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Community Profiles for North Pacific Fisheries - Alaska

Volume 5

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

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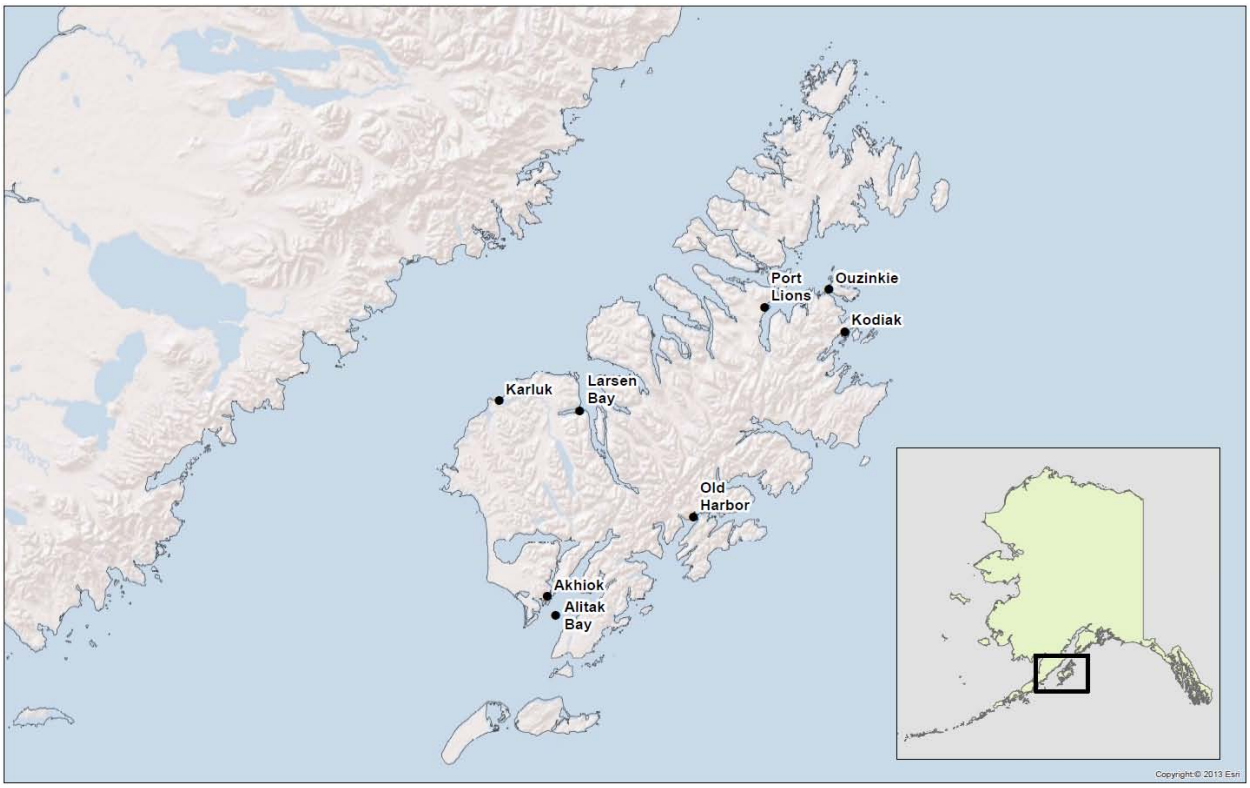
Kodiak Island Archipelago

Regional Introduction: Kodiak Island Archipelago

Communities

Akhiok
Alitak Bay*
Karluk
Kodiak
Larsen Bay
Old Harbor
Ouzinkie
Port Lions

*Included in Akhiok



People and Place

Location

The communities profiled in this section are located in the Kodiak Island archipelago, a group of islands located in the Western Gulf of Alaska. The largest island is Kodiak Island, the second largest island in the country, encompassing approximately 3,500 square miles and spanning 100 miles in length. Others are Afognak Island, Sitkalidak Island, the Trinity Islands, Raspberry Island, Shuyak Island, and Marmot Island and many additional small islands.[1] The archipelago is approximately 25 miles across the Shelikof Strait from the Katmai Coast of the Alaska Peninsula, and 90 miles southwest of the Kenai Peninsula.[2] In total, the area of the Kodiak Island Borough includes 6,559.8 square miles of land and 5,463.8 square miles of water. The islands are located at approximately 57.8° N. latitude and -152.4° W longitude. The most populous city, Kodiak, is located on the eastern shore of Kodiak Island, and is about 252 air miles south of Anchorage.

The influence of surrounding ocean waters protects the islands from extreme temperatures. Average monthly temperatures in this area vary from 32° to 62° F. There is frequent cloud cover on Kodiak Island as well as fog, with moderate rain, and rare if any freezing weather. Harsh storms during the months of December through February are common with winds sometimes reaching 90 miles-per-hour. On the windward side of the island the yearly precipitation is 60 inches and 40 inches on the leeward side. These intense winds and rain often result in airport closures or delays.[3]

Demographic Profile

In 2010, the total population of the Kodiak Island Borough was 13,592. That year, just under half of Borough residents resided in the City of Kodiak (45.1%), with a population of 6,130. The other six communities profiled in this section had populations of between 37 and 218 in 2010.[4]

In 2010, just over half of Kodiak Island Borough residents identified themselves as White (55%), along with 19.6% who identified as Asian, 13.2% as American Indian or Alaska Native, 0.7% as Black or African American, 0.6% as Native Hawaiian or Other Pacific Islander, 0.5, 2.9% as 'Some Other Race', and 7.6% that identified as two or more races. In addition, 7.3% of Kodiak Island Borough residents identified themselves as Hispanic or Latino in 2010. It is important to note that, other than in the City of Kodiak, a majority of the population of all other communities profiled in this section identified themselves as American Indian or Alaska Native, from 51% identifying as Native in Ouzinkie to 100% in Karluk. In comparison, 9.9% of the population of the City of Kodiak identified themselves as Native in 2010, along with 13.8% that

[1] Kodiak, Alaska's Emerald Island. (2008). *The Kodiak Island Archipelago*. Retrieved November 29, 2012 from http://www.kodiak.org/explore-kodiak/the-kodiak-islands/46-the-kodiak-islands.html.
[2] Alaska Dept. of Natural Resources. (2011). *Kodiak Island Natural History*. Retrieved November 28, 2012 from http://dnr.alaska.gov/parks/units/kodiak/nathistory.htm.
[3] 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.
[4] 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.

indicated they were American Indian or Alaska Native in combination with some other race. Most individuals identifying with other races or ethnicities reside in the City of Kodiak.[5]

In 2010, the overall regional per capita income of the Kodiak Island Borough was estimated at $26,413, while the estimated median household income was $65,605, compared to statewide estimates of $30,726 and $77,886, respectively.[6]

History

Kodiak Island is within the traditional territory of the Alutiiq peoples, and the area is estimated to have been inhabited for at least 7,500 years.[7] At the time of Russian settlement, the Alutiiq peoples were referred to as 'Aleuts'. The name 'Alutiiq' has been used since the 1980s to refer to the linguistic and cultural group of Alaska Natives from the southern coast of the Alaska Peninsula to Prince William Sound, as distinguished from the Aleuts living in the Aleutian Islands. Alutiiq people living on Kodiak Island and the south coast of the Alaska Peninsula are called Koniag (Koniagmiut), and those living on Kodiak Island specifically are called Qikertarmiut (people of Kodiak Island). The Koniags historically migrated between permanent winter villages and temporary summer fish camps. Salmon was an important staple, and they also harvested other fish, intertidal resources, and marine mammals, including whales, sea lions, seals, and sea otters. They were skilled mariners, using skin kayaks and larger wooden boats for both war raids and trade.[8,9]

After the Russian fur trade caused sea otter populations to decline in the Aleutian Islands, fur traders entered the territory of the Koniags. The Russians were initially repelled by the Alutiiqs, but in 1784 Gregorii Shelikof approached Kodiak Island armed with muskets and cannons to take the area by force. Several thousand Natives retreated to Refuge Rock near Sitkalidak Island. Once the Russians discovered a hidden access to the rock, the Alutiiqs knew they were overwhelmed. Rather than be captured, hundreds of Alutiiqs were killed jumping off a cliff to escape from Shelikof's party. That same year, Shelikof's men founded a settlement near the present location of Old Harbor. Three Saint's Bay was the first Russian colony in Alaska, but in 1788 the settlement was destroyed by a tsunami. The community experienced two more earthquakes and relocated to the northeast coast of the island in 1793, to "Saint Paul's", which today is the City of Kodiak. Kodiak was the capital of Russian America until 1808, when the capital was moved to Sitka to provide better access to Russia's holdings in California. Russian Orthodox clergymen arrived around 1794 to missionize the population of the region. There were more than 6,500 Koniags in the Kodiak area at that time, but by the end of Russian control of the

[5] Ibid.
[6] 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.
[7] Jordan, R. H. and R. A. Knecht. (1986). Archaeological research on western Kodiak Island, Alaska: the development of Koniag culture, pp. 225-306. In: *Late Prehistoric Development of Alaska's Native People*. R. D. Shaw, R. K. Harritt, and D. E. Dumond, eds. Anchorage: Aurora IV, Alaska Anthropological Association. (Alaska Historical Commission studies in history, no. 190) 641 p.
[8] City of Old Harbor (1989). *Old Harbor Comprehensive Plan and Capital Improvements Program: Public Hearing Draft*. June 1989. Retrieved December 5, 2011 from http://www.kodiakak.us/.
[9] Mason, R. (1995). *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from http://ankn.uaf.edu.

island in 1867 the Native population had decreased to around 2,000 because of "hardship, accidents, and starvation, along with diseases introduced by the Russians."[10]

After the U.S. purchase of Alaska in 1867, American entrepreneurs arrived to continue hunting sea otter and to develop other industries, including salmon fishing.[11] The first salmon cannery on the Karluk River was established in 1882. Additional canneries were built in the Karluk area in the late 1800s and early 1900s.[12,13] Few Alaska Natives initially worked in the local canneries. A majority of cannery employees were brought in from outside the region, primarily from the lower U.S. and China, and later a wave of Scandinavian immigrants arrived to work in local fisheries. However, Alaska Natives became increasingly involved in commercial salmon fishing in the early 1900s, and coordinated their commercial fishing activity with subsistence hunting and fishing activities.[14] Canneries places at the mouth of rivers funned returning salmon into their processing lines, and by the late 1930s overfishing forced all of the Karluk canneries to close.[15]

Through the early decades of the 1900s, the salmon fishery remained the primary focus of local commercial fishing activity, and the most common fishing gear was the beach seine. With the rise of diesel engines in the 1920s, the range of fishing vessels expanded, and commercial exploitation of halibut and groundfish extended into the Gulf of Alaska. The rise of fuel-powered vessels also led to a shift towards the use of purse seines in the salmon fishery. Herring fishermen also began stopping in Kodiak by the 1920s, and a herring reduction plant also operated in Kodiak until the early 1960s.[16,17,18]

Military involvement during World War II contributed to development on Kodiak Island; the Navy and the Army both built bases as part of the "Aleutian Campaign". Fort Abercrombie, built in 1939, became the first secret radar site in Alaska.[19]

The Good Friday earthquake of 1964 caused widespread destruction of communities on Kodiak Island and throughout the Gulf of Alaska. All three salmon canneries on the Karluk River were destroyed, as was the City of Old Harbor and nearby Native villages. The fishing fleet and downtown area of the City of Kodiak were also destroyed. The canneries at Karluk were never rebuilt, and after the tsunami, processing activity became increasingly concentrated in Kodiak. The king crab fishery emerged as a new focus for the Kodiak fishing fleet in the years following the tsunami. Most Alutiiq fishermen continued to focus on salmon fishing into the late 1900s, but some also diversified into herring, Pacific cod, and crab fisheries. Today, all of these

[10] Ibid.
[11] Ibid.
[12] Bowers, G. M., Commissioner. 1899. *Bulletin of the United States Fish Commission, Vol. XVIII,* for 1898. Washington D.C. Government Printing Office. 55th Congress, 3rd Session, Document No. 308.
[13] 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.
[14] See footnote 12.
[15] See footnote 13.
[16] Ibid.
[17] Thompson, W. F. and N. L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from http://ww.iphc.int/publications/scirep/Report0005.pdf.
[18] 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.
[19] 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.

commercial fisheries continue to be important to Kodiak Island fishermen, along with continued subsistence fishing and hunting.[20]

Natural Resources and Environment

The Kodiak Island archipelago is a group of islands located approximately 25 miles from the Alaska Peninsula. The largest island in the group, Kodiak Island, comprises 3,588 square miles of diverse landscapes, and is part of a larger archipelago encompassing roughly 5,000 square miles. The Island consists primarily of mountainous terrain, with mountain ridges running northeast-southeast. Most peaks range between 3,000 and 4,000 feet, although several peaks are greater than 4,000 feet. Approximately 40 small cirque glaciers are located along the main divide of the glaciers, feeding into hanging valleys. Many swift-water streams drain upland areas. The Barren Islands to the north of Shuyak Island consist primarily of barren, rocky environments. Tugidak Island is relatively flat and supports expansive areas of moist and wet tundra. Sitka spruce stands dominate much of the landscape from the shore to the treeline on Shuyak Island to northeastern Kodiak Island. Stands extend south to a general northwest-southeast divider running from Kupreanof Peninsula to Cape Chiniak. Southeast Kodiak Island is relatively flat and covered by wet and moist tundra. Exposed bedrock and shallow soils cover the 2,500 miles coastline.[21]

Protected areas in the Kodiak Island Borough include several National Wildlife Refuges, state parks and recreation sites, and a Critical Habitat Area (CHA). The Kodiak National Wildlife Refuge (NWR) encompasses 1.9 million acres of the southwestern two-thirds of Kodiak Island, Uganik Island, Ban Island, and the Red Peaks area on the northwest side of Afognak Island.[22] The waters surrounding the northeastern portion of the archipelago are included as a unit of the Alaska Maritime NWR.[23] A number of state parks, state historical parks, and state recreation sites located on the northeast corner of Kodiak Island.[24] The Tugidak Island CHA is located of the southwest corner of Kodiak Island. It was established in 1988 to protect habitat and populations of marine mammals, birds, fish and shellfish and other wildlife.[25]

Kodiak Island is located in a highly active volcanic and tectonic zone along the Pacific "Ring of Fire." The original settlement at the site of Old Harbor was destroyed by a tsunami in 1788, and Old Harbor was again destroyed by the tsunami resulting from the Good Friday earthquake of 1964.[26] The 1912 eruption of the volcano Novarupta, located 100 miles northwest of Kodiak Island on the Alaska Peninsula, covered the island in ash and gasses and disrupted the

[20] See footnote 12.
[21] Kodiak Chamber of Commerce. (2003). *Kodiak Region Comprehensive Economic Development Strategy.* Retrieved September 11, 2012 from: http://www.commerce.state.ak.us/dca/plans/KodiakRegion-EDP-2003.pdf.
[22] U.S. Fish and Wildlife Service. (2012). *Kodiak National Wildlife Refuge*. Retrieved November 28, 2012 from http://www.fws.gov/refuge/Kodiak/about.html.
[23] U.S. Fish and Wildlife Service. (n.d.) *Alaska Maritime National Wildlife Refuge Map*. Retrieved November 28, 2012 from http://alaska.fws.gov/nwr/akmar/pdf/akmmap.pdf.
[24] Alaska Dept. of Natural Resources. (n.d.) *Alaska State Parks* . Retrieved December 6, 2011 from http://dnr.alaska.gov/parks/.
[25] Alaska Dept. of Fish and Game. (1995). *Tugidak Island Critical Habitat Area Management Plan.* Retrieved November 28, 2012 from http://www.adfg.alaska.gov/static/lands/protectedareas/_management_plans/tugidak.pdf.
[26] City of Old Harbor. *Community Emergency Response Plan: Annex D to the Kodiak Emergency Operations Plan*. August 2000. Retrieved November 30, 2011 from http://www.city.kodiak.ak.us.

local salmon fishery, especially between 1915 to 1919, when many adult fish starved and failed to spawn in ash-choked streams.[27]

In addition to high risk of earthquake, tsunami, and volcanic activity, natural hazards with the potential to impact communities in the Kodiak Island Borough include landslides (moderate to high risk), fire, severe weather, flood, drought, and coastal erosion (all moderate risk), and avalanche (low risk).[28]

Kodiak Island was directly impacted by the *Exxon Valdez* Oil Spill in March of 1989, in which 11 million gallons of crude oil spilled into Prince William Sound and spread to surrounding areas.[29] Oil was carried by currents throughout the area of the Alutiiq people, and hit the beaches of Kodiak Island in mid-April.[30] The *Exxon Valdez* Oil Spill Trustee Council was formed following the spill, and has overseen large-scale habitat restoration, protection, and acquisition. On Kodiak Island, the Trustee Council has protected over 260,000 acres, much of it now included within the Kodiak NWR.[31]

Governance

The Kodiak Island Borough was incorporated in 1963 and includes Kodiak Island and the surrounding islands, as well as a portion of the southern coast of the Alaska Peninsula.[32] Services provided by the Borough include solid waste management, fire protection, and road maintenance within road service areas.[33] The Borough also administers the school system. As of 2011, there were 15 schools in the school district, with a total of 2,565 students and 207 teachers.[34] Communities located in the Borough include Akhiok, Chiniak, Karluk, Kodiak, Kodiak Station, Larsen Bay, Old Harbor, Ouzinkie, Port Lions, Uganik, and Womens Bay.[35] City governments are incorporated for six communities (Akhiok, Kodiak, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions),[36] and there are Tribal Councils in six communities (Akhiok, Karluk, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions).[37] The Borough administers a 10.75 mills property tax (excluding service areas), a 1.075% severance tax, and a 5% Bed Tax.[38] Sales tax is collected by

[27] U.S. Geological Survey. 1998. "Can Another Great Volcanic Eruption Happen in Alaska?" Retrieved December 5, 2011 from http://volcanoes.usgs.gov/about/publications/factsheets.php.
[28] Kodiak Emergency Services Organization. (2005). *Kodiak Area Emergency Operations Plan*. Retrieved November 29, 2012 from http://www.city.kodiak.ak.us/Emergency/Documents/EOP.pdf.
[29] Environmental Protection Agency. "*Exxon Valdez*." Retrieved December 2, 2011 from http://www.epa.gov/emergencies/content/learning/exxon.htm.
[30] City of Old Harbor (1989). *Old Harbor Comprehensive Plan and Capital Improvements Program: Public Hearing Draft*. June, 1989. Retrieved December 5, 2011 from http://www.kodiakak.us/.
[31] Restoration Notebook. 2009. "Habitat Protection – A Successful Restoration Strategy." *Exxon Valdez Oil Spill Trustee Council*. Retrieved December 1, 2011 from http://dnr.alaska.gov.
[32] Kodiak Island Borough. (n.d.). *Government* and *Community*. Retrieved November 29, 2012 from http://www.kodiakak.us/index.aspx.
[33] Kodiak Island Borough. (n.d.). *Services*. Retrieved November 29, 2012 from http://www.kodiakak.us/index.aspx.
[34] Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from http://eed.alaska.gov/stats/.
[35] Alaska Dept. of Comm. And Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved November 29, 2012 from http://www.dced.state.ak.us/dca/commdb/CF_COMDB.htm.
[36] Kodiak Island Borough. (n.d.). *Communities*. Retrieved November 29, 2012 from http://www.kodiakak.us/index.aspx.
[37] Kodiak Area Native Association. (n.d.). *Communities*. Retrieved November 29, 2012 from http://www.kanaweb.org/.
[38] See footnote 35.

some City governments within the Borough, including a 6% sales tax in the City of Kodiak, and 3% sales tax in Larsen Bay, Old Harbor, and Ouzinkie.[39]

The regional Native corporation for the Kodiak area is Koniag, Inc. The corporation holds approximately 56,860 acres of surface lands near Karluk and Larsen Bay, as well as subsurface land rights to these lands and Native village corporation lands elsewhere in the Kodiak archipelago and the coast of the Alaska Peninsula.[40] The Koniag Education Foundation, which is part of Koniag, Inc., provides scholarships and other educational programs to Koniag shareholders and their descendants for college, graduate school, vocational training, or career development courses.[41] Native villages in the region are also members of the Kodiak Area Native Association (KANA), a tribal non-profit organization headquartered in Kodiak that serves communities in the Kodiak Archipelago. KANA provides health and development services, as well as career development and other community services, with the goal of promoting economic self sufficiency and promote healthy families.[42]

Offices of the National Marine Fisheries Service (NMFS), Alaska Department of Fish and Game (ADF&G), Alaska Department of Natural Resources, and U.S. Bureau of Citizenship and Immigration Services are all located within the City of Kodiak, on the eastern tip of Kodiak Island. The nearest office of the Alaska Department of Commerce, Community, and Economic Development is in Anchorage.

Involvement in North Pacific Fisheries

Communities in the Kodiak Island Borough are highly dependent on fisheries resources overall. The City of Kodiak is one of the top commercial fishing ports in Alaska, ranking 2nd in 2010 in terms of overall volume and value of landings. While commercial fishing activity is concentrated around the City of Kodiak, a relatively high percentage of the local populations of Larsen Bay, Old Harbor, and Ouzinkie are also engaged in commercial fishing activities as vessel owners, crew license holders, and permit holders.[43,44] The higher rate of commercial fishing participation in these communities relative to others profiled in this section is likely due to their proximity to processing facilities. According to ADF&G's Intent to Operate list, there were 11 shore-side processing plants in the City of Kodiak in 2010, as well as 1 in Larsen Bay and 1 in Old Harbor.[45] Although no processing facilities were located in Ouzinkie, Kodiak processing facilities are relatively close by. In contrast, some Kodiak Island communities are minimally engaged in commercial fishing. For example, in a survey conducted by NOAA's

[39] 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.
[40] Koniag, Incorporated. (2011). *Our Lands*. Retrieved November 29, 2012 from http://www.koniag.com/.
[41] Koniag Education Foundation. (2012). *Scholarships* and *Programs*. Retrieved November 29, 2012 from http://www.koniageducation.org/.
[42] Kodiak Area Native Association. (n.d.). *Homepage.* Retrieved February 16, 2012 from http://www.kanaweb.org/.
[43] 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.]
[44] 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.]
[45] 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.]

Alaska Fisheries Science Center (AFSC) in 2011, Akhiok community leaders indicated that the community has no dependence on commercial fishing. In Karluk, no fishing permits were held by residents between 2000 and 2010, and very few community members held crew licenses or owned fishing vessels.

The sport fishing industry is also an important component of the regional economy of Kodiak Island. Sport fisheries target all five species of Pacific salmon, halibut, rockfish, lingcod, Dolly Varden, steelhead, and rainbow trout. As in the case of commercial fishing, infrastructure in the visitor industry is centered in and around the City of Kodiak, and the extensive road network provides easy access to 10 salmon streams and over 20 stocked lakes.[46] In 2010, 65 sport guide businesses operated out of the City of Kodiak.[47] The sport hunting and fishing industry is also a primary economic driver in the community of Karluk. According to the Kodiak Area Native Association, as of 2011, there were six lodges in Karluk that provide local employment opportunities,[48] although ADF&G statistics suggest that the number of guides and guide businesses declined to zero in Karluk over the 2000-2010 period. ADF&G statistics suggest that sportfishing activity was also relatively high in Old Harbor, Larsen Bay, and Ouzinkie. One registered sport fish guide was also located in Akhiok in 2010.[49]

Finally, subsistence fishing is very important to residents of the Kodiak Island area. Of those communities surveyed in a 2003 subsistence harvest study by ADF&G, per capita subsistence harvest varied between a low of 157 lbs in Akhiok to a high of 357 lbs in Old Harbor. In all communities surveyed that year (Akhiok, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions), 100% of households were estimated to participate in halibut subsistence, and between 80% and 88% of households were estimated to participate in salmon subsistence. The highest levels of marine invertebrate subsistence participation were recorded in Akhiok and Ouzinkie, and the highest levels of marine mammal and non-salmon fish participation in Old Harbor and Ouzinkie.[50]

Regional Challenges

The Kodiak Island region faces several challenges with regard to fishery stock status. The Kodiak red king crab fishery, historically the leading fishery in Kodiak from the 1950s to early 1970s, has been closed in recent years due to low abundance.[51] A Kodiak food/bait herring fishery has historically taken place in Shelikof Strait, but has been closed in recent years because the Kamishak Bay spawning biomass (Cook Inlet) has been below threshold since 1998. The

[46] Alaska Dept. of Fish and Game. (n.d.). *Kodiak Management Area.* Retrieved September 17, 2012 from: http://www.adfg.alaska.gov/index.cfm?ADFG=ByAreaSouthcentralKodiak.fishingInfo#/runtiming.
[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] Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from http://www.kanaweb.org/files/CEDS.pdf
[49] See footnote 47.
[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] 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.

Alaska Board of Fish closes food/bait fisheries if any of the individual spawning populations is below threshold.[52]

In the 2011 AFSC survey, some community leaders also noted a lack of sufficient infrastructure to effectively engage in commercial fishing activities. In Ouzinkie, community leaders indicated in the survey that Individual Fishing Quota accounts have migrated out of the community over the past decade, creating a challenge for continued participation in that fishery. The community was actively looking for ways to bring quota back into the community, and as of the 2011 survey, the Ouzinkie Community Holding Corporation had purchased its first block of community quota through the Community Quota Entity program.

The challenge of declining fisheries participation is present in many Kodiak-area coastal communities. Data on fisheries participation presented in these community profiles show dramatic changes in fisheries participation in the Kodiak Archipelago in recent years. This topic has been thoroughly studied by Courtney Carothers at the University of Alaska. Please refer to the books and articles referenced here a more detailed discussion of the impact of declining fishing participation on Kodiak-area villages.[53,54,55,56]

[52] Alaska Dept. of Fish and Game. 2012. *Commercial Herring Fisheries*. Retrieved June 25, 2012 from http://www.adfg.alaska.gov/index.cfm?ADFG=CommercialByFisheryHerring.main.
[53] Carothers, C**.** 2012. Enduring ties: salmon and the Sugpiat of the Kodiak Archipelago. Pages 133-160 in B.J. Colombi and J.F. Brooks, eds. *Keystone Nations: Indigenous Peoples and Salmon across the North Pacific*. School for Advanced Research Press, Santa Fe, NM.
[54] Carothers C. 2010. Tragedy of commodification: Transitions in Alutiiq fishing communities in the Gulf of Alaska. *MAST* 90:91–115.
[55] Langdon, S.J. 2008. The Community Quota Program in the Gulf of Alaska: A vehicle for Alaska Native village sustainability. In Lowe, M.E., Carothers, C., eds. "Enclosing the Fisheries: People, Places, and Power." *American Fisheries Society*. Symposium 68:155-194.
[56] Carothers, C. 2011. Equity and access to fishing rights: Exploring the Community Quota Program in the Gulf of Alaska. *Human Organization*.70:213–223.

Akhiok (*AH-key-ock*)

Includes Alitak Bay

People and Place

Location [57]

Akhiok is located at the southern end of Kodiak Island in Alitak Bay. It lies 80 mi southwest of the City of Kodiak and 340 mi southwest of Anchorage. The area encompasses 7.9 sq mi of land and 2.5 sq mi of water. Akhiok was incorporated as a Second-class city in 1972 and is under the jurisdiction of the Kodiak Borough.

Demographic Profile [58]

In 2010, there were 71 residents, ranking Akhiok 278th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population declined by 7.8%. Between 2000 and 2009, the population fell by 10.5% with an average annual growth rate of -1.9%, which was much lower than the statewide average of 0.75% and indicative of a rapid decline in those years. There is a notable difference between the 2009 Alaska Department of Labor and Workforce Development (DOLWD) and 2010 Census figures indicating a possible discrepancy between the two. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported 80 permanent and no seasonal or transient residents living in Akhiok in 2010 (83 as of 2012). Because of housing shortages, the community is unable to accommodate temporary residents. Information regarding population trends can be found in Table 1.

Akhiok's population was mostly Alutiiq in 2010. In that year, 50.7% of residents identified themselves as American Indian or Alaska Native, compared to 86.2% in 2000. In addition, 38.0% of residents identified themselves as two or more races that year, compared to 7.5% in 2000; 8.5% identified themselves as White, compared to 2.5% in 2000; 1.4% identified themselves as Black or African American, compared to 0.0% in 2000; and 1.4% identified themselves as Asian, compared to 3.8% in 2000. In addition, 11.3% of residents identified themselves as Hispanic or Latino in 2010, compared to 1.3% in 2000. Information regarding race and ethnicity can be found in Figure 1.

In 2010, the average household size was 3.74, compared to 3.91 in 2000 and 4.0 in 1990. The total number of housing units that year was 27, compared to 77 in 1990 and 34 in 2000. Of the households surveyed in 2010, 41% were owner-occupied, compared to 68% in 2000; 30% were renter-occupied, compared to 6% in 2000; 22% were vacant, compared to 21% in 2000; and 7% were occupied seasonally, compared to 6% in 2000. In a survey conducted by NOAA's

[57] 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.
[58] 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.

AFSC in 2011, community leaders reported that there was no annual influx of seasonal workers in Akhiok due to housing shortages.

The gender distribution in 2010 was almost even, at 49.3% male and 50.7% female. This was slightly more even than both the statewide distribution (52.0% male, 48.0% female) and 2000 distribution (55.0% male, 45.0% female). The median age that year was 22.2 years, much younger than the statewide median of 32.7 and slightly younger than the 2000 median of 24.0 years.

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

Year	U.S. Decennial Census[1]	Alaska Dept. of Labor Estimate of Permanent Residents[2]
1990	77	-
2000	80	-
2001	-	57
2002	-	49
2003	-	51
2004	-	57
2005	-	42
2006	-	41
2007	-	36
2008	-	48
2009	-	51
2010	71	-

[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, Akhiok: 2000-2010 (U.S. Census).

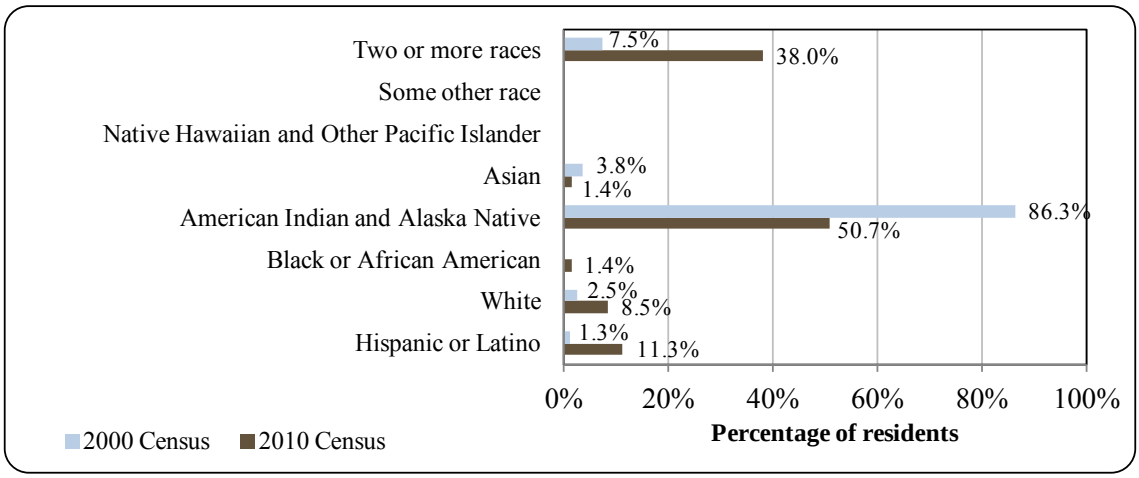
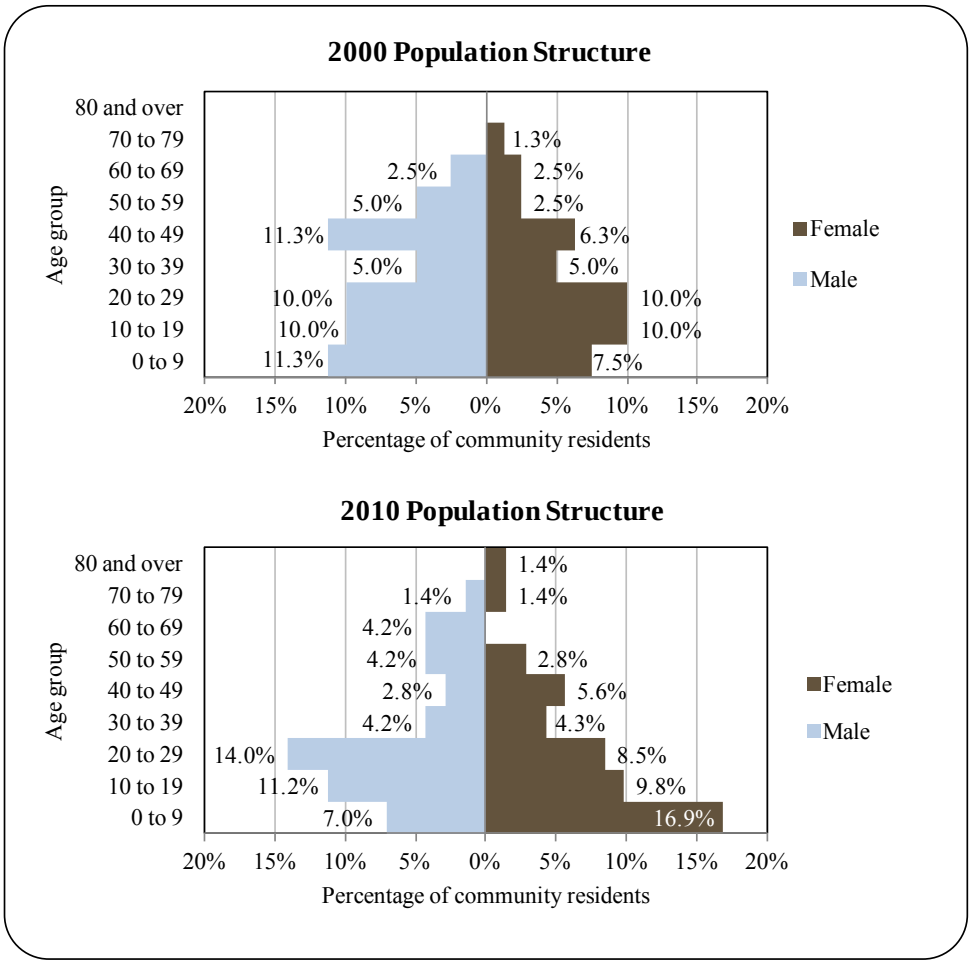


Figure 2. Population Age Structure in Akhiok Based on the 2000 and 2010 U.S. Decennial Census.



Compared to 2000, the population structure in 2010 was slightly more expansive. In that year, 44.9% of residents under the age of 20, compared to 33.8% in 2000; 8.4% were over the age of 59, compared to 4.4% in 2000; 23.9% were between the ages of 30 and 59, compared to 23.1% in 2000; and 22.5% were between the ages of 20 and 29, compared to 15.4% in 2000.

Gender distribution by age cohort was less even in 2010 than in 2000 with almost equal biases in both females and males among age ranges. In that year, the greatest absolute gender difference occurred in the 0 to 9 rage (16.9% female, 7.0% male), followed by the 20 to 29 (14.0% male, 8.5% female) and 60 to 69 (4.2% male, 0% female) ranges. Of those three, the greatest relative gender difference occurred in the 60 to 69 range. Information regarding population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)[59] estimated that in 2010, 75.5% of residents aged 25 and older held a high school

[59] 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.

diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 10.3% had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 13.8% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 25.9% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 6.9% had an Associate's degree, compared to an estimated 8% of Alaska residents overall; and an estimated 22.4% had a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall. No residents were estimated to have a graduate or professional degree in 2010.

History, Traditional Knowledge, and Culture[60]

The original village of Akhiok was located near Humpy Cove, and served as a sea otter hunting settlement. The village, called Kashukugniut, was occupied by Russians during the early nineteenth century. The name "Akhiok" was reported in the 1880 census. In 1881, residents from the old village relocated to the present site at the south end of Kodiak Island at Alitak Bay. A post office was established in 1933 and remained open until 1945. The village was renamed Alitak during World War I by the post office to avoid confusion with a village near Bethel named Akiak. The name was later changed back to Akhiok. With the decline of the sea otter industry, the village became oriented toward fishing. Following the 1964 earthquake and tsunami, families from the village of Kaguyak were relocated in Akhiok.

The majority of Ahkiok's residents are descendents from the Alutiiq people who originally occupied the Kodiak archipelago. Residents are proud of their heritage and traditions of respect towards their land and marine resources. Subsistence is an important part of the community's culture. Children are taught from an early age how to hunt, fish, dig for clams, pick berries, and gather wild edibles and medicinal plants.

Ahkiok's community life revolves around its "Protection of the Theotokos" Orthodox Church. This strong faith has sustained the community through loss and hardship, demonstrated during Great Lent when the entire community gathers to celebrate the Easter season. The community's cemetery contains several historic landmarks. The community values the need to find ways to continue its Native language and culture so that young people grow up with a strong sense of identity. To this end, Akhiok initiated "Alutiiq Week" in 1991. Alutiiq Week is a week of workshops, celebration and community gatherings in the Akhiok School that focus on the continuance of Alutiiq culture. Alutiiq Week is now celebrated every year by other Kodiak Archipelago villages, and has become a cornerstone of teaching skills such as carving to young people.

The community hosts one property currently on the National Register of Historic Places (NRHP). Protection of the Theotokos Chapel, a Russian Orthodox church, was founded in 1926.[61] Alutiiq petroglyphs are also found in the area.

[60] Kodiak Island Borough. (2008). *Kodiak Island Borough Comprehensive Plan Update.* Retrieved March 8, 2012 from: http://www.commerce.state.ak.us/dca/plans/KodiakIslandBorough-CP-2008.pdf.
[61] American Dreams Inc. (n.d.). *National Register of Historic Places.* Retrieved December 2, 2011 from: http://www.nationalregisterofhistoricplaces.com/ak/Kodiak+Island/state.html

Natural Resources and Environment

The climate of the Kodiak Islands is dominated by a strong marine influence. There is little or no freezing weather, moderate precipitation, and frequent cloud cover and fog. Severe storms are common from December through February. Annual precipitation is 35 inches. Temperatures remain within a narrow range, from 25 to 54 °F (-3 to 12 °C).[62]

Akhiok's landscape is characterized by narrow rocky beaches, moist tundra lowlands, and steep relief uplands. Dominant vegetation types include tall grasses, fireweed, horse-tail, yarrow, sedges, mosses, fern, lichens, dwarf birch, and alder stands.[63]

The Kodiak archipelago and waters that surround it are home to many species of terrestrial and aquatic life. The Kodiak National Wildlife Refuge occupies two-thirds of Kodiak Island and is home to terrestrial species such as brown bears, bats, tundra vole, short-tailed weasel, red fox, river otter, Sitka black-tail deer, beavers, red squirrels, snowshoe hare, arctic ground squirrel, Roosevelt elk, muskrat, and mountain goat. Marine mammals documented in the area include whales, harbor seals, fur seals, sea otters, and Steller sea lions.[64] The adjacent waters provide some of the richest commercial fishing grounds in the world, home to stocks of Pacific salmon, halibut, flounder, cod, trout, grayling, crab, and shrimp.[65]

There are several mineral projects in the area as of 2011 including a tin claim around Halibut Bay to the north and a gold/silver claim around the city of Kodiak.[66] In addition, there is a placer gold deposit located in the vicinity of Alitak and Tanner Head Island to the south.[67]

Natural hazards in the area include coastal flooding, coastal erosion, earthquakes, tsunamis, volcanism, landslides, and sea-level rise. Coastal flooding and erosion is mainly attributed to storm surges. There are several faults that run through Kodiak Island, and earthquakes that are magnitude six or above are relatively frequent. Threats from Aleutian volcanoes include the possibility of acidic rain, ash clouds, landslides, tsunamis, and earthquakes.[68] According to the Alaska Department of Environmental Conservation, there were no local significant environmental remediation projects active in 2010.[69]

Current Economy[70]

Akhiok's economy is largely based around subsistence. Public sector employment and seasonal work provide cash flow in the community. Almost all of Akhiok's residents depend heavily on subsistence fishing and hunting. Salmon, crab, shrimp, clams, ducks, seal, deer, rabbit, and bear are utilized. In January 2003, each Akhiok shareholder received $200,000 from

[62] 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.
[63] See footnote 60.
[64] United States Fish and Wildlife Service (n.d.). *Kodiak National Wildlife Refuge.* Retrieved December 2, 2011 from: http://kodiak.fws.gov/wildlife_habitat.htm.
[65] Ibid.
[66] Alaska Department of Commerce. (n.d.) *Mineral Resources of Alaska Map.* Retrieved December 2, 2011 from: http://commerce.alaska.gov/ded/dev/minerals/mining.htm.
[67] See footnote 64.
[68] City of Akhiok. (1986). *Comprehensive Plan.* Retrieved December 2, 2011 from: http://www.kodiakak.us/DocumentView.aspx?DID=85.
[69] Alaska Department of Environmental Conservation. (n.d.) *Contaminated Sites Program.* Retrieved June 5, 2012 from: http://dec.alaska.gov/spar/csp/list.htm.
[70] Unless otherwise noted, all monetary data are reported in nominal values.

the sale of a $36 million trust fund provided in the *Exxon Valdez* oil spill settlement.[71] Top employers in 2010[72] included the Kodiak Area Native Association, Kodiak Island Housing Authority, the City of Akhiok, Kodiak Island Borough School District, Ocean Beauty Seafoods, and Kishan Group.

According to the 2006-2010 ACS,[73] the per capita income in Akhiok was estimated at $12,614 and the median household income was estimated at $23,182, compared to $8,473 and $33,438 in 2000, respectively.[74] After accounting for inflation by converting 2000 values into 2010 dollars,[75] the real per capita income ($11,142) and real median household income ($43,971) indicate that while individual earnings increased slightly, household earnings decreased somewhat dramatically. In 2010, Akhiok ranked 229th of 305 Alaskan communities from which per capita income was estimated, and 267th of 299 Alaskan communities from which median household income was estimated, indicating that it is one of the poorer communities in Alaska.

Akhiok's small population size may have prevented the ACS from accurately portraying economic conditions.[76] 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 a total of $335,453 in wages in 2010.[77] When divided by the 2010 population, the per capita income of $4,725 indicates a significant decline in individual earnings compared to the real per capita income values reported by the U.S. Census in 2000.[78] In addition, 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. [79] However, it should be noted that American Community Survey and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

According to 2006-2010 ACS estimates,[80] 62.9% of residents aged 16 and over were considered part of the civilian labor force. Between 2006 and 2010, the estimated unemployment rate was 4.8%, compared to an estimated 5.9% statewide; and an estimated 7.1% of the population was living below the poverty level, compared to an estimated 9.5% of residents

[71] See footnote 62.
[72] 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/.
[73] 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.
[74] 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.
[75] 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.gove/research/cpi/inflationcalc.htm).
[76] See footnote 74.
[77] ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.
[78] See footnote 72.
[79] Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.
[80] See footnote 74.

statewide. Of those employed, an estimated 91.7% worked in the public sector while an estimated 8.3% worked in the private sector.

By industry, most (77.8%) employed residents were estimated to work in education services, health care, or social assistance sectors; followed by public administration sectors (8.3%); finance, insurance, and real estate sectors (8.3%); and transportation, warehousing, and utilities sectors (5.6%) (Figure 3). By occupation type, most (75.0%) employed residents were estimated to hold management or professional positions; followed by services positions (11.1%); natural resources, construction, or maintenance positions (8.3%); and sales or office positions (5.6%) (Figure 4).

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

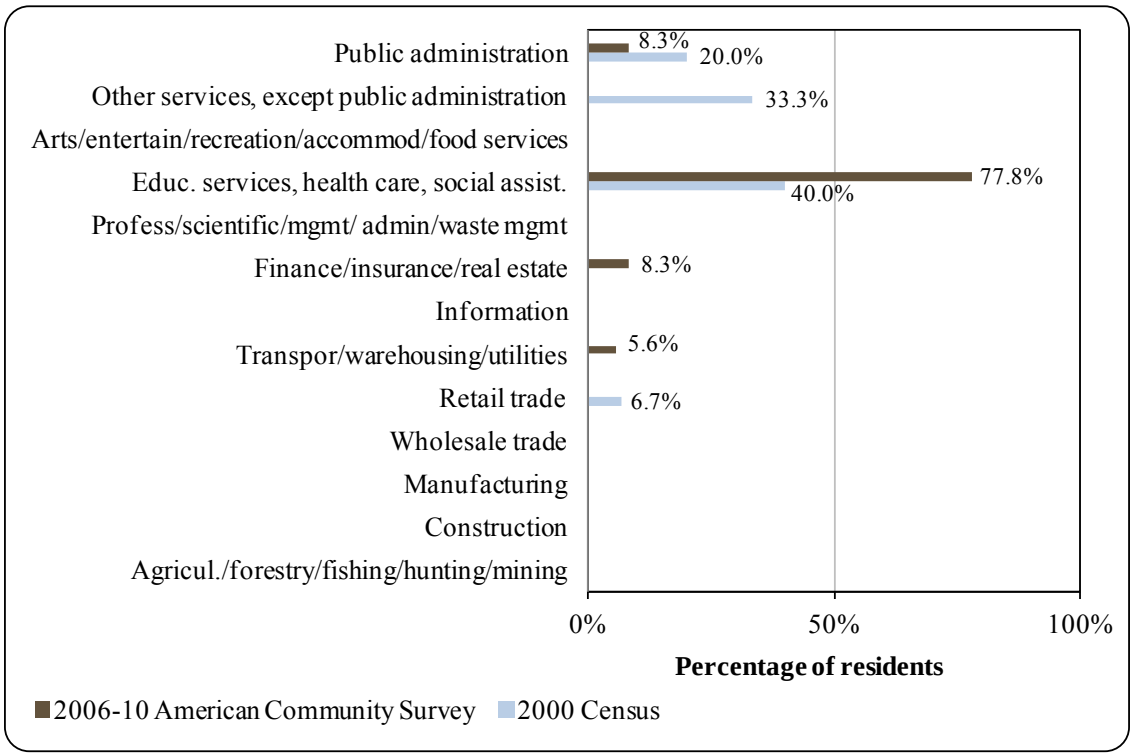
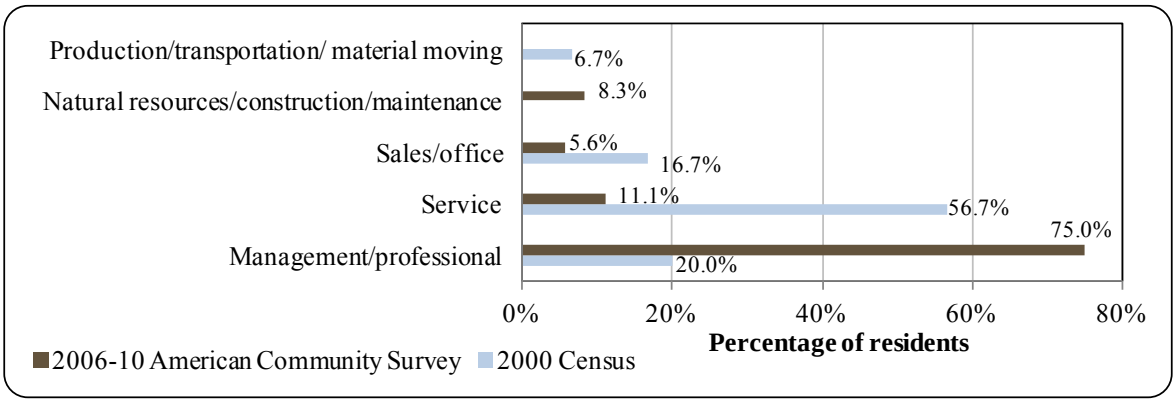


Figure 4. Local Employment by Occupation in 2000-2010, Akhiok (U.S. Census).



It should be noted that sampling techniques may not have captured the true scope of industry and occupational representation. This may account for the dramatic variation in industry sector employment and occupation type between 2000 and 2010. It should also be noted that income and poverty statistics are based on wage income and other money sources and are not reflective of the value of subsistence to the local economy. According to 2010 ALARI estimates, most (30.0%) employed residents were estimated to work in local government sectors; followed by education and health service sectors (26.7%) and financial service sectors (20.0%). No individuals characterized themselves as working in natural resource based 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.

Governance

Akhiok is a Second-class city located within the Kodiak Island Borough. In addition, there is a U.S. Bureau of Indian Affairs (BIA) recognized Tribal government located in Akhiok. The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Akhiok is Koniag Inc., and the local ANCSA chartered non-profit is the Kodiak Area Native Association. The ANCSA chartered village corporation is Akhiok-Kaguyak, Inc. The closest National Marine Fisheries Service (NMFS), Alaska Department of Fish and Game (ADF&G), and Bureau of Citizenship and Immigration Services are all located within the city of Kodiak, 80 mi northeast.

The City does not administer any taxes; however, the borough administers an annually adjusted property tax, resource severance tax, and 5% accommodations tax. The total municipal revenue for 2010 was $215,913, compared to $101,285 in 2000, representing a 64.8% increase in revenues after adjusting for inflation.[81] Akhiok collected revenue from both the Commnuity Revenue Sharing and State Revenue Sharing programs between 2000 and 2010. Akhiok collected an average of $21,316 annually between 2000 and 2004 from State Revenue Sharing and $99,230 annually between 2009 and 2010 from Community Revenue Sharing. Additional revenue included $19,000 collected in 2007 from fuel deliveries, and a $14 million grant in 2008 for the construction of a sewer system and landfill (Table 2).

[81] Inflation calculated using Anchorage CPI from Alaska DOL: http://labor.alaska.gov/research/cpi/cpi.htm.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Akhiok 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	$101,285	n/a	$21,119	n/a
2001	$119,374	n/a	$20,337	n/a
2002	$113,619	n/a	$20,483	n/a
2003	$114,517	n/a	$20,643	n/a
2004	$115,780	n/a	$24,000	n/a
2005	$195,256	n/a	-	n/a
2006	$78,000	n/a	-	n/a
2007	$140,535	n/a	-	n/a
2008	$203,127	n/a	-	n/a
2009	$204,199	n/a	$98,449	n/a
2010	$215,913	n/a	$100,012	n/a

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

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

[2]Alaska Department of Community and Economic 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, 2011from 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, 2011from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Akhiok is accessible by water or air only. The State of Alaska maintains a 3,120-ft runway south of town. No crosswind runway or tower services exist and flights are often limited due to severe weather. There is also a floatplane harbor available.[82]

Akhiok does not have a deep water dock or boat harbor and no regular barge service is available. One company transports cargo via landing craft as needed. Alitak cannery possesses full docking facilities and residents are able to obtain supplies at the cannery store when the facility is operating. Otherwise, freight is most often moved by small personal craft from off-shore freight vessels or by air.[83]

According to survey conducted by the AFSC in 2011, community leaders reported that most travel throughout the area is done by private skiff. As of November 2011, the price for

[82] 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.

[83] Kodiak Island Borough. (2008). *Kodiak Island Borough Comprehensive Plan Update.* Retrieved March 8, 2012 from: http://www.commerce.state.ak.us/dca/plans/KodiakIslandBorough-CP-2008.pdf.

airfare in June 2012 was $360 for roundtrip from Anchorage to the city of Kodiak.[84] Island Air provides charter flights from Kodiak to Akhiok. As of 2011, the rate was $140 each way.[85]

Facilities[86]

Akhiok's water is derived from a small dam and reservoir. Water is treated, stored, and distributed through a city-owned piped gravity water and sewer system that serves each home in the community. Additional water capacity is needed, as current systems often do not provide adequate water during July and August, which forces residents to haul water from other sources. Improvements to filtration systems are needed as well. Wastewater is piped from buildings to several city-owned septic tanks. The city and Tribal council provide electricity service from a central diesel power plant, and fuel is stored in a new bulk storage facility located outside the community.

Medical Services[87]

Basic healthcare is provided by the Akhiok Health Clinic or Akhiok Village Response Team. The clinic is a Primary Health Care Facility. Acute, long-term, and specialized care can be found in the city of Kodiak.

Educational Opportunities[88]

Akhiok has one school providing Kindergarten through 12th grade instruction. As of 2011, Akhiok School had 12 students enrolled and 2 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on Kodiak Island and surrounding areas. The Koniags historically migrated between permanent winter villages and temporary summer fish camps. Salmon was an important staple, and they also harvested other fish, intertidal resources and marine mammals, including whales, sea lions, seals, and sea otters. With the arrival of Russian colonists to Kodiak Island in the late 1700s, the Alutiiq people were forced to hunt for sea otters to fuel the trade of their valuable pelts.[89]

[84] Airfare was calculated using lowest fare. Source: http://www.travelocity.com (retrieved November 22, 2011).
[85] Island Air. (n.d.). Retrieved January 31, 2012 from: http://www.kodiakislandair.com/.
[86] See footnote 83.
[87] See footnote 82.
[88] Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from http://eed.alaska.gov/stats/.
[89] Mason, R. 1995. The Alutiiq Ethnographic Bibliography. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from http://ankn.uaf.edu.

The ADF&G manages the Kodiak salmon and herring fisheries in waters surrounding the Kodiak archipelago.[90] The salmon fishery is divided into seven fishing districts (Afognak District, Northeast Kodiak District, Eastside Kodiak District, Alitak Bay District, Southwest Kodiak District, Northwest Kodiak District, and Mainland Districts). Gear types in use currently include purse seine, set gillnets and beach seine.[91] Kodiak herring fisheries include a roe fishery (using both purse seine and gillnet gear) and a food/bait fishery. Herring sac roe fisheries take place in the spring when individual spawning biomasses are aggregated. In contrast, food/bait fisheries take place in the summer, fall, and winter when herring from several stocks may be mixed together. A Kodiak food/bait herring fishery has historically taken place in Shelikof Strait, but has been closed in recent years because the Kamishak Bay spawning biomass (Cook Inlet) has been below threshold since 1998. The Alaska Board of Fish (BOF) closes food/bait fisheries if any of the individual spawning populations is below threshold.[92]

Groundfish and crab fisheries that occur within 3 nmi off 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. In the Gulf of Alaska (GOA), federally-managed groundfish fisheries target Pacific cod, walleye pollock, pelagic shelf rockfish, sablefish, and flatfish. Parallel fisheries for Pacific cod and walleye pollock also take place in state waters surrounding Kodiak Island. Parallel fisheries occur at the same time as the federal fisheries. The Total Allowable Catch (TAC) set by NMFS in each fishery applies to both federal and parallel harvest. In addition to federally-managed groundfish fisheries, beginning in 1997, a 'state-waters fishery' for Pacific cod was initiated in the Kodiak area. Management plans for state-waters fisheries are approved by the BOF, and guideline harvest limits (GHL) are set by the ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition, the ADF&G manages lingcod fisheries in both state and EEZ waters off Alaska, and beginning in 1998, management of black rockfish and blue rockfish in the GOA was transferred from NMFS to ADF&G.[93]

Kodiak Island is one historical center of the red king crab fishery, and Tanner crab are also distributed through the GOA. ADF&G manages red king and Tanner crab stocks in the GOA. Snow crab are distributed throughout the eastern and northern Bering Sea, and are not found in the immediate Kodiak area.[94,95] The Kodiak red king crab fishery has been closed in recent years due to low abundance. Parts of the Kodiak district have been open for Tanner crab harvest in recent years. Kodiak area Tanner crab harvest is managed using eight separate

[90] Alaska Dept. of Fish and Game. 2012. *Kodiak Management Area*. Retrieved June 25, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakodiak.main.
[91] 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.
[92] Alaska Dept. of Fish and Game. 2012. *Commercial Herring Fisheries*. Retrieved June 25, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisheryHerring.main.
[93] 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.
[94] Alaska Dept. of Fish and Game. 2012. *Red King Crab Species Profile*. Retrieved June 20, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=redkingcrab.main.
[95] Alaska Dept. of Fish and Game. 2012. *Tanner Crab Species Profile*. Retrieved June 25, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=tannercrab.management.

management areas, each with its own GHL.[96] Pacific halibut fisheries are managed under the International Pacific Halibut Commission.

