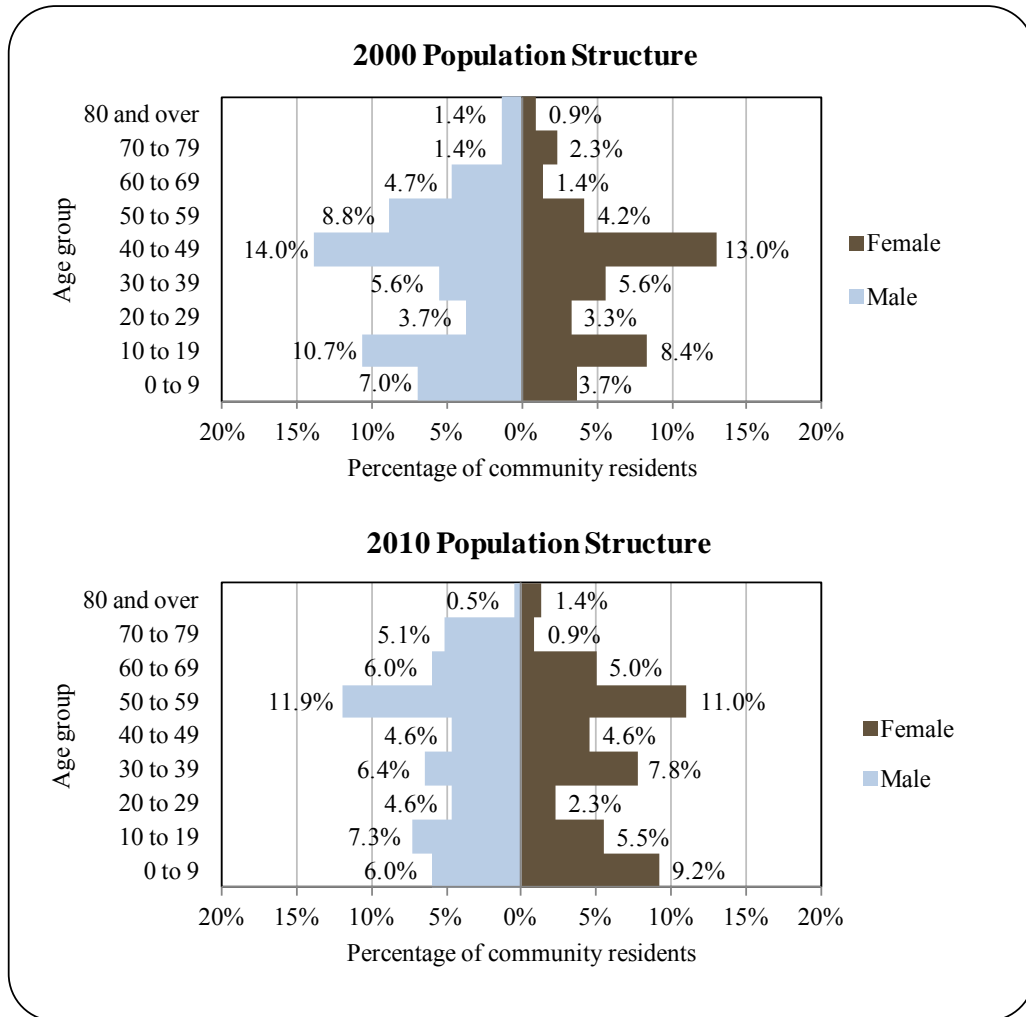
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

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



In 2010, the average household size was 2.5, a significant decline from 3.5 in 1990 and about the same when compared to 2000 (2.6). There has been an increase in occupied households, from seven in 1990 to 84 in 2000 to 86 in 2010. Of those occupied households surveyed in 2010, 75.6% were owner-occupied and of the 86 housing units reported in Gakona, 52.3% were considered vacant, compared to 71.4% in 2000. Of those households surveyed in 2010, 24.4% were renter-occupied. There are no records of residents living in group quarters in 2000 and 2010.

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



According to the 2006-2010 American Community Survey (ACS),¹⁵⁷ in terms of educational attainment, 92.1% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to 91% of Alaskan residents overall. Also in 2010, 3.9% of residents aged 25 and older were estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 3.9% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 13.8% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 1.3% were estimated to have an Associate’s degree, compared to 8% of Alaskan residents overall; 36.8% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and 20.4% were

¹⁵⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Ahtna Athabascans have lived in the Copper River basin for thousands of years. “Ahtna” is the Athabaskan name for the Copper River. Most settlements along the river were either fish camps, winter villages, or hunting and trapping camps. Gakona served as a wood and fish camp and later became a permanent village.¹⁵⁸ In 1904, Doyle’s Roadhouse was constructed at the junction of the Valdez-Eagle and Valdez-Fairbanks Trails and became an essential stopping point for travelers. There was also a post office, stagecoach station, and blacksmith shop here. Some buildings are still standing, like the Gakona Lodge which was built in 1929 and is on the National Register of Historical Places. The lodge contains many old relics of the gold rush era in the late 1890s.¹⁵⁹

Natural Resources and Environment

Gakona is located in the center of Copper Valley, surrounded by mountains and the famous Copper River. Gakona is located adjacent the Copper, Gakona and Gulkana Rivers allowing access to world class Chinook salmon, sockeye salmon and rainbow trout fishing. Gakona is located in the continental climate zone, with long, cold winters and relatively warm summers. Temperature extremes have been recorded from -62 to 91 °F. Annual snowfall averages 61 inches, with total precipitation of 13 inches.¹⁶⁰

Between 1910 and 1938, the Kennecott Copper Company operated in Gakona. The company also built the railroad between Cordova and Kennecott/McCarthy, and today the mine site is a National Historic Landmark managed by the National Park Service. During the gold rushes in 1898 and 1899, the Copper River Basin was a staging area for thousands of prospectors traveling to Alaska’s interior, including Gakona.¹⁶¹

The Copper River or Ahtna River is a 300 mile river in south-central Alaska. It drains a large region of the Wrangell Mountains and Chugach Mountains into the Gulf of Alaska. It is known for its extensive delta ecosystem, as well as for its prolific runs of wild salmon, which are among the most highly prized stocks in the world. It is the tenth largest river in the United States, as ranked by average discharge volume at its mouth. The Copper River Delta, which extends for roughly 700,000 acres is the considered the largest contiguous wetlands along the Pacific coast of North America. It is used annually by 16 million shorebirds, including the world's entire population of western sandpipers. It is also home to the world's largest population of nesting trumpeter swans and is the only known nesting site for the dusky Canada goose. Over 20,000

¹⁵⁸ Simeone, William E. and James Kari. (2002). *Traditional Knowledge and Fishing Practices of the Ahtna of the Copper River, Alaska*. Technical Paper No. 270. Alaska Department of Fish and Game. Division of Subsistence. Juneau, Alaska. July.

¹⁵⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁰ See footnote 159.

¹⁶¹ Ibid.

years ago, the area now drained by the great Copper River was a massive lake, covering nearly 2,000 square miles.

The name of the river comes for the abundant copper deposits along the upper river that were used by Alaska Native population and then later by settlers from the Russian Empire and the United States. Extraction of the copper resources was rendered difficult by navigation difficulties at the river's mouth. Finalized in 1911, the construction of the Copper River and Northwestern Railway from Cordova through the upper river valley allowed widespread extraction of the mineral resources, in particular from the Kennecott Mine, as mentioned above, which was discovered in 1898. The mine was abandoned in 1938 and is now a ghost town tourist attraction. A road runs from Cordova to the lower Copper River near Child's Glacier, following the old railroad route and ending at the reconstructed "Million Dollar Bridge" across the river. The Tok Cut-Off follows the Copper River Valley on the north side of the Chugach Mountains. To the west of Gakona, is Lake Louise, where there are vast deposits of coal.¹⁶²

In August 2011, the Native Village of Gakona and the Mt. Sanford Tribal Consortium partnered to reduce solid waste in Gakona, removing 90 tons or about 180,000 pounds. This was achieved by the removal of about 110 abandoned cars and trucks from Native land in the Gakona area, many of which were removed from one large dumping ground in the community. The Native Village of Gakona began working with the Indian General Assistance Program with the Environmental Protection Agency in 2004 on a number of environmental projects.¹⁶³ However, according to the Alaska Department of Environmental Conservation (DEC), there were no notable environmental remediation sites active in 2010.¹⁶⁴

Current Economy¹⁶⁵

The 2006-2010 ACS estimated 107 residents as employed in that time period and 77.6% of residents aged 16 years and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 11.6%, almost twice the statewide rate of 5.9%. However, an estimated 5.7% of residents were living below the poverty line, compared to an estimated 9.5% of Alaskan residents overall. Of those employed in 2010, an estimated 28.8% worked in the private sector and an estimated 71.2% worked in the public sector.

In 2010,¹⁶⁶ the estimated per capita income was \$32,829 and the estimated median household income was \$104,375, compared to \$18,143 and \$33,750 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,¹⁶⁷ the real per capita income (\$23,858) and real median household income (\$44,381) indicate that both individual earnings and household earnings increased significantly during this time period. In 2010, Gakona ranked

¹⁶² Alaska Department of Natural Resources and Division of Geological and Geophysical Surveys (n.d.). *Department Homepage*. Retrieved August 1, 2012 from <http://www.dggs.dnr.state.ak.us/>

¹⁶³ Native Village of Gakona (n.d.). *Native Village of Gakona Homepage*. Retrieved December 13, 2011 from http://www.nvgakona.com/Native_Village_of_Gakona/Welcome.html

¹⁶⁴ Alaska Dept. of Environmental Conservation (n.d.). *List of contaminated site summaries by region*. Retrieved July 31, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹⁶⁵ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁶⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁶⁷ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

46th of 305 communities from which per capita income was estimated, and 7th of 299 communities for which median household income was estimated.

However, Gakona's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁶⁸ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development.¹⁶⁹ According to the ALARI database, residents earned \$2,845,759 million in total wages in 2010.¹⁷⁰ When paired with the 2010 Decennial Census population, the per capita income is \$13,053, which was significantly less than the 2010 ACS estimate and suggests that caution should be used when using ACS data.

In 2010, the greatest number of workers was employed in the public sector (67.3%), while 16.8% were employed in the private sector, while no residents reported themselves as self-employed. As seen in Figure 3, by industry, slightly over half (52.3%) of the employed residents were estimated to work in education services, health care, and social assistance sectors; followed by public administration sectors (14.0%) and arts, entertainment, recreation, accommodation, and food service sectors (14.0%). Compared with 2000, significant proportional increases occurred in education services, health care, and social assistance sectors, as well as information and public administration sectors. However, there was a significant drop in the percentage of those estimated to be employed in retail trade sectors from 12.7% in 2000 to an estimated 8.4% in 2010. A significant drop was seen in the percentage of those estimated to be employed in scientific/professional/management sectors from 9.5% in 2000 to an estimated 2.8% in 2010.

By occupation type, most (69.2%) employed residents were estimated to hold management or professional positions in 2010; followed by service positions (16.8%); sales or office positions (11.2%); and natural resources, construction, or maintenance positions (2.8%). Compared to 2000, significant proportional decreases occurred in natural resources, construction, or maintenance positions sales and office occupations, and significant proportional increases occurred in service and management and professional occupations. As an additional source of occupational information, according to ALARI estimates, in 2010, accommodation and food service, and construction workers made up the majority of occupations.¹⁷¹ Further trends for employment by industry and occupation can be found in Figures 3 and 4.

¹⁶⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁶⁹ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹⁷⁰ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁷¹ Ibid.

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

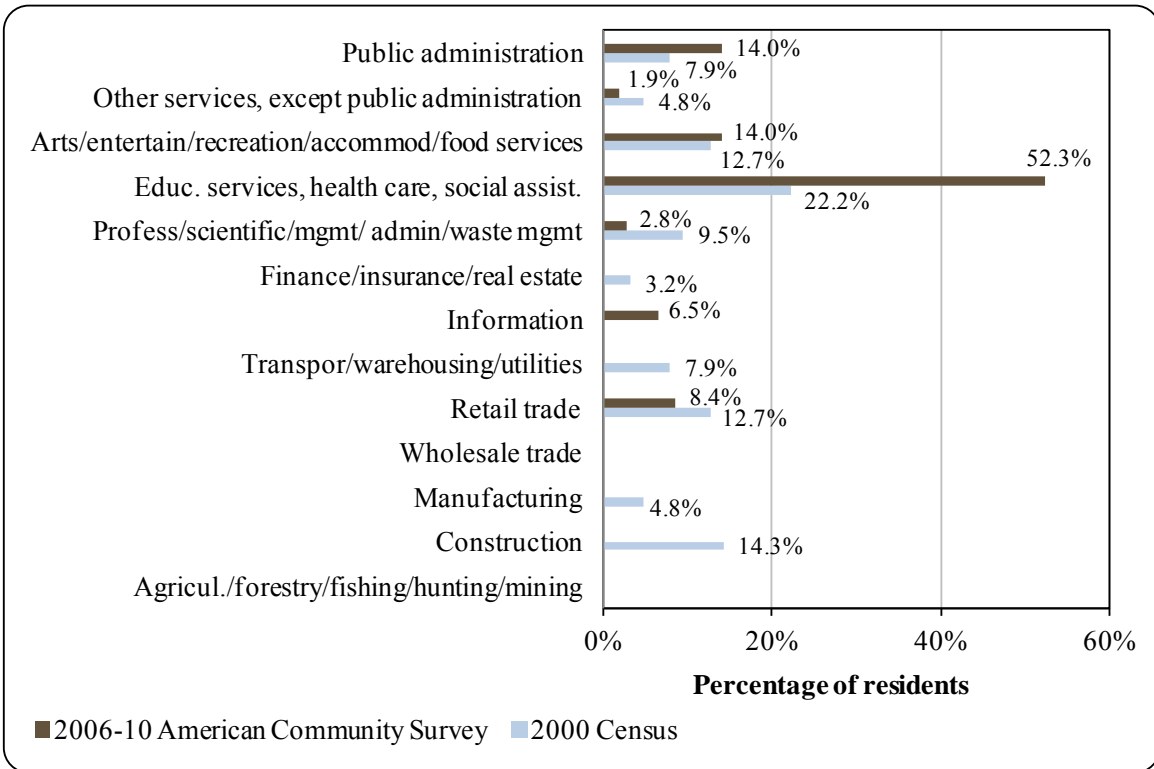
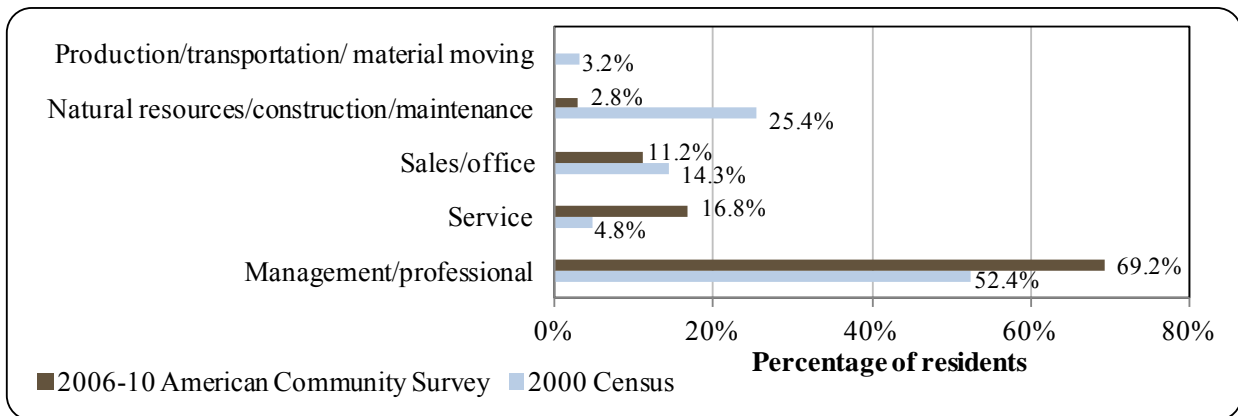


Figure 4. Local Employment by Occupation in 2000-2010, Gakona (U.S. Census).



Governance

Gakona is an unincorporated city and is not located in an organized borough, so there are no city or borough officials in the community. Given this, there is no local authority to set a municipal budget or collect taxes or revenue (Table 2). However, the Native Village of Gakona is a U.S. Bureau of Indian Affairs (BIA) recognized tribe and serves as the governing body for the village.¹⁷²

The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Gakona is Ahtna, Incorporated, and the local ANCSA chartered non-profit is the Cooper River Native Association. The ANCSA chartered village corporation is Ahtna, Inc.

Gakona is home to the Mount Sanford Tribal Consortium (Kelt'aeni), a tribal consortium made up of two federally recognized Tribal Councils of Chistochina and Mentasta Lake.¹⁷³

The closest National Marine Fisheries Service (NMFS), Alaska Department of Fish and Game (ADF&G), and Bureau of Citizenship and Immigration Services offices are all located in Cordova.

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

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

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

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

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

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

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

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

¹⁷² Native Village of Gakona (n.d.). *Native Village of Gakona Homepage*. Retrieved December 13, 2011 from http://www.nvgakona.com/Native_Village_of_Gakona/Welcome.html.

¹⁷³ Mount Sanford Tribal Consortium (n.d.). *Mount Sanford Tribal Consortium Homepage*. Retrieved December 13, 2011 from <http://www.mstc.org/mstc.html>.

Infrastructure¹⁷⁴

Connectivity and Transportation

The Glenn/Tok cutoff and Richardson Highway provides road access to the Anchorage, Fairbanks, and the Lower 48. The Richardson Highway connects Valdez to Gakona. There is a 5,000' paved runway in nearby Gulkana. The nearest airport to Gakona is approximately 130 miles away in Valdez, where, as of June 2012, roundtrip airfare from Anchorage to Valdez costs \$314.¹⁷⁵

Facilities

Electricity in Gakona is provided by Copper Valley Electric Association, Inc and operated by REA Co-op. The local communication service infrastructure is provided by Copper Valley Telephone Cooperative, AT&T Alascom GCI, and local radio stations include KCAM-AM and KUAC-FM. All residences have individual wells and septic systems and complete plumbing. The school uses its own well-water system. Refuse collection services are available from Copper Basin Sanitation, which hauls waste to the Glennallen landfill.

Medical Services

The Gakona Clinic, which is a designated Community Health Aid Program site, is operated by the Mt. Sanford Tribal Consortium and owned by the Village Council. Emergency Services have highway and air access and are within 30 minutes of a higher-level satellite health care facility. Emergency service is provided by 911 Telephone Service and volunteers. The nearest hospital to Gakona is the Mat-Su Regional Medical Center in Palmer, Alaska, about 132 miles away.

Educational Opportunities

Gakona is located in the Copper River School District. In 2011, there was one school, the Gakona Elementary School, which had no students or teachers.¹⁷⁶

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Copper River and Bering River districts are located on the Gulf of Alaska east of Prince William Sound. Covering over 1,100 square miles, the Copper River District is the largest district in Prince William Sound. By contrast, Bering River District is approximately one-sixth the size with an open area greater than 200 square miles. The Copper River drains over 27,000

¹⁷⁴ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved December 12, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁷⁵ Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

¹⁷⁶ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

square miles of interior Alaska while the Bering River has a drainage area of only a few hundred square miles. Together, these systems provide spawning and rearing habitat for all five species of Pacific salmon. Sockeye, coho and Chinook salmon runs are harvested by approximately 500 drift gillnet commercial permit holders and managed by the local Alaska Department of Fish and Game office in Cordova.

The sockeye and Chinook salmon runs that have been commercially fished since the late 1800s are among the earliest and most prized in the state.¹⁷⁷ Ahtna Athabascans have long fished along the Copper River¹⁷⁸ and Gakona itself continues to be a popular salmon and trout fishing destination. Early research on the Copper River salmon is related to the development of the commercial fishery at the mouth of the river. Between 1889 and 1905, a commercial fishery targeting Copper River stocks of salmon was developed on the Copper River delta. In 1915, the fishery expanded into the lower Copper River up to Baird Canyon and in 1924 Congress passed the White Act, which prohibits commercial fishing in the main stem of the Copper River. After the passage of the White Act, the federal government conducted periodic harvest surveys on the upper river and monitored escapement into the river. Following statehood in 1959, the State of Alaska took over management of the Copper River salmon fishery.¹⁷⁹

Ahtna oral tradition indicates that every 30 or 40 years the salmon runs on the Copper River failed¹⁸⁰ and there Ahtna stories of starvation and hard times when people had to rely upon resources other than salmon support this claim. Today, there are indications that certain wild stocks of sockeye and Chinook salmon may have declined from historical levels. The Ahtna have identified 14 different species of fish and 21 different salmon runs or stocks in the Copper River Basin, and sockeye salmon are the most culturally valued fish of the Ahtna.¹⁸¹ The cultural significance of sockeye salmon is shaped by the fact that this species of salmon has been critical to the Ahtna's economic and cultural survival for at least 1,000 years.¹⁸²

Given that Gakona is more than 50 miles from the coast, no federal fisheries regulatory areas are located within the immediate vicinity. Gakona is not eligible for the Community Quota Entity (CQE) program. The community is also not eligible to participate in the Community Development Quota (CDQ) program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Gakona does not have a registered shoreside processing plant. The nearest shoreside processing plant is located in Cordova.

¹⁷⁷ Alaska Department of Fish and Game (n.d.). *Commercial Fisheries Overview: Copper River Management Area*. Retrieved August 1, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyareacopperriver.main>

¹⁷⁸ Simeone, William E. and James Kari (2002). *Traditional Knowledge and Fishing Practices of the Ahtna of the Copper River, Alaska*. Technical Paper No. 270. Alaska Department of Fish and Game. Division of Subsistence. Juneau, Alaska. July.

¹⁷⁹ Ibid.

¹⁸⁰ See footnote 178.

¹⁸¹ Ibid.

¹⁸² Workman, William (1977). Ahtna archaeology: a preliminary statement. In *Problems in the Prehistory of the North American Subarctic: the Athapaskan Question*. Pp.22-39. J.W. Helmer, S. Van Dyke, and F. Kense, eds. Calgary: University of Calgary Archeological Association.

Fisheries-Related Revenue

Given the lack of an incorporated governance structure, there was no reported fisheries-related municipal revenue for Gakona between 2000 and 2010.

Commercial Fishing

Commercial fishing plays a small role in the economy of Gakona. In 2010, five permits were held by four permit holders and of these, 100% were actively fished. Since 2000, when there were three permits issued and three permit holders, there has only been a slight increase in the number of permits issued. Between 2000 and 2010, residents held permits issued by the Commercial Fisheries Entry Commission (CFEC). In that time period, the number of salmon CFEC permit holders ranged from two to four, there was one herring CFEC permit holder between 2005 and 2007, and one halibut CFEC permit holder between 2000 and 2008. Residents holding CFEC permits participated in Bristol Bay salmon drift and set gillnet fisheries.

No residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits between 2000 and 2010. Finally, no residents participated in the sablefish or crab catch share programs between 2000 and 2010. In this same time period, limited participation was seen in the halibut catch share program where participation was non-existent until 2006 when 32,154 were held by one resident. In 2007, no halibut quota shares were held and then from 2008 to 2010 only 489 shares were held each year, again by one account holder (see Table 6).

Although no landings were made in Gakona, local residents did make commercial landings elsewhere. For example, ex-vessel revenue earned by Gakona residents landing catch outside of Gakona totaled \$721,322 in 2010, a significant increase compared to the \$497,668 earned from landings in 2009, and all of which was based on salmon landings. All data on ex-vessel revenue earned by Gakona residents between 2000 and 2008 is confidential, so reporting trends for this time period is not possible. Since 2004, there has been an 84.2% decrease (from 19 to 3) in the number of vessels homeported and a 66.7% decrease (from 15 to 5) in the number of vessels primarily owned by Gakona residents. Between 2000 and 2010 the number of crew license holders has ranged from one to three. As of 2010, there are no fish buyers or shoreside processors in Gakona. Further trends for commercial fishing in Gakona between 2000 and 2010 can be found in Tables 4 through 10.

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

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

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

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

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

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

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

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	1	1	1	0	0	0
	Fished permits	0	0	0	0	0	1	1	1	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	100%	100%	100%	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	1	1	1	0	0	0
Herring (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	n/a	n/a
	Total permit holders	1	1	1	1	1	1	1	1	1	0	0

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	2	2	2	2	2	2	2	2	4	5	5
	Fished permits	2	2	2	2	2	2	2	2	4	5	5
	% of permits fished	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	2	2	2	2	2	2	2	2	3	4	4
<i>Total CFEC Permits²</i>	<i>Permits</i>	3	3	3	3	3	4	4	4	5	5	5
	<i>Fished permits</i>	2	2	2	2	2	3	3	3	4	5	5
	<i>% of permits fished</i>	67%	67%	67%	67%	67%	75%	75%	75%	80%	100%	100%
	<i>Permit holders</i>	3	3	3	3	3	3	3	3	4	4	4

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

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

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

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

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Gakona ²	Total Net Pounds Landed in Gakona ^{2,5}	Total Ex-Vessel Value of Landings in Gakona ^{2,5}
2000	3	0	0	22	19	0	0	\$0
2001	3	0	0	20	20	0	0	\$0
2002	2	0	0	15	15	0	0	\$0
2003	2	0	0	15	19	0	0	\$0
2004	2	0	0	15	19	0	0	\$0
2005	2	0	0	2	1	0	0	\$0
2006	3	0	0	2	1	0	0	\$0
2007	2	0	0	3	2	0	0	\$0
2008	1	0	0	3	2	0	0	\$0
2009	1	0	0	5	2	0	0	\$0
2010	3	0	0	5	3	0	0	\$0

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

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

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

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

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

⁵ Totals only represent non-confidential data.

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

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	1	32,154	4,315
2007	0	0	0
2008	1	489	0
2009	1	489	0
2010	1	489	0

Note: n/a indicates that no data were reported for that year. Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for AFSC, Seattle. [URL not publicly available as some information is confidential.]

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

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Note: n/a indicates that no data were reported for that year. Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for AFSC, Seattle. [URL not publicly available as some information is confidential.]

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

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Note: n/a indicates that no data were reported for that year. Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for AFSC, Seattle. [URL not publicly available as some information is confidential.]

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

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

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

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

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

² Totals only represent non-confidential data.

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

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	624,264	767,636
<i>Total²</i>	--	--	--	--	--	--	--	--	--	624,264	767,636
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	\$497,668	\$721,322
<i>Total²</i>	--	--	--	--	--	--	--	--	--	\$497,668	\$721,322

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

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

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

² Totals only represent non-confidential data.

Recreational Fishing

The Copper River is a major sportfishing destination in Alaska and many Gakona residents participate in recreational fishing. The Upper Copper/Upper Sustina Sport Fish Management Area (UCUSMA), offers a unique blend of freshwater fishing opportunities to sport anglers and subsistence participants. Three species of North Pacific salmon (Chinook, coho, and sockeye) are available to anglers fishing upper Copper River drainage waters. A resident-only, personal use dip net fishery and a subsistence fishery takes place in the mainstem Copper River. The upper Sustina River drainage has no anadromous salmon. A velocity barrier in Devil's Canyon prevents upstream migration in the Sustina River. Anglers can also target coho salmon stocked in several landlocked lakes of the region. Popular fisheries also occur on the area's resident stocks of Arctic grayling, Burbot, Dolly Varden, rainbow and steelhead trout, and lake trout. Smaller fisheries occur on the area's resident stocks of whitefish. Currently 29 lakes in the UCUSMA are stocked with Arctic grayling, rainbow trout, coho salmon and Arctic char. The

stocked fish are reared at state-owned hatcheries on Fort Richardson and Elmendorf Air Force Base in Anchorage.¹⁸³

In 2010, 324 sportfishing licenses were sold in the community, of which 190 were sold to Gakona residents, representing 87% of the population. Since 2000, the number of sport fish guide licenses has steadily declined, with 20 licenses issued in 2000 and 5 in 2010. Between 2004 and 2010, the number of sport fish guide licenses issued decline by 70.6%. The number of locally registered sport fish guide business averaged around seven between 2000 and 2005, while declining to an average of five between 2006 and 2010. However, only one locally registered sport fish guide business was in operation in any given year, and none operated between 2005 and 2007. The number sport fish guide licenses hit a 10-year high in 2000 at 21, and declined steadily in years following. In 2010, eight sport fish guide licenses were held in the community. According to the ADF&G harvest survey data, local charters are fishing in both freshwater and saltwater, and catch primarily coho, burbot, grayling, rockfish, Pacific cod, and razor clams.

Gakona is located within Alaska Sport Fishing Survey Area I – Upper Copper River Drainage. Information is available about freshwater sportfishing activity only at this regional scale. In general, freshwater fishing in the region surrounding Gakona was significant. Between 2000 and 2010, freshwater angler days fished varied considerably for both Alaska residents and non-Alaska residents. Alaska residents fished consistently more angler days in freshwater in this region between 2000 and 2010, averaging 31,555 angler days fished per year compared to an average of 14,109 angler days fished by non-Alaska residents. Further information about the sportfishing sector in and near Gakona is presented in Table 11.

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

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Gakona ²
2000	1	21	187	204
2001	1	17	199	195
2002	1	15	176	248
2003	1	16	191	224
2004	1	17	202	339
2005	0	10	191	348
2006	0	10	191	337
2007	0	5	201	328
2008	1	10	211	349
2009	1	8	181	300
2010	1	8	190	324

¹⁸³ Alaska Department of Fish and Game. (n.d.). *Upper Copper and Sustina River Management Area*. Retrieved August 21, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=ByAreaInteriorUpperCopperSustina.main>.

