

Quinhagak (QUINN-uh-hawk)

People and Place

*Location*¹



Quinhagak, also known as Kwinhagak, is on the Kanektok River on the east shore of Kuskokwim Bay, less than a mile from the Bering Sea coast. It lies 71 miles southwest of Bethel. Quinhagak is located in the Bethel Recording District, the Bethel Census Area, and is not located within an organized Borough. The community encompasses 4.7 square miles of land and 0.6 square miles of water.

*Demographic Profile*²

Based on the 2010 U.S. Decennial Census, there were 669 residents in Quinhagak, making it the 94th largest of 352 total Alaskan communities with recorded populations that year. Overall, between 1990 and 2010, the population has increased by 22.5%. The Quinhagak annual growth rate between 2000 and 2009 was 1.47%, indicating a slow rate of population growth. The change in population from 1990 to 2010 is provided in Table 1.

In 2010, the majority of the residents of Quinhagak identified themselves as American Indian or Alaska Native (93.4%), with the remaining racial composition as follows: two or more races (3.7%), White (2.2%), Native Hawaiian or Other Pacific Island (0.4%), and some other race (0.1%). In addition, 0.4% of the residents of Quinhagak identified themselves as Hispanic or Latino. The percentage of Quinhagak residents identifying themselves as American Indian or Alaska Native decreased by 2.6% between 2000 and 2010, with corresponding increases in the percentage of the population identifying themselves as two or more races, Native Hawaiian or Other Pacific Islander, and some other race. The change in racial and ethnic composition in Quinhagak from 2000 to 2010 is provided in Figure 1.

Based on household surveys conducted for the U.S. Census, the average household size was estimated to be 4.05, a figure that remained the same in 2010 (4.05), but is slightly larger than the average household size in 1990 (3.90). There has been an increase in the number of households in Quinhagak from 127 in 1990 to 137 in 2000 to 165 in 2010. Of the 187 housing units surveyed for the 2010 Decennial Census, 134 were owner-occupied, 31 were renter-occupied, and 22 housing units were vacant. In 2010, no residents of Quinhagak were reported to be living in group quarters.

¹ 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.

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>.

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

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	501	-
2000	555	-
2001	-	544
2002	-	573
2003	-	578
2004	-	615
2005	-	643
2006	-	650
2007	-	641
2008	-	659
2009	-	680
2010	669	-

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, Quinhagak: 2000-2010 (U.S. Census).