Although Akhiok was originally founded as a sea-otter hunting community, the decline of the industry prompted its economy to migrate towards subsistence and commercial fishing. Today, salmon is the mainstay of commercial fishing in the community while subsistence activities involve range of marine mammals, fish, and aquatic invertebrates.

In a survey conducted by the AFSC in 2011, community leaders reported that the community is not tied to commercial fisheries economically, nor does it advocate for itself in the management process. However, Akhiok is eligible for participation in the Community Quota Entity (CQE) program and is represented by the Akhiok Halibut & Sablefish Commission. 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 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.

The community is located in Federal Reporting Area 620, International Pacific Halibut Commission Regulatory Area 3B, and the Central Gulf of Alaska (GOA) Sablefish Regulatory District.

Processing Plants

In a survey conducted by the AFSC in 2011, community leaders reported that Akhiok's economy is not dependant on the commercial fishing industry nor are there any fisheries support businesses in town. According to the 2010 Alaska Department of Fish and Game's Intent to Operate list, Akhiok does not have a registered processing plant. However, there is a seafood processor located in nearby Alitak.

The Alitak processing facility, owned and operated by Ocean Beauty Seafoods, was built in 1917. Due to its remote location on the south end of Kodiak Island the facility is only accessible by boat or float plane. The facility opens in early April to process herring roe. During this time the plant also processes deliveries of black cod, halibut, Pacific cod and idiot fish (rockfish) from long line boats. Starting in early June the plant begins the salmon season. Between June and mid-September the Alitak facility processes sockeye, chum, pink and coho salmon. The Alitak facility is completely self-sufficient, providing its own electricity and water system. It supplies work-related clothing such as gloves, aprons, rubber boots and rain gear to its fish processing employees.[97]

[96] See footnote 93.
[97] Ocean Beauty Seafoods. (n.d.). Retrieved from: http://www.oceanbeauty.com/about/alitak.htm

Fisheries-Related Revenue

Overall, in 2010, the city of Akhiok received a reported $332,699 in fisheries-related taxes and fees, most of which came from Fisheries Resource Landings taxes. Since 2000, reported fisheries-related revenues steadily increased by an inflation adjusted[98] $314,807, although these figures are likely tied to Alitak Bay which is not recognized as a Census Designated Place (CDP). In addition, in several cases reported fisheries-related revenue exceeded reported municipal revenue which further complicates Alitak Bay's distinction as a separate community. 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 a survey conducted by the AFSC in 2011, community leaders reported that Akhiok does not possess harbor infrastructure or commercial fishery support services. In addition, they reported that the community itself is not dependent on fisheries. However, commercial vessels between 35 and 60 feet do use the community as a base of operation during the fishing season. It is likely that when reporting, community leaders made a distinction between Akhiok and neighboring Alitak Bay, where a processor is located and landings are made. However, for the purpose of this profile Alitak Bay is considered part of Akhiok.

In 2010, 7 residents, or 9.9% of the population, held 8 permits issued by the Commercial Fishery Entry Commission (CFEC). In 2000, 10 residents held 8 CFEC permits. In both 2000 and 2010, salmon permits made up 88% of the CFEC permits issued. In addition, one Federal Fisheries Permit (FFP) and one License Limitation Program (LLP) permit for groundfish were held, although neither was actively fished. No residents held halibut, sablefish, or crab quota between 2010 and when the programs began.

Residents held 8 commercial crew licenses in 2010, compared to 12 in 2000. In addition, residents held majority ownership of four vessels that year, compared to two in 2000. Overall, every CFEC permit issued in 2010 was actively fished, compared to 88% in 2000. Fisheries prosecuted by residents of Akhiok that year included Kodiak gillnet and purse seine herring roe, and Kodiak purse seine and set gillnet salmon.[99]

Akhiok (Alitak Bay) ranked 39th of 67 communities who reported landings in terms of total pounds landed that year and 33rd in terms of total ex-vessel value of landings. All information regarding total net poundage and total ex-vessel value of landings in Akhiok (Alitak Bay) between 2000 and 2010 are considered confidential. In addition, all information regarding total poundage and ex-vessel value of landings by residents of Akhiok between 2000 and 2010 are also considered confidential. Information regarding commercial fishing trends can be found in Tables 4 through 10.

[98] Inflation calculated using Anchorage CPI for 2010 from Alaska DOL: http://labor.alaska.gov/research/cpi/cpi.htm

[99] 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 3. Known Fisheries-Related Revenue (In U.S. Dollars) Received by the Community of Akhiok: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax[1]	n/a	$13,892	$13,892	$10,978	$11,000	$8,500	n/a	$15,531	$13,500	$15,000	$15,000
Shared Fisheries Business Tax[1]	$13,836	$10,756	$14,242	$10,737	$8,655	$11,617	$13,633	$15,517	$13,749	$16,323	$18,908
Fisheries Resource Landing Tax[1]	n/a	n/a	n/a	$108,081	$77,584	$155,078	$125,016	$179,193	$170,205	$259,551	$298,791
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 revenue[4]	*$13,836*	*$24,648*	*$28,134*	*$129,797*	*$97,239*	*$175,196*	*$138,649*	*$210,241*	*$197,455*	*$290,874*	*$332,699*
Total municipal revenue[5]	*$101,285*	*$119,374*	*$113,619*	*$114,517*	*$115,780*	*$195,256*	*$78,000*	*$140,535*	*$203,127*	*$204,199*	*$215,913*

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 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, Akhiok: 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	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	1	1	1	1	1	1	1	1	1	1	1
	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	1	1	1	1	1	1	1	1	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	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	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	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	1
	% of permits fished	n/a	n/a	n/a	0%	0%	0%	0%	0%	0%	0%	100%
	Total permit holders	0	0	0	1	1	1	1	1	1	1	1

Table 4 -- Cont. Permits and Permit Holders by Species: 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	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
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	7	6	6	7	8	5	5	5	5	7	7
	Fished permits	7	6	1	7	8	5	4	4	5	6	7
	% of permits fished	100%	100%	17%	100%	100%	100%	80%	80%	100%	86%	100%
	Total permit holders	9	7	7	8	8	5	5	6	6	6	6
Total CFEC Permits[2]	*Permits*	*8*	*6*	*6*	*8*	*9*	*6*	*6*	*6*	*6*	*8*	*8*
	Fished permits	*7*	*6*	*1*	*7*	*8*	*5*	*4*	*4*	*5*	*6*	*8*
	% of permits fished	*88%*	*100%*	*17%*	*88%*	*89%*	*83%*	*67%*	*67%*	*83%*	*75%*	*100%*
	Permit holders	*10*	*7*	*7*	*9*	*9*	*6*	*6*	*7*	*7*	*7*	*7*

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 Akhiok: 2000-2010.

Year	[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 Akhiok[2]	Total Net Pounds Landed In Akhiok[2,5]	Total Ex-Vessel Value Of Landings In Akhiok[2,5]
2000	12	2	0	2	10	77	--	--
2001	9	1	0	3	9	43	--	--
2002	9	2	0	3	9	43	--	--
2003	8	1	1	4	7	16	--	--
2004	7	2	1	5	9	7	--	--
2005	5	2	1	4	8	14	--	--
2006	7	3	2	4	7	29	--	--
2007	2	2	2	4	6	42	--	--
2008	6	1	1	4	6	41	--	--
2009	7	1	1	4	6	28	--	--
2010	8	1	1	4	6	43	--	--

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 Akhiok: 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 Akhiok: 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 Akhiok: 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 Akhiok: 2000-2010.

	Total Net Pounds[1]										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
Total[2]	--	--	--	--	--	--	--	--	--	--	--
	Ex-vessel Value (nominal U.S. dollars)										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
Total[2]	--	--	--	--	--	--	--	--	--	--	--

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 Akhiok Residents: 2000-2010.

	Total Net Pounds[1]										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
Total[2]	--	--	--	--	--	--	--	--	--	--	--
	Ex-vessel Value (nominal U.S. dollars)										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
Total[2]	--	--	--	--	--	--	--	--	--	--	--

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

Sportfishing on Kodiak Island can be divided into private anglers who use boats and those who use the Island's road system to access sportfishing destinations. There are 75 mi of paved and hard-packed gravel roads that cross 10 significant streams and provide access to 18 stocked lakes. Road system anglers can find salmon, Dolly Varden, rainbow trout, and steelhead in freshwaters. Remote areas on Kodiak, categorized as any areas outside the road system, provide opportunities for salmon, Dolly Varden, and fall-run steelhead trout. Remote Area salmon being to return in early June, and fishing grounds are typically accessed by charter boat or seaplane.[100]

Troll-fishing Kodiak's marine waters for Chinook and coho salmon is a popular activity on the island. Chiniak bay provides year-round habitat for Chinook. The Karluk River south of

[100] Alaska Dept. of Fish and Game. (2012). *Kodiak.* Division of Sport Fish. Retrieved August 14, 2012 from: http://www.adfg.alaska.gov/static-sf/Region2/pdfpubs/kodiak.pdf.

Larsen Bay provides one of Kodiak's only native freshwater Chinook fisheries. Normally, the Karluk River annually averages an in-river run of 8,000 Chinook; however, recent runs have been in decline.

Sockeye salmon are plentiful in many drainages on Kodiak and tend to spawn along lakeshores and tributary systems. Generally, sockeye salmon arrive in early June and run through the end of July. The Kodiak road system provides access to sockeye salmon on the Buskin, Pasagshak, and Saltery rivers on eastern Kodiak Island. Pink salmon are found in abundance throughout the coastal and freshwater drainage systems around Kodiak Island. Pink salmon can be caught along ocean beaches and near stream mouths between middle to late July with runs peaking around mid-August. Coho salmon are typically targeted in offshore marine areas using charter or private vessels. The troll recreational fishery peaks the third week of August and is typically over by mid-September. Large runs of coho salmon occur late in the year in the Karluk River, with lagoon fishing starting in early September and peaking by the end of the month. The Karluk River also maintains the largest population of steelhead trout on the island, averaging 8,000 fish annually. Middle to late October is the best time to fish for steelhead, although mid-April and early May are also good times. Dolly Varden are found at lake outlets and near the mouths of freshwater systems feeding on out-migrating pink salmon fry. Then in mid-July through October, Dolly's migrate back into freshwaters to spawn and winter. Halibut are abundant around Kodiak Island, and sportfishing is excellent from late April through early September. In a typical year, sport anglers catch over 25,000 halibut in Kodiak waters. More than 30 species of rockfish are found in Kodiak marine waters. Common species caught include dark, dusky, and yellow-eye rockfish. The estimated rockfish catch is around 25,000 fish annually. Lingcod are also found in the area, and the typical annual catch averages around 2,500 fish.[101]

Although sportfishing around Kodiak Island is immensely popular among both Alaska resident and non-Alaska resident private anglers, accessibility and infrastructure limit large-scale tourism-based sportfishing within Akhiok. In 2010, only one registered sport fish guide business was active in the community. South Kodiak Adventures provides lodging, fishing, hunting, and wildlife viewing services.[102] In 2010, 14 sportfishing licenses were sold to residents, compared to 16 in 2000. No sportfishing licenses were sold within the community between 2000 and 2010.

Akhiok is located within the Kodiak Island ADF&G Harvest Survey Area, which includes all Alaskan waters and drainages of the Kodiak and Afognak Island groups. In 2010, angler days fished totaled 40,377 for saltwater and 41,082 for freshwater fisheries, compared to 55,576 and 65,831 in 2000, respectively. In that year non-Alaska residents accounted for 49.6% of saltwater angler days fished, compared to 30.2% in 2000; indicating a proportional decline in resident angler days fished. The same trend was seen in freshwater angler days fished with non-Alaska residents accounting for 45.9% in 2010, compared to 28.3% in 2000.

According to ADF&G Harvest Survey data, local anglers using private boats target Chinook, coho, sockeye, and pink salmon, Dolly Varden char, halibut, and Dungeness crab. Other species targeted include chum salmon, rainbow and steelhead trout, and Tanner crab.[103] There is no kept/released charter log data available for Akhiok.

[101] Ibid.
[102] South Kodiak Adventures. (n.d). Retrieved January 31, 2012 from: http://www.kodiakadventures.com/
[103] Ibid.

Table 11. Sport Fishing Trends, Akhiok: 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 Akhiok[2]
2000	0	0	16	0
2001	0	1	14	0
2002	0	1	22	0
2003	0	2	20	0
2004	0	2	22	0
2005	1	3	9	0
2006	0	0	14	0
2007	0	0	16	0
2008	0	0	9	0
2009	0	1	11	0
2010	0	1	14	0

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	16,767	38,809	18,524	47,307
2001	14,761	24,604	18,299	19,757
2002	18,356	19,737	15,018	35,113
2003	17,715	23,726	13,362	34,034
2004	18,896	22,787	21,331	31,124
2005	21,269	33,917	23,789	36,753
2006	23,511	21,991	23,483	26,239
2007	21,668	31,554	26,916	31,072
2008	20,275	31,944	24,944	24,876
2009	20,813	26,520	10,859	21,283
2010	20,012	20,365	18,871	22,211

[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

Many residents of Akhiok supplement their income and diets with subsistence resources. According to a survey conducted by the AFSC in 2011, community leaders reported that halibut, salmon, and clams were the three most important subsistence resources to the community. In a 2003 ADF&G survey of subsistence participation by household, 88% were participating in salmon subsistence activities, 100% were participating in halibut subsistence activities, 21% were participating in marine mammals subsistence activities, 77% were participating in marine invertebrates subsistence activities, and 26% were participating in non-salmon fish subsistence activities. Estimated pounds per capita harvested that year for those species was 157.22. Another similar survey conducted by ADF&G in 2004 found 92% of households participating in salmon subsistence activities and 46% participating in non-salmon fish subsistence activities.

Of the species reported by ADF&G in Table 13, residents reported harvesting sockeye salmon the most often, followed by pink and coho. In 2008, residents reported harvesting 90 salmon on 3 permits, compared to 105 salmon on 2 permits in 2000. In 2010, 6 residents held 10 Subsistence Halibut Registration Certificates (SHARC), compared to 15 in 2003. In that year, an estimated 320 lbs of halibut was harvested using 8 SHARC, compared to an estimated 1,846 lbs harvested on 14 SHARC in 2003. Subsistence halibut harvests peeked in 2005 with an estimated 3,587 lbs harvested on 16 SHARC. Residents living in Akhiok have seen dramatic declines in subsistence halibut harvests. Between 2007 and 2012, the community reported significant declines in number of halibut over 20 lbs, compared to regular harvests of fish ranging from 80 to 100 lbs during the 1990s. There have also been observations in skin abnormalities (including the apparent "shearing" of skin from the underside of the fish) in halibut harvests. Overall there is concern within the community over implications of commercial trawl fisheries on subsistence resources.[104] In terms of marine mammal harvests, an ADF&G survey estimated that 15 sea lions and 78 harbor seals were harvested between 2000 and 2008 (Table 15). Further information regarding subsistence trends can be found in Tables 12 through 15.

Additional Information

In a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing has "dwindled down to almost non-existent" and that the community's economy is currently not dependent on natural resources. Commercial vessel traffic to the community has remained unchanged over the last 5 years, although there has been an increase in recreational and pleasure vessels in the harbor.

[104] Personal correspondence (recorded November 13, 2012).

Table 12. Subsistence Participation by Household and Species, Akhiok: 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	88%	100%	21%	77%	26%	157.22
2004	92%	n/a	n/a	n/a	46%	123.3
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, Akhiok: 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	2	4	n/a	6	n/a	95	n/a	n/a
2001	n/a	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	1	12	n/a	n/a	n/a	n/a	20	n/a	n/a
2003	n/a	7	n/a	n/a	n/a	n/a	n/a	766	151
2004	8	8	n/a	n/a	n/a	11	102	n/a	70
2005	5	5	n/a	n/a	4	8	95	n/a	n/a
2006	n/a	n/a	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	n/a	n/a
2008	4	3	n/a	n/a	4	4	82	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, Akhiok: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	15	14	1,846
2004	19	11	1,691
2005	22	16	3,587
2006	23	15	3,563
2007	22	10	924
2008	14	7	823
2009	10	8	1,123
2010	6	1	320

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, Akhiok: 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	3	18	n/a
2001	n/a	n/a	n/a	n/a	1	7	n/a
2002	n/a	n/a	n/a	n/a	n/a	6	n/a
2003	n/a	n/a	n/a	n/a	3	5	n/a
2004	n/a	n/a	n/a	n/a	1	4	n/a
2005	n/a	n/a	n/a	n/a	n/a	7	n/a
2006	n/a	n/a	n/a	n/a	2	14	n/a
2007	n/a	n/a	n/a	n/a	3	7	n/a
2008	n/a	n/a	n/a	n/a	2	10	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.

Karluk (*KAR-luck*)

People and Place

Location [105]

Karluk is located on the west coast of Kodiak Island, on the Karluk River, 88 air miles southwest of Kodiak and 301 miles southwest of Anchorage. The community occupies 55.4 sq mi of land and 2.4 sq mi of water. Karluk is unincorporated and under the jurisdiction of the Kodiak Island Borough.

Demographic Profile [106]

In 2010, there were 37 residents in Karluk, making it the 309th largest of 352 communities in Alaska with recorded populations that year. Between 1990 and 2000, the population declined by 62%, followed by a rebound of 37% between 2000 and 2010. Overall, the Karluk's population in 2010 was 47.9% lower than in 1990. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 40.7%., with an average annual growth rate of 4.06%.

In 2010, a majority of Karluk residents identified themselves as American Indian and Alaska Native (35 individuals; 94.6% of the total population), while 2 individuals (5.4%) identified themselves as White. It is important to note that, although no Asian population appears to be represented in 2010, in 2000 one individual (3.7% of the population) identified as Asian, and no residents identified themselves as White that year. 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.

In 2010, the average household size in Karluk was 3.08, a slight increase from 3.0 persons per household in 2000, but an overall decrease from 3.9 in 1990. In that year, there were a total of 21 housing units, compared to 27 in 1990 and 24 in 2000. Of the households surveyed in 2010, 43% were owner-occupied, compared to 25% in 2000; 14% were renter-occupied, compared to 13% in 2000; and 43% were vacant or occupied seasonally, compared to 63% in 2000.

The gender distribution in 2010 was skewed towards males at 56.8% male and 43.2% female. This was less even than the statewide distribution (52.0% male, 48.0% female), and similar to the distribution in 2000 (55.6% male, 44.4% female). The median age in 2010 was 18.8 years, which was significantly lower than both the statewide median of 33.8 years and 2000 median of 30.3 years.

[105] 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.

[106] 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.

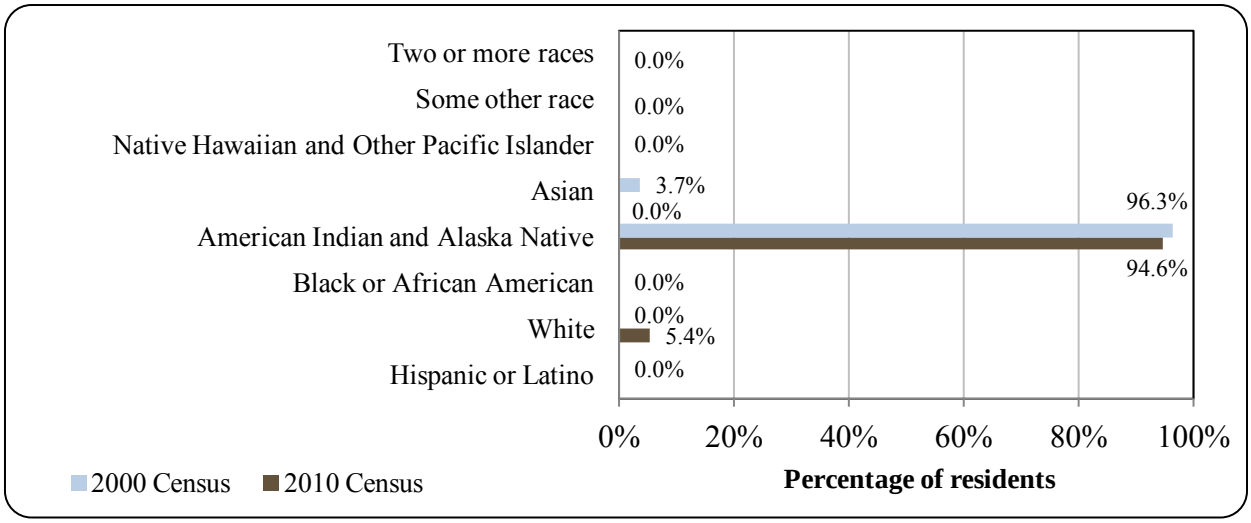
Table 1. Population in Karluk from 1990 to 2010 by Source.

Year	U.S. Decennial Census[1]	Alaska Dept. of Labor Estimate of Permanent Residents[2]
1990	71	-
2000	27	-
2001	-	29
2002	-	27
2003	-	28
2004	-	32
2005	-	35
2006	-	34
2007	-	40
2008	-	38
2009	-	38
2010	37	-

[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.

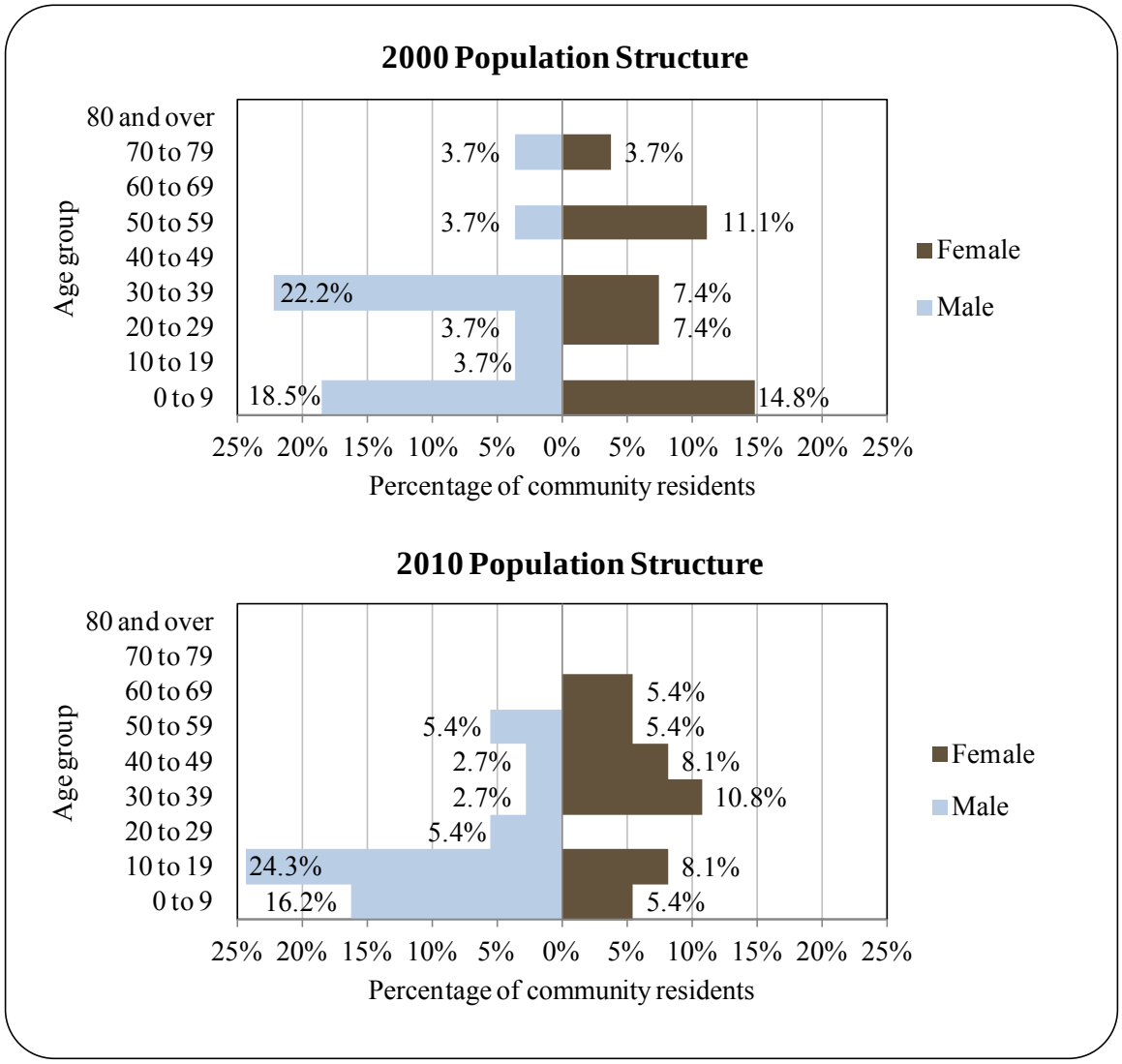
Figure 1. Racial and Ethnic Composition, Karluk: 2000-2010 (U.S. Census).



The population structure was significantly irregular in both 2000 and 2010, likely due to the small population size. However, there was a strong shift to a younger demographic between those years. In 2010, 54.0% of residents were under the age of 20, compared to 37.0% in 2000; 5.4% were over the age of 59, compared to 7.4% in 2000; 35.1% were between the ages of 30 and 59, compared to 44.4% in 2000; and 5.4% were between the ages of 20 and 29, compared to 11.1% in 2000.

Gender distribution by age cohort was significantly less even in 2010 than in 2000. In 2010, the greatest absolute gender difference occurred in the 10 to 19 range (24.3% male, 8.1% female), followed by the 0 to 9 (16.2% male, 5.4% female) and 30 to 39 (10.8% female, 2.7% male) ranges.

Figure 2. Population Age Structure in Karluk 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)[107] estimated that 66.7% of residents aged 25 and over held a high school diploma or higher degree in 2010, significantly less than the estimated 90.7% of Alaska residents overall.

[107] 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.

Also in that year, 16.7% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; 16.7% of resident had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; 10% of residents had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; no resident held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Kodiak Island is within the traditional territory of the Alutiiq peoples, and the area is estimated to have been inhabited for at least 7,500 years.[108,109,110] Great numbers of salmon can be harvested at the mouth of the Karluk River. In part due to this abundant resource, the Karluk village site is thought to have been populated by indigenous people for more than 7,000 years. Thirty-six archaeological sites have been identified in the area.[111] At one of the more recent sites called 'Karluk 1' (1250 - 1750 A.D.), a large number of well preserved wooden artifacts have been excavated, including masks, tools, and boxes.[112]

Russian hunters established a trading post and salmon saltery at Karluk in 1786. The Russians often referred to Karluk village as 'Nunakakhvak'. During that period, the village was located on both sides of the Karluk River.[113] Following the U.S. purchase of Alaska from Russia in 1867, commercial exploitation of the salmon resource intensified. The first cannery at Karluk – also the first on Kodiak Island – was built on Karluk Spit in 1882, and by 1884, five other canneries were also operating at Karluk.[114] In the beginning of the industry, few Alaska Natives worked in the local canneries, and a majority of cannery employees were hired from outside the region, primarily from the U.S. and China. In 1890, only 10% of the people living at Karluk were Alaska Native. However, Native Alaskans became increasingly involved in commercial salmon fishing in the early 1900s, and coordinated their commercial fishing activity with subsistence hunting and fishing activities.[115,116] In the early 1900s, Karluk was known for having the largest cannery and the greatest salmon stream in the world.[117] However, overfishing forced all of the Karluk canneries to close by the late 1930s.[118]

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[108] Crowell, A.L. Steffian, A.F., and G.L. Pullar, eds. 2001. Looking Both Ways: Heritage and Identity of the Alutiiq People. University of Alaska Press, Fairbanks.
[109] Clark, D.W. 1998. Kodiak Island: The Later Cultures. *Arctic Anthropology* 35:172-186.
[110] Clark, D.W. 1984. Pacific Eskimo: Historical Ethnography. In *Handbook of North American Indians, vol. 5*. D. Damas, ed. Pp 185-197. Smithsonian Insitution, Washington D.C.
[111] 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.
[112] Smithsonian Museum of Natural History, Alaska Native Heritage Center, and Alutiiq Museum & Archaeology Repository. 2001. "Exhibition Catalog: Karluk Village Profile." In *Looking Both Ways: Heritage and Identity of the Alutiiq People of Southern Alaska: An Interactive Exhibition, Text Only Version*. Eds. Crowell, Aron L., Amy F. Steffian, and Gordon L. Pullar. University of Alaska, Fairbanks. Retrieved August 24, 2012 from http://www.mnh.si.edu/lookingbothways/text/villages/karluk.html.
[113] See footnotes 111 and 112.
[114] Bowers, George M., Commissioner. 1899. *Bulletin of the United States Fish Commission, Vol. XVIII,* for 1898. Washington D.C. Government Printing Office. 55th Congress, 3rd Session, Document No. 308.
[115] Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from http://ankn.uaf.edu.
[116] See footnote 112.
[117] Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from http://www.kanaweb.org/files/CEDS.pdf.
[118] See footnote 111.

In 1978, a severe storm with winds of 100 miles per hour from the northeast damaged personal property and caused severe coastal erosion, including breaching the spit that connected the two sides of the community of Karluk.[119,120] Following the storm, the Karluk village council chose to relocate the community to its present site, upstream on the south side of the Karluk Lagoon. The U.S. Department of Housing and Urban Development constructed 23 houses at the new community location. Today, Karluk residents continue to engage in commercial fishing and subsistence hunting, fishing, and gathering.[121]

Natural Resources and Environment

The climate of the Kodiak Islands is dominated by a strong marine influence. There is moderate precipitation, frequent cloud cover and fog, and little to no freezing weather. Severe storms are common from December through February. Annual precipitation averages 60 inches with 87 inches of snowfall. Temperatures remain within a narrow range throughout the year, from 32 to 62 °F.[122]

Karluk is located in close proximity to Kodiak National Wildlife Refuge (KNWR). The KNWR was established in 1941 with the purpose of wildlife conservation, in particular the Kodiak brown bear, unique to the island, as well as fulfillment of treaty obligations, providing for continued subsistence use, and to ensure water quality and quantity.[123] In 2002, the KNWR signed an agreement with Koniag, Inc. (the regional Native corporation for Kodiak Island) and the State of Alaska creating a conservation easement zone on Koniag land surrounding Karluk Lake and the portion of Karluk River within the boundaries of the KNWR. The 22-mile long Karluk River begins in the KNWR and passes through tribal land before emptying into the Gulf of Alaska at Karluk. Koniag, Inc. owns the majority of the land adjacent to the river and the northern portion of Karluk Lake while the Native Village of Karluk owns the land adjacent to the lower 3 miles of the Karluk River and the Karluk Lagoon. To facilitate public use of this zone, the KNWR implemented a cost-free permit system for unguided users of land within one-half mile of Karluk Lake and Karluk River.[124] In addition to the KNWR, protected areas near Karluk include a number of state parks, state historical parks, and state recreation sites located on the northeast corner of Kodiak Island.[125]

Kodiak Island is located in a highly active volcanic and tectonic zone along the Pacific "Ring of Fire". The earthquake belt along the Aleutian Islands, Alaska Peninsula, and Kenai Peninsula is known as the Alaska-Aleutian subduction zone, where strong earthquakes occur as a result of slipping along the contact zone between the Pacific and Alaska plates. Earthquakes can

[119] Karluk IRA Traditional Council. 1999. *Community Emergency Response Plan*. Retrieved August 24, 2012 from http://www.city.kodiak.ak.us/Emergency/Documents/Annex%20B%20-%20Karluk.pdf.
[120] Norgaard Consultants. 1984. *Karluk Comprehensive Development Plan*. Prepared for Kodiak Island Borough. Retrieved August 27, 2012 from http://www.commerce.state.ak.us/dca/plans/Karluk-CP-1984.pdf.
[121] See footnote 111.
[122] Ibid.
[123] U.S. Fish & Wildlife Service. *Kodiak National Wildlife Refuge*. Retrieved November 30, 2011 from http://kodiak.fws.gov.
[124] U.S. Fish & Wildlife Service. 2011. *Karluk River Land Status & Public Use Info*. Retrieved August 24, 2012 from www.fws.gov/uploadedFiles/Region_7/NWRS/Zone_2/Kodiak/PDF/Koniag%20easement%20leaflet_2011.pdf#d.
[125] Alaska Dept. of Natural Resources. (n.d.) *Alaska State Parks website*. Retrieved December 6, 2011 from http://dnr.alaska.gov/parks/.

cause tsunamis, landslides, snow avalanches, and submarine slumps. The risk posed to Karluk by any individual earthquake depends on the quake's severity and location. The 1964 Alaska Earthquake and ensuring tsunami, which destroyed the City of Old Harbor and caused significant damage in Kodiak, did not inflict any significant damage in Karluk. The earthquake did cause 1.5 feet of subsidence, causing tides to run slightly earlier into the area.[126] The 1912 eruption of the volcano Novarupta, located 100 miles northwest of Kodiak Island on the Alaska Peninsula, covered the island in ash and gasses and disrupted the local salmon fishery, especially between 1915 to 1919, when many adult fish starved and failed to spawn in ash-choked streams.[127]

In addition to risk of earthquake and volcanic activity, natural hazards that pose a high risk in Karluk include coastal erosion and severe weather. The primary weather hazards in Karluk are freezing rain, heavy snowfall, and high winds. Winds can occasionally exceed 50 miles per hour, with gusts of up to 90 miles per hour. Extreme weather events can also exacerbate the hazard of coastal erosion, which is already a problem in the community. In 1978, extreme winter weather eroded the Karluk spit and forced a relocation of the entire village. Coastal erosion has also occurred in several other places in the village, and has the potential to impact current structures and future residential and commercial development. According to the Karluk Emergency Response Plan of 2000, a hillside road from the airstrip down to the lagoon was eroding away. The potential impact of natural hazards is increased by Karluk's relative isolation from emergency response services.[128]

Kodiak Island was directly impacted by the *Exxon Valdez* Oil Spill in March of 1989, in which 11 million gallons of crude oil spilled into Prince William Sound and spread to surrounding areas.[129] Oil was carried by currents throughout the area of the Alutiiq people, and hit the beaches of Kodiak Island in mid-April.[130] The *Exxon Valdez* Oil Spill Trustee Council was formed following the spill, and has overseen large-scale habitat restoration, protection, and acquisition. On Kodiak Island, the Trustee Council has protected over 260,000 acres, much of it now included within the KNWR.[131]

According to the Alaska Department of Environmental Conservation, there were no notable active environmental cleanup sites located in Karluk as of August 2012.[132]

Current Economy[133]

From the late 1800s through the 1930s, fish processing was a primary source of livelihood in Karluk.[134,135,136,137] Today, Karluk residents have minimal involvement in

[126] See footnote 119.
[127] U.S. Geological Survey. 1998. *Can Another Great Volcanic Eruption Happen in Alaska?* Retrieved December 5, 2011 from http://volcanoes.usgs.gov/about/publications/factsheets.php.
[128] Karluk IRA Traditional Council. 1999. *Community Emergency Response Plan*. Retrieved August 24, 2012 from http://www.city.kodiak.ak.us/Emergency/Documents/Annex%20B%20-%20Karluk.pdf.
[129] United States Environmental Protection Agency. *Exxon Valdez*. Retrieved December 2, 2011 from http://www.epa.gov/emergencies/content/learning/exxon.htm.
[130] Mason, R. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from http://ankn.uaf.edu.
[131] Restoration Notebook. January 2009. *Habitat Protection – A Successful Restoration Strategy*. *Exxon Valdez* Oil Spill Trustee Council. Retrieved December 1, 2011 from http://dnr.alaska.gov.
[132] Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved August 24, 2012 from http://dec.alaska.gov/spar/csp/list.htm.
[133] Unless otherwise noted, all monetary data are reported in nominal values.

commercial fishing activities, and the lack of marine facilities in Karluk provides a barrier to higher levels of local involvement. Construction of docking and moorage facilities would allow for expansion in fishing as well as tourism opportunities. Today, the primary economic activity in the community is sport hunting and fishing. As of 2011, there were six lodges in Karluk that provide a limited number of seasonal employment opportunities to local residents. Other top employers in the community are the Native Village of Karluk Traditional IRA Council and the Kodiak Island Borough School District. Local residents rely heavily on subsistence hunting and fishing to supplement their diets.[138] Salmon, trout, ducks, seals, and deer are some of the primary subsistence resources utilized by local residents.[139]

Based on household surveys for the 2006-2010 ACS,[140] in 2010, the per capita income in Karluk was estimated to be $7,540 and the median household income was estimated to be $34,375. This represents a decrease from the per capita income reported in the year 2000 ($13,736) and an increase from the median household income reported in 2000 ($19,167). If inflation is taken into account by converting 2000 values to 2010 dollars,[141] the drop in per capita income is revealed to be even greater; real per capita income in 2000 was $18,063. In contrast, the real median household income in 2000 was $25,204, and the 2010 estimate remains a substantial increase. In 2010, Karluk ranked 300th in per capita income out of 305 Alaskan communities with per capita income data, and 220th in median household income, out of 299 Alaskan communities with household income data that year.

Although Karluk's small population size may have prevented the ACS from accurately portraying economic conditions,[142] the decline in per capita income suggested by the 2006-2010 ACS estimate is supported by 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 Karluk in

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[134] 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.

[135] Smithsonian Museum of Natural History, Alaska Native Heritage Center, and Alutiiq Museum & Archaeology Repository. 2001. "Exhibition Catalog: Karluk Village Profile." In *Looking Both Ways: Heritage and Identity of the Alutiiq People of Southern Alaska: An Interactive Exhibition, Text Only Version*. Eds. Crowell, Aron L., Amy F. Steffian, and Gordon L. Pullar. University of Alaska, Fairbanks. Retrieved August 24, 2012 from http://www.mnh.si.edu/lookingbothways/text/villages/karluk.html.

[136] 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.

[137] See footnote 130.

[138] Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from http://www.kanaweb.org/files/CEDS.pdf.

[139] See footnote 134.

[140] 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.

[141] 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).

[142] 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.

2010 is $10,939.[143,144] Although this is higher than the ACS estimate, it remains lower than the reported inflation-adjusted per capita income in 2000. Despite the apparent decline in per capita income in Karluk from 2000 to 2010, the community was not recognized as "distressed" by the Denali Commission in 2011.[145] 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, 48.6% of the population age 16 and older was estimated to be in the civilian labor force, a substantially lower percentage than was estimated to be in the civilian labor force statewide (68.8%). In the same year, 65.5% of local residents were estimated to be living below the poverty line, almost seven times the statewide rate of 9.5%, and the unemployment rate was estimated to be 11.4% compared to the statewide 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%, compared to a statewide unemployment rate estimate of 11.5%.[146]

Also based on the 2006-2010 ACS, a majority of Karluk workers were estimated to be employed in the public sector (76.9%), along with 23.1% in the private sector. Of the 13 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest number was estimated to work in transportation, warehousing, and utilities (4 individuals; 30.8% of the civilian labor force), retail trade (3 individuals; 23.1%), educational services, health care, and social assistance (3 individuals; 23.1%), and public administration (3 individuals; 23.1%). In 2010, 0% of the employed civilian labor force was estimated to be working in agriculture, forestry, fishing and hunting, and mining. However, the number of individuals employed in the fishing industry is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3.

By occupation type, most (53.8%) residents were estimated to hold management or professional positions in 2010; followed by service (23.1%) and sales or office (23.1%) positions. Between 2000 and 2010, there was a significant proportional decline in the number of service positions occupied by residents. Conversely, there were significant proportional gains in the number of management and professional positions between those years (Figure 4).

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 18 employed residents in Karluk in 2010, of which 12 (66.7%) were employed in local government, 3 (16.7%) were employed in financial activities, 2 (11.1%) in trade, transportation, and utilities, and 1 (5.6%) in educational and health services.[147] As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

[143] 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/.
[144] See footnote 140.
[145] Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.
[146] See footnote 143.
[147] Ibid.

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

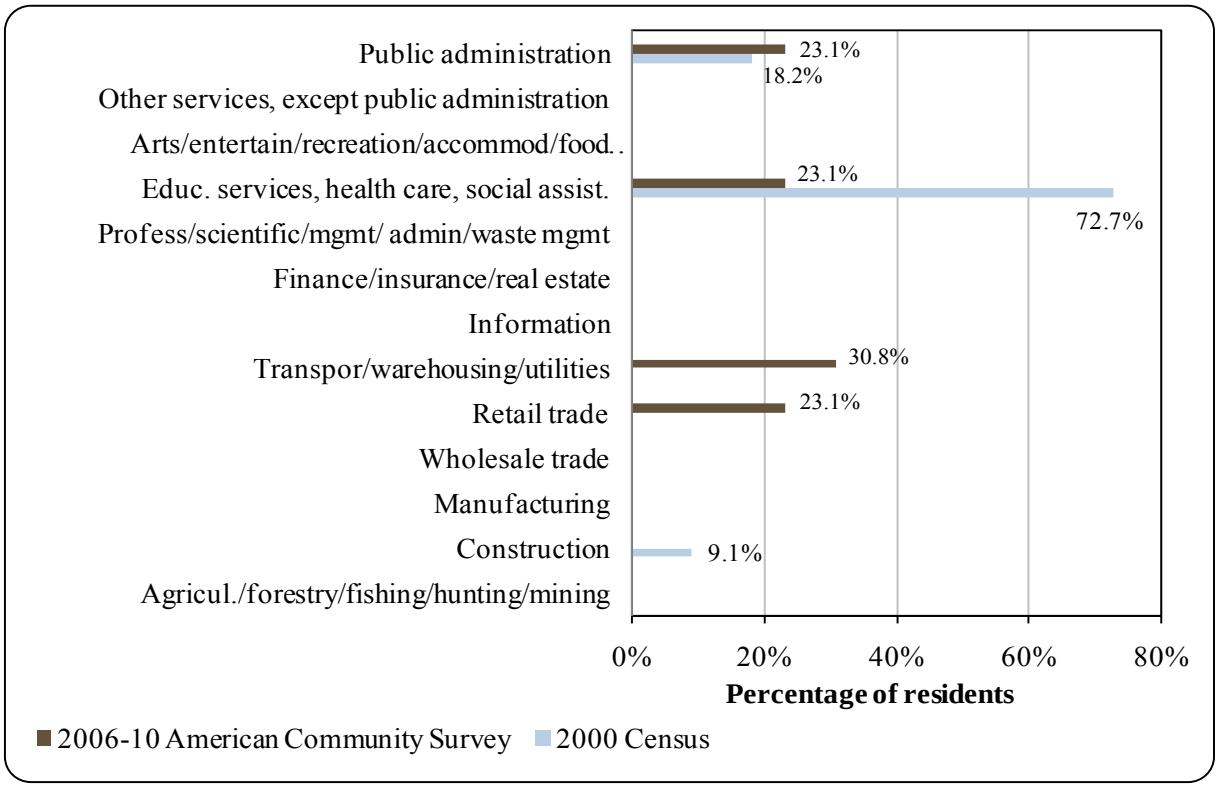
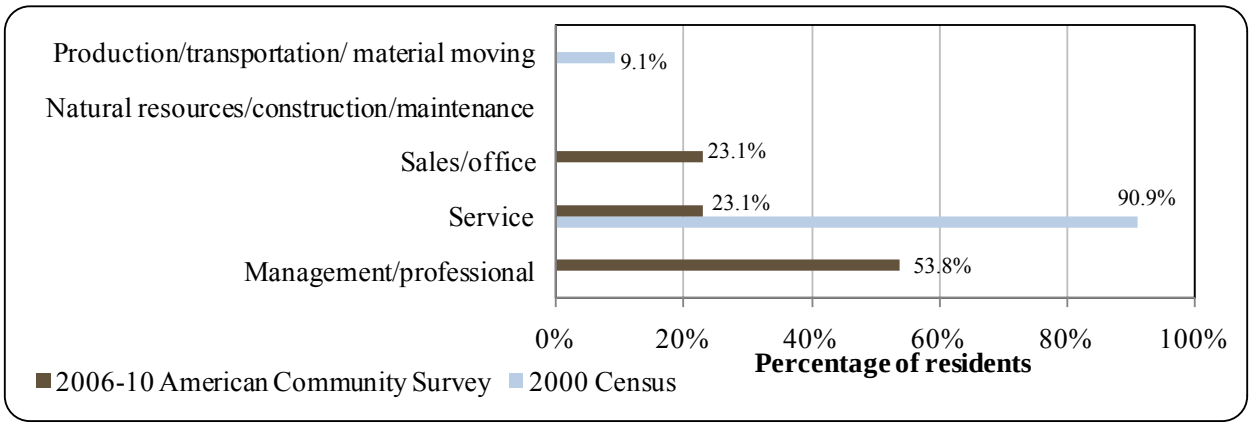


Figure 4. Local Employment by Occupation in 2000-2010, Karluk (U.S. Census).



Governance

Karluk is an unincorporated community under the jurisdiction of the Kodiak Island Borough. Because the community is not incorporated, no information is available regarding local revenue sources (Table 2). However, the Borough administers a 11.27 mills property tax in Karluk, along with a 5% Bed Tax and 1.05% severance tax. Karluk was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized Indian Reorganization Act Tribal Council, recognized by the Bureau of Indian Affairs, is the Native Village of Karluk.[148] The Tribal Council administers a variety of federal programs, including local health care, employment assistance, and other social services.[149]

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Karluk 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

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

A village corporation, Karluk Native Corporation, was formed in 1971 pursuant to ANCSA. Karluk Native Corporation selected and received 83,787 acres of land conveyance, approximately 90% of the total acreage to which it was entitled. On December 6, 1980, Karluk Native Corporation merged with Koniag, Incorporated, the regional Native corporation for Kodiak Island. The merged corporation owns both surface and subsurface rights to lands

[148] Alaska Dept. of Comm. And Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved December 27, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.
[149] Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from http://www.kanaweb.org/files/CEDS.pdf.

originally titled to Karluk Native Corporation.[150] Shareholders of the original village corporation received additional shares of Koniag stock, and the Native Village of Karluk received 1,860 acres of land near the village and $35,340 to divide among its former shareholders.[151]

In early 2012, the Native Village of Karluk brought a lawsuit against Koniag, Incorporated in an effort to have former reservation lands put under the control of the IRA Council. In July 2012, a federal court blocked the lawsuit, saying that Karluk tribal court lacks jurisdiction over Kodiak Island's regional Native corporation.[152]

Karluk is a member of the Kodiak Area Native Association (KANA), a tribal non-profit organization headquartered in Kodiak that serves communities in the Kodiak Archipelago.[153] KANA is one of the 12 regional Alaska Native 501(c)(3) nonprofit 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.[154] KANA provides health and development services, as well as career development and other community services, with the goal of promoting economic self sufficiency and promote healthy families.[155] KANA provides health services in Karluk under an agreement with the Native Village of Karluk.[156]

The closest National Marine Fisheries Service (NMFS), Alaska Department of Fish and Game (ADF&G), and U.S. Bureau of Citizenship and Immigration Services offices are all located within the City of Kodiak. The nearest Alaska Department of Natural Resources office is a Division of Parks and Outdoor Recreation office, also located in Kodiak, and the nearest office of the Alaska Department of Commerce, Community, and Economic Development is in Anchorage.

Infrastructure

Connectivity and Transportation

Karluk is accessible by air and water. Regular and charter flights depart from nearby Kodiak. There are both a state-owned 2,000 feet long by 60 feet wide gravel airstrip and a seaplane base at Karluk Lake.[157] As of early June 2012, a roundtrip ticket between Kodiak and Anchorage cost $360.[158] Several companies offer service between Kodiak and Karluk if a minimum number of passengers charter a plane. As of summer 2012, a roundtrip ticket between

[150] Norgaard Consultants. 1984. *Karluk Comprehensive Development Plan*. Prepared for Kodiak Island Borough. Retrieved August 27, 2012 from http://www.commerce.state.ak.us/dca/plans/Karluk-CP-1984.pdf.
[151] Koniag, Incorporated. 2012. *Shareholder News*. Retrieved August 23, 2012 from http://www.koniag.com/wp-content/uploads/2012/07/KON207-Shareholder-Newsletter-MAY_v13A.pdf.
[152] Anchorage Daily News. July 12, 2012. "Federal judge blocks village lawsuit against Native corporation." Retrieved August 23, 2012 from http://www.adn.com/2012/07/12/v-printer/2539564/federal-judge-blocks-village-lawsuit.html.
[153] Kodiak Area Native Association. (n.d.). Retrieved February 16, 2012 from http://www.kanaweb.org/.
[154] 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.
[155] See footnote 153.
[156] Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from http://www.kanaweb.org/files/CEDS.pdf.
[157] 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.
[158] This price was calculated on November 21, 2011 using kayak.com.

Kodiak and Karluk with Island Air Service cost $300 roundtrip, and was available Monday, Wednesday, or Friday with a minimum of two passengers. Servant Air did not offer scheduled service to Karluk, but a stop could be added for three or more seat fares.[159] Barge service is available twice a month from Kodiak, and goods are lightered to shore by skiff.[160] Karluk does not have a harbor or docking facilities, so landing crafts are used to bring supplies ashore. Local residents who transport their own supplies will anchor off shore and haul their goods with smaller boats or skiffs. There is about one mile of gravel road in the community.[161]

Facilities

Water in Karluk is retrieved from a creek and is treated and stored in a 50,000-gallon tank. All occupied homes are fully plumbed. A community septic tank and sewage lagoon are used to manage waste. There is no organized refuse collection service, and individuals must haul their own garbage. The landfill is a temporary, unpermitted site, and is operated by the Village Council. The school organizes aluminum recycling. Power is provided by a diesel powerhouse operated by the Village Council.[162] The Kodiak Island Borough is considering options for renewable energy sources. Some of the most promising opportunities include electrical interties between communities that are currently powered by hydroelectric and nearby communities still operating diesel plants, such as a possible intertie between Larsen Bay and Karluk. In addition, wind power generation is of interest. Karluk is one of several communities on Kodiak Island that may have potential for wind generation, although the proximity to the KNWR may present challenges to gaining approval of such a facility.[163]

Police services in Karluk are provided by a Village Public Safety Officer stationed in Karluk. The nearest state trooper post is located in Kodiak. Fire and rescue services are provided by the Karluk Village Response Team.[164] Additional community facilities include a community hall and the school library, which is accessible to the public, and a small post office operated by the U.S. Postal Service. As of August 2012, a telephone system was in place in Karluk. Residents can access internet through purchase of individual satellite dishes. No cable service is available locally.[165][166]

Medical Services

The Karluk Health Clinic provides residents with basic medical services. The Clinic is a Community Health Aid Program site. It is owned and operated by the Karluk Village Council.[167] KANA provides health services in Karluk under an agreement with the Native Village of

[159] Price information retrieved June 26, 2012 from http://www.kodiakislandair.com/summer_schedule.htm and http://www.servantair.com/schedules_summer.html.
[160] See footnote 157.
[161] See footnote 156.
[162] See footnote 157.
[163] Kodiak Island Borough. 2009. *Regional Energy Plan*. Retrieved August 24, 2012 from ftp://ftp.aidea.org/2010AlaskaEnergyPlan/Regional%20Energy%20Plans/Kodiak%20Island%20Borough%20Regional%20Energy%20Plan.pdf.
[164] See footnote 157.
[165] Ibid.
[166] See footnote 156.
[167] See footnote 157.

Karluk.[168] Emergency Services have coastal floatplane and air access.[169] The nearest hospital is located in the City of Kodiak.

Educational Opportunities

One school is present in Karluk. The school offers a Kindergarten through 12th grade education. However, due to the small student population residing in Karluk and the requirement that a rural school have a minimum of 10 students enrolled to retain funding, each year the Karluk school is at the risk of being closed for the year.[170] The school was closed due to low enrollment during the 1999-2000 and 2002-2003 school years.[171] In 2010, Karluk School had 13 enrolled students and 2 teachers, in 2011 there were 15 students and 4 teachers, and in 2012 there were 16 students and 3 teachers.[172] A few high school students attend Mount Edgecumbe High School in Sitka, Alaska.[173]

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on Kodiak Island and surrounding areas. The Koniags historically migrated between permanent winter villages and temporary summer fish camps. For up to 7,000 years, the mouth of the Karluk River has been utilized as a village site due to the great numbers of salmon can be harvested there. Like Alutiiq people today, the ancient residents of Karluk smoked and dried the river salmon they caught during the summer to provide food through the long winter.[174,175] In addition to salmon, the Alutiiq people of Kodiak Island also harvested other fish, intertidal resources, and marine mammals, including whales, sea lions, seals, and sea otters.[176,177]

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[168] Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from http://www.kanaweb.org/files/CEDS.pdf.
[169] 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.
[170] Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from http://eed.alaska.gov/stats/.
[171] See footnote 169.
[172] Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from http://eed.alaska.gov/stats/.
[173] See footnote 163.
[174] Smithsonian Museum of Natural History, Alaska Native Heritage Center, and Alutiiq Museum & Archaeology Repository. 2001. "Exhibition Catalog: Karluk Village Profile." In *Looking Both Ways: Heritage and Identity of the Alutiiq People of Southern Alaska: An Interactive Exhibition, Text Only Version*. Eds. Crowell, Aron L., Amy F. Steffian, and Gordon L. Pullar. University of Alaska, Fairbanks. Retrieved August 24, 2012 from http://www.mnh.si.edu/lookingbothways/text/villages/karluk.html.
[175] See footnote 169.
[176] Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from http://ankn.uaf.edu.
[177] 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.