Table 11 cont'd. Sport Fishing Trends, Gakona: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	0	0	14,806	32,769
2001	0	0	12,212	31,506
2002	0	0	13,069	27,978
2003	0	0	10,901	32,550
2004	0	0	12,248	27,454
2005	0	0	11,659	25,529
2006	0	0	12,516	21,448
2007	0	0	16,970	27,658
2008	0	0	11,959	27,940
2009	0	0	11,071	33,493
2010	0	0	13,683	27,229

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

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

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

Subsistence Fishing

Ahtna have historically engaged in subsistence fishing along the Copper River, with a particular focus on salmon.¹⁸⁴ Between 2000 and 2010, subsistence fishing by residents of Gakona targeted almost exclusively salmon (Table 13). Sockeye salmon made up the bulk of subsistence harvests between 2000 and 2008, followed by Chinook, coho, and chum. Salmon are harvested using either a dip net or a fish wheel, but only one type of gear can be used for each permit. Subsistence fishing opens in the Glennallen district of the Copper River opens June 1 and closes September 30. In 2008, the most recent year in which data are available, 33 subsistence salmon permits were issued, representing 15% of the population. In that same year, 2,300 sockeye salmon were reported as harvested, in addition to 153 Chinook salmon and 21 coho salmon. The largest harvest of Sockeye salmon occurred in 2001, when 7,188 were harvested, and the lowest harvest occurred in 2003, when 1,377 were harvested. Between 2000 and 2008, Chinook harvests were at their lowest in 2003, when 52 Chinook were harvested, and were at their highest in 2000, when 309 were harvested (Table 13).

¹⁸⁴ Simeone, William E. and James Kari (2002). *Traditional Knowledge and Fishing Practices of the Ahtna of the Copper River, Alaska*. Technical Paper No. 270. Alaska Department of Fish and Game. Division of Subsistence. Juneau, Alaska. July.

In 2010, one halibut Subsistence Halibut Registration Certificate (SHARC) was issued, but there was no reported harvest (Table 14). Based on household surveys conducted by ADF&G, there appears to be no reliance on marine mammals for subsistence by local residents (Table 15). While the ADF&G’s Community Subsistence Information System (CSIS) reports no data on the percentage of households using subsistence resources in Gakona in particular, non-salmon fish species are harvested by subsistence users on the Copper River, including: rainbow and lake trout, burbot, grayling, whitefish, steelhead, and Dolly Varden.

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

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

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

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

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

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	65	64	309	n/a	67	n/a	6,395	n/a	n/a
2001	62	60	263	17	126	n/a	7,188	n/a	n/a
2002	43	40	186	n/a	n/a	n/a	2,474	n/a	n/a
2003	30	24	52	n/a	n/a	n/a	1,377	n/a	n/a
2004	39	34	148	n/a	n/a	n/a	3,865	n/a	n/a
2005	60	57	155	n/a	n/a	n/a	6,565	n/a	n/a
2006	53	50	145	n/a	4	n/a	4,471	n/a	n/a
2007	53	50	145	n/a	4	n/a	4,471	n/a	n/a
2008	33	31	153	n/a	21	n/a	2,300	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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

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

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

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

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	1	n/a	n/a
2008	1	n/a	n/a
2009	1	n/a	n/a
2010	1	n/a	n/a

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

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

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

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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

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

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

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

Glennallen (gleh-NAL-len)



People and Place

*Location*¹⁸⁵

The community of Glennallen lies along the Glenn Highway at its junction with the Richardson Highway, 189 road miles east of Anchorage. Glennallen is located in the Valdez-Cordova Census Area and the Chitina Recording District. The community is located just west of Wrangell-St. Elias National Park.

*Demographic Profile*¹⁸⁶

In 2010, there were 483 residents in Glennallen, ranking it the 120th largest community in Alaska terms of population size. Overall, between 1990 and 2010, the population increased by 7.09%. Between 2000 and 2010, the population decreased by 12.8% and the average annual growth rate during that time was -2.3%, representing a greater decline than the statewide average of 0.75% (Table 1).

In 2010, the majority of Glennallen residents identified themselves as White (77.4%), compared to 85.2% in 2000. Additionally, 7.7% identified themselves as American Indian and Alaska Native in 2010, compared to 5.1% in 2000; 11.4% identified themselves as of two or more races in 2010, compared to 7.9% in 2000; 2.1% identified themselves as Native Hawaiian and Other Pacific Islander in 2010, compared to 1.4% in 2000; 1.4% identified themselves as Hispanic or Latino in 2010, compared to 0.5% in 2000; 0.4% identified themselves as Black or African American in 2010, compared to 0.2% in 2000; 0.6% identified themselves as Asian in 2010, compared to 0.2% in 2000; and 0.4% identified themselves as of some other race, compared to 0.0% in 2000. The largest changes were seen in the White population, which decreased over the time period, and the Alaska Native population, which increased a corresponding amount over the time period (Figure 1).

In 2010, the average household size in Glennallen was 2.29, compared to 3.31 in 2000 and 2.7 in 1990. Also in 2010, there were a total of 203 occupied housing units, compared to 204 in 2000. Of those households surveyed in 2010, 30.9% were owner-occupied and 29.5% were renter-occupied. In that same year, 39.6% were vacant, compared to 24.2% in 2000. There were 17 residents living in group quarters in 2000 and 18 in 2010.

¹⁸⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁸⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

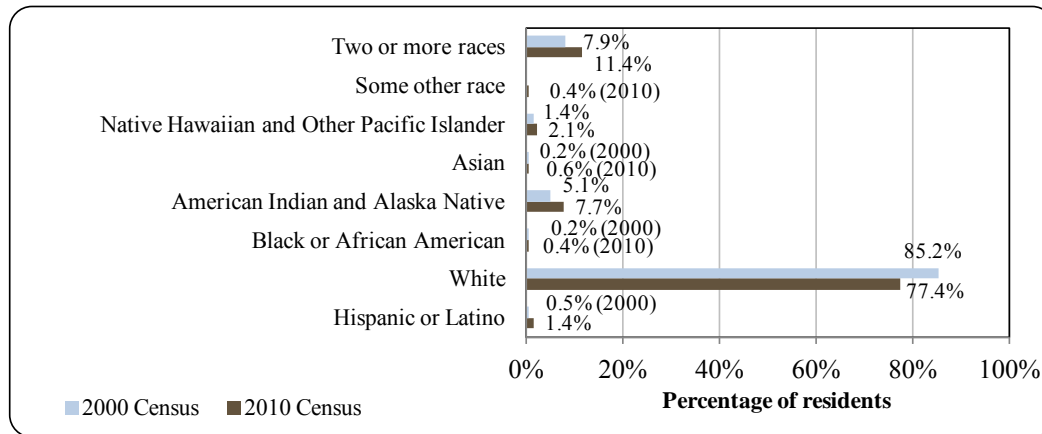
Table 1. Population in Glennallen from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	451	-
2000	554	-
2001	-	546
2002	-	527
2003	-	585
2004	-	549
2005	-	587
2006	-	519
2007	-	504
2008	-	455
2009	-	473
2010	483	-

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

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

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

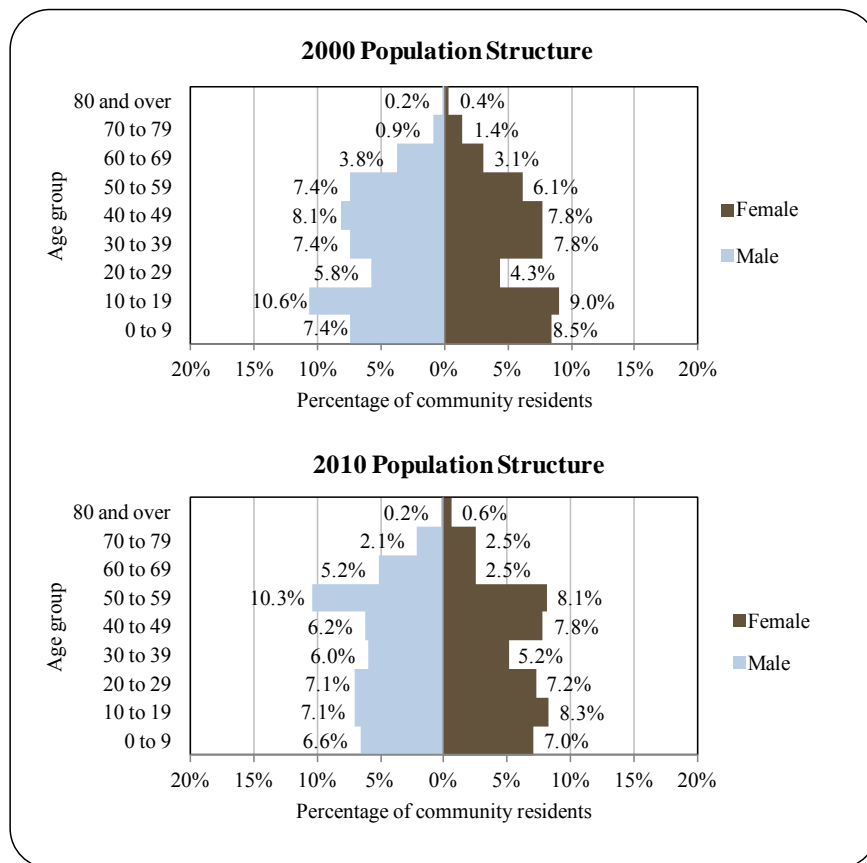


In 2010, the gender makeup in Glennallen was 50.7% male and 49.3% female, very similar to the state as a whole (52% male, 48% female). The median age was estimated to be 35.8 years, lower than the U.S. national average of 36.8 years and higher than the median age for Alaska, 33.8 years. In 2010, females outnumbered males in most age groups but 60-69 years, 50-59 years, and 30-39 years. The age groups that experienced the greatest change between 2000 and 2010 were the 50-59 and 10-19 age groups, when in 2010 the male population increased by 2.9% and decreased by 3.5% when compared to 2000. In 2010, 13.1% of the Glennallen

population was age 60 or older, compared to 9.8% in 2000. The overall population structure of Glennallen in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)¹⁸⁷ an estimated 97% of Glennallen residents aged 25 and over held a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 0% of residents aged 25 and older were estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 3% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 30.6% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 11% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 11.3% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 15.1% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.¹⁸⁸

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



¹⁸⁷ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁸⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

History, Traditional Knowledge, and Culture

The area has historically been occupied by the Ahtna Athabaskan people, although Glennallen is currently predominantly a White community.¹⁸⁹ Most historical settlements along the Copper River were either fish camps, winter villages, or hunting and trapping camps in the uplands. The Native Alaskan residents were divided into clans and the various groups had their own hunting, fishing and berry picking areas.¹⁹⁰ While historical records show Russian contact in this area as early as the 18th century, it was not until the late 1800s that the Ahtna had their first true involvement with outside explorers. Several years after the U.S. purchase of Alaska from Russia in 1867, Lt. Henry Allen traveled the Copper River as far north as the Tanana River. With his exploration came the word of the large concentrations of copper found in this volcanic valley.¹⁹¹ The community received its modern name from Henry Allen and another early American explorer named Major Edwin Glenn.¹⁹² The settlement of Glennallen grew in the 1940s with the construction of the Glenn Highway.¹⁹³ It is one of the few communities in the Copper River region that was not built on the site of a Native village.¹⁹⁴

Natural Resources and Environment

Just outside the western boundary of Wrangell-St. Elias National Park, Glennallen is located in the continental climate zone, with long, cold winters, and relatively warm summers. The mean temperature in January is -10°F and 56°F in July. Temperature extremes can reach -50°F in winter and 80°F in summer. Snowfall averages 39 inches, with total precipitation of 9 inches per year.¹⁹⁵ The Copper River Valley is surrounded by the mountains of the Alaska Range and Talkeetna, Chugach, and Wrangell Mountains. The Denali Fault runs through the region, and more than 12 volcanoes are recognized in the Wrangell Mountains. Mt. Wrangell is considered to be an active volcano, with steam still venting from near its summit.¹⁹⁶

Forests of aspen, spruce, and balsam poplar cover much of the Valley. Permafrost is found throughout the Valley at varying depths. Common wildlife in the Valley includes moose, bison, Dall sheep, mountain goats, black bear, grizzly bear, porcupines, and many furbearers such as coyote, red fox, martin, mink, lynx, muskrat, and beaver. In addition, about 135 species of birds are present during summer months in interior Alaska, along with an approximately 3 dozen migratory species that pass through the area in spring and fall. Resident species include trumpeter swans, bald eagle, and spruce, sharptail, and ruffed grouse.¹⁹⁷

¹⁸⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁹⁰ Copper River Native Association Website. (n.d.). *About Us*. Retrieved September 6, 2012 from <http://crnative.org/company/about-us/>

¹⁹¹ Greater Copper Valley Chamber of Commerce. (n.d.). *About the Copper Valley*. Retrieved February 10, 2012 from <http://www.coppervalleychamber.com/aboutthecoppervalley.htm>.

¹⁹² See footnote 189.

¹⁹³ Alaska Tour and Travel. (n.d.). *Destinations: Glennallen Alaska*. Retrieved October 22, 2012 from <http://www.alaskatravel.com/alaska/glennallen.html>.

¹⁹⁴ See footnote 189.

¹⁹⁵ Ibid.

¹⁹⁶ Copper River Native Association. 2009. *Comprehensive Economic Development Strategy, Copper River Region, Alaska, 2009 Update*. Retrieved October 22, 2012 from <http://commerce.alaska.gov/ded/dev/oedp/pubs/CVDA-CEDS2009-2011.pdf>.

¹⁹⁷ Ibid.

The Wrangell–St. Elias National Park and Preserve is a U.S. National Park and National Preserve jointly managed by the National Park Service in southeastern Alaska established in 1980 by the Alaska National Interest Lands Conservation Act. This protected area is included in an International Biosphere Reserve and is part of a UNESCO World Heritage Site. This Park and Preserve is the largest protected area managed by the National Park Service, with a total of 13,175,799 acres. Nearly 66% of the Park and Preserve is designated as wilderness, also ranking as the largest designated wilderness in the country.¹⁹⁸

As a community within the greater Copper River Basin, Glennallen has a rich natural resource harvesting history. In 1898, the U.S. Geological Survey published reports on the geology of the Copper River basin region, and several copper and gold deposits were found. For example, in 1900 the great copper deposit was staked on a ridge just north of what is now the community of McCarthy. The Kennecott Copper Company developed the mine and built the railroad between Cordova and Kennecott/McCarthy, which was active from 1910 until it shut down in 1938. Discovery of gold in 1898 and 1899 in the Klondike resulted in the creation of the Valdez-Eagle trail as an alternate route for gold miners. This resulted in Copper Basin becoming a major staging area for thousands of prospectors who were traveling to the interior regions of Alaska from the coast at Valdez. It later became an important stage coach and mail route for those people who, under the Homestead Act, had settled through the Copper Valley region.¹⁹⁹

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation sites active in Glennallen as of October 2012.²⁰⁰

Current Economy²⁰¹

Glennallen is a hub of the Copper River region, acting as a center of commerce, medical services, administration, and education and community services.²⁰² The economy of Glennallen and other communities along the Glenn Highway also depends on tourism, including visitation resulting from passing traffic.²⁰³ Various state, federal, and local government offices located in Glennallen provide additional employment opportunities, including an administrative office of the Alaska Department of Fish and Game (ADF&G), a U.S. Bureau of Land Management (BLM) field office, an Alaska Department of Labor and Workforce Development (DOLWD) job center, offices of the Copper River School District, and an Alaska State Troopers post.²⁰⁴ The offices of the Ahtna, Inc., the regional Native corporation for the Copper River region, is also headquartered in Glennallen.²⁰⁵ In addition, there are several small farms in the area that provide

¹⁹⁸ National Park Service. (n.d.). *Wrangell-St. Elias National Park and Preserve*. Retrieved September 6, 2012 from <http://www.nps.gov/wrst/parkmgmt/index.htm>.

¹⁹⁹ Ibid.

²⁰⁰ Alaska Dept. of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved October 9, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

²⁰¹ Unless otherwise noted, all monetary data are reported in nominal values.

²⁰² Copper River Native Association. 2009. *Comprehensive Economic Development Strategy, Copper River Region, Alaska, 2009 Update*. Retrieved October 22, 2012 from <http://commerce.alaska.gov/ded/dev/oedp/pubs/CVDA-CEDS2009-2011.pdf>.

²⁰³ Alaska Dept. of Transportation and Public Facilities. 2010. *Interior Alaska Transportation Plan*. Retrieved October 22, 2012 from <http://dot.alaska.gov/nreg/studies/iatp/documents.shtml>.

²⁰⁴ See footnote 202.

²⁰⁵ Ahtna, Incorporated. 2012. *Welcome to Ahtna, Incorporated*. Retrieved October 23, 2012 from <http://www.ahtna-inc.com/>.

employment, and a number of residents hold commercial fishing permits (see *Commercial Fishing* section).²⁰⁶

Based on household surveys conducted for the 2006-2010 ACS,²⁰⁷ in 2010, the per capita income in Glennallen was estimated to be \$26,858 and the median household income was estimated to be \$49,000. These numbers represent increases from the per capita reported in 2000 (\$17,084) and a slight increase from the median household income reported in 2000 (\$38,846). If inflation is taken into account by converting the 2000 values to 2010 dollars,²⁰⁸ per capita is shown to have increased slightly, from a real per capita income figure of \$22,465 in 2000, and median household incomes appear to have decreased slightly over the decade, from a real per capita income in 2000 of \$51,082. In 2010, Glennallen ranked 88th of 305 Alaskan communities with per capita income data, and 137th in median household income, out of 299 Alaskan communities with household income data that year.

However, Glennallen's small population size may have prevented the ACS from accurately portraying economic conditions.²⁰⁹ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the DOLWD. If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Glennallen in 2010 is \$13,199.^{210,211} This estimate is lower than per capita income reported in 2000, suggesting that caution is warranted when citing an increase in per capita income in Glennallen based on 2006-2010 ACS estimates. This lower ALARI income estimate is reflected in the fact that the community was recognized as “distressed” by the Denali Commission, indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.²¹² It is important to note that both ACS and DOLWD data are based on wage earnings, and do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a slightly higher percentage of Glennallen residents was estimated to be in the civilian labor force (71.6%) compared to the civilian labor force statewide (68.8%). In the same year, 0% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was also estimated to be 0%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment, based on the ALARI database, indicates that the unemployment rate in Glennallen was much higher in 2010 (12.6%), slightly higher than the

²⁰⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved August 4, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁰⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²⁰⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²⁰⁹ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²¹⁰ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

²¹¹ See footnote 207.

²¹² Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

statewide unemployment rate estimate of 11.5%.²¹³ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Also based on the 2006-2010 ACS, a majority of the Glennallen workforce was estimated to be employed in the private sector (61.8%), along with 24.7% in the public sector, and 13.4% estimated to be self-employed. Of the 283 people aged 16 and over that were estimated to be employed in the civilian labor force, almost half were estimated to be working in retail trade (48.8%), while 12.7% were estimated to be working in public administration and 11.7% in educational services, health care and social assistance industries. Smaller numbers were estimated to be working in transportation, warehousing, and utilities (6.4%), information (5.3%), arts, entertainment, recreation, accommodation, and food services (5.3%), construction (4.9%), and finance, insurance, real estate, rental and leasing (4.9%) industries. Between 2000 and 2010, employment in retail trade appears to have increased by almost 5 times, while employment in education, health care, and social assistance industries declined by over 70% (Figure 3). These shifts in employment by industry are reflected in changes in employment by occupation. Compared to 2000, approximately 42% more of the workforce was employed in sales and office occupations in 2010, while 18.7% less of the workforce was employed in management and professional occupations (Figure 4). It is also important to note that no Glennallen residents were estimated to be employed in agriculture, forestry, fishing, hunting, and mining industries in 2010, compared to 2% of the civilian labor force in 2000 (Figure 3). The number of individuals employed in fishing industry is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly.

Data reported in the ALARI database conflicts somewhat with 2006-2010 ACS employment estimates, with the highest percentage of workers estimated to be employed in trade, transportation, and utilities industries (25.5%), and a higher percentage estimated to be employed in public administration (16.8% in local government and 10.9% in state government). In addition, the ALARI database suggests that 15% were employed in education and health services, 10.5% in leisure and hospitality, 5% in construction, 2.7% in natural resources and mining, 2.7% in financial activities, 2.7% in professional and business services, and 7.3% in other industries.²¹⁴

²¹³ See footnote 210.

²¹⁴ Ibid.

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

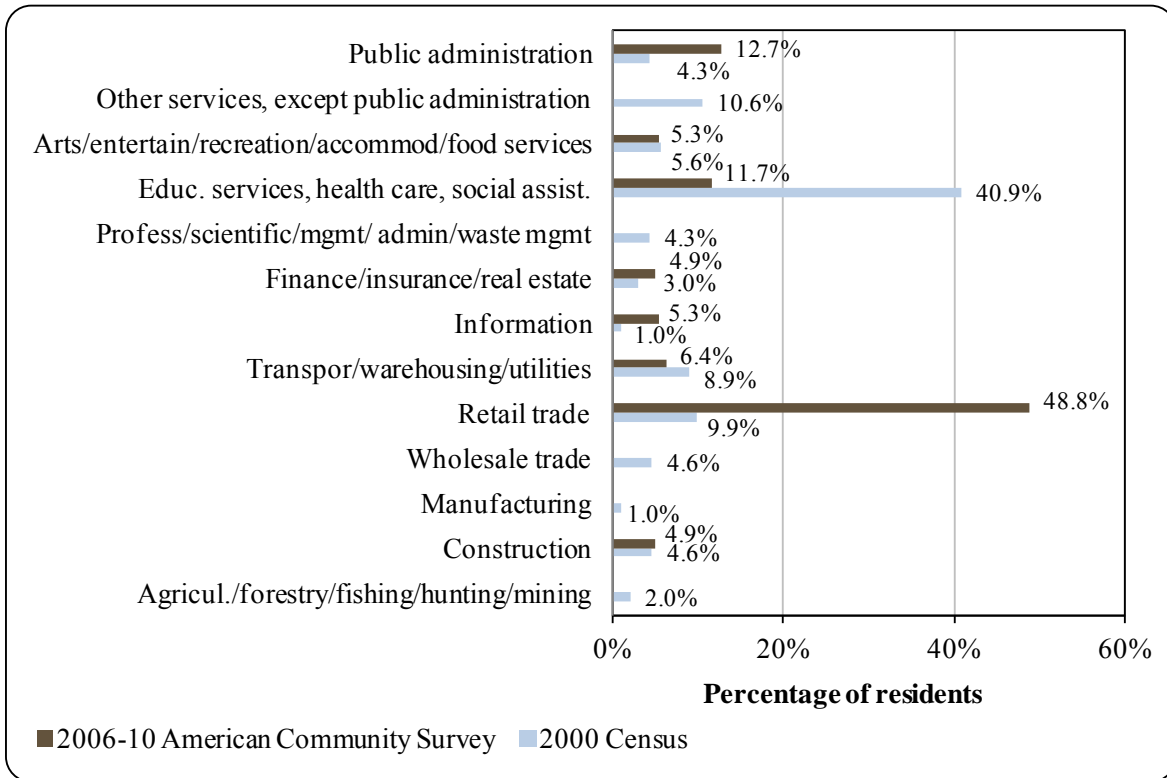
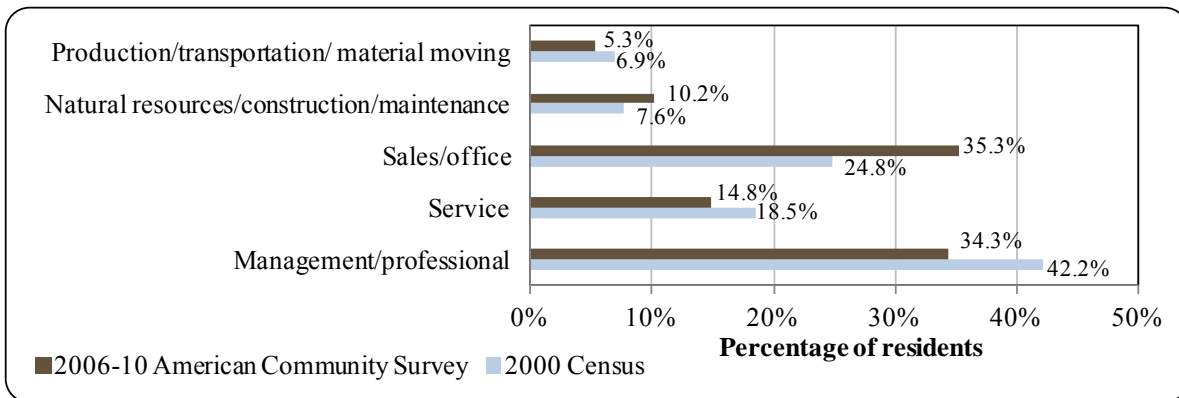


Figure 4. Local Employment by Occupation in 2000-2010, Glennallen (U.S. Census).



Governance

Glennallen is an unincorporated city located in an unorganized borough. Therefore, no information about municipal, state, or federal revenue is reported for this community (Table 2). Glennallen was not included under the Alaska Native Claims Settlement Act (ANCSA), and is not federally recognized as a Native village.²¹⁵

²¹⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved August 4, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Although there is no Tribal Council or Native village corporation in Glennallen, many Natives living in the area are shareholders in Ahtna, Incorporated, the regional Native corporation for the Copper River region. Ahtna, Inc. is headquartered in Glennallen.²¹⁶ In addition, the Copper River Native Association (CRNA), with offices 16 miles south in Copper Center, provides health and tribal community services in the region.²¹⁷ The CRNA is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.²¹⁸

An office of the ADF&G is located in Glennallen. The closest office of the Alaska Department of Natural Resources is located in Palmer, and the nearest offices of the National Marine Fisheries Service (NMFS), Alaska Department of Commerce, Community, and Economic Development, and the U.S. Bureau of Citizenship and Immigration Services are located in Anchorage.

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

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

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

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

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

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

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

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

²¹⁶ Ibid.

²¹⁷ Copper River Native Association. (n.d.). *Departments*. Retrieved October 23, 2012 from <http://crnative.org/departments/>.

²¹⁸ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

Infrastructure

Connectivity and Transportation

Glennallen is accessible by highway year-round. The Glen/Tok cutoff connects Glennallen to Palmer and Anchorage to the west and to Tok to the east. The Richardson Highway provides access south to Valdez and north to Delta Junction and further to Fairbanks.²¹⁹ Glennallen is also accessible via air. Brenwick's Airport provides public air access, and scheduled services are available. The 2,070 foot turf airstrip is owned and operated by Copper Basin District, Inc.²²⁰ The nearest commercial airport is the Gulkana airport, located approximately 6 miles northeast of Glennallen. As of 2012, roundtrip airfare from Anchorage to the Gulkana airport was \$390.²²¹

Facilities

A majority of homes in Glennallen source water from private wells, and several community wells are also available. Well water is not treated.²²² Water in the area is highly mineralized and sometimes iron-rich, and wells drilled in the Glennallen area sometimes produce somewhat saline water.²²³ All year-round homes are fully plumbed. For those homes not connected to the piped water system or a well, a local business offers water-delivery to fill home water tanks. Many homes also use private septic tanks, and a community septic tank and sewage lagoon are also in use. A non-profit organization called the Glennallen Improvement Corporation operates the local sewer system, which serves 52 homes and businesses. A majority of the downtown area is connected to a piped sewage system, while other homes use private septic tanks. Copper Basin Sanitation operates a landfill, and also provides refuse collection services. Electricity in Glennallen is provided by the Copper Valley Electric Association, Inc., which purchases power from the state-owned Solomon Gulch Hydro Facility. The utility company also owns diesel plants in Glennallen and Valdez.²²⁴

Glennallen is an administration hub for the Copper River region, and a number of state, federal, local, and tribal offices are present in the community. These include a local state trooper post, state highway maintenance, Copper River School District administrative offices, an office of the ADF&G, a BLM field office,²²⁵ and the headquarters of Ahtna, Incorporated.²²⁶

²¹⁹ Alaska Dept. of Transportation and Public Facilities. 2010. *Interior Alaska Transportation Plan*. Retrieved October 22, 2012 from <http://dot.alaska.gov/nreg/studies/iatp/documents.shtml>.

²²⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved February 9, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²²¹ Information retrieved October 23, 2012 from the Copper Valley Air website:

<http://www.coppervalleyairservice.com/Bi-Weekly-Direct-Flights-from-Anchorage-Gulkana-McCarthy.php>

²²² See footnote 220.

²²³ Copper River Native Association. 2009. *Comprehensive Economic Development Strategy, Copper River Region, Alaska, 2009 Update*. Retrieved October 22, 2012 from <http://commerce.alaska.gov/ded/dev/oedp/pubs/CVDA-CEDS2009-2011.pdf>.

²²⁴ See footnote 220.

²²⁵ See footnote 223.

²²⁶ Ahtna, Incorporated. 2012. *Welcome to Ahtna, Incorporated*. Retrieved October 23, 2012 from <http://www.ahtna-inc.com/>.