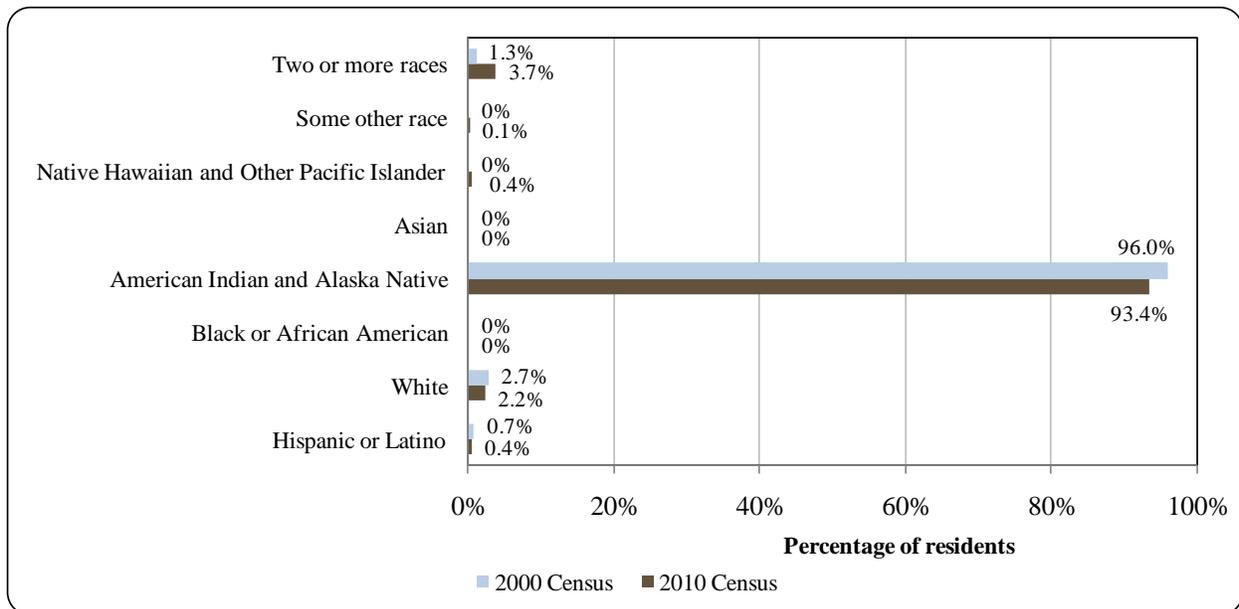
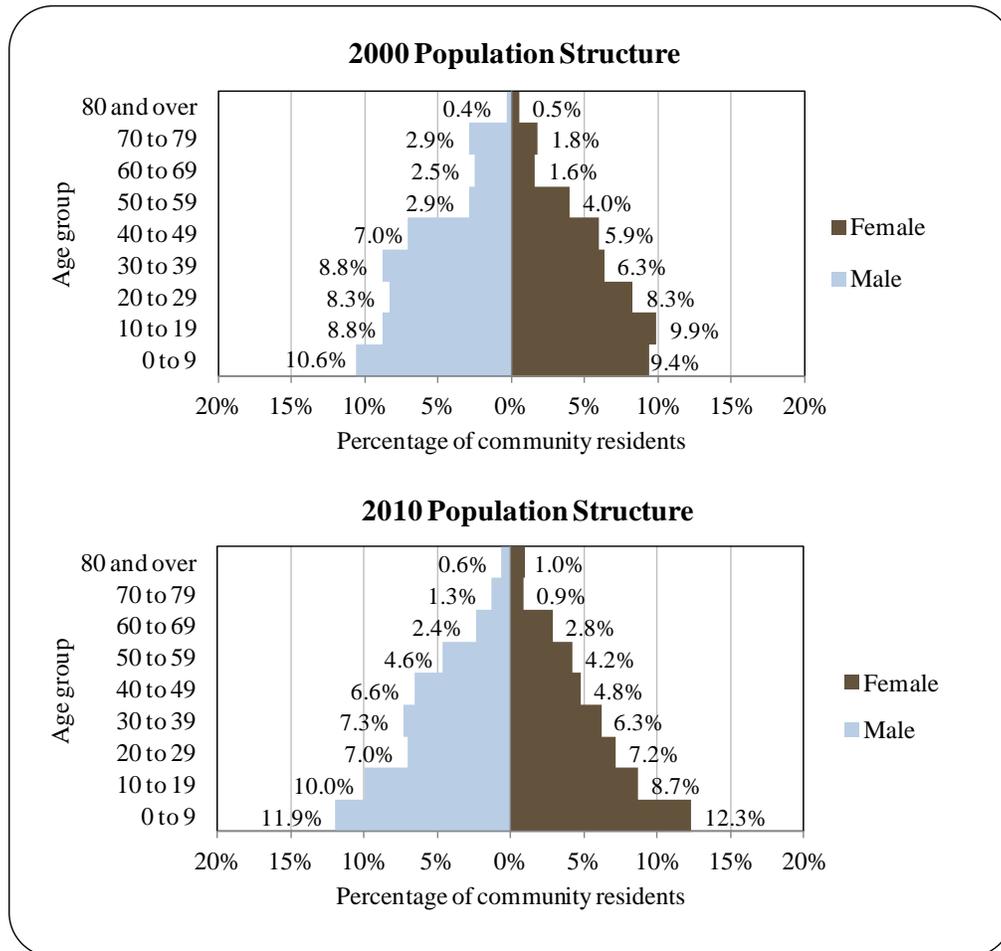


Figure 2. Population Age Structure in Quinhagak Based on the 2000 and 2010 U.S. Decennial Census.



In 2010, the gender makeup was fairly even, at 52% male and 48% female, identical to the gender makeup of the state as a whole. The median age in Quinhagak was 24.0 years, lower 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 0-29 years old, with the percentages decreasing steadily with age. Relatively few people were 60 or older. The overall population structure of Quinhagak in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),³ an estimated 54.3% of residents aged 25 or older held a high school diploma or higher degree, compared with 90.7% of Alaska residents overall. Also in 2010, an estimated 17.9% of the population had a less than ninth grade education, compared to 3.5% of Alaska residents overall; an estimated 27.7% had a 9th to 12th grade education but no diploma, compared

³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

to 5.8% of Alaska residents overall; an estimated 40.3% had a high school diploma or equivalent, compared to 27.4% of Alaska residents overall; an estimated 11.2% had some college but no degree, compared with 27.8% of Alaska residents overall; an estimated 0.8% held an Associate's degree, compared with 8% of Alaska residents overall; an estimated 0.8% held a Bachelor's degree, compared to 17.4% of Alaska residents overall; and an estimated 1.1% had a graduate or professional degree, compared to 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*⁴

The Yup'ik name for Quinhagak is Kuinerraq, meaning “new river channel.” Quinhagak is a long-established village whose origin has been dated to 1000 AD. It was the first village on the lower Kuskokwim to have sustained contact with Europeans. Gavril Sarichev reported the village on a map in 1826. After the purchase of Alaska in 1867, the Alaska Commercial Company sent annual supply ships to Quinhagak with goods for Kuskokwim River trading posts. Supplies were brought to shore from the ship and stored in a building on Warehouse Creek. A Moravian mission was built in 1893. There were many non-Natives in the village at that time; most were waiting for boats to go upriver. In 1904, a mission store opened, followed by a post office in 1905 and a school in 1909. Between 1906 and 1909, over 2,000 reindeer were brought in to the Quinhagak area. They were managed for a time by the Native-owned Kuskokwim Reindeer Company, but the herd had scattered by the 1950s. In 1915, the Kuskokwim River was charted, so goods were barged directly upriver to Bethel. In 1928, the first electric plant opened; the first mail plane arrived in 1934. The City was incorporated in 1975.