With the arrival of Russian colonists to Kodiak Island in the late 1700s, the Alutiiq people were forced to hunt for sea otters to fuel the trade of their valuable pelts. The Russians also began commercial salmon exploitation in the early 1800s. They blocked salmon streams, such as the Karluk River on the west side of Kodiak Island, using fish weirs. Commercial processing involved salting. In addition, Alutiiq women dried the fish for the winter for use in the Russian colony.[178]

After the U.S. purchase of Alaska, American entrepreneurs arrived to continue hunting sea otter and to develop other industries, including salmon fishing. The first cannery at Karluk – the first on Kodiak Island – was built on Karluk Spit by Smith & Hirsch in 1882, who had previously operated a salting operation there. In 1884, this cannery was organized under the title of Karluk Packing Company. By 1884, five other canneries were also operating at Karluk, including canneries operated by the Alaska Improvement Company and the Alaska Packers Association (APA). By 1897, the APA operated all of the local canneries.[179] Few Natives worked initially worked in the local canneries, and a majority of cannery employees were hired from outside the region, primarily from the United States and China. By 1890, only 10% of the people living at Karluk were Alaska Native. However, Native Alaskans became increasingly involved in commercial salmon fishing in the early 1900s, and coordinated their commercial fishing activity with subsistence hunting and fishing activities.[180,181]

By 1901, the Karluk salmon fishery harvest reached about 4 million sockeye, but after that point began to decline.[182] At that time, Karluk was known for having the largest cannery and the greatest salmon stream in the world.[183] In the early 1900s, additional canneries were constructed in the area by the APA.[184] The APA finally opened a hatchery in 1896 because officials believed that hatcheries would protect the dwindling salmon runs. But overfishing continued to reduce the number of salmon at the Karluk River. In 1911, the APA moved its prominent cannery operations from the village of Karluk to the sheltered inlet at Larsen Bay due to the lack of a harbor in Karluk and the frequent shipwrecks in the shallow and rocky waters. The hatchery was closed in 1917.[185,186] Overfishing forced all of the Karluk canneries to close by the late 1930s.[187]

Through the early decades of the 1900s, the salmon fishery remained the primary focus of local commercial fishing activity, and the most common fishing gear was the beach seine. With the rise of diesel engines in the 1920s, the range of fishing vessels expanded, and commercial exploitation of halibut and groundfish extended into the Gulf of Alaska. The rise of fuel-powered vessels also led to a shift toward use purse seines in the salmon fishery. Herring

[178] See footnotes 176 and 177.
[179] Bowers, George M., Commissioner. 1899. *Bulletin of the United States Fish Commission, Vol. XVIII,* for 1898. Washington D.C. Government Printing Office. 55th Congress, 3rd Session, Document No. 308.
[180] See footnote 176.
[181] See footnote 174.
[182] See footnote 177.
[183] See footnote 168.
[184] 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.
[185] KMXT Radio. September 6, 2011. "Larsen Bay Cannery is 100 This Year." Retrieved August 24, 2012 from http://www.kmxt.org/index.php?option=com_content&task=view&id=3110&Itemid=2.
[186] See footnote 174.
[187] See footnote 184.

fishermen also began stopping in Kodiak by the 1920s, and a herring reduction also operated in Kodiak until the early 1960s.[188,189,190]

Since the closure of the Karluk canneries in the 1930s,[191] no processing facilities have been operational locally, although it is important to note that Icicle Seafoods currently operates a cannery at nearby Larsen Bay.[192] Today, the primary economic activity in Karluk is sport hunting and fishing. As of 2011, there were six lodges in Karluk that provide a limited number of seasonal employment opportunities to local residents. Local residents also rely heavily on subsistence hunting and fishing to supplement their diets.[193] Salmon, trout, ducks, seals, and deer are some of the primary subsistence resources utilized by local residents.[194]

Karluk is located in Federal Statistical and Reporting Area 620, Pacific Halibut Fishery Regulatory Area 3A, and the Central Gulf of Alaska Sablefish Regulatory Area. Karluk is eligible to participate in the Community Quota Entity. The governing body that recommended Karluk was the Native Village of Karluk, but as of August 2012, the community had not formed a CQE.[195] 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 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.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, there were no registered shore-side processing plants in Karluk. Karluk was a historical center of the Kodiak salmon fishery

[188] Ibid.
[189] Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from http://ww.iphc.int/publications/scirep/Report0005.pdf.
[190] 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.
[191] See footnote 184.
[192] Icicle Seafoods. (n.d.). *Larsen Bay*. Retrieved August 24, 2012 from http://www.icicleseafoods.com/locations/lsb/
[193] Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from http://www.kanaweb.org/files/CEDS.pdf.
[194] See footnote 184.
[195] NOAA Fisheries, Alaska Regional Office. 2012. *Name and Contact Information of Community Quota Entities*. Retrieved August 20, 2012 from http://www.fakr.noaa.gov/ram/daily/cqenamescontacts.pdf.

beginning in the late 1800s, but the last canneries in the area were closed by the late 1930s.[196] It is important to note that one shore-side processing facility is located nearby in the community of Larsen Bay (see the community profile for Larsen Bay profile).

Fisheries-Related Revenue

Between 2000 and 2010, no information was reported regarding fisheries-related revenue in Karluk (Table 3).

Commercial Fishing

Karluk residents are minimally involved in commercial fishing. Two Karluk residents held commercial crew license in 2010, representing a decline of crew licenses through the decade when compared to six crew license holders in 2000. In 2000, there were also two vessels homeported and two vessels primarily owned by Karluk residents, but none in other years during the decade. No fish buyers or shore-side processors were present in any year during the 2000-2010 period, and it follows that no landings or ex-vessel revenue were reported locally (Table 5).

The only state Commercial Fisheries Entry Commission (CFEC) permit held by a Karluk resident between 2000 and 2010 was a groundfish permit held by one permit holder in 2004. The permit was held in the statewide miscellaneous saltwater finfish fishery, and was associated with mechanical jig gear. The permit was actively fished that year. Between 2000 and 2010, no Karluk residents held other state CFEC permits, federal License Limitation Permits or Federal Fisheries Permits (Table 4). In addition, no Karluk residents held quota share accounts in federal catch share fisheries for halibut, sablefish, or crab during the period (Tables 6 through 8). Given the lack of fish buyers and shore-side processors (Table 5), no landings or ex-vessel revenue were generated in the community during the 2000-2010 period (Table 9). Two vessels were owned by Karluk residents in 2000, but due to the small number of participants, landings and ex-vessel revenues generated by Karluk vessel owners are considered confidential that year. Given the lack of vessel owners in the remaining years of the period, no data are reported from 2001 to 2010 (Table 10).

[196] 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.

Table 3. Known Fisheries-Related Revenue (In U.S. Dollars) Received by the Community of Karluk: 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 revenue[4]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total municipal revenue[5]	*n/a*	*n/a*	*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] 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, Karluk: 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	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, Karluk: 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	1	0	0	0	0	0	0
	Fished permits	0	0	0	0	1	0	0	0	0	0	0
	% of permits fished	-	-	-	-	100%	-	-	-	-	-	-
	Total permit holders	0	0	0	0	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	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (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
Total CFEC Permits[2]	*Permits*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*0*	*0*	*0*
	Fished permits	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*0*	*0*	*0*
	% of permits fished	-	-	-	-	*100%*	-	-	-	-	-	-
	Permit holders	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*0*	*0*	*0*

[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 Karluk: 2000-2010.

Year	[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 Karluk[2]	Total Net Pounds Landed In Karluk[2,5]	Total Ex-Vessel Value Of Landings In Karluk[2,5]
2000	6	0	0	2	2	0	0	$0
2001	4	0	0	0	0	0	0	$0
2002	1	0	0	0	0	0	0	$0
2003	3	0	0	0	0	0	0	$0
2004	3	0	0	0	0	0	0	$0
2005	2	0	0	0	0	0	0	$0
2006	1	0	0	0	0	0	0	$0
2007	0	0	0	0	0	0	0	$0
2008	0	0	0	0	0	0	0	$0
2009	0	0	0	0	0	0	0	$0
2010	2	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 Karluk: 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 Karluk: 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 Karluk: 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 Karluk: 2000-2010.

	Total Net Pounds[1]										
	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
Total[2]	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
	Ex-vessel Value (nominal U.S. dollars)										
	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
Total[2]	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*

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 Karluk Residents: 2000-2010.

	Total Net Pounds[1]										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	-	0	0	0	0	0	0	0	0	0	0
Finfish	-	0	0	0	0	0	0	0	0	0	0
Halibut	-	0	0	0	0	0	0	0	0	0	0
Herring	-	0	0	0	0	0	0	0	0	0	0
Other Groundfish	-	0	0	0	0	0	0	0	0	0	0
Other Shellfish	-	0	0	0	0	0	0	0	0	0	0
Pacific Cod	-	0	0	0	0	0	0	0	0	0	0
Pollock	-	0	0	0	0	0	0	0	0	0	0
Sablefish	-	0	0	0	0	0	0	0	0	0	0
Salmon	-	0	0	0	0	0	0	0	0	0	0
Total[2]	-	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
	Ex-vessel Value (nominal U.S. dollars)										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	-	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Finfish	-	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Halibut	-	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Herring	-	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other Groundfish	-	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other Shellfish	-	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pacific Cod	-	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pollock	-	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sablefish	-	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Salmon	-	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total[2]	-	*$0*	*$0*	*$0*	*$0*	*$0*	*$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 pounds refers to the landed weight recorded in fish tickets.
[2] Totals only represent non-confidential data.

Recreational Fishing

Today, the primary economic activity in Karluk is sport hunting and fishing. As of 2011, there were six lodges in Karluk that provide a limited number of seasonal employment opportunities to local residents.[197] However, according to data reported by ADF&G, sportfishing activity appears to have declined between 2000 and 2010. While there were sport fish guide businesses registered in Karluk between 2000 and 2010, none were active during those years. The number of sport fish guide licenses held in the community declined from 14 in 2000 to 1 in 2009. No residents held sport fish guide licenses in 2010 (Table 11). Eight residents purchased sportfishing licenses in 2000 (irrespective of point of sale), while only two purchased licenses in 2000. Similarly, the number of sportfishing licenses purchased in Karluk fell from 85 in 2000 to 4 in 2009, and 0 in 2010. Given that a greater number of licenses were purchased each year in Karluk than were purchased by local residents indicates that sportfishing activities brought visitors to Karluk during the 2000-2010 period.

Karluk is located within Alaska Sport Fishing Survey Area Q – Kodiak. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. On average, Alaska resident anglers fished more angler days per year than non-Alaska residents in both saltwater and freshwater sport fisheries, and more angler days were fished per year in freshwater than in saltwater in the Kodiak region between 2000 and 2010. However, sportfishing activity in by both Alaska resident and non-Alaska resident anglers, and in both saltwater and freshwater, was extremely high. Information about the sportfishing sector in and near Karluk is displayed in Table 11.

The Alaska Statewide Harvest Survey,[198] conducted by ADF&G between 2000 and 2010, noted the following species targeted in freshwater by private anglers in Karluk: Chinook, coho, and sockeye salmon. They also noted sport harvest of Pacific halibut in saltwater by private anglers in Karluk. No kept/release log book data were reported for sportfishing charters out of Karluk between 2000 and 2010.[199]

[197] Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from http://www.kanaweb.org/files/CEDS.pdf.
[198] 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).
[199] 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.]

Table 11. Sport Fishing Trends, Karluk: 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 Karluk[2]
2000	0	14	8	84
2001	0	10	7	85
2002	0	9	7	38
2003	0	6	3	56
2004	0	7	6	54
2005	0	4	3	47
2006	0	3	6	47
2007	0	1	3	19
2008	0	1	4	16
2009	0	1	3	4
2010	0	0	3	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Alaska residents[3]	Angler Days Fished – Alaska residents[3]	Angler Days Fished – Non-Alaska residents[3]	Angler Days Fished – Alaska residents[3]
2000	16,767	38,809	18,524	47,307
2001	14,761	24,604	18,299	19,757
2002	18,356	19,737	15,018	35,113
2003	17,715	23,726	13,362	34,034
2004	18,896	22,787	21,331	31,124
2005	21,269	33,917	23,789	36,753
2006	23,511	21,991	23,483	26,239
2007	21,668	31,554	26,916	31,072
2008	20,275	31,944	24,944	24,876
2009	20,813	26,520	10,859	21,283
2010	20,012	20,365	18,871	22,211

[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

Villages have existed through history at the mouth of the Karluk River, where great numbers of salmon can be harvested. Like Alutiiq people today, the ancient residents of Karluk smoked and dried the river salmon they caught during the summer to provide food through the winter.[200] In addition to salmon, Alutiiq people living on Kodiak Island caught other fish and gathered intertidal resources on the shores. Hunting was done with harpoons and clubs, and fish were speared, gaffed, harpooned or hooked. Salmon were often caught in weirs built across rivers.[201] Today, local residents rely heavily on subsistence hunting and fishing to supplement their diets.[202] Salmon, trout, ducks, seals, and deer are some of the primary subsistence resources utilized by local residents.[203]

Between 2000 and 2010, ADF&G did not report any information about the percentage of Karluk households participating in marine resource subsistence or regarding per capita subsistence harvest (Table 12). An earlier ADF&G subsistence survey provides species-level household participation information regarding marine invertebrate, marine mammal, and non-salmon fish harvest in 1991. That year, 54% of Karluk households reported harvesting black chitons, 39% harvested mussels, 31% harvested butter clams, 23% harvested sea urchin, 15% harvested Pacific littleneck clams, 8% harvested geoducks, and 8% reported harvesting octopus. Although no households reported harvest of Dungeness crab, Tanner crab, or scallops, 8% of households reported using each of these subsistence resources in 1991. In the same year, 8% of Karluk households reported harvesting harbor seal, while 39% of households reported using harbor seal. Also in 1991, species of non-salmon fish harvested by the greatest percentage of Karluk households included Dolly Varden (69% of households reported involvement in harvesting), steelhead (46%), flounder (23%), rainbow trout (15%), and black rockfish (8%). Although no households reported harvest of Pacific cod or red rockfish in 1991, 23% of households reported using Pacific cod and 8% reported using red rockfish for subsistence. The fact that some households utilized resources not harvested in the community suggests sharing of resources between communities. It is also important to note that, in many cases, the percentage of households using subsistence resources was higher than the percentage involved in harvest, indicating the presence of sharing networks within Karluk as well.[204]

Some information was available regarding subsistence salmon, halibut, and marine mammal harvest between 2000 and 2010 in Karluk. For those years in which data were available between 2000 and 2010, the number of subsistence salmon permits issued to Karluk households varied between one and three. In addition, a number of permits were reported as returned in

[200] Smithsonian Museum of Natural History, Alaska Native Heritage Center, and Alutiiq Museum & Archaeology Repository. 2001. "Exhibition Catalog: Karluk Village Profile." In *Looking Both Ways: Heritage and Identity of the Alutiiq People of Southern Alaska: An Interactive Exhibition, Text Only Version*. Eds. Crowell, Aron L., Amy F. Steffian, and Gordon L. Pullar. University of Alaska, Fairbanks. Retrieved August 24, 2012 from http://www.mnh.si.edu/lookingbothways/text/villages/karluk.html.

[201] Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from http://ankn.uaf.edu.

[202] Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from http://www.kanaweb.org/files/CEDS.pdf.

[203] 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.

[204] 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).

2001, 2002, and 2003 although no data were available regarding the total number issued to households in those years. No information was reported regarding the species harvested using these permits. In addition, no data were reported regarding total harvest of marine invertebrates or non-salmon fish in Karluk between 2000 and 2010 (Table 13). Between 2003 and 2007, one Subsistence Halibut Fishing Certificate (SHARC) was issued per year to an individual in Karluk, and no information was reported regarding the number of permits returned or the total pounds harvested using these SHARC. In 2010, 9 SHARC were issued, and an estimated 595 lbs of halibut harvested (Table 14). Marine mammals were also harvested by Karluk residents between 2000 and 2010. According to data reported by ADF&G, between 2000 and 2008, Karluk residents harvested 11 to 63 harbor seals per year, and also harvested 2 to 3 Steller sea lions in some early years of the period (Table 15).

Table 12. Subsistence Participation by Household and Species, Karluk: 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, Karluk: 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	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	3	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	1	1	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	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	1	1	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, Karluk: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	1	n/a	n/a
2004	1	n/a	n/a
2005	1	n/a	n/a
2006	1	n/a	n/a
2007	1	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	9	5	595

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, Karluk: 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	2	22	n/a
2001	n/a	n/a	n/a	n/a	3	18	n/a
2002	n/a	n/a	n/a	n/a	3	18	n/a
2003	n/a	n/a	n/a	n/a	n/a	32	n/a
2004	n/a	n/a	n/a	n/a	n/a	21	n/a
2005	n/a	n/a	n/a	n/a	n/a	11	n/a
2006	n/a	n/a	n/a	n/a	n/a	11	n/a
2007	n/a	n/a	n/a	n/a	n/a	21	n/a
2008	n/a	n/a	n/a	n/a	n/a	63	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.

Kodiak (*KOH-dee-ack*)

People and Place

Location [205]

Kodiak is located near the northwestern tip of Kodiak Island in the Gulf of Alaska. Kodiak Island (aka: "the emerald isle") is the largest island in Alaska and is the second largest island in the United States. Kodiak National Wildlife Refuge (KNWR) encompasses nearly 1.9 million acres on Kodiak and Afognak Islands. It is 252 mi south of Anchorage (a 45-minute flight) and is a 4-hour flight from Seattle. The area encompasses 3.5 sq mi of land and 1.4 sq mi of water. Kodiak was first incorporated in 1940 and is now a Home Rule City and the seat of the Kodiak Island Borough .

Demographic Profile [206]

In 2010, there were 6,130 residents in Kodiak, ranking it the 16th largest of 352 total Alaskan communities with recorded populations that year. Between 1990 and 2010, the population declined by 3.7%. Between 2000 and 2009, the population increased by 4.6% with an average annual growth rate of 0.51%, which was similar to statewide average of 0.75% and indicative of modest growth (Table 1). In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there were an estimated 6,000 permanent residents, and 600 transient residents living in Kodiak in 2010. According to community leaders, seasonal workers live in Kodiak from July through September, with annual population peaks typically occurring in July and August. Peaks in population are mostly driven by employment in fisheries sectors.

Kodiak has a racially and ethnically diverse community. The majority of the Alaska Native population is Alutiiq, and there is a large Filipino subculture residing in the city. The majority of the changes in racial distribution in the population occurred as proportional increases in the Asian population and decreases in the White population between 2000 and 2010. Further, in 2010, 40.3% of residents identified themselves as White, compared to 46.4% in 2000; 37.4% identified themselves as Asian, compared to 31.7% in 2000; 9.9% identified themselves as American Indian or Alaska Native, compared to 10.5% in 2000; 1.0% identified themselves as Native Hawaiian or Other Pacific Islander, compared to 0.9% in 2000; 0.5% identified themselves as Black or African American, compared to 0.7% in 2000; 6.3% identified themselves as two or more races, compared to 5.4% in 2000; and 4.6% identified themselves as some other race, compared to 4.4% in 2000. In addition, 9.4% of residents identified themselves as Hispanic or Latino, compared to 8.5% in 2000. Information regarding racial and ethnic trends can be found in Figure 1.

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[205] 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.

[206] 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.

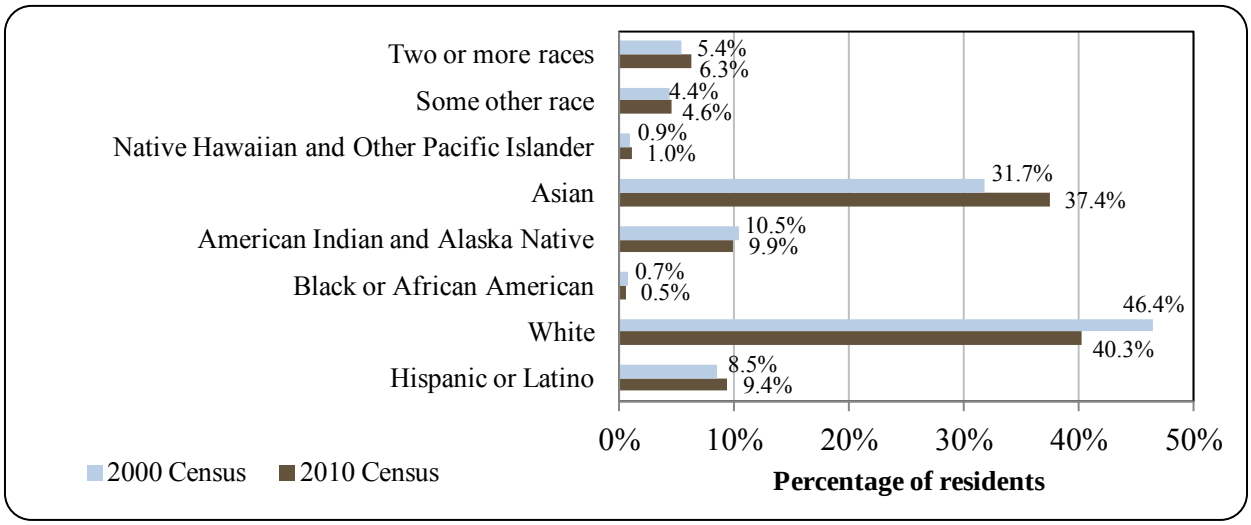
Table 1. Population in Kodiak from 1990 to 2010 by Source.

Year	U.S. Decennial Census[1]	Alaska Dept. of Labor Estimate of Permanent Residents[2]
1990	6,365	-
2000	6,334	-
2001	-	6,073
2002	-	6,100
2003	-	6,109
2004	-	6,210
2005	-	6,139
2006	-	5,670
2007	-	5,796
2008	-	6,541
2009	-	6,626
2010	6,130	-

[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, Kodiak: 2000-2010 (U.S. Census).

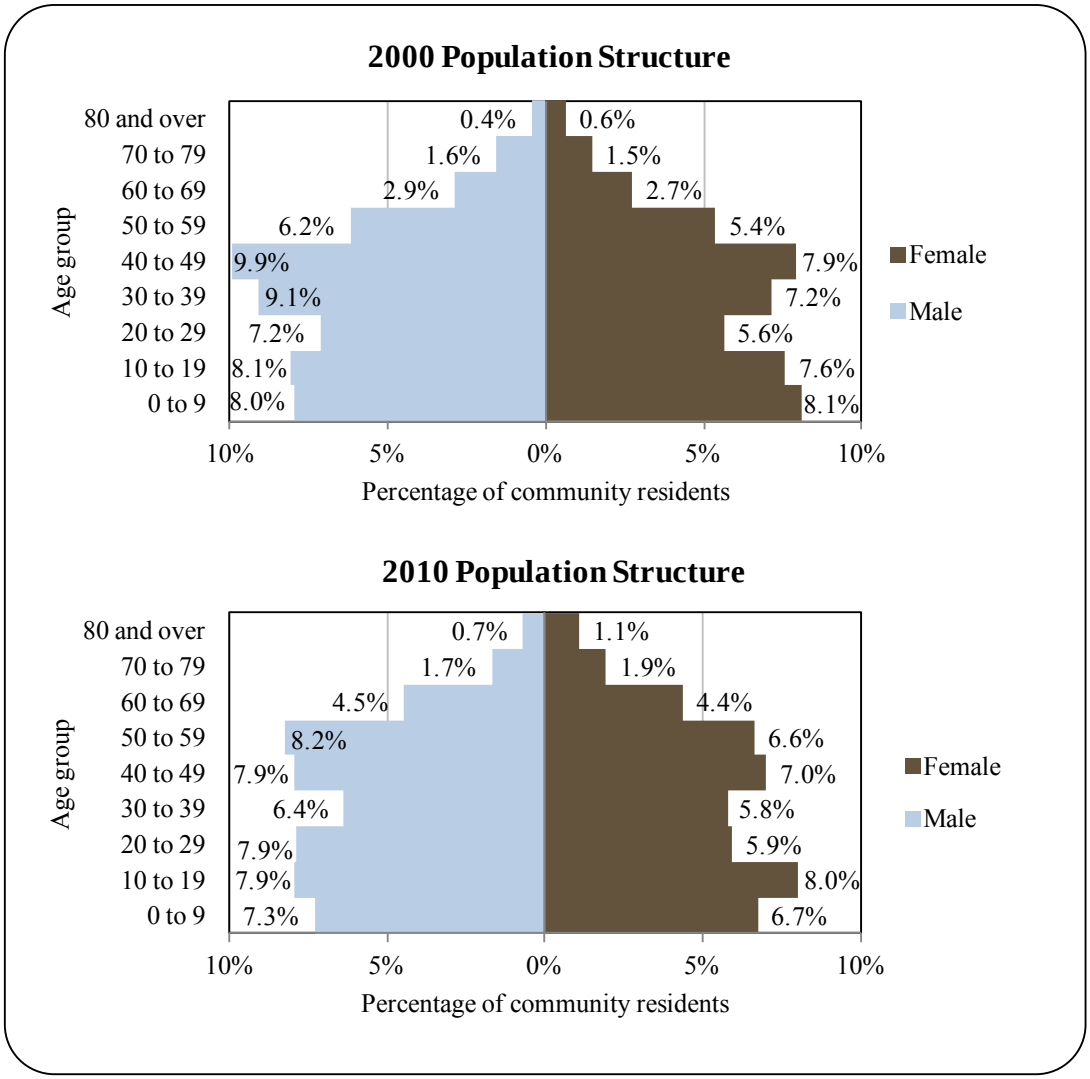


In 2010, the average household size was 2.94, compared to 2.90 in 1990 and 3.10 in 2000. In that year, there were a total of 2,178 households, compared to 2,177 in 1990 and 2,255 in 2000. Of the households surveyed in 2010, 46% were owner-occupied, compared to 43% in 2000; 47% were renter-occupied, compared to 46% in 2000; 5% were vacant, compared to 10% in 2000; and 2% were occupied seasonally, compared to 1% in 2000. In addition, 144 residents were living in group quarters in 2010, compared to 146 in 2000.

In 2010, the gender distribution in Kodiak was 52.5% male and 47.4% female. This was similar to both the statewide gender distribution (52.0% male, 48.0% female), and 2000 distribution (53.3% male, 46.7% female). The median age that year was 35.1 years, which was higher than both the statewide median of 33.8 years and 2000 median of 33.5 years.

In general, population structure was stationary in both 2000 and 2010. However, cohorts displayed age transitions consistent with a stable population, meaning that they retained their overall structure as they aged. In 2010, 29.9% of residents were under the age of 20, compared to 31.8% in 2000; 14.3% were over the age of 59, compared to 9.7% in 2000; 41.9% were between the ages of 30 and 59, compared to 45.7% in 2000; and 13.8% were between the ages of 20 and 29, compared to 12.8% in 2000.

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



Gender distribution by age cohort was more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 20 to 29 range (7.9% male, 5.9% female), followed by the 50 to 59 (8.2% male, 6.6% female) and 40 to 49 (7.9% male, 7.0% female) ranges. Of those three, the greatest relative difference occurred within the 20 to 29 range. Information regarding changes in Kodiak's population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)[207] estimated that 88.2% 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 7.8% had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; and estimated 4.0% had 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 30.4% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 8.5% held an Associate's degree, compared to an estimated 8.0% of Alaska residents overall; an estimated 17.8% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 5.8% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Kodiak Island is estimated to have been inhabited for at least 7,500 years.[208,209,210] According to some archaeologists "the ancestors of the present-day Native Alaska residents of the Alutiiq culture area have continuously inhabited the area for at least 7,000 years."[211] Alutiiq is the more recent term which is used for the culture and the language of the "group of Alaska Native people indigenous to the Kodiak Island Archipelago, the southern coast of the Alaska Peninsula, Prince William Sound, and the lower tip of the Kenai Peninsula."[212] By about 1200 C.E., the Island may have had a population of about 14,000 Alutiiq inhabitants which is similar to the total number of inhabitants today on the island of Kodiak.[213]

At the time of Russian contact the peoples living on Kodiak Island were the Koniags (the Alutiiq of Kodiak Island and the Alaska Peninsula) of which there were 10,000 or more.[214] The first European and specifically Russian contact was in 1763 by Stephen Glotov. A Russian settlement was established at Three Saints Bay by Gregorii Shelikof in 1784 where the native population was forced to work hunting sea otters. Prior to this hundreds of Alutiiq natives were killed attempting to hide from Shelikof's party and the Alutiiqs were dominated by the Russians

[207] 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.
[208] Crowell, A.L. Steffian, A.F., and G.L. Pullar, eds. 2001. Looking Both Ways: Heritage and Identity of the Alutiiq People. University of Alaska Press, Fairbanks.
[209] Clark, D.W. 1998. Kodiak Island: The Later Cultures. *Arctic Anthropology* 35:172-186.
[210] Clark, D.W. 1984. Pacific Eskimo: Historical Ethnography. In *Handbook of North American Indians, vol. 5*. D. Damas, ed. Pp 185-197. Smithsonian Insitution, Washington D.C.
[211] Mason, R. (1995). *The Alutiiq Ethnographic Bibliography*. Retrieved April 3, 2012 from http://www.ankn.uaf.edu/aeb.html
[212] Ibid.
[213] Rennick, P., ed. (2002). From Kodiak to Unalaska. *Alaska Geographic*, 29(4).
[214] Korsmo, F. L. (1994). The Alaska Natives. In Minority Rights Group (Ed.), *Polar Peoples: Self Determination and Development*. London: Minority Rights Publications.

using muskets and cannons. Shelikof was recalled back to Russia and in 1792 Alexander Baranov, a fur trapper established a trading post at St. Paul Harbor, which is the site of the City of Kodiak today. Kodiak became the capital of Russian America and at that time the island was called "Kikhtak" and later "Kadiak" which is the Inuit word for the island. Russian Orthodox clergymen arrived around 1794 to missionize the people of the region. There were more than 6,500 Koniags in the area at that time, but by the end of Russian control of the island in 1867 the population had decreased down to around 2,000 because of "hardship, accidents, and starvation, along with diseases introduced by the Russians."[215]

Alaska became a U.S. Territory in 1867 and the harvesting of the sea otters was still the major commercial enterprise of the area, although this quickly led to the near extinction of the animals. In 1882 a fish cannery opened at the Karluk spit which began the development of commercial fishing in the Kodiak area. Many canneries opened by the 1890's with salmon being the main fish harvested at that time. Kodiak was incorporated in the year of 1940. During World War II, Kodiak was a key operations area throughout the Aleutian Campaign and both the Navy and Army built bases on the island. The population of the town rocketed up to more than 25,000 people during the World War II. After the war the Navy base was transferred into a Coast Guard base and now is the largest Coast Guard base in the world.

Natural Resources and Environment

The climate of the Kodiak Islands has a strong marine influence. There is little to no freezing weather, moderate precipitation, occasional high winds, and frequent cloud cover and fog. Severe storms are common from December through February. Annual rainfall averages 67 inches, and annual snowfall averages 78 inches. January temperatures range from 14 to 46 °F (-10 to 8 °C); July temperatures vary from 39 to 76 °F (4 to 24 °C).[216]

Kodiak Island comprises of 3,588 sq mi of diverse landscapes, and is part of a larger archipelago encompassing roughly 5,000 sq mi. The Island consists primarily of mountainous terrain, with mountain ridges running northeast-southeast. Most peaks range between 3,000 and 4,000 ft, although several peaks are greater than 4,000 ft. Approximately 40 small cirque glaciers are located along the main divide of the glaciers; feeding into hanging valleys. Many swift-water streams drain upland areas. The Barren Islands to the north of Shuyak Island consist primarily of barren, rocky environments. Tugidak Island is relatively flat and supports expansive areas of moist and wet tundra. Sitka spruce stands dominate much of the landscape from the shore to the treeline on Shuyak Island to northeastern Kodiak Island. Stands extend south to a general northwest-southeast divider running from Kupreanof Peninsula to Cape Chiniak. Southeast Kodiak Island is relatively flat and covered by wet and moist tundra. Exposed bedrock and shallow soils cover the 2,500 mi coastline.[217]

Subsurface geology is diverse, consisting of both marine sedimentary and meta-sedimentary rocks to intrusive igneous plutons that make up the ridge and peak formations that provide the interior drainage divide of Kodiak Island. The central part of the island is composed of weakly metamorphosed turbidites including shale, slate, and phyllite, with lesser amounts of

[215] See footnote 211.
[216] 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.
[217] Kodiak Chamber of Commerce. (2003). *Kodiak Region Comprehensive Economic Development Strategy.* Retrieved September 11, 2012 from: http://www.commerce.state.ak.us/dca/plans/KodiakRegion-EDP-2003.pdf.

siltstone and greywacke sandstone. The southeast portion of the island consists of clastic sedimentary marine deposits, including siltstone. Most of the Kodiak Island was extensively glaciated during the late Pleistocene. During glacial maximum, glaciers extended well offshore in the southern region of the Island. As they retreated they scoured bedrock and left a thin layer of moraine which is clay-rich and poorly drained. As glaciers retreated into valleys, cobble and boulder outwash was deposited at the lower reaches, leaving glacio-fluvial gravels more than 100 ft thick in some areas. Following deglaciation, the Island was repeatedly coved by layers of volcanic ash from Alaska Peninsula volcanoes, the thickest and most recent originating from the 1912 Mt. Katmai eruption. Ash rich soils are moderately permeable and can form perched aquifers when covering bedrock. Perched aquifers are generally very shallow and easily contaminated, possibly leading to a high incidence of septic system failure on the Island.[218]

Primary habitat areas located within the Kodiak Island Borough include small portions of the Alaska Maritime National Wildlife Refuge and Alaska Peninsula National Wildlife Refuge, The KNWR, Shuyuk Island State Park, Afognak Island State Park, Tugidak Island Critical Habitat Area, Koniag Inc. trust lands, and other essential habitat areas throughout the Borough.[219] The KNWR encompasses 1.9 million acres of the southwestern two-thirds of Kodiak Island, Uganik Island, Ban Island, and the Red Peaks area on the northwest side of Afognak Island. In terms of local wildlife, six species of terrestrial mammals occur naturally within the KNWR. These include: Kodiak brown bear, red fox, river otter, ermine, tundra vole, and little brown bat. Introduced species include Sitka black tail deer, mountain goats, Roosevelt elk, reindeer, beaver, red squirrel, snowshoe hare, and pine marten. In addition, a total of 247 species of birds have been observed on the Kodiak archipelago.[220] Freshwater and anadromous fish include all five species of Pacific salmon, Dolly Varden, and rainbow trout. Saltwater species include sablefish, Alaska pollock, Pacific cod, Pacific halibut, black rockfish, skate, lingcod, octopus, littleneck clams, shrimp, scarlet king crab, red sea cucumber, golden king crab, Tanner crab, Dungeness crab, razor clams, sea urchin, and Pacific herring. Marine mammals include sea otters; Dalls porpoise; while-sided porpoise; fin, minke, sei, humpback, and gray whales; Steller sea lion; and harbor seals.[221]

Kodiak Island has an abundance of natural resources. The KNWR provides ecosystem services which support wildlife habitat and recreational opportunities. Wildlife viewing, hunting, hiking, fishing, and camping are accessible by boat, floatplane, or road system.[222] Mineral resources include lode deposits of gold, mainly in quartz veins, are found throughout the Kodiak Island Borough. Tungsten, chromite, pyrite, arsenopyrite, galena, bornite, chalcopyrite, pyrrhotite, chlorite, sphalerite, and stibnite occurrences are also found within the Borough. Placer gold mining produced approximately $150,000 from Borough beaches in the early 20th century. Lode mining of gold occurred prior to World War I, and a small amount of activity continued until 1935. However, gold mining has generally been unprofitable within the Borough, and there are no active commercial-scale mining operations within the vicinity of Kodiak. Coal Beds are found on the eastern portion of Kodiak Island and on Sitkinak Island. The coal that is exposed

[218] Kodiak Island Borough. (2008). *KIB Comprehensive Plan Update.* Retrieved September 11, 2012 from: http://www.commerce.state.ak.us/dca/plans/KodiakIslandBorough-CP-2008.pdf.
[219] Ibid.
[220] U.S. Fish & Wildlife Service. (n.d.). *Kodiak National Wildlife Refuge.* Retrieved September 11, 2012 from: http://www.fws.gov/refuge/kodiak/.
[221] Glen Gray and Associates. (2007). *KIB Coastal Management Plan – Final Plan Amendment.* Retrieved September 11, 2012 from: http://alaskacoast.state.ak.us/District/FinalFinalPlans/Kodiak/Kodiak_CMP.pdf.
[222] See footnote 218.

does not contain economically viable reserves. Abundant sand, gravel, and rock resources are available for local use. A large sand and gravel deposit is found on one of the Trinity Islands.[223]

Timber resources are abundant, and make up an important although declining segment of the Kodiak economy. Sitka spruce stands extend from the northern portion of Kodiak Island toward both the south and west. Most natural emerging stands contain many knots which decrease their value. Second growth stands that develop naturally following clear-cutting produce higher quality timber. In 2002, two forest products companies operated within the Kodiak Island Borough. Production has been in decline due to depressed Asian timber markets. The Kodiak Island Borough contains portions of petroleum reserves located within the Cook Inlet Planning Area for Oil and Gas Lease 149. Three exploration plays sourced are recognized in the sale area.[224] Cultural and historic resources which are listed on the National Register of Historic Places and are located in Kodiak include the Agricultural Experiment Station Barn, American Cemetery, Erskine House, Fort Ambercrombie State Historic Site, Holy Resurrection Church, Kad'yak, and several archaeologically significant sites. Sites in the area al mostly related to Alutiiq cultural history, Russian Orthodox history, or World War II.[225]

Kodiak Island is located in a geologically active zone, and hazards posed by earthquakes and volcanism are prevalent. Many fault lines run along the length of Kodiak Island in a southwest-northeast direction, just south of the City of Kodiak. Kodiak Island lies directly above the eastern Aleutian subduction zone and the Aleutian megathrust, which lies under Kodiak, is the largest active fault in North America. The Kodiak Island Borough designates the entire coastal zone, excluding federal land, as an Earthquake Hazard Area. It generated the 1964 "Good Friday" earthquake which devastated many coastal areas around south-central Alaska. Much of downtown Kodiak was destroyed by the resulting tsunami. The City of Kodiak has experience at least 14 earthquake generated tsunamis since settlement by Russians in the late 18th century. The Alaska Volcano Observatory at the University of Alaska Fairbanks list 19 active or dormant volcanoes bordering the western edge of the Kodiak Island Borough, on the Alaska Peninsula. Several have generated major eruptions including the 1912 Mt. Katmai eruption. Pyroclastic flows, lahars, and slope failures have the potential to create tsunamis if they reach the Shelikof Straits. Steep slope relief within the Kodiak area poses a significant threat of slope failure and avalanche. Flood hazards are present in valley bottoms of larger rivers and along some coastlines. Bank erosion hazards are high among rivers and channels where there is a high content of glaciofluvial and alluvial deposition. The Kodiak Island Borough designates areas 20 ft on either side of rivers and streams and areas 50 ft from the mean high water mark of coastlines as erosion hazard areas.[226,227]

There are a number of hazardous waste "Superfund" sites located within the Kodiak Island Borough; however, none of them are on the National Priorities List. Most contamination sites involve petroleum products, sourced from fuel farms and marine vessel spills. Portions of the Kodiak region were also impacted by the 1989 *Exxon Valdez* spill.[228] According to the Alaska Department of Environmental Conservation, there is an ongoing cleanup effort being conducted within the vicinity of the U.S. Coast Guard Integrated Support Command facility.

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[223] See footnote 221.
[224] Kodiak Chamber of Commerce. (2003). *Kodiak Region Comprehensive Economic Development Strategy.* Retrieved September 11, 2012 from: http://www.commerce.state.ak.us/dca/plans/KodiakRegion-EDP-2003.pdf.
[225] See footnote 218.
[226] Ibid.
[227] See footnote 221.
[228] See footnote 218.

Contaminates of concern include petroleum compounds, PCBs, paints, solvents, metals, herbicides, pesticides, and leachate from solid waste. Possible impacts to the Buskin River, which runs through the facility, are being monitored.[229]

Current Economy[230]

Commercial fishing, seafood processing, and commercial fishing support services are the major industries contributing to the local economy. The U.S. Coast Guard station is also a significant employer. Other industries include retail services and government. Tourism is growing, and recreational fishing, hiking, and kayaking are increasing in popularity. In 2002, the visitor industry generated estimated revenue of over $19 million. The local hospital is another top employer. The Kodiak Launch Complex is a commercial orbital launch facility operated by the Alaska Aerospace Corporation, a public corporation of the State of Alaska. In 2001, the launch facility provided an equivalent of 85 jobs.[231] In a survey conducted by the AFSC in 2011, community leaders reported that Kodiak's economy is reliant on logging, fishing, ecotourism, and sport hunting and fishing.

In 2010,[232] the estimated per capita income was $23,674 and the estimated median household income was $56,731, compared to $21,522 and $55,142 in 2000. However, after adjusting for inflation by converting 2000 values to 2010 dollars,[233] the real per capita income ($28,301) and real median household income ($72,511) indicate a decline in both individual and household earnings. In 2010, Kodiak ranked 121st of 305 communities from which per capita income was estimated, and 91st of 299 communities from which median household income was estimated.

However, Kodiak's small population size may have prevented the ACS from accurately portraying economic conditions.[234] 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 $84.04 million in total wages in 2010.[235] When matched with the 2000 Decennial Census population, the per capita income equaled $13,710, which was significantly lower than the 2010 ACS estimate, and suggests that caution should be used when comparing 2010 ACS and 2000 Census figures.[236]

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[229] Alaska Dept. of Environmental Conservation (n.d.). *Contaminated Sites Program.* Retrieved September 12, 2012 from: http://dec.alaska.gov/spar/csp/list.htm.
[230] Unless otherwise noted, all monetary data are reported in nominal values.
[231] See footnote 224.
[232] U.S. Census American Community Survey 2006-2010 estimates.
[233] 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).
[234] 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.
[235] ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.
[236] 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/.

According to 2006-2010 ACS estimates,[237] 75.4% of residents over the age of 16 were in the civilian labor force and 2.5% were in the Armed Forces in 2010. Unemployment that year was estimated at 3.0%, compared to 5.9% statewide; and an estimated 12.8% of residents were living below the poverty level, compared to an estimated 9.5% of Alaska residents overall. According to 2010 ALARI estimates, the unemployment rate was 23.9% based on unemployment insurance claimants.[238] Both the unemployment rate and per capita income estimated by DOLWD differed significantly from 2010 ACS estimates.

Of those employed in 2010 (according to ACS estimates), an estimated 82.5% worked in the private sector, an estimated 13.6% worked in the public sector, and an estimated 3.9% were self-employed. Kodiak's economy is diverse. By industry, most (22.7%) employed residents were estimated to work in manufacturing sectors; followed by retail trade (18.8%) and education services, health care, social assistance sectors (15.4%). Between 2000 and 2010, there were no extreme variations in employment by industry sector. The most significant proportional increase occurred in retail trade sectors, while the most significant proportional decline occurred in manufacturing sectors. Agriculture, forestry, fishing, hunting, and mining sectors accounted for 1.8% of industry sector employment in 2010, compared to 6.8% in 2000. According to 2010 ALARI estimates, most (37.2%) employed residents worked in manufacturing sectors; followed by trade transportation, and utilities (16.1%) and educational and health service (9.3%) sectors.[239]

According to 2006-2010 ACS estimates, by occupation, most (32.9%) employed residents were estimated to hold production, transportation, or material moving positions; followed by sales or office (28.9%); management or professional (17.9%); service (17.1%); and natural resource, construction, or maintenance (6.3%) positions. Again there were no extreme variations in employment by occupation type between 2000 and 2010. The most significant proportional gain occurred in residents holding sales or office positions. The most significant proportional decline occurred in residents holding natural resources, construction, or maintenance positions. According to 2010 ALARI estimates, most employed residents held occupations related to food processing; followed by cashiers, janitorial, and retail sales positions.[240] There was a diverse range of occupations represented in Kodiak in 2010, and DOLWD listed over 100 distinct occupational categories. Information regarding employment trends can be found in Figures 3 and 4.

[237] See footnote 234.
[238] See footnote 236.
[239] Ibid.
[240] Ibid.

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

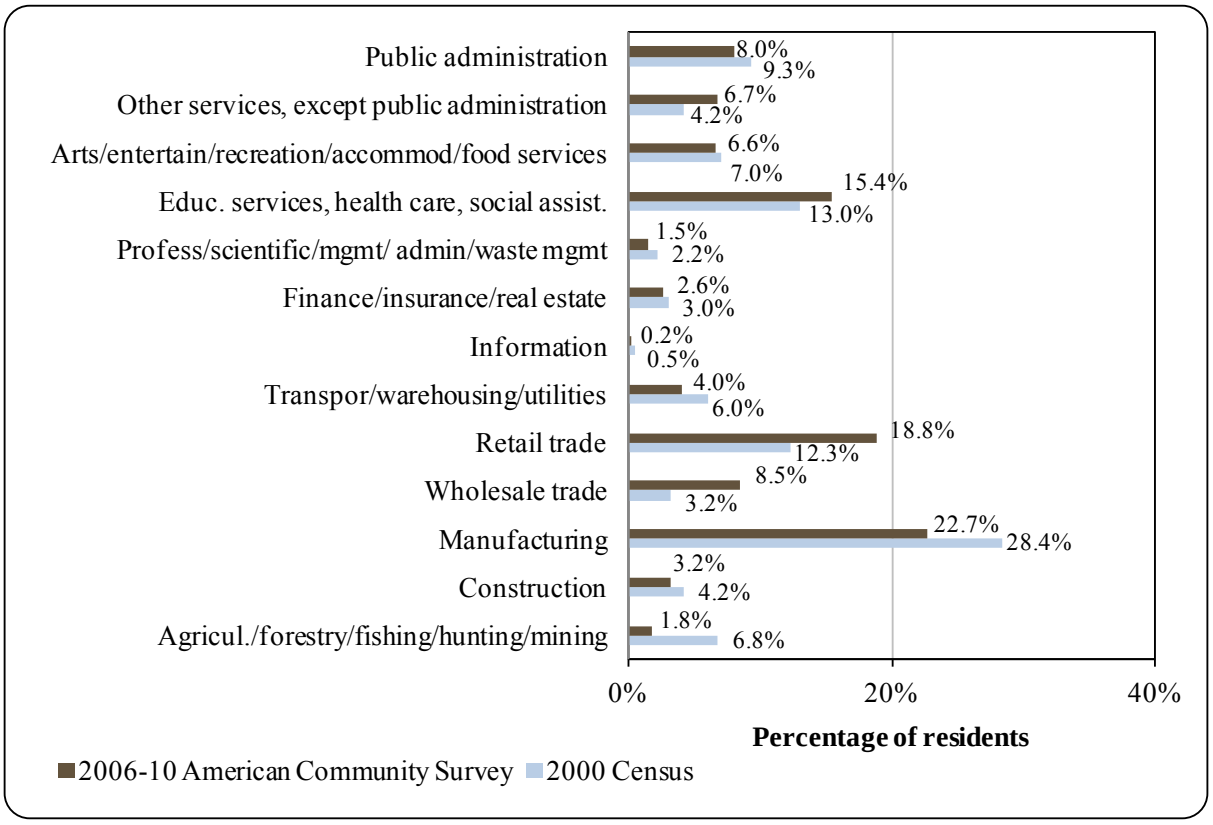
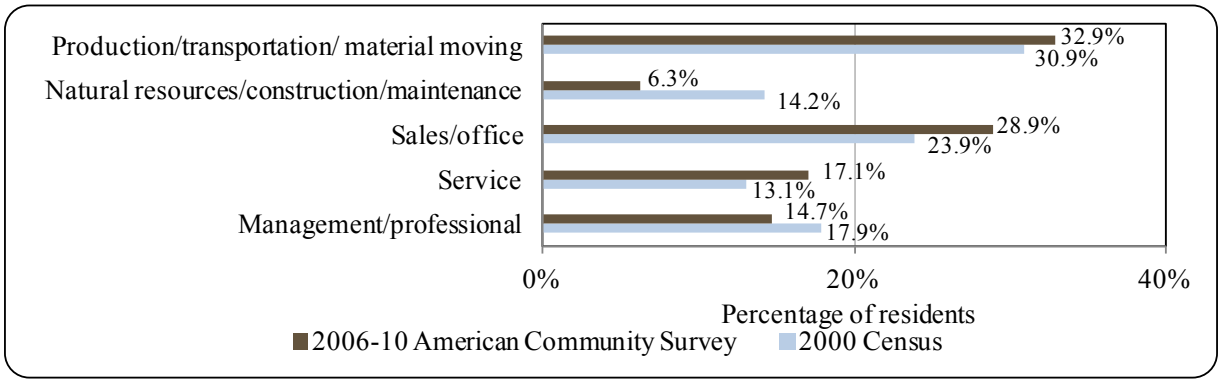


Figure 4. Local Employment by Occupation in 2000-2010, Kodiak (U.S. Census).



Governance

Kodiak is a Home Rule city and the seat of the Kodiak Island Borough. Incorporated in 1940, Kodiak has a Council-Manager form of government, which includes a mayor, a six-person city council, a five member school board, and six municipal employees. The City of Kodiak also has a seven-member advisory board.[241] In addition, there is a U.S. Bureau of Indian Affairs recognized tribal government located in Kodiak. The Shoonaq' Tribe of Kodiak was federally recognized in 2001. The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Kodiak is Koniag, Incorporated, and the local ANCSA chartered non-profit is the Kodiak Area Native Association. The ANCSA chartered village corporation is Native of Kodiak, Inc.

The closest National Marine Fisheries Service (NMFS), Alaska Department of Fish & Game (ADF&G), and Bureau of Citizenship and Immigration Services offices are all located within the city of Kodiak. The new NOAA ship *Oscar Dyson* is homeported in Kodiak.

There is a 6% sales tax for a maximum of $30 per transaction, a property tax of 2 mills (0.2%) by the City and 9.25 mills (0.93%) by the Borough, and a 5% accommodations tax imposed by the City and the Borough. Beyond the revenue sources that accrue to the municipality directly, residents of Kodiak (like the residents of other communities on the island) derive benefits from services provided by the Borough, which also funds its services in part through fishery derived revenues. The Borough has a resource-based severance tax that applies to extraction of natural resources including rock, sand, and gravel as well as timber and fish. This Borough tax is designed to mirror that state raw fish tax with the taxes being applied to the transactional value at the point of extraction, based on the value paid to commercial fishermen (as part of the transaction with the processors upon landing).

In 2010, Kodiak's municipal budget was $30.48 million, compared to $22.99 in 2000; a 2.5% increase after adjusting for inflation.[242] Municipal revenues estimated here include general fund revenues, special revenues, enterprise funds, and capital project funds. The annual municipal budget peaked in 2008 at $60.76 million. In 2010, sales tax accounted for 30.5% of the total municipal budget that year, compared to 31.0% in 2000. In addition, state allocated Community Revenue Sharing accounted for 1.4% of the total municipal budget that year, compared to less than 1% in 2000. Fisheries related state and federal grants awarded to Kodiak between 2000 and 2010 included: $2.0 million for a large vessel lift and boat yard, $250,000 for a cruise ship pier master plan, $710,000 for city harbor projects, $2.3 million for Pier III repairs; $2.3 million for a travel lift and tidal grid, $78,367 for seafood marketing projects, $15,000 for Half Moon Bay Fisheries: RSW and Skiff modifications, $200,000 for St. Herman Harbor loading dock planning and design, $200,000 for a fisheries research building feasibility study, and $140,000 for St. Paul Harbor spit improvements. Information regarding municipal finances can be found in Table 2.

[241] City of Kodiak (2006). *City of Kodiak Annual Operating Budget: July 1,2005 – June 30, 2006*. Prepared for Kodiak City Council. May 25, 2005. Retrieved July 27, 2012 from http://www.commerce.state.ak.us/dcra/commfin/Kodiak/KodiakFY06Budget.pdf.
[242] Inflation calculated using Anchorage CPI from Alaska DOL: http://labor.alaska.gov/research/cpi/cpi.htm.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kodiak 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	$22,985,854	$7,122,358	$82,265	n/a
2001	$25,204,376	$7,139,290	$70,535	$140,000
2002	$29,219,409	$6,996,894	$68,511	$400,000
2003	$33,409,555	$7,003,452	$63,501	$150,000
2004	$27,827,753	$7,130,691	n/a	$95,367
2005	$34,780,344	$7,328,281	n/a	$2,300,000
2006	$32,797,953	$7,814,820	n/a	$2,000,000
2007	$48,467,736	$8,136,785	n/a	$600,000
2008	$60,759,520	$8,838,679	n/a	n/a
2009	$55,024,164	$8,878,804	$400,759	$2,960,000
2010	$30,482,743	$9,308,959	$428,304	n/a

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

Infrastructure

Connectivity and Transportation[243]

Kodiak is accessible by air and sea. The state-owned Kodiak airport has three asphalt runways measuring 7,542-ft long by 150-ft wide, 5,399-ft long by 150-ft wide, and 5,013-ft long by 150-ft wide. Kodiak Municipal Airport also offers a 2,475-ft long by 40-ft wide paved runway. Three airlines serve Kodiak with several daily flights, and a number of air taxi services provide flights to other communities on the island. City-owned seaplane bases at Trident Basin and Lilly Lake accommodate floatplane traffic. Roundtrip airfare between Anchorage and Kodiak in June 2012 was $360.[244]

Approximately 140 mi of state roads connect island communities on the east side of the island. Rental cars are available through Budget, Rent-a-Heap, and Avis. Numerous taxi services are available for transport on the island. Kodiak also has its own transit system with limited public service.

[243] 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.
[244] Airfare calculated using lowest fare from www.travelocity.com (Retrieved November 22, 2011).

Facilities

Electricity in Kodiak is operated and purchased by Kodiak Electric Association Incorporated, a cooperative utility, from the Four Dam Pool-owned Terror Lake Hydroelectric Facility. Kodiak Electric Association also operates a Coast Guard-owned plant and owns three additional diesel-powered plants at Swampy Acres, Kodiak, and Port Lions. In a survey conducted by the AFSC in 2011, community leaders indicated that Kodiak plans to expand their alternative energy sources (e.g. hydro, wind, tidal) between 2012 and 2015. The City operates piped water and sewage systems. Water is supplied by the Pillar Creek and Monashka Creek reservoirs and chlorinated before distribution. Piped sewage is processed in a treatment plant. All homes are fully plumbed. A washeteria is privately operated within the community. Refuse collection services are provided by the Kodiak Borough through Waste Management Inc., and refuse is delivered to a permitted, Class 1 landfill located six mi north of the city at Monashka Bay.[245]

A public teen center, community gym and pool, public library, and food bank are also available in the community.[246] Community leaders report that a community center will be completed between 2013 and 2015. Safety services are provided by the City police department and the state trooper post in Kodiak itself. The City also maintains its own fire department. Visitor accommodations are provided by Russian Heritage Inn, Comfort Inn, and 38 Bed and Breakfasts in the area.[247] The community is also home to four museums including the Alutiiq Museum. Kodiak also has a post office, and telephone service and broadband internet access are in place.

With regard to fisheries-related infrastructure, the City provides several public dock facilities. Pier I is 204-ft by 28-ft and provides mooring, loading, and unloading capabilities. Services include water and bulk fuel. This dock also services Alaska Marine Highway ferries. Pier II (City Dock) is 804-ft by 64-ft and has a harbor depth that exceeds 30 ft depending on tides (which range approximately 10 ft). Uses include loading and unloading commercial freight, and services include bulk fuel, water, warehousing, and cargo cranes. Pier III (Container Terminal) is 490-ft by 64-ft. Uses include container services for general cargo, and services include water and a 30 ton Gantry crane. Small vessel moorage includes two small boat harbors with 600 stalls and mooring buoys in St. Paul and St. Herman Harbors. Ship and boat repair services are available through local boatyards, and can accommodate vessels up to 150 tons. Dry dock storage is also available.[248]

In the 2011 AFSC survey, community leaders reported that 35,000 linear ft of floating dock space and 3,000 linear ft of fixed dock space is available for permanent vessels to moor at. Transient vessels have access to 5% of dock space for mooring. The current dock infrastructure is serviced by electricity, water, and roads although no fuel tanks exist at the dock. Currently, community leaders report that vessels up to 710 ft long can use moorage in Kodiak, and the port of Kodiak is capable of handling rescue vessels (e.g., Coast Guard), cruise ships, ferries, fuel barges, and containers ships. Community leaders also report that Kodiak has a fish cleaning station and built dry dock space, haul out facilities, and an Environmental Protection Agency

[245] See footnote 243.
[246] Ibid.
[247] Ibid.
[248] Kodiak Chamber of Commerce. (2003). *Kodiak Region Comprehensive Economic Development Strategy.* Retrieved September 11, 2012 from: http://www.commerce.state.ak.us/dca/plans/KodiakRegion-EDP-2003.pdf.

certified boat cleaning station in 2009. Within the next 10 years, Kodiak hopes to make improvements to its existing dock structure and construct new dock spaces. Community leaders indicate that multiple fisheries-related businesses are available in Kodiak, including fish processing plants, fishing gear sales and repair, haul out facilities, and extensive boat repair services.

Medical Services[249]

The primary medical facilities in Kodiak are the Alutiiq Health Clinic, the Kodiak Community Health Center, the Providence Kodiak Island Medical Center, and the U.S. Coast Guard (USCG) Rockmore-King Medical Clinic. Both hospitals are qualified Acute Care Facilities, and long-term care is available at Providence Kodiak Island Medical Center. The USCG facility provides emergency support only. The City is part of the Southern Emergency Medical System (EMS) Region. Emergency Services have limited highway marine airport floatplane and helicopter access, and are provided by 911 Telephone Service and paid EMS Service.