Additional facilities are located in nearby Copper Center, 16 miles to the south, such as the National Park Service’s Wrangell-St. Elias Visitor Center²²⁷ and officers of the CRNA.²²⁸

Police services are provided by the state trooper post, as well as a Village Public Safety Officer stationed in Glennallen. Fire and rescue services are provided by Copper River Emergency Medical Services and GlennRich Fire/Rescue. Additional community facilities in Glennallen include several public libraries (one public, three at schools, and one special library), the Greater Copper River Valley Visitor Information Center, the Frontier Museum, Wrangell-St. Elias National Park Repertory Theater, and a number of hotels, bed and breakfasts, lodges, and campgrounds. Telephone and internet service is available in Glennallen, but no cable provider offers local service.²²⁹

Medical Services

Medical services are available in Glennallen at the Cross Road Medical Center, which is a qualified Emergency Care Center. The facility provides Critical Care Air Ambulance Services. Emergency Services have highway and helicopter access. Emergency service is provided by 911 Telephone Service and volunteers.²³⁰ In addition, the Glennallen Health Center is operated by the Alaska Department of Public Health. The Center offers preventative health services, family planning, well-child screening, immunizations and TB tests, STD and HIV screenings and counseling, and offers some educational programs related to health and parenting.²³¹ The nearest hospitals are located in Valdez (120 road miles away) and Palmer (140 road miles away).

Educational Opportunities

There are three schools in Glennallen. Glennallen Elementary offers preschool through 6th grade), Glennallen Jr./Sr. High School instructs 7th through 12th grade, and the Upstream Learning correspondence program offers Kindergarten through 12th grade via a correspondence program. As of 2011, the elementary school had 118 students and 9 teachers, and the high school had 135 students and 11 teachers. Also that year, the Upstream Learning program (formerly known as Copper River Correspondence Studies) had 54 students and 1 teacher.²³² The Upstream Learning program serves home-educated students. In its early years the service was offered to residents of the Copper River Valley only, but in the 1990s services were expanded to enroll correspondence students throughout Alaska. Program officers are located in Glennallen.²³³

It is important to note that the main office of the Copper River School District is located in Glennallen. In addition to K-12 education, campuses of the Alaska Bible College and Prince William Sound Community College are both located in Glennallen.²³⁴

²²⁷ See footnote 220.

²²⁸ Copper River Native Association. (n.d.). *Departments*. Retrieved October 23, 2012 from <http://crnative.org/departments/>.

²²⁹ See footnote 220.

²³⁰ Ibid.

²³¹ See footnote 223.

²³² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²³³ Upstream Learning. (n.d.). *About Us*. Retrieved October 23, 2012 from <http://www.upstreamlearning.org/about-us.html>.

²³⁴ See footnote 223.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Ahtna Athabascan people have engaged in subsistence fishing in the Copper Valley Basin for at least the past 1,000 years. Salmon have long been one of the species critical to survival of indigenous peoples of the region, and major settlements have long been located along the Copper River in order to make use of this resource. Sockeye salmon were particularly important in the area, and Chinook and coho salmon also spawn and rear in the Copper River. Historically, dip nets were the most common salmon harvest method used by the Athna, along with additional harvest methods including use of weirs, basket traps, gaffs, spears, and snares. Whitefish and Arctic grayling were also important subsistence species.²³⁵ Ahtna oral tradition indicates that every 30 or 40 years the salmon runs on the Copper River have failed²³⁶ and other stories of starvation and hard times when people had to rely upon resources other than salmon support this claim.²³⁷ Subsistence fishing remains important along the Copper River today. Copper River subsistence and personal use fisheries are managed by the ADF&G. The River is divided into two management subdistricts. The Glennallen subdistrict is classified as a subsistence fishery, in which both fishwheels and dipnets can be used for harvest. Further downriver, the Chitina subdistrict is managed as a personal use fishery, and only dipnets are allowed.²³⁸ The Copper River and its tributaries also attract a large number of sport fishers each year.²³⁹

Commercial fishing for salmon takes place in marine waters near the mouth of the Copper River. The Copper River commercial salmon fishery began in 1887 when Prince Williams Sound's (PWS) first cannery was built by the Pacific Packing Company near the village of Eyak. Early fishing at the mouth of the Copper River was done by essentially barricading the mouth, which although very efficient, did not allow enough salmon through to spawn. Soon after Alaska became a territory in 1912, measures were taken to regulate gear types in the Copper River area due to a proliferation of many different catch methods, and subsequent concerns of local Native groups regarding decreased subsistence harvests. Between 1914 and 1923, 14 new canneries were established in the PWS area. By the 1940s, over 40 fish traps were built in the PWS area which operated six days a week for 24 hours a day during seasons. Canneries processed not only salmon, but also crab, clams, and shrimp. Fish stocks began to crash in the late 1940s and early 1950s because of the overuse of fish traps. Upon gaining statehood, Alaska was given the authority to manage its fisheries, including gear types used in

²³⁵ Simeone, William E. and Kari, James. 2002. *Traditional Knowledge and Fishing Practices of the Ahtna of the Copper River, Alaska*. U.S. Fish and Wildlife Service, Technical Paper No. 270. In collaboration with the Copper River Native Association. Retrieved October 23, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/00-040finalpart1.pdf>.

²³⁶ Reckford, Holly. (1983). *That's the Way We Live: Subsistence in the Wrangell-St. Elias National Park and Preserve*, Occasional Paper No. 34, Anthropology and Historic Preservation, Cooperative Park Studies Unit, University of Alaska Fairbanks, Fairbanks, Alaska.

²³⁷ See footnote 235.

²³⁸ Alaska Dept. of Fish and Game. 2012. *Chitina Personal Use Salmon Fishery Overview*. Retrieved October 23, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=PersonalUsebyAreaInteriorChitina.main>.

²³⁹ Copper River Chamber of Commerce. 2011. *Welcome to the Greater Copper Valley*. Retrieved October 23, 2012 from <http://www.coppervalleychamber.com/>.

prosecuting them, which lead to the abolishment of commercial traps in the Copper River Delta.²⁴⁰

Today, the Copper River salmon fishery is managed by the ADF&G. The PWS salmon management area is divided into 11 commercial fishing districts, covering the coastal area from Cape Suckling (northwest of Yakutat) to Cape Fairfield (east of Seward), and the inland waters of PWS. The Copper River empties into marine waters just east of the entrance to PWS. Drift gillnet is the only fishing gear utilized in this salmon district, as well as the adjacent Bering River district east of the Copper River. It is important to note that a sockeye hatchery program augments Copper River returns.²⁴¹

Along with salmon, herring harvest developed into one of the earliest commercial fisheries in Alaska, during the period when the product was salted for storing and shipment. PWS historically had a productive herring fishery. However, in 1993, four years after the Exxon Valdez oil spill, the stock collapsed in conjunction with an outbreak of hemorrhagic septicemia virus. Since 1998, the PWS herring fishery has been closed. The relationships between the oil spill, the virus, and the stock collapse remain unclear, and the population has shown little sign of recovery.^{242,243}

The commercial fishery for Pacific halibut expanded north to the Gulf of Alaska (GOA) by the 1920s, after diesel engines expanded the range of fishing trips.²⁴⁴ Today, Pacific halibut fisheries are managed under the International Pacific Halibut Commission (IPHC). In 1995, management of the Pacific halibut fishery shifted from limited entry to a catch share program.²⁴⁵

In addition to salmon, herring, and halibut, one Glennallen resident was involved in a fishery for ‘freshwater fish’ during the 2000-2010 period (see the *Commercial Fishing* section below). Commercial freshwater fish fisheries may target species such as Arctic char, northern pike, rainbow trout, Dolly Varden char, and sheefish.²⁴⁶

Given that Glennallen is more than 50 miles from the coast, no federal fisheries regulatory areas are located within the immediate vicinity. Glennallen is not eligible for the Community Quota Entity program or to participate in the Community Development Quota program. The Copper River empties into marine waters encompassed by Federal Reporting Area 649, IPHC Regulatory Area 3A, and the Central GOA Sablefish Regulatory District.

²⁴⁰ Cordova District Fishermen United. (n.d). *A Historical Narrative of Fishing in the PWS/Copper River Area*. Retrieved February 24, 2012 from: <http://www.cdfu.org>.

²⁴¹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afbr/clarv12n1.pdf>.

²⁴² Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

²⁴³ Alaska Dept. of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

²⁴⁴ International Pacific Halibut Commission. 1978. *The Pacific Halibut: Biology, Fishery, and Management*. Technical Report No. 16 (Revision of No. 6).

²⁴⁵ Fina, Mark. 2011. “Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific.” *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

²⁴⁶ Alaska Dept. of Fish and Game (2006). *Our Wealth Maintained: A Strategy for Conserving Alaska’s Diverse Wildlife and Fish Resources*. Retrieved June 21, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=species.wapview>.

Processing Plants

According to the ADF&G's 2010 Intent to Operate list, Glennallen does not have a registered processing plant. The closest processing facilities are located in Anchorage.

Fisheries-Related Revenue

Between 2000 and 2010, no known fisheries-related revenue was recorded in Glennallen (Table 3).

Commercial Fishing

Between 2000 and 2010, Glennallen residents participated in commercial fisheries as state permit holders, crew license holders, and vessel owners. The number of state-issued Commercial Fisheries Entry Commission (CFEC) permits held by residents varied between four and nine per year over the period (Table 4), while the number of crew licenses holders varied between three and six. The number of Glennallen residents who were the primary owners of a fishing vessel showed a declining trend over the period, from 14 in 2001 and 2002 to 0 by 2010, and the number of vessels homeported in the community declined from 10 to 0. No fish buyers or shore-side processors were present in Glennallen during the 2000-2010 period, and no landings or ex-vessel revenue were generated locally (Table 5).

Glennallen residents held CFEC permits in fisheries for salmon, herring, halibut, and freshwater fish between 2000 and 2010. Several salmon and herring permits were held in all years during the period, while an 'other finfish' permit was held from 2000 to 2006, and one halibut permit was held in 2002 only. In 2010, salmon permits were held in the Bristol Bay drift gillnet fishery (1 permit held, 1 actively fished), the Lower Yukon gillnet fishery (1 permit held, 0 actively fished), and the statewide hand troll fishery (1 permit held, 0 actively fished). Earlier in the decade, a small number of salmon permits were also held by Glennallen residents in the Prince William Sound, Bristol Bay, and Cook Inlet set gillnet fisheries, and in the Prince William Sound purse seine fishery. The 'other finfish' permit was held in the statewide freshwater fish permit, and was not actively fished in any year during the period. One herring permit was held each year in the Prince William Sound spawn on kelp fishery, and was not actively fished in any year between 2000 and 2010. Two additional herring permits were held in 2005 in the Security Cove and Bristol Bay roe herring gillnet fisheries, and both of these permits were actively fished that year. Finally, the halibut permit held in 2002 was held in the statewide longline fishery, and was actively fished that year. Information about CFEC permits is presented in Table 4.

Additionally, no residents held federal fishery permits (Table 4) or participated in federal catch share programs for halibut, sablefish, or crab between 2000 and 2010 (Tables 6-8). Given the lack of fish buyers and shore-side processors in Glennallen (Table 5), no landings were reported in the community during this time period (Table 9). In addition, information about landings and ex-vessel revenue generated by Glennallen vessel owners, including all delivery locations, is considered confidential due to the small number of participants engaged in commercial fishing between 2000 and 2008 (Table 10).

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
Total municipal revenue⁵	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a refers to data that was not available at the time of printing.

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

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

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

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

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

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	1	0	0	0	0	0	0	0	0
	Fished permits	0	0	1	0	0	0	0	0	0	0	0
	% of permits fished	-	-	100%	-	-	-	-	-	-	-	-
	Total permit holders	0	0	1	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	2	1	1	1	1	3	1	1	1	1	1
	Fished permits	0	0	0	0	0	2	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	67%	0	0	0	0	0
	Total permit holders	2	1	1	1	1	2	1	1	1	1	1

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	1	1	1	1	1	1	1	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	-	-	-	-
	Total permit holders	1	1	1	1	1	1	1	0	0	0	0
Salmon (CFEC) ²	Total permits	3	3	3	3	4	5	7	7	8	5	3
	Fished permits	2	1	1	1	3	3	5	2	3	3	1
	% of permits fished	67%	33%	33%	33%	75%	60%	71%	29%	38%	60%	33%
	Total permit holders	4	3	3	3	4	5	7	7	8	5	3
<i>Total CFEC Permits²</i>	<i>Permits</i>	6	5	6	5	6	9	9	8	9	6	4
	<i>Fished permits</i>	2	1	2	1	3	5	5	2	3	3	1
	<i>% of permits fished</i>	33%	20%	33%	20%	50%	56%	56%	25%	33%	50%	25%
	<i>Permit holders</i>	7	5	5	5	6	7	9	8	9	6	4

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

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

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

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Glennallen ²	Total Net Pounds Landed In Glennallen ^{2,5}	Total Ex-Vessel Value Of Landings In Glennallen ^{2,5}
2000	4	0	0	8	10	0	0	\$0
2001	6	0	0	14	13	0	0	\$0
2002	5	0	0	14	13	0	0	\$0
2003	6	0	0	11	10	0	0	\$0
2004	3	0	0	8	7	0	0	\$0
2005	3	0	0	3	0	0	0	\$0
2006	4	0	0	3	0	0	0	\$0
2007	3	0	0	3	0	0	0	\$0
2008	3	0	0	1	0	0	0	\$0
2009	5	0	0	0	0	0	0	\$0
2010	4	0	0	0	0	0	0	\$0

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

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

³ National Marine Fisheries Service. (2011). Alaska processors' Weekly Production Reports (WPR) data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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

⁵ Totals only represent non-confidential data.

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

Year	Number of Halibut Quota Share Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

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

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

Year	Number of Sablefish Quota Share Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

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

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

Year	Number of Crab Quota Share Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

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

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

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

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

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

² Totals only represent non-confidential data.

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

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

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

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

[URL not publicly available as some information is confidential.]

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

² Totals only represent non-confidential data.

Recreational Fishing

The Copper River is a major sportfishing destination in Alaska and many Glennallen residents participate in recreational fishing. Two tributaries of the Copper River – the Gulkana and Klutina Rivers – are particularly well known for their Chinook and sockeye sport fisheries.²⁴⁷ Excellent sportfishing opportunities are also available in the main stem of the Copper River. Three species of salmon (Chinook, coho, and sockeye) are present in the Upper Copper/Upper Susitna Sport Fish Management Area. Anglers can also target coho salmon stocked in several landlocked lakes of the region. Twenty-nine lakes in the area are also stocked with Arctic grayling, rainbow trout, and Arctic char, providing for popular sport fisheries for these species. Other freshwater sport fish species in the local Sport Fish Management Area include burbot, Dolly Varden, steelhead, lake trout, and whitefish.²⁴⁸

Although there was an active sport fish guide business in one year of the 2000-2010 period only, the number of licensed sport fish guides present in Glennallen was more significant. The number of licensed sport fish guides declined over the period, from a high of 31 guides in 2003 to a low of 3 guides in 2009. Over the same period, the number of sportfishing licenses sold locally in Glennallen increased substantially over the decade, from 0 in 2000 to 1,113 sold in 2010. However, the number of licenses sold to Glennallen residents remained relatively stable over the period (averaging 570 per year), suggesting that Glennallen residents have access to additional license sale locations.

Glennallen is located within Alaska Sport Fishing Survey Area I – Upper Copper River Drainage. Information is available about freshwater sportfishing activity only at this regional scale. Between 2000 and 2010, Alaska residents fished consistently more angler days in freshwater than non-Alaska residents, averaging 31,555 angler days fished per year compared to an average of 14,109 angler days fished by non-Alaska residents. No saltwater fishing was recorded in this region given its inland location. Further information about the sportfishing sector in and near Glennallen is presented in Table 11.

²⁴⁷ Copper River Chamber of Commerce. 2011. *Welcome to the Greater Copper Valley*. Retrieved October 23, 2012 from <http://www.coppervalleychamber.com/>.

²⁴⁸ Alaska Dept. of Fish and Game. 2012. *Upper Copper River & Susitna River Management Area Overview*. Retrieved October 23, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=ByAreaInteriorUpperCopperSusitna.main>.

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

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Glennallen ²
2000	1	22	561	0
2001	0	23	599	117
2002	0	26	573	0
2003	0	31	572	8
2004	0	24	558	132
2005	0	7	632	186
2006	0	6	592	145
2007	0	6	557	1,192
2008	0	7	546	1,127
2009	0	3	521	1,068
2010	0	5	554	1,113

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	0	0	14,806	32,769
2001	0	0	12,212	31,506
2002	0	0	13,069	27,978
2003	0	0	10,901	32,550
2004	0	0	12,248	27,454
2005	0	0	11,659	25,529
2006	0	0	12,516	21,448
2007	0	0	16,970	27,658
2008	0	0	11,959	27,940
2009	0	0	11,071	33,493
2010	0	0	13,683	27,229

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

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

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

Subsistence Fishing

The Ahtna people have historically engaged in subsistence fishing along the Copper River, with a particular focus on salmon.²⁴⁹ Today, salmon harvests continue to be a primary subsistence resource in the Glennallen area. The Copper River is divided into two management subdistricts. The Glennallen subdistrict is classified as a subsistence fishery, in which both fishwheels and dipnets can be used for harvest. Further downriver, the Chitina subdistrict is managed as a personal use fishery, and only dipnets are allowed.²⁵⁰ Between 2000 and 2010, the number of Glennallen households that were issued subsistence salmon permits varied between 116 and 239 per year. Sockeye salmon were by far the most heavily harvested salmon species, with an average of 6,908 sockeye harvested per year. Several hundred Chinook and coho salmon were also reported as harvested using subsistence salmon permits between 2000 and 2010 (Table 13).

During this period, no data were reported by ADF&G regarding harvest of marine invertebrates or non-salmon fish (not including halibut) (Table 13). However, an earlier subsistence harvest survey by ADF&G provides some information about harvest of marine invertebrates and non-salmon fish by Glennallen households in 1987. That year, the species of non-salmon fish harvested by the greatest number of Glennallen households were Arctic grayling (27% of households reported participation in harvest activity), rainbow trout (16% of households), Dolly Varden (14%), whitefish (6%), lake trout (5%), pike (2%), steelhead (2%), and red rockfish (2%). In addition, 1% of Glennallen households were estimated to harvest clams in 1987.²⁵¹

According to data reported by ADF&G, four Subsistence Halibut Registration Certificates (SHARC) were issued to Glennallen residents in 2004 and again in 2005, while one was issued in 2010. No data were reported regarding the number of SHARC cards returned or pounds of halibut harvested between 2003 and 2010 (Table 14). In addition, no data were reported by management agencies regarding harvest of marine mammals by Glennallen residents between 2000 and 2010 (Table 15).

²⁴⁹ Simeone, William E. and James Kari. (2002). *Traditional Knowledge and Fishing Practices of the Ahtna of the Copper River, Alaska*. Technical Paper No. 270. Alaska Department of Fish and Game. Division of Subsistence. Juneau, Alaska. July.

²⁵⁰ Alaska Dept. of Fish and Game. 2012. *Chitina Personal Use Salmon Fishery Overview*. Retrieved October 23, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=PersonalUsebyAreaInteriorChitina.main>.

²⁵¹ Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Retrieved February 2011 from <http://www.adfg.alaska.gov/sb/CSIS/>.

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

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

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

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

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

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	152	146	1,028	n/a	79	n/a	8,065	n/a	n/a
2001	161	154	413	n/a	376	n/a	8,753	n/a	n/a
2002	151	135	462	n/a	175	n/a	6,620	n/a	n/a
2003	123	108	169	n/a	96	n/a	4,112	n/a	n/a
2004	132	115	408	n/a	38	n/a	5,386	n/a	n/a
2005	194	160	391	n/a	26	n/a	9,069	n/a	n/a
2006	187	163	578	n/a	24	n/a	8,355	n/a	n/a
2007	239	203	523	n/a	135	n/a	8,551	n/a	n/a
2008	116	96	185	n/a	145	n/a	3,257	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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

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

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

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

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	4	n/a	n/a
2005	4	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	1	n/a	n/a

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

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

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

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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

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

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

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

Tatitlek (*tuh-TIT-leck*)



People and Place

*Location*²⁵²

Tatitlek is located on the northeast shore of Tatitlek Narrows, on the Alaska Mainland in Prince William Sound (PWS). It lies near Bligh Island, southwest of Valdez by sea and 30 air miles northwest of Cordova. Tatitlek is located in the Valdez Recording District and the Valdez-Cordova Census Area and is not located within an organized Borough.

*Demographic Profile*²⁵³

In 2010, there were 88 inhabitants in Tatitlek, making it the 257th largest of 352 total Alaskan communities with recorded populations that year. Between 2000 and 2009, the population of Tatitlek decreased by 22.43%, with an average annual growth rate of -3.01%. The change in population from 1990 to 2010 is provided in Table 1.

In 2010, a majority of Tatitlek residents identified themselves as American Indian and Alaska Native (60.2%). Other ethnic groups present in Tatitlek that year included White (30.7%), two or more races (5.7%), Hispanic or Latino (3.4%), some other race (1.1%), Native Hawaiian or Other Pacific Islander (1.1%), and Asian (1.1%). Between 2000 and 2010, the percentage of the population identifying themselves as American Indian and Alaska Native decreased by 23.9%, with corresponding increases in the percentage of the population identifying themselves as White, two or more races, some other race, Native Hawaiian and Other Pacific Islander, and Hispanic or Latino. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Tatitlek was 2.44, a decrease from 3.6 persons per household in 1990 and 2.82 in 2000. The total number of households increased from 33 in 1990 to 38 in 2000, then decreased slightly to 36 occupied housing units in 2010. Of the 75 total housing units surveyed for the 2010 Decennial Census, 22 were owner-occupied, 14 were renter occupied, and 39 were vacant or used only seasonally. Throughout this period no residents of Tatitlek were reported to be living in group quarters.

²⁵² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁵³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

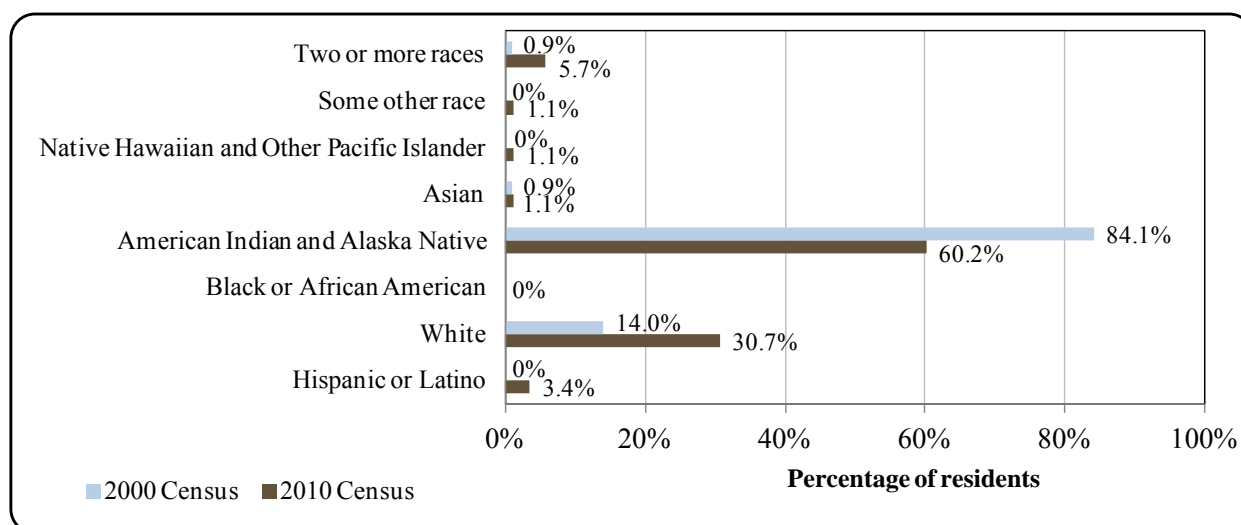
Table 1. Population in Tatitlek from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	119	-
2000	107	-
2001	-	96
2002	-	103
2003	-	105
2004	-	107
2005	-	102
2006	-	117
2007	-	110
2008	-	102
2009	-	83
2010	88	-

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

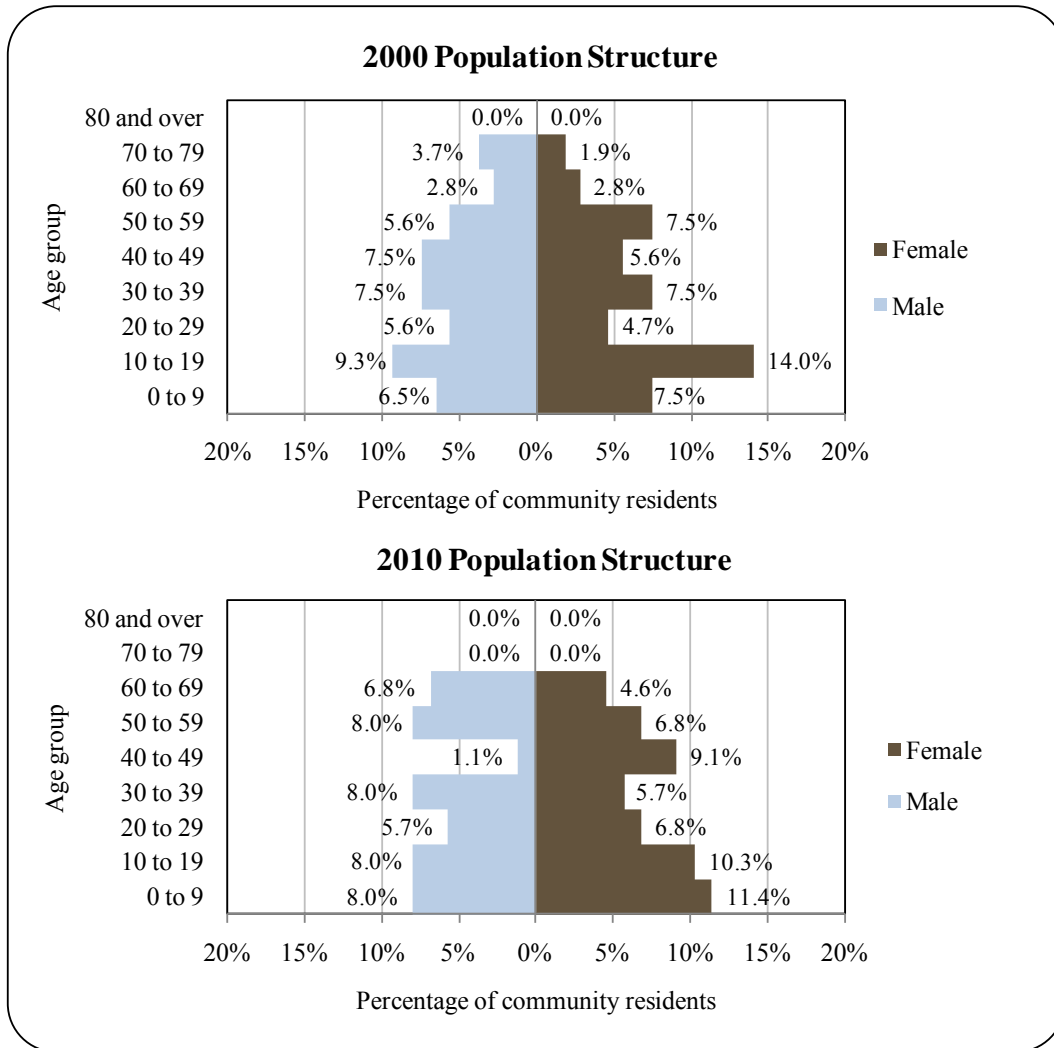
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

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



The gender makeup in Tatitlek in 2010 was 45.5% male and 54.5% female, more heavily skewed towards females than the state as a whole (52% male, 48% female). The median age was estimated to be 29.5 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the largest percentage of the population fell within the age group zero to 9 years old, with the next largest percentage falling within the age group 10 to 19 years old. There were no residents of Tatitlek that were age 70 or over in 2010. The overall population structure of Tatitlek in 2000 and 2010 is shown in Figure 2.

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



According to the 2006-10 American Community Survey (ACS),²⁵⁴ in terms of educational attainment, 87.8% of Tatitlek residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 4.1% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 8.2% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 42.9% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 26.5% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; and 18.4% were estimated to have a Bachelor’s degree, compared

²⁵⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

to 17.4% of Alaskan residents overall. In 2010, there were no residents of Tatitlek that were estimated to have an Associate's degree or a graduate or professional degree.

*History, Traditional Knowledge, and Culture*²⁵⁵

Tatitlek is an Alutiiq village first reported in the 1880 U.S. Census as “Tatikhlek,” with a population of 73. The present spelling was published in 1910 by the U.S. Geological Survey, which wrote that the village originally stood at the head of Gladhaugh Bay but was moved to its present site in the shadow of Copper Mountain around 1900. A post office was established in 1946. Many residents of Chenega moved to Tatitlek following its destruction by tsunami after the 1964 Good Friday Earthquake. The dominant feature in the village is the blue-domed Russian Orthodox church.

Today, Tatitlek is a coastal Alutiiq village with a fishing- and subsistence-based culture. The sale and importation of alcohol is banned in the village.

Natural Resources and Environment

Winter temperatures range from 17 to 28 °F (-8.3 to -2.2 °C); summers average 49 to 63 °F (9.4 to 17.2 °C). Annual precipitation averages 28 inches of rain and 150 inches of snowfall.²⁵⁶

Tatitlek is located within the Chugach National Forest, an area that is administered by the U.S. Department of Agriculture (USDA) Forest Service.²⁵⁷ The Chugach National Forest is America's most northerly National Forest. This stunning landscape stretches across south-central Alaska, from the salty waters and snowy peaks of PWS to the fabulous salmon and trout streams of the Kenai Peninsula, covering an area the size of New Hampshire. It is one of the few places left in the world where glaciers still grind valleys into the hard rock of the earth. Its geographic diversity is unique among national forests. The three distinct landscapes of the Copper River Delta, the Eastern Kenai Peninsula, and PWS are destinations for adventurers and nature enthusiasts the world over. The forest is home to wild lands, wildlife, wild fish, and wild ice. Visitors in kayaks, cruise ships, small boats, ferries, and float planes explore the Sound's 3,500 miles of coastline and 3 million acres of ocean and land.