Educational Opportunities

In 2012, there were 6 schools and a correspondence school. Combined, these schools employed 144 teachers, and enrolled 2,147 students.[250] Kodiak is located in the Kodiak Island Borough School District. St. Herman Orthodox Seminary, located in Kodiak, is one of only two Russian Orthodox seminaries in the United States. Kodiak College, a branch of the University of Alaska system, offers a number of occupational certificates and undergraduate degrees. Bachelor's degrees are offered for early childhood education and elementary education.[251]

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Kodiak archipelago was likely populated approximately 7,500 years ago. The Alutiiq culture has been strongly dependent on harvesting fish, marine invertebrates, and marine mammals. Salmon, caught in both salt and fresh water, have been extremely important resources and Alutiiq peoples have traditionally hunted whales. Today, residents of Kodiak Island Borough continue to rely on subsistence resources as a lifestyle, and to supplement income and diet. Reliance on subsistence resources is higher within the six villages within the Borough with higher Alaska Native populations than in the City of Kodiak and other communities along the road system.[252]

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[249] 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.
[250] Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from http://eed.alaska.gov/stats/.
[251] Kodiak College. (n.d.). *Degrees and Certificates.* Retrieved September 13, 2012 from: http://www.koc.alaska.edu/.
[252] Glen Gray and Associates. (2007). *KIB Coastal Management Plan – Final Plan Amendment.* Retrieved September 11, 2012 from: http://alaskacoast.state.ak.us/District/FinalFinalPlans/Kodiak/Kodiak_CMP.pdf.

Kodiak has participated in commercial fisheries since the early 1800s, when Russians in the area began salting and exporting salmon. The first salmon cannery was established on the Karluk spit in 1882 to take advantage of large sockeye runs. By 1889, five canneries were operating on the mouth of the Karluk River. Sockeye salmon harvests in the region ranged between 1.0 million (1887) and 4.83 million (1901) fish between 1887 and 1928. From 1984 to 1999, the average ex-vessel value of salmon landings was $88.3 million. A record harvest of 39 million salmon occurred in 1993 within the Kodiak Management Area (KMA). Over 800 salmon producing streams are located in the KMA, contributing to the highly productive fishery. [253]

Before 1950, most seafood processing facilities in Kodiak were dedicated to salmon. However, in 1950, 60,000 pounds of king crab were landed and processing capacity was added by building new plants and expanding others. The king crab fishery became a major component in Kodiak's fisheries economy from 1950 to 1959 as catch increased from 60,000 to 21 million pounds. By 1968, the City of Kodiak was the largest fishing port in the United States in terms of ex-vessel value. However, by the late 1960s and early 1970s, harvest levels began to drop and several seafood processors relocated in Unalaska and Dutch Harbor to be closer to the crab supply. This diverted much of the Bering Sea and Aleutian Island harvests away from Kodiak. In 1982, king crab harvest was 8.7 million pounds, which was the lowest in 24 years. Soon after, the crab fishery was closed because of poor stock conditions.

The Kodiak shrimp fishery began in the 1950s with a harvest of 31,886 pounds in 1958. The fishery grew rapidly to an annual catch of 10 to 12 million pounds in the early 1960s. The 1964 "Good Friday" earthquake devastated seafood processing infrastructure, leading to the fishery's decline; however, harvests peaked in 1970s at 82.2 million pounds in 1971. Sharp declines in harvests followed this peak, and effort was shifted to the Chignik and South Peninsula areas until those areas experienced similar declines in the late 1970s. Since its decline, the Kodiak shrimp fishery has remained depressed.

As harvests and processing capacity declined through overharvesting and resource competition, an effort to develop groundfish fisheries began in the 1980s and continued through the 1990s. During those two decades, groundfish landings increased from $528,000 to almost $45 million ex-vessel, making groundfish one of Kodiak's most valuable fisheries.

Kodiak is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central Gulf of Alaska Sablefish Regulatory Area. The community is not eligible for the Community Quota Entity program or the Community Development Quota program.

Processing Plants

According to ADF&G's Intent to Operate list, there were 11 shoreside processing plants in Kodiak in 2010. Alaska Fresh Seafoods, Inc. operates a seafood processing facility in Kodiak. The plant began operations in 1978 and in 2010 employed a maximum of 60 workers.[254] Alaska

[253] Kodiak Chamber of Commerce. (2003). *Kodiak Region Comprehensive Economic Development Strategy.* Retrieved September 11, 2012 from: http://www.commerce.state.ak.us/dca/plans/KodiakRegion-EDP-2003.pdf.
[254] This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

Fresh Seafoods processes cod (black, Pacific), crab (king, snow), halibut, herring, lingcod, pollock, scallops, and all five species of Pacific salmon.[255]

Alaska Seafood Systems operates a seafood processing facility in Kodiak. Alaska Seafood Systems processes cod (black and Pacific), flounder, halibut, octopus, pollock, sea urchin, skate, and all five species of Pacific salmon.[256]The plant began operations in 2007 and in 2010 employed a maximum of 20 workers.[257]

Global Seafoods North America owns several processing facilities though out the Pacific Rim, including a plant in Kodiak. The plant began operations in 2000 and was previously owned by Peter Pan Seafoods.[258] The facility in Kodiak processes black and Pacific cod, pollock, sole, rockfish, halibut and several species of salmon.[259] In 2010, the plant employed a maximum of 100 workers.[260]

International Seafoods of Alaska, Inc. was founded in Kodiak in 1978. Its shoreside processing facility takes deliveries from fishing vessels directly from its dock. Located near the Kodiak boat harbor, the plant operates year round. During the summer months the facility processes salmon, halibut and black cod. Throughout the rest of the year the plant processes Pacific cod, pollock, and various types of sole and rockfish. In addition to processing facilities International Seafoods of Alaska also owns the largest cold storage facility in Kodiak.[261] In 2010, the plant employed a maximum of 420 workers.[262]

Island Seafoods began in 1995 as a small custom processing facility for charter boat fishermen. After being acquired by Pacific Seafood Group in 2003, Island Seafoods has expanded dramatically. Their processing facility is located just outside the Kodiak boat harbor breakwater. Today, the Island Seafoods processing facility operates year round and processes millions of pounds of cod, halibut, rockfish and salmon from commercial fishing vessels. Staying true to its roots, Island Seafood continues to offer custom processing for sport fishermen.[263] In 2010, the plant employed a maximum of 100 workers.[264]

Since 1984, Kodiak Island Smokehouse has been a small family owned and operated smokehouse that processes smoked salmon (Chinook, sockeye and coho) caught by sport fishermen and a few commercial salmon boats. The plant began operations in 2001 and its

[255] Alaska Seafood Marketing Institute. (n.d.). *Supplier Information.* Retrieved August 15, 2012 from: http://alaskaseafood.org/.
[256] Ibid.
[257] This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.
[258] Ibid.
[259]Global Seafoods. (n.d.). *Company Homepage.* Retrieved August 15, 2012 from: http://www.globalseafoods.com.
[260] This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.
[261] International Seafoods of Alaska. (n.d.). *International Seafoods of Alaska, Inc.* Retrieved August 15, 2012 from: http://isa-ak.com/about.html.
[262] This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.
[263] Island Seafoods. (n.d.). *About Us.* Retrieved August 15, 2012 from: http://www.islandseafoods.com/index.php?option=com_content&view=article&id=48&Itemid=61.
[264] This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

primary customers are tourists and locals.[265] Kodiak Island Smokehouse also processes and smokes black cod and halibut. It is located on Mill Bay road.[266]

North Pacific Seafoods Inc. facility is located in the City of Kodiak. The plant was originally built in the early 1950s as an ice and cold storage facility. When North Pacific Seafoods purchased the facility in 1975 they expanded it to include seafood processing. Today, the plant is open year-round and processes all major commercially harvested species from the Gulf of Alaska including salmon, pollock, Pacific cod, rockfish, black cod, halibut, crab, roe, octopus, herring, flatfish and sea cucumber. During the peak season from June until the end of September the facility employs a maximum of 280 workers.[267] The Kodiak plant provides to its fish processors free room and board (including shower facilities), as well as free air transportation from and to Anchorage, provided the processors fulfill their contractual obligations.[268]

Ocean Beauty Seafoods LLC., founded in 1910, operates the largest and oldest seafood production facility in Kodiak (constructed in 1911). Located near the Kodiak boat harbor, Ocean Beauty - Kodiak is a major producer of fresh, frozen and canned salmon, as well as halibut, perch, cod, pollock, flatfish and herring. The facility processes seafood year round and employs a maximum of 375 workers during the peak season.[269]

Trident Seafoods Corporation, founded 1973, owns and operates two processing facilities in Kodiak. A portion of the processing activity takes place on the *Star of Kodiak*, a permanently moored World War II Liberty Ship that has been converted into a processing facility. The shipboard operation works in conjunction with another modern facility located next to the vessel. The facilities operate year-round, processing cod (black and Pacific), crab, pollock, halibut, flatfish, rockfish, and various species of Pacific salmon. The *Star of Kodiak* alone can process 1.1 million pounds of pollock and 400,000 pounds of cod per day. The very culturally diverse crew size varies from 100 to 300 employees depending on the season. The Kodiak facility provides room and board (including shower facilities) to its fish processing workforce at a nominal fee, as well as free air transportation from and to Seattle. Its on-site store sells personal care items to the workers, such as toothpaste and soap.[270]

Westward Seafoods was established in 1989 and started operations in 1991. In 2004, Western Alaska Fisheries merged with Westward Seafoods to form what is now known as Westward Seafoods Inc. One of Westward's seafood processing facilities is located in Kodiak. Westward also owns a facility in Dutch Harbor. The Kodiak plant processes cod, pollock, halibut

[265] Ibid.
[266] Kodiak Island Smokehouse. (n.d.). *Kodiak Island Smokehouse.* Retrieved August 15, 2012 from: http://www.kodiaksmokehouse.com/.
[267] This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.
[268] North Pacific Seafoods. (n.d.). *Production Facilities.* Retrieved August 15, 2012 from: http://northpacificseafoods.com/index.php?option=com_content&task=view&id=40&Itemid=51.
[269] This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.
[270] Trident Seafoods. (n.d.). *Alaska Plants.* Retrieved August 15, 2012 from: http://www.tridentseafoods.com/company/plants_alaska.php#Kodiak.

and salmon. The facility has an annual total production of 45,000,000 pounds[271] and employs a maximum of 300 workers each year.[272]

Wildsource Inc. processes black cod and salmon (Chinook, coho, pink and sockeye) in Kodiak[273] and began operations in 2008.[274] The Sun'aq tribe purchased the Wildsource facility in January 2010 with grant money from the Office of Indian Energy and Economic Development.[275] The plant employs a maximum of six workers each year.[276]

Fisheries-Related Revenue

In 2010, Kodiak collected $5.27 million in fisheries-related taxes, compared to $3.63 million in 2000. However, it should be noted that data related to port/dock usage fees are not available for 2010. Since those fees accounted for a significant portion of fisheries-related revenue in previous years, it is likely that revenue figures are grossly underrepresented. The most accurately represented year was 2009, when fisheries-related revenue peaked at $31.1 million. In that year, port/dock usage fees accounted for most revenues collected, followed by harbor usage fees and Shared Fisheries Business Tax revenues. Revenue collected for port/dock fees increased significantly between 2000 and 2009. Information regarding fisheries-related taxes and fees can be found in Table 3. In a survey conducted by the AFSC in 2011, community leaders reported that Kodiak received $100,680 from harbor sales tax, $1.05 million from raw fish tax sharing, and $179,789 from Commercial Passenger Vessel Tax revenues in 2010. Revenues collected from fisheries-related taxes are put towards maintaining the harbor, roads, water and wastewater systems, and public safety services.

Commercial Fishing

Kodiak hosts Alaska's largest fishing port. The KMA has 7 districts and 52 sections. There are approximately 750 salmon producing streams within the KMA. Chinook salmon occur in 6 streams, and sockeye salmon are found in 49. Coho salmon are found in 204 streams, while 404 streams support pink salmon. Finally, chum salmon can be found in 174 streams. Two hatcheries are located within the KMA which supplement natural populations. One is located in Kitoi Bay on the southeast side of Afognak Island, while the other is located at Pillar Creek near the City of Kodiak. Commercial salmon in the KMA dates back to 1882. In 1974, a limited entry system was created by the state to restrict effort. The primary gear used in harvesting is either purse or beach seine, although gillnets are also used. In 2010, the projected KMA harvest was

[271] Westward Seafoods. (n.d.). *Our Plants.* Retrieved August 15, 2012 from: http://www.westwardseafoods.com/company.php.
[272] This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.
[273] Alaska Seafood Marketing Institute. (n.d.). *Suppliers.* Retrieved August 15, 2012 from: alaskaseafood.org/industry/suppliers/.
[274] This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.
[275] Kodiak Daily Mirror *"Sun'aq Tribe awarded grant for entering seafood industry."* October 11, 2010. Retrieved August 15, 2012 from: kodiakdailymirror.com.
[276] This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

20,000 Chinook, 2.49 million sockeye, 413,108 coho, 11.4 million pink, and 1.02 million chum salmon.[277]

Pacific herring have been harvested for food and bait in the KMA since 1912. Early harvests were primarily used for food or reduction products. During the 1980s and 1990s, harvests occurred mainly in the northeast portion of the Shelikof Strait, with effort targeting both the Kodiak and Kamishak Bay stocks. However, the Kamishak spawning biomass has been below acceptable levels since 1998, and the Kamishak Bay sac roe and Kodiak food/bait fisheries have remained closed since then. Fisheries remain open in the rest of the KMA where spawning stocks are strong. The Kodiak food/bait herring fishery has been utilized primarily as bait for crab and longline fisheries, while the sac roe fishery is typically exported to Asian markets.[278]

Halibut stocks in IPHC Area 3A were at average levels as of 2007; however, levels are believed to be declining due to low recruitment and decreasing size-at-age.[279]

Historically, Kodiak supported significant red king crab populations, and trawl shrimp fisheries. However, since the 1980s, red king crab populations have been depressed, and the commercial fishery remains closed. Shrimp stocks as of 2009 only support minor fisheries. Small green sea urchin, golden king crab, and grooved Tanner crab fisheries exist, and various clam species are commercial harvested for consumption or bait. The dominate species harvested from Kodiak waters in 2009 were Tanner crab, Dungeness crab, giant Pacific octopus, and red sea cucumber. Dungeness crab was the most valuable shellfish harvested in the Kodiak area in 2009.[280]

Commercially significant groundfish species harvested in the Kodiak area include Pacific cod, sablefish, lingcod, skates, black rockfish, and walleye pollock. In 2010, walleye pollock and Pacific cod comprised the largest volume of groundfish harvested from state waters around Kodiak. Pacific cod are managed primarily through NMFS, although ADF&G issues emergency orders for state-water or parallel fisheries. The largest harvest of cod in federal waters occurred in the early 1990s, but has recently been more closely regulated in order to mitigate impacts on Steller sea lion populations. Harvest of Pacific cod within the KMA during the 2010 parallel season reached 8.59 million pounds. The majority of cod was harvested using pot and longline gear. Total Pacific cod harvests from state-waters in 2010 was 13.56 million pounds. Walleye pollock are managed by NMFS as three separate stocks, with parallel fisheries occurring in state-waters. Harvests from state-waters within the KMA totaled 23.68 million pounds in 2010.[281] Black rockfish were not targeted commercially in the Kodiak area until 1990. Harvests declined shortly after they started due to low abundance and poor market conditions. Skate harvests grew

[277] Jackson, J.; Dinnocenzo, J.; and Spalinger, G. (2010). *Kodiak Management Area Commercial Salmon Fishery Annual Management Report, 2010.* Fishery Management Report No. 10-47. Retrieved September 14, 2012 from: http://www.adfg.alaska.gov/FedAidpdfs/FMR10-47.pdf.
[278] Jackson, J. (2011). *Kodiak Management Area Commercial Herring Food and Bait Fishery Harvest Strategy, 2010.* Fishery Management Report No. 10-34. Retrieved September 14, 2012 from: http://www.sf.adfg.state.ak.us/FedAidpdfs/FMR10-34.pdf.
[279] Glen Gray and Associates. (2007). *KIB Coastal Management Plan – Final Plan Amendment.* Retrieved September 11, 2012 from: http://alaskacoast.state.ak.us/District/FinalFinalPlans/Kodiak/Kodiak_CMP.pdf.
[280] Stichert, M. A. (2010), *Annual Management Report for Shellfish Fisheries in the Kodiak, Chignik, and Alaska Peninsula Areas, 2009.* Fishery Management Report No. 10-32. Retrieved September 14, 2012 from: http://www.adfg.alaska.gov/FedAidPDFs/FMR10-32.pdf.
[281] Stichert, M. A.; Phillips, K.; and Converse, P. (2011). *Annual Management Report for Groundfish Fisheries in the Kodiak, Chignik, and South Alaska Peninsula Management Areas, 2010.* Fishery Management Report No. 11-44. Retrieved September 14, 2012 from: http://www.adfg.alaska.gov/FedAidPDFs/FMR11-44.pdf.

quickly starting in 2003 due an emerging Korean market for skate products. Fishermen targeting skates were also allowed to retain cod in some instances. Sablefish habitat in state waters is limited in the Kodiak area, and larger adult fish prefer deeper waters. Lingcod are not typically targeted in the western Gulf of Alaska (GOA), although they are harvested from bycatch. Harvests primarily occur in rocky reef areas, although large catches are sometimes taken in offshore trawl fisheries.[282]

In 2010, 587 residents, or 9.6% of the population, held 1,279 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 716 residents held 1,646 CFEC permits, indicating an 18% decrease in commercial fisheries participation by local residents over the decade. Of the permits held in 2010, 13% were for crab, compared to 8% in 2000; 6% were for "other" shellfish, compared to 4% in 2000; 16% were for halibut, compared to 18% in 2000; 11% were for herring, compared to 10% in 2000; 3% were for sablefish, compared to 4% in 2000; 23% were for groundfish, compared to 34% in 2000; and 31% were for salmon, compared to 23% in 2000. Also in that year, 187 residents held 216 License Limitation Program (LLP) groundfish permits, compared to 245 permits held by 200 residents in 2000; 42 residents held 47 LLP crab permits, compared to 67 permits held by 56 residents in 2000; and 137 residents held 143 Federal Fisheries Permits (FFP), compared to 188 FFP held by 168 residents in 2000.

In 2010, 224 account holders held 47.77 million shares of halibut quota, compared to 304 who held 57.08 million in 2000. The number of halibut quota shares held in Kodiak peaked in 2000. However, it should be noted that the amount of Individual Fish Quota (IFQ) in pounds decreased steadily between 2000 and 2010 from 9.26 million pounds, to 6.44 million. Also in 2010, 62 account holders held 19.09 million shares of sablefish quota, compared to 67 who held 17.99 million in 2000. The number of sablefish shares held in Kodiak peaked in 2010, and the IFQ allotment peaked in 2006 at 1.79 million pounds. Finally, 57 account holders held 174.24 million pounds of crab quota, compared to 46 who held 146.08 million in 2005. The number of crab quota shares held in Kodiak peaked in 2009 at 181.71 million, and the IFQ allotment peaked in 2008 at 6.75 million pounds. Overall, Kodiak residents held 23.3% of halibut, 14.4% of sablefish, and 32.5% of crab quota statewide in 2010.

Of the CFEC permits held in 2010, 59% were actively fished, compared to 60% in 2000. By fishery, 47% of crab permits were actively fished, compared to 69% in 2000; 35% of "other: shellfish permits, compared to 36% in 2000; 86% of halibut permits, compared to 81% in 2000; 26% of herring permits, compared to 23% in 2000; 89% of sablefish permits, compared to 69% in 2000; 63% of groundfish permits, compared to 52% in 2000; and 59% of salmon permits, compared to 73% in 2000.

Residents held 884 commercial crew licenses in 2010, compared to 1,263 in 2000; which was also the year in which the number of locally held crew licenses peaked. Also in that year, residents held majority ownership of 452 commercial fishing vessels, compared to 719 in 2000; which was again, the year in which local vessel ownership peaked. Both the number of crew licenses and the number of vessels owned by local residents declined at a steady rate between 2000 and 2010. Fisheries prosecuted by Kodiak residents in 2010 included: Westward pot Dungeness crab; Kodiak pot king and Tanner crab; Bering Sea pot king and Tanner crab; Bristol Bay pot king crab; Alaska Peninsula pot Tanner crab; statewide hand troll, mechanical jig, and longline halibut; southeast purse seine herring roe; Kodiak purse seine and gillnet herring roe; Alaska Peninsula purse seine herring roe; Bristol Bay purse seine herring roe; Kodiak purse seine

[282] See footnote 279.

herring food/bait; statewide longline, otter trawl, mechanical jig, and pot miscellaneous saltwater finfish; GOA longline, otter trawl, pot, and mechanical jig miscellaneous saltwater finfish; southeast longline demersal shelf rockfish; statewide pot octopi/squid; Prince William Sound pot shrimp; Westward pot shrimp; statewide dive sea cucumber; Kodiak dive sea cucumber; statewide dredge scallop; statewide longline sablefish; Prince William Sound purse seine and drift gillnet salmon; Kodiak set gillnet and purse and beach seine salmon; Chignik purse seine salmon; Cook Inlet drift gillnet salmon; Alaska Peninsula drift gillnet salmon; Bristol Bay drift and set gillnet salmon; and statewide power troll salmon.[283]

In 2010, a total of 316.50 million pounds of seafood was landed in Kodiak valued at $121.70 million ex-vessel, compared to 285.43 million pounds valued at $96.71 million in 2000. Pounds landed in Kodiak peaked in 2006 at 376.51 million. Total ex-vessel value of landings peaked in 2008 at $145.33 million. Overall, 13.6% of total 2010 landings made in Alaska were made in Kodiak, compared to 13.0% in 2000. In addition, Kodiak received 9.9% of total ex-vessel revenue made statewide that year, compared to 13.2% in 2000. Kodiak ranked 2nd of 65 communities reporting landings for 2010 in both total pounds landed and total ex-vessel value of landings and pollock was ranked first in 2010 in terms of pounds landed, followed by Pacific cod, "other" groundfish, salmon, herring, halibut, sablefish, and "other" shellfish. In that year, 106.78 million pounds of pollock valued at $17.43 million ex-vessel was landed, compared to 106.09 million pounds valued at $12.17 million ex-vessel in 2000; an increase of $0.00 per pound ex-vessel after adjusting for inflation.[284] Also in that year, 75.38 million pounds of Pacific cod valued at $19.43 million ex-vessel was landed, compared to 64.17 million pounds valued at $22.90 ex-vessel in 2000; a decrease of $0.23 per pound ex-vessel after adjusting for inflation.[285] In terms of "other" groundfish, landings totaled 66.15 million pounds valued at $7.41 million ex-vessel, compared to 47.02 million valued at $4.54 million ex-vessel in 2000. In terms of salmon, 44.22 million pounds were landed valued at $24.02 million ex-vessel, compared to 52.03 million pounds valued at $18.59 million ex-vessel in 2000; an increase of $0.05 per pound ex-vessel after adjusting for inflation,[286] and without considering the species composition of landings. In terms of herring, landings totaled 11.63 million pounds valued at $1.33 million in 2010, compared to 1.87 million pounds valued at $635,596 in 2000; a decrease of $0.11 per pound ex-vessel after adjusting for inflation.[287] In terms of halibut, 6.45 million pounds valued at $31.16 million were landed in 2010, approximately a third less than landed in 2000 (9.23 million pounds valued at $23.02 million); however, also representing an increase of $0.40 per pound ex-vessel after adjusting for inflation.[288] In terms of sablefish, 2.76 million pounds were landed valued at $21.02 million, compared to 2.07 million pounds valued at $6.34 million in 2000; an increase of $0.72 per pound ex-vessel after adjusting for inflation.[289] Finally, 674,606 pounds of "other" shellfish were landed valued at $452,263, significantly higher than the 141,935 pounds valued at $49,545 landed in 2000.

[283] 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.]
[284] Inflation calculated using 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, http://www.bls.gov/ppi/#data.
[285] Ibid.
[286] Ibid.
[287] Ibid.
[288] Ibid.
[289] Ibid.

For landings made by Kodiak residents in 2010, pollock ranked first in terms of pounds landed; followed by Pacific cod, salmon, "other" groundfish, herring, halibut, crab, sablefish, and "other" shellfish. In that year, residents landed 67.07 million pounds of pollock valued at $10.40 million ex-vessel, compared to 75.44 million pounds valued at $8.48 million ex-vessel; an increase of $0.01 per pound ex-vessel after adjusting for inflation.[290] Residents landed 54.20 million pounds of Pacific cod valued at $14.65 million ex-vessel, compared to 52.90 million pounds valued at $22.45 million ex-vessel in 2000; a decrease of $0.31 per pound ex-vessel after adjusting for inflation.[291] Residents landed 31.97 million pounds of salmon valued at $18.88 million ex-vessel, compared to 31.73 million pounds valued at $11.66 million ex-vessel in 2000; an increase of $0.08 per pound ex-vessel after adjusting for inflation,[292] and without considering the species composition of landings. Residents landed 27.82 million pounds of "other" groundfish valued at $3.24 million ex-vessel, compared to 35.76 million pounds valued at $4.55 million ex-vessel in 2000. Residents landed 22.36 million pounds of herring valued at $3.60 million ex-vessel, compared to 8.0 million pounds valued at $1.19 million in 2000; a decrease of $0.04 per pound ex-vessel after adjusting for inflation.[293] Residents landed 7.52 million pounds of halibut valued at $35.64 million ex-vessel, compared to 10.85 million pounds valued at $27.04 million ex-vessel in 2000; an increase of $1.31 per pound ex-vessel after adjusting for inflation.[294] Residents landed 7.30 million pounds of crab valued at $17.29 million ex-vessel, compared to 7.41 million pounds valued at $19.15 million ex-vessel in 2000; a decrease of $1.18 per pound ex-vessel after adjusting for inflation,[295] and without considering the species composition of landings. Residents landed 1.61 million pounds of sablefish valued at $8.60 million ex-vessel, compared to 1.87 million pounds valued at $6.62 million in 2000; an increase of $0.47 per pound ex-vessel after adjusting for inflation.[296] Finally, residents landed 453,391 pounds of "other" shellfish valued at $446,032, compared to 224,160 pounds valued at $311,114 in 2000. Information regarding commercial fishing trends can be found in Tables 4 through 10.

[290] Ibid.
[291] Ibid.
[292] Ibid.
[293] Ibid.
[294] Ibid.
[295] Ibid.
[296] Ibid.

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax[1]	$520,000	$520,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	$1.05 M[3]
Shared Fisheries Business Tax[1]	$617,330	$649,909	$885,447	$610,634	$503,617	$642,980	$711,505	$828,287	$884,658	$1.02 M	$1.12 M
Fisheries Resource Landing Tax[1]	$337	$18,016	$3,868	$17,084	$857	$580	$918	$485	$1,018	$779	$1,441
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]	$26,000	$30,000	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]	$1.27 M	$1.77 M	$2.38 M	$2.46 M	$2.77 M	$2.37 M	$1.79 M	$1.89 M	$2.58 M	$2.63 M	$3.10 M
Port/dock usage[2]	$1.20 M	$1.80 M	$1.22 M	$578,776	$2.06 M	$3.38 M	$2.63 M	$8.74 M	$15.77 M	$27.45 M	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 revenue[4]	*$3.63 M*	*$4.79 M*	*$4.48 M*	*$3.67 M*	*$5.34 M*	*$6.40 M*	*$5.13 M*	*$11.46 M*	*$19.24 M*	*$31.10 M*	*$5.27 M*
Total municipal revenue[5]	*$22.99 M*	*$25.20 M*	*$29.22 M*	*$33.41 M*	*$27.83 M*	*$34.78 M*	*$32.80 M*	*$48.47 M*	*$60.76 M*	*$55.02 M*	*$30.48 M*

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, Kodiak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) [1]	Total permits	245	228	215	209	204	211	209	210	218	215	216
	Active permits	125	125	126	113	110	111	106	101	109	109	116
	% of permits fished	51%	54%	58%	54%	53%	52%	50%	48%	50%	50%	53%
	Total permit holders	200	195	187	176	176	181	182	179	188	187	187
Crab (LLP) [1]	Total permits	67	61	58	52	51	50	51	50	50	49	47
	Active permits	39	36	36	33	32	31	28	25	22	21	19
	% of permits fished	58%	59%	62%	63%	62%	62%	54%	50%	44%	42%	40%
	Total permit holders	56	50	49	43	41	42	43	42	43	41	42
Federal Fisheries Permits[1]	Total permits	188	197	202	171	174	180	153	160	164	141	143
	Fished permits	0	0	1	125	121	124	112	118	125	112	109
	% of permits fished	0%	0%	0%	73%	70%	69%	73%	74%	76%	79%	76%
	Total permit holders	168	176	180	157	160	163	144	149	152	135	137
Crab (CFEC) [2]	Total permits	124	268	295	217	215	222	182	172	168	166	167
	Fished permits	85	195	240	146	125	107	84	70	56	55	79
	% of permits fished	69%	73%	81%	67%	58%	48%	46%	41%	33%	33%	47%
	Total permit holders	79	198	220	155	133	176	154	149	145	143	144
Other shellfish (CFEC) [2]	Total permits	73	63	56	60	53	64	43	39	45	35	45
	Fished permits	27	12	16	17	13	14	9	9	13	8	16
	% of permits fished	36%	19%	28%	28%	24%	21%	20%	23%	28%	22%	35%
	Total permit holders	56	52	42	47	44	47	37	31	37	31	35
Halibut (CFEC) [2]	Total permits	289	270	248	243	229	224	221	217	210	208	207
	Fished permits	235	207	217	208	192	188	192	186	187	172	177
	% of permits fished	81%	77%	88%	86%	84%	84%	87%	86%	89%	83%	86%
	Total permit holders	262	249	234	227	216	212	208	206	198	198	196
Herring (CFEC) [2]	Total permits	159	145	139	134	131	131	132	131	128	133	135
	Fished permits	36	36	36	32	30	38	19	20	23	28	35
	% of permits fished	23%	25%	26%	24%	23%	29%	14%	15%	18%	21%	26%
	Total permit holders	103	102	97	91	94	97	100	96	97	98	94

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) [2]	Total permits	58	55	52	52	47	46	52	53	48	50	44
	Fished permits	40	42	43	42	33	39	42	43	37	40	39
	% of permits fished	69%	76%	83%	81%	70%	85%	81%	81%	77%	80%	89%
	Total permit holders	57	54	50	50	46	46	51	50	47	50	44
Groundfish (CFEC) [2]	Total permits	559	406	348	379	399	411	345	332	340	293	290
	Fished permits	292	183	164	211	238	234	198	181	189	176	182
	% of permits fished	52%	45%	47%	56%	60%	57%	57%	55%	56%	60%	63%
	Total permit holders	386	299	264	282	300	309	269	267	262	239	237
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	384	378	370	367	372	386	381	385	383	391	391
	Fished permits	279	240	179	204	207	221	207	211	208	210	232
	% of permits fished	73%	63%	48%	56%	56%	57%	54%	55%	54%	54%	59%
	Total permit holders	391	375	363	346	356	361	355	352	349	345	347
Total CFEC Permits[2]	*Permits*	*1,646*	*1,585*	*1,508*	*1,452*	*1,446*	*1,484*	*1,356*	*1,329*	*1,322*	*1,276*	*1,279*
	Fished permits	*994*	*915*	*895*	*860*	*838*	*841*	*751*	*720*	*713*	*689*	*760*
	% of permits fished	*60%*	*58%*	*59%*	*59%*	*58%*	*57%*	*55%*	*54%*	*54%*	*54%*	*59%*
	Permit holders	*716*	*666*	*661*	*633*	*636*	*659*	*628*	*624*	*608*	*595*	*587*

[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 Kodiak: 2000-2010.

Year	[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 Kodiak[2]	Total Net Pounds Landed In Kodiak[2,5]	Total Ex-Vessel Value Of Landings In Kodiak[2,5]
2000	1,263	27	15	719	697	661	285,432,670	$96,713,090
2001	1,127	30	12	644	645	621	280,354,204	$79,969,674
2002	965	34	16	601	633	536	260,611,820	$66,415,954
2003	920	29	13	579	621	508	271,050,978	$84,596,173
2004	937	35	11	581	620	527	324,206,948	$95,440,256
2005	891	42	12	526	565	610	361,877,488	$108,642,258
2006	901	32	12	485	537	498	376,511,736	$123,710,448
2007	892	33	13	490	511	477	328,773,989	$133,955,945
2008	891	31	12	468	530	504	289,541,359	$145,335,157
2009	868	34	11	457	536	499	308,772,614	$112,442,426
2010	884	33	11	452	533	506	316,500,477	$121,704,107

[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 Kodiak: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	304	57,080,447	9,255,627
2001	287	50,510,994	9,243,424
2002	271	46,525,462	8,729,310
2003	264	44,811,524	8,603,499
2004	251	44,645,629	8,189,985
2005	252	47,078,550	8,140,122
2006	249	48,840,531	7,759,598
2007	249	48,900,974	7,510,047
2008	236	50,549,298	7,865,301
2009	229	48,807,714	7,050,593
2010	224	47,765,032	6,444,672

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 Kodiak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	67	17,988,783	1,573,109
2001	65	16,950,060	1,453,540
2002	62	14,816,809	1,327,576
2003	57	15,398,307	1,653,396
2004	54	13,365,140	1,605,057
2005	55	14,666,666	1,672,611
2006	56	16,641,450	1,785,365
2007	60	15,728,908	1,622,165
2008	60	16,535,007	1,452,653
2009	58	17,347,762	1,384,865
2010	62	19,086,362	1,447,274

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 Kodiak: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	46	146,078,033	4,459,871
2006	47	170,384,920	4,402,191
2007	48	175,622,924	7,278,521
2008	54	175,501,341	6,749,102
2009	58	181,707,004	5,689,446
2010	57	174,235,081	5,715,071

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 Kodiak: 2000-2010.

	Total Net Pounds[1]										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	9,233,449	8,659,750	7,657,222	7,988,764	8,514,844	8,638,822	8,416,196	8,243,195	8,384,759	7,507,807	6,452,623
Herring	1,865,675	3,164,892	3,193,111	4,395,581	6,765,288	7,414,634	5,410,127	4,958,669	6,099,140	9,767,602	11,626,225
Other Groundfish	47,024,536	41,843,195	43,993,573	47,182,133	46,235,331	52,646,313	66,964,895	71,000,361	82,093,807	71,964,543	66,146,874
Other Shellfish	141,935	355,233	483,660	336,158	445,659	1,501,641	3,268,894	1,231,477	686,828	1,041,789	674,606
Pacific Cod	64,174,761	53,748,832	49,182,878	51,774,863	61,285,752	53,882,267	49,023,028	54,288,908	58,902,808	45,702,810	75,380,048
Pollock	106,094,642	89,611,856	65,111,550	71,338,423	84,169,222	104,029,882	98,427,793	73,202,635	71,933,351	56,927,178	106,776,930
Sablefish	2,071,265	2,105,860	1,683,118	2,328,749	2,600,036	2,525,996	2,410,174	3,080,707	2,455,314	2,466,658	2,763,564
Salmon	52,027,172	78,838,317	86,970,330	83,542,164	111,910,020	127,826,561	139,194,438	109,715,426	56,188,080	110,801,766	44,222,475
Total[2]	*282,633,435*	*278,327,935*	*258,275,442*	*268,886,835*	*321,926,152*	*358,466,116*	*373,115,545*	*325,721,378*	*286,744,087*	*306,180,153*	*314,043,345*
	Ex-vessel Value (nominal U.S. dollars)										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	$23,023,430	$17,207,856	$16,857,177	$22,552,489	$24,904,619	$25,122,905	$32,175,455	$34,889,958	$35,848,807	$22,848,762	$31,157,917
Herring	$635,596	$919,020	$793,678	$1,170,045	$1,661,260	$1,663,673	$562,236	$783,448	$1,298,566	$2,137,909	$1,333,146
Other Groundfish	$4,541,561	$3,434,518	$3,285,893	$4,188,390	$3,202,659	$5,141,931	$8,688,375	$10,404,637	$12,021,987	$7,778,009	$7,407,750
Other Shellfish	$49,545	$269,242	$333,135	$248,386	$312,463	$521,266	$469,014	$506,827	$533,670	$490,720	$452,263
Pacific Cod	$22,903,026	$15,547,542	$12,091,259	$16,026,883	$17,123,994	$16,785,166	$19,688,080	$27,269,569	$33,533,205	$14,451,852	$19,430,012
Pollock	$12,170,802	$11,080,009	$6,281,669	$6,385,428	$8,868,979	$14,176,306	$13,390,885	$8,145,267	$12,290,730	$9,616,228	$17,425,037
Sablefish	$6,342,126	$6,063,222	$4,779,447	$7,449,042	$7,406,201	$7,569,457	$8,237,177	$10,104,721	$9,290,959	$9,924,865	$13,621,925
Salmon	$18,591,496	$18,822,924	$13,598,450	$19,265,619	$23,978,687	$28,104,742	$32,171,181	$32,438,126	$32,094,870	$39,095,940	$24,024,558
Total[2]	*$88,257,582*	*$73,344,333*	*$58,020,709*	*$77,286,282*	*$87,458,861*	*$99,085,445*	*$115,382,402*	*$124,542,554*	*$136,912,794*	*$106,344,285*	*$114,852,609*

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 Kodiak Residents: 2000-2010.

	Total Net Pounds[1]										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	7,410,891	5,383,969	6,205,762	6,169,872	5,755,299	6,497,203	6,323,098	7,926,096	13,063,779	9,299,824	7,302,708
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	10,850,819	10,266,327	10,515,056	10,270,942	9,879,735	9,364,183	8,834,092	9,059,984	8,640,983	8,151,599	7,524,511
Herring	7,998,326	8,421,986	9,096,512	8,033,311	9,612,358	12,169,653	11,802,235	9,974,002	19,046,884	15,125,022	22,362,694
Other Groundfish	35,756,763	25,770,366	21,584,998	22,295,660	16,205,733	16,707,938	19,251,764	23,767,197	27,598,223	29,141,207	27,821,343
Other Shellfish	224,160	240,167	342,992	326,250	607,091	676,168	1,369,868	708,282	514,370	635,151	453,391
Pacific Cod	52,897,317	30,635,990	34,366,630	39,768,485	43,055,249	39,314,436	39,207,893	41,358,433	36,577,122	32,558,237	54,196,122
Pollock	75,435,694	72,877,022	74,679,015	73,879,805	79,078,724	77,582,088	74,419,635	66,797,804	49,862,065	45,852,004	67,067,727
Sablefish	1,873,774	1,246,189	1,376,278	1,468,051	1,596,333	1,578,174	1,521,295	1,867,634	1,474,405	1,572,900	1,613,994
Salmon	31,732,849	49,172,809	42,441,699	35,631,899	49,241,534	56,259,715	58,244,505	57,047,460	31,377,462	56,906,860	31,967,261
Total[2]	*224,180,593*	*204,014,826*	*200,608,942*	*197,844,276*	*215,032,056*	*220,149,558*	*220,974,385*	*218,506,892*	*188,155,293*	*199,242,804*	*220,309,751*
	Ex-vessel Value (nominal U.S. dollars)										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	$19,154,686	$14,525,267	$17,325,538	$18,691,177	$17,539,509	$15,887,860	$11,995,305	$21,043,428	$31,909,307	$18,846,590	$17,293,854
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	$27,037,553	$20,304,227	$23,350,180	$29,375,078	$29,105,782	$27,716,712	$33,507,055	$38,638,741	$36,788,565	$24,588,722	$35,636,950
Herring	$1,192,064	$1,502,602	$1,329,126	$1,162,874	$1,599,499	$2,197,767	$1,060,641	$1,526,360	$3,871,738	$3,539,728	$3,600,773
Other Groundfish	$4,553,293	$3,545,368	$2,469,797	$2,837,700	$1,146,875	$1,754,855	$2,702,843	$3,506,269	$4,423,705	$3,314,810	$3,238,609
Other Shellfish	$311,114	$219,060	$243,164	$292,305	$583,952	$503,749	$430,632	$489,759	$503,357	$487,513	$446,032
Pacific Cod	$22,453,748	$8,801,981	$8,482,457	$12,795,181	$11,790,348	$12,189,145	$16,007,844	$21,059,066	$21,084,289	$9,921,927	$14,647,444
Pollock	$8,477,141	$7,098,811	$7,853,801	$6,974,400	$7,855,493	$10,065,597	$9,642,785	$8,005,230	$9,143,172	$8,028,073	$10,397,353
Sablefish	$6,618,730	$3,714,869	$4,203,723	$5,018,220	$4,612,858	$4,886,092	$5,387,704	$6,612,485	$6,038,160	$6,997,784	$8,602,511
Salmon	$11,662,171	$10,540,860	$6,343,594	$7,714,676	$9,830,603	$11,828,845	$15,016,648	$16,599,984	$16,707,469	$20,652,430	$18,877,120
Total[2]	*$101,460,500*	*$70,253,046*	*$71,601,381*	*$84,861,611*	*$84,064,918*	*$87,030,622*	*$95,751,457*	*$117,481,322*	*$130,469,764*	*$96,377,576*	*$112,740,645*

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 KMA is a very popular recreational fishing area for both Alaska resident and non-resident anglers. The 70 mi of paved and hard-packed gravel roads provide access to 10 significant salmon streams and over 20 stocked lakes. Freshwater fishing opportunities available include Chinook, pink, sockeye, and coho salmon, Dolly Varden, rainbow trout, and steelhead. Fishing destinations not located adjacent to the road system can be accessed by boat or floatplane. Approximately 11,000 people live along the Kodiak road system, and around 14,000 visitors travel to the Kodiak area every year. Available services include 65 charter operators, 33 remote lodges, 6 air taxis, 12 state and federal public cabins, 10 private remote rental cabins, 5 hotels and motels, 30 bed and breakfasts, 4 sporting good stores, and a range of other services which support a robust visitor economy.[297] According to ADF&G records, there were 46 sport fish guide businesses active in Kodiak in 2010, compared to 47 in 2000. According to records, active sport fish guide businesses peaked in 2008 at 58. In addition, 98 sport fish guide licenses were issued to residents in 2010, compared to 140 in 2000. The number of sport fish guide licenses held by residents declined at a steady rate between 2000 and 2010. Between 4,300 and 5,000 sportfishing licenses were sold to residents each year between 2000 and 2010; however, as many as 11,436 licenses were sold in the community (irrespective of residence) indicating that Kodiak is a popular sportfishing destination for non-residents (Table 11).

On the road system, Chinook salmon can be found offshore of Monashka Bay, Cape Chiniak, and the American and Olds rivers. Saltwater trolling is a popular activity in marine waters, and most trolling occurs in Chiniak Bay between April and October. The Karluk and Ayakulik rivers, located on the southwest end of Kodiak Island, are Kodiak's only native Chinook fisheries. There are three sockeye salmon producing streams on the Kodiak road system: the Buskin, Pasagshak, and Saltery rivers. The largest sockeye run occurs on the Saltery River, starting in early July, and peaking near the end of the month. Pink salmon are widely available throughout the Kodiak area. Pinks can be taken along beaches or at the mouth of most drainages, and are available by mid-July. Coho salmon are typically targeted in marine waters by troll vessel during the last week of July as they begin to move towards shore.

Popular areas include Cape Chiniak and Buoy 4. Steelhead trout are available in limited numbers within Buskin, Miam, and Saltery drainages adjacent to the road system. The Karluk River contains Kodiak Island's largest population of steelhead. The Dog Salmon and Litnik rivers also contain large concentrations. Halibut are found in abundance throughout marine waters around Kodiak Island, and are typically targeted from late April through early September. More than 30 species of rockfish are also available, with yellow-eye caught most often. Lingcod can be targeted beginning July 1, but are in relatively lower abundance. Dolly Varden are at their peak in late May, and again from mid-July through October. Fishing areas along the road system include Mission and Pillar creek beaches in the spring and most Kodiak drainages in the summer and fall.[298]

Kodiak is located in the Kodiak ADF&G Harvest Survey Area, which included all Alaskan waters, including drainages, of the Kodiak and Afognak Island groups. In 2010, there were a total of 40,377 saltwater and 41,082 freshwater angler days fished, compared to 55,576

[297] Alaska Dept. of Fish and Game. (n.d.). *Kodiak Management Area.* Retrieved September 17, 2012 from: http://www.adfg.alaska.gov/index.cfm?adfg=ByAreaSouthcentralKodiak.fishingInfo#/runtiming
[298] Alaska Dept. of Fish and Game. (n.d.). *Kodiak.* Retrieved September 17, 2012 from: http://www.adfg.alaska.gov/static-sf/Region2/pdfpubs/kodiak.pdf.

and 65,831 in 2000, respectively (Table 11). Both saltwater and freshwater angler days fished peaked in 2000. Between 2000 and 2010, the proportion of non-Alaska residents participating in freshwater and saltwater recreational fisheries grew relative to the total number of angler days fished. Overall, non-Alaska residents accounted for 49.6% of saltwater and 45.9% of freshwater angler days fished in 2010, compared to 30.2% and 28.1% in 2000, respectively.

Table 11. Sport Fishing Trends, Kodiak: 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 Kodiak[2]
2000	47	140	5,062	6,402
2001	43	142	4,699	5,271
2002	44	165	4,733	7,182
2003	45	154	4,785	6,990
2004	45	151	4,691	7,112
2005	53	102	4,754	7,606
2006	53	109	4,602	7,134
2007	55	116	4,450	7,436
2008	58	106	4,317	6,931
2009	49	97	4,436	6,472
2010	46	98	4,418	11,436

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	16,767	38,809	18,524	47,307
2001	14,761	24,604	18,299	19,757
2002	18,356	19,737	15,018	35,113
2003	17,715	23,726	13,362	34,034
2004	18,896	22,787	21,331	31,124
2005	21,269	33,917	23,789	36,753
2006	23,511	21,991	23,483	26,239
2007	21,668	31,554	26,916	31,072
2008	20,275	31,944	24,944	24,876
2009	20,813	26,520	10,859	21,283
2010	20,012	20,365	18,871	22,211

[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).

In a survey conducted by the AFSC in 2011, community leaders reported that private anglers in Kodiak target Chinook salmon, coho salmon, sockeye salmon, halibut, and crab. Fishing is typically done by charter vessel, locally owned private vessel, or from shore (residents only). According to ADF&G Harvest Survey data, local private anglers target all five species of Pacific salmon, rainbow trout, Dolly Varden, Arctic grayling, northern pike, Pacific halibut, rockfish, lingcod, Pacific cod, sablefish, smelt, Dungeness crab, Tanner crab, razor clams, hardshell clams, and shrimp.[299] According to 2010 catch/release data collected by ADF&G, charter vessels kept 1,017 Chinook salmon, 1,759 coho salmon, 83 sockeye salmon, 421 unspecified salmon, 7,133 halibut, 1,423 lingcod, and 11,388 rockfish. Overall, the number of salmon caught was lower in 2010 than in previous years since 2000. The number of Chinook and coho salmon caught was lower than any other year during that decade. Conversely, the number of rockfish caught was at its highest level in 10 years in 2010.

Subsistence Fishing

Subsistence resources have been relied on in Kodiak since human occupation began some 7,500 years ago. The Alutiiq culture relied strongly on subsistence use of marine fish, invertebrates, marine mammals, terrestrial mammals, and freshwater fish. While Kodiak's economy is not as dependent on subsistence resources as more remote locations on Kodiak Island, residents still practice subsistence to supplement diets and income. Participation in the KMA subsistence salmon fishery is open to any Alaska residents. However, subsistence activities on federal waters are limited only to qualified rural Alaska residents. All communities located within the KMA are considered rural by the Federal Subsistence Board and are eligible to participate in subsistence activities on federal lands and waters.[300] In a survey conducted by the AFSC in 2011, community leaders reported that residents consider salmon, halibut, and crab as the three most important aquatic subsistence resources. Species which Kodiak Island Borough residents harvest for subsistence purposes include: all five species of Pacific salmon, halibut, sole, flounder, herring, capelin, cod, bass, snapper, herring, crab, mussels, razor clams, butter clams, softshell clams, cockles, emmas, bidarkis, king crabs, tanner crabs, Dungeness crabs, horse crabs, limpets, snails, octopus, sea urchins, shrimp, Dolly Varden, whitefish, lake trout, rainbow/steelhead trout, Arctic grayling, Northern pike, burbot, blackfish, longnose sucker, smelt, harbor seal, spotted seal, ringed seal, bearded seal, Steller sea lion, walrus, and beluga whale.[301]

According to 2006 ADF&G estimates detailed in Kodiak Island Borough's *2007 Coastal Management Plan,* 93.3% of Kodiak residents use subsistence salmon, 1.9% use marine mammals, 79.0% use marine invertebrates, and 95.2% use non-salmon fish.[302] Of the species listed by ADF&G in Table 13, residents reported harvesting sockeye salmon the most, followed by coho, pink, Chinook, and chum salmon. In 2008, residents reported harvesting 19,996 salmon,

[299] 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).
[300] Federal Subsistence Board. (2010). *Rural Determinations.* 50 CFR 100 Subpart B – Subsistence Management Regulations for Public Lands in Alaska. Retrieved September 18, 2012 from: http://ecfr.gpoaccess.gov
[301] Glen Gray and Associates. (2007). *KIB Coastal Management Plan – Final Plan Amendment.* Retrieved September 11, 2012 from: http://alaskacoast.state.ak.us/District/FinalFinalPlans/Kodiak/Kodiak_CMP.pdf.
[302] Ibid.

compared to 23,619 in 2000. Reported salmon harvests peaked in 2004 at 29,399 fish. In 2010, residents were issued 1,720 Subsistence Halibut Registration Certificates (SHARC), compared to 1,345 in 2003. In that year, an estimated 130,384 pounds of halibut was harvested on 508 SHARC, compared to an estimated 157,746 pounds harvested on 667 SHARC in 2003. This represents a significant decline in both the number of SHARC fished and the estimated pounds harvested, as well as the lowest permit activity relative to the number of SHARC issued since the program began. Subsistence halibut harvests peaked in 2004 at an estimated 257,581 pounds harvested on 827 SHARC (Table 14). Between 2000 and 2010, an estimated 458 sea otters were harvested. Estimated sea otter harvests peaked in 2002 at 64 otters. Between 2000 and 2008 an estimated 222 harbor seals and 8 Steller sea lions were harvested (Table 15).

Additional Information

In a survey conducted by the AFSC in 2011, community leaders reported that high fuel prices, variable fish prices, and continuous changes in fishery regulations are current challenges for the portion of Kodiak's economy that is based on fishing. They expressed that due to the diversity of Kodiak's fleet and seafood processing sectors, most policy or management changes have an impact on some portion of the local population and fishing industry. In the past, regulations pertaining to rationalization and privatization have affected Kodiak the most.

Table 12. Subsistence Participation by Household and Species, Kodiak: 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, Kodiak: 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	24	1,118	282	206	3,531	467	19,133	n/a	n/a
2001	26	1,683	16	8	n/a	4	753	n/a	n/a
2002	17	1,755	14	13	n/a	n/a	1,069	n/a	n/a
2003	14	1,768	12	2	13	n/a	559	n/a	n/a
2004	1,740	1,730	252	153	3,493	594	24,907	n/a	n/a
2005	1,424	1,424	293	135	4,815	860	20,107	n/a	n/a
2006	23	20	26	10	n/a	7	526	n/a	n/a
2007	28	22	22	7	n/a	n/a	930	n/a	n/a
2008	1,276	1,268	112	104	2,721	669	16,390	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, Kodiak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	1,345	667	157,746
2004	1,587	827	257,581
2005	1,762	885	217,016
2006	1,738	975	210,696
2007	1,902	966	197,788
2008	1,745	978	180,440
2009	1,847	941	182,340
2010	1,720	508	130,384

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, Kodiak: 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	41	n/a	n/a	2	27	n/a
2001	n/a	39	n/a	n/a	3	18	n/a
2002	n/a	64	n/a	n/a	3	18	n/a
2003	n/a	61	n/a	n/a	n/a	32	n/a
2004	n/a	38	n/a	n/a	n/a	21	n/a
2005	n/a	57	n/a	n/a	n/a	11	n/a
2006	n/a	38	n/a	n/a	n/a	11	n/a
2007	n/a	26	n/a	n/a	n/a	21	n/a
2008	n/a	54	n/a	n/a	n/a	63	n/a
2009	n/a	5	n/a	n/a	n/a	n/a	n/a
2010	n/a	35	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.

Larsen Bay

People and Place

Location [303]

Larsen Bay is located on the northwest coast of Kodiak Island. It is 60 miles southwest of the City of Kodiak and 283 miles southwest of Anchorage. The area encompasses 5.4 square miles of land and 2.2 square miles of water. The City was incorporated in 1974 and is under the jurisdiction of the Kodiak Island Borough.

Demographic Profile [304]

In 2010, there were 87 residents in Larsen Bay, ranking it the 259th largest of 352 Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population decreased by 40.8%. Between 2000 and 2009, the population declined by 31.3% and there was an average annual growth rate of -1.37%, compared to the statewide average of 0.75%; indicative of a steep rate of decline. Information regarding population trends can be found in Table 1.

Larsen Bay is a predominately Alutiiq community. In 2010, 71.3% of residents identified themselves as American Indian or Alaska Native, compared to 78.3% in 2000; 24.1% identified themselves as White, compared to 20.9% in 2000; and 4.6% identified themselves as two or more races, compared to 0.9% in 2000. Information regarding racial and ethnic trends can be found in Figure 1.

In 2010, the average household size in Larsen Bay was 2.56, compared to 3.30 in 1990 and 2.88 in 2000. Also in 2010, there were a total of 70 housing units, compared to 74 in 1990 and 70 in 2000. Of the households surveyed in 2010, 29% were owner-occupied, compared to 46% in 2000; 20% were renter-occupied, compared to 11% in 2000; 11% were vacant, compared to 3% in 2000; and 40% were occupied seasonally, compared to 40% in 2000.

In 2010, the gender makeup of Larsen Bay was 55.2% male and 44.8% female. This was somewhat more skewed than both the distribution statewide (52.0% male, 48.0% female) and the distribution in 2000 (53.0% male, 47.0% female). The median age was estimated to be 43.5 years, higher than both the statewide median of 33.8 years, and 2000 median of 29.3 years.

Compared with 2000, the population structure in 2010 was more constricted in the younger age groups and expanded in the older age groups. In that year, 24.2% of residents were under the age of 20, compared to 39.1% in 2000 while 10.4% were between the ages of 20 and 29, compared to 12.2% in 2000. However, in 2010, 40.4% were between the ages of 30 and 59, compared to 37.5% in 2000 and 25.3% were over the age of 59, compared to 11.3% in 2000.

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[303] 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.

[304] 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.

This suggests that the population of Larsen Bay is continuing to age and no longer possesses a pyramid structure when the population is examined by age and gender.

Gender distribution by age cohort was slightly more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within both the 60 to 69 age range (9.2% male, 5.7% female) and the 80 and over age range (0.0% male, 3.5% female) with a disparity of 3.5%, closely followed by the 10 to 19 (6.9% male, 3.5% female) age group. Further information regarding trends in Fairbanks' population structure can be found in Figure 2.

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

Year	U.S. Decennial Census[1]	Alaska Dept. of Labor Estimate of Permanent Residents[2]
1990	147	-
2000	115	-
2001	-	113
2002	-	107
2003	-	95
2004	-	96
2005	-	97
2006	-	83
2007	-	89
2008	-	68
2009	-	79
2010	87	-

[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, Larsen Bay: 2000-2010 (U.S. Census).