Historically, the Chugach region was one of the foremost mining regions in Alaska. The Beatson mine on Latouche Island and the Ellamar mine near Tatitlek yielded over 200 million pounds of copper, 52,000 ounces of gold and 1.7 million ounces of silver before closing down in the 1930's.²⁵⁸

²⁵⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁵⁶ Ibid.

²⁵⁷ United States Department of Agriculture Forest Service. Chugach National Forest: About the Forest. Retrieved from <http://www.fs.usda.gov/main/chugach/about-forest> on April 2, 2012.

²⁵⁸ Chugach Alaska Corporation. 2012. Our Lands. Retrieved on May 11, 2012 from <http://www.chugach-ak.com/lands/Pages/default.aspx>.

Current Economy²⁵⁹

Fish processing and oyster farming provide some employment in Tatitlek. In 2010, one resident held a commercial fishing permits. Subsistence activities provide the majority of food items. A coho salmon hatchery, supporting subsistence activities, is located at Boulder Bay. The community has a store.²⁶⁰ Top employers in 2010 included Tatitlek Village IRA Council, Chugach School District, The Tatitlek Corp., Chugachmiut, Native Village of Chenega Bay Public Health, and North Pacific Rim Housing Authority.

In 2010, the per capita income in Tatitlek was estimated to be \$17,068 and the median household income was estimated to be \$38,750, compared to \$13,015 and \$36,875 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,²⁶¹ the real per capita income in 2000 is shown to have been \$17,115 and the real 2000 median household income was \$48,490. This shows that per capita income stayed stable over the period, while there was a real decrease in median household income. In 2010, Tatitlek ranked 176th of 305 Alaskan communities with per capita income that year, and 197th of 299 Alaskan communities with household income data. However, Tatitlek's small population size may have prevented the American Community Survey from accurately portraying economic conditions.²⁶² In addition, the Alaska Department of Labor and Workforce Development (DOLWD) reported \$7,692 in per capita income, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.^{263,264} This data is supported by the fact that the community was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. However, it should be noted that American Community Survey and DOLWD data is based on wage earnings and does not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in the same year, 59.3% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 8.6%, compared to the statewide rate of 5.9%. Approximately 5.4% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Tatitlek are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Tatitlek. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 3.4%.

Also based on household surveys conducted for the 2006-2010 ACS, the greatest number of workers was employed in the private sector (53.1%), while 37.5% were employed in the

²⁵⁹ Unless otherwise noted, all monetary data are reported in nominal values.

²⁶⁰ See footnote 255.

²⁶¹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²⁶² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁶³ Calculated as the total wages earned by those employed in the community divided by the total population. The wages earned do not include income collected by residents that are self employed.

²⁶⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

public sector and 9.4% were self-employed. Out of 32 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in educational services, health care, and social assistance (57.6%), public administration (12.1%), transportation, warehousing, and utilities (12.1%), and construction (12.1%). Only 6.1% of the workforce was employed in retail trade. No individuals characterized themselves as working in natural resource based occupations or industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

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

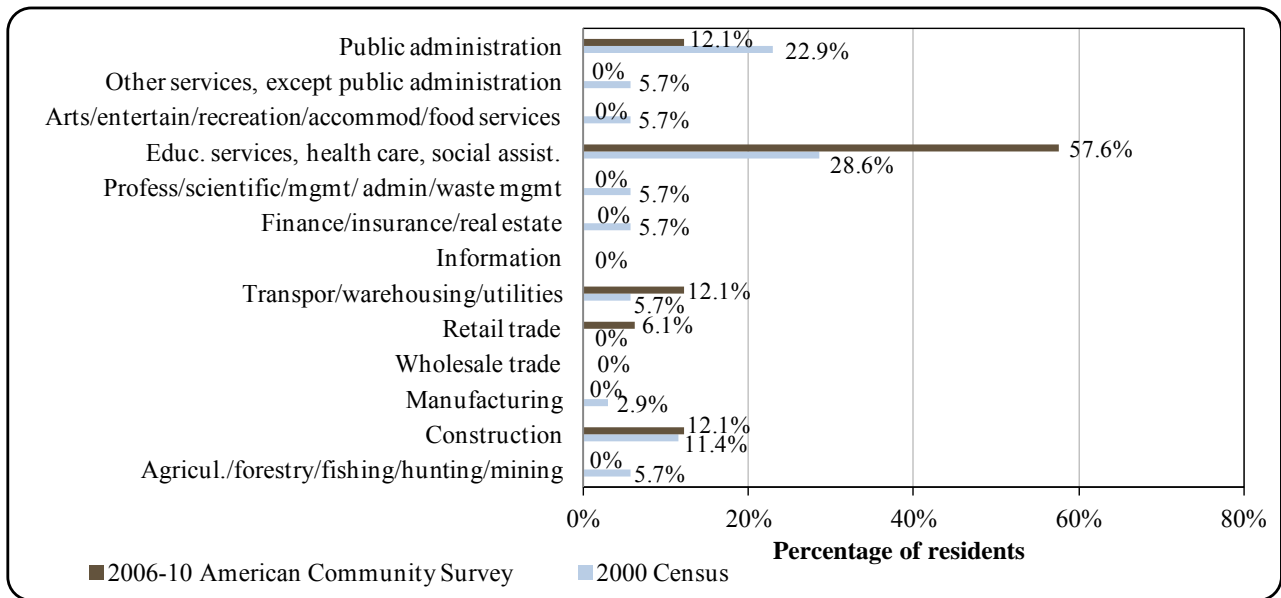
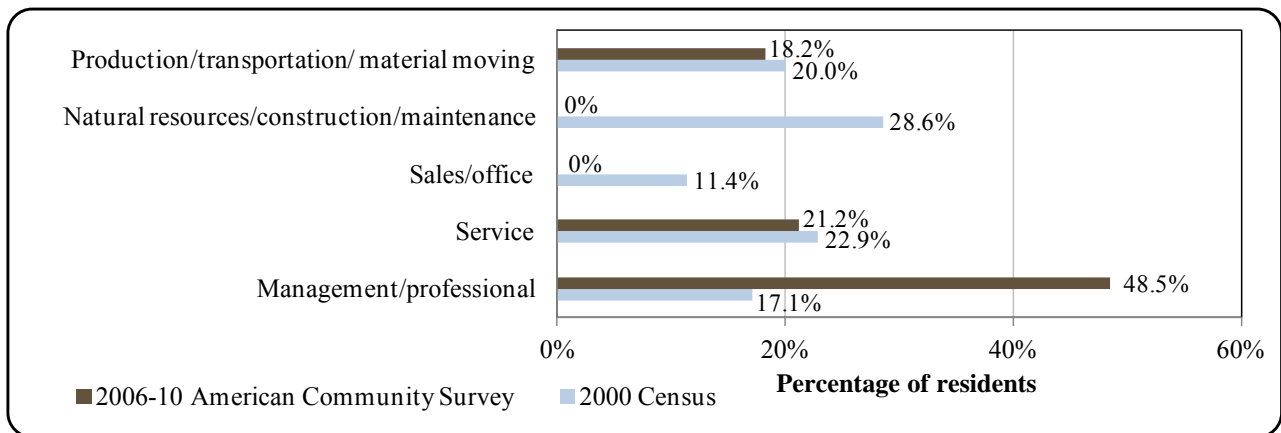


Figure 4. Local Employment by Occupation in 2000-2010, Tatitlek (U.S. Census).



Governance

Tatitlek is an unincorporated town located in the Valdez-Cordova Borough. Because of Tatitlek’s unincorporated status, no municipal taxes were administered between 2000 and 2010, nor is there any total municipal revenue to report. Likewise, no information was available regarding revenue sharing contributions from the State Revenue Sharing and Community Revenue Sharing programs during the 2000-2010 period. However, community entities in Tatitlek did receive a number of fisheries-related grants for projects including small boat harbor and breakwater design and construction, small boat harbor construction, construction of the Tatitlek Community Dock, and an Alaska King Crab Research and Rehabilitation Contract. This information about selected revenue streams in Tatitlek is presented in Table 2.

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

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	\$7,500,000
2003	n/a	n/a	n/a	\$7,500,000
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	\$367,000
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	\$68,000
2010	n/a	n/a	n/a	n/a

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

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

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

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

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

Tatitlek was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is The Tatitlek Corporation. The regional Native corporation to which Tatitlek belongs is the Chugach Alaska Corporation (Chugach). Chugach is one of the thirteen regional Alaska Native corporations created by ANCSA as amended by the Alaska National Interest Land Conservation Act (ANILCA). The Chugach Region comprises some 10 million acres in South-central Alaska. Chugach is entitled to 928,000 acres, of which approximately 378,000 acres are full fee entitlement and 550,000 acres of subsurface estate. At

this time, Chugach has received 94% of its total entitlement. Chugach has selected lands that have potential for economic development including commercial timber land, mineral estates as well as lands that have potential for tourism, and lands of cultural and historical importance to the Chugach people.²⁶⁵

The closest office of the Alaska Department of Fish and Game (ADF&G) is located in Cordova. The closest offices of the Alaska Department of Natural Resources (DNR), Department of Commerce, Community, and Economic Development, the National Marine Fisheries Service (NMFS), the Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

Infrastructure

Connectivity and Transportation

Tatitlek has a state-owned 3,701 foot long by 75 foot wide lighted gravel airstrip and a seaplane landing area; air charters are available from Valdez and Cordova. Boats are the primary means of local transportation. In 1996, the Alaska Marine Highway began "whistle stop" service.²⁶⁶ After a short charter flight, direct commercial service is available to Anchorage from Valdez and Cordova. In June 2012, round-trip airfare between Valdez and Anchorage was \$298, and round-trip airfare between Cordova and Anchorage was \$208.²⁶⁷

*Facilities*²⁶⁸

A dam provides water, which is treated and stored in a 170,000-gallon tank. A piped water and sewer system serves all 34 homes. The piped community septic tank system discharges via an ocean outfall. There is an operating oil and hazardous waste recycling center. Law enforcement services are provided by state troopers in Valdez, and fire/rescue services are provided by the Tatitlek Emergency Medical Service. Tatitlek also has a teen center and a community center.

*Medical Services*²⁶⁹

Medical care is provided by the Tatitlek Clinic, which is owned by the Village Council and operated by Chugachmiut. The clinic is a Community Health Aid Program site. Alternate health care is provided by the Tatitlek Emergency Medical Service. Emergency services have coastal air, floatplane, and helicopter access and are provided by a health aide.

²⁶⁵ Chugach Alaska Corporation. 2012. Our Lands. Retrieved on May 11, 2012 from <http://www.chugach-ak.com/lands/Pages/default.aspx>.

²⁶⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁶⁷ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

²⁶⁸ See footnote 266.

²⁶⁹ Ibid.

*Educational Opportunities*²⁷⁰

The Tatitlek Community School provides instruction to students from pre-school through 12th grade. In 2011 the school had 18 students and two teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Groundfish and crab fisheries that occur within 3 nautical miles (nm) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nm in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. PWS is located in Federal Statistical and Reporting Area 649 and Pacific Halibut Fishery Regulatory Area 3A. The outlet of PWS is at the boundary between the Central Gulf of Alaska (GOA) and Eastern GOA federal Sablefish Regulatory Areas.

In addition to federal groundfish fisheries that take place in the Central and Eastern GOA, state groundfish fisheries take place in the inland waters of PWS for rockfish, lingcod, pollock, sablefish, and Pacific cod. The PWS Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal cod fishery. The Total Allowable Catch (TAC) set by NMFS applies to both fisheries. Beginning in 1997, an additional ‘state-waters fishery’ for Pacific cod was initiated in PWS. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition, a pelagic trawl fishery for pollock began in PWS in 1995. It is managed under a guideline harvest limit (GHL) determined by ADF&G, and is not conducted as a parallel fishery. The PWS limited entry sablefish fishery is also managed separately under a GHL.²⁷¹

A majority of lingcod are found in nearshore rocky reef habitat from 10-100 meters in depth. ADF&G manages all lingcod fisheries in state and EEZ waters off Alaska. Lingcod in PWS are primarily harvested as incidental catch in longline fisheries, although lingcod fisheries have increased in importance in recent decades. The state manages rockfish harvest in PWS, and since 1998 also has jurisdiction of blue and black shelf rockfish in the western GOA, and all rockfish in the eastern GOA.²⁷²

PWS historically had a productive herring fishery. However, in 1993, four years after the Exxon Valdez oil spill, the stock collapsed in conjunction with an outbreak of hemorrhagic septicemia virus. Since 1998, the PWS herring fishery has been closed. The relationships between the oil spill, the virus, and the stock collapse remain unclear, and the population has shown little sign of recovery.^{273,274} PWS was also a historical center for Dungeness crab fisheries, but this stock has also collapsed. Possible causes for the Dungeness collapse include

²⁷⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²⁷¹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

²⁷² Ibid.

²⁷³ Ibid.

²⁷⁴ Alaska Dept. of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

overfishing, sea otter predation, and adverse climatic changes. Red king crab and Tanner crab fisheries in PWS are also closed due to low stock abundance.²⁷⁵ In contrast to the closures of herring and crab fisheries, spot shrimp (*Pandalus platyceros*) pot fisheries reopened in PWS in 2010 after almost two decades of closure due to low abundance.²⁷⁶

Tatitlek is located on the northeast shore of Tatitlek Narrows, on the Alaska Mainland in PWS.²⁷⁷ The area is included in Federal Statistical and Reporting Area 640, Pacific Halibut Fishery Regulatory Area 3A, and Sablefish Regulatory Area Eastern Gulf of Alaska/ West Yakutat. The community is eligible for the Community Quota Entity (CQE) program; however, it has not yet formed a non-profit entity that can purchase quota share.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Tatitlek does not have a registered processing plant. The nearest processing plants are located in Cordova and Valdez.

Fisheries-Related Revenue

Tatitlek did not receive any fisheries-related revenue between 2000 and 2010 (Table 3).

Commercial Fishing

In 2010, there was one permit holder that held one commercial salmon fishing permit issued by the Commercial Fisheries Entry Commission (CFEC) for the drift gill net fishery in PWS. Overall between 2000 and 2010, the number of CFEC salmon permits and permit holders, as well as the number of permits fished, as declined. In previous years, Tatitlek residents have also held groundfish and sablefish CFEC permits, though the permits were not reported as fished in all years between 2000 and 2010. During this period, there was one groundfish License Limitation Program (LLP) permit issued to a Tatitlek resident, though that permit was not reported as fished between 2000 and 2010. Information on commercial fishing permits and permit holders by species is provided in Table 4.

There were six crew license holders in Tatitlek in 2010, a number which varied considerably between 2000 and 2010. During this period, there were no fish buyers or shore-side processing facilities located in Tatitlek. Also in 2010, there was one commercial fishing vessel primarily owned by a Tatitlek resident, a number which declined from a high of seven vessels owned primarily by Tatitlek residents in 2000. There were three commercial fishing vessels homeported in Tatitlek in 2010, a number which varied between one and three vessels between 2000 and 2010. During this period, there were no vessels landing catch in the community, and as such there are no landings or associated ex-vessel revenue to report. Information on characteristics of the commercial fishing sector in Tatitlek between 2000 and 2010 is provided in Table 5.

²⁷⁵ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

²⁷⁶ Alaska Dept. of Fish and Game. 2012. *Spot Shrimp Species Profile: Status, Trends and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=spotshrimp.main>.

²⁷⁷ Ibid.

Between 2000 and 2010, there were no quota share account holders in Tatitlek for federal halibut (Table 6), sablefish (Table 7), or crab fisheries (Table 8). As previously stated, there were no landings recorded in Tatitlek between 2000 and 2010, and no associated ex-vessel revenue reported during this period (Table 9). Landings by Tatitlek residents, as well as associated ex-vessel revenue between 2000 and 2010, are considered confidential due to a small number of participants (Table 10).

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

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

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

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

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

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

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

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	1	1	1
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	0	0
	Fished permits	1	1	1	1	0	1	1	1	1	0	0
	% of permits fished	100%	100%	100%	100%	0%	100%	100%	100%	100%	-	-
	Total permit holders	1	1	1	1	1	1	1	1	1	0	0
Groundfish (CFEC) ²	Total permits	2	2	1	1	1	1	1	1	2	0	0
	Fished permits	2	0	0	0	0	0	0	0	0	0	0
	% of permits fished	100%	0%	0%	0%	0%	0%	0%	0%	0%	-	-
	Total permit holders	2	2	1	1	1	1	1	1	1	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	4	3	3	4	3	4	3	3	3	1	1
	Fished permits	3	2	3	4	3	4	2	3	2	1	1
	% of permits fished	75%	67%	100%	100%	100%	100%	67%	100%	67%	100%	100%
	Total permit holders	4	3	3	4	3	4	3	3	3	1	1
<i>Total CFEC Permits²</i>	<i>Permits</i>	7	6	5	6	5	6	5	5	6	1	1
	<i>Fished permits</i>	6	3	4	5	3	5	3	4	3	1	1
	<i>% of permits fished</i>	86%	50%	80%	83%	60%	83%	60%	80%	50%	100%	100%
	<i>Permit holders</i>	5	4	3	4	3	4	3	3	3	1	1

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

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

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

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Tatitlek ²	Total Net Pounds Landed In Tatitlek ^{2,5}	Total Ex-Vessel Value Of Landings In Tatitlek ^{2,5}
2000	15	0	0	7	3	0	0	\$0
2001	12	0	0	5	2	0	0	\$0
2002	8	0	0	4	1	0	0	\$0
2003	7	0	0	4	1	0	0	\$0
2004	2	0	0	4	2	0	0	\$0
2005	8	0	0	4	2	0	0	\$0
2006	10	0	0	4	2	0	0	\$0
2007	6	0	0	4	2	0	0	\$0
2008	4	0	0	3	2	0	0	\$0
2009	11	0	0	1	3	0	0	\$0
2010	6	0	0	1	3	0	0	\$0

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

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

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

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

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

⁵ Totals only represent non-confidential data.

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

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

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

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

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

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

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

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

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

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

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

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

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

² Totals only represent non-confidential data.

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

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

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

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

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

² Totals only represent non-confidential data.

Recreational Fishing

There were no sport fish guide businesses or community residents holding sport fish guide licenses in Tatitlek between 2000 and 2010. In 2010, there were 16 sportfishing licenses sold to community residents (irrespective of the location of the point of sale), a number which varied between 2000 and 2010. In contrast, no sportfishing licenses were sold within the community in 2010, indicating the potential that Tatitlek residents pursue recreational fishing in other communities.

Tatitlek is located in the North Gulf Coast/PWS Alaska Sport Fishing Survey Area. Between 2000 and 2010, sportfishing activity in this region varied considerably. For saltwater sportfishing, non-Alaska resident angler days fished varied between 39,551 and 90,002 during this period, while Alaska resident angler days fished varied between 82,908 and 210,203 days. Alaska resident anglers fished consistently more angler days than non-Alaska residents during

this period. Information about the sportfishing sector in and near Tatitlek is displayed in Table 11.

The Alaska Statewide Harvest Survey,²⁷⁸ conducted by ADF&G between 2000 and 2010, noted that coho salmon and sockeye salmon are targeted by private anglers in Tatitlek.

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

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Tatitlek ²	Saltwater Angler Days Fished – Non-Residents ³	Saltwater Angler Days Fished – Alaska Residents ³
2000	0	0	17	8	39,551	82,908
2001	0	0	17	5	66,450	135,248
2002	0	0	30	17	67,698	133,508
2003	0	0	28	19	70,549	150,086
2004	0	0	11	0	76,173	184,492
2005	0	0	32	23	87,033	165,559
2006	0	0	37	0	79,313	157,194
2007	0	0	22	0	90,002	210,203
2008	0	0	17	4	67,410	181,381
2009	0	0	16	0	59,505	189,563
2010	0	0	16	0	64,776	148,017

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

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

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

Subsistence Fishing

Subsistence activities provide the majority of food items for Tatitlek residents. A coho salmon hatchery, supporting subsistence activities, is located at Boulder Bay, which is less than a mile from the center of the community.²⁷⁹ In 2003, the only year that a subsistence survey was conducted by ADF&G in Tatitlek between 2000 and 2010, 89% of households were recorded as using salmon for subsistence, 96% of households used halibut, 46% of households used marine mammal, 58% of households used marine invertebrates, and 57% of households used non-salmon fish (other than halibut). Per capita, the residents of Tatitlek harvested 262.32 pounds of

²⁷⁸ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000-2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

²⁷⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

marine subsistence resources. Information about per capita subsistence harvest and household participation in subsistence activities is presented in Table 12.

In years for which data were reported between 2000 and 2010, an average of nine subsistence salmon permits were issued to Tatitlek residents, with an average of six of those permits being reported as fished in any given year. Coho salmon were the primary species harvested under subsistence permits (an average of 217 coho per year), along with Chinook salmon, chum salmon, pink salmon, and sockeye salmon in much smaller quantities. In 2003, total harvest of marine invertebrates was 61 pounds, and total harvest of non-salmon fish was 4,270 pounds. According to the ADF&G Division of Subsistence, marine invertebrate species harvested for subsistence in Tatitlek included black (small) chitons, butter clams, octopus, Pacific littleneck clams (steamers), and unknown cockles. The ADF&G Division of Subsistence also reported that non-salmon fish species harvested for subsistence included: black rockfish, eel, eulachon (hooligan candlefish), herring, herring roe/unspecified, lake trout, lingcod, Pacific cod (gray), red rockfish, sablefish (black cod), sea bass, starry flounder, unknown sole, and wolf fish. Information about subsistence harvest of salmon, marine invertebrates, and non-salmon fish (not including halibut) is presented in Table 13.

Between 2003 and 2010, an average of 24 Subsistence Halibut Registration Certificates (SHARC) were issued to Tatitlek residents each year, representing 28.4% of the total households. In 2010, 15 SHARC were issued, 6 were reported as fished, and 1,525 pounds of subsistence halibut were reported as harvested. This represents a substantial decline from 2007, in which 28 SHARC cards were issued, 26 were returned, and 12,782 pounds of subsistence halibut were reported as harvested. Information about subsistence halibut harvest is presented in Table 14.

Information about subsistence harvest of marine mammals was reported between 2000 and 2008, with the exception of 2005 and 2007. Sea otters were among the marine mammals harvested by Tatitlek residents during this period. No information was reported regarding harvest of beluga whales or walrus. Information about the subsistence harvest of marine mammals is presented in Table 15. Between 2000 and 2008, Steller sea lions and harbor seals were also reported harvested for subsistence in Tatitlek. The number of Steller sea lions harvested for subsistence varied from year to year, from two in 2000 to 41 in 2007, and the number of harbor seals harvested for subsistence also varied from 13 in 2002 to 219 in 2006. No information was reported regarding harvest of spotted seals during this period. Information regarding the subsistence harvest of seals and sea lions is presented in Table 16.

The ADF&G Division of Subsistence reported that the following species of marine invertebrates were used for subsistence in Tatitlek during this period: black (small) chitons, butter clams, octopus, Pacific littleneck clams (steamers), and unknown cockles. Marine mammals reported as harvested for subsistence use included harbor seal, harbor seal (saltwater), porpoise, and Steller sea lion. Non-salmon fish reported as harvested for subsistence use included: black rockfish, eel, eulachon (hooligan candlefish), herring, herring roe/unspecified, lake trout, lingcod, Pacific cod (gray), red rockfish, sablefish (black cod), sea bass, starry flounder, unknown sole, and wolf fish.²⁸⁰

²⁸⁰ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

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

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	89%	96%	46%	58%	57%	262.32
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

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

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

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

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	1	1	n/a	n/a	n/a	n/a	10	n/a	n/a
2001	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	7	7	11	n/a	n/a	n/a	12	61	4,270
2004	19	14	8	23	355	99	379	n/a	n/a
2005	8	7	15	n/a	186	n/a	23	n/a	n/a
2006	10	3	3	n/a	n/a	n/a	85	n/a	n/a
2007	17	7	6	n/a	n/a	n/a	1	n/a	n/a
2008	7	6	15	n/a	n/a	n/a	73	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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

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

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

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

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	19	17	4,516
2004	26	25	7,034
2005	30	14	6,458
2006	30	21	6,490
2007	28	26	12,782
2008	24	20	5,621
2009	17	6	1,814
2010	15	6	1,525

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

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

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

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	16	n/a	n/a	2	46	n/a
2001	n/a	n/a	n/a	n/a	6	62	n/a
2002	n/a	n/a	n/a	n/a	n/a	13	n/a
2003	n/a	n/a	n/a	n/a	12	91	n/a
2004	n/a	n/a	n/a	n/a	26	90	n/a
2005	n/a	n/a	n/a	n/a	39	138	n/a
2006	n/a	n/a	n/a	n/a	16	219	n/a
2007	n/a	n/a	n/a	n/a	41	133	n/a
2008	n/a	n/a	n/a	n/a	17	125	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	2	n/a	n/a	n/a	n/a	n/a

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

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

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

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

Valdez (val-DEEZ)

People and Place

Location



Valdez is located on the north shore of Port Valdez, a deep water fjord in Prince William Sound. By water, Valdez is 1,239 miles northwest of Seattle, 170 miles northeast of Seward, 80 miles northeast of Whittier, and some 45 miles northwest of Cordova. Anchorage is 120 air miles northwest of Valdez, and 305 road miles. Valdez is the southern terminus of the Trans-Alaska oil pipeline. It is located in the Valdez Recording District and the Valdez-Cordova Census Area. The City encompasses 222 square miles of land and 55.1 square miles of water.^{281,282}

*Demographic Profile*²⁸³

In 2010, there were 3,976 residents in Valdez, making it the 29th largest of 352 Alaskan communities with populations recorded that year. From 1990 to 2010, the population decreased by 2.3%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population fell by 13.9% with an average annual growth rate of -1.65%, indicative of a steady rate of decline in those years.

In 2010, a majority of Valdez residents identified themselves as White (81.5%), 8.2% identified as American Indian or Alaska Native, 1.9% as Asian, 0.8% as Native Hawaiian or Other Pacific Islander, 0.6% as Black or African America, 0.7% as ‘some other race’, and 6.3% identified with two or more races. In addition, 4.7% of Valdez residents also identified themselves as Hispanic in 2010. The percentage of the population made up of each of these racial and ethnic groups remained relatively stable between 2000 and 2010. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Valdez decreased over time, from 2.9 persons per household in 1990 to 2.66 per household in 2000, and 2.43 in 2010. During the same period, the number of households increased, from 1,277 occupied households in 1990 and 1,494 in 2000, to 1,573 occupied housing units in 2010. Of the 1,763 total housing units surveyed for the 2010 Decennial Census, 61.3% were owner-occupied, 28% were rented, and 10.8% were vacant or used only seasonally. In 1990, 281 Valdez residents lived in group quarters. This number decreased to 56 in 2000, then rose again to 149 by 2010.

²⁸¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁸² City of Valdez. 2007. *Valdez Comprehensive Development Plan*. Retrieved April 30, 2012 from <http://www.commerce.state.ak.us/dca/plans/Valdez-CP-2007.pdf>.

²⁸³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

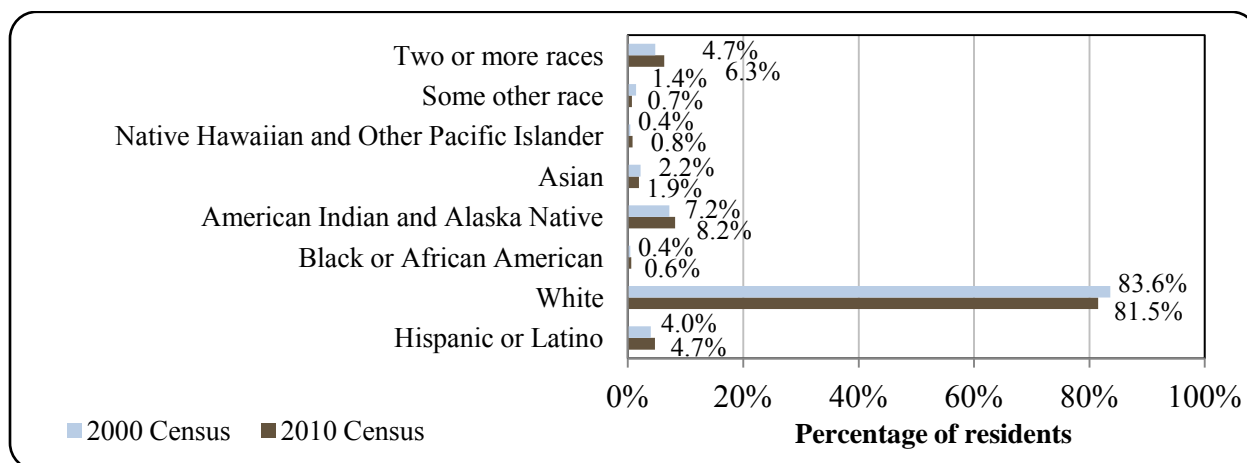
Table 1. Population in Valdez from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	4,068	-
2000	4,036	-
2001	-	3,825
2002	-	3,952
2003	-	3,897
2004	-	3,719
2005	-	3,754
2006	-	3,675
2007	-	3,580
2008	-	3,628
2009	-	3,475
2010	3,976	-

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

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

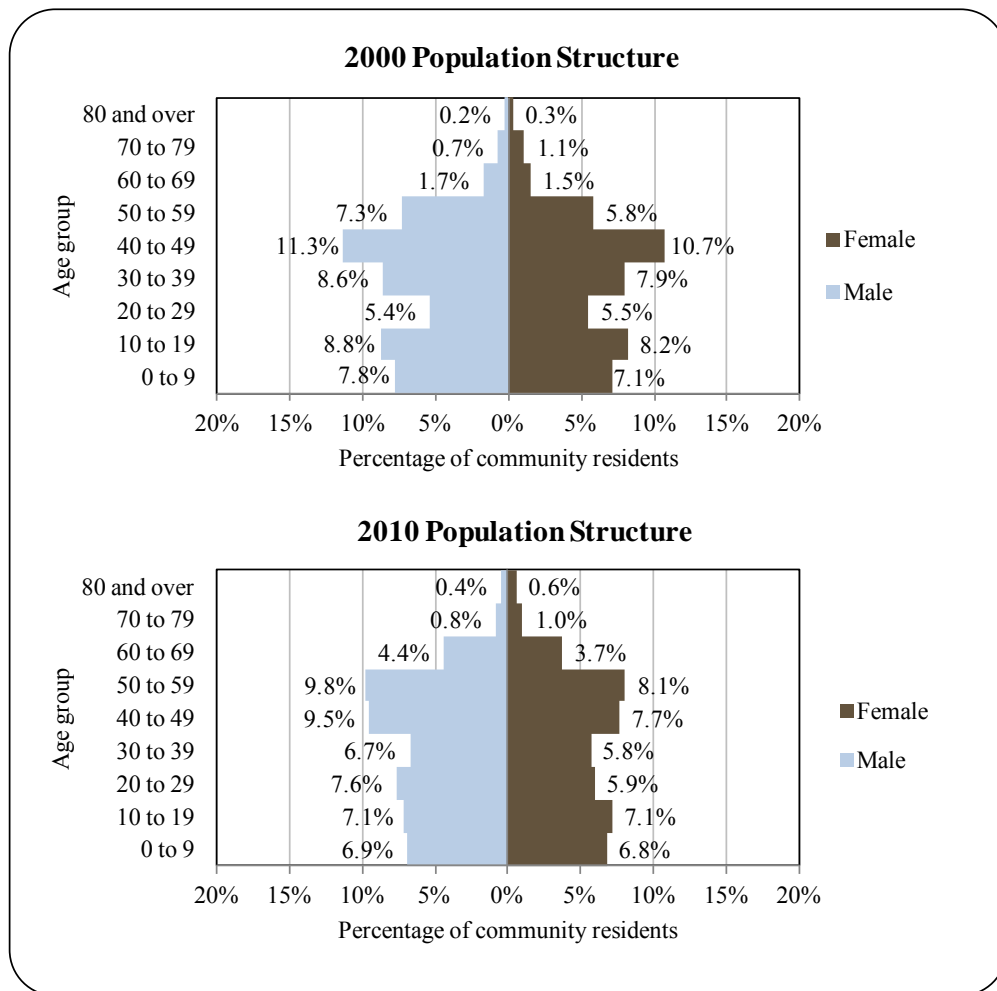
Figure 1. Racial and Ethnic Composition, Valdez: 2000-2010 (U.S. Census).



The gender distribution in 2010 (53.3% male and 46.7% female) was slightly more skewed toward males than the statewide distribution (52% male, 48% female). The median age of Valdez residents that year was 36.7 years, close to the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 10.9% of Valdez’s population was age 60 or older. The overall population structure of Valdez in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),²⁸⁴ 96.1% of Valdez residents over the age of 16 were estimated to hold a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 0% had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 3.9% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 40.6% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; an estimated 13.2% held an Associate’s degree, compared to an estimated 8% of Alaskan residents overall; an estimated 15.1% held a Bachelor’s degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 5.9% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

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



²⁸⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Archaeological evidence suggests that Chugach Eskimos (Chugachmiut) were present in the Valdez region starting in the early Holocene period. Port Valdez was likely used for foraging and hunting activities, but probably did not contain permanent settlements, as the Chugachmiut preferred to reside along protected shorelines with unobstructed views of all approaches, and avoided closed bays. Of eight sub-groups of Chugachmiut, the Tatitlek group was the nearest to Valdez.²⁸⁵

The Port of Valdez was named in 1790 by Don Salvador Fidalgo for the celebrated Spanish naval officer Antonio Valdes y Basan. Due to its excellent ice-free port, a town developed in 1898 as a debarkation point for men seeking a route to the Eagle Mining District and the Klondike gold fields. Valdez soon became the supply center of its own gold-mining region and incorporated as a City in 1901. Fort Liscum was established in 1900, and a sled and wagon road was constructed to Fort Egbert in Eagle by the U.S. Army. The Alaska Road Commission further developed the road for automobile travel to Fairbanks.²⁸⁶ By 1920, the Richardson Highway was completed, and was Alaska's first road connecting Fairbanks in the interior with the coast. Today, the Highway (Alaska Route 4) is a paved, two-lane highway open year-round to traffic.²⁸⁷

Valdez prospered for a time as a commercial center, especially after gold and copper were discovered nearby.²⁸⁸ However, the community's population declined by half between 1910 and 1920 as mining activity decreased and Fort Liscum was closed. In addition, completion of the Alaska Railroad from Seward to Fairbanks in 1923 led to a decline in the importance of Valdez as a transportation center.²⁸⁹ As mining declined in importance to the local economy, commercial fishing began to grow in importance in the region. The first salmon cannery was built in Valdez in 1917. Between 1917 and 1955, several additional canneries opened and closed. Fur farming was briefly an important industry in the 1920s, and mining retained a small presence in the local economy through the early 1940s.²⁹⁰

The Great Alaska Earthquake of 1964 caused significant damage in Valdez. Shock waves from the 9.2 magnitude quake ripped streets apart, damaged homes and destroyed buildings in town. An underwater landslide followed the earthquake that caused a tsunami, further destroying the waterfront and much of the community. Two docks in town were completely destroyed. Several residents were killed. In total, \$15 million dollars in damage was reported. Following this disaster, community leaders moved the City four miles west to a safer location.²⁹¹ The economy of Valdez rebounded after the City was selected as the terminus of the Trans-Alaska Pipeline, and construction of a terminal and other cargo transportation facilities brought rapid growth.²⁹² The Exxon Valdez oil spill disaster of March, 1989 also led to a population boom, as

²⁸⁵ City of Valdez. 2007. *Valdez Comprehensive Development Plan*. Retrieved April 30, 2012 from <http://www.commerce.state.ak.us/dca/plans/Valdez-CP-2007.pdf>.

²⁸⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁸⁷ See footnote 285.

²⁸⁸ City of Valdez. 2004. *Local Hazards Mitigation Plan*. Retrieved April 30, 2012 from http://www.commerce.state.ak.us/dcra/planning/nfip/Hazard_Mitigation_Plans/Valdez_LHMP.pdf.

²⁸⁹ See footnote 285.

²⁹⁰ Ibid.

²⁹¹ See footnotes 286 and 288.

²⁹² See footnotes 285 and 286.

thousands of workers came to Valdez to work in clean-up efforts.²⁹³ The oil spread outward and did not reach the shores of the community, but commercial, recreational, and subsistence fisheries in Valdez continue to be affected by the impacts of the spill.²⁹⁴

Natural Resources and Environment

Valdez has a maritime climate which is characterized by cool summers and mild winters. January temperatures range from 21 to 30 °F, and July temperatures are from 46 to 61 °F. Annual precipitation averages 62 inches. The average snowfall is 325 inches (27 feet) annually.²⁹⁵ The Prince William Sound area is characterized by complex coastlines, peninsulas and small islands, and glacial carved valleys and fjords.²⁹⁶ Valdez is surrounded by the Chugach mountains, with close peaks as high as 4,000 feet, and Mt. Marcus Baker, located 55 miles northwest, rising to 13,250 feet. High mountain ridges to the north of the community provide a barrier to the flow of cold air from the interior, but the mountains also channel local winds, bringing cold air down from snowfields and the Valdez glacier. The City of Valdez is built on an alluvial fan of Mineral Creek.²⁹⁷ Uplands host coniferous forest and muskegs.²⁹⁸

The City of Valdez is located just north and east of the boundary of the Chugach National Forest, the western and northern-most National Forest in the U.S., comprising 5.5 million acres. The area of the National Forest adjacent to Prince William Sound makes up 48% of its total acreage. Within this region of the National Forest there are 3,500 miles of shoreline, and 20 active tidewater glaciers.²⁹⁹ Marine protected areas near Valdez include Shoup Bay, Jack Bay, and Sawmill Bay State Marine Parks (SMPs) and the Copper River Delta Critical Habitat Area.³⁰⁰ SMPs are intended to protect natural habitat, and do not restrict fishing activity.³⁰¹ All three of these SMPs are important recreational areas for residents of Valdez. Additional recreational areas include Mineral Creek Flats and Canyon, the Valdez Glacier, Valdez Lake and Stream, Robe Lake, Keystone Canyon and associated trail system, Solomon Gulch, the Old Valdez townsite, and Valdez Duck Flats.³⁰²

Valdez hosts the terminus of the Alaska Pipeline, which carries crude oil south from oil fields in Alaska's North Slope. Living marine resources in the Valdez area were negatively impacted and continue to show affects of the March 1989 Exxon Valdez Oil Spill, when 11 million gallons of crude oil spilled into Prince William Sound. The spill affected the food chain

²⁹³ See footnote 288.

²⁹⁴ Chugachmiut. 2009. *Chugach Region Comprehensive Economic Development Strategy*. Retrieved April 30, 2012 from <http://www.chugachmiut.org/services/enterprise/Chugach%20Region%20CEDS%20draft%20v5.pdf>.

²⁹⁵ See footnote 286.

²⁹⁶ U.S. Forest Service. 2008. *East Prince William Sound Landscape Assessment*. Retrieved May 3, 2012 from http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5151500.pdf

²⁹⁷ See footnote 285.

²⁹⁸ See footnote 296.

²⁹⁹ National Park Service (n.d.). *Chugach National Forest: Forest Facts*. Retrieved December 14, 2011 from <http://www.fs.usda.gov/chugach/>.

³⁰⁰ Alaska Dept. of Natural Resources. 2010. *State Marine Parks near Valdez*. Retrieved May 3, 2012 from <http://dnr.alaska.gov/parks/units/pwssmp/smpvald.htm>.

³⁰¹ Alaska Dept. of Fish and Game Marine Protected Area Task Force. 2002. *Marine Protected Areas in Alaska: Recommendations for a Public Process*. Regional Information Report 5J02-08. Retrieved April 13, 2012 from <http://www.adfg.alaska.gov/static/lands/protectedareas/pdfs/5j02-08.pdf>.

³⁰² City of Valdez. 2006. *Coastal Management Plan, 2006 Plan Amendment*. Retrieved May 3, 2012 from http://www.alaskacoast.state.ak.us/District/FinalFinalPlans/Valdez/Valdez2006PlanAmendment_081306.pdf.

that supports the Prince William Sound commercial fishery, and impacted shore birds, waterfowl, sea otters, harbor porpoises, harbor seals, Steller sea lions, and several species of whale, among other species.³⁰³ Harvest of shellfish declined dramatically due to petrochemical contamination. Sea otter mortality was as high as 40% immediately following the spill. The 50% decline in the Prince William Sound orca population in the decades following the spill has been attributed to direct oil exposure and consumption of oiled marine mammals. Many other fish, marine mammal, and bird populations declined following the spill, including harbor seals, Steller sea lions, marbled murrelets, and black oyster catchers. Impacts on habitat and forage fishes created continued difficulties for recovery of many species.³⁰⁴ In particular, the 1993 collapse of the Prince William Sound herring fishery has made recovery for many species difficult, as it is a primary food source for harbor seal, Steller sea lion, and marbled murrelet, among other species. The relationship between the herring collapse and the oil spill remains unclear.^{305,306}

No offshore oil and gas lease sales were scheduled in the Gulf of Alaska for the 2012-2017 leasing program.³⁰⁷ A 2000 assessment of conventionally recoverable oil and gas estimated the presence of between 360 million to 3.27 billion barrels of oil and gas in the Gulf of Alaska region. This was slightly higher than estimates in Cook Inlet. The Pacific Margin Subregion (including Cook Inlet, Gulf of Alaska and Shumagin-Kodiak) was estimated to hold only 6.3% of all conventionally recoverable oil and gas in Alaska's offshore regions, while the Arctic Subregion was estimated to hold 84.6% and the Bering Shelf subregion was estimated to hold 9.1%.³⁰⁸ On state lands, acreage is available in the Valdez area for oil and gas exploration, but no current leases were active as of 2011, and no exploration licenses were proposed in the area for the 2012-2017 lease period.³⁰⁹

Valdez played a role in the history of mining in Alaska both as a launching point for gold prospectors bound for the Klondike or Copper River Basin in the late 1800s and early years of the 1900s, and later miners prospected for gold, copper and silver locally on the islands and shores of Prince William Sound. The most profitable mines in the vicinity of Valdez were the Cliff Gold Mine and the Midas Mine. The Cliff Mine resulted in about 51,740 ounces of gold and 8,153 ounces of silver. The Midas Mine, in nearby Solomon Gulch on the south shore of the Port, was the fourth largest producer of copper in the Prince William Sound area. Ellamar Mine, located near Tatitlek, was a large copper producer, and almost as much gold was produced as a by-product of copper mining as was produced at the Cliff Mine.³¹⁰ Today, the Midas and

³⁰³ U.S. Environmental Protection Agency (n.d.). *Exxon Valdez*. Retrieved December 2, 2011 from <http://www.epa.gov/emergencies/content/learning/exxon.htm>.

³⁰⁴ See footnote 294.

³⁰⁵ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

³⁰⁶ Alaska Dept. of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

³⁰⁷ Minerals Management Service. November, 2011. *Proposed Outer Continental Shelf Oil and Gas Leasing Program 2012-2017*. Retrieved February 2, 2012 from http://www.boem.gov/uploadedFiles/Proposed_OCS_Oil_Gas_Lease_Program_2012-2017.pdf.

³⁰⁸ Bureau of Ocean Energy Management. 2000. *Undiscovered Oil and Gas Resources, Alaska Federal Offshore, December 2000 Update*. Retrieved May 3, 2012 from <http://alaska.boemre.gov/re/uogr/uogr.pdf>.

³⁰⁹ State of Alaska. January 2011. *Five-Year Program of Proposed Oil and Gas Lease Sales*. Retrieved May 3, 2012 from http://dog.dnr.alaska.gov/Leasing/Documents/5YearReports/2011/5Year_Leasing_Program_01012011.pdf.

³¹⁰ Valdez, AK website. (n.d.). *Short History of Valdez*. Retrieved May 3, 2012 from <http://www.valdezalaska.org/discover-valdez-history/short-history-of-valdez>.

Ellamar Mines are still considered to be some of the most significant copper deposits in Alaska, along with some gold, zinc, lead, and silver.³¹¹

Natural hazards identified in Valdez include high risk of flooding, avalanche, landslides, erosion, and severe weather, and medium risk of earthquake, tsunami and seiche, and wildfire. The risk of volcanic activity and drought was unknown.³¹² Avalanche areas in Valdez include steep slopes north of the Valdez airport and along Mineral Creek. Flood hazards are posed by tsunamis, storm surges, heavy rainfall, snow and glacial melt, and potential for release of glacier-dammed lakes.³¹³ Earthquake hazards are high in this region of Alaska. There are 11 major active fault systems within 150 miles that are capable of producing earthquakes that can be felt in the Valdez.³¹⁴ According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Valdez as of July 2012.³¹⁵

Current Economy³¹⁶

In a survey conducted by the AFSC in 2011, community leaders reported that Valdez's economy is dependent on commercial and recreational fishing, sport hunting, and oil and natural gas exploration and drilling. Valdez is the southern terminus and off-loading point of oil extracted from Prudhoe Bay on Alaska's North Slope, and as a result has one of the highest municipal tax bases in the state. Valdez is a major seaport, with a \$48 million cargo and container facility. City, state, and federal agencies provide significant employment. In addition, in 2010, 62 residents held state commercial fishing permits. Several fish processing plants operate in Valdez. The Valdez Fisheries Development Association operates the Valdez Fish Hatchery as well as a seasonal processing plant during harvest season. Several cruise ships dock in Valdez each year. Valdez is a foreign free trade zone. In addition, 98 uniformed U.S. Coast Guard personnel were stationed in Valdez in 2011.³¹⁷ As of 2010, top local employers included pipeline services (design, construction, maintenance, and operation), schools, the City of Valdez, health services, oil spill cleanup and prevention services, the State of Alaska, University of Alaska, and police/security services.³¹⁸

Based on household surveys conducted for the 2006-2010 ACS,³¹⁹ in 2010, the per capita income in Valdez was estimated to be \$34,822 and the median household income was estimated

³¹¹ Szumigala, D.J., L.A. Harbo, and J.N. Adleman. *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

³¹² City of Valdez. 2004. *Local Hazards Mitigation Plan*. Retrieved April 30, 2012 from http://www.commerce.state.ak.us/dcra/planning/nfip/Hazard_Mitigation_Plans/Valdez_LHMP.pdf.

³¹³ City of Valdez. 2006. *Coastal Management Plan, 2006 Plan Amendment*. Retrieved May 3, 2012 from http://www.alaskacoast.state.ak.us/District/FinalFinalPlans/Valdez/Valdez2006PlanAmendment_081306.pdf.

³¹⁴ See footnote 312.

³¹⁵ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

³¹⁶ Unless otherwise noted, all monetary data are reported in nominal values.

³¹⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³¹⁸ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

³¹⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

to be \$69,536. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$27,341 and \$66,532, respectively). However, if inflation is taken into account by converting the 2000 values to 2010 dollars,³²⁰ per capita income is shown to have decreased very slightly, from a real per capita income of \$35,953 in 2000, while household income is shown to have decreased more substantially, from a real median household income of \$87,489 in 2000. In 2010, Valdez ranked 30th of 305 Alaskan communities with per capita income data, and 48th in median household income, out of 299 Alaskan communities with household income data that year.

Although Valdez's small population size may have prevented the ACS from accurately portraying economic conditions,³²¹ additional evidence for a decrease in per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Valdez in 2010 is \$24,105.³²² This is lower than the 2006-2010 ACS estimate, thus providing additional evidence that per capita may have declined between 2000 and 2010. Despite this, Valdez did not meet the Denali Commission's 2011 criteria as a "distressed" community.³²³ It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the potential value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a slightly higher percentage of Valdez residents were estimated to be in the civilian labor force (74%) than in the civilian labor force statewide (68.8%). In the same year, 4.7% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 3.6%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 9.7%, compared to a statewide unemployment rate estimate of 11.5%.³²⁴

Also based on the 2006-2010 ACS, a majority of the Valdez workforce (71.6%) was estimated to be employed in the public sector, along with 22.1% in the public sector, and 6.3% estimated to be self-employed. Of the 547 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number was estimated to be working in educational services, health care, and social assistance (25.1%) and transportation, warehousing, and utilities (12.5%). Between 2006 and 2010, only 5.9% of the Valdez civilian labor force was estimated to be employed in agriculture, forestry, fishing, hunting, and mining (Figures 3 and 4). However, given the known information on Valdez residents' contribution to state fisheries, the number of individuals employed in farming, fishing, and forestry occupations and industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly.

³²⁰ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

³²¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³²² See footnotes 318 and 319.

³²³ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

³²⁴ See footnote 318.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 1,960 employed residents in Valdez in 2010, of which 26.3% were employed in trade, transportation, and utilities, 15.9% in local government, 12.8% in leisure and hospitality, 11.8% in education and health services, 8% in professional and business services, 6% in state government, 5.5% in natural resources and mining, 4.1% in manufacturing, 3.5% in construction, 2.7% in information, 1.5% in financial activities, 0.1% in unknown industries, and 1.9% in other industries.³²⁵ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

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

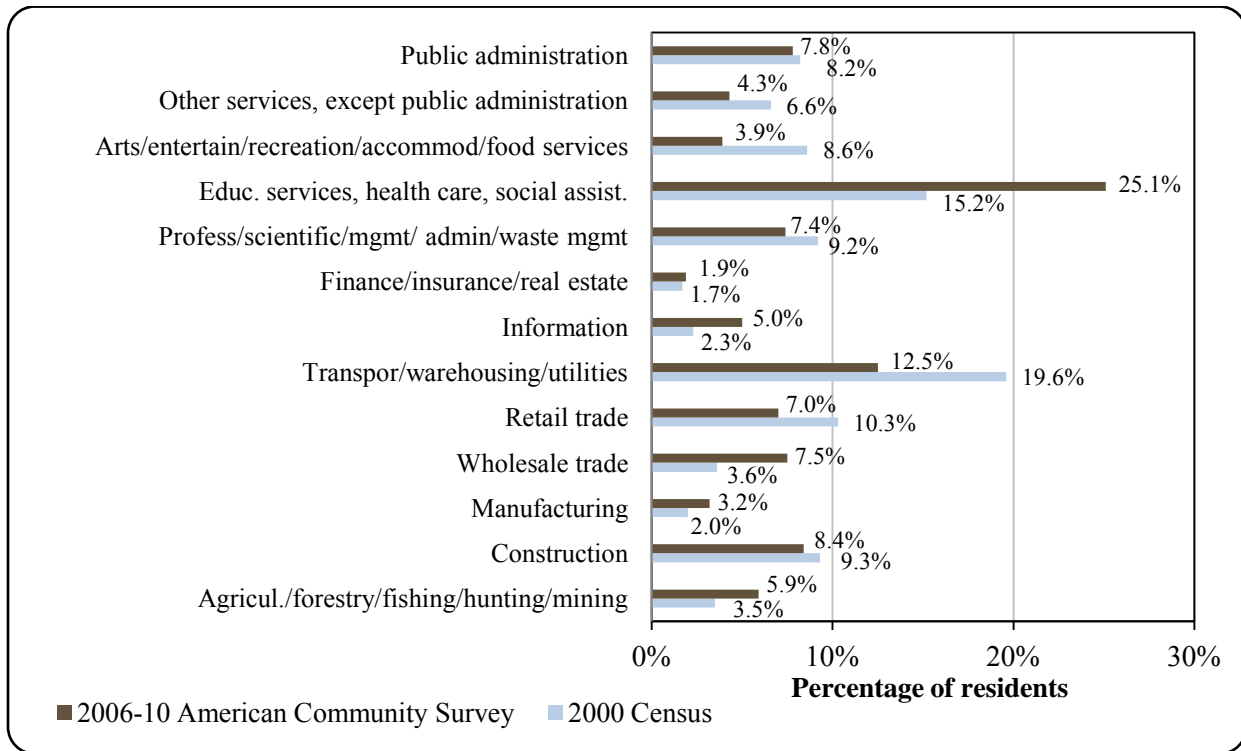
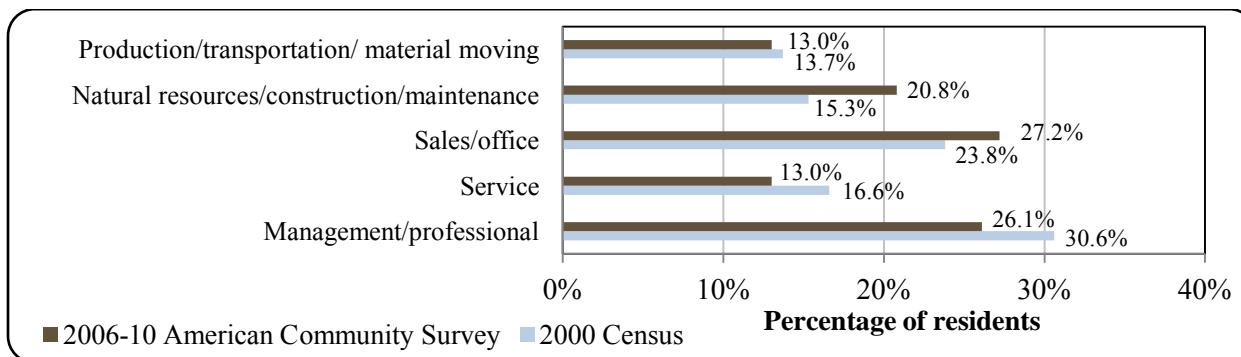


Figure 4. Local Employment by Occupation in 2000-2010, Valdez (U.S. Census).



³²⁵ Ibid.

Governance

Valdez is a Home Rule City, and is not located in an organized borough. The City was incorporated in 1901 and has a Strong Mayor form of government, including a seven-person city council including the Mayor, a seven-person advisory school board, a seven-person planning and zoning commission, and a number of municipal employees. The City administers a 20.0 mills property tax and a 6% Bed Tax. No sales tax is administered in the City of Valdez.³²⁶ Municipal revenue in Valdez more than doubled between 2000 and 2010, from just over \$20,000,000 in 2000 to over \$50,000,000 in 2009 and 2010. This increase can be attributed in part to an increase in tax revenues over the period.

Shared revenues from state and federal sources provided another important revenue source for the City during this period. Valdez received contributions from the State Revenue Sharing program from 2000 to 2003 (approximately \$100,000 per year), from the Community Revenue Sharing program in 2009 and 2010 (just over \$320,000 per year), as well as shared funds from state fish tax refunds (see the *Fisheries-Related Revenue* section for more information).

Grants also accounted for a sizeable portion of municipal revenues, including multiple fisheries-related grants. Federal funding came from the U.S. Economic Development Administration, including \$3,000,000 toward harbor improvements or the cruise ship dock in 2004, and \$558,000 for a smoker and cold storage in 2006. In addition, Valdez received federal disaster assistance totaling \$2,825,267 between 2000 and 2006, and a federal ‘marine first responder’ grant of \$7,756 in 2008. State funding included \$12,174,427 from the Alaska Department of Commerce, Community, and Economic Development’s (DCCED) Division of Community and Regional Affairs (DCRA) between 2000 and 2010. DCRA-funded projects included design of a dried fish processing plant, City Dock repair, revitalization, and fendering, improvements to the small boat harbor including installation of a ramp, development of a new harbor, cruise ship dock renovation, and uplands repair, other dock and harbor improvements and maintenance, and funding for chum salmon fisheries development granted to the Prince William Sound Aquaculture Corporation. Alaska DEC – Municipal Grants and Loans contributed \$56,700 toward the small boat harbor in 2002. The Alaska Department of Transportation and Public Facilities provided \$762,998 in 2001 for replacement of the ferry terminal building, and \$424,623 in 2002 for staging of the Valdez Ferry Terminal. In addition, the State of Alaska provided \$310,473 between 2000 and 2004 for repairs the old City Dock including addition of fenders, and \$140,117 from 2000 to 2003 for construction of a new cruise ship dock. Information about selected aspects of Valdez’s municipal revenue is presented in Table 2.

Valdez was not included under the Alaska Native Claims Settlement Act (ANCSA), and is not federally recognized as a Native village.³²⁷ The Native population of Valdez is represented by the Valdez Native Tribe, a non-profit organization that formed in 1974. The Tribe’s mission is to “promote the unity, self-determination, and empowerment of the Alaska Native and American Indian beneficiaries residing in the Valdez area, by providing services that will strengthen, increase opportunities, and enhance the mental, physical and spiritual well being of

³²⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³²⁷ Ibid.

our people, in harmony with our land and traditional values.”³²⁸ The organization provides health, social, educational, and cultural services.³²⁹

The closest office of the Alaska Department of Fish and Game (ADF&G) is located in Cordova, though ADF&G’s Anchorage office may be more accessible to residents of Valdez because Cordova is not connected to the road system. Anchorage also hosts the nearest offices of the Alaska Department of Natural Resources, the National Marine Fisheries Service (NMFS), the DCCED, and the U.S. Bureau of Citizenship and Immigration Services.

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

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$21,679,852	n/a	\$114,675	\$868,727
2001	\$23,193,808	n/a	\$102,453	\$1,877,490
2002	\$23,759,150	n/a	\$92,373	\$3,109,197
2003	\$23,727,809	n/a	\$95,657	\$3,194,194
2004	\$31,483,980	n/a	n/a	\$4,053,772
2005	\$23,793,604	n/a	n/a	\$352,700
2006	\$30,417,694	n/a	n/a	\$1,084,600
2007	\$32,583,668	n/a	n/a	\$3,565,000
2008	\$48,560,552	n/a	n/a	\$7,756
2009	\$50,839,699	n/a	\$325,462	\$4,175,000
2010	\$54,036,827	n/a	\$321,582	\$3,325,000

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

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

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

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

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

Infrastructure

Connectivity and Transportation

The Richardson Highway connects Valdez to Alaska’s road system. Valdez is 305 road miles southeast of Anchorage. The Port of Valdez is ice-free throughout the year, and is navigated by hundreds of ocean-going oil cargo vessels each year. Valdez has the largest floating concrete dock in the world, with a 1,200-foot front and water depth exceeding 80 feet. Numerous cargo and container facilities are present in Valdez, as well as boat harbors. Both barges and

³²⁸ Chugachmiut. 2009. *Chugach Region Comprehensive Economic Development Strategy*. Retrieved April 30, 2012 from <http://www.chugachmiut.org/services/enterprise/Chugach%20Region%20CEDS%20draft%20v5.pdf>.