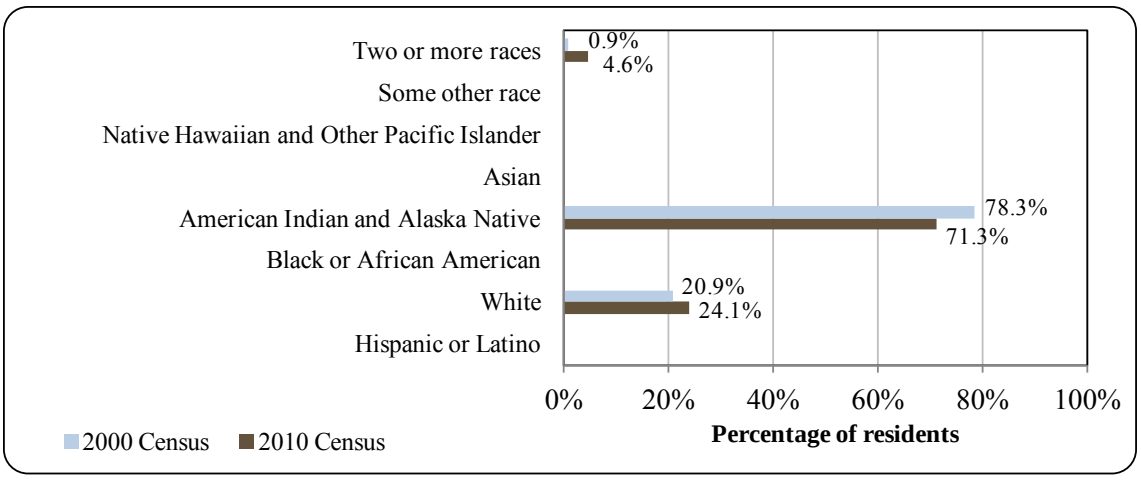
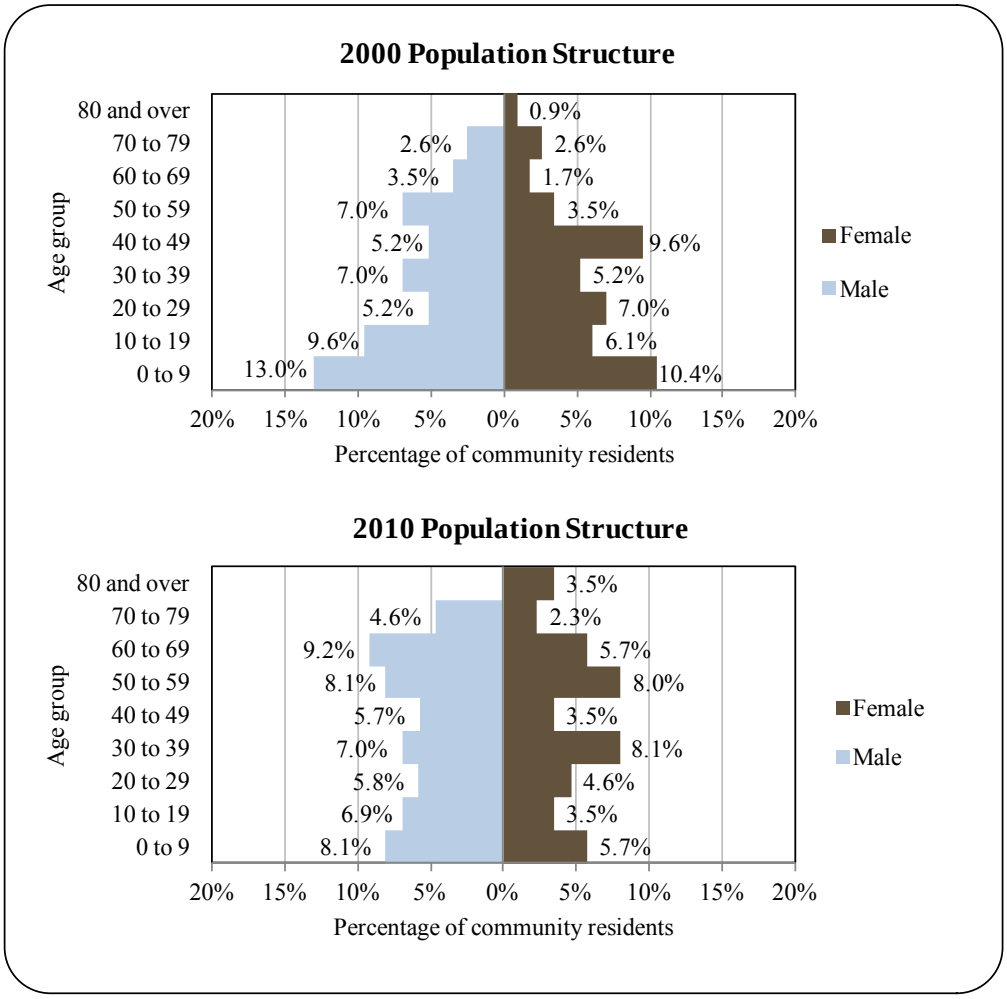


Figure 2. Population Age Structure in Larsen Bay Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)[305] estimated that 94.4% of residents aged 25 and over 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 2.6% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 3.1% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 14.1% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; 28.2% of resident held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 17.9% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

[305] 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.

History, Traditional Knowledge, and Culture[306]

Kodiak Island is within the traditional territory of the Alutiiq peoples, and the area is estimated to have been inhabited for at least 7,500 years.[307,308,309] The area around Larsen Bay is believed to have been inhabited for at least 2,000 years. Hundreds of artifacts have been uncovered in the community, which attest to the fact that an Aleut or more recently termed Alutiiq community lived in the area for about 2,000 years prior to the first contact with the Russians in the mid-1700s when fur traders began to frequent the islands. A tannery was present at Uyak Bay during the early 1800s. Peter Larsen was an Unga Island furrier, hunter and guide during the late 1800s and at the time of the 1890 Census the native village which was situated on the west shore of the bay, Uyak was renamed Larsen Bay after him. A cannery was constructed by the Alaska Packers Association in 1911. Owned now by the Kodiak Salmon Packers, the facility is one of the largest in the State of Alaska.[310]

Larsen Bay was incorporated in the year 1974. The City gained national attention in 1991 when the Smithsonian Institution repatriated the remains of 756 Alutiiq people which had been taken 50 years earlier in accordance with the Native American Graves Protection and Repatriation Act. The remains were given a Russian Orthodox reburial and interned in a mass grave. This was the largest repatriation of Native remains carried out by the Smithsonian.

Natural Resources and Environment[311]

The climate of the Kodiak Islands is dominated by a strong marine influence. There is moderate precipitation, frequent cloud cover and fog, and little or no freezing weather. Severe storms are common from December through February. Average annual precipitation is 23 inches. Temperatures remain within a narrow range, from 32 to 62 °F.[312]

The Larsen Bay area was sculpted heavily by glacial activities dating back to the Miocene. The bay itself is a fjord, which was at one time filled with ice as part of an extensive ice mass occupying Uyak Bay. Larsen Bay's coastal regions are characterized by narrow rocky beaches, moist tundra lowlands, and steep relief uplands. The community itself is located along a beach with gradual incline. Surrounding mountains reach elevations of approximately 3,000 feet. Because of extensive glaciation, the hills are generally smooth and rounded.[313]

Subsurface geology consists primarily of slate dating by to the Late Cretaceous Period. Bedrock is found and varying depths, with some areas exposed. The mantle of bedrock is

[306] 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.
[307] Crowell, A.L. Steffian, A.F., and G.L. Pullar, eds. 2001. Looking Both Ways: Heritage and Identity of the Alutiiq People. University of Alaska Press, Fairbanks.
[308] Clark, D.W. 1998. Kodiak Island: The Later Cultures. *Arctic Anthropology* 35:172-186.
[309] Clark, D.W. 1984. Pacific Eskimo: Historical Ethnography. In *Handbook of North American Indians, vol. 5*. D. Damas, ed. Pp 185-197. Smithsonian Insitution, Washington D.C.
[310] Norgaard Consultants. (1984). *Comprehensive Development Plan.* Retrieved August 13, 2012 from: http://www.commerce.state.ak.us/dca/plans/LarsenBay-CP-1984.pdf
[311] See footnote 306.
[312] Ibid.
[313] See footnote 310.

covered in till with thicknesses up to 30 feet. Organic silt and volcanic ash overlay this till in depths of up to four feet. Soils are relatively shallow throughout Kodiak Island.[314]

Vegetation in the area is dominated by scattered birch, cottonwood, and alders. In addition, high brush alder and willow is mixed with tree stands. There are no Sitka spruce or western hemlock in the area, as are found in eastern Kodiak Island. Bluejoint and fescue grasses abound in the open area, accompanied by other vegetation, such as lupine, Jacob's ladder, germs, sedges, and horsetail. Small areas of wetlands are found, especially near the head of the bay where soils are poorly drained.[315]

The Kodiak archipelago and waters that surround it are home to many species of terrestrial and aquatic life. The Kodiak National Wildlife Refuge occupies two-thirds of Kodiak Island and is home to terrestrial species such as brown bears, bats, tundra vole, short-tailed weasel, red fox, river otter, Sitka black-tail deer, beavers, red squirrels, snowshoe hare, arctic ground squirrel, Roosevelt elk, muskrat, and mountain goat. Marine mammals documented in the area include whales, harbor seals, fur seals, sea otters, and Steller sea lions.[316] The adjacent waters provide some of the richest commercial fishing grounds in the world, home to stocks of Pacific salmon, halibut, flounder, cod, trout, grayling, crab, and shrimp.[317]

There are several mineral projects in the area as of 2011 including a tin claim around Halibut Bay to the north and a gold/silver claim around the City of Kodiak.[318] In addition, there is a placer gold deposit located in the vicinity of Alitak and Tanner Head Island to the south.[319]

Natural hazards in the area include coastal flooding, coastal erosion, earthquakes, tsunamis, volcanism, landslides, and sea-level rise. Coastal flooding and erosion is mainly attributed to storm surges. There are several faults that run through Kodiak Island, including one 3.5 km west of Larsen Bay, and earthquakes that are magnitude six or above are relatively frequent. Threats from Aleutian volcanoes include the possibility of acidic rain, ash clouds, landslides, tsunamis, and earthquakes. Residents in the area reported subsidence of around 2 to 20 ft as a result of the 1964 Good Friday earthquake. Coastal erosion is a significant threat to the coastline of Larsen Bay, particularly along the shore to the northeast of the mouth of Humpy Creek. East-facing shorelines are the most prone to such damage. Gulf of Alaska (GOA) storms exacerbate coastal erosion as well as cause wind-related damage to infrastructure and utilities. Cyclonic storms in the GOA can sustain speeds of between 50 and 75 knots. Tsunami risks are considered low because of Larson Bay's location on the west side of Kodiak Island. Ash is considered a secondary threat posed by volcanism in the area. In 1912, the eruption of Mt. Katmai blanketed Kodiak Island in several feet of ash. Corrosive rains cause ash clouds may also pose a threat.[320]

According to the Alaska Department of Environmental Conservation, there were no local significant environmental remediation projects active in 2010.[321]

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[314] Ibid.
[315] Ibid.
[316] U.S. Fish and Wildlife Service (n.d.). *Kodiak National Wildlife Refuge.* Retrieved December 2, 2011 from: http://kodiak.fws.gov/wildlife_habitat.htm.
[317] Ibid.
[318] Alaska Department of Commerce. (n.d.) *Mineral Resources of Alaska Map.* Retrieved December 2, 2011 from: http://commerce.alaska.gov/ded/dev/minerals/mining.htm.
[319] See footnote 316.
[320] See footnote 310.
[321] Alaska Department of Environmental Conservation. (n.d.) *Contaminated Sites Program.* Retrieved June 5, 2012 from: http://dec.alaska.gov/spar/csp/list.htm.

Current Economy[322]

Larsen Bay's economy is heavily dependent on commercial fishing. In the summer months, the population swells to over 300 with approximately 200 local cannery workers and transient lodge workers joining the community. The local commercial fishing industry has been in decline since its peak in the 1980s. The impact of limited entry consolidated local fishing efforts, and many residents emigrated to find other employment. Permanent wage employment was replaced with a more seasonal economy as the community shrank. Local demographics have also had an impact on the local economy. Between 2000 and 2010, Larsen Bay's population structure went from an expansive, younger demographic, to a more constrictive, older demographic. Youth retention is of particular concern to the community and its economy. In 2004, only 12 of the 222 positions available in Larsen Bay were full time. The local seafood processor and tourism lodges provide seasonal employment, but the positions are low paying and typically outsourced to non-residents. The area surrounding Larsen Bay provides an abundance of exploitable marine resources. In addition, the Karluk River and Kodiak National Wildlife Refuge provides ample wildlife habitat and recreational resources. However, many areas surrounding Larsen Bay are restricted to non-commercial uses. As of 2004, Larsen Bay supported six tourism sport fish lodges; two of which were open year round.[323]

In 2010,[324] the estimated per capita income was $15,350 and the estimated median household income was $37,083, compared to $16,227 and $40,833 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,[325] the real per capita income $21,338 and real median household income $53,695 indicate a decline in both individual and household earnings between 2000 and 2010. In 2010, Larsen Bay ranked 200th of 305 Alaskan communities from which per capita income was estimated, and 208th of 299 communities from which median household income was estimated.

However, Larsen Bay's small population size may have prevented the ACS from accurately portraying economic conditions.[326] 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 $1.06 million in total wages in 2010.[327,328] When matched with the 2010 Decennial Census population, the per capita income

[322] Unless otherwise noted, all monetary data are reported in nominal values.
[323] Townsend-Vennel, R. J. (2004). *Community of Larsen Bay, Community Comprehensive Plan.* Retrieved August 13, 2012 from: http://www.commerce.state.ak.us/dca/plans/LarsenBay-CP-2004.pdf.
[324] 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.
[325] Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, http://labor.alaska.gove/research/cpi/inflationcalc.htm).
[326] 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.
[327] ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.
[328] 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/.

equals $12,233, which is somewhat less than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Decennial Census figures.

According to 2006-2010 ACS estimates,[329] 50% of residents over the age of 16 were part of the civilian labor force in 2010. In that year, unemployment was estimated at 0%, compared to an estimated 5.9% statewide; and an estimated 0% of residents were living below the poverty level, compared to an estimated 9.5% of Alaskan residents overall. However, it is likely that the ACS misrepresented employment conditions due to Larsen Bay's small population size. The ALARI database[330] estimated that unemployment in 2010 was 27.4% according to unemployment insurance claimants. In addition, the 2006-2010 ACS estimated to 50% of those employed worked in the public sector, and 50% were self-employed. Again, the validity of this estimate is questionable considering the ACS sample size; however, if accurate, ALARI estimates may be misrepresentative as they do capture not self-employed residents.

By industry, half of those employed were estimated to work in public administration sectors; and half in agriculture, forestry, fishing, hunting, and mining sectors. Between 2000 and 2010, there was significant consolidating of Larsen Bay's economy. The proportion of residents working in agriculture, forestry, fishing, hunting, and mining sectors experienced the greatest gain in those years, while all other sectors—with the exception of public administration—experienced significant proportional declines. This reduction in diversity was also seen in employment by occupation type, with significant proportional increases in natural resources, construction, and maintenance positions. Again, it is likely that Larsen Bay's small population size impacted the ACS' ability to accurately portray economic conditions. According to 2010 ALARI estimates,[331] most (59.6%) employed residents worked in local government sectors; followed by financial service sectors (11.5%); leisure and hospitality sectors (5.8%); and education and health service sectors (5.8%). It was estimated that natural resources and mining sectors accounted for only 1.9% of sector employment that year. Further information regarding employment by industry sector can be found in Table 3.

By occupation, most (50.0%) employed residents were estimated to hold natural resources, construction, or maintenance positions; followed by service (25.0%) and sales or office positions (25.0%). With the exception of service positions, there was significant proportional variation in employment by occupation type between 2000 and 2010. Between those years, there were large representative gains in natural resources, construction, maintenance, sales, and office occupations; while there were large declines in production, transportation, material moving, management, and professional occupations. As with employment by industry sector, it is possible that the ACS was unable to accurately portray local employment by occupation type in 2010. Further information regarding employment by occupation type can be found in Table 4.

[329] See footnote 326.
[330] See footnote 328.
[331] Ibid.

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

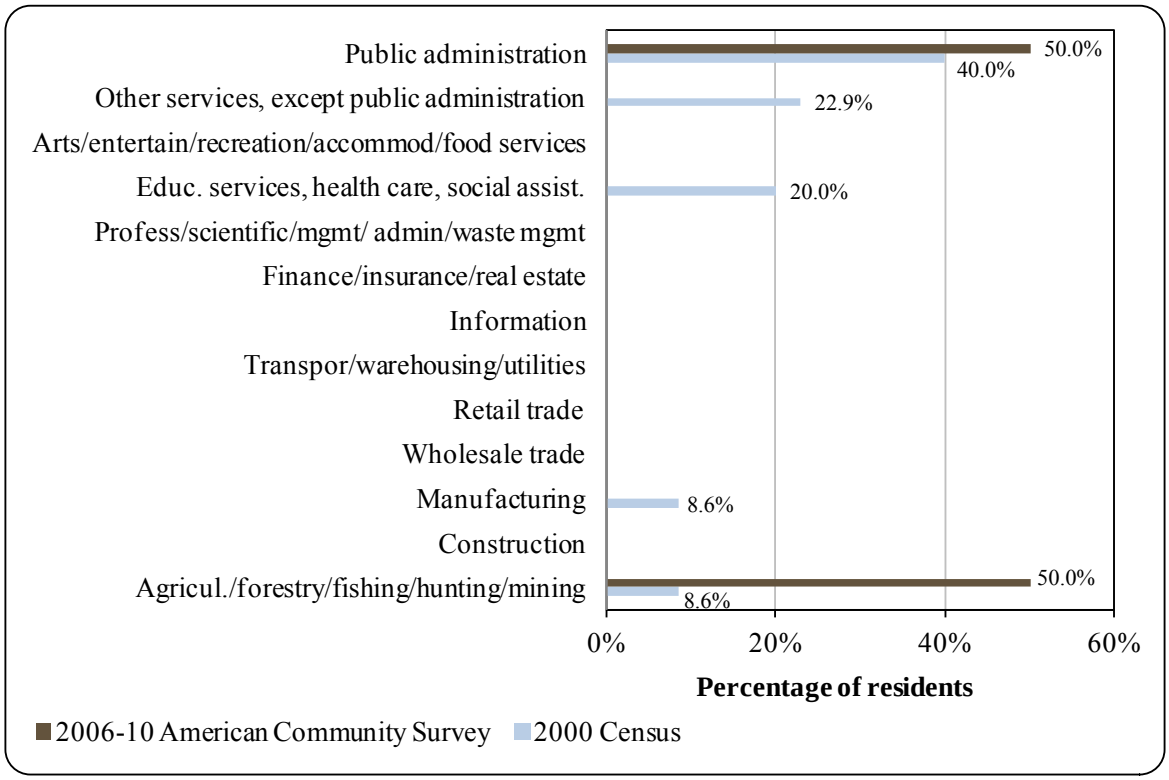
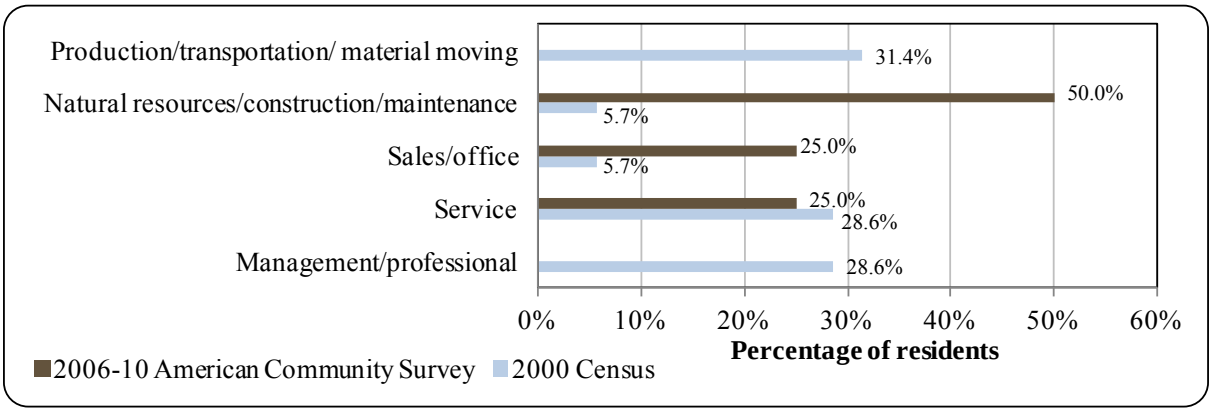


Figure 4. Local Employment by Occupation in 2000-2010, Larsen Bay (U.S. Census).



Governance

Larsen Bay is a Second-class city located within the Kodiak Island Borough. Incorporated in 1974, Larsen Bay has a manager or "Strong Mayor" form of government. In addition, there is a U.S. Bureau of Indian Affairs (BIA) recognized tribal government located in Larsen Bay. The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Larsen Bay is Koniag, Incorporated, and the local ANCSA chartered non-profit is the Kodiak Area Native Association. The ANCSA chartered village corporation is Anton Larsen, Inc. 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 within the City of Kodiak, 60 miles northeast.

The City collected a 3% sales tax and an accommodations tax in 2010. When adjusted for inflation,[332] total municipal revenues increased by 14.5% between 2000 and 2010 from $627,854, to $929,462. In 2010, most (91.1%) locally generated revenues came from utility rents; followed by local tax revenues (2.9%) and building and equipment rentals (2.5%). In terms of outside revenues, Outside revenues were almost entirely collected from state revenue sharing sources. Also in that year, sales taxes accounted for 1.3% of total municipal revenues, compared to 3.1% in 2000. Finally, state allocated Community Revenue Sharing accounted for 10.8% of total municipal revenues, compared to 3.4% from State Revenue Sharing in 2000. State and federal fisheries-related grants awarded to Larsen Bay between 2000 and 2010 included $399,600 for a small boat harbor, $67,624 for a disaster/boat harbor, and $965,000 for freezer/storage/processing equipment.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Larsen 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	$627,854	$19,418	$21,301	$222,630
2001	$748,362	$14,314	$20,480	n/a
2002	$919,511	$9,800	$20,483	$22,147
2003	$781,229	$6,333	$20,643	$222,447
2004	$730,103	$7,019	-	$965,000
2005	$674,334	$8,925	-	n/a
2006	$555,306	$9,627	-	n/a
2007	$631,606	$9,335	-	n/a
2008	$697,648	$9,231	-	n/a
2009	$822,603	$10,071	$99,417	n/a
2010	$929,462	$11,638	$99,961	n/a

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

[332] Inflation calculated using 2010 Anchorage CPI from Alaska DOL: http://labor.alaska.gov/research/cpi/cpi.htm.

Infrastructure

Connectivity and Transportation

Larsen Bay is accessible by water or air only. No roads connect the community with any other on Kodiak Island. Docking facilities are available. In 2002, a small boat harbor was completed. A cargo barge arrives every 6 weeks from Seattle.

The State of Alaska operates a 2,690-foot gravel airstrip and a seaplane base. As of November 2011, the price for airfare in June 2012 was $360 for roundtrip from Anchorage to the City of Kodiak.[333] Regular and charter flights are available from Kodiak to Larsen Bay and serviced by Island Air Service and Servant Air. Uyak Air Service is based in Larsen Bay and provides air service to other Kodiak Island communities on a charter basis.

Facilities

Water is supplied by two groundwater sources – a gravity feed from the hydrological plant and a backup well – and stored in a 200,000-gallon steel tank. A water supply line is connected to the penstock of the hydroelectric plant and used a majority of the time to reduce utility expenses to both the service plant and the customers. All 40 homes are connected to the piped water system. A community septic tank with outfall line serves approximately half of these homes and the rest are on individual septic systems. Weekly refuse collection services are provided.

In the City's Comprehensive Development Plan, community members report that a post office is present in the community.[334] The community also has telephone and internet access, but does not have a cable provider. A fire-hydrant system is attached to the City's water storage tank, and the community utilizes a local volunteer fire department for fire protection. The community is served by a Village Public Safety Officer. The nearest state troopers are located in Kodiak.

Medical Services

The Larsen Bay Health Clinic provides residents with basic medical services and contains an examination room as well as laboratory, waiting room, and office. Larsen Bay is part of the Southern Emergency Medical Services Region. Emergency Services have coastal and air access. Emergency service is provided by a health aide. The nearest hospital is located in Kodiak.

Educational Opportunities

The education system is operated by the Kodiak Island Borough School District. The school is housed in two buildings,[335] the first being the older building which houses grades kindergarten through sixth grade. This building has two classrooms and a library. The second building was constructed in 1980 and houses grades seventh through twelfth. This building

[333] Inflation calculated using 2010 Anchorage CPI from Alaska DOL: http://labor.alaska.gov/research/cpi/cpi.htm
[334] U.S. Government Printing Office. (n.d.) *City of Larsen Bay Comprehensive Development Plan.* Retrieved July 23, 2012 from: http://www.gpo.gov/fdsys/pkg/CZIC-ht168-l38-l37-1984/html/CZIC-ht168-l38-l37-1984.htm.
[335] Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from http://eed.alaska.gov/stats/.

contains two classrooms, a vocational education room, a gymnasium, a kitchen, and a storage area. The facility is utilized by the community during selected non-school hours for recreational use. In 2011, the school had 16 students in attendance and 5 teachers.[336]

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on Kodiak Island and surrounding areas. The Koniags historically migrated between permanent winter villages and temporary summer fish camps. Salmon was an important staple, and they also harvested other fish, intertidal resources and marine mammals, including whales, sea lions, seals, and sea otters. With the arrival of Russian colonists to Kodiak Island in the late 1700s, the Alutiiq people were forced to hunt for sea otters to fuel the trade of their valuable pelts.[337]

After the U.S. purchase of Alaska, American entrepreneurs arrived to continue hunting sea otter and to develop other industries, including salmon fishing. In 1889, the Royal Packing Company constructed a cannery at Larsen Bay. Shortly afterward, the American Packing Company built another. A majority of cannery employees were hired from outside the region, primarily from the United States and China. Native Alaskans became increasingly involved in commercial salmon fishing in the early 1900s, and coordinated commercial fishing activity with subsistence hunting and fishing activities. The most common fishing gear was the beach seine until purse seining became popular in the 1920s with the rise of fuel-powered boats. The salmon fishery was the primary focus of local commercial fishing activity, although by the 1920s, halibut fisherman began stopping in Kodiak, and herring and cod fishermen also worked in the area.[338]

The ADF&G manages the Kodiak salmon and herring fisheries in waters surrounding the Kodiak archipelago.[339] The salmon fishery is divided into seven fishing districts (Afognak District, Northeast Kodiak District, Eastside Kodiak District, Alitak Bay District, Southwest Kodiak District, Northwest Kodiak District, and Mainland Districts). Gear types in use currently include purse seine, set gillnets and beach seine.[340] Kodiak herring fisheries include a roe fishery (using both purse seine and gillnet gear) and a food/bait fishery. Herring sac roe fisheries take place in the spring when individual spawning biomasses are aggregated. In contrast, food/bait fisheries take place in the summer, fall, and winter when herring from several stocks may be mixed together. A Kodiak food/bait herring fishery has historically taken place in Shelikof Strait, but has been closed in recent years because the Kamishak Bay spawning biomass (Cook Inlet)

[336] 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.
[337] Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from http://ankn.uaf.edu.
[338] Ibid.
[339] Alaska Dept. of Fish and Game. 2012. *Kodiak Management Area*. Retrieved June 25, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakodiak.main.
[340] 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.

has been below threshold since 1998. The Alaska Board of Fish (BOF) closes food/bait fisheries if any of the individual spawning populations is below threshold.[341]

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. In the Gulf of Alaska (GOA), federally-managed groundfish fisheries target Pacific cod, walleye pollock, pelagic shelf rockfish, sablefish, and flatfish. Parallel fisheries for Pacific cod and walleye pollock also take place in state waters surrounding Kodiak Island. Parallel fisheries occur at the same time as the federal fisheries. The Total Allowable Catch (TAC) set by NMFS in each fishery applies to both federal and parallel harvest. In addition to federally-managed groundfish fisheries, beginning in 1997, a 'state-waters fishery' for Pacific cod was initiated in the Kodiak area. Management plans for state-waters fisheries are approved by the BOF, and guideline harvest limits (GHL) are set by the ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition, the ADF&G manages lingcod fisheries in both state and EEZ waters off Alaska, and beginning in 1998, management of black rockfish and blue rockfish in the GOA was transferred from NMFS to ADF&G.[342]

Kodiak Island is one historical center of the red king crab fishery, and Tanner crabs are also distributed through the GOA. The ADF&G manages red king crab and Tanner crab stocks in the GOA. Ouzinkie residents primarily held permits in the snow crab fishery between 2000 and 2010. Snow crab are distributed throughout the eastern and northern Bering Sea, and are not found in the immediate Kodiak area.[343,344] The Kodiak red king crab fishery has been closed in recent years due to low abundance. Parts of the Kodiak district have been open for Tanner crab harvest in recent years. Kodiak area Tanner crab harvest is managed using 8 separate management areas, each with its own GHL.[345] Pacific halibut fisheries are managed under the International Pacific Halibut Commission.

Larsen Bay has the longest history of a running cannery, Kodiak Salmon Packers, dating back to 1911. Since this time, Larsen Bay has been a focal point for the commercial and sports fishing industry. Before Russian fur traders arrived in the 18th century, Alutiiq villagers fished the waters around what is today Larsen Bay.

The City is located in Federal Statistical and Reporting Area 620, Pacific Halibut Fishery Regulatory Area 3A, and the Central Gulf of Alaska (GOA) Sablefish Regulatory Area. Larsen Bay is not eligible to participate in the Community Development Quota program. The community is, however, eligible to participate in the Community Quota Entity (CQE) program.

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.

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[341] Alaska Dept. of Fish and Game. 2012. *Commercial Herring Fisheries*. Retrieved June 25, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisheryHerring.main.
[342] 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.
[343] Alaska Dept. of Fish and Game. 2012. *Red King Crab Species Profile*. Retrieved June 20, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=redkingcrab.main.
[344] Alaska Dept. of Fish and Game. 2012. *Tanner Crab Species Profile*. Retrieved June 25, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=tannercrab.management.
[345] See footnote 342.

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 2013, 45 communities were considered eligible for the CQE program, and 2 CQE non-profits had purchased commercial halibut IFQ and were actively leasing it to eligible community residents. Both of these CQE non-profits were located in the Kodiak area: Cape Barnabas, Inc. in Old Harbor and the Ouzinkie Company Holding Corporation in Ouzinkie.[346]

The Larsen Bay Development Company is the CQE non-profit entity which represents Larsen Bay and according to a household survey conducted in 2006, the majority of residents (72%) expressed a desire to participate directly in the CQE program and 85% of residents expected the program to help the Larsen Bay community.[347] As of October 2013, the Larsen Bay Development Company had not purchased any commercial IFQ. However, the non-profit did have seven halibut charter permits available for lease to community members.[348]

Processing Plants

According to ADF&G's 2010 Intent to Operate list, there is one shoreside processing plant in Larsen Bay. In 2006, Icicle Seafoods Inc. purchased the Larsen Bay processing plant from Kodiak Salmon Packers. The plant, constructed in 1911, is located in a small glacial fjord off of the large Uyak Bay that bisects Kodiak Island and is one of the oldest canneries in Alaska. The plant exclusively processes and cans salmon and is only open during the summer and early fall. Over 200 employees work at the facility from June until late September. Free room, laundry service and board as well as air transportation between Anchorage and Larsen Bay are provided to fish processing workers, provided they fulfill their contractual obligations. Icicle offers a varied fare in its galley.[349] In 2010, the plant employed a maximum of 246 workers.[350]

Fisheries-Related Revenue

The City began collecting harbor usage fees in 2004, but has collected revenue from the Shared Fisheries Business Tax and Fisheries Resource Landing Tax programs every year between 2000 and 2010. In 2010, known fisheries-related revenue totaled $107,079, an increase

[346] NOAA Fisheries. (2013). *Community Quota and License Programs and Community Quota Entities.* Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/cqp.htm.
[347] Carothers, Courtney (2011). Equity and Access to Fishing Rights: Exploring the Community Quota Program in the Gulf of Alaska. *Human Organization* 70(3):213-223.
[348] See footnote 346.
[349] Icicle Seafoods, Inc. (n.d.). *Kodiak Salmon Packers.* Retrieved at http://www.icicleseafoods.com/locations/lsb/about.aspx on May 5, 2012.
[350] This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

from 2000 when a total of $81,489 was collected. However, there was significant inter-annual variation in the intervening years. In the second half of the decade, anywhere from 23% to 34% of the total fisheries-related revenues came from harbor usage fees. For more information on known fisheries-related revenues for Larsen Bay between 2000 and 2010, see Table 3.

Commercial Fishing

In 2000, 21 residents held 26 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2010, 14 residents, or 16% of the population, held 14 CFEC permits. Of the permits held in 2010, 86% were for salmon, compared to 73% in 2000; 7% were for groundfish, compared to 23% in 2000; and 7% were for crab, compared to 0% in 2000. In addition, one resident held a groundfish License Limitation Program (LLP) permit in 2010. No residents held halibut quota shares between 2008 and 2010. However, residents held 1,181 shares through 1 account in 2007, compared to 4,559 shares through 2 accounts in 2000. No residents held sablefish or crab quota shares between 2005 and 2010.

Residents held 8 commercial crew licenses in 2010, compared to 29 in 2000. Also in that year, residents held majority ownership of 8 vessels, compared to 20 in 2000. Both the number of crew licenses and vessels owned by residents declined between 2000 and 2010. Of the permits held in 2010, 64% were actively fished, compared to 77% in 2000. This varied by fishery from 100% of groundfish and crab permits, to 58% of salmon permits. Fisheries prosecuted in 2010 by Larsen Bay residents included: GOA mechanical jig saltwater finfish and Kodiak purse seine, beach seine, and set gillnet salmon.

Between 2000 and 2010, no landings were made in Larsen Bay, with the exception of 2010, when 40 vessels made landings. However, landings are considered confidential for that year. Landings reported by Larsen Bay residents are considered confidential, with the exception of 2004 when residents landed 166,330 pounds of Pacific cod valued at $53,759. Information regarding commercial fishing trends can be found in Tables 4 through 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Larsen 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]	$81,429	$113,036	$69,750	$28,259	$33,675	$40,177	$51,718	$65,785	$73,461	$99,273	$82,480
Fisheries Resource Landing Tax[1]	$60	$358	$198	$259	$220	$271	$76	$139	$259	$90	$88
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	$20,500	$20,500	$12,750	$15,000	$13,750	$13,000	$24,510
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 revenue[4]	*$81,489*	*$113,394*	*$69,948*	*$28,518*	*$54,396*	*$60,948*	*$64,545*	*$80,924*	*$87,470*	*$112,363*	*$107,079*
Municipal revenue[5]	*$627,854*	*$748,362*	*$919,511*	*$781,229*	*$730,103*	*$674,334*	*$555,306*	*$631,606*	*$697,648*	*$822,603*	*$929,462*

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, Larsen Bay: 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	2	1	1	1
	Active permits	1	0	0	0	1	0	0	0	0	0	0
	% of permits fished	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	2	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	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	2	2	1	1	1	2	2	1	1	1
	Fished permits	0	2	2	0	0	1	0	1	0	0	1
	% of permits fished	n/a	100%	100%	0%	0%	100%	0%	50%	0%	0%	100%
	Total permit holders	0	2	2	1	1	1	2	2	1	1	1
Other shellfish (CFEC) [2]	Total permits	1	0	0	0	0	0	0	0	0	0	0
	Fished permits	1	0	0	0	0	0	0	0	0	0	0
	% of permits fished	100%	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
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

Table 4 cont'd. Permits and Permit Holders by Species, Larsen 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	6	2	2	1	7	2	1	1	1	2	1
	Fished permits	5	2	1	1	6	1	0	1	0	0	1
	% of permits fished	83%	100%	50%	100%	86%	50%	0%	100%	0%	0%	100%
	Total permit holders	5	2	2	1	5	2	1	1	1	1	1
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	19	13	13	11	14	13	14	10	9	12	12
	Fished permits	14	10	7	7	10	10	10	7	4	7	7
	% of permits fished	74%	77%	54%	64%	71%	77%	71%	70%	44%	58%	58%
	Total permit holders	19	13	13	12	16	13	18	12	10	12	13
Total CFEC Permits[2]	*Permits*	*26*	*17*	*17*	*13*	*22*	*16*	*17*	*13*	*11*	*15*	*14*
	Fished permits	*20*	*14*	*10*	*8*	*16*	*12*	*10*	*9*	*4*	*7*	*9*
	% of permits fished	*77%*	*82%*	*59%*	*62%*	*73%*	*75%*	*59%*	*69%*	*36%*	*47%*	*64%*
	Permit holders	*21*	*14*	*14*	*12*	*19*	*13*	*19*	*13*	*12*	*13*	*14*

[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 Larsen Bay: 2000-2010.

Year	[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 Larsen Bay[2]	Total Net Pounds Landed in Larsen Bay[2,5]	Total Ex-Vessel Value of Landings in Larsen Bay [2,5]
2000	29	0	0	20	37	0	0	$0
2001	32	0	0	22	39	0	0	$0
2002	17	0	0	24	38	0	0	$0
2003	22	0	1	22	37	0	0	$0
2004	25	0	1	16	33	0	0	$0
2005	24	0	1	11	18	0	0	$0
2006	13	0	1	9	18	0	0	$0
2007	10	0	1	10	19	0	0	$0
2008	9	0	1	6	16	0	0	$0
2009	11	0	1	8	18	0	0	$0
2010	8	1	1	8	17	40	--	--

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 Larsen Bay: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	2	4,559	451
2001	2	4,559	539
2002	2	4,559	558
2003	2	4,559	557
2004	2	4,559	617
2005	1	1,181	162
2006	1	1,181	160
2007	1	1,181	167
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 Larsen 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 Larsen 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 Larsen Bay: 2000-2010.

	***Total Net Pounds*[1]**										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	0	0	0	0	0	0	0	0	0	0	--
Finfish	0	0	0	0	0	0	0	0	0	0	--
Halibut	0	0	0	0	0	0	0	0	0	0	--
Herring	0	0	0	0	0	0	0	0	0	0	--
Other Groundfish	0	0	0	0	0	0	0	0	0	0	--
Other Shellfish	0	0	0	0	0	0	0	0	0	0	--
Pacific Cod	0	0	0	0	0	0	0	0	0	0	--
Pollock	0	0	0	0	0	0	0	0	0	0	--
Sablefish	0	0	0	0	0	0	0	0	0	0	--
Salmon	0	0	0	0	0	0	0	0	0	0	--
Total[2]	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	--
	Ex-vessel Value (nominal U.S. dollars)										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	--
Finfish	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	--
Halibut	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	--
Herring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	--
Other Groundfish	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	--
Other Shellfish	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	--
Pacific Cod	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	--
Pollock	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	--
Sablefish	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	--
Salmon	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	--
Total[2]	*$0*	*$0*	*$0*	*$0*	*$0*	*$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 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 Larsen Bay Residents: 2000-2010.

	Total Net Pounds[1]										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	166,330	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
Total[2]	--	--	--	--	*166,330*	--	--	--	--	--	--
	Ex-vessel Value (nominal U.S. dollars)										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	$53,759	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
Total[2]	--	--	--	--	*$53,759*	--	--	--	--	--	--

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

Larsen Bay residents participate in recreational fishing. The number of active sport fish guide businesses remained relatively steady between 2000 and 2010 at either three or four in any given year. The only exception was 2004 when only two sport fish guide businesses were active. The number of sport fish guide licenses held also remained relatively steady, averaging about 12 licenses annually. Residents

Larsen Bay is located within Alaska Sport Fishing Survey Area Q – Kodiak. This area includes all Alaskan waters, including drainages, of the Kodiak and Afognak Island groups, including the Trinity Islands. Sportfishing on Kodiak Island can be divided into private anglers who use boats and those who use the Island's road system to access sportfishing destinations. There are 75 miles of paved and hard-packed gravel roads that cross 10 significant streams and provide access to 18 stocked lakes. Road system anglers can find salmon, Dolly Varden, and rainbow and steelhead trout in fresh waters. Remote areas on Kodiak, categorized as any areas

outside the road system, provide opportunities for salmon, Dolly Varden, and fall-run steelhead trout. Remote Area salmon begin to return in early June, and fishing grounds are typically accessed by charter boat or seaplane.[351]

Troll-fishing Kodiak's marine waters for Chinook and coho salmon is a popular activity on the island. Chiniak Bay provides year-round habitat for Chinook. The Karluk River south of Larsen Bay provides one of the only native freshwater Chinook. Normally, the Karluk River annually averages an in-river run of 8,000 Chinook; however, recent runs have been in decline. Sockeye salmon are plentiful in many drainages on Kodiak and tend to spawn along lakeshores and tributary systems. Generally, sockeye arrive in early June and run through the end of July. The Kodiak road system provides access to sockeye on the Buskin, Pasagshak, and Saltery rivers, in eastern Kodiak Island. Pink salmon are found in abundance throughout the coastal and freshwater drainage systems around Kodiak Island. Pinks can be taken along ocean beaches and near stream mouths between middle to late July with runs peaking around mid-August. Coho salmon are typically targeted in offshore marine areas using charter or private vessels. The troll recreational fishery peaks the third week of August, and is typically over by mid-September. Large runs of coho occur late in the year in the Karluk River, with lagoon fishing starting in early September and peaking by the end of the month. The Karluk River also maintains the largest population of steelhead trout on the island, averaging 8,000 fish annually. Middle to late October is the best time to fish for steelhead, although mid-April and early May are also good times. Dolly Varden are found at lake outlets and near the mouths of freshwater systems feeding on out-migrating pink salmon fry. Then in mid-July through October, Dolly Varden migrate back into freshwaters to spawn and winter. Halibut are abundant around Kodiak Island, and sportfishing is excellent from late April through early September. In a typical year, sport anglers catch over 25,000 halibut in Kodiak waters. More than 30 species of rockfish are found in Kodiak marine waters. Common species caught include dark, dusky, and yellow-eye rockfish. The estimated rockfish catch is around 25,000 fish annually. Lingcod are also found in the area, and the typical annual catch averages around 2,500 fish.[352]

In 2010, angler days fished totaled 40,377 for saltwater and 41,082 for freshwater fisheries, compared to 55,576 and 65,831 in 2000, respectively (Table 11). In that year non-Alaskan residents accounted for 49.6% of saltwater angler days fished, compared to 30.2% in 2000; indicating a proportional decline in resident angler days fished. The same trend was seen in freshwater angler days fished with non-Alaska residents accounting for 45.9% in 2010, compared to 28.3% in 2000.

According to ADF&G Harvest Survey Records, Larsen Bay private anglers target Chinook, coho, sockeye, and pink salmon, Pacific halibut, rockfish, Pacific cod, steelhead trout, and Tanner crab. According to 2010 kept/released charter logs, local charter fishing vessels reported keeping 232 Chinook salmon, 2,792 coho salmon, 2,487 halibut, 57 lingcod, 1,098 rockfish, and 6 sockeye salmon.[353]

[351] Alaska Dept. of Fish and Game. (2012). *Kodiak.* Division of Sport Fish. Retrieved August 14, 2012 from: http://www.adfg.alaska.gov/static-sf/Region2/pdfpubs/kodiak.pdf.
[352] Ibid.
[353] 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, Larsen 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 Larsen Bay[2]
2000	4	11	30	64
2001	4	14	24	66
2002	3	15	32	1
2003	3	13	32	30
2004	2	13	38	40
2005	3	12	37	70
2006	3	11	35	88
2007	4	11	31	130
2008	4	15	29	206
2009	4	11	29	234
2010	3	10	31	192

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	16,767	38,809	18,524	47,307
2001	14,761	24,604	18,299	19,757
2002	18,356	19,737	15,018	35,113
2003	17,715	23,726	13,362	34,034
2004	18,896	22,787	21,331	31,124
2005	21,269	33,917	23,789	36,753
2006	23,511	21,991	23,483	26,239
2007	21,668	31,554	26,916	31,072
2008	20,275	31,944	24,944	24,876
2009	20,813	26,520	10,859	21,283
2010	20,012	20,365	18,871	22,211

[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

Larsen Bay residents participate extensively in subsistence fishing. Community residents consider halibut, salmon, trout, grayling, flounder, and cod as primary fish subsistence resources. In addition, clams, crab, and shrimp are harvested. Subsistence marine mammals include seals and sea lions. Waterfowl and terrestrial mammal hunting also takes place. Uyak Bay is the principal area for subsistence activities, both upland and waterside. Zachar and Spiridon Bay are also important areas for subsistence harvest.[354]

According to the ADF&G Community Subsistence Information System (CSIS), an estimated 83% of households participated in salmon subsistence activities in 2005, and 25% of households participated in non-salmon fish subsistence activities. In 2003, an estimated 80% of households participated in salmon subsistence activities, an estimated 76% participated in halibut subsistence activities, an estimated 12% participated in marine mammal subsistence activities, an estimate 40% participated in marine invertebrate subsistence activities, and an estimated 11% participated in non-salmon fish subsistence activities.[355]

Data on subsistence harvest of salmon, marine invertebrates, and non-salmon fish are somewhat limited. In 2008, residents reported harvesting sockeye salmon most often, followed by coho, pink, Chinook, and chum salmon. In that year, residents reported harvesting 1,130 fish, compared to 439 in 2000. Reported salmon harvests peaked in 2005 at 1,470 fish. In addition, residents reported harvesting 3,199 lbs of marine invertebrates and 1,034 lbs of other fish species in 2003.

Halibut is a popular subsistence resource in Larsen Bay. In 2010, 33 residents held Subsistence Halibut Registration Certificates (SHARC), compared to 21 in 2003. In that year, an estimated 2,617 lbs of halibut was harvested on 13 SHARC, compared to an estimated 5,684 on 20 SHARC in 2003. Estimated halibut harvests peaked in 2004 at 12,327 lbs. In 2010, SHARC activity and estimated pounds harvested were both at their lowest since the program began. SHARC activity declined significantly after years of stable use.

Reported marine mammal harvests included sea otters and harbor seals. Between 2000 and 2010, a total of 46 sea otters were reported harvested; and 96 harbor seals were reported harvested between 2000 and 2008.

According to ADF&G's CSIS database, marine and freshwater species that residents of Larsen Bay have harvested or used include chitons, butter clams, king crab, octopus, razor clams, sea cucumber, sea urchin, Tanner crab, harbor seal, Steller sea lion, rockfish, Dolly Varden, herring, Pacific cod, and steelhead trout.[356] Information regarding subsistence trends can be found in Tables 12 through 15.

[354] Norgaard Consultants. (1984). *Comprehensive Development Plan.* Retrieved August 13, 2012 from: http://www.commerce.state.ak.us/dca/plans/LarsenBay-CP-1984.pdf.
[355] Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS).* ADF&G Division of Subsistence. Retrieved August 25, 2012 from: http://www.adfg.alaska.gov/sb/CSIS/.
[356] Ibid.

Table 12. Subsistence Participation by Household and Species, Larsen 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	80%	76%	12%	40%	11%	290.76
2004	84%	n/a	n/a	n/a	35%	n/a
2005	83%	n/a	n/a	n/a	25%	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, Larsen 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	1	11	n/a	3	23	3	430	n/a	n/a
2001	n/a	26	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	21	n/a	n/a	n/a	n/a	n/a	3,199	1,034
2004	28	28	21	n/a	19	23	958	n/a	2,032
2005	25	25	7	25	53	51	1,334	n/a	347
2006	n/a	n/a	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	n/a	n/a
2008	23	23	26	9	76	42	977	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, Larsen Bay: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	21	20	5,684
2004	40	29	12,327
2005	39	21	4,359
2006	37	22	5,022
2007	42	29	6,827
2008	39	21	3,381
2009	34	24	3,889
2010	33	13	2,617

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, Larsen 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	6	n/a	n/a	n/a	19	n/a
2001	n/a	6	n/a	n/a	n/a	9	n/a
2002	n/a	n/a	n/a	n/a	n/a	3	n/a
2003	n/a	6	n/a	n/a	n/a	2	n/a
2004	n/a	23	n/a	n/a	n/a	12	n/a
2005	n/a	n/a	n/a	n/a	n/a	17	n/a
2006	n/a	4	n/a	n/a	n/a	20	n/a
2007	n/a	n/a	n/a	n/a	n/a	9	n/a
2008	n/a	n/a	n/a	n/a	n/a	5	n/a
2009	n/a	1	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.

Old Harbor

People and Place

Location

Old Harbor is situated on the southeast coast of Kodiak Island. The harbor is protected from the Gulf of Alaska by Sitkalidak Island to the southeast. A large salt lagoon is present at the center of the community.[357] Old Harbor is located 70 miles southwest of the City of Kodiak and 322 miles southwest of Anchorage. The City encompasses 21.0 square miles of land and 6.2 square miles of water. Old Harbor is located in the Kodiak Island Borough Census Area and the Kodiak Recording District.[358]

Demographic Profile [359]

In 2010 there were 218 residents in Old Harbor, making it the 189th largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population of Old Harbor declined by 23%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents decreased by 18.6%, with an average annual growth rate of -0.71%. A majority of the population in Old Harbor identifies with the cultural group Alutiiq/Sugpiaq.[360] This is reflected in U.S. Census statistics. In 2010, a majority of Old Harbor residents identified themselves as American Indian or Alaska Native (87.6%). In addition, 11% of the population identified as White in 2010, 1.4% identified with two or more races, and 1.4% of the population also identified themselves as Hispanic. Individuals identifying as American Indian or Alaska Natives made up 14.6% more of the population in 2010 than in 2000, while 2.1% less of the population identified as White and 12.5% less identified with two or more races. 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.

According to household surveys conducted for the U.S Census, the average household size in Old Harbor in 2010 was 2.6, a substantial decrease from 3.60 persons per household in 2000 and 3.20 in 1990. Over the same period, the number of households stayed relatively stable, decreasing from 87 in 1990 to 79 in 2000, and then increasing again to 84 occupied housing units in 2010. Of the 105 housing units surveyed for the 2010 U.S. Decennial Census, 66.7% were owner-occupied, 13.3% were rented, and 20% were vacant or used only seasonally. From 1990 to 2010, no residents of Old Harbor lived in group quarters.

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[357] City of Old Harbor. *Community Emergency Response Plan: Annex D to the Kodiak Emergency Operations Plan*. August 2000. Retrieved November 30, 2011 from http://www.city.kodiak.ak.us.

[358] 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.

[359] 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.

[360] Based on community feedback provided during review of the draft of this community profile in December, 2012.

The gender makeup in Old Harbor in 2010 was more skewed toward males (56.4% male and 43.6% female) than the gender makeup of the State as a whole, which was 52% male and 48% female. That year, the median age of Old Harbor residents was 34.3 years, slightly higher than the median age for Alaska of 33.8, and lower than the U.S. national average of 36.8 years. The overall population structure of Old Harbor in 2000 and 2010 is shown in Figure 2 below. In 2010, almost all age groups had more males than females, with the exception of more females in the 0-9 and 70-79 age categories, and an equal number of males and females between 30 and 39 years of age. Relatively few people were over the age of 70, and no one over the age of 80 lived in Old Harbor in 2010.

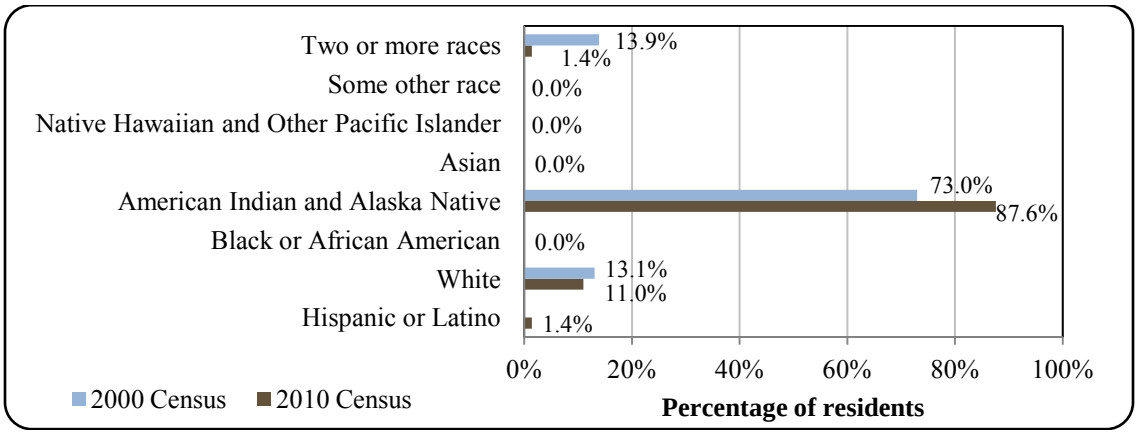
Table 1. Population in Old Harbor from 1990 to 2010 by Source.

Year	U.S. Decennial Census[1]	Alaska Dept. of Labor Estimate of Permanent Residents[2]
1990	284	-
2000	237	-
2001	-	236
2002	-	226
2003	-	211
2004	-	198
2005	-	200
2006	-	179
2007	-	201
2008	-	185
2009	-	193
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.

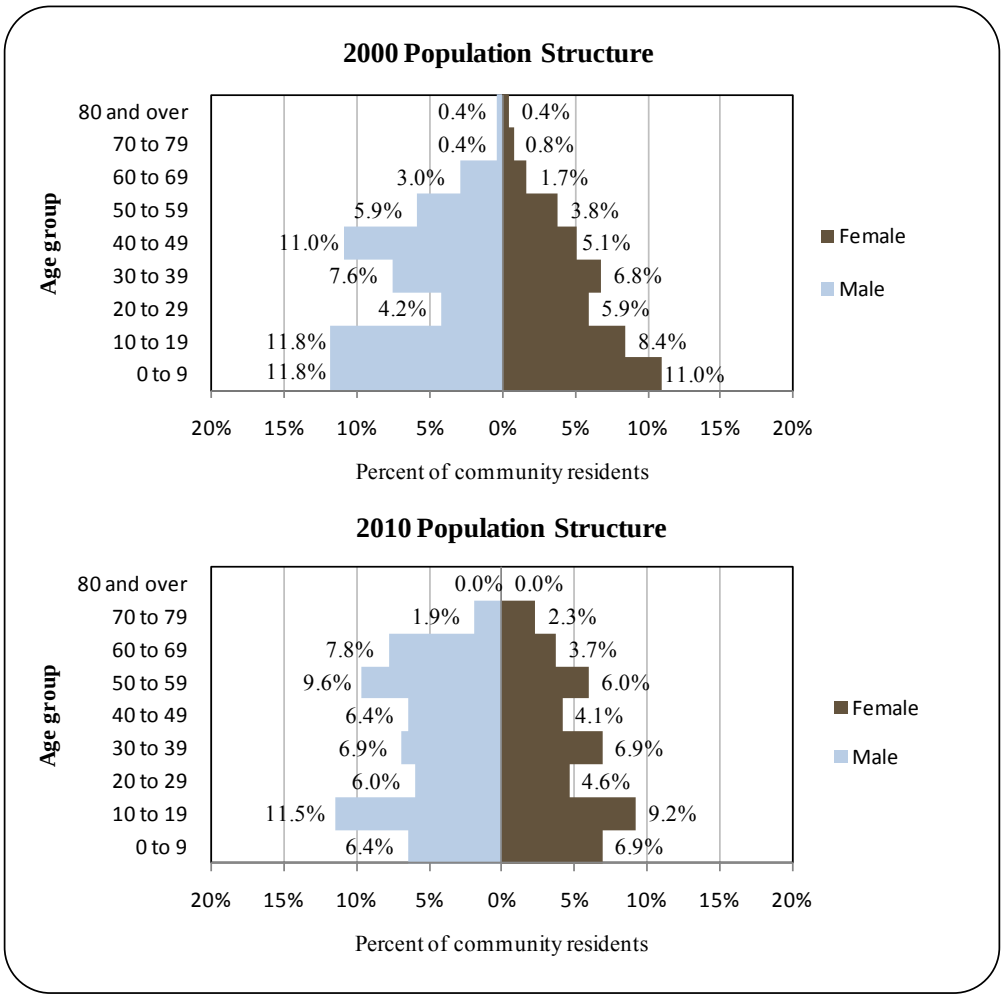
[2] Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from http://labor.alaska.gov/research/pop/popest.htm.