³²⁹ Chugachmiut. 2012. *Valdez Native Tribe*. Retrieved April 27, 2012 from <http://www.chugachmiut.org/tribes/valdez.html>.

trucking services deliver cargo to the City.³³⁰ The Alaska Marine Highway Ferry System provides transport to Cordova, Tatitlek, Whittier, and Chenega Bay in Prince William Sound, to Kodiak, Ouzinke, Port Lions, and Old Harbor on Kodiak Island, and to Seward, Seldovia, and Homer on the Kenai Peninsula.³³¹ The Valdez airport is operated by the State, with a 6,500 feet long by 150 feet wide paved runway.³³² As of early June 2012, roundtrip airfare between Valdez and Anchorage was \$298.³³³ In addition, a seaplane base is located at Robe Lake, approximately 8 road miles southeast of town.³³⁴

Facilities

Water in Valdez is derived from four primary wells and is stored in five 750,000-gallon reservoirs. The City operates a piped water distribution system, and also operates the sewage system. The sewage treatment plant is capable of processing 1.25 million gallons a day. Sewage is deposited in a secondary treatment lagoon. Over 95% of homes are fully plumbed, and many homes use individual wells and septic tanks. The City operates a landfill and provides refuse collection services in Valdez. An oil and hazardous waste recycling center is also available. Electricity is provided by the Copper Valley Electric Association which purchases hydroelectric power from the Four Dam Pool Power Agency and diesel electricity from the Petro Star Refinery. The electric utility also owns a backup diesel plant. Police services are provided by the City Police Department and a local state troopers post. Fire and rescue services are provided by the City Fire Department and Emergency Medical Service (EMS), as well as the Robe River Fire Hall, Alyeska Marine Terminal Fire Response, and Civil Air Patrol. A State District Court and State Jail are both located in Valdez.³³⁵

Additional community facilities and services include Valdez Senior Citizens housing, a convention and civic center which houses a movie theater, a teen center, two museums and a historical archive, one academic/public library and three school libraries, a high school pool and gymnasium, and bingo offered by the Valdez Native Tribe.³³⁶ According to a survey conducted by the AFSC in 2011, Valdez also has a food bank. Internet, cable, and telephone service are all available in Valdez.³³⁷

With regard to fisheries-related facilities, a small harbor is present in Valdez that accommodates 546 commercial fishing boats and recreational vessels. Boat launches and haul-out services are available.³³⁸ According to the 2011 AFSC, community leaders indicated that dry dock storage is also available, along with sales of ice, boat fuel, bait, and tackle. They also noted that fish processing plants are present in Valdez (see *Processing Plants* section).

³³⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³³¹ Route information retrieved April 27, 2012 from <http://www.dot.state.ak.us/amhs/routes.shtml>.

³³² See footnote 330.

³³³ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on November 16, 2011.

³³⁴ See footnote 330.

³³⁵ Ibid.

³³⁶ Ibid.

³³⁷ Ibid.

³³⁸ Ibid.

Medical Services

Local health care is provided by the Valdez Community Hospital and the Valdez Native Tribe Clinic. The hospital is owned by the City, and the clinic is owned and operated by the Valdez Native Tribe. The hospital is a qualified Acute Care facility. Emergency Services have helicopter, marine, and airport access. Emergency service is provided by 911 Telephone Service and paid EMS. Alternative health care is provided by the Valdez Fire Department. Long-term care is also available in Valdez at Sourdough Place.³³⁹

Educational Opportunities

Three schools are present in Valdez, including Hermon Hutchens Elementary School (preschool through 6th grade), George H. Gilson Junior High School (7th and 8th grade), and Valdez High School (9th through 12th grade). As of 2011, 354 students were enrolled at the elementary school, 112 at the junior high school, and 222 at the high school. That year, there were 26 elementary school teachers, 13 junior high school teachers, and 19 high school teachers. A correspondence school is also in operation in Valdez – the Chugach Extension Correspondence School – which offered preschool through 12th grade. As of 2011, 203 students were enrolled in the correspondence program, and there were 6 teachers.³⁴⁰

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The original inhabitants of the Valdez area, the Chugachmiut, were marine hunters and fishers. In summer, they moved from permanent winter settlements to temporary fish camps. Salmon were a dietary staple, and large quantities were dried for winter use. The Chugachmiut also caught other fish, gathered intertidal resources, and hunted sea mammals, such as whales, seals, sea lions, and sea otters. Hunting was done with harpoons and clubs, and fish were speared, gaffed, harpooned, or hooked. Salmon were often caught in weirs built across rivers.³⁴¹

The community of Valdez was originally founded as a debarkation point for miners in the late 1800s. Commercial fishing began to gain importance as mining activity declined in the early 1900s. The first salmon cannery was built in Valdez in 1917.³⁴² Prior to construction of the Valdez cannery, one salmon cannery was in operation in the Prince William Sound (PWS) region, and fishing took place primarily along the Copper River delta. Salmon fishing continued to expand to other regions of PWS as additional canneries were constructed.³⁴³ Salmon and herring were two of the earliest commercial fisheries in Alaska, during the period when the

³³⁹ Ibid.

³⁴⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

³⁴¹ Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

³⁴² City of Valdez. 2007. *Valdez Comprehensive Development Plan*. Retrieved April 30, 2012 from <http://www.commerce.state.ak.us/dca/plans/Valdez-CP-2007.pdf>.

³⁴³ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

product was salted for storing and shipment.³⁴⁴ By the 1920s, commercial fisheries for Pacific halibut and groundfish expanded north to the Gulf of Alaska (GOA) and west as far as Unimak Pass.³⁴⁵

Today, ADF&G manages the PWS salmon fishery. The PWS salmon management area is divided into 11 commercial fishing districts, covering the coastal area from Cape Suckling (northwest of Yakutat) to Cape Fairfield (east of Seward), and the inland waters of PWS. Valdez is located in the Eastern district. Purse seine gear is the most common gear type, and is allowed in eight of the nine inland fishing districts. Drift gillnet gear is allowed in three districts, and set gillnet gear is only allowed in the Eshamy District. It is important to note that a salmon hatchery program was initiated in Prince William Sound in the early 1970s, and hatchery returns have consistently contributed to harvests since the 1980s.³⁴⁶

Groundfish and crab fisheries that occur within 3 nautical miles (nmi) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nmi in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. PWS is located in Federal Statistical and Reporting Area 649 and Pacific Halibut Fishery Regulatory Area 3A. The outlet of PWS is at the boundary between the Central GOA and Eastern GOA federal Sablefish Regulatory Areas.

In addition to federal groundfish fisheries that take place in the Central and Eastern GOA, state groundfish fisheries take place in the inland waters of PWS for rockfish, lingcod, pollock, sablefish, and Pacific cod. The PWS Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal cod fishery. The Total Allowable Catch (TAC) set by NMFS applies to both fisheries. Beginning in 1997, an additional ‘state-waters fishery’ for Pacific cod began in PWS. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition, a pelagic trawl fishery for pollock began in PWS in 1995, managed under a guideline harvest limit (GHL) determined by ADF&G, and is not conducted as a parallel fishery. The PWS limited entry sablefish fishery is also managed separately under a GHL.³⁴⁷

A majority of lingcod are found in nearshore rocky reef habitat from 10-100 meters in depth. ADF&G manages all lingcod fisheries in state and EEZ waters off Alaska. Lingcod in PWS are primarily harvested as incidental catch in longline fisheries, although lingcod fisheries have increased in importance in recent decades. The state manages rockfish harvest in PWS, and since 1998 also has jurisdiction of blue and black shelf rockfish in the western GOA, and all rockfish in the eastern GOA.³⁴⁸

PWS historically had a productive herring fishery. However, in 1993, four years after the Exxon Valdez oil spill, the stock collapsed in conjunction with an outbreak of hemorrhagic septicemia virus. Since 1998, the PWS herring fishery has been closed. The relationships between the oil spill, the virus, and the stock collapse remain unclear, and the population has shown little sign of recovery.^{349,350} PWS was also a historical center for Dungeness crab

³⁴⁴ Woodby, D., D. Carlile, S. Siddeek, F. Funk, J.H. Clark, and L. Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

³⁴⁵ International Pacific Halibut Commission. 1978. *The Pacific Halibut: Biology, Fishery, and Management*. Technical Report No. 16 (Revision of No. 6).

³⁴⁶ See footnote 343.

³⁴⁷ See footnote 344.

³⁴⁸ Ibid.

³⁴⁹ Ibid.

fisheries, but this stock has also collapsed. Possible causes for the Dungeness collapse include overfishing, sea otter predation, and adverse climatic changes. Red king crab and Tanner crab fisheries in PWS are also closed due to low stock abundance.³⁵¹ In contrast to the closures of herring and crab fisheries, spot shrimp (*Pandalus platyceros*) pot fisheries reopened in PWS in 2010 after almost two decades of closure due to low abundance.³⁵²

Valdez is not eligible to participate in the Community Quota Entity program or the Community Development Quota program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, three shore-side processing plants are in operation in Valdez. Information about and history of these facilities is presented below.

Peter Pan Seafoods owns and operates the only fresh/frozen/cannery facility in Valdez. The facility operates between April and September, processing salmon – including Copper River salmon – as well as sablefish and halibut.³⁵³ According to a survey of plant managers conducted by the AFSC in 2011, the Valdez plant began operations in 1988, and in 2010 employed up to 352 workers in the months of July and August.

Silver Bay Seafoods LLC processes salmon at its “Northern Reach Seafoods” facility in Valdez, which it acquired in early 2010. During the first winter, the company made large-scale investments in the old plant, including expanding freezer capacities by four times and purchasing new equipment for cutting salmon and preserving salmon roe. The daily processing capacity of the facility was increased from 250,000 round pounds of salmon to one million round pounds. The plant was operational during the 2010 summer season. In 2011, the Valdez facility employed 197 workers during the summer season.³⁵⁴

The Solomon Falls Seafoods facility in Valdez processes pink and coho salmon. Solomon Falls Seafoods is a subsidiary of the Valdez Fisheries Development Association, which was started in 1978 and is one of the biggest producers of pink salmon in Alaska.³⁵⁵ According to the 2011 survey of plant managers conducted by the AFSC, in 2010, the Solomon Falls plant employed up to 20 workers from June through September.

Fisheries-Related Revenue

In 2010, the City of Valdez received \$1,868,658 from fisheries-related taxes and fees. These revenue sources include the Shared Fisheries Business Tax and fees for harbor and port/dock usage. Table 3 presents details of selected aspects of community finances between 2000 and 2010.³⁵⁶

³⁵⁰ Alaska Dept. of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

³⁵¹ See footnote 344.

³⁵² Alaska Dept. of Fish and Game. 2012. *Spot Shrimp Species Profile: Status, Trends and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=spotshrimp.main>.

³⁵³ Peter Pan Seafoods. 2011. *Facilities*. Retrieved July 6, 2012 from <http://www.ppsf.com/facilities/index.aspx>.

³⁵⁴ Silver Bay Seafoods. 2011. *Facilities*. Retrieved July 6, 2012 from <http://silverbayseafoods.com/>.

³⁵⁵ Solomon Fall. 2012. *About*. Retrieved July 6, 2012 from <http://www.solomonfalls.com/about/>.

³⁵⁶ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

Between 2000 and 2010, Valdez residents were active in commercial fisheries as permit and quota share account holders, crew license holders, and vessel owners. They were most involved in fisheries for salmon, halibut, and sablefish. Inactive permits were held in a number of other fisheries throughout the period, and a number of shrimp permits were acquired in 2010 (Table 4). In addition to fisheries participation, the community of Valdez is one of the leading processing communities in Alaska, ranking 9th in landings and 14th in ex-vessel revenue, out of 67 Alaskan ports that received landings in 2010. That year, 20 fish buyers were present locally, and 3 shore-side processing facilities were in operation. In total, 72,812,837 net pounds were landed in Valdez in 2010, generating a total of \$31,530,772 in ex-vessel revenue (Table 5).

Between 2000 and 2010, the number of Valdez residents holding commercial crew licenses varied between a low of 56 in 2009 and a high of 93 in 2003. In 2010, 78 crew licenses were held. During the same period, the number of residents that were the primary owner of a fishing vessel varied between a low of 46 in 2006 and a high of 88 in 2000 and 2004, with 69 fishing vessels primarily owned by Valdez residents in 2010. Also in 2010, 80 vessels were listed as homeported in Valdez, and 275 vessels delivered landings locally. Further information about the commercial fishing sector in Valdez is presented in Table 5.

In 2010, 62 Valdez residents held a total of 97 state Commercial Fisheries Entry Commission (CFEC) permits. Of these, 44 were held for salmon fisheries, 25 were held for ‘other shellfish’ (shrimp), 13 were held for halibut, 6 were held for herring, 5 for sablefish, and 4 for groundfish. Additional information about CFEC permits is presented in Table 4, and further details regarding these permits are included below.

Of 44 salmon CFEC permits, 28 were held in the PWS purse seine fishery, 10 in the Prince William Sound drift gillnet fishery, 2 for Upper Yukon River fishwheel, 1 in the Cook Inlet drift gillnet fishery, 1 for Bristol Bay drift gillnet, and 1 was a statewide hand troll permit. In addition, one PWS ‘special harvest area’ (hatchery) permit was held in 2010. Overall, 57% of salmon permits held in Valdez were actively fished in 2010. Of the purse seine permits, 61% were actively fished that year, and 80% of PWS drift gillnet permits were actively fished. No statewide troll or Upper Yukon River fishwheel permits were actively fished by Valdez residents during the 2000-2010 period. The number of salmon permit holders and the total salmon permits held increased slightly between 2000 and 2010, and the percentage of permits actively fished also increased slightly over the period.

In 2010, 25 ‘other shellfish’ permits were held in Valdez. All 25 of these permits were held for shrimp fisheries using pot gear, and 11 of the permits were actively fished that year (44%). This represents a sudden increase in the number of ‘other shellfish’ permits held in Valdez, from one inactive permit held in 2000 and 2001 and no permits held between 2002 and 2009. The sudden increase reflects the reopening of the spot shrimp fishery in PWS in 2010. The fishery had previously been closed since the early 1990s due to low stock abundance.³⁵⁷

All 13 halibut CFEC permits held in 2010 were for the statewide longline fishery on vessels under 60 feet in length. That year, 11 (85%) of halibut permits were actively fished. Between 2000 and 2010, the number of halibut permit holders and the total number of permits held decreased slightly, while the percentage of permits actively fished increased.

³⁵⁷ Alaska Dept. of Fish and Game. 2012. *Spot Shrimp Species Profile: Status, Trends and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=spotshrimp.main>.

Sablefish CFEC permits were actively fished at the highest rate of any fishery in Valdez between 2000 and 2010, with 100% of permits fished in 8 years during the period. The number of sablefish permits held by Valdez residents rose from a low of two held in 2001 to a peak of eight held in 2004. From 2007 to 2010, five Valdez residents held five sablefish CFEC permits.

The number of groundfish CFEC permits held by Valdez residents also peaked in 2004, with 12 permits held by 9 permit holders. That year was also the only year during the 2000-2010 period in which a groundfish permit was actively fished. Between 2004 and 2010, the number of permit holders declined to three, and the number of permits held declined to four.

Although the PWS herring fishery has been closed since 1998, several Valdez residents held inactive herring permits in PWS herring fisheries between 2000 and 2010. The number of permit holders and permits held during this period varied from four to six per year. In 2010, six residents held a total of six herring permits. Three of these were held in the PWS herring purse seine fishery, one was held in the PWS roe herring gillnet fishery, and two were held in the PWS closed-pound herring spawn on kelp fishery. A “closed-pound” is a single, floating, rectangular frame structure with suspended webbing that is used to enclose herring long enough for them to spawn on kelp included in the enclosure.³⁵⁸

Local PWS fisheries for Dungeness, red king, and Tanner crab are currently closed due to low stock abundance of these species.³⁵⁹ However, from 2001 to 2004, one permit was held by one Valdez resident in the Southeast Alaska Tanner crab pot gear fishery. The only years during the 2000-2010 that the permit was actively fished were 2002 and 2003.

In addition to CFEC permits, Valdez residents also held Federal Fisheries Permits (FFP) and federal License Limitation Program (LLP) permits between 2000 and 2010. The number of FFPs held increased from five to nine from 2000 to 2006, and then declined to seven by 2010. The first year that an FFP was actively fished during the 2000-2010 period was 2003, and the number of active permits varied from two to four between 2003 and 2010. The number of Valdez residents holding groundfish LLPs declined from nine in 2000 to seven in 2010, and the number actively fished varied from zero to two during this period. No LLP permits were held for federal crab fisheries between 2000 and 2010. Federal permit information is presented in Table 4.

Between 2000 and 2010, Valdez residents held quota share accounts and quota shares in federal catch share fisheries for halibut, sablefish, and crab, with the highest level of participation in the halibut fishery. The number of halibut quota share account holders in Valdez was 26 in the year 2000, declining to 16 by 2010. It is interesting to note that the number of quota shares held did not decrease at the same rate as the number of quota share accounts. On average, the number of quota shares held in each quota share account increased from 24,464 in 2000 to 44,320 in 2008, then declined slightly to 37,107 by 2010. The annual halibut individual fishing quota (IFQ) allotment increased to 41% higher than 2000 levels by 2007, before decreasing to 8% above 2000 levels in by 2010. Information about federal halibut catch share participation is presented in Table 6.

The number of sablefish quota share account holders varied from two to four between 2000 and 2010. The maximum amount of quota shares were held in 2005 (711,077), declining to

³⁵⁸ Alaska Dept. of Fish and Game. 2011. *2011 Southeast Alaska Herring Spawn-On-Kelp Pound Fishery Management Plan*. Regional Information Report No. 1J11-01. Retrieved April 2, 2012 from <http://www.sf.ADFG.state.ak.us/FedAidpdfs/RIR.1J.2011.01.PDF>.

³⁵⁹ Woodby, D., D. Carlile, S. Siddeek, F. Funk, J.H. Clark, and L. Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

389,073 in 2010. Annual sablefish IFQ allotment followed a similar pattern as the halibut IFQs described above. The value increased to 28% above 2000 levels in 2005, before decreasing to approximately 22% below 2000 levels in 2010. Information about federal sablefish catch share participation is presented in Table 7.

Between 2005 and 2010, one crab quota share account was held each year by a Valdez resident. The number of quota shares held decreased from 65,056 in 2005 to a stable 8,951 from 2006 to 2010. From 2006 to 2008, no IFQ allotment was associated with these quota shares. From 2009 to 2010, the annual crab IFQ allotment increased by 37%. This information is about crab catch share participation is presented in Table 8.

Of the landings reported between 2000 and 2010, the species landed in the greatest volume in Valdez were salmon and halibut. On average between 2000 and 2010, 38,318,995 net pounds of salmon were landed in Valdez, valued on average at \$11,070,777 in ex-vessel revenue. Salmon landings can be reported for all years except 2006 and 2008, for which the information is considered confidential due to the small number of participants. For the 4 years in which halibut landings and revenue were reported, landings averaged 119,942 net pounds, valued at \$281,186 in ex-vessel revenue on average. Landings and revenue information for halibut is considered confidential in years other than 2000-2003 due to low participant numbers. In addition, ‘other groundfish’ landings were reported from 2000 to 2002, averaging 4,096 net pounds landed per year, and an average ex-vessel revenue of \$1,021, while ‘other groundfish’ landings are considered confidential from 2003 to 2010. In the 2000-2010 period, landings and revenue were reported in 2010 only for ‘other shellfish’. All of the 4,668 net pounds were landings from the PWS shrimp pot gear fishery, valued at \$29,132. Landings and revenue in ‘other shellfish’ fisheries are considered confidential in 2000 and 2001, and no permits were held from 2002 to 2009. Information about landings and ex-vessel revenue in Valdez is presented in Table 9.

In addition to the landings delivered in Valdez by fishermen from many communities, landings and ex-vessel revenue earned by Valdez vessel owners, irrespective of port of landing, is of note. Valdez vessel owners made deliveries in many locations around Alaska between 2000 and 2010. Information can be reported in all years during this period for salmon and halibut, and for all years except 2006 for ‘other groundfish’ landings, when the information is considered confidential due to the small number of participants. On average between 2000 and 2010, Valdez vessel owners landed 10,144,922 net pounds of salmon, valued at \$2,323,243 in ex-vessel revenue on average over the period. The next greatest volume of deliveries was in the halibut fishery, with an average of 50,243 net pounds landed per year, and average ex-vessel revenue of \$158,722. For those years in which data can be reported, Valdez residents landed an average of 3,609 net pounds of ‘other groundfish’ during the 2000-2010 period, with an average ex-vessel revenue of \$1,472. In addition, ‘other shellfish’ landings in 2010 totaled 2,531 net pounds for a total ex-vessel revenue of \$14,471 that year. Data for other fisheries, with the exception of crab, are considered confidential between 2000 and 2010 due to low participant numbers. Information about landings by Valdez vessel owners is presented in Table 10.

Of the species landed between 2000 and 2010, shrimp (‘other shellfish’) landings were the most valuable per pound, and halibut were the second most valuable species per pound.

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries											
Business Tax ¹	\$233,241	\$283,114	\$278,716	\$269,826	\$150,203	\$254,135	\$191,693	\$272,340	\$223,389	\$360,592	\$413,239
Fisheries Resource											
Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$78	\$61	\$46	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$561,000	\$587,500	\$649,550	\$646,680	\$621,571	\$642,250	\$755,305	\$733,386	\$751,267	\$1,003,422	\$1,089,460
Port/dock usage ²	\$443,217	\$259,851	\$289,906	\$292,444	\$294,182	\$379,991	\$441,204	\$320,524	\$295,946	\$324,034	\$365,959
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$1,237,458</i>	<i>\$1,130,465</i>	<i>\$1,218,172</i>	<i>\$1,208,950</i>	<i>\$1,065,956</i>	<i>\$1,276,376</i>	<i>\$1,388,202</i>	<i>\$1,326,329</i>	<i>\$1,270,663</i>	<i>\$1,688,094</i>	<i>\$1,868,658</i>
<i>Total municipal revenue⁵</i>	<i>\$21,679,852</i>	<i>\$23,193,808</i>	<i>\$23,759,150</i>	<i>\$23,727,809</i>	<i>\$31,483,980</i>	<i>\$23,793,604</i>	<i>\$30,417,694</i>	<i>\$32,583,668</i>	<i>\$48,560,552</i>	<i>\$50,839,699</i>	<i>\$54,036,827</i>

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

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

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

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

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

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

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	9	9	8	8	8	8	8	7	8	8	7
	Active permits	1	1	2	2	1	1	1	1	1	0	2
	% of permits fished	11%	11%	25%	25%	12%	12%	12%	14%	12%	0%	28%
	Total permit holders	9	9	8	8	8	8	8	7	8	8	7
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	5	6	8	7	7	7	9	9	9	6	7
	Fished permits	0	0	0	4	2	3	2	4	4	2	3
	% of permits fished	0%	0%	0%	57%	29%	43%	22%	44%	44%	33%	43%
	Total permit holders	5	6	8	7	7	7	8	8	8	6	6
Crab (CFEC) ²	Total permits	0	1	1	1	1	0	0	0	0	0	0
	Fished permits	0	0	1	1	0	0	0	0	0	0	0
	% of permits fished	-	0%	100%	100%	0%	-	-	-	-	-	-
	Total permit holders	0	1	1	1	1	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	1	1	0	0	0	0	0	0	0	0	25
	Fished permits	0	0	0	0	0	0	0	0	0	0	11
	% of permits fished	0%	0%	-	-	-	-	-	-	-	-	44%
	Total permit holders	1	1	0	0	0	0	0	0	0	0	24
Halibut (CFEC) ²	Total permits	16	16	16	16	14	13	12	14	15	14	13
	Fished permits	9	11	11	12	12	11	11	13	14	12	11
	% of permits fished	56%	69%	69%	75%	86%	85%	92%	93%	93%	86%	85%
	Total permit holders	16	15	16	16	14	13	12	14	15	14	13
Herring (CFEC) ²	Total permits	4	4	6	4	4	4	4	4	4	5	6
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	4	4	6	4	4	4	4	4	4	5	6

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	3	2	3	5	8	7	6	5	5	5	5
	Fished permits	1	2	3	5	7	7	5	5	5	5	5
	% of permits fished	33%	100%	100%	100%	88%	100%	83%	100%	100%	100%	100%
	Total permit holders	2	2	3	5	7	6	6	5	5	5	5
Groundfish (CFEC) ²	Total permits	8	9	9	9	12	10	5	3	3	3	4
	Fished permits	0	0	0	0	1	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	8%	0%	0%	0%	0%	0%	0%
	Total permit holders	7	7	7	7	9	8	4	2	2	2	3
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	41	34	42	44	42	43	39	35	37	39	44
	Fished permits	26	21	22	27	24	22	21	19	23	25	28
	% of permits fished	63%	62%	52%	61%	57%	51%	54%	54%	62%	64%	64%
	Total permit holders	38	33	40	40	40	43	39	34	36	35	38
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>73</i>	<i>67</i>	<i>77</i>	<i>79</i>	<i>81</i>	<i>77</i>	<i>66</i>	<i>61</i>	<i>64</i>	<i>66</i>	<i>97</i>
	<i>Fished permits</i>	<i>36</i>	<i>34</i>	<i>37</i>	<i>45</i>	<i>44</i>	<i>40</i>	<i>37</i>	<i>37</i>	<i>42</i>	<i>42</i>	<i>55</i>
	<i>% of permits fished</i>	<i>49%</i>	<i>51%</i>	<i>48%</i>	<i>57%</i>	<i>54%</i>	<i>52%</i>	<i>56%</i>	<i>61%</i>	<i>66%</i>	<i>64%</i>	<i>57%</i>
	<i>Permit holders</i>	<i>51</i>	<i>45</i>	<i>55</i>	<i>55</i>	<i>56</i>	<i>58</i>	<i>50</i>	<i>47</i>	<i>48</i>	<i>47</i>	<i>62</i>

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

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

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

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Valdez ²	Total Net Pounds Landed In Valdez ^{2,5}	Total Ex-Vessel Value Of Landings In Valdez ^{2,5}
2000	59	13	5	88	122	427	24,965,242	\$6,046,269
2001	75	14	5	76	116	504	42,378,441	\$10,478,676
2002	60	11	5	82	115	497	34,281,839	\$9,132,464
2003	93	9	4	86	114	442	37,597,226	\$12,072,309
2004	85	6	3	88	118	436	27,065,424	\$9,129,339
2005	92	7	4	52	55	432	52,692,909	\$13,947,640
2006	68	6	3	46	56	285	22,116,940	\$9,769,723
2007	76	5	3	47	60	336	47,109,130	\$18,052,449
2008	82	3	2	48	60	287	-	-
2009	56	7	3	53	63	262	11,360,811	\$7,630,134
2010	78	20	3	69	80	275	72,812,837	\$31,530,772

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

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

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

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

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

⁵ Totals only represent non-confidential data.

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

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	26	636,077	63,772
2001	24	640,157	76,614
2002	26	744,454	91,986
2003	27	721,470	89,139
2004	25	647,796	88,453
2005	25	647,796	89,689
2006	23	771,519	105,424
2007	23	771,519	109,440
2008	18	797,761	104,800
2009	18	638,199	75,263
2010	16	593,722	64,512

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

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

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	3	3,696	334
2001	2	2,172	185
2002	4	390,004	33,441
2003	4	459,041	46,667
2004	4	459,041	52,897
2005	4	711,077	82,528
2006	3	458,156	46,063
2007	3	458,156	44,764
2008	3	389,073	33,779
2009	3	389,073	30,640
2010	3	389,073	27,693

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

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

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	1	65,065	1,345
2006	1	8,951	0
2007	1	8,951	0
2008	1	8,951	0
2009	1	8,951	310
2010	1	8,951	425

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

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

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	-	0	0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	111,556	81,227	158,838	128,150	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	2,496	2,500	7,292	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	4,668
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	24,833,627	42,279,813	34,038,074	37,284,478	26,594,542	51,758,342	-	45,703,090	-	10,395,126	71,983,869
<i>Total²</i>	<i>24,947,679</i>	<i>42,363,540</i>	<i>34,204,204</i>	<i>37,412,628</i>	<i>26,594,542</i>	<i>51,758,342</i>	<i>22,116,940</i>	<i>45,703,090</i>	<i>-</i>	<i>10,395,126</i>	<i>71,988,537</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$254,020	\$149,270	\$343,785	\$377,669	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	\$879	\$590	\$1,594	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	\$29,132
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$5,735,925	\$10,276,681	\$8,541,840	\$11,041,647	\$7,690,721	\$11,114,466	-	\$12,431,839	-	\$4,634,736	\$28,169,136
<i>Total²</i>	<i>\$5,990,824</i>	<i>\$10,426,541</i>	<i>\$8,887,219</i>	<i>\$11,419,316</i>	<i>\$7,690,721</i>	<i>\$11,114,466</i>	<i>\$9,769,723</i>	<i>\$12,431,839</i>	<i>-</i>	<i>\$4,634,736</i>	<i>\$28,198,268</i>

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

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

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

² Totals only represent non-confidential data.

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

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	44,264	43,491	63,929	54,137	54,814	46,395	53,920	57,877	51,646	45,095	37,105
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	1,039	1,659	3,120	1,230	2,611	1,965	-	2,521	10,211	6,347	5,390
Other Shellfish	-	-	-	-	-	-	-	-	-	-	2,531
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	10,818,753	7,439,614	3,912,503	14,311,549	6,405,203	18,980,831	5,387,279	15,086,172	11,151,013	2,242,878	15,858,346
<i>Total²</i>	<i>10,864,056</i>	<i>7,484,764</i>	<i>3,979,552</i>	<i>14,366,916</i>	<i>6,462,628</i>	<i>19,029,191</i>	<i>5,441,199</i>	<i>15,146,570</i>	<i>11,212,870</i>	<i>2,294,320</i>	<i>15,903,372</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$77,363	\$79,437	\$140,721	\$159,555	\$161,081	\$139,396	\$190,896	\$245,177	\$231,084	\$144,829	\$176,405
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	\$396	\$190	\$1,106	\$163	\$828	\$1,071	-	\$1,577	\$3,668	\$2,718	\$2,998
Other Shellfish	-	-	-	-	-	-	-	-	-	-	\$14,471
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$1,998,371	\$1,157,543	\$605,984	\$2,628,378	\$894,042	\$2,739,561	\$1,267,912	\$3,022,695	\$4,481,575	\$790,792	\$5,968,824
<i>Total²</i>	<i>\$2,076,130</i>	<i>\$1,237,169</i>	<i>\$747,812</i>	<i>\$2,788,096</i>	<i>\$1,055,951</i>	<i>\$2,880,028</i>	<i>\$1,458,808</i>	<i>\$3,269,449</i>	<i>\$4,716,327</i>	<i>\$938,340</i>	<i>\$6,162,698</i>

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

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

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

² Totals only represent non-confidential data.