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



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),[361] 78.9% of Old Harbor residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 9.2% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 11.9% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 20.2% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 3.7% were estimated to have an Associate's degree, compared to 8% of Alaska residents overall; 0% were estimated to have a Bachelor's degree, compared to 17.4% of Alaska residents overall; and 7.3% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

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



[361] 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

Kodiak Island is within the traditional territory of the Alutiiq peoples, and the area is estimated to have been inhabited for at least 7,500 years.[362,363,364] At the time Russian settlement, the Alutiiq peoples were referred to as 'Aleuts'. The name 'Alutiiq' has been used since the 1980s to refer to the linguistic and cultural group of Alaska Natives from the southern coast of the Alaska Peninsula to Prince William Sound, as distinguished from the Aleuts living in the Aleutian Islands. Alutiiq people living on Kodiak Island and the south coast of the Alaska Peninsula are called Koniag (Koniagmiut), and those living on Kodiak Island specifically are called Qikertarmiut (people of Kodiak Island). The Koniags historically migrated between permanent winter villages and temporary summer fish camps. Salmon was an important staple, and they also harvested other fish, intertidal resources, and marine mammals, including whales, sea lions, seals, and sea otters. They were skilled mariners, using skin kayaks and larger wooden boats for both war raids and trade.[365,366]

After the Russian fur trade caused sea otter populations to decline in the Aleutian Islands, fur traders entered the territory of the Koniags. The Russians were initially repelled by the Alutiiqs, but in 1784 Gregorii Shelikof approached Kodiak Island armed with muskets and cannons to take the area by force. Several thousand Natives retreated to Refuge Rock near Sitkalidak Island. The Russians discovered a hidden access to the rock, and hundreds of Natives were killed jumping off a cliff to escape from Shelikof's party. That same year, Shelikof's men founded a settlement near the present location of Old Harbor. It was named Three Saint's Bay after Shelikof's flagship, the "Three Saints". Three Saint's Bay was the first Russian colony in Alaska, but in 1788 the settlement was destroyed by a tsunami. The community experienced two more earthquakes and relocated to the northeast coast of the island in 1793, to "Saint Paul's," which today is the City of Kodiak.[367]

By the time of the sale of Alaska to the United States in 1867, hardship, starvation, and disease had reduced the Native population of Kodiak Island from 8,000 to 2,000. Salmon canneries were established around the region starting in the 1880s. Although some Natives worked in the canneries, the workforce was primarily hired from the U.S. and China. Starting in the late 1800s there was a wave of Scandinavian immigrants to the region.[368] In 1884 the community of "Staruigayan", which translates to "old harbor" from Russian, was established near the original site of Three Saint's Bay. In 1932, the Old Harbor post office opened. The Good Friday earthquake in 1964 and accompanying tsunami destroyed the whole community of Old Harbor; only the church and two homes remained. The community was rebuilt, and in 1966 the City of Old Harbor was incorporated.[369,370]

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[362] Crowell, A.L. Steffian, A.F., and G.L. Pullar, eds. 2001. Looking Both Ways: Heritage and Identity of the Alutiiq People. University of Alaska Press, Fairbanks.
[363] Clark, D.W. 1998. Kodiak Island: The Later Cultures. *Arctic Anthropology* 35:172-186.
[364] Clark, D.W. 1984. Pacific Eskimo: Historical Ethnography. In *Handbook of North American Indians, vol. 5*. D. Damas, ed. Pp 185-197. Smithsonian Insitution, Washington D.C.
[365] Mason, R. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from http://ankn.uaf.edu.
[366] City of Old Harbor (1989). *Old Harbor Comprehensive Plan and Capital Improvements Program: Public Hearing Draft*. June, 1989. Retrieved December 5, 2011 from http://www.kodiakak.us/.
[367] See footnotes 365 and 366.
[368] See footnote 365.
[369] Ibid.

Natural Resources and Environment

The climate of Kodiak Island is dominated by a strong marine influence. There is little or no freezing weather, moderate precipitation, and frequent cloud cover and fog. Severe storms are common from December through February.[371] Annual precipitation averages 69 inches. Average temperatures vary between 23 to 62 °F.[372] Extreme low temperatures can be well below freezing and summer high temperatures can run as high as 80 or 90 °F.[373] Kodiak Island is located in a highly active volcanic and tectonic zone along the Pacific "Ring of Fire". The original settlement at the site of Old Harbor was destroyed by a tsunami in 1788, and Old Harbor was again destroyed by the tsunami resulting from the Good Friday earthquake of 1964.[374] The 1912 eruption of the volcano Novarupta, located 100 miles northwest of Kodiak Island on the Alaska Peninsula, covered the island in ash and gasses and disrupted the local salmon fishery, especially between 1915 to 1919, when many adult fish starved and failed to spawn in ash-choked streams.[375] For more information about earthquakes and volcanic activity near Old Harbor, see the *Additional Information* section of this profile.

Old Harbor is located in close proximity to Kodiak National Wildlife Refuge (NWR). The NWR was established in 1941 with the purpose of wildlife conservation, in particular the Kodiak brown, bear unique to the island, as well as fulfillment of treaty obligations, providing for continued subsistence use, and to ensure water quality and quantity.[376] Two conservation easements were purchased in 1995 from the village Native corporation, Old Harbor Native Corporation. They are located in the Lagoon Creek and Mountain Creek Drainages, and became part of the NWR. In 2000, the local electrical utility, Alaska Village Electric Cooperative (AVEC) requested amendments to the conservation easements in order to divert water from Mountain Creek to a hydroelectric powerhouse discharging into Lagoon Creek. The amendments were granted, and the project was estimated to impact between 24 and 36 acres of the NWR.[377] There are also a number of state parks, state historical parks, and state recreation sites located on the northeast corner of Kodiak Island.[378]

Kodiak Island was directly impacted by the *Exxon Valdez* Oil Spill in March of 1989, in which 11 million gallons of crude oil spilled into Prince William Sound and spread to surrounding areas.[379] Oil was carried by currents throughout the area of the Alutiiq people, and

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[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] Ibid.
[372] USA website. (2013). *Old Harbor, AK Weather*. Retrieved October 21, 2013 from http://www.usa.com/old-harbor-ak-weather.htm.
[373] Based on community feedback provided during review of the draft of this community profile in December, 2012.
[374] City of Old Harbor. *Community Emergency Response Plan: Annex D to the Kodiak Emergency Operations Plan*. August 2000. Retrieved November 30, 2011 from http://www.city.kodiak.ak.us.
[375] U.S. Geological Survey. 1998. "Can Another Great Volcanic Eruption Happen in Alaska?" Retrieved December 5, 2011 from http://volcanoes.usgs.gov/about/publications/factsheets.php.
[376] U.S. Fish and Wildlife Service. Kodiak National Wildlife Refuge . Retrieved November 30, 2011 from http://kodiak.fws.gov.
[377] State of Alaska (2001). "Old Harbor – Amendment to Purchase Agreement and Conservation." Publish date 06/06/2001. Retrieved December 2, 2011 from http://notes4.state.ak.us/pn/pubnotic.nsf .
[378] Alaska Dept. of Natural Resources. (n.d.) *Alaska State Parks* . Retrieved December 6, 2011 from http://dnr.alaska.gov/parks/.
[379] Environmental Protection Agency. "*Exxon Valdez*." Retrieved December 2, 2011 from http://www.epa.gov/emergencies/content/learning/exxon.htm.

hit the beaches of Kodiak Island in mid-April.[380] The *Exxon Valdez* Oil Spill Trustee Council was formed following the spill, and has overseen large-scale habitat restoration, protection, and acquisition. On Kodiak Island, the Trustee Council has protected over 260,000 acres, much of it now included within the NWR.[381]

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Old Harbor as of May 2012.[382]

Current Economy[383]

Commercial and subsistence fishing, as well as subsistence hunting, are all very important to the community of Old Harbor. Many residents hold commercial fishing permits or work as crew members. In 2000, the number of state fishery permit holders in Old Harbor was equivalent to 14% of the total local population, and the number of crew license holders was equivalent to 26.5% of the population. By 2010, the number of permit holders had declined to 13% and the number of crew license holders declined to 16.5% of the population. The City also has a number of sportfishing guide businesses. Important subsistence food sources include salmon, halibut, crab, deer, seal, rabbit, and bear.[384] In addition to commercial fisheries, top employers of Old Harbor residents in 2010 included local government offices, the Kodiak Island Borough School District, regional housing and other community service providers, Kodiak Sportsman Lodge, LLC, a construction company, a stevedoring company, and Servant Air, Inc.[385]

Based on household surveys for the 2006-2010 ACS,[386] in 2010, the per capita income in Old Harbor was estimated to be $10,992 and the median household income was estimated to be $33,333, compared to $14,265 and $32,500 reported in 2000, respectively. This drop in per capita income between 2000 and 2010 is revealed to be even greater when accounting for inflation by converting the 2000 values to 2010 dollars,[387] showing that the real per capita income in 2000 was $18,758. Household income is also shown to have decreased over the period after accounting for inflation, from a real median household income in 2000 of $42,737. In 2010, Old Harbor ranked 257th in per capita income out of 305 Alaskan communities with per capita income data, and 227th in median household income, out of 299 Alaskan communities with household income data that year.

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[380] Mason, R. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from http://ankn.uaf.edu.
[381] Restoration Notebook. 2009. "Habitat Protection – A Successful Restoration Strategy." *Exxon Valdez Oil Spill Trustee Council*. Retrieved December 1, 2011 from http://dnr.alaska.gov.
[382] 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.
[383] Unless otherwise noted, all monetary data are reported in nominal values.
[384] See footnote 370.
[385] 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/.
[386] 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.
[387] 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).

Although Old Harbor's small population size may have prevented the ACS from accurately portraying economic conditions,[388] the 2010 ACS per capita income estimate is supported 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 Old Harbor in 2010 is $7,050.[389] This is slightly lower than the 2006-2010 ACS estimate, and provides additional evidence that per capita income declined in Old Harbor between 2000 and 2010. This decline 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.[390] 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, 75.6% of the population age 16 and older was estimated to be in the civilian labor force, a higher percentage than was estimated to be in the civilian labor force statewide (68.8%). Also in 2010, 41.6% of local residents were estimated to be living below the poverty line, compared to 9.5% statewide, and the unemployment rate was estimated to be 25.2%, much higher than the state estimate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 9.9%, compared to a statewide unemployment rate estimate of 11.5%.[391]

Also based on the 2006-2010 ACS, a majority of Old Harbor workers were estimated to be employed in the public sector (79.4%), along with 16.2% worked in the private sector, and 4.4% estimated to be self-employed. Of the 68 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest number of workers was estimated to be employed in educational services, health care, and social assistance (54.4%) and public administration (20.6%). No residents reported working in fishing or other natural resource industries. However, the number of individuals employed in farming, fishing, and forestry industries is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 96 employed residents in Old Harbor in 2010, of which 52.1% were employed in local government, 10.4% in education and health services, 10.4% in financial activities, 7.3% in trade, transportation, and utilities, 6.3% in leisure and hospitality, 5.2% in construction, 1% in professional and business services, and 7.3% in other industries.[392] As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

[388] 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.
[389] See footnotes 385 and 386.
[390] Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.
[391] See footnote 385.
[392] Ibid.

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

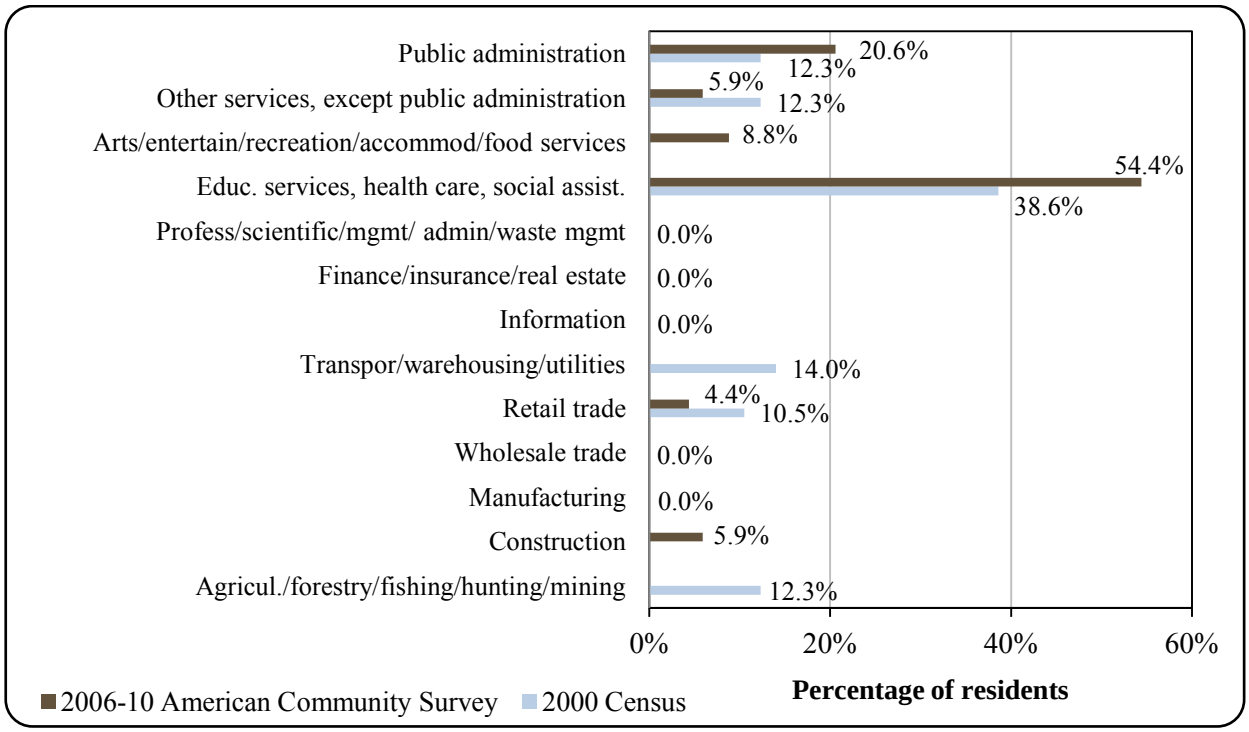
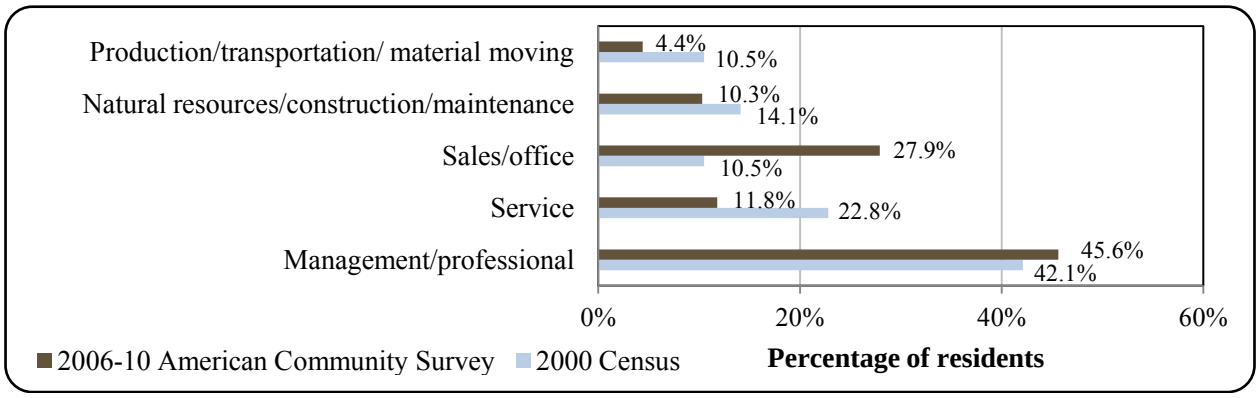


Figure 4. Local Employment by Occupation in 2000-2010, Old Harbor (U.S. Census).



Governance

Old Harbor is a 2nd Class City in the Kodiak Island Borough. The City was incorporated in 1966 and has a Strong Mayor form of government, including a mayor, a seven-person city council, a five-person advisory school board, and six municipal employees. The City administers a 3% sales tax, and the Borough administers a 10.5 mills (1.05%) property tax, excluding service area taxes.[393] In addition to sales tax revenue, other locally-generated revenue sources in Old Harbor included building leases, state contracts for maintenance of facilities, building and equipment rentals, water and sewer service fees, and fuel sales. Outside revenue sources included shared revenue from various state programs as well as a number of capital and special project grants. Shared revenues came from the State Revenue Sharing program (contributions of just over $20,000 per year from 2000 to 2003), the Community Revenue Sharing program (just over $100,000 per year in 2009 and 2010), the Safe Communities program, telephone and electric co-op refunds, and fish tax refunds. (See the *Fisheries-Related Revenue* section for more information about fish tax revenues.) Total municipal revenue was substantially higher in 2004 and in the last two years of the 2000-2010 period. Grants were received in a number of years for special projects and capital improvements including equipment upgrades, erosion control, and road building. Particularly large grants were received in 2006, 2009, and 2010, accounting in large part for the substantial increase in total municipal revenues in these years. State and federal grants were received from the Alaska Division of Emergency Services, the Alaska Department of Commerce, Community, and Economic Development, the Bureau of Indian Affairs (BIA), the Denali Commission, and the Federal Emergency Management Agency, among others. In addition, Old Harbor received fisheries-related grants in some years for projects including city dock construction and replacement, small boat harbor renovations, and purchase of processing equipment.[394] Information about selected revenue sources in Old Harbor are presented in Table 2.

Old Harbor 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 BIA, is the Village of Old Harbor. The Native village corporation is the Old Harbor Native Corporation, which manages 115,200 acres of land. The regional Native corporation to which Old Harbor belongs is Koniag, Incorporated.[395]

Old Harbor is also a member of the Kodiak Area Native Association (KANA), a tribal non-profit organization headquartered in Kodiak that serves communities in the Kodiak Archipelago.[396] KANA is one of the 12 regional Alaska Native 501(c)(3) nonprofit 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.[397] KANA provides health and

[393] 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.
[394] 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.
[395] See footnote 393.
[396] Kodiak Area Native Association. (n.d.). ***Homepage.*** Retrieved February 16, 2012 from http://www.kanaweb.org/.
[397] 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.

development services, as well as career development and other community services, with the goal of promoting economic self sufficiency and promote healthy families.[398]

The closest offices of the National Marine Fisheries Service (NMFS), Alaska Department of Fish and Game (ADF&G), Alaska Department of Natural Resources, and U.S. Bureau of Citizenship and Immigration Services are all located within the City of Kodiak, which is on the eastern tip of Kodiak Island. The nearest office of the Alaska Department of Commerce, Community, and Economic Development is in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Old Harbor 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	$265,455	$11,620	$21,775	n/a
2001	$356,393	$14,123	$20,961	$50,000
2002	$359,076	$12,749	$20,960	$25,004
2003	$473,843	$23,918	$21,100	n/a
2004	$1,375,421	$18.192	-	$46,000
2005	$472,906	$23,247	-	n/a
2006	$457,321	$19,904	-	n/a
2007	$494,547	$16,771	-	$1,200,000
2008	$583,101	$11,798	-	n/a
2009	$890,503	$16,608	$105,387	n/a
2010	$2,619,181	$19,429	$105,679	$5,000,000

Note: n/a indicates that no data were reported for that year. Cells showing – indicate that the data are considered confidential.

[1] Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/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.

[398] See footnote 396.

Infrastructure

Connectivity and Transportation

The community of Old Harbor is only reachable by air or water. A state-owned 2,750 foot by 60 foot gravel runway is present in Old Harbor, as well as a seaplane base. Both regularly scheduled and charter flights are available from Kodiak.[399] As of June 2012, the approximate cost to fly roundtrip between Kodiak and Anchorage $360,[400] and an additional roundtrip flight between Kodiak and Old Harbor was approximately $200 roundtrip.[401] A harbor is present in Old Harbor with docking facilities for 55 boats. Seattle-based and local barge services are available.[402]

Facilities

Water in Old Harbor is derived from a dammed creek and an infiltration gallery,[403] then filtered, chlorinated, and stored in a tank. The City operates a piped water and sewer system. A diesel powerhouse provides electricity to the community, operated by the Alaska Village Electric Cooperative. The City operates a landfill but does not provide refuse collection.[404] Police services are available from the State Village Public Safety Officer stationed in Old Harbor.[405] The nearest state trooper post is located in the City of Kodiak.[406] Accommodations are available at the Bay View Bed and Breakfast, the Ocean View Lodge and the Kodiak Sportsman Lodge.[407]

Medical Services

Health care is available at the Old Harbor Health Clinic and owned by the City and operated by KANA.[408] The nearest hospital is located in the City of Kodiak.

Educational Opportunities

There is one school in the community which offers Kindergarten through 12th grade. As of 2011, the Old Harbor School had 43 students and 10 teachers.[409]

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[399] 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.
[400] This price was calculated on November 21, 2011 using kayak.com.
[401] Price information retrieved June 26, 2012 from http://www.kodiakislandair.com/summer_schedule.htm and http://www.servantair.com/schedules_summer.html.
[402] See footnote 399.
[403] Infiltration galleries are a type of well constructed near rivers or ponds to collect infiltrated surface waters. Since the water infiltrates through a layer of soil/sand, it is significantly free from suspended impurities including microorganisms usually present in surface water. (Definition retrieved February 22, 2012 from http://phys4.harvard.edu/~wilson/arsenic/conferences/Feroze_Ahmed/Sec_3.htm.)
[404] Personal communication with Old Harbor Tribal Council, 2004.
[405] Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from http://www.dps.alaska.gov/.
[406] Alaska Dept. of Public Safety. 2012. *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from http://www.dps.state.ak.us/ast/detachments.aspx.
[407] Personal communication with Old Harbor Tribal Council, 2004.
[408] See footnote 399.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on Kodiak Island and surrounding areas. The Koniags historically migrated between permanent winter villages and temporary summer fish camps. Salmon was an important staple, and they also harvested other fish, intertidal resources, and marine mammals, including whales, sea lions, seals, and sea otters. With the arrival of Russian colonists to Kodiak Island in the late 1700s, the Alutiiq people were forced to hunt for sea otters to fuel the trade of their valuable pelts. The Russians also began commercial salmon exploitation in the early 1800s. They blocked salmon streams, such as the Karluk River on the west side of Kodiak Island, using fish weirs. Commercial processing involved salting. In addition, Alutiiq women dried the fish for the winter for use in the Russian colony.[410,411]

After the U.S. purchase Alaska, American entrepreneurs arrived to continue hunting sea otter and to develop other industries, including salmon fishing. The first salmon cannery on the Karluk River was established in 1882, and two more followed. Few Natives worked initially in the local canneries; a majority of cannery employees were hired from outside the region, primarily from the lower U.S. states and China. However, Native Alaskans became increasingly involved in commercial salmon fishing in the early 1900s, and coordinated their commercial fishing activity with subsistence hunting and fishing activities.[412]

Through the early decades of the 1900s, the salmon fishery remained the primary focus of local commercial fishing activity, and the most common fishing gear was the beach seine. With the rise of diesel engines in the 1920s, the range of fishing vessels expanded, and commercial exploitation of halibut and groundfish extended into the Gulf of Alaska (GOA). The rise of fuel-powered vessels also led to a shift toward use purse seines in the salmon fishery. Herring fishermen also began stopping in Kodiak by the 1920s, and a herring reduction also operated in Kodiak until the early 1960s.[413,414,415]

All three salmon canneries on the Karluk River were destroyed by the Good Friday earthquake of 1964, along with the City of Old Harbor and nearby Native villages. Kodiak's fishing fleet was also destroyed. The canneries near Old Harbor were never rebuilt, and after the tsunami processing activity became increasingly concentrated in Kodiak. The king crab fishery emerged as a new focus for the Kodiak fishing fleet in the years following the tsunami. Most

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[409] Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from http://eed.alaska.gov/stats/.
[410] 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.
[411] Mason, R. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from http://ankn.uaf.edu.
[412] Ibid.
[413] Ibid.
[414] Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from http://ww.iphc.int/publications/scirep/Report0005.pdf.
[415] 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.

Alutiiq fishermen continued to focus on salmon fishing into the late 1900s, but some also diversified into herring, cod, and crab fisheries. Today all of these commercial fisheries continue to be important to fishermen living in Old Harbor, as well as continued subsistence fishing and hunting.[416]

Between 2000 and 2010, Old Harbor fishermen were most engaged in commercial fisheries for salmon and Pacific cod, as well as halibut, herring, crab, 'other groundfish' and 'other shellfish' fisheries (see the *Commercial Fishing* section for details). 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.[417] Pacific halibut fisheries are managed under the International Pacific Halibut Commission.

Old Harbor is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA federal Sablefish Regulatory Area. ADF&G manages the Kodiak salmon and herring fisheries in waters surrounding the Kodiak archipelago.[418] The salmon fishery is divided into seven fishing districts (Afognak District, Northeast Kodiak District, Eastside Kodiak District, Alitak Bay District, Southwest Kodiak District, Northwest Kodiak District, and Mainland Districts). Gear types in use currently include purse seine, set gillnets and beach seine.[419] Kodiak herring fisheries include a roe fishery (using both purse seine and gillnet gear) and a food/bait fishery. Herring sac roe fisheries take place in the spring when individual spawning biomasses are aggregated. In contrast, food/bait fisheries take place in the summer, fall, and winter when herring from several stocks may be mixed together. A Kodiak food/bait herring fishery has historically taken place in Shelikof Strait, but has been closed in recent years because the Kamishak Bay spawning biomass (Cook Inlet) has been below threshold since 1998. The Alaska Board of Fish (BOF) closes food/bait fisheries if any of the individual spawning populations is below threshold.[420]

In the GOA, federally-managed groundfish fisheries target Pacific cod, walleye pollock, pelagic shelf rockfish, sablefish, and flatfish. Parallel fisheries for Pacific cod and walleye pollock also take place in state waters surrounding Kodiak Island. Parallel fisheries occur at the same time as the federal fisheries. The Total Allowable Catch (TAC) set by NMFS in each fishery applies to both federal and parallel harvest. In addition to federally-managed groundfish fisheries, beginning in 1997, a 'state-waters fishery' for Pacific cod was initiated in the Kodiak area. Management plans for state-waters fisheries are approved by the BOF, and guideline harvest limits (GHL) are set by the ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition, the ADF&G manages lingcod fisheries in both state and EEZ waters off Alaska, and beginning in 1998, management of black rockfish and blue rockfish in the GOA was transferred from NMFS to ADF&G.[421] Kodiak Island is one historical center of the red king crab fishery, and Tanner crabs are also distributed through the GOA. The

[416] See footnote 411.
[417] See footnote 415.
[418] Alaska Dept. of Fish and Game. 2012. *Kodiak Management Area*. Retrieved June 25, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakodiak.main.
[419] See footnote 410.
[420] Alaska Dept. of Fish and Game. 2012. *Commercial Herring Fisheries*. Retrieved June 25, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisheryHerring.main.
[421] Ibid.

ADF&G manages red king crab and Tanner crab stocks in the GOA.[422,423] The Kodiak red king crab fishery has been closed in recent years due to low abundance. However, parts of the Kodiak district have been open for Tanner crab harvest in recent years. Kodiak area Tanner crab harvest is managed using eight separate management areas, each with its own GHL.[424]

In 1995, management of the Pacific halibut and sablefish fisheries shifted from limited entry to a catch share program. The program includes allocation of the annual Total Allowable Catch (TAC) of halibut and sablefish via Individual Fishing Quota (IFQ). 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 TAC 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.[425] These and other factors that may contribute to decreasing fisheries participation in villages of the Kodiak Island archipelago have been discussed in detail in a number of research papers. Please refer to the books and articles referenced here for a more nuanced discussion of the impact of catch share programs on Kodiak-area coastal communities.[426,427]

The Community Quota Entity (CQE) program, implemented by the North Pacific Fishery Management Council in 2005, is one program intended to address the issue of fishing rights leaving rural communities. Under the program, eligible communities can form a non-profit corporation under state law to purchase and manage quota share on their behalf. After they purchase quota share, CQE non-profits can lease the IFQ to eligible community residents.[428] Old Harbor participates in the program through Cape Barnabas, Incorporated, a non-profit entity created under the program through the recommendation of the City of Old Harbor. Cape Barnabas, Inc. is one of two CQE non-profits in Alaska that held commercial halibut IFQ and was actively leasing commercial halibut quota to residents in 2013. As of October that year, Cape Barnabas, Inc. held 151,234 halibut quota shares in Area 3B.[429] It is important to note that, in additional to commercial halibut quota, CQE non-profits now have the ability to acquire and

[422] Alaska Dept. of Fish and Game. 2012. *Red King Crab Species Profile*. Retrieved June 20, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=redkingcrab.main.
[423] Alaska Dept. of Fish and Game. 2012. *Tanner Crab Species Profile*. Retrieved June 25, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=tannercrab.management.
[424] See footnote 415.
[425] North Pacific Fishery Management Council. (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program.* Retrieved October 23, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEreport210.pdf.
[426] Langdon, S.J. 2008. The Community Quota Program in the Gulf of Alaska: A vehicle for Alaska Native village sustainability. In Lowe, M.E., Carothers, C., eds. "Enclosing the Fisheries: People, Places, and Power." *American Fisheries Society*. Symposium 68:155-194.
[427] Carothers, C. 2011. Equity and access to fishing rights: Exploring the Community Quota Program in the Gulf of Alaska. *Human Organization*.70:213–223.
[428] Gulf of Alaska Coastal Communities Coalition. 2012. *Halibut Community Quota Entities: Management Manual*. Retrieved October 21, 2013 from http://www.goac3.org/pdf/initiatives/Halibut_Managment_Manualv6.pdf.
[429] NOAA National Marine Fisheries Service. (2013). *Permit Reports: Individual Fishing Quota*. Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/daily/ifq_cqea_permits.xls.

lease charter halibut permits and non-trawl gear groundfish License Limitation Permits (LLP). In October 2013, Cape Barnabas, Inc. held seven halibut charter permits and five non-trawl groundfish LLPs.[430,431] Old Harbor is not eligible to participate in the Community Development Quota (CDQ) program.

Processing Plants

A fish buyer operated in Old Harbor during one year of the 2000-2010 period (2003). That year, one vessel delivered fish in Old Harbor. Despite the lack of fish buyers in other years during the decade, ADF&G's 2010 Intent to Operate List listed one shore-side processing plant in Old Harbor from 2003 and 2010 (Table 5).

The seafood processing facility Old Harbor's Finest processes sablefish, Pacific cod, Pacific halibut, and all five species of salmon.[432] According to a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2012, the plant is a home-based business that began operations in 2006 and primarily smokes fish, freezes fresh fillets, and processes for sport fisherman and charter boats.

Fisheries-Related Revenue

Overall, in 2010, the City of Old Harbor received $34,485 from fisheries-related taxes and fees. The most consistent fisheries-related revenue sources between 2000 and 2010 were a raw fish tax, the Shared Fisheries Business Tax, the Fisheries Resource Landing Tax, an Extraterritorial Fish Tax, and fees for harbor usage. In 2010, Old Harbor also received $5,000,000 in state and federal fisheries-related grants, the most the community received in any year between 2000 and 2010. Refer to Tables 2 and 3 for details on selected aspects of community finances during this period.[433]

Commercial Fishing

Between 2000 and 2010, Old Harbor residents were engaged in commercial fishing activities as vessel owners, quota share account and permit holders, and crew license holders. There was one registered fish processor in town from 2003 to 2010. With the exception of 2003, there were no fish buyers in Old Harbor between 2000 and 2010. In 2010, there were no direct landings of fisheries resources and no ex-vessel revenue generated in Old Harbor, indicating that landings are made elsewhere and then shipped to the plant for processing. The fish buyer that operated briefly in 2003 received landings from one vessel, but information about the landings and ex-vessel revenue generated is considered confidential due to the small number of buyers. Table 9 presents information about landings and ex-vessel revenue generated in Old Harbor.

[430] NOAA National Marine Fisheries Service. (2013). *Permit Reports: Charter Halibut*. Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/daily/chp_cqe_permits.xls.
[431] NOAA National Marine Fisheries Service. (2013). *Permit Reports: License Limitation Program*. Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/daily/llp_cqea_permits.xls.
[432] Alaska Seafood Marketing Institute. 2005. *Supplier Information: Old Harbor's Finest*. Retrieved June 25, 2012 fr4om http://alaskaseafood.org/industry/suppliers/detail.cfm?Supplier=471.
[433] 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.

In 2010, 36 Old Harbor residents held state crew licenses (equivalent to 16.5% of the total local population) and 22 residents were the primary owner of a fishing vessel. Both of these numbers represent substantial declines since 2000, with a 42.9% decrease in crew licenses (down from 63 in 2000), and a 43.6% decrease in vessels owned by residents (down from 39 in 2000). In 2010, 27 vessels were homeported in Old Harbor, down from 41 homeported there in 2000 (a decline of 34.1%. These characteristics of the Old Harbor commercial fishing sector are available in Table 5.

As the data in Table 5 indicate, along with permit data presented in Table 4 and described in below, there have been dramatic changes in fisheries participation in the Kodiak Archipelago. This topic has been thoroughly studied by Courtney Carothers at the University of Alaska. Please refer to the books and articles referenced here a more detailed discussion of the impact of declining fishing participation on Kodiak-area villages.[434,435]

In 2010, 57 state Commercial Fisheries Entry Commission (CFEC) permits were held by 29 Old Harbor residents (equivalent to 13.3% of the population). Of these, 24 were salmon permits (11 actively fished in 2010, including 7 Prince William Sound seine permits, 1 Bristol Bay drift gillnet, and 1 Kodiak set gillnet), 8 were halibut permits (6 actively fished in 2010, all longline permits for vessels under 60 feet), 7 were for groundfish (2 actively fished in 2010, both using pot gear), 7 were for crab (2 actively fished in 2010, Tanner crab, fished using pot gear on vessels under 60 feet) and 2 were for 'other shellfish' (0 active in 2010, octopi/squid fished using pot gear on vessels under 60 feet). These numbers represent a 19.7% decline in total permits held since the year 2000, but only a 12.1% decline in total permits actively fished. This information can be found in Table 4.

In addition to state fishery permits, 10 Old Harbor residents held a total of 11 License Limitation Permits (LLP) in federal groundfish fisheries and 4 residents held 5 Federal Fisheries Permits (FFP). That year, no LLPs were held in federal crab fisheries. This permit information is also presented in Table 4.

Also in 2010, eight Old Harbor residents held quota share accounts in the federal halibut catch share fishery, with a total of 313,812 quota shares held. The number of halibut quota shares held in the community increased between 2000 and 2010, and the annual halibut individual fishing quota (IFQ) allotment also increased slightly over the period. Information about federal halibut catch share participation is presented in Table 6. Between 2000 and 2010, no Old Harbor residents held quota share accounts or quota shares in federal catch share fisheries for sablefish or crab (Tables 7 and 8).

In 2010, Old Harbor vessel owners landed 1,571,308 net pounds of salmon and 49,085 pounds of halibut, earning $929,828 and $221,741 in ex-vessel revenue, respectively. Information about landings and earnings by Old Harbor vessel owners in other fisheries in 2010 is considered confidential due to the small number of participants. However, it should be noted that over time Pacific cod and herring fisheries have also made up a large portion of total harvest and value for local fisherman. Some local vessel owners have also participated in crab, 'other groundfish', and 'other shellfish' fisheries. Information about landings and ex-vessel revenue earned by vessels owners residing in Old Harbor is presented in Table 10.

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[434] Carothers, C**.** 2012. Enduring ties: salmon and the Sugpiat of the Kodiak Archipelago. Pages 133-160 in B.J. Colombi and J.F. Brooks, eds. *Keystone Nations: Indigenous Peoples and Salmon across the North Pacific*. School for Advanced Research Press, Santa Fe, NM.

[435] Carothers C. 2010. Tragedy of commodification: Transitions in Alutiiq fishing communities in the Gulf of Alaska. *MAST* 90:91–115.

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

Revenue source	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Raw fish tax[1]	$9,000	$20,000	$19,500	$16,500	$15,147	$11,096	$13,000	$14,700	$15,714	$13,930	$16,000
Shared fisheries business tax[1]	$10,596	$11,339	$14,941	$11,046	$9,035	$21,064	$26,149	$30,029	$30,055	$16,949	$15,254
Fisheries resource landing tax[1]	$43	$311	$206	$249	$623	$265	$76	$138	$142	$89	$84
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	$70,000	$100,000	$60,000	$60,000	n/a	$274,731	$240,000	$270,000	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]	$5,000	$2,000	$850	n/a	$851	n/a	$1,000	n/a	n/a	$1,166	$3,147
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 revenue[4]	*$24,639*	*$103,650*	*$135,497*	*$87,795*	*$85,656*	*$32,426*	*$314,956*	*$284,867*	*$315,911*	*$32,134*	*$34,485*
Total municipal revenue[5]	*$265,455*	*$356,393*	*$359,076*	*$473,843*	*$1.4 million*	*$472,906*	*$457,321*	*$494,547*	*$583,101*	*$890,503*	*$2.6 million*

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] Kodiak Area Native Association 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, Old Harbor: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) [1]	Total permits	12	11	11	11	11	11	11	11	11	11	11
	Active permits	6	6	6	6	5	5	6	6	6	5	5
	% of permits fished	50%	54%	54%	54%	45%	45%	54%	54%	54%	45%	45%
	Total permit holders	11	10	10	10	10	10	10	10	10	10	10
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	6	6	6	3	3	3	4	4	4	4	5
	Fished permits	0	0	0	2	2	2	2	2	2	3	2
	% of permits fished	0%	0%	0%	67%	67%	67%	50%	50%	50%	75%	40%
	Total permit holders	6	6	6	3	3	3	4	4	4	4	4
Crab (CFEC) [2]	Total permits	0	6	7	8	12	7	7	7	7	7	7
	Fished permits	0	3	7	8	4	4	4	4	4	2	2
	% of permits fished	0%	50%	100%	100%	33%	57%	57%	57%	57%	29%	29%
	Total permit holders	0	6	7	8	7	7	7	7	7	7	7
Other shellfish (CFEC) [2]	Total permits	7	5	4	3	2	2	2	2	2	2	2
	Fished permits	4	0	0	0	0	0	0	0	0	0	0
	% of permits fished	57%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	6	5	4	3	2	2	2	2	2	2	2
Halibut (CFEC) [2]	Total permits	3	3	3	3	3	3	5	8	10	11	8
	Fished permits	3	1	3	2	3	3	4	6	8	8	6
	% of permits fished	100%	33%	100%	67%	100%	100%	80%	75%	80%	73%	75%
	Total permit holders	3	3	3	3	3	3	5	8	10	11	8
Herring (CFEC) [2]	Total permits	15	14	13	13	10	10	10	10	11	9	9
	Fished permits	5	6	4	4	4	3	3	3	3	3	3
	% of permits fished	33%	43%	31%	31%	40%	30%	30%	30%	27%	33%	33%
	Total permit holders	9	9	9	9	9	9	9	9	9	8	8

Table 4 cont'd. Permits and Permit Holders by Species, Old Harbor: 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	18	16	12	9	9	9	8	9	9	9	7
	Fished permits	10	8	5	5	2	4	2	4	4	5	2
	% of permits fished	56%	50%	42%	56%	22%	44%	25%	44%	44%	56%	29%
	Total permit holders	15	13	10	7	7	7	7	9	8	8	6
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	28	26	24	24	23	24	24	25	26	26	24
	Fished permits	15	11	7	9	7	10	10	11	9	14	11
	% of permits fished	54%	42%	29%	38%	30%	42%	42%	44%	35%	54%	46%
	Total permit holders	29	26	24	25	23	25	24	25	24	26	25
Total CFEC Permits[2]	*Permits*	*71*	*70*	*63*	*60*	*59*	*55*	*56*	*61*	*65*	*64*	*57*
	Fished permits	*37*	*29*	*26*	*28*	*20*	*24*	*23*	*28*	*28*	*32*	*24*
	% of permits fished	*52%*	*41%*	*41%*	*47%*	*34%*	*44%*	*41%*	*46%*	*43%*	*50%*	*42%*
	Permit holders	*33*	*31*	*27*	*28*	*25*	*27*	*27*	*30*	*28*	*33*	*29*

[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 Old Harbor: 2000-2010.

Year	[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 Old Harbor[2]	Total Net Pounds Landed In Old Harbor[2,5]	Total Ex-Vessel Value Of Landings In Old Harbor[2,5]
2000	63	0	0	39	41	0	0	$0
2001	52	0	0	34	36	0	0	$0
2002	48	0	0	36	37	0	0	$0
2003	54	1	1	33	34	1	-	-
2004	51	0	1	27	33	0	0	$0
2005	35	0	1	22	24	0	0	$0
2006	44	0	1	20	22	0	0	$0
2007	42	0	1	22	23	0	0	$0
2008	44	0	1	22	22	0	0	$0
2009	39	0	1	25	22	0	0	$0
2010	36	0	1	22	27	0	0	$0

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

[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 Old Harbor: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	8	267,126	29,843
2001	7	214,699	27,264
2002	7	195,685	25,869
2003	7	195,685	25,845
2004	7	186,513	27,293
2005	7	186,513	27,077
2006	8	313,812	53,270
2007	10	313,812	49,137
2008	11	313,812	52,636
2009	10	313,812	50,601
2010	8	313,812	46,185

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 Old Harbor: 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 Old Harbor: 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 Old Harbor: 2000-2010.

	***Total Net Pounds*[1]**										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	0	0	0	-	0	0	0	0	0	0	0
Finfish	0	0	0	-	0	0	0	0	0	0	0
Halibut	0	0	0	-	0	0	0	0	0	0	0
Herring	0	0	0	-	0	0	0	0	0	0	0
Other Groundfish	0	0	0	-	0	0	0	0	0	0	0
Other Shellfish	0	0	0	-	0	0	0	0	0	0	0
Pacific Cod	0	0	0	-	0	0	0	0	0	0	0
Pollock	0	0	0	-	0	0	0	0	0	0	0
Sablefish	0	0	0	-	0	0	0	0	0	0	0
Salmon	0	0	0	-	0	0	0	0	0	0	0
Total[2]	*0*	*0*	*0*	-	*0*	*0*	*0*	*0*	*0*	*0*	*0*
	Ex-vessel Value (nominal U.S. dollars)										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	0	0	0	-	0	0	0	0	0	0	0
Finfish	0	0	0	-	0	0	0	0	0	0	0
Halibut	0	0	0	-	0	0	0	0	0	0	0
Herring	0	0	0	-	0	0	0	0	0	0	0
Other Groundfish	0	0	0	-	0	0	0	0	0	0	0
Other Shellfish	0	0	0	-	0	0	0	0	0	0	0
Pacific Cod	0	0	0	-	0	0	0	0	0	0	0
Pollock	0	0	0	-	0	0	0	0	0	0	0
Sablefish	0	0	0	-	0	0	0	0	0	0	0
Salmon	0	0	0	-	0	0	0	0	0	0	0
Total[2]	*0*	*0*	*0*	-	*0*	*0*	*0*	*0*	*0*	*0*	*0*

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.

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

	Total Net Pounds[1]										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	-	-	15,402	28,257	39,824	58,581	102,277	29,440	13,512	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	40,722	59,247	48,466	49,085
Herring	939,001	1,480,042	815,317	1,100,194	1,424,343	-	-	-	-	-	-
Other Groundfish	18,559	-	-	-	-	-	-	-	-	-	-
Other Shellfish	18,849	6,624	5,803	-	-	5,944	-	-	-	-	-
Pacific Cod	1,157,988	777,919	272,545	298,768	-	887,940	-	472,418	446,667	494,064	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	2,209,324	3,256,359	3,688,912	3,124,849	2,623,278	6,079,984	5,647,237	4,737,014	2,290,944	5,132,378	1,571,308
Total[2]	*4,343,721*	*5,520,944*	*4,797,979*	*4,552,068*	*4,087,445*	*7,032,449*	*5,749,514*	*5,279,594*	*2,810,370*	*5,674,908*	*1,620,393*
	Ex-vessel Value (nominal U.S. dollars)										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	-	-	$33,854	$65,460	$97,609	$101,462	$156,279	$54,081	$26,740	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	$162,266	$246,217	$142,512	$221,741
Herring	$272,551	$266,038	$207,091	$303,654	$360,359	-	-	-	-	-	-
Other Groundfish	$8,029	-	-	-	-	-	-	-	-	-	-
Other Shellfish	$8,460	$3,213	$3,493	$800	-	$3,837	-	-	-	-	-
Pacific Cod	$426,399	$230,122	$68,513	$96,260	-	$293,933	-	$242,268	$268,108	$167,474	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	$892,958	$720,719	$525,364	$595,654	$709,955	$1,043,140	$1,176,479	$1,153,537	$1,221,931	$1,625,895	$929,828
Total[2]	*$1,608,398*	*$1,220,092*	*$838,315*	*$1,061,828*	*$1,167,922*	*$1,442,372*	*$1,332,758*	*$1,612,152*	*$1,762,996*	*$1,935,882*	*$1,151,569*

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

In 2010, there were three active sport fish guide businesses in Old Harbor, a decrease from six guide businesses in the year 2000. The number of licensed sport fish guides residing in Old Harbor also declined slightly from 11 in 2000 to 5 in 2005, and rebounded to 8 guides by 2010. The number of Old Harbor residents who purchased sportfishing licenses (irrespective of point of sale) varied between 43 and 69 per year between 2000 and 2010. Starting in 2004, sportfishing licenses were sold in the community. In 2004, 44 licenses were sold locally, and from 2005-2010 the number varied between 217 and 338 licenses sold per year. The greater number of sportfishing licenses purchased in Old Harbor than those purchased by residents of Old Harbor, along with the presence of several guides and guide businesses, suggests that visitors come to Old Harbor in order to engage in sportfishing activity (Table 11). It is also important to note that, as of 2013, Old Harbor's CQE non-profit, Cape Barnabas, Inc., held seven charter halibut permits that were available for lease to community residents.[436]

Old Harbor is located within Alaska Sport Fishing Survey Area Q – Kodiak. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. On average, Alaska resident anglers fished more angler days per year than non-Alaska residents in both saltwater and freshwater sport fisheries, and more angler days were fished per year in freshwater than in saltwater in the Kodiak region between 2000 and 2010. However, sportfishing activity in by both resident and non-Alaska resident anglers, and in both saltwater and freshwater, was extremely high. Information about the sportfishing sector in and near Old Harbor is displayed in Table 11.

The Alaska Statewide Harvest Survey,[437] conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Old Harbor: Chinook, coho, sockeye, and pink salmon, and Pacific halibut. The survey also noted harvest of Dungeness crab and razor and hardshell clams in Old Harbor. Kept/released statistics from charter logbook data reported by ADF&G[438] show that Pacific halibut was by far the most important species targeted by fishing charters out of Old Harbor, with 1,067 halibut kept and 880 released in 2010. These numbers represent a decline from 1,501 halibut kept and 1,250 released in 2005. Chinook and coho salmon were important, with 234 large Chinook kept and 4 released, and 854 coho kept and 0 released in 2010. Pelagic rockfish were also important, with 739 kept and 240 released in 2010, down from 1,561 kept and 1,219 released in 2007. Other species that were also caught during charters out of Old Harbor between 2000 and 2010 include sockeye, chum, and pink salmon, lingcod, yelloweye rockfish, 'other rockfish', sablefish, and shark.

[436] NOAA National Marine Fisheries Service. (2013). *Permit Reports: Charter Halibut*. Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/daily/chp_cqe_permits.xls.
[437] 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).
[438] 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.]

Table 11. Sport Fishing Trends, Old Harbor: 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 Old Harbor[2]
2000	6	11	43	0
2001	4	9	50	0
2002	3	9	40	0
2003	3	8	55	0
2004	3	7	69	44
2005	2	5	55	311
2006	3	7	60	217
2007	3	7	63	338
2008	3	7	68	228
2009	3	9	59	195
2010	3	8	48	97

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	16,767	38,809	18,542	47,307
2001	14,761	24,604	18,299	19,757
2002	18,356	19,737	15,018	35,113
2003	17,715	23,726	13,362	34,034
2004	18,896	22,787	21,331	31,124
2005	21,269	33,917	23,789	36,753
2006	23,511	21,991	23,483	26,239
2007	21,668	31,554	26,916	31,072
2008	20,275	31,944	24,944	24,876
2009	20,813	26,520	16,654	32,965
2010	20,012	20,365	18,871	22,211

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

[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 harvest continues to play an important role in the traditional Alutiiq culture and lifestyle of Old Harbor.[439] Between 2003 and 2005, the years for which subsistence surveys were conducted by ADF&G in the community, an average of 85.5% of households were reported to participate in salmon subsistence. In 2003, 92.3% of households participated in halibut subsistence and 35.6% of households participated in non-salmon fish subsistence (other than halibut). In the case of marine mammals and marine invertebrates, data were only available for 2003. In that year, 35.3% of households participated in marine mammal subsistence and 55.7% participated in marine invertebrate subsistence. In 2003, per capita subsistence harvest of land and sea-based resources in Old Harbor was 357 lbs. This information is presented in Table 12. In total that year, 4,752 lbs of marine invertebrates were harvested and 2,138 lbs of 'non-salmon' fish were harvested (not including halibut) (Table 13).[440]

At the species level, some Old Harbor households reported harvesting marine mammals in 2003, including harbor seal and Steller sea lion. The species of marine invertebrates harvested by the greatest number of Old Harbor households in 2003 included butter clams, black chitons, sea urchin, Pacific littleneck clams, Tanner crab, octopus, Dungeness crab, and king crab. The species of non-salmon fish harvested by the greatest number of households included Pacific cod, black rockfish, and lingcod. In addition, while only a small number of Old Harbor households reported subsistence harvest of herring and sablefish in 2003, a greater percentage of households reported using these species. Most species listed above were used by a greater percentage of household than were involved in harvest activities, indicating the presence of sharing networks in the community.[441]

In 2008, the most recent year for which data are available from ADF&G about subsistence salmon harvest, 25 Old Harbor households were issued subsistence salmon permits. All 25 were returned that year, with a total of 1,445 salmon harvested. These numbers represent a decline from 38 to 39 permits issued in 2004 and 2005, and total salmon harvests of 2,000 – 3,000 in those years. Coho and sockeye salmon made up the greatest percentage of the subsistence salmon harvest in all years for which data were reported.

In 2010, 41 Subsistence Halibut Fishing Certificates (SHARC) were issued to residents of Old Harbor. Of these, 13 were fished that year, and the total reported subsistence halibut harvest was 3,583 pounds. These numbers represent a decline from earlier years in the decade. Of all years in which data were reported, the highest volume harvest was reported in 2004, when 13,150 pounds of halibut were reported harvested using 46 SHARC cards. Information about subsistence halibut harvest is presented in Table 14.

Old Harbor residents also participated in the subsistence harvest of marine mammals. According to data reported by the U.S. Fish and Wildlife Service, for years in which data were reported, the number of sea otters harvested varied between 2 and 21. According to data reported by ADF&G, the number of harbor seals harvested varied between 1 and 28 per year, and the number of Steller sea lions harvested varied between 20 and 71. No information was reported by

[439] 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.
[440] 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).
[441] Ibid.

management agencies regarding harvest of beluga whale, walrus, or spotted seal between 2000 and 2010. Information about marine mammal subsistence is presented in Table 15.

Additional Information

The Alaska-Aleutian arc, also known as the "Pacific Ring of Fire" is one of the most active earthquake areas in the world.[442] Some of these earthquakes are associated with explosive volcanic eruptions.[443] Since the arrival of Europeans to Kodiak Island, three major geologic events stand out in history, including two great earthquakes in 1788 and 1967, both followed by tsunamis, and the eruption of Novarupta Volcano on the Alaska Peninsula in 1912.

During the period of Russian settlement, the community of Three Saint's Bay was destroyed by a tsunami. Based on the following evidence from written accounts, geologists have determined that this earthquake was large enough to have ruptured at least a 600-km portion of the Alaska-Aleutian arc:

> *In a letter of 1789 to G.I. Shelikov, Merkul'ev described strong shaking on Kodiak Island, an intense flood (tsunami) consisting of a series of waves, aftershocks every day for a month or longer, and a permanent change in sea level. Davydov also mentioned landslides on Kodiak Island and observed that the sea first withdrew from shore, surged onshore, and carried a vessel onto the top of a cabin.*[444]

Ash clouds from the 3-day-long 1912 eruption of the volcano Novarupta traveled as far as Seattle, Washington, by the end of the eruption, and 10 days later reached Algeria in Africa. Kodiak Island was in the immediate path of the ash, located only 100 miles southeast of the volcano. Water became undrinkable on the island and people suffered from respiratory distressed and sore eyes. Radio communications were disrupted, and boats were unable to dock due to low visibility. Roofs in Kodiak collapsed under more than a foot of ash, and building were wrecked in ash avalanches. The Novarupta eruption also formed the famous Valley of 10,000 Smokes located in Katmai National Park on the Alaska Peninsula. In the years following the eruption local fish and wildlife populations suffered from lack of food and poor water quality. The salmon fishery faltered between 1915 to 1919 due to starvation and failure of many adult fish to spawn in ash-choked streams.[445]

The Good Friday earthquake of 1964 was the largest recorded earthquake in the United States, with a magnitude of 9.2 on the Richter scale. It struck Prince William Sound on Good Friday, March 28th, 1964. Kodiak Island was one of the areas affected by the ensuing tsunami. The extreme southeast coast of Kodiak Island, Sitkalidak Island and part or all of Sitkinak Island experienced extreme uplift of between 13 and 15 m. In Anchorage, the quake lasted for about 3 minutes, and although the City was 75 miles from the location of the quake's epicenter, major damages resulted. Many buildings were damaged beyond repair, displacements broke the ground

[442] Sykes, L. R., J. B. Kisslinger, L. House, J. N. Davies and K. H. Jacob. 1980. Rupture Zones and Repeat Times of Great Earthquakes along the Alaska-Aleutian Arc, 1784-1980. *Science* 19 December 1980, Vol. 210, No.. 4476 pp. 1343-1345.
[443] U.S. Geological Survey. 1998. *Can Another Great Volcanic Eruption Happen in Alaska?* Retrieved December 5, 2011 from http://volcanoes.usgs.gov/about/publications/factsheets.php.
[444] See footnote 442, pg. 1343.
[445] See footnote 443.

in an area of about 130 acres, and landslides destroyed areas of the business district and private homes.[446]

Table 12. Subsistence Participation by Household and Species, Old Harbor: 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	82%	92%	35%	56%	36%	357
2004	90%	n/a	n/a	n/a	3%	n/a
2005	85%	n/a	n/a	n/a	10%	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).

[446] U.S. Geological Survey. "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/.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Old Harbor: 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	21	n/a	34	570	184	351	n/a	n/a
2001	n/a	49	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	40	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	41	n/a	n/a	n/a	n/a	n/a	4752	2138
2004	39	39	13	85	1001	531	574	n/a	66
2005	38	38	13	236	1025	725	1304	n/a	116
2006	38	38	22	81	1262	563	630	n/a	n/a
2007	38	38	22	81	1262	563	630	n/a	n/a
2008	25	25	0	34	604	222	585	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, Old Harbor: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	46	35	5,196
2004	63	46	13,150
2005	74	55	7,411
2006	71	61	9,270
2007	73	51	4,877
2008	71	48	7,714
2009	64	49	4,376
2010	41	13	3,583

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, Old Harbor: 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	13	59	n/a
2001	n/a	21	n/a	n/a	26	71	n/a
2002	n/a	n/a	n/a	n/a	9	40	n/a
2003	n/a	2	n/a	n/a	28	67	n/a
2004	n/a	12	n/a	n/a	8	38	n/a
2005	n/a	11	n/a	n/a	18	38	n/a
2006	n/a	12	n/a	n/a	1	20	n/a
2007	n/a	9	n/a	n/a	7	35	n/a
2008	n/a	n/a	n/a	n/a	7	35	n/a
2009	n/a	5	n/a	n/a	n/a	n/a	n/a
2010	n/a	6	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.