Recreational Fishing

In 2010, there were 19 active sport fish guide businesses and 31 licensed sport fish guides located in Valdez (Table 11). These numbers remained relatively stable over the 2000-2010 period, although there was a peak of 45 licensed guides present in 2003 and 2004. During this period, the number of sportfishing licenses sold to Valdez residents (irrespective of point of sale) varied from 1,470 to 1,813 per year, and the number of licenses sold in Valdez varied from 2,207 to 7,509 per year (Table 11). The greater number of licenses sold locally than sold to residents reflects the fact that sportfishing draws tourism to the Valdez area.

Valdez is located in North Gulf Coast/PWS Statewide Harvest Survey Area which includes all drainages from east of Cape Suckling, through PWS to Gore Point. In 2010, there were a total of 212,793 saltwater angler days fished in the region, compared to 122,459 in 2000, representing a 74% increase. Non-Alaska residents made up 30.4% of total saltwater angler days fished in 2010 in the region, compared to 32.3% in 2000. Regional saltwater angler days fished peaked at 300,205 in 2007. Total freshwater angler days fished increased 90% from 22,979 in 2010 to 12,108 in 2000. Non-Alaska residents made up 57% of freshwater angler days fished in 2010 in the region, compared to 26% in 2000. Total freshwater angler days fished in the region peaked in 2010. Information regarding these regional trends can also be found in Table 11.

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

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Valdez²
2000	15	33	1,813	2,207
2001	13	29	1,745	3,689
2002	16	42	1,635	3,582
2003	18	45	1,683	3,793
2004	22	45	1,720	3,782
2005	24	33	1,812	4,793
2006	22	34	1,624	4,721
2007	20	35	1,539	5,073
2008	18	30	1,470	7,509
2009	18	31	1,498	5,782
2010	19	31	1,671	5,043

Table 11 cont'd. Sport Fishing Trends, Valdez: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	39,551	82,908	3,168	8,940
2001	66,450	135,248	8,587	8,610
2002	67,698	133,508	5,132	8,126
2003	70,549	150,086	10,657	10,235
2004	76,173	184,492	9,199	10,349
2005	87,033	165,559	6,894	6,187
2006	79,313	157,194	8,886	5,655
2007	90,002	210,203	8,446	9,944
2008	67,410	181,381	8,056	5,489
2009	59,505	189,563	8,730	10,938
2010	64,776	148,017	13,118	9,861

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

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

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

According to a survey conducted by the AFSC in 2011, community leaders indicated that private anglers in Valdez target all five species of salmon, halibut, rockfish, sablefish, crab, and shrimp. They also noted that sportfishing activity takes place using private boats and charter boats, and through shore-based fishing. The Alaska Statewide Harvest Survey,³⁶⁰ conducted by ADF&G between 2000 and 2010, also noted species harvested by Valdez sport fishermen. In freshwater, the survey indicated that Valdez recreational anglers harvest chinook, coho, and sockeye salmon, rainbow trout, cutthroat trout, Dolly Varden, burbot, whitefish, and Arctic grayling. In saltwater, the survey noted sport harvest of all five Pacific salmon species, Dolly Varden char, Pacific halibut, rockfish, lingcod, Pacific cod, and smelt. In addition, the survey noted sport harvest of Dungeness crab, hardshell and razor clams, and shrimp.

Kept/released statistics from charter logbook data reported by ADF&G³⁶¹ show that coho salmon, Pacific halibut, rockfish, and lingcod were the most important species caught by volume

³⁶⁰ Alaska Dept. of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

³⁶¹ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

during fishing charter trips out of Valdez, with an average of 11,682 coho, 8,873 halibut, 4,632 rockfish (yelloweye, pelagic, and ‘other’ rockfish), and 1,692 lingcod kept between 2000 and 2010. In addition, 978 pink, 79 sockeye, 53 chinook and 45 chum salmon, 70 sharks, and 20 sablefish were kept per year, on average. It is important to note that the species with the highest numbers of releases were Pacific halibut (6,600 released per year on average), lingcod (1,190 per year), rockfish (480 released per year, including yelloweye, pelagic, and ‘other’ rockfish), coho salmon (343 per year), sharks (156 per year), and Chinook salmon (83 released per year, on average).

Subsistence Fishing

Residents of Valdez, including members of the Valdez Native Tribe, continue to practice a subsistence lifestyle.³⁶² In 1992, an ADF&G household survey of subsistence activity found that 97% of Valdez households used subsistence resources that year.³⁶³ Health concerns after the 1989 Exxon Valdez oil spill led to a decline in subsistence activity in PWS communities. In the nearby village of Tatitlek, oil contamination led to an 89% reduction in subsistence harvest in the years following the spill.³⁶⁴ According to the Exxon Valdez Oil Spill Trustee Council, subsistence resources are recovering, although harvest levels in most PWS communities are still below pre-spill levels.³⁶⁵

According to Chugachmiut, a Tribal consortium serving Native communities in the Chugach region, chum salmon have historically been important to subsistence users who dry fish for winter use; halibut are important in subsistence diets; clams remain an important component of subsistence harvests in the region, although commercial harvest of clams has been restricted following the Exxon Valdez oil spill; use of mussels has declined significantly due to high concentrations of petrochemicals still present in mussel beds following the oil spill; and Native Alaskans harvest some sea otters, harbor seals, and Steller sea lions. Populations of harbor seals and Steller sea lions are both depressed in PWS. The collapse of the PWS herring population in the 1990s, one of the primary food sources for both species, is thought to have contributed to population declines.³⁶⁶

Between 2000 and 2010, no information was reported by ADF&G regarding the percentage of households participating in subsistence harvest of various marine resources, or per capita harvest of subsistence resources by Valdez residents (Table 12). In addition, no information is available about the use of marine invertebrates or non-salmon fish (not including halibut) between 2000 and 2010 (Table 13). However, earlier information is available from an ADF&G study of 1992 subsistence harvest. The survey identified species of marine invertebrates and non-salmon fish harvested by Valdez households that year. The species of marine invertebrates harvested by the greatest percentage of Valdez households in 1992 included shrimp (17% of households reported harvest), razor clams (6%), butter clams (5%), Tanner crab (3%),

³⁶² Chugachmiut. 2009. *Chugach Region Comprehensive Economic Development Strategy*. Retrieved April 30, 2012 from <http://www.chugachmiut.org/services/enterprise/Chugach%20Region%20CEDS%20draft%20v5.pdf>.

³⁶³ U.S. Forest Service, Cordova Ranger District, Chugach Ranger District. 2008. *East Prince William Sound Landscape Assessment*. Retrieved May 3, 2012 from http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5151500.pdf

³⁶⁴ See footnote 362.

³⁶⁵ Exxon Valdez Oil Spill Trustee Council. (n.d.). *Subsistence*. Retrieved May 2, 2012 from http://www.evostc.state.ak.us/recovery/status_human_subsistence.cfm.

³⁶⁶ See footnote 362.

mussels (2%), Dungeness crab (1%), and octopus (1%). Additional marine invertebrate species harvested in 1992 included black chitons, red chitons, cockles, horse clams, pinkneck clams, Pacific littleneck clams, scallops, sea cucumber, sea urchin, Dungeness crab, and king crab. The species of non-salmon fish harvested by the greatest percentage of Valdez households included Dolly Varden (20% of households reported harvest), grayling (14%), rainbow trout (13%), lingcod (11%), black rockfish (9%), and herring (9%). Valdez residents also harvested lake trout, Pacific cod, sablefish, flounder, eulachon (hooligan candlefish), cutthroat trout, pike, sea bass, sole, steelhead, sturgeon, Irish lord, red rockfish, burbot, salmon shark, skates, greenling, whitefish, pollock, and wolf fish. In addition, Valdez residents harvested herring sac roe and spawn on kelp roe.³⁶⁷ It is important to note than in many cases, the number of households reporting use of these subsistence resources was greater than the number involved in harvest, indicating the presence of sharing networks in Valdez.

Data are available for the 2000-2010 period regarding annual subsistence salmon and halibut harvest. The number of Valdez households that were issued subsistence salmon permits varied from 181 to 306 between 2000 and 2008. In 2008, the last year for which data were reported, 227 permits were issued and 197 were returned. Sockeye was the most heavily utilized salmon species during this period, averaging 5,919 harvested per year. An average of 193 Chinook were also harvested each year, as well as a small number of pink, coho, and chum salmon. This information about subsistence harvest of salmon is presented in Table 13.

Between 2003 and 2010, the number of Valdez residents that participated in the Subsistence Halibut Registration Certificate (SHARC) program increased from 22 to 38. The greatest subsistence harvest of halibut was reported in 2009, when 4,778 pounds of halibut were harvested on 33 SHARC cards. In 2010, only 6 SHARC cards were reported to have been active. This information about the subsistence halibut fishery is presented in Table 14.

In addition, information was reported by the various management agencies regarding marine mammal harvest by residents of Valdez between 2000 and 2010. According to data reported by the U.S. Fish and Wildlife Service, the number of sea otters harvested varied between 40 and 101 per year, while ADF&G reported harvest of harbor seal varying between 18 and 63 animals per year (for those years in which information was available). No information was reported regarding harvest of beluga whale, walrus, Steller sea lion, or spotted seal between 2000 and 2010. Information about subsistence harvest of marine mammals by Valdez residents is presented in Table 15.

Additional Information

The Good Friday earthquake of 1964, or “Great Alaska Earthquake,” was the largest recorded earthquake in the U.S., with a magnitude of 9.2 on the Richter scale. It struck Prince William Sound on Good Friday, March 28th, 1964. A tsunami with a maximum wave height recorded was 67 meters at Valdez Inlet.³⁶⁸ Shoup Bay near Valdez became famous for the 150-foot tidal wave that supposedly surged in and out of the bay three times during the earthquake.³⁶⁹

³⁶⁷ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

³⁶⁸ U.S. Geological Survey (n.d.). Historic Earthquakes: Prince William Sound, Alaska, 1964 March 28 03:36 UTC, Magnitude 9.2. Retrieved December 5, 2011 from <http://earthquake.usgs.gov/earthquakes/states/>.

³⁶⁹ Alaska Dept. of Natural Resources. 2010. *State Marine Parks near Valdez*. Retrieved May 3, 2012 from <http://dnr.alaska.gov/parks/units/pwssmp/smpvald.htm>.

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

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

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

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

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

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	245	229	167	n/a	85	n/a	5,731	n/a	n/a
2001	306	278	254	n/a	43	n/a	7,061	n/a	n/a
2002	210	179	223	n/a	1	n/a	4,973	n/a	n/a
2003	181	155	113	n/a	29	n/a	4,319	n/a	n/a
2004	263	228	214	5	179	6	6,391	n/a	n/a
2005	278	229	147	n/a	77	n/a	6,670	n/a	n/a
2006	292	227	290	n/a	3	n/a	7,489	n/a	n/a
2007	234	197	237	n/a	8	n/a	6,801	n/a	n/a
2008	227	197	91	n/a	41	n/a	3,835	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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

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

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

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

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	22	16	1,611
2004	28	12	2,956
2005	26	20	3,589
2006	27	10	1,909
2007	37	17	2,990
2008	35	14	4,374
2009	37	33	4,778
2010	38	6	1,750

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

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

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

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	69	n/a	n/a	n/a	n/a	n/a
2001	n/a	75	n/a	n/a	n/a	18	n/a
2002	n/a	45	n/a	n/a	n/a	44	n/a
2003	n/a	100	n/a	n/a	n/a	60	n/a
2004	n/a	63	n/a	n/a	n/a	58	n/a
2005	n/a	60	n/a	n/a	n/a	63	n/a
2006	n/a	40	n/a	n/a	n/a	63	n/a
2007	n/a	50	n/a	n/a	n/a	n/a	n/a
2008	n/a	55	n/a	n/a	n/a	24	n/a
2009	n/a	81	n/a	n/a	n/a	n/a	n/a
2010	n/a	101	n/a	n/a	n/a	n/a	n/a

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

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

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

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

Whittier (WIT-ee-er)



People and Place

*Location*³⁷⁰

Whittier is on the northeast shore of the Kenai Peninsula, at the head of Passage Canal. It is on the west side of Prince William Sound, 60 miles southeast of Anchorage. The area encompasses 12.5 square miles of land and 7.2 square miles of water. Whittier was incorporated in 1969 and is now a Second-class city. It is located in the Valdez-Cordova Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*³⁷¹

In 2010 there were 220 residents ranking Whittier 185th of 352 communities in terms of population size. Between 1990 and 2010, the population declined by 9.5%. Between 2000 and 2009, the population declined by 12.6% with an average annual growth rate of -1.37%, which was much lower than the statewide average of 0.75% and indicative of steady decline. Information regarding population trends can be found in Table 1.

The racial composition of Whittier is predominately White, although there is some diversity. In 2010, 69.5% of residents identified themselves as White, compared to 79.1% in 2000; 13.2% identified themselves as two or more races, compared to 8.2% in 2000; 7.7% identified themselves as Asian, compared to 7.1% in 2000; 5.5% identified themselves as American Indian or Alaska Native, compared to 5.5% in 2000; 3.2% identified themselves as Native Hawaiian or Pacific Islander, compared to 0% in 2000; 0.5% identified themselves as Black or African American, compared to 0% in 2000; and 0.5% identified themselves as some other race, compared to 0% in 2000. In addition, 5.0% of residents identified themselves as Hispanic or Latino, compared to 1.1% in 2000 (Figure 1).

In 2010, the average household size was 1.93, which was a decrease from 2.10 in 1990 and 2.12 in 2000. In that year, there were a total of 280 housing units, compared to 265 in 1990 and 213 in 2000. Of the households surveyed in 2010, 15% were owner-occupied, compared to 16% in 2000; 25% were renter-occupied, compared to 24% in 2000; 22% were vacant, compared to 23%; and 37% were occupied seasonally, compared to 37% in 2000.

The gender distribution in 2010 was somewhat skewed at 56.8% male and 43.2% female, which was more uneven than the statewide distribution (52.0% male, 48.0% female) and distribution in 2000 (52.7% male, 47.3% female). The median age that year was 48.0 years, which was significantly older than the statewide median of 33.8 years and 2000 median of 39.3 years.

³⁷⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁷¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

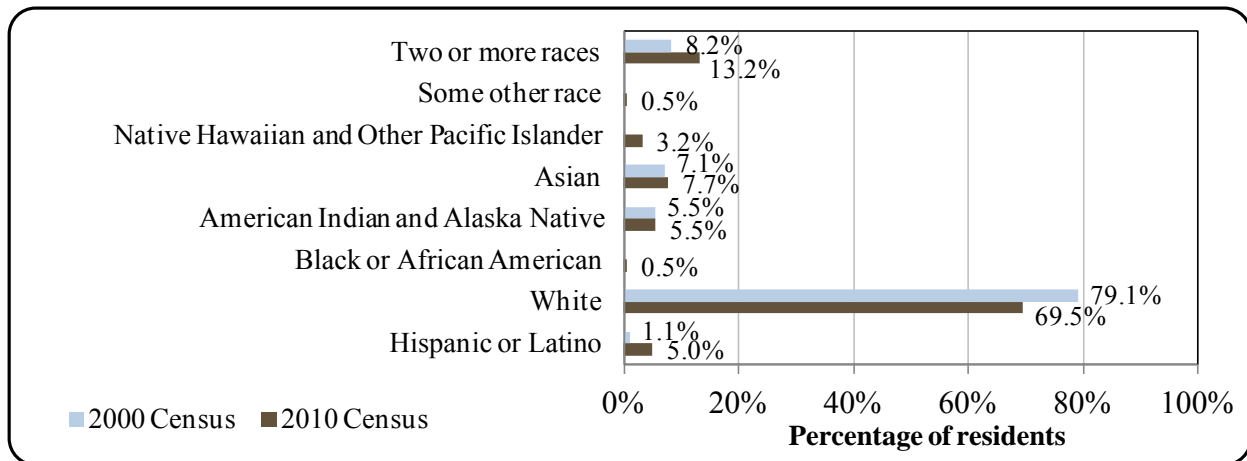
Table 1. Population in Whittier from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	243	-
2000	182	-
2001	-	170
2002	-	161
2003	-	172
2004	-	172
2005	-	188
2006	-	189
2007	-	173
2008	-	159
2009	-	159
2010	220	-

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

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

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

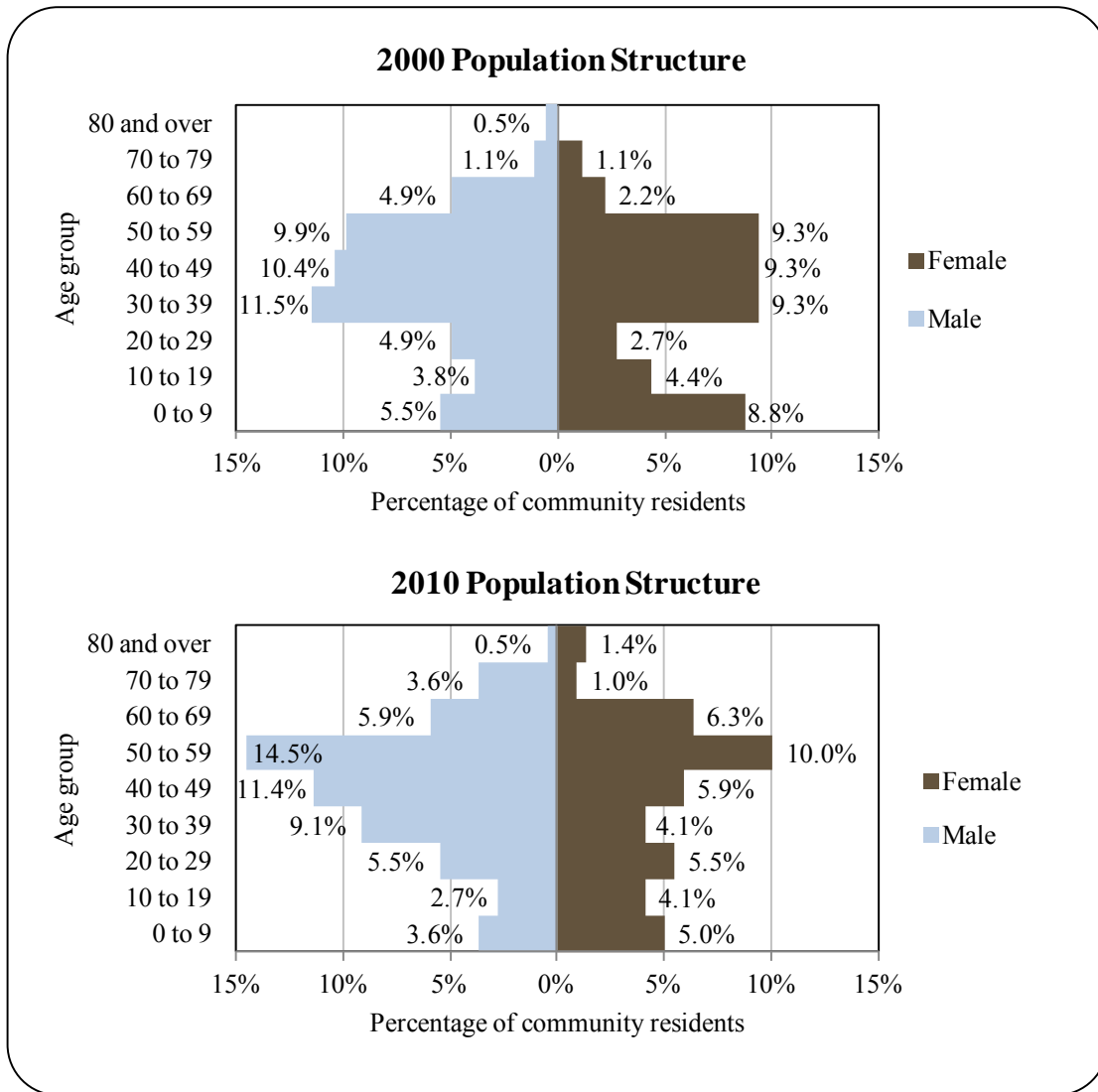


When compared to 2000, the population structure was somewhat less expansive in 2010 (Figure 2). In that year, 15.4% of residents were under the age of 20, compared to 22.5% in 2000; 18.7% were over the age of 59, compared to 9.8% in 2000; 55.0% were between the ages of 30 and 59, compared to 59.7% in 2000; and 11.0% were between the ages of 20 and 29, compared to 7.6% in 2000.

Gender distribution by age cohort was less even in 2010 and in 2000, with relatively equal numbers of male and female biases along age ranges. The greatest absolute gender

difference that year occurred in the 40 to 49 range (11.4% male, 5.9% female), followed by the 30 to 39 (9.1% male, 4.1% female) and 50 to 59 (14.5% male, 10% female) ranges. Of those three, the greatest proportional gender difference occurred in the 30 to 39 range. Information regarding Whittier’s population structure can be found in Figure 2.

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



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)³⁷² estimated that 95.7% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 1.4% had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 2.9% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 30.6% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; an estimated 7.7% held an Associate's degree, compared to an estimated 8.0% of Alaskan residents overall; an estimated 25.4% of residents held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 3.3% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

*History, Traditional Knowledge, and Culture*³⁷³

The Whittier townsite was platted by the U.S. Department of the Interior in 1942 as a terminal for the Alaska Railroad. The U.S. Army selected Whittier as a focal point for several of its operations in Alaska and built a port and rail-tunnel in 1942 and 1943. These facilities were built for the purpose of transporting service-members and materials to Fort Richardson in Anchorage, and Fort Wainwright in Fairbanks.

In 1949, the Army constructed an extensive complex to provide long term support facilities for petroleum-rail operations as well as other military interests throughout Alaska. At the height of military activity in the late 1950s, there were approximately 1,000 people stationed in Whittier. At the time, the military complex there boasted the largest building in Alaska. The now vacant Buckner Building consisted of 1,000 apartments, a hospital, bowling alley, theater, library, two firing ranges, and a host of shops. The building was damaged and abandoned after the 1964 Good Friday earthquake and has since fallen into considerable disrepair. Other structures, most notably the Begich Towers, currently serve as housing and commercial space.

In 1960, the Army declared that Whittier was no longer necessary to its operations in Alaska. Most buildings were abandoned, although many were maintained until 1968.

The 1964 Good Friday earthquake caused considerable damage to Whittier. The ground shook for three to four minutes and land subsidence measured over eight feet. Three massive tsunamis, the largest being over 40 feet in height, struck the town. After it ended, 13 people had died and many port facilities were destroyed.

In 1969, the City was incorporated with a population of approximately 140. Shortly after incorporation, a small boat harbor was built and the newly formed city sought to acquire additional land for development. In 1973, the Shotgun Cove area was annexed to the city. In 1980, the small boat harbor was expanded, and in 1984, freight services in Whittier were improved.

³⁷² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³⁷³ City of Whittier (1986). *City of Whittier Community Comprehensive Plan*. Retrieved April 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Whittier-CP-1986.pdf>.

Natural Resources and Environment

Winter temperatures range from 17 to 28 °F (-8 to -4 °C) and summer temperatures average 49 to 63 °F (9 to 17 °C). Average annual precipitation includes 197 inches of rain and 241 inches of snowfall. High winds are common.³⁷⁴

Whittier is located in the Chugach National Forest, which occupies 5.5 million acres of Southcentral Alaska. Subsurface geology consists mostly of slate and greywacke. Bedrock is overlain by unconsolidated glacial materials and stream gravel. Topography is characterized by steep relief slopes rising abruptly from sea level at 30-60% grades. Mountain altitudes range from 3,500 to 4,500 feet. The Bay Delta and Shotgun Cove areas provide the only shallow relief suitable for development. The Passage Canal connects Whittier to Prince William Sound (PWS). The deep-water port is ice free all year, although subject to strong winds, fog, and precipitation. Seas can reach six feet around the port during poor weather. Ground cover consists of a thick layer of topsoil. Vegetation is mostly comprised of mixed Sitka Spruce and Western Hemlock stands. Undergrowth consists of lichens, grasses, wildflowers, and high-bush blueberries. Disturbed land is covered in scrub alder, blueberry, and salmonberry bushes.³⁷⁵

PWS and surrounding areas are home to a variety of terrestrial and aquatic wildlife. Common fish include rockfish, flounder, all five species of Pacific salmon, lingcod, and Pacific halibut. Salmon sharks, crab, shrimp, and clams are also in the area. Marine mammals include whales, porpoises, seals, sea otters, and sea lions. Terrestrial mammals include black bears, wolves, coyotes, mountain goats, moose, snowshoe hares, porcupines, beavers, river otters, mink, marmots, squirrels, and weasels. Migratory birds such as geese, ducks and cranes frequent the Portage Pass.³⁷⁶

Fishery and recreational resources make up the majority of natural resources utilized locally. Timber is a potential resource; however, commercial timber leases in the PWS area have been halted in order to aid environmental recovery following the 1989 *Exxon Valdez* oil spill.³⁷⁷ As of 2011, there were no active mineral projects in the area; however, the Mineral King and Granite gold/arsenic mines occupy the east and west banks of College Fjord, north of Whittier.³⁷⁸

Environmental hazards present in the community include coastal flooding, wildfire, earthquake, snow avalanche, tsunami, severe weather, landslides, and erosion. Flooding and erosion are primarily caused by storm surges, although rainfall, snowmelt, and glacier outwash flooding contributes as well. In addition, there is the possibility of levee failure as the Whittier Creek Levee is over 50 years old and levee protection has eroded. The last major flooding event occurred in 2006. Severe weather can bring high winds, extreme cold and heavy snow. These hazards can potentially impact local infrastructure, particularly the local small boat harbor. Wildfire potential in the Whittier area has been determined as moderate, although there has been no history of catastrophic wildfires affecting the community. Whittier is located in a potentially damaging seismic area, as evidenced by the 1964 Good Friday earthquake. The area itself is

³⁷⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁷⁵ ASCG Inc. (2005). *Whittier Comprehensive Plan Update 2005*. Retrieved April 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Whittier-CP-2005.pdf>.

³⁷⁶ Ibid.

³⁷⁷ U.S. Forest Service (n.d.). *ROD for FEIS Revised Land and Resource Management Plan – Alaska Region*. Retrieved April 19, 2012 from: http://www.fs.fed.us/outernet/r10/chugach/forest_plan/rod.pdf.

³⁷⁸ Alaska Department of Natural Resources (n.d.). *Minerals Development*. Retrieved April 19, 2012 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

prone to tsunami inundation, land subsidence, liquefaction, and landslides. Finally, high relief slopes combined with high levels of precipitation in forms of both rain and snow create hazardous conditions for landslides and avalanches on steep slopes behind the West Delta and partway out Shotgun Cove.³⁷⁹

According to the Alaska Department of Environmental Conservation (DEC), there are no notable active environmental cleanup sites located in or around Whittier.³⁸⁰

Current Economy³⁸¹

Whittier's origins as a military outpost led to an emphasis on commercial-industrial port and railroad land uses and dense residential style housing. Although relatively diverse, the community's economy is focused on commercial and recreational fishing and boating in PWS. Tourism is another important industry and the community is connected to other regions of Alaska via the Anton Memorial Tunnel. Cruise ships and the Alaska Railroad bring visitors to the city each summer. Cruise ships dock in Whittier several times per week during summer months and visitors have a range of accommodations and attractions to choose from during their stay.³⁸² Top employers³⁸³ in 2010 included: City of Whittier, Chugach School District, Anchor Inn, Southeast Stevedoring Corporation, Great Pacific Seafoods Inc., VMS Inc., State of Alaska, Begich Towers Condo Association Inc., Shoreside Petroleum Inc., and VECO Alaska Inc.

in 2010,³⁸⁴ the estimated per capita income was \$37,135 and the estimated median household income was \$47,969, compared to \$25,700 and \$47,500 in 2000, respectively. However, after accounting for inflation by converting 2000 values into 2010 dollars,³⁸⁵ the real per capita income (\$33,795) and real median household income (\$62,462) indicate that individual earnings grew while household earnings declined. In 2010, Whittier ranked 21st of 305 communities from which per capita income was estimated, and 142nd of 299 communities from which median household income was estimated.

Whittier's small population size may have prevented the ACS from accurately portraying economic conditions.³⁸⁶ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$3.09 million in total wages in 2010,³⁸⁷ resulting in a per capita income of \$14,024 when matched with the population in 2010. Overall, comparative differences between the ACS and ALARI estimates indicate significantly a lower per capita income than what was reported in both 2000 and 2010.

³⁷⁹ City of Whittier. (2008). *City of Whittier Local Hazards Mitigation Plan*. Retrieved April 19, 2012 from: http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Whittier_HMP.pdf.

³⁸⁰ Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved April 23, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm#Kenai>.

³⁸¹ Unless otherwise noted, all monetary data are reported in nominal values.

³⁸² See footnote 379.

³⁸³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

³⁸⁴ See footnote 372.

³⁸⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

³⁸⁶ See footnote 372.

³⁸⁷ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

According to 2006-2010 ACS estimates, 75.9% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 13.2%, compared to an estimated 5.9% statewide; and an estimated 13.7% of residents were living below the poverty line, compared to an estimated 9.5% of Alaskan residents overall. Of those employed, an estimated 37.8% worked in the private sector, an estimated 46.9% worked in the public sector, and an estimated 15.4% were self-employed.

By industry, most employed residents were estimated to work in public administration sectors (23.8%) in 2010; followed by arts, entertainment, recreation, accommodation, and food service sectors (21.7%); and other services, except public administration (11.2%). By occupation type, most employed residents were estimated to hold management or professional positions (35%) that year; followed by service positions (26.6%); sales or office positions (18.2%); natural resources, construction, or maintenance positions (14.7%); and production, transportation, or material moving positions (5.6%). Overall, there was significant growth in public administration and other service, except public administration sectors. Most other sectors saw declines during those years. In addition, there was moderate growth in the number of employed residents estimated to hold service positions, while there was a decline in the number of employed residents estimated to hold production, transportation, and material moving positions. No residents were estimated to work in agriculture, forestry, fishing, hunting, or mining sectors in 2010. However, it should be noted that many resource based sectors, including commercial fishing, are seasonal or transient in nature. This makes tracking them by conventional ACS survey methods difficult in some instances. Information regarding employment trends can be found in Figures 3 and 4.

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

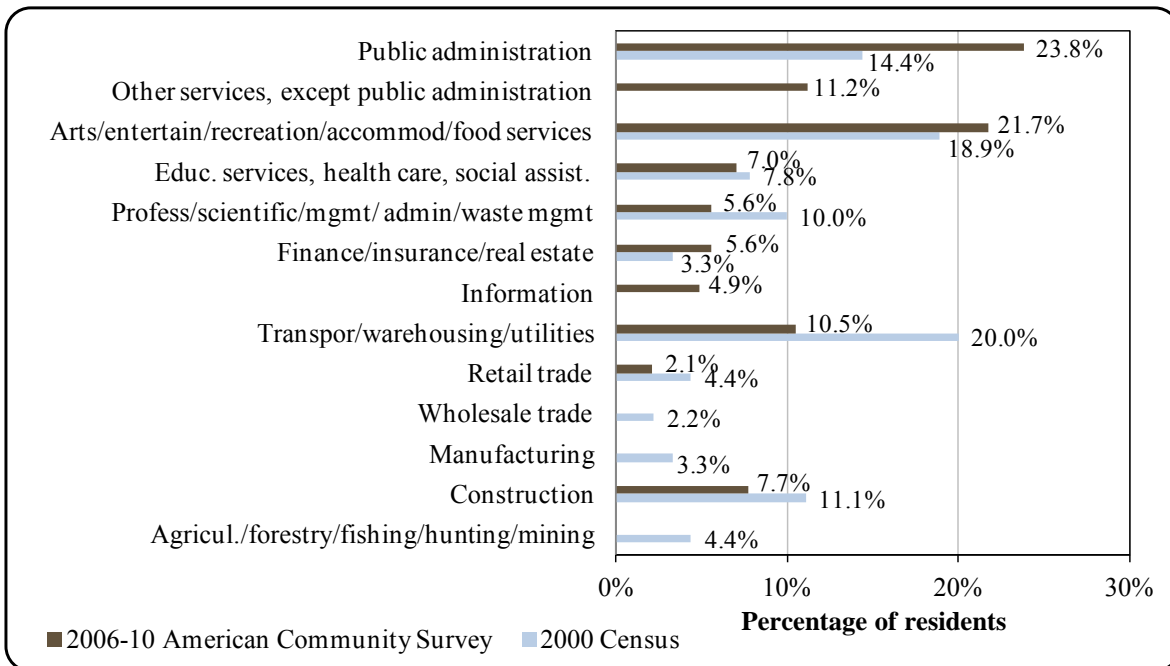
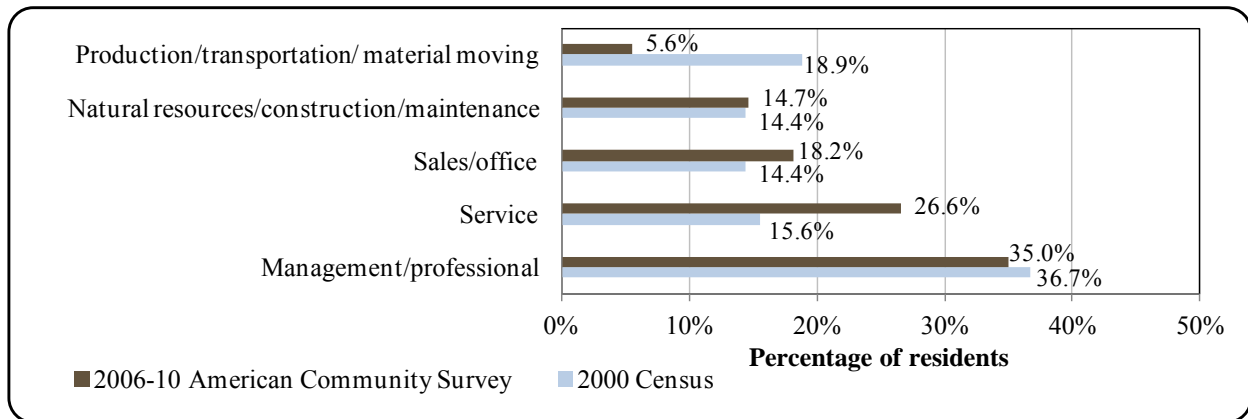


Figure 4. Local Employment by Occupation in 2000-2010, Whittier (U.S. Census).



Governance

Whittier is a Second-class city with a mayoral form of government. There is a seven-member city council, five-member school board, five-member planning commission, and six municipal employees. The community was not included in the Alaska Native Claims Settlement Act (ANCSA) and does not possess a U.S. Bureau of Indian Affairs (BIA) recognized Tribal council. The closest National Marine Fisheries Service (NMFS), Alaska Department of Fish and Game (ADF&G), and U.S. Bureau of Citizenship and Immigration Services (BCIS) offices are located in Anchorage, 60 miles northwest.

In 2010, the city administered a 5% sales tax between April and September, a 5 mill property tax, and a \$2.50 Passenger Transportation Tax. Municipal revenue figures were taken from financial audits, and report total governmental funds.³⁸⁸ When adjusted for inflation,³⁸⁹ total municipal revenues increased by 36.4% between 2000 and 2010 from \$2.62 million, to \$4.63 million. In 2010, general funds accounted for 37.3% of total municipal revenues. In that year, most (62.7%) general funds were collected from local taxes, followed by rental and lease revenues (15.0%), state revenue sharing (8.0%), and federal revenues (5.9%). Cruise ship tax revenues accounted for 22.6% of total municipal revenues, while several capital projects accounted for 38.8%.

Sales taxes accounted for 12.1% of total municipal revenues in 2010, compared to 6.6% in 2000. In addition, state allocated Community Revenue Sharing accounted for 2.9% of revenues, compared to 2.5% from State Revenue Sharing in 2000. Between 2000 and 2010, Whittier was awarded over \$7.94 million in federal and state fisheries-related grants. These grants went to harbor and dock expansion and maintenance and a new breakwater. Information regarding community finances can be found in Table 2.

³⁸⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dkra/commfin/CF_FinRec.cfm.

³⁸⁹ Inflation calculated using Anchorage CPI from Alaska DOĹ: <http://labor.alaska.gov/research/cpi/cpi.htm>.

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

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$2,624,125	\$173,103	\$24,129	\$20,000
2001	\$1,130,183	\$182,867	\$23,260	\$31,994
2002	\$1,437,296	\$196,871	\$23,256	\$2,746,296
2003	\$1,211,161	\$176,461	\$23,377	\$2,522,100
2004	\$2,227,148	\$265,355	-	n/a
2005	\$2,485,148	\$321,797	-	n/a
2006	\$2,383,603	\$258,102	-	\$625,400
2007	\$4,631,466	\$422,755	-	\$1,000,000
2008	\$3,437,822	\$597,638	-	n/a
2009	\$4,052,992	\$512,365	\$107,080	n/a
2010	\$4,630,110	\$560,254	\$105,743	\$990,000

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

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

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

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

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

Infrastructure

*Connectivity and Transportation*³⁹⁰

Whittier has an ice-free port and two city docks (70-foot cargo dock and 60-foot floating passenger dock). A small boat harbor has slips for 360 fishing, recreation, and charter vessels. It is served by road, rail, the state ferry, boat, and aircraft. Since 2000, a tunnel has provided a road connection to Anchorage and the rest of the Alaska highway system. The Anton Anderson Memorial Tunnel was reconstructed to accommodate both rail and road vehicles. The railway carries passengers, vehicles, and cargo 12 miles from the Portage Station east of Girdwood. The state-owned 1,480-foot long by 58-foot wide gravel airstrip accommodates charter aircraft, and a city-owned seaplane dock is available for passenger transfer.

Facilities

Water is derived from wells and a reservoir. Water storage capacity is 1.2 million gallons. The entire community is served by a piped water and sewer system, and over 95% of homes are fully plumbed. Refuse is hauled out by a private contractor to Anchorage - the local landfill has been closed. An oil and hazardous waste recycling center is available. Electricity is provided by

³⁹⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

hydroelectric and natural gas generators. Visitor accommodations include June’s Whittier Bed & Breakfast, The Anchor Inn, The Inn at Whittier, and Sportsman’s Inn. Public safety is provided by city police and state troopers based in Girdwood. Fire and rescue services are provided by city volunteer fire department, Anton Anderson Memorial Tunnel Fire Department, and local Emergency Medical Services. Additional public facilities include a community hall, school gym, museum, and library. Communications services include local and long distance telephone, internet, and local and cable television.³⁹¹

Most residents rent or own condominiums in the Begich Towers or Whittier Manor. The six-unit Anchor Annex and several single family homes contribute addition housing. Although most units in the Begich Towers are reserved for living space, several floors are zoned for commercial uses.

Whittier acts as a freight exchange hub for barge service between Alaska and the rest of the contiguous United States and Canada. Several barge services and transport agencies move freight through Whittier including Lynden Transport, Alaska Railroad Corporation, Alaska Railroad Marine Services, and Canadian National. As of 2010, berth capacity of public mooring facilities was insufficient, and unmet demand was estimated at between 1,500 and 2,000 berths for recreational vessels. A private marina was completed in 2004. Fisheries-related businesses and services include marine fuel, marine repair and welding, dry-dock storage, haulout facilities, self-storage facilities, and charter services. Cruise ship facilities include a dock and 20,000 square-foot terminal capable of accommodating one cruise ship visit per day. Whittier acts as a “turnaround” point for cruise ships rather than a port of call. Visitors embarking or disembarking rely on the Alaska Railroad for transportation to and from Anchorage. The airport is non-towered and not maintained in the winter. High winds and poor weather common to Whittier often make landing difficult and there is no scheduled air service.³⁹²

*Medical Services*³⁹³

The Whittier Medical Clinic is located in the Begich Towers. The facility provides basic health care and has a nurse practitioner and community health practitioner on staff. Emergency medical staff tends to a range of local and regional medical-related issues and are often tasked with addressing issues aboard cruise ships

*Educational Opportunities*³⁹⁴

Whittier Community School offers preschool through 12th grade instruction. In 2011, 19 students were enrolled and there were 4 teachers employed.

³⁹¹ Ibid.

³⁹² ASCG Inc. (2005). *Whittier Comprehensive Plan Update 2005*. Retrieved April 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Whittier-CP-2005.pdf>.

³⁹³ Ibid.

³⁹⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Whittier's history as a military and transportation hub predates its involvement in North Pacific fisheries and much of PWS's extensive fisheries history is tied to Cordova and the Copper River. However, after military operations ceased the community became increasingly dependent on commercial and recreational fishing. Today, Whittier is one of the most popular sportfishing communities in the state as evidenced by the overcrowding of small vessel berths and constant summer influx of tourists.

Fish targeted in Whittier include all five species of Pacific salmon, cod, halibut, herring, rockfish, eel, trout, char, king crab, tanner crab, and Dungeness crab. Great Pacific Seafoods constructed a commercial seafood processor and in 2003, 11 million pounds of seafood was processed at the facility. Fish are pumped from tenders at the Alaska Railroad Corporation dock. Minimally processed fish is primarily transported to Anchorage for secondary processing. All five species of Pacific salmon from the Copper River and PWS make up the majority of landings. The remainder includes halibut and black cod. Most of Whittier's commercial fishing fleet consists of gillnetters, followed by purse-seiners and long-liners.

Built in 1985, the Wally Noerenberg Hatchery is the closest hatchery to Whittier; located 20 miles east in Lake Bay. The hatchery is the largest pink salmon production facility in North America. In 2001, 7.2 million pink and 2.4 million chum salmon returned to the facility. Additional PWS hatcheries are located in Valdez, Main Bay, Sawmill Bay, and Cannery Creek.

Whittier is located in Federal Reporting Area 649, International Pacific Halibut Commission (IHPC) Regulatory Area 3A, and the Central Gulf of Alaska (GOA) Sablefish Regulatory District. As of 2010, Whittier was ineligible for participation in the Community Quota Entity (CQE) program for GOA communities.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, there are two active shore-based processing plants in Whittier. Fee's Custom Seafoods provides custom processing for sport fishermen in Whittier. The plant began operations in 2003.³⁹⁵ The facility, located "on the Triangle" in Whittier, is open during the summer in conjunction with the Prince William Sound salmon (sockeye, coho, chum) runs. Fee's Custom Seafoods also processes halibut, spot prawns and side stripe shrimp.³⁹⁶ Employees are on an "on call" basis and the plant processes mostly for charter businesses.³⁹⁷

Great Pacific Seafoods was founded in 1977 and has a small seafood processing facility in Whittier that began operations in 1993.³⁹⁸ Its salmon season is from May to September, during which it employs up to 130 workers.³⁹⁹

³⁹⁵ This information is based on the results of a processing plant survey conducted by the Alaska Fisheries Science Center in 2011.

³⁹⁶ Fee's Custom Seafoods. (n.d.). *Fee's Custom Seafoods*. Retrieved from: <http://www.feescustomseafoods.com/>.

³⁹⁷ See footnote 395.

³⁹⁸ Ibid.

³⁹⁹ Ibid.

Fisheries-Related Revenue

Whittier receives fisheries-related revenue from both Shared Fisheries Business Taxes and harbor usage fees. In 2010, \$1.17 million was collected in fisheries-related revenue, compared to \$776,566 in 2001. Fisheries-related revenue totals are incomplete for 2000 and 2005 because of missing harbor fees data. Fisheries-related revenue peaked in 2009 at \$1.25 million. Information regarding fisheries-related revenue trends can be found in Table 3. It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In 2010, 12 residents, or 5.5% of the population, held 18 permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 9 residents held 18 CFEC permits. Of the CFEC permits held in 2010, 17% were for salmon, compared to 11% in 2000; 17% were for groundfish, compared to 61% in 2000; 6% were for sablefish, compared to 6% in 2000; 6% were for halibut, compared to 6% in 2000; and 56% were for other shellfish, compared to 17% in 2000. Of the CFEC permits held in 2010, 61% were actively fished, compared to 11% in 2000. This varied by fishery from 100% of salmon, sablefish, and halibut permits; to 50% of other shellfish and 33% of groundfish permits. Fifty-percent of FFP were actively fished and 0% of LLP were fished in 2010. Fisheries prosecuted by Whittier residents in 2010 included: statewide longline halibut, statewide hand troll ling cod, PWS pot shrimp, PWS fixed gear sablefish, PWS drift gillnet salmon, and Cook Inlet drift gillnet salmon.⁴⁰⁰

In addition, two residents held two Federal Fisheries Permits (FFP) and three residents held three License Limitation Program (LLP) groundfish permits that year. Residents held 8,474 shares of halibut quota on two accounts in 2010, compared to 77,054 shares held on four accounts in 2000. No residents held sablefish or crab quota between 2010 and when the programs began.

Residents held 27 commercial crew licenses in 2010, compared to 17 in 2000. In addition residents held majority ownership of 13 vessels, compared to 13 in 2000. In 2010, 330 vessels landed 15.94 million pounds of fish valued at \$10.10 million in Whittier, compared to 5.30 million pounds valued at \$3.67 million landed by 326 vessels in 2000. Salmon landings totaled 15.65 million pounds valued at \$9.34 million in 2010, compared to 4.85 million pounds valued at \$2.65 in 2000; a decrease of approximately \$0.15 per pound landed after adjusting for inflation⁴⁰¹ and without considering the species composition of landings. Halibut landings totaled 78,990 pounds valued at \$320,445 in 2010, compared to 303,961 pounds valued at \$787,381 in 2000; an increase of approximately \$0.50 per pound after adjusting for inflation.⁴⁰² Shrimp landings totaled 68,855 pounds valued at \$321,664 in 2010. Sablefish landings totaled 11,662 pounds valued at \$59,059 in 2010, compared to 29,957 pounds valued at \$70,183 in 2003; an

⁴⁰⁰ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴⁰¹ Inflation calculated using the 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

⁴⁰² Ibid.

increase of \$1.79 per pound after adjusting for inflation.⁴⁰³ Other groundfish landings totaled 36,573 pounds valued at \$20,375, compared to 29,526 pounds valued at \$19,555 in 2000. All other 2010 landings in Whittier are considered confidential. In addition, landings by Whittier residents between 2000 and 2010 are considered confidential for most years. However, in 2010 residents landed 3,006 pounds of Pacific cod valued at \$23,973 and 180,990 pounds of salmon valued at \$148,038. Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁴⁰³ Ibid.

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	\$87,608	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$74,790	\$63,716	\$87,608	\$70,903	\$79,913	\$76,978	\$61,016	\$93,517	\$79,337	\$130,050	\$130,006
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$78	\$61	\$46	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	\$712,850	\$727,000	\$777,936	\$815,000	n/a	\$1.09 M	\$1.03 M	\$1.02 M	\$1.12 M	\$1.04 M
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>\$74,790</i>	<i>\$776,566</i>	<i>\$902,216</i>	<i>\$848,839</i>	<i>\$894,913</i>	<i>\$76,978</i>	<i>\$1.15 M</i>	<i>\$1.13 M</i>	<i>\$1.10 M</i>	<i>\$1.25 M</i>	<i>\$1.17 M</i>
<i>Total municipal revenue</i> ⁵	<i>\$2.62 M</i>	<i>\$1.13 M</i>	<i>\$1.44 M</i>	<i>\$1.21 M</i>	<i>\$2.23 M</i>	<i>\$2.49 M</i>	<i>\$2.38 M</i>	<i>\$4.63 M</i>	<i>\$3.44 M</i>	<i>\$4.05 M</i>	<i>\$4.63 M</i>

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

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

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

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

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

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

⁶ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	5	4	4	4	3	3	4	4	3	3	3
	Active permits	0	0	0	0	0	0	1	1	1	1	0
	% of permits fished	0%	0%	0%	0%	0%	0%	25%	25%	33%	33%	0%
	Total permit holders	5	4	4	4	3	3	4	4	3	3	3
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	1	1	1	1	1	2	2
	Fished permits	0	0	0	0	0	0	0	0	0	0	1
	% of permits fished	n/a	n/a	n/a	n/a	0%	0%	0%	0%	0%	0%	50%
	Total permit holders	0	1	2	3	1	1	1	1	1	2	2
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	3	1	1	2	2	1	1	0	0	0	10
	Fished permits	0	1	0	0	0	0	0	0	0	0	5
	% of permits fished	0%	100%	0%	0%	0%	0%	0%	n/a	n/a	n/a	50%
	Total permit holders	2	1	1	2	2	1	1	0	0	0	10
Halibut (CFEC) ²	Total permits	1	1	1	1	2	2	3	3	2	1	1
	Fished permits	1	1	1	1	1	2	3	3	2	1	1
	% of permits fished	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%
	Total permit holders	1	1	1	1	2	2	3	3	2	1	1
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	1	2	2	1	1	0	1	1	1	1	1
	Fished permits	0	0	1	0	1	0	1	1	1	1	1
	% of permits fished	0%	0%	50%	0%	100%	n/a	100%	100%	100%	100%	100%
	Total permit holders	1	2	2	1	1	0	1	1	1	1	1
Groundfish (CFEC) ²	Total permits	11	14	7	8	2	2	3	2	2	2	3
	Fished permits	0	0	0	0	0	0	1	1	1	0	1
	% of permits fished	0%	0%	0%	0%	0%	0%	33%	50%	50%	0%	33%
	Total permit holders	6	9	5	6	2	2	2	1	1	1	2
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	2	2	2	2	0	0	0	1	2	2	3
	Fished permits	1	2	2	2	0	0	0	1	2	2	3
	% of permits fished	50%	100%	100%	100%	n/a	n/a	n/a	100%	100%	100%	100%
	Total permit holders	2	2	3	3	0	0	0	1	2	2	3
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>18</i>	<i>20</i>	<i>13</i>	<i>14</i>	<i>7</i>	<i>5</i>	<i>8</i>	<i>7</i>	<i>7</i>	<i>6</i>	<i>18</i>
	<i>Fished permits</i>	<i>2</i>	<i>4</i>	<i>4</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>5</i>	<i>6</i>	<i>6</i>	<i>4</i>	<i>11</i>
	<i>% of permits fished</i>	<i>11%</i>	<i>20%</i>	<i>31%</i>	<i>21%</i>	<i>29%</i>	<i>40%</i>	<i>63%</i>	<i>86%</i>	<i>86%</i>	<i>67%</i>	<i>61%</i>
	<i>Permit holders</i>	<i>9</i>	<i>12</i>	<i>10</i>	<i>10</i>	<i>4</i>	<i>3</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>4</i>	<i>12</i>

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

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

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

Year	Crew License Holders ¹	Count of All fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Whittier ²	Total Net Pounds Landed in Whittier ^{2,5}	Total Ex-Vessel Value of Landings in Whittier ^{2,5}
2000	17	20	2	13	42	326	5,298,212	\$3,672,639
2001	18	19	2	14	40	335	8,145,909	\$4,544,962
2002	17	17	2	12	44	377	9,504,882	\$4,779,782
2003	15	26	2	15	49	248	12,687,901	\$4,484,097
2004	14	22	2	11	43	374	7,795,375	\$4,004,739
2005	9	17	2	3	23	281	14,190,996	\$4,379,854
2006	9	14	2	6	21	229	8,728,698	\$5,227,804
2007	9	10	2	4	22	184	14,439,711	\$7,237,001
2008	11	11	2	5	20	285	11,402,482	\$8,029,641
2009	14	12	2	4	24	249	9,532,993	\$5,491,971
2010	27	26	2	13	42	330	15,939,417	\$10,098,779

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

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

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

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

⁵ Totals only represent non-confidential data.

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

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	4	77,054	7,629
2001	4	157,765	18,677
2002	5	206,697	34,781
2003	5	158,169	19,355
2004	5	254,088	44,657
2005	5	254,088	40,464
2006	5	314,166	49,154
2007	5	309,212	45,512
2008	2	8,474	1,109
2009	2	8,474	994
2010	2	8,474	916

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

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

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

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

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

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

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

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

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	303,961	294,016	331,283	293,435	292,446	263,808	220,738	206,862	204,053	173,275	78,990
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	29,526	18,829	26,070	17,761	144,154	18,899	18,361	20,033	16,795	--	36,573
Other Shellfish	--	--	--	--	--	--	--	--	--	--	68,855
Pacific Cod	51,196	18,759	33,018	2,058	--	--	1,481	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	29,957	20,969	--	10,337	19,370	16,789	--	11,662
Salmon	4,849,220	7,764,599	--	12,299,388	7,275,157	--	--	--	11,109,820	9,268,021	15,650,990
<i>Total²</i>	<i>5,233,903</i>	<i>8,096,203</i>	<i>390,371</i>	<i>12,642,599</i>	<i>7,732,726</i>	<i>282,707</i>	<i>250,917</i>	<i>246,265</i>	<i>11,347,457</i>	<i>9,441,296</i>	<i>15,847,070</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$787,381	\$545,699	\$725,238	\$883,079	\$905,074	\$811,940	\$809,430	\$890,735	\$940,909	\$532,399	\$320,445
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$19,555	\$11,077	\$17,617	\$8,142	\$35,026	\$12,536	\$14,239	\$12,900	\$10,541	--	\$20,375
Other Shellfish	--	--	--	--	--	--	--	--	--	--	\$321,664
Pacific Cod	\$20,434	\$7,129	\$11,371	\$732	--	--	\$828	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	\$70,183	\$41,892	--	\$31,063	\$53,397	\$62,708	--	\$59,059
Salmon	\$2,645,564	\$3,826,627	--	\$3,389,145	\$2,839,946	--	--	--	\$6,822,998	\$4,682,953	\$9,343,674
<i>Total²</i>	<i>\$3,472,933</i>	<i>\$4,390,531</i>	<i>\$754,225</i>	<i>\$4,351,282</i>	<i>\$3,821,938</i>	<i>\$824,476</i>	<i>\$855,559</i>	<i>\$957,032</i>	<i>\$7,837,155</i>	<i>\$5,215,351</i>	<i>\$10,065,217</i>

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

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

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

² Totals only represent non-confidential data.

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

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	3,006
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	180,990
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	183,996
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	\$23,973
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	\$148,038
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	\$172,011

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

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

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

² Totals only represent non-confidential data.

Recreational Fishing

Whittier's position as an embark/disembark port for cruise ships contributes substantially to its recreational fishing industry, as does the City's access to Alaska's highway system. As of 2005, fishing and hunting guide businesses outnumbered all other local tourism related businesses at 15 providers. Sightseeing came second at 10 providers.⁴⁰⁴ The Whittier Chamber of Commerce listed 15 local charter, guide service, and cruise service companies as of 2012.⁴⁰⁵ In 2010, there were five registered sport fish guide businesses active, compared to two in 2000. In addition, five sport fish guide licenses were held that year, compared to three in 2000. Charter log records kept by ADF&G report that in 2010, charter operators in Whittier kept 1,428 coho salmon, 4,497 halibut, 571 lingcod, 1,271 rockfish, one shark, 16 sablefish, and 276 unidentified salmon.⁴⁰⁶

In 2010, 76 sportfishing licenses were sold to Whittier residents and 1,072 were sold in the community, compared to 78 and 812 in 2000, respectively. Sportfishing license sales in the community peaked in 2002 at 1,360. Whittier is located in North Gulf Coast/PWS Statewide Harvest Survey Area which includes all drainages from east of Cape Suckling, through PWS to Gore Point. In 2010, there were a total of 212,793 saltwater angler days fished in the region, compared to 122,459 in 2000, representing a 74% increase. Non-Alaskan residents made up 30.4% of total saltwater angler days fished in 2010 in the region, compared to 32.3% in 2000. Regional saltwater angler days fished peaked at 300,205 in 2007. Total freshwater angler days fished was 22,979 in 2010, compared to 12,108 in 2000; an increase of 90%. Non-Alaskan residents made up 57% of freshwater angler days fished in 2010 in the region, compared to 26% in 2000. Total freshwater angler days fished in the region peaked in 2010. Information regarding these sportfishing trends can be found in Table 11. According to ADF&G Harvest Survey data,⁴⁰⁷ local private anglers target all five species of Pacific salmon, Pacific halibut, rockfish, lingcod, Pacific cod, shark, and shrimp.

Subsistence Fishing

Subsistence harvesting is not widely practiced by residents of Whittier. Although ADF&G subsistence harvest data is limited, reports show limited involvement. Information on subsistence participation by household and sea mammal subsistence harvesting is unavailable. Of the species listed by ADF&G in Table 13, sockeye salmon was the only species residents reported harvesting between 2003 and 2008. During those years, residents reported harvesting 85 total salmon. In 2010, two residents held Subsistence Halibut Registration Certificates (SHARC), compared to one in 2003. However, between 2003 and 2010 no halibut harvests were reported. Information regarding subsistence trends can be found in Tables 12 through 15.

⁴⁰⁴ ASCG Inc. (2005). *Whittier Comprehensive Plan Update 2005*. Retrieved April 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Whittier-CP-2005.pdf>.

⁴⁰⁵ Whittier Chamber of Commerce (n.d.). *Whittier Chamber of Commerce*. Retrieved April 25, 2012 from: <http://www.whittieralaskachamber.org/cruises-charters.htm>.

⁴⁰⁶ Ibid.

⁴⁰⁷ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

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

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Whittier ²
2000	2	3	78	812
2001	3	7	83	1,319
2002	4	7	98	1,360
2003	4	12	97	904
2004	3	6	94	1,115
2005	4	6	94	1,058
2006	3	3	80	1,084
2007	3	6	74	914
2008	3	4	72	1,196
2009	3	4	72	1,102
2010	5	5	76	1,072

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	39,551	82,908	3,168	8,940
2001	66,450	135,248	8,587	8,610
2002	67,698	133,508	5,132	8,126
2003	70,549	150,086	10,657	10,235
2004	76,173	184,492	9,199	10,349
2005	87,033	165,559	6,894	6,187
2006	79,313	157,194	8,886	5,655
2007	90,002	210,203	8,446	9,944
2008	67,410	181,381	8,056	5,489
2009	59,505	189,563	8,730	10,938
2010	64,776	148,017	13,118	9,861

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

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

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

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

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

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

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

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

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	6	6	n/a	n/a	n/a	n/a	15	n/a	n/a
2004	3	3	n/a	n/a	n/a	n/a	15	n/a	n/a
2005	2	2	n/a	n/a	n/a	n/a	30	n/a	n/a
2006	3	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	1	1	n/a	n/a	n/a	n/a	25	n/a	n/a
2008	2	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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

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

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

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

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	1	n/a	n/a
2004	2	n/a	n/a
2005	2	n/a	n/a
2006	1	n/a	n/a
2007	1	n/a	n/a
2008	3	n/a	n/a
2009	3	n/a	n/a
2010	2	n/a	n/a

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

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

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

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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

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

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

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

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