Ouzinkie (ooh-ZINK-ee)

People and Place

Location [447]

Ouzinkie is located on the west coast of Spruce Island, adjacent to the northeast coast of Kodiak Island. It lies 10 miles north of the City of Kodiak and 247 air miles southwest of Anchorage. Ouzinkie is located in the Kodiak Recording District and the Kodiak Island Borough Census Area. The City encompasses 6.0 square miles of land and 1.7 square miles of water.

Demographic Profile [448]

In 2010 there were 161 residents in Ouzinkie, making it the 216th largest of 352 communities in Alaska with recorded populations that year. Since the community was first recorded in the 1880 U.S. Census, the population has fluctuated from no inhabitants at the lowest point (1900 and 1910) to 253 inhabitants at the highest point (in 1940). Since 1930 the population has remained relatively stable, remaining close to 200 inhabitants. Between 1990 and 2010, the population of Ouzinkie declined by 23%. After a period of growth between 1990 and 2000, Alaska Department of Labor estimates suggest that the population of permanent residents decreased by 24.4% between 2000 and 2009, with an average annual growth rate of -0.9%. According to a survey conducted by the NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders indicated that approximately 10 additional people are present in Ouzinkie each year as seasonal workers or transients. They also indicated that the population of Ouzinkie is stable year-round, and the seasonal fishing activities do not influence population fluctuations in the community.

In 2010, a majority of the population of Ouzinkie identified as American Indian and Alaska Native (79.5%), along with 10.6% who identified as White, 0.6% as Asian, and 9.3% who identified with two or more races. In addition, 1.9% of the population considered themselves to be Hispanic in 2010. Individuals identifying as American Indian and Alaska Natives made up 1.4% less of the population in 2010 than in 2000, while those identifying as White made up 0.5% less of the population, and 1.3% more of the population identified with two or more races. In addition, Asian residents appeared to be present in 2010 but not in 2000, and the percentage of residents identifying as Hispanic decreased by 2.5%. 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.

[447] 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.

[448] 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.

According to household surveys conducted for the U.S Census, the average household size in Ouzinkie in 2010 was 2.88, a slight decrease from 3.04 persons per household in 2000 and 3.0 in 1990. The total number of households increased slightly between 1990 and 2000, from 68 to 74 occupied housing units, and then decreased to 56 households in 2010. Of the 88 housing units surveyed for the 2010 U.S. Decennial Census, 45.5% were owner-occupied, 18.2% were rented, and 36.4% were vacant or used only seasonally. From 1990 to 2010, no residents of Ouzinkie lived in group quarters.

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

Year	U.S. Decennial Census[1]	Alaska Dept. of Labor Estimate of Permanent Residents[2]
1990	209	-
2000	225	-
2001	-	204
2002	-	189
2003	-	172
2004	-	187
2005	-	189
2006	-	172
2007	-	166
2008	-	168
2009	-	170
2010	161	-

[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, Ouzinkie: 2000-2010 (U.S. Census).

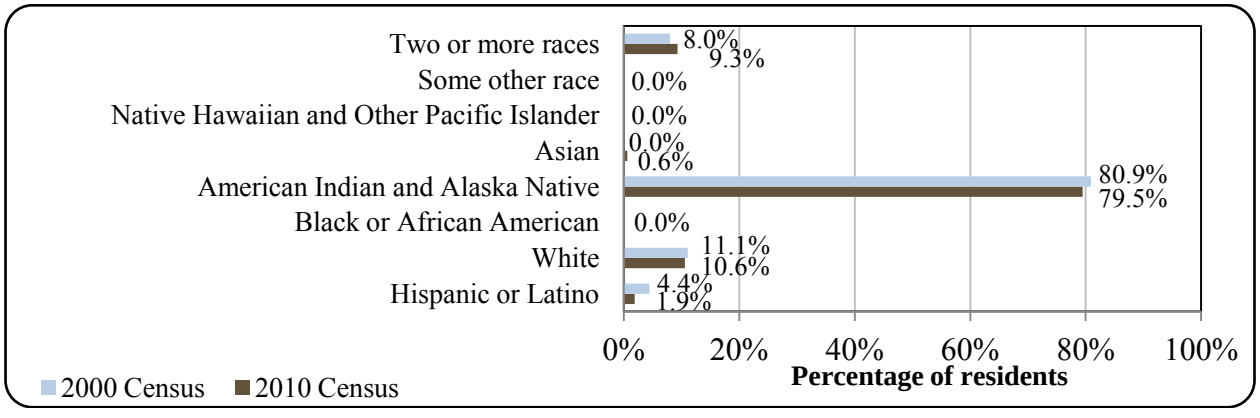
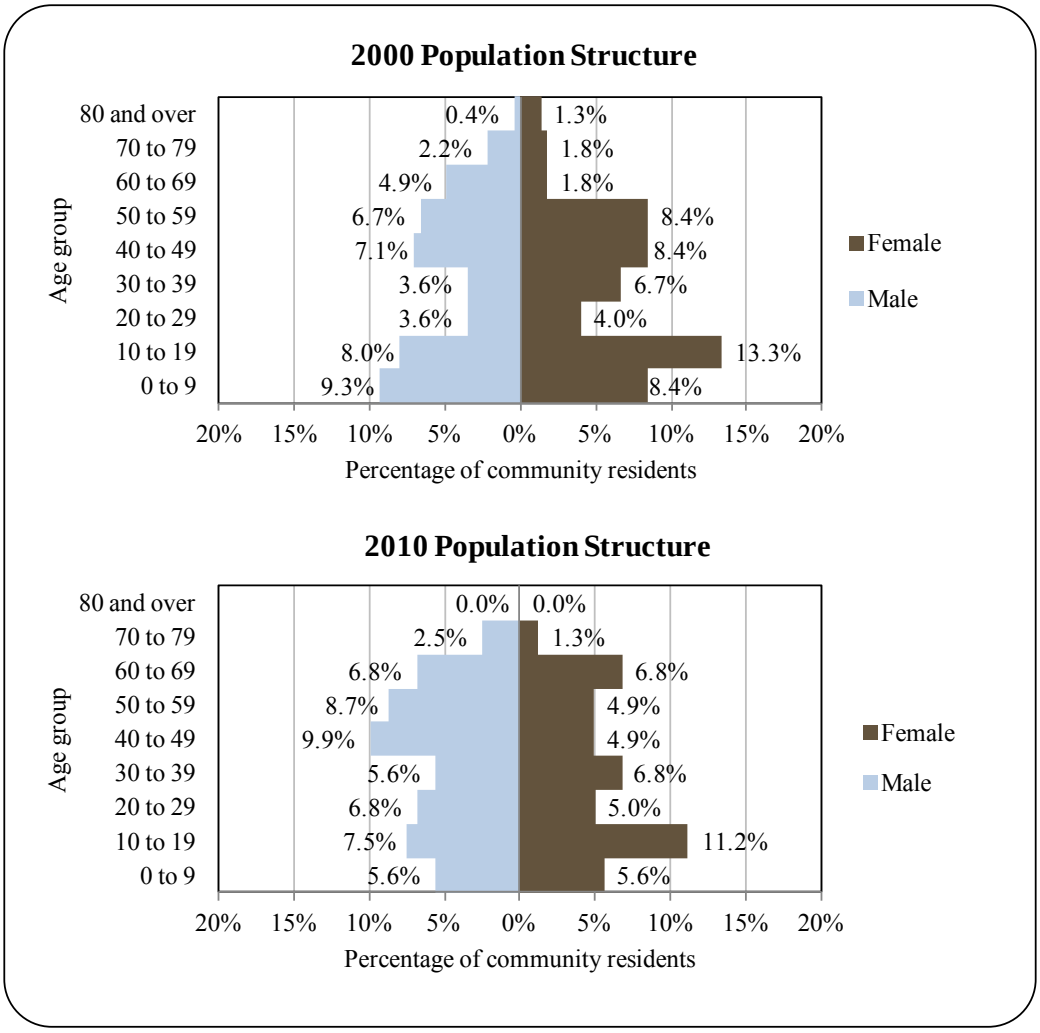


Figure 2. Population Age Structure in Ouzinkie Based on the 2000 and 2010 U.S. Decennial Census.



The gender makeup in Ouzinkie in 2010 was slightly more skewed toward males (53.4% male and 46.6% female) than the gender makeup of the State as a whole, which was 52% male and 48% female. That year, the median age was 40.7 years, higher than the median age for Alaska of 33.8 and the U.S. national average of 36.8 years. In 2010, almost all age groups had more males than females, with the exception of more females in the 10-19 and 30-39 age groups, and an equal number of males and females between 0 and 9 and between 60 and 69 years of age. Relatively few people were over the age of 70, and no one over the age of 80, lived in Ouzinkie in 2010. The overall population structure of Ouzinkie in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),[449] 80% of Ouzinkie 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

[449] 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.

in 2010, 3.9% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 16.1% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 16.1% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 0% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 17.4% were estimated to have a Bachelor's degree, the same as the percentage of Alaskan residents overall; and 11% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Kodiak Island is within the traditional territory of the Alutiiq peoples, and the area is estimated to have been inhabited for at least 7,500 years.[450,451,452] At the time Russian settlement, the Alutiiq peoples were referred to as 'Aleuts'. The name 'Alutiiq' has been used since the 1980s to refer to the linguistic and cultural group of Alaska Natives from the southern coast of the Alaska Peninsula to Prince William Sound, as distinguished from the Aleuts living in the Aleutian Islands. Alutiiq people living on Kodiak Island and the south coast of the Alaska Peninsula are called Koniag (Koniagmiut), and those living on Kodiak Island specifically are called Qikertarmiut (people of Kodiak Island).

The Koniags historically migrated between permanent winter villages and temporary summer fish camps. Salmon was an important staple, and they also harvested other fish, intertidal resources and marine mammals, including whales, sea lions, seals and sea otters. They were skilled mariners, using skin kayaks and larger wooden boats for both war raids and trade. When sea otter populations began to decline in the Aleutian Islands, Russian fur traders entered the territory of the Koniags. They were initially repelled by the Alutiiqs, but in 1784 Gregorii Shelikof and his men took Kodiak Island by force using cannons and muskets.[453]

Following a smallpox epidemic that dramatically reduced the Native population of Kodiak Island, in the 1840s the Russian colonial administration consolidated the remaining population into seven villages. Two villages, including Ouzinkie, were intended to be creole[454] settlements. The number of creoles increased during the period of the Russian colony. In addition, Ouzinkie was conceived as a retirement community for employees of the Russian American Company, many of whom had Native families and wanted to stay in Alaska.[455] The Russians referred to the settlement in 1849 as "Uzenkiy," meaning "village of Russians and Creoles."[456]

In 1889, the Royal Packing Company constructed a cannery at Ouzinkie. Shortly afterward, the American Packing Company built another. In 1890, a Russian Orthodox church

[450] Crowell, A.L. Steffian, A.F., and G.L. Pullar, eds. 2001. Looking Both Ways: Heritage and Identity of the Alutiiq People. University of Alaska Press, Fairbanks.
[451] Clark, D.W. 1998. Kodiak Island: The Later Cultures. *Arctic Anthropology* 35:172-186.
[452] Clark, D.W. 1984. Pacific Eskimo: Historical Ethnography. In *Handbook of North American Indians, vol. 5*. D. Damas, ed. Pp 185-197. Smithsonian Insitution, Washington D.C.
[453] Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from http://ankn.uaf.edu.
[454] Creoles were the children of Native women and Russian men, or the children of creoles.
[455] See footnote 453.
[456] 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.

was built, and in 1927 a post office was established. Cattle ranching was popular in the early 1900s. In 1964, the Good Friday Earthquake and resulting tsunami destroyed the Ouzinkie Packing Company cannery. Following the disaster, Columbia Ward bought the remains and rebuilt the store and dock but not the cannery. The City was incorporated in 1967. In the late 1960s, the Ouzinkie Seafoods cannery was constructed. The operation was sold to Glacier Bay and burned down in 1976 shortly after the sale. No canneries have operated since. Today, Ouzinkie remains an Alutiiq village.[457]

Natural Resources and Environment

The climate of the Kodiak Islands is dominated by a strong marine influence. There is moderate precipitation, frequent cloud cover and fog, and little to no freezing weather. Severe storms are common from December through February. Annual precipitation averages 60 inches, with 87 inches of snowfall. Temperatures remain within a narrow range throughout the year, from 32 to 62 °F.[458]

Ouzinkie is located just over 20 miles east of the border of the Kodiak National Wildlife Refuge (NWR). The NWR covers the southwestern two-thirds of Kodiak Island. It was established in 1941 with the purpose of wildlife conservation, in particular the Kodiak brown bear unique to the island, as well as fulfillment of treaty obligations, providing for continued subsistence use, and to ensure water quality and quantity.[459] There are also a number of state parks, state historical parks, and state recreation sites located on the northeast corner of Kodiak Island.[460]

Kodiak Island is located in a highly active volcanic and tectonic zone along the Pacific "Ring of Fire". The earthquake belt along the Aleutian Islands, Alaska Peninsula, and Kenai Peninsula is known as the Alaska-Aleutian subduction zone, where strong earthquakes occur as a result of slipping along the contact zone between the Pacific and Alaska plates. Earthquakes can cause tsunamis, landslides, snow avalanches, and submarine slumps.[461] The 1912 eruption of the volcano Novarupta, located 100 miles northwest of Kodiak Island on the Alaska Peninsula, covered the island in ash and gasses and disrupted the local salmon fishery, especially between 1915 to 1919, when many adult fish starved and failed to spawn in ash-choked streams.[462]

In addition to risk of earthquake and volcanic activity, natural hazards present in Ouzinkie include wildfire and severe weather. A drought scenario has the potential to exacerbate wildfire risk and disrupt hydroelectric power production. A backup diesel generator is present in the community in such an event. High winds are the greatest weather threat in Ouzinkie.[463]

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[457] Ibid.
[458] See footnote 456.
[459] U.S. Fish and Wildlife Service. *Kodiak National Wildlife Refuge website*. Retrieved November 30, 2011 from http://kodiak.fws.gov.
[460] Alaska Dept. of Natural Resources. (n.d.) *Alaska State Parks website*. Retrieved December 6, 2011 from http://dnr.alaska.gov/parks/.
[461] City of Ouzinkie. 2000. *Community Emergency Response Plan. Annex E to the Kodiak Emergency Operations Plan*. Retrieved March 7, 2012 from http://www.city.kodiak.ak.us/Emergency/Documents/Annex%20E%20-%20Ouzinkie.pdf.
[462] U.S. Geological Survey. 1998. "Can Another Great Volcanic Eruption Happen in Alaska?" Retrieved December 5, 2011 from http://volcanoes.usgs.gov/about/publications/factsheets.php.
[463] See footnote 461.

Kodiak Island was directly impacted by the *Exxon Valdez* Oil Spill in March of 1989, in which 11 million gallons of crude oil spilled into Prince William Sound and spread to surrounding areas.[464] Oil was carried by currents throughout the area of the Alutiiq people, and hit the beaches of Kodiak Island in mid-April.[465] The *Exxon Valdez* Oil Spill Trustee Council was formed following the spill, and has overseen large-scale habitat restoration, protection, and acquisition. On Kodiak Island, the Trustee Council has protected over 260,000 acres, much of it now included with Kodiak NWR.[466]

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Ouzinkie as of May 2012.[467]

Current Economy[468]

According to a survey conducted by the AFSC in 2011, community leaders reported that Ouzinkie's economy relies upon commercial fishing and sport hunting and fishing. Other top local employers in 2010 included local government offices, regional health and social service organizations, the Kodiak Island Borough School District, the village Native corporation (Ouzinkie Native Corporation), a construction company, a stevedoring company, and Servant Air, Inc.[469] In addition, almost the entire population depends to some extent on subsistence activities for various food sources. Salmon, crab, halibut, shrimp, clams, ducks, deer, and rabbit are utilized.[470]

Based on household surveys for the 2006-2010 ACS,[471] in 2010, the per capita income in Ouzinkie was estimated to be $18,548 and the median household income was estimated to be $48,824. This represents a decrease from the per capita and median household incomes reported in the year 2000 ($19,324 and $52,500, respectively). If inflation is taken into account by converting 2000 values to 2010 dollars,[472] this drop in income is revealed to be even greater. Real per capita income in 2000 was $25,411 and real median household income was $69,037. In 2010, Ouzinkie ranked 166th in per capita income out of 305 Alaskan communities with per capita income data, and 139th in median household income, out of 299 Alaskan communities with household income data that year.

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[464] Environmental Protection Agency. *Exxon Valdez*. Retrieved December 2, 2011 from http://www.epa.gov/emergencies/content/learning/exxon.htm.
[465] Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from http://ankn.uaf.edu.
[466] Restoration Notebook. 2009. *Habitat Protection – A Successful Restoration Strategy*. *Exxon Valdez* Oil Spill Trustee Council. Retrieved December 1, 2011 from http://dnr.alaska.gov.
[467] 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.
[468] Unless otherwise noted, all monetary data are reported in nominal values.
[469] 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/.
[470] 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.
[471] 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.
[472] 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).

Although Ouzinkie's small population size may have prevented the ACS from accurately portraying economic conditions,[473] the 2010 ACS per capita income estimate is supported 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 Ouzinkie in 2010 is $10,970.[474] This is lower than the 2006-2010 ACS estimate, providing additional evidence that per capita income declined in Ouzinkie between 2000 and 2010. Despite this apparent decline in per capita income in Ouzinkie, the community was not recognized as "distressed" by the Denali Commission.[475] 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, 54.3% of the population age 16 and older was estimated to be in the civilian labor force, a lower percentage than was estimated to be in the civilian labor force statewide (68.8%). In the same year, 26.5% of local residents were estimated to be living below the poverty line, compared to 9.5% statewide, and the unemployment rate was estimated to be 7.5%, compared to the state percentage of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 8.5%, compared to a statewide unemployment rate estimate of 11.5%.[476]

Also based on the 2006-2010 ACS, a majority of Ouzinkie workers were estimated to be employed in the public sector (64.2%), along with 34.6% worked in the private sector, and 1.2% estimated to be self-employed. Of the 81 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest number was estimated to work in educational services, health care, and social assistance (27.2%), public administration (27.2%), construction (17.3%), and transportation, warehousing, and utilities (13.6%). Also in 2010, 4.6% of the employed civilian labor force was estimated to be working in agriculture, forestry, fishing and hunting, and mining. However, the number of individuals employed in farming, fishing, and forestry industries is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 97 employed residents in Ouzinkie in 2010, of which 53.6% were employed in local government, 10.3% in trade, transportation, and utilities, 10.4% in educational and health services, 9.3% in professional and business services, 5.2% in construction, 4.1% in natural resources and mining, 1% in leisure and hospitality, 1% in unknown industries, and 5.2% in other industries.[477] As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

[473] 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.
[474] See footnotes 469 and 471.
[475] Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.
[476] See footnote 469.
[477] Ibid.

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

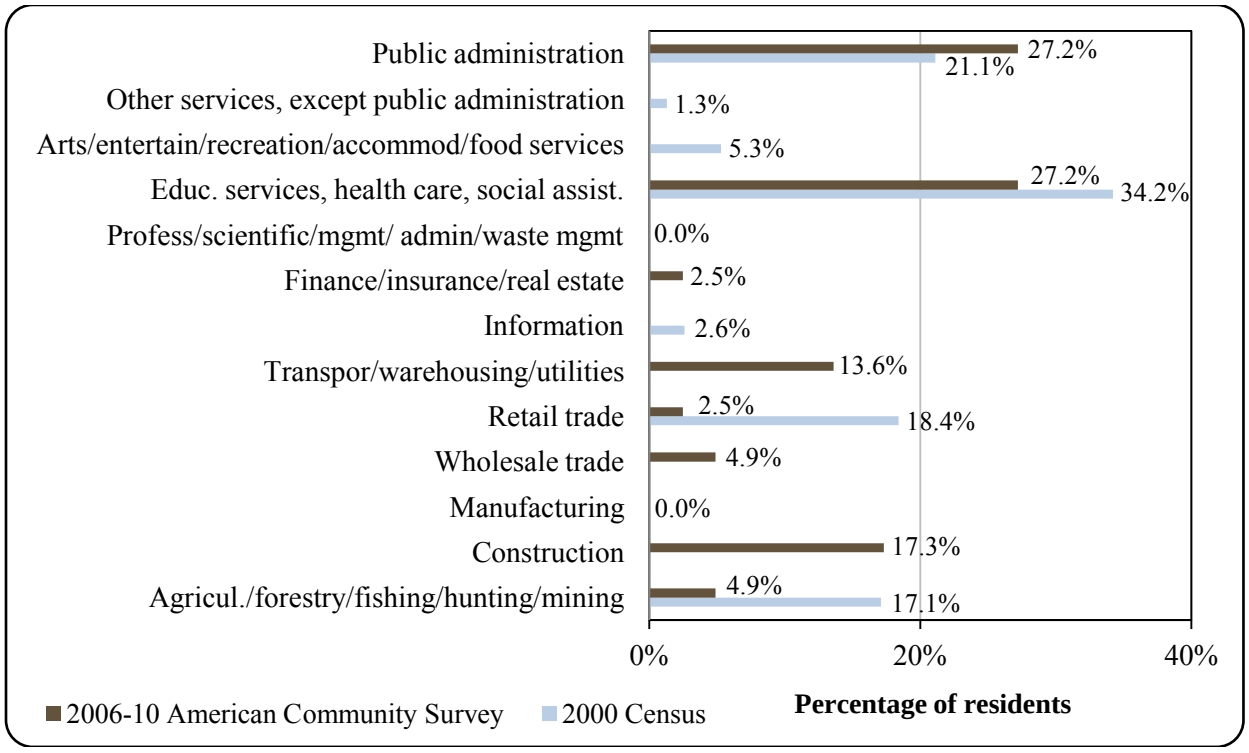
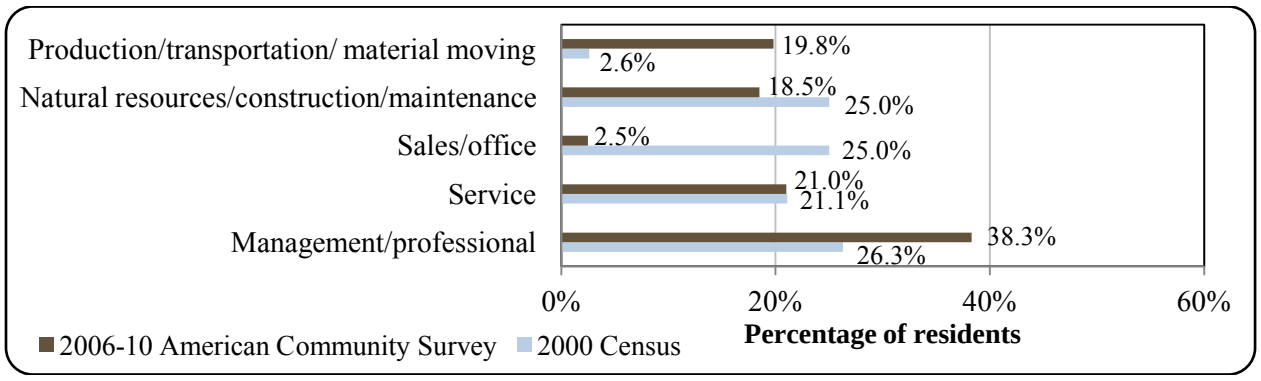


Figure 4. Local Employment by Occupation in 2000-2010, Ouzinkie (U.S. Census).



Governance

Ouzinkie is a 2nd Class City in the Kodiak Island Borough. The City was incorporated in 1967 and has a Strong Mayor form of government, including a seven-person city council which includes the Mayor, a five-person advisory school board, and several municipal employees. The City administers a 3% sales tax, and the Borough administers a 11.27 mills (1.127%) property tax, excluding service area taxes.[478] In addition to sales tax revenue, other locally-generated revenue sources included contracted maintenance services, land leasing, fees for water/sewer,

[478] 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.

landfill, and electricity services, gravel sales, apartment rentals, and equipment rentals. Outside revenue sources included shared funds from various state revenue sharing programs, as well as grants and subsidies in some years. Revenue sharing contributions came from the State Revenue Sharing program (approximately $21,000 per year from 2000 to 2003), the Community Revenue Sharing program (just over $100,000 per year in 2009 and 2010), and state fish tax revenues (see the *Fisheries-Related Revenue* section of this profile). In addition, Ouzinkie received a variety of fisheries-related grants between 2000 and 2010, including a $1,300,000 grant in 2002 for improvements to harbor facilities, a $11,854 disaster aid grant in 2005 for construction of a Wave Wall, and a series of grants in 2008 and 2010 for dock replacement. Information about selected aspects of Ouzinkie municipal revenue is presented in Table 2.

Ouzinkie 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 Native Village of Ouzinkie. The Native village corporation is the Ouzinkie Native Corporation, which manages 151,052 acres of land. The regional Native corporation to which Ouzinkie belongs is Koniag, Incorporated.[479]

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Ouzinkie 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	$522,007	$12,318	$21,640	n/a
2001	$627,637	$6,276	$20,824	$1,300,000
2002	$576,919	$5,962	$20,825	n/a
2003	$490,483	$8,134	$20,970	n/a
2004	$539,797	$5,266	n/a	$11,854
2005	$579,957	$15,246	n/a	n/a
2006	$507,541	$10,108	n/a	n/a
2007	$519,718	$11,544	n/a	$570,000
2008	$551,541	$8,577	n/a	n/a
2009	$628,567	$6,866	$104,519	$4,000,000
2010	$878,950	$17,494	$104,526	n/a

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

[479] Ibid.

Ouzinkie is also a member of the Kodiak Area Native Association (KANA), a tribal non-profit organization headquartered in Kodiak that serves communities in the Kodiak Archipelago.[480] KANA is one of the 12 regional Alaska Native 501(c)(3) nonprofit 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.[481] KANA provides health and development services, as well as career development and other community services, with the goal of promoting economic self sufficiency and promote healthy families.[482]

The closest National Marine Fisheries Service (NMFS), Alaska Department of Fish and Game (ADF&G), and U.S. Bureau of Citizenship and Immigration Services offices are all located within the City of Kodiak, 10 miles south of Ouzinkie. The nearest Alaska Department of Natural Resources office is a Division of Parks and Outdoor Recreation office, also located in Kodiak, and the nearest office of the Alaska Department of Commerce, Community, and Economic Development is in Anchorage.

Infrastructure

Connectivity and Transportation

The village is accessible by air and water. There is a state-owned 2,085 ft long by 80 ft wide gravel airstrip, although runway conditions are not monitored, so visual inspection is recommended prior to use.[483] As of early June 2012, a roundtrip ticket between Kodiak and Anchorage cost $360.[484] Several companies offer service between Kodiak and Ouznike, including Servant Air, Inc. and Island Air Service. As of June 2012, a roundtrip ticket between Kodiak and Ouzinkie with these air services cost between $110 and $120.[485] A floatplane landing area is also available at Ouzinkie Harbor.[486] According to a survey conducted by the AFSC in 2011, water taxi service was also available to Ouzinkie. Barges provide cargo delivery from Seattle and Kodiak.[487] The road system in Ouzinkie is limited, including only a few miles of gravel roads and paths. Less than 50 vehicles are present in town, along with approximately 40-60 ATVs.[488]

[480] Kodiak Area Native Association. (n.d.). *Homepage.* Retrieved February 16, 2012 from http://www.kanaweb.org/.
[481] 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.
[482] See footnote 480.
[483] City of Ouzinkie. 2000. *Community Emergency Response Plan. Annex E to the Kodiak Emergency Operations Plan*. Retrieved March 7, 2012 from http://www.city.kodiak.ak.us/Emergency/Documents/Annex%20E%20-%20Ouzinkie.pdf.
[484] This price was calculated on November 21, 2011 using kayak.com.
[485] Price information retrieved June 26, 2012 from http://www.kodiakislandair.com/summer_schedule.htm and http://www.servantair.com/schedules_summer.html.
[486] 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.
[487] Ibid.
[488] See footnote 483.

Facilities

The City operates a piped water system in Ouzinkie. Water is derived from a dam on Mahoona Lake, and also from Katmai Creek. The City also operates a piped sewage system. A central septic treatment system and a sludge disposal site are used for waste. Over 90% of all homes in Ouzinkie are fully plumbed. Electricity is provided in Ouzinkie from a hydroelectric facility operated by the City, with a diesel backup generator.[489] Public safety services are provided by a Village Public Safety Officer (VPSO) stationed in Ouzinkie,[490] as well as a state trooper post in Kodiak. Fire and rescue services are provided by the city volunteer fire department and the U.S. Coast Guard (USCG). Additional community facilities include a Community Center, school gymnasium, and public library. A meals program for senior citizens operates out of the Community Center.[491] According to a survey conducted by the AFSC in 2011, a post office and publicly subsidized housing are also present in Ouzinkie.

With regard to fisheries-related infrastructure, according to the 2011 AFSC survey, community leaders reported that Ouzinkie has a breakwater, small boat harbor, and dock with fuel tanks. They indicated that 800 feet of dock space is available for permanent vessel moorage along with 100 ft of space for transient vessel moorage. They said that vessels up to 80 ft in length can be accommodated in Ouzinkie. According to community leaders, several improvements are currently underway to these facilities, including construction of new dock space and pilings, improvements to the existing dock structure, and addition of roads and electricity serving the dock. The new dock will have the capacity to receive a ferry. They noted that plans are in place to add a fish cleaning station and barge landing area and to connect the water system to the dock within the next 10 years. Additionally, they reported that harbor dredging has recently been carried out. For fisheries-related businesses and services not available locally, community leaders indicated that Ouzinkie residents typically travel to Kodiak, Homer, or Anchorage.

Medical Services

Health care is available at the Ouzinkie Health Clinic which is owned by the Village Council and operated by KANA. The clinic is a Community Health Aide Program site. Emergency Services have coastal and air access. Emergency service is provided by volunteers and a health aide.[492] The nearest hospital is located in the City of Kodiak.

Educational Opportunities

There is one school in the community, which offers Kindergarten through 12th grade. As of 2011, the Ouzinkie School had a total of 28 students and 3 teachers.[493]

[489] See footnote 486.
[490] Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from http://www.dps.alaska.gov/.
[491] See footnote 486.
[492] Ibid.
[493] 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

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on Kodiak Island and surrounding areas. The Koniags historically migrated between permanent winter villages and temporary summer fish camps. Salmon was an important staple, and they also harvested other fish, intertidal resources and marine mammals, including whales, sea lions, seals, and sea otters. With the arrival of Russian colonists to Kodiak Island in the late 1700s, the Alutiiq people were forced to hunt for sea otters to fuel the trade of their valuable pelts.[494]

After the U.S. purchase of Alaska, American entrepreneurs arrived to continue hunting sea otter and to develop other industries, including salmon fishing. In 1889, the Royal Packing Company constructed a cannery at Ouzinkie. Shortly afterward, the American Packing Company built another. A majority of cannery employees were hired from outside the region, primarily from the lower U.S. states and China. Native Alaskans became increasingly involved in commercial salmon fishing in the early 1900s, and coordinated commercial fishing activity with subsistence hunting and fishing activities. The most common fishing gear was the beach seine until purse seining became popular in the 1920s with the rise of fuel-powered boats. The salmon fishery was the primary focus of local commercial fishing activity, although by the 1920s halibut fisherman began stopping in Kodiak, and herring and cod fishermen also worked in the area.[495]

The Ouzinkie cannery was destroyed by the Good Friday earthquake of 1964. Following the disaster, Columbia Ward bought the remains and rebuilt the store and dock but not the cannery. In the late 1960s, the Ouzinkie Seafoods cannery was constructed. The operation was sold to Glacier Bay and burned down in 1976 shortly after the sale. No canneries have operated since.[496] After the 1964 earthquake, Kodiak became the focal point of seafood processing for the region. The king crab fishery emerged as a new focus for the Kodiak fishing fleet in the years following the tsunami. Most Alutiiq fishermen continued to focus on salmon fishing into the late 1900s, but some also diversified into herring, cod, and crab fisheries.[497] Today all of these commercial fisheries continue to be important to fishermen living in Ouzinkie, as well as continued subsistence fishing and hunting.[498]

Between 2000 and 2010, Ouzinkie fishermen were most engaged in commercial fisheries for salmon, groundfish, and halibut, and were also involved to a lesser degree in fisheries for crab, sablefish, and 'other shellfish'. According to a survey conducted by the AFSC in 2011, community leaders indicated that the Pacific cod jig fishery takes place during the first half of January each year, the snow crab fishery takes place in the second half of January, and the Pacific halibut longline fishery runs between mid-March and mid-November. 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

[494] Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from http://ankn.uaf.edu.
[495] Ibid.
[496] 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.
[497] See footnote 494.
[498] See footnote 496.

Zone (EEZ) are under federal jurisdiction.[499] Pacific halibut fisheries are managed under the International Pacific Halibut Commission.

Ouzinkie is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA federal Sablefish Regulatory Area. ADF&G manages the Kodiak salmon and herring fisheries in waters surrounding the Kodiak archipelago.[500] The salmon fishery is divided into seven fishing districts (Afognak District, Northeast Kodiak District, Eastside Kodiak District, Alitak Bay District, Southwest Kodiak District, Northwest Kodiak District, and Mainland Districts). Gear types in use currently include purse seine, set gillnets and beach seine.[501] Kodiak herring fisheries include a roe fishery (using both purse seine and gillnet gear) and a food/bait fishery. Herring sac roe fisheries take place in the spring when individual spawning biomasses are aggregated. In contrast, food/bait fisheries take place in the summer, fall, and winter when herring from several stocks may be mixed together. A Kodiak food/bait herring fishery has historically taken place in Shelikof Strait, but has been closed in recent years because the Kamishak Bay spawning biomass (Cook Inlet) has been below threshold since 1998. The Alaska Board of Fish (BOF) closes food/bait fisheries if any of the individual spawning populations is below threshold.[502]

In the GOA, federally-managed groundfish fisheries target Pacific cod, walleye pollock, pelagic shelf rockfish, sablefish, and flatfish. Parallel fisheries for Pacific cod and walleye pollock also take place in state waters surrounding Kodiak Island. Parallel fisheries occur at the same time as the federal fisheries. The Total Allowable Catch (TAC) set by NMFS in each fishery applies to both federal and parallel harvest. In addition to federally-managed groundfish fisheries, beginning in 1997, a 'state-waters fishery' for Pacific cod was initiated in the Kodiak area. Management plans for state-waters fisheries are approved by the BOF, and guideline harvest limits (GHL) are set by the ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition, the ADF&G manages lingcod fisheries in both state and EEZ waters off Alaska, and beginning in 1998, management of black rockfish and blue rockfish in the GOA was transferred from NMFS to ADF&G.[503] Kodiak Island is one historical center of the red king crab fishery, and Tanner crabs are also distributed through the GOA. The ADF&G manages red king crab and Tanner crab stocks in the GOA.[504,505] The Kodiak red king crab fishery has been closed in recent years due to low abundance. However, parts of the Kodiak district have been open for Tanner crab harvest in recent years. Kodiak area Tanner crab harvest is managed using eight separate management areas, each with its own GHL.[506]

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[499] 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.
[500] Alaska Dept. of Fish and Game. 2012. *Kodiak Management Area*. Retrieved June 25, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakodiak.main.
[501] 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.
[502] Alaska Dept. of Fish and Game. 2012. *Commercial Herring Fisheries*. Retrieved June 25, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisheryHerring.main.
[503] Ibid.
[504] Alaska Dept. of Fish and Game. 2012. *Red King Crab Species Profile*. Retrieved June 20, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=redkingcrab.main.
[505] Alaska Dept. of Fish and Game. 2012. *Tanner Crab Species Profile*. Retrieved June 25, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=tannercrab.management.
[506] See footnote 499.

In 1995, management of the Pacific halibut and sablefish fisheries shifted from limited entry to a catch share program. The program includes allocation of the annual Total Allowable Catch (TAC) of halibut and sablefish via Individual Fishing Quota (IFQ). 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 TAC 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.[507] These and other factors that may contribute to decreasing fisheries participation in villages of the Kodiak Island archipelago have been discussed in detail in a number of research papers. Please refer to the books and articles referenced here for a more nuanced discussion of this issue.[508,509]

The Community Quota Entity (CQE) program, implemented by the North Pacific Fishery Management Council in 2005, is one program intended to address the issue of fishing rights leaving rural communities. Under the program, eligible communities can form a non-profit corporation under state law to purchase and manage quota share on their behalf. After they purchase quota share, CQE non-profits can lease the IFQ to eligible community residents.[510] Ouzinkie participates in the program through the Ouzinkie Community Holding Corporation, a non-profit entity created under the program through the recommendation of the City of Ouzinkie. The Ouzinkie Community Holding Corporation is one of two CQE non-profits in Alaska that held commercial halibut IFQ and was actively leasing commercial halibut quota to residents in 2013. As of October that year, the Ouzinkie Community Holding Corporation held 159,978 halibut quota shares in Area 3A.[511] It is important to note that, in additional to commercial halibut quota, CQE non-profits now have the ability to acquire and lease charter halibut permits and non-trawl gear groundfish License Limitation Permits (LLP). In October 2013, the Ouzinkie Community Holding Corporation held seven halibut charter permits and nine non-trawl groundfish LLPs.[512,513] Ouzinkie is not eligible to participate in the Community Development Quota (CDQ) program.

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[507] North Pacific Fishery Management Council. (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program.* Retrieved October 23, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEreport210.pdf.

[508] Langdon, S.J. 2008. The Community Quota Program in the Gulf of Alaska: A vehicle for Alaska Native village sustainability. In Lowe, M.E., Carothers, C., eds. "Enclosing the Fisheries: People, Places, and Power." *American Fisheries Society*. Symposium 68:155-194.

[509] Carothers, C. 2011. Equity and access to fishing rights: Exploring the Community Quota Program in the Gulf of Alaska. *Human Organization*.70:213–223.

[510] Gulf of Alaska Coastal Communities Coalition. 2012. *Halibut Community Quota Entities: Management Manual*. Retrieved October 21, 2013 from http://www.goac3.org/pdf/initiatives/Halibut_Managment_Manualv6.pdf.

[511] NOAA National Marine Fisheries Service. (2013). *Permit Reports: Individual Fishing Quota*. Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/daily/ifq_cqea_permits.xls.

[512] NOAA National Marine Fisheries Service. (2013). *Permit Reports: Charter Halibut*. Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/daily/chp_cqe_permits.xls.

[513] NOAA National Marine Fisheries Service. (2013). *Permit Reports: License Limitation Program*. Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/daily/llp_cqea_permits.xls.

Community leaders also commented in the 2011 AFSC survey that Ouzinkie is not actively involved in the fisheries management process in Alaska. They also noted that lack of local infrastructure and high fuel costs are challenges for Ouzinkie's fishing sector, and expressed that the IFQ system has led to decreased recruitment of local residents into the fishing industry. They commented that most of the original local IFQ shareholders have sold their shares to individuals outside of the community, and noted that the community of Ouzinkie is actively looking for ways to buy into community quota to promote new entry into IFQ fisheries and invigorate future fishing opportunities locally. It is important to note that the declining fishery participation has a dramatic impact on coastal fishing communities. Several books and articles are referenced here that provide a more detailed discussion of the impact of declining fishing participation on Kodiak-area villages.[514,515]

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Ouzinkie. However, 11 processing facilities were registered in nearby Kodiak in 2010.

Fisheries-Related Revenue

According to information provided in Ouzinkie's annual municipal budget between 2000 and 2010, local fisheries-related revenue sources included a raw fish tax, the Shared Fisheries Business Tax, the Fisheries Resource Landing Tax, a fuel transfer tax, and harbor usage fees. In 2010, Ouzinkie received $17,250 in raw fish tax revenue, $15,777 from the Shared Fisheries Business Tax, $87 from the Fisheries Resource Landing Tax, $10,000 in fuel transfer tax revenue, and $10,000 from harbor usage fees. In addition, community leaders reported in a 2011 survey conducted by the AFSC that $100 was generated from tax on marine fuel sales. They also noted that a portion of revenues from fisheries-related funding sources is used to fund harbor maintenance activities. Information about fisheries-related revenue is presented in Table 3.[516]

Commercial Fishing

Between 2000 and 2010, Ouzinkie residents were engaged in commercial fishing activities as vessel owners, permit and quota share account holders, and crew license holders. In 2010, 23 Ouzinkie residents held state crew licenses and 20 residents were the primary owner of a fishing vessel. Both of these numbers represent decreases since 2000, with a 34.3% decrease in crew licenses, down from 35 in 2000, and a 28.6% decrease in vessels owned by residents, down from 23 in 2000. In addition, 16 vessels were homeported in Ouzinkie in 2010, down from 23 in 2000, a decline of 30.4%. Please refer to literature cited above, at the end of the *History and*

[514] Carothers, C**.** 2012. Enduring ties: salmon and the Sugpiat of the Kodiak Archipelago. Pages 133-160 in B.J. Colombi and J.F. Brooks, eds. *Keystone Nations: Indigenous Peoples and Salmon across the North Pacific*. School for Advanced Research Press, Santa Fe, NM.
[515] Carothers C. 2010. Tragedy of commodification: Transitions in Alutiiq fishing communities in the Gulf of Alaska. *MAST* 90:91–115.
[516] 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.

Evolution of Fishing section, for a more detailed discussion of the impact of declining fishing participation on Kodiak-area coastal communities.

According to the 2011 AFSC survey, community leaders reported that fishing boats using the community as their base of fishing operations are typically under 35 feet or between 35 and 60 feet in length, and used pots, longline, gillnet, or seine gear. No fish buyers or shore-side processors were present in Ouzinkie between 2000 and 2010. These characteristics of the Ouzinkie commercial fishing sector are presented in Table 5.

In 2010, a total of 31 state Commercial Fisheries Entry Commission (CFEC) permits were held by 19 Ouzinkie residents in fisheries for salmon, groundfish, halibut, herring, crab, and 'other shellfish'. Salmon permits were held in the Kodiak purse seine, beach seine, and set gillnet fisheries. Of 11 total salmon permits held in 2010, 5 were actively fished (45%). All eight permits in the statewide halibut fishery were actively fished in 2010. Also in 2010, groundfish permits were held in the statewide lingcod and miscellaneous saltwater finfish mechanical jig fisheries, and Gulf of Alaska (GOA) miscellaneous saltwater finfish troll and mechanical jig fisheries. Of the seven permits held, three were actively fished that year (43%). In addition, one crab permit was actively fished in 2010 in the Kodiak Tanner crab pot gear fishery, one sablefish permit was held but not actively fished in the statewide longline fishery (vessel under 60 ft), and one 'other shellfish' permit was held but not actively fished in the westward shrimp pot gear fishery (vessel under 60 ft). Overall between 2000 and 2010, the total number of CFEC permit holders declined by 32.1% and the number of permits held declined by 36.7%. The percentage of permits held that were actively fished remained relatively stable over the period. Information about CFEC permits held in Ouzinkie can be found in Table 4.

In addition, seven Ouzinkie residents held a total of nine License Limitation Program permits (LLP), all of which were held in federal groundfish fisheries. Four of these nine permits were actively fished in 2010 (44%). In 2001, one LLP was also held in a federal crab fishery, but was not actively fished that year. In 2010, five Ouzinkie residents also held a total of five Federal Fisheries Permits (FFP), of which three were actively fished that year (60%). This federal permit information is also presented in Table 4.

In 2010, Ouzinkie residents held 10 quota share accounts in the federal halibut catch share fishery, with a total of 550,333 halibut quota shares. The number of quota share accounts and the number of quotas held in Ouzinkie decreased between 2000 and 2010. The annual halibut individual fishing quota (IFQ) allotment increased to 17% higher than 2000 levels by 2004, and then declined again to 10% under the 2000 allotment level by 2010. Between 2000 and 2010, one sablefish quota share account was also held in Ouzinkie, and 91,457 sablefish quota shares were held each year. Sablefish IFQ allotment increased to 27% over the 2000 level by 2004, and then declined to almost 22% lower than the 2000 allotment by 2010. Between 2000 and 2010, no Ouzinkie residents held quota share accounts or quota shares in federal crab catch share fisheries. Federal catch share participation is presented in Tables 6 through 8.

Given the lack of fish buyers in Ouzinkie (Table 5), no landings or ex-vessel revenue were reported in the community between 2000 and 2010 (Table 9). However, information was reported regarding landings and ex-vessel revenue generated by Ouzinkie vessel owners, including all delivery locations. In 2010, Ouzinkie vessel owners landed 63,802 net pounds of Pacific halibut and 34,787 net pounds of Pacific cod. Other landings and ex-vessel revenue in 2010 are considered confidential due to the small number of participants. Salmon landings and revenue data were reported for 6 years during the 2000-2010 period. In 2007, Ouzinkie vessel owners landed 1,488,878 net pounds of salmon for an ex-vessel value of $408,426. 'Other

groundfish' landings and ex-vessel revenue were reported for only one year between 2000 and 2010 while information from other years is considered confidential due to the small number of participants. During the year in which 'other groundfish' data were reported (2002), Ouzinkie vessel owners landed 7,265 net pounds of groundfish, valued at $2,775. For information about landings and ex-vessel revenue earned by vessels owners residing in Ouzinkie, see Table 10.

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

Revenue source	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Raw fish tax[1]	$16,379	$12,000	n/a	$12,000	$11,500	$11,500	$12,280	$14,531	$14,531	$15,000	$17,250
Shared Fisheries Business Tax[1]	$13,717	$11,272	$14,950	$11,309	$9,248	$21,477	$26,490	$20,327	$14,195	$17,011	$15,777
Fisheries Resource Landing Tax[1]	$56	$309	$207	$255	$219	$271	$77	$139	$143	$89	$87
Fuel transfer tax[2]	n/a	n/a	n/a	$4,900	$11,500	$12,000	$8,000	$10,000	$10,000	$10,000	$10,000
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	$4,900	$11,500	$12,000	$8,000	$10,000	$10,000	$10,000	$10,000
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	$100
Total fisheries-related revenue[4]	*$30,152*	*$23,581*	*$15,156*	*$33,364*	*$43,968*	*$57,248*	*$54,847*	*$54,997*	*$48,869*	*$52,101*	*$53,114*
Total municipal revenue[5]	*$522,007*	*$627,637*	*$576,919*	*$490,483*	*$539,797*	*$579,957*	*$507,541*	*$519,718*	*$551,541*	*$628,567*	*$878,950*

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, Ouzinkie: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) [1]	Total permits	9	8	7	7	7	7	7	7	9	9	9
	Active permits	2	3	1	1	0	1	1	1	2	4	4
	% of permits fished	22%	37%	14%	14%	%	14%	14%	14%	22%	44%	44%
	Total permit holders	8	7	6	6	6	6	6	6	7	8	7
Crab (LLP) [1]	Total permits	0	1	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	-	0%	-	-	-	-	-	-	-	-	-
	Total permit holders	0	1	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits [1]	Total permits	7	8	8	4	5	5	4	4	5	5	5
	Fished permits	0	0	0	2	1	1	1	1	2	3	3
	% of permits fished	0%	0%	0%	50%	20%	20%	25%	25%	40%	60%	60%
	Total permit holders	6	6	6	4	5	5	4	4	5	5	5
Crab (CFEC) [2]	Total permits	0	3	3	2	3	3	1	1	1	1	1
	Fished permits	0	0	2	1	1	1	1	1	1	1	1
	% of permits fished		0	67%	50%	33%	33%	100%	100%	100%	100%	100%
	Total permit holders	0	3	3	2	2	3	1	1	1	1	1
Other shellfish (CFEC) [2]	Total permits	0	0	0	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	1	1	1	1	1	1	1	1
Halibut (CFEC) [2]	Total permits	14	14	15	13	14	12	12	11	11	10	8
	Fished permits	13	10	13	12	12	11	11	10	11	9	8
	% of permits fished	93%	71%	87%	92%	86%	92%	92%	91%	100%	90%	100%
	Total permit holders	14	14	15	13	14	12	11	11	11	10	8
Herring (CFEC) [2]	Total permits	2	2	2	2	2	2	2	2	2	2	2
	Fished permits	0	1	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	2	2	2	2	2	2	2	2	2	2

Table 4 cont'd. Permits and Permit Holders by Species, Ouzinkie: 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	1	1
	Fished permits	1	0	1	0	1	0	0	0	0	0	0
	% of permits fished	100%	0%	100%	0%	100%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Groundfish (CFEC) [2]	Total permits	18	17	15	15	14	14	7	7	7	11	7
	Fished permits	6	2	1	6	4	5	2	1	2	4	3
	% of permits fished	33%	12%	7%	40%	29%	36%	29%	14%	29%	36%	43%
	Total permit holders	13	14	12	12	11	10	7	7	7	9	6
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	14	14	15	12	12	13	13	13	12	12	11
	Fished permits	7	8	7	5	5	5	4	7	3	4	5
	% of permits fished	50%	57%	47%	42%	42%	38%	31%	54%	25%	33%	45%
	Total permit holders	15	14	15	12	12	13	14	13	13	11	10
Total CFEC Permits[2]	*Permits*	*49*	*51*	*51*	*46*	*47*	*46*	*37*	*36*	*35*	*38*	*31*
	Fished permits	*27*	*21*	*24*	*24*	*23*	*22*	*18*	*19*	*17*	*18*	*17*
	% of permits fished	*55%*	*41%*	*47%*	*52%*	*49%*	*48%*	*49%*	*53%*	*49%*	*47%*	*55%*
	Permit holders	*28*	*28*	*28*	*24*	*24*	*24*	*23*	*24*	*23*	*24*	*19*

[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 Ouzinkie: 2000-2010.

Year	[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 Ouzinkie[2]	Total Net Pounds Landed In Ouzinkie[2,5]	Total Ex-Vessel Value Of Landings In Ouzinkie[2,5]
2000	35	0	0	28	23	0	0	$0
2001	32	0	0	36	26	0	0	$0
2002	23	0	0	32	24	0	0	$0
2003	23	0	0	26	21	0	0	$0
2004	32	0	0	26	22	0	0	$0
2005	31	0	0	22	17	0	0	$0
2006	34	0	0	21	16	0	0	$0
2007	29	0	0	22	19	0	0	$0
2008	25	0	0	21	19	0	0	$0
2009	14	0	0	22	20	0	0	$0
2010	23	0	0	20	16	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 Ouzinkie: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	20	652,006	87,090
2001	18	607,009	88,504
2002	17	584,140	88,774
2003	18	588,991	89,197
2004	18	611,484	96,326
2005	17	601,597	92,113
2006	17	601,597	87,631
2007	13	588,902	85,919
2008	12	578,329	81,866
2009	11	578,329	75,174
2010	10	550,333	65,996

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 Ouzinkie: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	1	91,457	8,280
2001	1	91,457	7,807
2002	1	91,457	7,846
2003	1	91,457	9,302
2004	1	91,457	10,544
2005	1	91,457	10,470
2006	1	91,457	9,199
2007	1	91,457	8,939
2008	1	91,457	7,943
2009	1	91,457	7,206
2010	1	91,457	6,513

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 Ouzinkie: 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 Ouzinkie: 2000-2010.

	***Total Net Pounds*[1]**										
	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
Total[2]	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
	Ex-vessel Value (nominal U.S. dollars)										
	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
Total[2]	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*

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 Ouzinkie Residents: 2000-2010.

	Total Net Pounds[1]										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	81,159	75,849	96,789	91,575	90,933	81,112	88,112	84,140	81,426	63,981	63,802
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	7,265	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	58,531	13,599	-	39,086	-	-	-	-	8,926	60,796	34,787
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	996,100	1,861,839	1,166,568	-	1,007,615	1,571,529	-	1,488,878	-	-	-
Total[2]	*1,135,790*	*1,951,287*	*1,263,357*	*137,926*	*1,098,548*	*1,652,641*	*88,112*	*1,573,018*	*90,352*	*124,777*	*98,589*
	Ex-vessel Value (nominal U.S. dollars)										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	$204,172	$152,456	$213,313	$260,714	$267,161	$238,226	$334,476	$353,826	$346,146	$196,111	$311,768
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	$2,775	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	$23,870	$4,254	-	$13,376	-	-	-	-	$5,588	$20,155	$10,652
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	$306,918	$376,716	$176,891	-	$220,906	$321,909	-	$408,426	-	-	-
Total[2]	*$534,960*	*$533,427*	*$390,204*	*$276,864*	*$488,068*	*$560,134*	*$334,476*	*$762,252*	*$351,733*	*$216,266*	*$322,419*

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

Between 2000 and 2010, there was at least one active sport fish guide business in Ouzinkie in each year except 2002. The number of licensed sport fish guides residing in the community declined slightly over this period, falling from four in 2000 to one in 2010, after a brief increase to six guides present in 2003 and 2004. The number of Ouzinkie residents who purchased sportfishing licenses (irrespective of point of sale) varied between 46 and 75 per year between 2000 and 2010. This was higher than the number of licenses sold in Ouzinkie, which varied between 31 and 63 per year, suggesting that Ouzinkie residents may travel to Kodiak or other areas to prepare for or engage in sportfishing activity. According to a survey conducted by the AFSC in 2011, community leaders indicated that local sportfishing activity is largely made up of residents using private boats or fishing from docks or the shore, as well as charter fishing. They also noted that fishing lodges are present in Ouzinkie.

Ouzinkie is located within Alaska Sport Fishing Survey Area Q – Kodiak. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. On average, Alaska resident anglers fished more angler days per year than non-Alaska residents in both saltwater and freshwater sport fisheries, and more angler days were fished per year in freshwater than in saltwater in the Kodiak region between 2000 and 2010. However, sportfishing activity in by both Alaska resident and non-Alaska resident anglers, and in both saltwater and freshwater, was extremely high. Information about the sportfishing sector in and near Ouzinkie is displayed in Table 11.

The Alaska Statewide Harvest Survey,[517] conducted by ADF&G between 2000 and 2010, noted the following saltwater species targeted by private anglers in Ouzinkie: Chinook, coho, sockeye, and pink salmon, Dolly Varden, Pacific halibut, rockfish, lingcod, and Pacific cod, as well as Tanner crab and razor clams. In freshwater the survey noted sport harvest of Chinook, coho, and pink salmon. In the 2011 AFSC survey, community leaders reported a similar list of species targeted by recreational fishing, including all five species of Pacific salmon, Pacific halibut, rockfish, crab, and clams.

Kept/released statistics from charter logbook data reported by ADF&G[518] show that Pacific halibut, coho salmon, and pelagic rockfish were the most important species targeted by fishing charters out of Ouzinkie. In 2010, 112 halibut were kept and 21 released, 104 coho were kept, and 66 pelagic rockfish were kept and 43 released. These numbers represent a decline from higher charter harvest levels in 2005 and 2006. Other species that were also caught on charter fishing trips out of Ouzinkie between 2000 and 2010 include Chinook, chum, sockeye, and pink salmon, lingcod, yelloweye rockfish, 'other rockfish', and shark.

It is also important to note that, as of 2013, Ouzinkie's CQE non-profit, the Ouzinkie Community Holding Corporation, held seven charter halibut permits that were available for lease to community residents.[519]

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[517] 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).

[518] 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.]

[519] NOAA National Marine Fisheries Service. (2013). *Permit Reports: Charter Halibut*. Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/daily/chp_cqe_permits.xls.

Table 11. Sport Fishing Trends, Ouzinkie: 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 Ouzinkie[2]
2000	2	4	75	63
2001	2	5	74	49
2002	0	4	55	47
2003	1	6	62	46
2004	1	6	55	37
2005	1	1	49	38
2006	1	1	46	39
2007	1	2	51	44
2008	1	4	51	34
2009	1	3	58	33
2010	1	2	55	31

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	16,767	38,809	18,542	47,307
2001	14,761	24,604	18,299	19,757
2002	18,356	19,737	15,018	35,113
2003	17,715	23,726	13,362	34,034
2004	18,896	22,787	21,331	31,124
2005	21,269	33,917	23,789	36,753
2006	23,511	21,991	23,483	26,239
2007	21,668	31,554	26,916	31,072
2008	20,275	31,944	24,944	24,876
2009	20,813	26,520	16,654	32,965
2010	20,012	20,365	18,871	22,211

[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 harvest continues to play an important role in the culture and economy of Ouzinkie.[520] According to a survey conducted by the AFSC in 2011, salmon, Pacific halibut, and waterfowl were some of the most important subsistence resources for Ouzinkie residents. Crab, shrimp, clams, deer, and rabbit are also utilized.[521] Between 2003 and 2005, the years for which subsistence surveys were conducted in the community, an average of 85% of households were reported to participate in salmon subsistence, and an average of 29% participated in non-salmon fish subsistence (not including halibut). In 2003, 98% of households participated in halibut subsistence, 27% of households participated in marine mammal subsistence, and 65% participated in marine invertebrate subsistence. That year, the per capita subsistence of land and sea-based resources by residents of Ouzinkie was 316 lbs. This information is presented in Table 12.

Information was also available from ADF&G regarding the species of marine invertebrates, non-salmon fish, and marine mammals harvested by Ouzinkie households in 2003. The species of marine invertebrate harvested by the greatest number of Ouzinkie households that year included black chitons, octopus, Tanner crab, sea urchin, limpets, butter clams, Dungeness crab, razor clams, Pacific littleneck clams, red chitons, shrimp, and weathervane scallops. The species of non-salmon fish harvested by the greatest number of households included black rockfish, Pacific cod, Dolly Varden, lake trout, rainbow trout, steelhead, lingcod, red rockfish, herring, greenling, walleye pollock, starry flounder, Pacific tomcod, and Irish lord. In addition, although no households reported harvesting herring roe, a small number of households did report using it, indicating the presence of sharing networks between Ouzinkie and other communities. In addition, a number of Ouzinkie households reported involvement in the harvest of harbor seal. Most species listed above were used by a greater percentage of household than were involved in harvest activities, indicating the presence of sharing networks within the community.[522]

Information was also reported during the 2000-2010 period regarding total subsistence harvests of salmon and halibut. In 2008, the most recent year for which data are available about subsistence salmon harvest, 29 Ouzinkie households were issued subsistence salmon permits, and all 29 were returned, with a total harvest of 1,644 salmon. These numbers represent a decline from 43 permits issued in 2004 and 36 in 2005, and harvests of between 2,000 and 3,400 salmon in those years. Sockeye salmon made up the greatest percentage of the subsistence salmon harvest in all years for which data were reported. Additionally, in 2003, 2,966 pounds of marine invertebrates were harvested and 13,543 lbs of non-salmon fish (not including halibut) were harvested. This information is presented in Table 13.

In 2009, the most recent year for which data are available regarding subsistence halibut harvest, 59 Subsistence Halibut Fishing Certificates (SHARC) were issued to residents of Ouzinkie. Of these, 26 were fished that year, and a total of 3,433 lbs of halibut were harvested through the program. The number of SHARC cards issued varied considerably between 2003 and 2010, fluctuating between a low of 39 in 2003 and a high of 66 in 2007. The greatest volume of

[520] 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.
[521] Ibid.
[522] 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).

halibut was harvested in 2006 through this program, with 8,718 lbs harvested on 39 active SHARC cards. This information about subsistence halibut harvest is presented in Table 14.

Ouzinkie residents also participated in the subsistence harvest of marine mammals. Data reported by the U.S. Fish and Wildlife Service (FWS) indicate that six sea otters were harvested for subsistence purposes in 2003, and data from a 2009 ADF&G report indicates that Steller sea lions were also harvested in several years between 2000 and 2010. No information was available from management agencies regarding subsistence harvest of beluga whale, walrus, harbor seal, or spotted seal during the 2000-2010 period. This information is presented in Table 15.

Table 12. Subsistence Participation by Household and Species, Ouzinkie: 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	88%	98%	27%	65%	35%	316
2004	86%	n/a	n/a	n/a	38%	n/a
2005	81%	n/a	n/a	n/a	13%	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, Ouzinkie: 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	26	8	43	617	20	1,422	n/a	n/a
2001	n/a	45	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	40	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	1	41	3	n/a	n/a	n/a	30	2,966	13,543
2004	43	43	23	35	514	168	1,525	n/a	843
2005	36	36	119	172	863	572	1,690	n/a	758
2006	1	n/a	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	n/a	n/a
2008	29	29	7	14	449	54	1,120	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, Ouzinkie: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	39	28	5,163
2004	47	38	6,435
2005	43	35	6,620
2006	48	39	8,718
2007	66	46	6,248
2008	53	31	5,181
2009	59	26	3,433
2010	47	17	2,724

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, Ouzinkie: 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	43	n/a
2001	n/a	n/a	n/a	n/a	3	33	n/a
2002	n/a	n/a	n/a	n/a	5	63	n/a
2003	n/a	6	n/a	n/a	n/a	49	n/a
2004	n/a	n/a	n/a	n/a	3	73	n/a
2005	n/a	n/a	n/a	n/a	n/a	137	n/a
2006	n/a	n/a	n/a	n/a	n/a	49	n/a
2007	n/a	n/a	n/a	n/a	2	50	n/a
2008	n/a	n/a	n/a	n/a	n/a	32	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

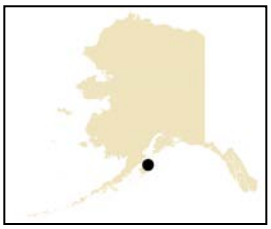
Note: n/a indicates that no data were reported for that year.

[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.

Port Lions



People and Place

Location [523]

Port Lions is located in Settler Cove, on the north coast of Kodiak Island, 247 air miles southwest of Anchorage. Port Lions is located in the Kodiak Island Census Area and is under the jurisdiction of the Kodiak Island Borough. The community encompasses 6.3 square miles of land and 3.7 square miles of water. Port Lions is a Second-class city and was incorporated in 1966.

Demographic Profile [524]

In 2010, there were 194 residents in Port Lions, making it the 196th largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population decreased by 12.6%. According to Alaska Department of Labor population estimates, between 2000 and 2009, the population of permanent residents fell by 21.88%. The average annual growth during this period was -1.82%, indicating a slow, steady decline. The change in population from 1990 to 2010 is provided in Table 1.

The majority of the residents of Port Lions in 2010 identified themselves as American Indian or Alaska Native (58.8%), with the remaining racial composition as follows: White (36.1%), Asian (2.6%), two or more races (2.6%), and Hispanic or Latino (1.5%). The percentage of the population identifying themselves as American Indian or Alaska Native decreased by 8.8% from 2000 to 2010, with corresponding increases in the percentage of the population identifying themselves as White, Asian, and two or more races. The change in racial and ethnic composition from 2000 to 2010 is provided in Figure 1 below.

In 2010, the average household size was estimated at 2.52, a decrease from 2.88 in 2000 and 3.0 in 1990. There was a decrease in the number of households present in 2000 (89), though the 2010 estimate number of households (77) is still larger than the number of households in 1990 (73). Of the 113 total housing units surveyed for the 2010 Decennial Census, 62 were owner-occupied, 15 were renter-occupied, and 36 were vacant. In 2010, no residents of Port Lions were reported to be living in group quarters.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimate that approximately 50 people come to Port Lions as seasonal workers each year between May and August.

[523] 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.

[524] 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.

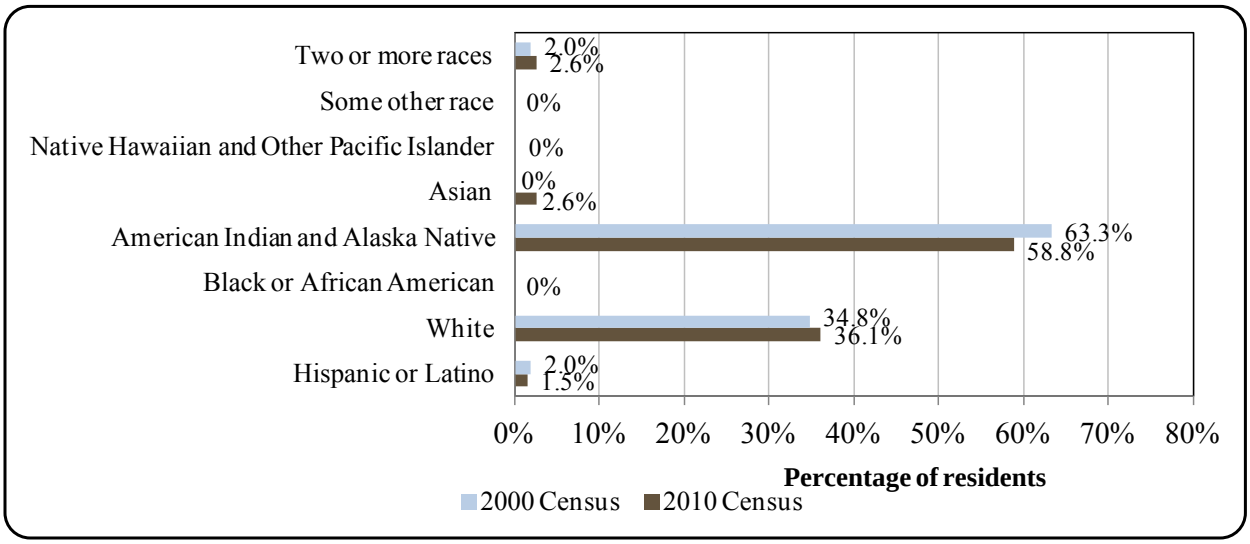
Table 1. Population in Port Lions from 1990 to 2010 by Source.

Year	U.S. Decennial Census[1]	Alaska Dept. of Labor Estimate of Permanent Residents[2]
1990	222	-
2000	256	-
2001	-	246
2002	-	227
2003	-	233
2004	-	240
2005	-	220
2006	-	196
2007	-	193
2008	-	191
2009	-	200
2010	194	-

[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.

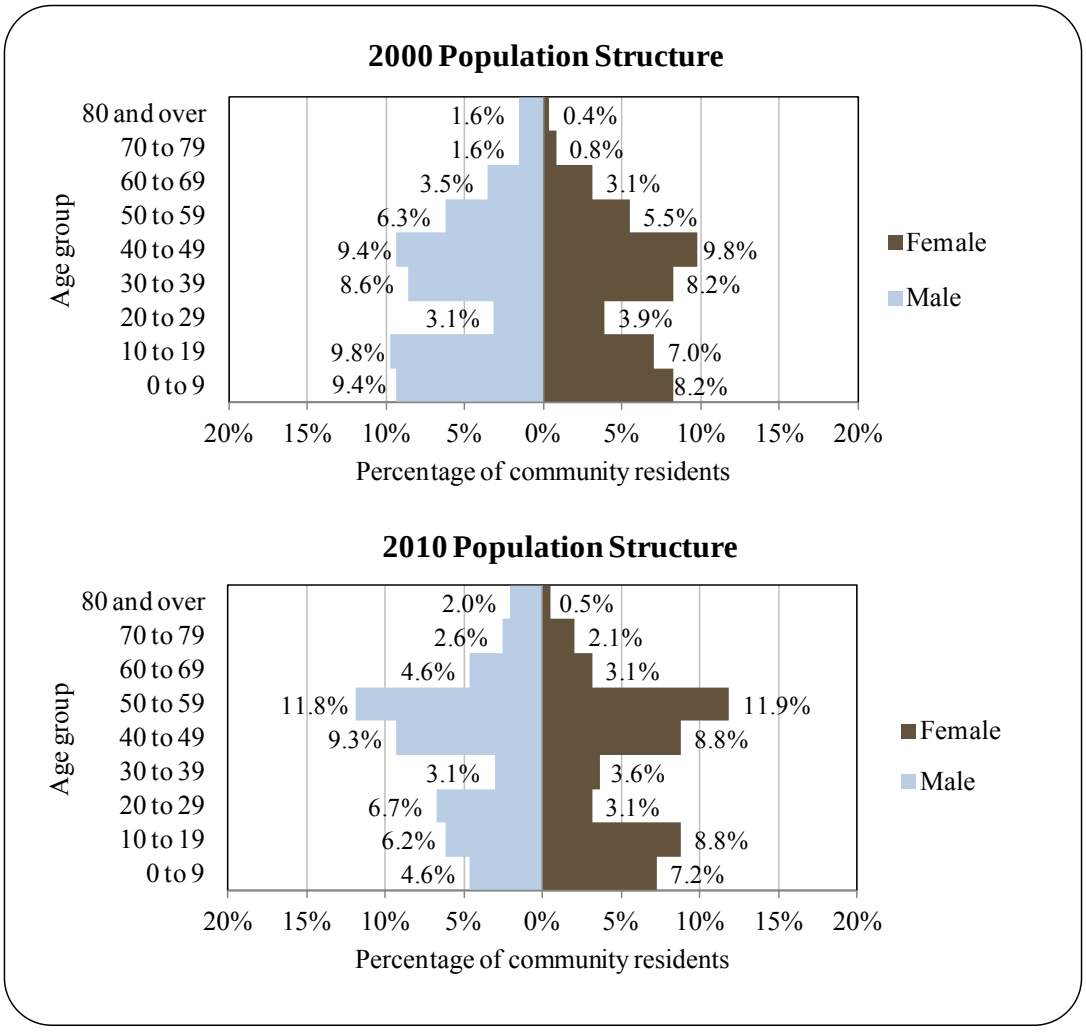
Figure 1. Racial and Ethnic Composition, Port Lions: 2000-2010 (U.S. Census).



In 2010, the gender makeup was fairly even, at 51% male and 49% female, similar to the state as a whole (52% male, 48% female). The median age in Port Lions was 44.3, higher than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. The greatest percentage of residents fell within the age category 40-59 years old, with the next largest percentage for the age category 0-29 years old. Relatively few people were 30-39 years old or 60 or older. The overall population structure of Port Lions in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),[525] an estimated 86.6% of residents aged 25 and older had a high school diploma or higher degree, compared to 90.7% of Alaskans overall. Also in 2010, an estimated 3.2% of residents had less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 10.2% had a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 32.5% had a high school diploma, compared with 27.4% of Alaskan residents overall; 29.9% had some college but no degree, compared to 28.3% of Alaskan residents overall; 7.6% had an Associate's degree, compared with 8% of Alaskan residents overall; 2.5% had a Bachelor's degree, compared with 17.4% of Alaskan residents overall; and 14% had a graduate or professional degree, compared with 9.6% of Alaskan residents overall.

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



[525] 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[526]

The majority of the population of Port Lions is Alutiiq, and the residents lead a fishing and subsistence lifestyle. The town was founded in 1964 by the displaced inhabitants of Afognak, which was destroyed by a tsunami after the Good Friday Earthquake. The community was named in honor of the Lions Club for their support in rebuilding and relocating the village. The city government was incorporated in 1966. For many years, Port Lions was the site of the large Wakefield Cannery on Peregrebni Point. The cannery burned down in March 1975. Soon thereafter, the village corporation purchased a 149-foot floating processor, the *Smokwa*. Although sold in 1978, the *Smokwa* processed crab in the area intermittently between 1975 and 1980. A small sawmill, located south of town, operated until 1976.

Natural Resources and Environment[527]

The climate of the Kodiak Islands is dominated by a strong marine influence. There is little or no freezing weather, moderate precipitation, and frequent cloud cover and fog. Severe storms are common from December through February. Annual precipitation averages 54 inches, with 75 inches of snowfall. Temperatures remain within a narrow range, from 20 to 60 °F (-6.7 to 15.6 °C).

The economy of Port Lions depends on the area's natural resources, especially fish. In a survey conducted by the AFSC in 2011, community leaders report local reliance on commercial fishing, recreational/sportfishing, and charter fishing.

Port Lions is located near the Kodiak National Wildlife Refuge (Refuge). The Refuge covers the southwestern two-thirds of Kodiak Island. It was established in 1941 with the purpose of wildlife conservation, in particular the Kodiak brown bear unique to the island, as well as fulfillment of treaty obligations, providing for continued subsistence use, and to ensure water quality and quantity.[528] There are also a number of state parks, state historical parks and state recreation sites located on the northeast corner of Kodiak Island.[529]

Kodiak Island is located in a highly active volcanic and tectonic zone along the Pacific "Ring of Fire". The earthquake belt along the Aleutian Islands, Alaska Peninsula and Kenai Peninsula is known as the Alaska-Aleutian subduction zone, where strong earthquakes occur as a result of slipping along the contact zone between the Pacific and Alaska plates. Earthquakes can cause tsunamis, landslides, snow avalanches, and submarine slumps.[530] The 1912 eruption of the volcano Novarupta, located 100 miles northwest of Kodiak Island on the Alaska Peninsula,

[526] 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.
[527] Ibid.
[528] U.S. Fish and Wildlife Service. *Kodiak National Wildlife Refuge website*. Retrieved November 30, 2011 from http://kodiak.fws.gov.
[529] Alaska Dept. of Natural Resources. (n.d.) *Alaska State Parks website*. Retrieved December 6, 2011 from http://dnr.alaska.gov/parks/.
[530] City of Ouzinkie. 2000. *Community Emergency Response Plan. Annex E to the Kodiak Emergency Operations Plan*. Retrieved March 7, 2012 from http://www.city.kodiak.ak.us/Emergency/Documents/Annex%20E%20-%20Ouzinkie.pdf.

covered the island in ash and gasses and disrupted the local salmon fishery, especially between 1915 to 1919 due to starvation and failure of many adult fish to spawn in ash-choked streams.[531]

Kodiak Island was directly impacted by the *Exxon Valdez* Oil Spill in March of 1989, in which 11 million gallons of crude oil spilled into Prince William Sound and spread to surrounding areas.[532] Oil was carried by currents throughout the area of the Alutiiq people, and hit the beaches of Kodiak Island in mid-April.[533] The *Exxon Valdez* Oil Spill Trustee Council was formed following the spill, and has overseen large-scale habitat restoration, protection and acquisition. On Kodiak Island, the Trustee Council has protected over 260,000 acres, much of it now included with Kodiak National Wildlife Refuge.[534]

Current Economy[535]

The economy of Port Lions is based primarily on commercial fishing, fish processing, and tourism. In addition, the residents depend to some extent on subsistence food sources such as salmon, crab, halibut, shrimp, clams, duck, seal, deer, and rabbit.[536]

Based on the 2006-2010 ACS,[537] the per capita income in Port Lions in 2010 was estimated to be $24,555, and the median household income in 2010 was estimated to be $64,167, compared to $17,492 and $39,107 in 2000, respectively. However, after accounting for inflation by converting the 2000 values to 2010 dollars,[538] the real per capita income ($23,002) and the real median household income ($51,425) in 2000 indicate an increase in both per capita and household income between 2000 and 2010. However, the small population size of Port Lions may have prevented the ACS from accurately portraying economic conditions.[539] A potentially more accurate 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. According to the ALARI database, the per capita income in Port Lions in 2010 was $9,243, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.[540] In 2011, Port Lions was recognized as a distressed community (using a plus/minus 3% formula) by the Denali Commission, prioritizing it for economic assistance.[541] In 2010, Port Lions ranked 113th of 305

[531] U.S. Geological Survey. 1998. "Can Another Great Volcanic Eruption Happen in Alaska?" Retrieved December 5, 2011 from http://volcanoes.usgs.gov/about/publications/factsheets.php.
[532] United States Environmental Protection Agency. "*Exxon Valdez*." Retrieved December 2, 2011 from http://www.epa.gov/emergencies/content/learning/exxon.htm.
[533] Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from http://ankn.uaf.edu.
[534] Restoration Notebook. January 2009. "Habitat Protection – A Successful Restoration Strategy." *Exxon Valdez* Oil Spill Trustee Council. Retrieved December 1, 2011 from http://dnr.alaska.gov/commis/opmp/evos/pdfs/restoration_notebook.pdf.
[535] Unless otherwise noted, all monetary data are reported in nominal values.
[536] See footnote 526.
[537] See footnote 525.
[538] 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).
[539] See footnote 525.
[540] 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/.
[541] Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

Alaskan communities with per capita income that year, and 65th out of 299 Alaskan communities with household income data.

Based on the 2006-2010 ACS, in 2010, 54.8% 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 4.6%, compared to the statewide unemployment rate of 5.9%. Approximately 6% of residents were living below the poverty line, compared to 9.6% of Alaskan residents overall. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Port Lions 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 Port Lions. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 15.2%.

Based on household surveys conducted for the 2006-2010 ACS, the greatest number of workers was employed in the public sector (47.1%), while 24% were employed in the public sector and 28.8% were self-employed. Out of 104 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in transportation, warehousing, and utilities (23.8%), arts, entertainment, recreation, accommodations, and food services (17.9%), retail trade (14.3%), public administration (13.1%), and wholesale trade (10.7%). Only 7.1% of the workforce was estimated to be employed in education services, health care, and social assistance, with 7.1% employed in agriculture, forestry, fishing, hunting, and mining, and 6% employed in construction. The number of individuals employed in farming, fishing, and forestry industries is probably underestimated in 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, Port Lions (U.S. Census).

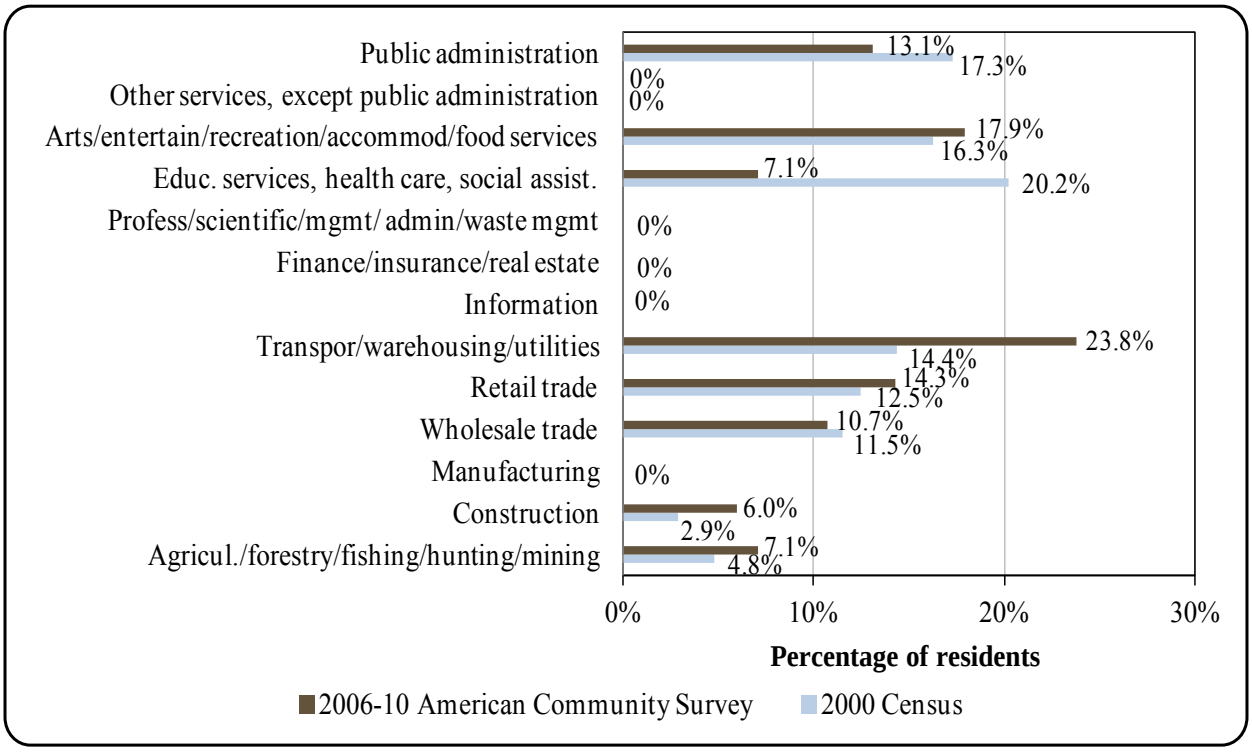
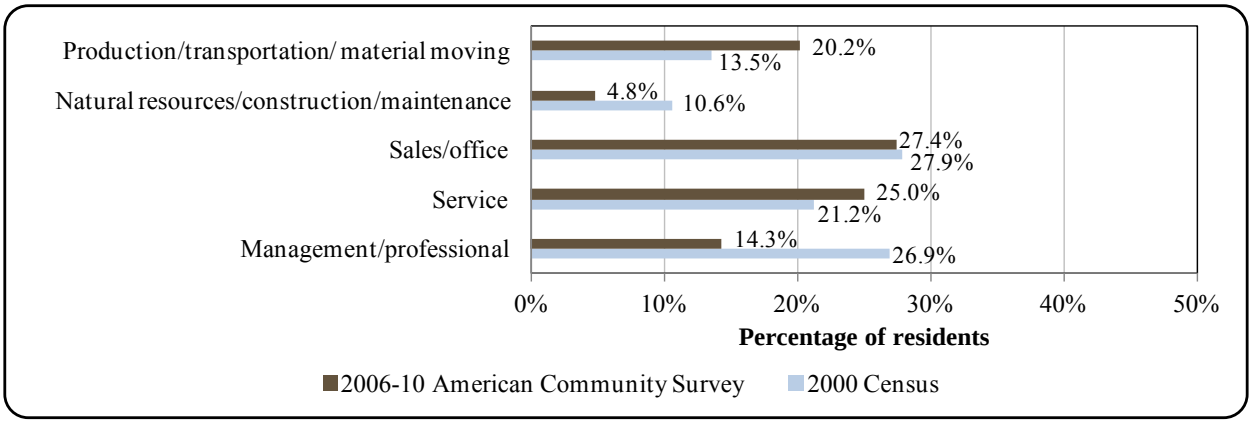


Figure 4. Local Employment by Occupation in 2000-2010, Port Lions (U.S. Census).



Governance

Port Lions is a Second-class City, governed by a mayor and city council. Port Lions is part of the Kodiak Island Borough, and is also a member of a regional Native corporation called Koniag, Incorporated. The Native village corporation is Afognak Native Corporation, which manages 98,208 acres of land granted under the Alaska Native Claims Settlement Act. The nearest Alaska Department of Fish and Game (ADF&G), National Marine Fisheries Service (NMFS), U.S. Bureau of Citizenship and Immigration Services, and Alaska Department of Natural Resources offices are located in Kodiak. The nearest office of the Alaska Department of Commerce, Community, and Economic Development is located in Anchorage.

As of 2010, neither the Kodiak Island Borough nor the City of Port Lions administered a sales tax. However, the Borough administered a 1.05% severance tax and the City administered a 10.5 mills property tax and a 5% bed tax.[542] Municipal revenues were taken from Certified Financial Statements. When adjusted for inflation,[543] total revenues increased 26.1% between 2000 and 2010 from $252,856, to $412,368. Municipal revenues peaked in 2006 at $470,565, and were at their lowest in 2007 at $192,238. In 2010, most (25.6%) municipal revenues were collected from state allocated Community Revenue Sharing, followed by water and sewer charges (19.0%) and outside grants (13.0%).

Also in 2010, Port Lions received $1,690,421 in fisheries-related grants, including a harbor feasibility grant, a grant for Port Lions city dock and ferry terminal repair, design, and construction, and a grant for harbor improvements. Refer to Table 2 for details on community finances from 2000 to 2010. While the amount received from fisheries-related grants varies from year to year, the total grants received in 2010 is the second-largest amount during the period.

The Native Village of Port Lions, a federally recognized Tribe, was established in August 1978 with a base roll of 225 members. Membership has grown steadily and is currently over 300. The Port Lions Traditional Tribal Council is the traditional governing body of the village.[544]

[542] 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.
[543] Inflation calculated using Anchorage CPI from Alaska DOL: http://labor.alaska.gov/research/cpi/cpi.htm.
[544] Native Village of Port Lions (n.d.). *Homepage*. Retrieved from http://portlions.net/ on December 2, 2011.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Port Lions 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	$252,856	n/a	$21,706	$24,000
2001	$327,265	n/a	$20,890	$24,000
2002	$302,660	n/a	$20,890	$895,005
2003	$285,519	n/a	$21,032	$5,024,000
2004	$256,424	n/a	-	$4,699
2005	$257,927	n/a	-	n/a
2006	$470,565	n/a	-	n/a
2007	$192,238	n/a	-	n/a
2008	$430,697	n/a	-	$125,000
2009	$337,905	n/a	$105,693	$846,878
2010	$412,368	n/a	$106,030	$1,690,421

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 April 15, 2011from 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 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*. Retrieved April 15, 2011from 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, 2011from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Port Lions is accessible by air and water, but not by road. There is a state-owned 2,200 ft long by 75 ft wide gravel airstrip, and the city dock may be used by seaplanes. Regular and charter flights are available from Kodiak. The boat harbor with breakwater and dock provide 82 boat slips. The state ferry operates bi-monthly from Kodiak between May and October. Barge service is available from Seattle.[545] After a short flight to Kodiak ($110[546]), round-trip airfare to Anchorage was $360.[547]

[545] See footnote 542.

[546] Regular air service from Port Lions to Kodiak is provided by Island Air. One-way fares are $55. Retrieved on December 1, 2011 from http://www.kodiakislandair.com.

[547] Airfare was obtained from 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.

Facilities[548]

The community system was built by the Bureau of Indian Affairs and Indian Health Service in 1965. Over 100 residences are connected to the City's piped water and sewer systems, and 95% of these have complete plumbing. The Branchwater Creek Reservoir provides water, which is treated and stored in a 125,000-gallon tank.

Local law enforcement is provided by a local Village Public Safety Officer and state troopers stationed in the City of Kodiak. Fire and rescue services provided by Port Lions Public Safety/Emergency Medical Services. The Village Council operates a youth center, senior services, and bingo. There are both public and school libraries. The city of Port Lions provides sewage collection through a piped sewer system and a community septic tank, and also operates a Class 3 landfill. Electricity is powered by diesel fuel and is provided by the Kodiak Electric Association.

In a survey conducted by the AFSC in 2011, community leaders report that a fish cleaning station and new dock space with electricity, water, and pilings are currently in progress. In the same survey, community leaders report that plans for additional new dock space and a breakwater will be completed in the future.

Medical Services[549]

Medical services are provided by the Port Lions Health Clinic, which is operated by the Kodiak Area Native Association. The clinic is a Community Health Aid Program site. Alternate health care is provided by the Port Lions Department of Public Safety. Emergency services have marine and air access and are provided by 911 telephone service volunteers and a health aide.

Educational Opportunities[550]

The Port Lions School provides instruction to students from kindergarten through 12th grade and, in 2011 had 36 students and 4 teachers.

[548] See footnote 542.
[549] Ibid.
[550] 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

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on Kodiak Island and surrounding areas. The Koniags historically migrated between permanent winter villages and temporary summer fish camps. Salmon was an important staple, and they also harvested other fish, intertidal resources and marine mammals, including whales, sea lions, seals, and sea otters. With the arrival of Russian colonists to Kodiak Island in the late 1700s, the Alutiiq people were forced to hunt for sea otters to fuel the trade of their valuable pelts.[551]

After the U.S. purchase of Alaska, American entrepreneurs arrived to continue hunting sea otter and to develop other industries. The salmon fishery was the primary focus of local commercial fishing activity, although by the 1920s halibut fisherman began stopping in Kodiak, and herring and cod fishermen also worked in the area. After the 1964 earthquake, the City of Kodiak became the focal point of seafood processing for the region. The king crab fishery emerged as a new focus for the Kodiak fishing fleet in the years following the tsunami. Most Alutiiq fishermen continued to focus on salmon fishing into the late 1900s, but some also diversified into herring, cod, and crab fisheries.[552] Today all of these commercial fisheries continue to be important to fishermen living in Port Lions, as well as continued subsistence fishing and hunting.[553]

Between 2000 and 2010, Port Lions fishermen were most engaged in commercial fisheries for salmon, groundfish, halibut, and herring, and were also involved to a lesser degree in fisheries for crab, sablefish, and 'other shellfish'. According to a survey conducted by the AFSC in 2011, community leaders indicated that the Pacific cod jig fishery takes place during the first half of January each year, the snow crab fishery takes place in the second half of January, and the Pacific halibut longline fishery runs between mid-March and mid-November.

The ADF&G manages the Kodiak salmon and herring fisheries in waters surrounding the Kodiak archipelago.[554] The salmon fishery is divided into seven fishing districts (Afognak District, Northeast Kodiak District, Eastside Kodiak District, Alitak Bay District, Southwest Kodiak District, Northwest Kodiak District, and Mainland Districts). Gear types in use currently include purse seine, set gillnets and beach seine.[555] Kodiak herring fisheries include a roe fishery (using both purse seine and gillnet gear) and a food/bait fishery. Herring sac roe fisheries take place in the spring when individual spawning biomasses are aggregated. In contrast, food/bait fisheries take place in the summer, fall, and winter when herring from several stocks may be mixed together. A Kodiak food/bait herring fishery has historically taken place in Shelikof Strait, but has been closed in recent years because the Kamishak Bay spawning biomass (Cook Inlet)

[551] Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from http://ankn.uaf.edu.
[552] Ibid.
[553] 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.
[554] Alaska Dept. of Fish and Game. 2012. *Kodiak Management Area*. Retrieved June 25, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakodiak.main.
[555] 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.

has been below threshold since 1998. The Alaska Board of Fish (BOF) closes food/bait fisheries if any of the individual spawning populations is below threshold.[556]

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. In the Gulf of Alaska (GOA), federally-managed groundfish fisheries target Pacific cod, walleye pollock, pelagic shelf rockfish, sablefish, and flatfish. Parallel fisheries for Pacific cod and walleye pollock also take place in state waters surrounding Kodiak Island. Parallel fisheries occur at the same time as the federal fisheries. The Total Allowable Catch (TAC) set by NMFS in each fishery applies to both federal and parallel harvest. In addition to federally-managed groundfish fisheries, beginning in 1997, a 'state-waters fishery' for Pacific cod was initiated in the Kodiak area. Management plans for state-waters fisheries are approved by the BOF, and guideline harvest limits (GHL) are set by the ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition, the ADF&G manages lingcod fisheries in both state and EEZ waters off Alaska, and beginning in 1998, management of black rockfish and blue rockfish in the GOA was transferred from NMFS to ADF&G.[557]

Kodiak Island is one historical center of the red king crab fishery, and Tanner crabs are also distributed through the GOA. The ADF&G manages red king crab and Tanner crab stocks in the GOA. From 2000 to 2002, Port Lions residents held permits in the Kodiak king crab and Bristol Bay Dungeness crab fisheries. However, from 2003 to 2010, only Tanner crab permits were held.[558,559] The Kodiak red king crab fishery has been closed in recent years due to low abundance. Parts of the Kodiak district have been open for Tanner crab harvest in recent years. Kodiak area Tanner crab harvest is managed using 8 separate management areas, each with its own GHL.[560] Pacific halibut fisheries are managed under the International Pacific Halibut Commission.

Port Lions is located in the Gulf of Alaska Federal Statistical and Reporting Area 630, the Pacific Halibut Fishery Regulatory area 3A, and the Central Gulf of Alaska Sablefish Regulatory Area. The community is not eligible to participate in the Community Development Quota (CDQ) program. However, Port Lions is eligible to participate in the Community Quota Entity (CQE) program.

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. 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

[556] Alaska Dept. of Fish and Game. 2012. *Commercial Herring Fisheries*. Retrieved June 25, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisheryHerring.main.
[557] 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.
[558] Alaska Dept. of Fish and Game. 2012. *Red King Crab Species Profile*. Retrieved June 20, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=redkingcrab.main.
[559] Alaska Dept. of Fish and Game. 2012. *Tanner Crab Species Profile*. Retrieved June 25, 2012 from http://www.adfg.alaska.gov/index.cfm?adfg=tannercrab.management.
[560] See footnote 557.

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 2013, 45 communities were considered eligible for the CQE program. Only two CQE non-profits had purchased commercial halibut IFQ and were actively leasing it to eligible community residents. Both of these CQE non-profits were located in the Kodiak area: Cape Barnabas, Inc. in Old Harbor and the Ouzinkie Company Holding Corporation in Ouzinkie.[561]

Port Lions Fisheries, Inc. is the CQE non-profit entity which represents Port Lions. In a survey conducted by the AFSC in 2011, Port Lions community leaders reported that the CQE non-profit was developed with the intention of also purchasing and managing commercial quota shares in eligible fisheries as well as charter halibut permits for the community. As of October 2013, Port Lions Fisheries, Inc. had not purchased any commercial IFQ. However, the non-profit did have seven halibut charter permits available for lease to community members.[562]

In the 2011 AFSC survey, community leaders also said in the survey that the community's annual population peak is "entirely" driven by employment in the fishing sectors, particularly commercial fishing, recreational/sportfishing, and charter fishing. Community leaders also reported that Port Lions has seen an increase in charter/party boats and in commercial fishing boats over the past five years.

Processing Plants

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

Fisheries-Related Revenue

Overall, in 2010, Port Lions received $63,459 from fisheries-related taxes and fees (Table 3).[563] These revenue sources include the Shared Fisheries Business Tax, the Fisheries Resource Landing Tax, and harbor usage fees. Table 3 shows the historical annual revenue for each of these categories.

In a survey conducted by the AFSC in 2011, community leaders reported that roads, social services, and water and wastewater systems are supported at least partially by funds obtained through fisheries-related revenue sources.

[561] NOAA Fisheries. (2013). *Community Quota and License Programs and Community Quota Entities.* Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/cqp.htm.
[562] Ibid.
[563] 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, 16 residents of Port Lions held a total of 38 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). Salmon permits made up 37% of the CFEC permits issued in 2010, a percentage which remained generally the same between 2000 and 2010. The majority (10) of the salmon CFEC permits issued in 2010 were for the Kodiak purse seine fishery, with the remainder issued for the Kodiak beach seine fishery, the Peninsula-Aleutians drift gill net fishery, and the Kodiak set gill net fishery. Halibut CFEC permits were issued for the statewide longline fishery using vessels under 60 ft. Also in 2010, herring CFEC permits were issued for the Kodiak purse seine and gill net roe herring fisheries, the Cook Inlet purse seine fishery (roe and food/bait), and the Kodiak purse seine food/bait fishery using vessels under 60 ft. Permits were also issued in 2010 for the following "other shellfish" fisheries: statewide octopi/squid longline fishery using vessels under 60 ft and pot gear fishery using vessels under 60 ft, the Kodiak sea cucumber diving gear fishery, and the Kodiak Tanner bairdi crab pot fishery using vessels under 60 ft. There were also other finfish CFEC permits issued for the statewide and Gulf of Alaska miscellaneous saltwater finfish mechanical jig fisheries. In addition, one Federal Fisheries Permit (FFP) was issued to a Port Lions resident in 2010 (Table 4). Overall, just over half the permits issued to residents of Port Lions in 2010 were actually fished, although this varies by fishery, with 71% of salmon CFEC permits fished to 100% of halibut CFEC permits fished to 20% of crab CFEC permits fished. There was a large decline in the total quota shares held by residents of Port Lions for both halibut and sablefish between 2000 and 2010. Note that no residents of Port Lions held quota shares in any of the Alaskan crab fisheries regulated by catch share programs.

Between 2000 and 2010, there were an average of 25 crew license holders, 28 vessels owned primarily by Port Lions residents and 31 vessels homeported in Port Lions. There were no fish buyers, shore-side processing facilities, or vessels landing catch in Port Lions between 2000 and 2010 (Table 5). The number of halibut quota share account holders decreased between 2000 and 2010, as did the number of halibut quota shares held by Port Lions residents and the annual IFQ allotment (Table 6). There was one Port Lions resident holding sablefish quota shares between 2000 and 2009, though there were no Port Lions residents holding sablefish quota shares in 2010 (Table 7). There were no Port Lions residents holding crab quota shares between 2005 and 2010 (Table 8). Since there were no vessels landing catch in Port Lions between 2000 and 2010, there are no landings or ex-vessel revenue data to report during this period (Table 9). Landings by Port Lions residents were considered confidential due to a small number of participants for all species in all years with the exception of halibut (2000, 2002, 2006-2008, and 2010), Pacific cod (2004), and salmon (2000-2010). Landings and ex-vessel revenue reported by Port Lions residents for halibut decreased during the period for years in which data were available, while landings and ex-vessel revenue for salmon varied considerably during the period (Table 10).

In a survey conducted by the AFSC in 2011, community leaders reported that gear types used by commercial fishing vessels based in Port Lions include gill nets, pots, and purse seines. Community leaders also reported that Port Lions is home to more commercial fishing boats than there were five years ago. In addition, community leaders reported that, while not directly involved in the fisheries management process in Alaska, Port Lions relies on regional organizations, such as the Gulf of Alaska Regional Communities Coalition, to provide information on fisheries management issues to the community.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Port Lions: 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]	$9,979	$12,640	$15,044	$10,953	$8,961	$20,818	$25,646	$29,328	$13,714	$16,588	$15,573
Fisheries Resource Landing Tax[1]	$41	$308	$206	$567	$212	$262	$74	$135	$138	$87	$86
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]	$31,000	$34,300	$32,600	$34,200	$32,000	$34,100	n/a	$37,858	$43,891	$27,500	$47,800
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 revenue[4]	*$41,020*	*$47,248*	*$47,850*	*$45,720*	*$41,173*	*$55,180*	*$25,720*	*$67,320*	*$57,743*	*$44,175*	*$63,459*
Total municipal revenue[5]	*$252,856*	*$327,265*	*$302,660*	*$285,519*	*$256,424*	*$257,927*	*$470,565*	*$192,238*	*$430,697*	*$337,905*	*$412,368*

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 financial statements. 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, Port Lions: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) [1]	Total permits	8	8	8	8	8	8	8	8	8	5	5
	Active permits	1	2	2	1	2	2	1	1	2	0	1
	% of permits fished	12%	25%	25%	12%	25%	25%	12%	12%	25%	-	20%
	Total permit holders	7	7	7	7	7	7	7	7	7	5	5
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	3	3	3	2	3	3	3	3	3	1	1
	Fished permits	0	0	0	1	1	1	0	1	1	1	1
	% of permits fished	-	-	-	50%	33%	33%	-	33%	33%	100%	100%
	Total permit holders	3	3	3	2	2	2	2	2	2	1	1
Crab (CFEC) [2]	Total permits	2	4	4	4	4	4	4	4	4	4	5
	Fished permits	1	3	3	1	3	3	2	1	2	1	1
	% of permits fished	50%	75%	75%	25%	75%	75%	50%	25%	50%	25%	20%
	Total permit holders	2	4	4	4	3	4	4	4	4	4	5
Other shellfish (CFEC) [2]	Total permits	0	1	1	2	2	2	2	2	2	3	3
	Fished permits	0	0	1	0	0	0	0	0	0	1	0
	% of permits fished	-	-	100%	-	-	-	-	-	-	33%	-
	Total permit holders	0	1	1	1	1	1	1	1	1	2	2
Halibut (CFEC) [2]	Total permits	11	10	9	9	8	8	7	7	7	6	7
	Fished permits	8	7	8	6	6	5	6	7	7	4	7
	% of permits fished	73%	70%	89%	67%	75%	63%	86%	100%	100%	67%	100%
	Total permit holders	10	9	8	8	7	7	7	7	7	6	7
Herring (CFEC) [2]	Total permits	7	7	7	8	7	8	7	6	6	6	6
	Fished permits	1	2	3	3	3	4	1	2	1	1	2
	% of permits fished	14%	29%	43%	38%	43%	50%	14%	33%	17%	17%	33%
	Total permit holders	5	5	4	4	4	4	4	4	4	4	4

Table 4 cont'd. Permits and Permit Holders by Species, Port Lions: 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	2	0
	Fished permits	1	1	1	1	1	1	1	1	1	1	0
	% of permits fished	100%	100%	100%	100%	100%	100%	100%	100%	100%	50%	-
	Total permit holders	1	1	1	1	1	1	1	1	1	1	0
Groundfish (CFEC) [2]	Total permits	13	9	10	8	6	6	3	6	7	6	3
	Fished permits	6	2	2	4	3	2	1	2	4	2	1
	% of permits fished	46%	22%	20%	50%	50%	33%	33%	33%	57%	33%	33%
	Total permit holders	10	6	7	7	5	5	3	5	5	5	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	15	14	13	14	14	13	12	13	13	12	14
	Fished permits	10	9	7	9	9	9	7	9	7	8	10
	% of permits fished	67%	64%	54%	64%	64%	69%	58%	69%	54%	67%	71%
	Total permit holders	16	15	14	14	14	13	12	13	14	12	14
Total CFEC Permits[2]	*Permits*	*49*	*46*	*45*	*46*	*42*	*42*	*36*	*39*	*40*	*39*	*38*
	Fished permits	*27*	*24*	*25*	*24*	*25*	*24*	*18*	*22*	*22*	*18*	*21*
	% of permits fished	*55%*	*52%*	*56%*	*52%*	*60%*	*57%*	*50%*	*56%*	*55%*	*46%*	*55%*
	Permit holders	*25*	*21*	*20*	*19*	*18*	*17*	*15*	*18*	*18*	*17*	*16*

[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 Port Lions: 2000-2010.

Year	[1]	Count of All Fish Buyers[2]	Count of Shore-Side Processing Facilities[4]	Vessels Primarily Owned by Residents[5]	Vessels Homeported[5]	Vessels Landing Catch in Port Lions[2]	Total Net Pounds Landed in Port Lions[2,3]	Total Ex-Vessel Value of Landings in Port Lions[2,3]
2000	28	0	0	35	37	0	0	$0
2001	27	0	0	33	36	0	0	$0
2002	27	0	0	30	33	0	0	$0
2003	26	0	0	32	35	0	0	$0
2004	25	0	0	33	36	0	0	$0
2005	22	0	0	27	29	0	0	$0
2006	21	0	0	24	27	0	0	$0
2007	21	0	0	24	28	0	0	$0
2008	25	0	0	22	25	0	0	$0
2009	27	0	0	21	27	0	0	$0
2010	23	0	0	25	28	0	0	$0

[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] Totals only represent non-confidential data.
[4] 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.]
[5] 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 6. Halibut Catch Share Program Participation by Residents of Port Lions: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	15	234,732	28,635
2001	15	234,732	33,436
2002	15	287,638	52,722
2003	14	196,783	41,441
2004	14	196,783	36,650
2005	14	190,122	34,514
2006	14	203,219	34,297
2007	13	174,159	27,662
2008	13	174,159	27,125
2009	10	155,973	21,343
2010	10	155,973	19,592

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 Port Lions: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	1	283,840	25,609
2001	1	283,840	26,728
2002	1	283,840	28,926
2003	1	193,739	24,325
2004	1	193,739	27,731
2005	1	191,739	23,839
2006	1	234,755	30,752
2007	1	277,260	35,143
2008	1	277,260	29,217
2009	1	191,739	15,392
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 Port Lions: 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 Port Lions: 2000-2010.

	***Total Net Pounds*[1]**										
	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
Total[2]	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
	Ex-vessel Value (nominal U.S. dollars)										
	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
Total[2]	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*

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 Port Lions Residents: 2000-2010.

	Total Net Pounds[1]										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	60,832	--	30,922	--	--	--	21,341	27,717	21,895	--	17,116
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	118,851	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	1,528,906	2,435,323	3,667,375	2,925,854	3,760,603	4,597,767	2,875,396	2,978,450	1,276,042	3,013,703	1,748,979
Total[2]	*1,589,738*	*2,435,323*	*3,698,297*	*2,925,854*	*3,879,454*	*4,597,767*	*2,896,737*	*3,006,167*	*1,297,937*	*3,013,703*	*1,766,095*
	Ex-vessel Value (nominal U.S. dollars)										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	$149,634	--	$66,435	--	--	--	$80,495	$117,899	$88,559	--	$81,105
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	$38,298	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	$527,766	$494,701	$460,539	$511,840	$730,241	$965,779	$652,490	$774,712	$678,089	$957,254	$843,246
Total[2]	*$677,400*	*$494,701*	*$526,974*	*$511,840*	*$768,539*	*$965,779*	*$732,985*	*$892,611*	*$766,648*	*$957,254*	*$924,351*

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

According to the ADF&G Statewide Harvest Survey, Chinook salmon, coho salmon, pink salmon, sockeye salmon, Dolly Varden, Pacific halibut, rockfish, Pacific cod, razor clams, and hardshell clams are caught by private anglers in Port Lions. In addition, charter logbook data indicate that Chinook salmon, chum salmon, coho salmon, pink salmon, sockeye salmon, other salmon, halibut, lingcod, pelagic rockfish, yelloweye rockfish, other rockfish, and sharks have been targeted by the charter industry in Port Lions.[564] According to the ADF&G Charter Logbook data, Chinook salmon, chum salmon, coho salmon, halibut, lingcod, other rockfish, other salmon, pink salmon, pelagic rockfish, sablefish, shark, sockeye, and yelloweye rockfish are caught by anglers aboard charter vessels operating out of Port Lions.[565] According to a survey conducted by the AFSC in 2011, community leaders indicated that the following saltwater species are targeted by recreational fishermen that use boats based in Port Lions: pink salmon, chum salmon, Chinook/king salmon, sockeye/red salmon, halibut, rockfish, crab, and clams.

In 2010, there were nine registered sport fish businesses active and twelve registered sport fish guides. The number of active sport fish guide businesses fluctuated at any given year between 2000 and 2010, but ranged between 6 and 10. In, addition, there was a yearly average of 12 registered sport fish guides located in the community during that time. A total of 77 sportfishing licenses were sold to residents of Port Lions in 2010 (irrespective of the location of the point of sale). In comparison, a total of 84 sportfishing licenses were sold in Port Lions, indicating the potential that visitors to Port Lions are participating in recreational fishing activities.

Port Lions is located within Alaska Sport Fishing Survey Area Q – Kodiak. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. On average, Alaska resident anglers fished more angler days per year than non-Alaska residents in both saltwater and freshwater sport fisheries, and more angler days were fished per year in freshwater than in saltwater in the Kodiak region between 2000 and 2010. However, sportfishing activity in by both Alaska resident and non-Alaska resident anglers, and in both saltwater and freshwater, was extremely high. Information about the sportfishing sector in and near Port Lions is displayed in Table 11.

[564] 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).

[565] 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.]

Table 11. Sport Fishing Trends, Port Lions: 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 Port Lions[2]
2000	7	15	60	0
2001	6	16	80	86
2002	7	11	68	43
2003	6	13	81	89
2004	7	14	87	111
2005	9	11	80	104
2006	7	11	71	116
2007	7	9	70	130
2008	10	14	62	137
2009	8	11	70	126
2010	9	12	77	84

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	16,767	38,809	18,542	47,307
2001	14,761	24,604	18,299	19,757
2002	18,356	19,737	15,018	35,113
2003	17,715	23,726	13,362	34,034
2004	18,896	22,787	21,331	31,124
2005	21,269	33,917	23,789	36,753
2006	23,511	21,991	23,483	26,239
2007	21,668	31,554	26,916	31,072
2008	20,275	31,944	24,944	24,876
2009	20,813	26,520	16,654	32,965
2010	20,012	20,365	18,871	22,211

[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

Residents of Port Lions supplement their incomes and diet with subsistence resources such as salmon, crab, halibut, shrimp, clams, duck, seal, deer, and rabbit.[566]

According to a survey conducted by the AFSC in 2011, community leaders indicated that salmon, halibut, cod, clams, and sea ducks are the most important subsistence marine resources for the residents of Port Lions. There has been considerable harvest of halibut for subsistence by residents of Port Lions that hold a valid Subsistence Halibut Registration Certificate (SHARC) issued by NMFS (Table 14). The ADF&G Division of Subsistence estimated subsistence participation between 2003 and 2004 by household and species, showing a high percentage of households participating in salmon and halibut subsistence, as well as lower participation levels in marine mammal, marine invertebrate, and non-salmon fish subsistence (Table 12).

Between 2000 and 2010, for years in which data are available, the estimated total subsistence harvest of salmon appears to be somewhat variable from year to year (Table 13). From 2003 to 2010, while somewhat variable, the total subsistence harvest of halibut decreased overall by nearly half. During this same time period, the number of SHARC card holders and the number of SHARC cards fished has also decreased (Table 14). In 2004, there was a significant spike in subsistence halibut harvests. In that year, an estimated 18,914 pounds were harvested on 44 SHARC despite permit activity remaining relatively unchanged in the shouldering years. In years for which data were reported by ADF&G between 2000 and 2010, an estimated total of 97 sea otters, 16 Steller sea lions, and 301 harbor seals were harvested. Sea otter harvests peaked in 2010 at an estimated 32 otters, while harbor seal harvests peaked in 2005 through 2007 at an estimated 77 seal in each of those years. However, it should be noted that years which reflect consecutive estimates may represent estimates which were carried over from the original year. This was done in the event that there was a gap in the data. This should be considered when calculating total Steller sea lion and harbor seal harvests (Table 15).

The ADF&G Division of Subsistence reported that the following species of marine invertebrates were used for subsistence in Port Graham during this period: black (small) chitons, butter clams, Dungeness crab, king crab, limpets, octopus, Pacific littleneck clams (steamers), razor clams, sea urchin, snails, Tanner crab, unknown king crab, unknown mussels, and unknown Tanner crab. Marine mammals reported as harvested for subsistence use included harbor seal and Steller sea lion. Non-salmon fish reported as harvested for subsistence use included: black rockfish, Dolly Varden, herring, lake trout, lingcod, Pacific cod, rainbow trout, red rockfish, sablefish (black cod), starry flounder, steelhead, unknown rockfish, unknown shark, unknown sole, unknown trout, and walleye pollock.[567]

Additional Information

[566] 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.

[567] 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).

A long, wooden footbridge links the two sides of Port Lions across Settlers Cove. The bridge is commonly known as "The Causeway."[568]

[568] Go Kodiak Alaska (n.d.). *Port Lions.* Retrieved December 1, 2011 from http://www.gokodiakalaska.com/html/locations/port-lions.php.

Table 12. Subsistence Participation by Household and Species, Port Lions: 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	85%	93%	13%	31%	31%	221
2004	78%	n/a	n/a	n/a	13%	n/a
2005	72%	n/a	n/a	n/a	17%	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.ADF&G.alaska.gov/sb/CSIS/ (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Port Lions: 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	41	2	1	431	11	2,041	n/a	n/a
2001	1	55	n/a	n/a	n/a	n/a	75	n/a	n/a
2002	n/a	47	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	51	n/a	n/a	n/a	n/a	n/a	2,262	3,130
2004	49	49	43	3	612	65	1,519	n/a	229
2005	43	43	28	1	466	85	1,313	n/a	1,134
2006	39	39	25	1	560	165	531	n/a	n/a
2007	39	39	25	1	560	165	531	n/a	n/a
2008	38	38	3	0	313	85	1,161	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

[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, Port Lions: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	68	42	6,786
2004	83	44	18,914
2005	84	41	8,709
2006	77	44	7,465
2007	66	30	4,826
2008	45	24	3,465
2009	49	28	3,754
2010	39	19	3,986

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, 2010. 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, Port Lions: 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	1	n/a	n/a	n/a	6	n/a
2001	n/a	n/a	n/a	n/a	n/a	9	n/a
2002	n/a	10	n/a	n/a	n/a	13	n/a
2003	n/a	21	n/a	n/a	n/a	13	n/a
2004	n/a	n/a	n/a	n/a	1	21	n/a
2005	n/a	24	n/a	n/a	4	77	n/a
2006	n/a	n/a	n/a	n/a	4	77	n/a
2007	n/a	3	n/a	n/a	4	77	n/a
2008	n/a	6	n/a	n/a	3	20	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	32	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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