The community is primarily Yup'ik Eskimos who fish commercially and are active in subsistence food gathering. The sale, importation, and possession of alcohol are banned in the village.

Natural Resources and Environment⁵

Quinhagak is located in a marine climate. Precipitation averages 22 inches a year, with 43 inches of snowfall. Summer temperatures average 41 to 57 °F (5 to 14 °C), and winter temperatures average 6 to 24 °F (-14.4 to -4.4 °C). Extreme temperatures have been measured from -34 °F to 82 °F (-37 to 27.8 °C).

Quinhagak is located near the Togiak National Wildlife Refuge (Refuge), an area that is managed by the U.S. Fish and Wildlife Service (FWS). The following information is from the FWS.⁶ The Refuge totals 4.7 million acres - an area about the size of the states of Connecticut and Rhode Island combined. Almost half of these lands, the northern 2.3 million acres, are designated as the Togiak Wilderness Area. This constitutes the second largest contiguous Wilderness Area within the National Wildlife Refuge System. The Refuge was established to conserve fish and wildlife populations and habitats in their natural diversity including salmon, marine birds and mammals, migratory birds, and large mammals, to fulfill international treaty obligations; to provide for continued subsistence use; and to ensure necessary water quality and

⁴ 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.

⁵ Ibid.

⁶ U.S. Fish and Wildlife Service. 2011. *Togiak National Wildlife Refuge*. Retrieved from <http://togiak.fws.gov/> on April 9, 2012.

quantity. Special values of the Refuge include the Togiak Wilderness Area, the Kanektok, Goodnews and Togiak river drainages, and sportfishing. The wild lands of the refuge, including the Togiak Wilderness Area, provide valuable and diverse habitat for the fish and wildlife that make the area their home. The conservation of freshwater streams and rivers, wetland and alpine tundra, boreal forests, and coastal cliffs and beaches allow an amazing diversity of species to find suitable homes here. The lands also offer amazing opportunities for recreation and education.⁷

The Refuge protects habitat that produces nearly 3 million Chinook, sockeye, chum, pink and coho salmon, and 27 other fish species. These fish species are the primary subsistence resource for residents of seven local villages. Fishery resources in this area of Alaska are economically important for commercial fisheries valued at over 8 million dollars, as well as a 6 million dollar sport fishery. Ensuring that adequate numbers of each fish species are allowed to spawn in each drainage is key to this region's aquatic and terrestrial ecosystems. The Refuge also contains prime habitat for several other fish species, including rainbow trout, Arctic grayling, Dolly Varden, and Arctic char. Anglers come from around the world for an opportunity to pursue these prized fish species.

The Refuge is working to further our understanding of these fish species. The Refuge conserves habitat for at least 201 staging, migrating, or breeding bird species. Bird species groups include landbirds, shorebirds, seabirds, raptors, and waterfowl. Birds from the North American Pacific Flyway and several Asiatic routes funnel through the area. It is home to more than 30 species of terrestrial mammals. With a wide variety of habitats, the Refuge supports brown bear, moose, caribou, wolves, and many smaller mammals. The Nushagak Peninsula, in the southeastern portion of the Refuge, was the site of a 1988 caribou reintroduction, and the caribou population continues to grow. Moose populations on the refuge have increased substantially in recent years as well, much to the delight of local people. Lynx and wolverines continue their elusive ways, seldom seen except for tracks they leave in the snow. In addition, 17 species of marine mammals are found along the coastline. The Refuge has haulout sites that provide animals a place to rest after feeding forays in the Bering Sea. Cape Peirce, on the southwestern tip of the Refuge, is one of only two regularly used land-based haulouts for Pacific walrus in North America. Up to 12,000 male walrus may haul out here at one time. Endangered Steller sea lions use haulouts within the Refuge, as do harbor and spotted seals. Marine and terrestrial mammals are important food resources for local village residents, and are important in the local tourism economy as well.⁸

Current Economy⁹

Most of the employment in Quinhagak is with the school, government services, or commercial fishing. Trapping, basket weaving, skin sewing, and ivory carving also provide income. Subsistence remains an important part of residents' livelihoods; seal and salmon are staples of the diet. Coastal Villages Seafood LLC processes halibut and salmon in Quinhagak.¹⁰

⁷ U.S. Fish and Wildlife Service. 2011. *Togiak National Wildlife Refuge: Wildlands*. Retrieved from <http://togiak.fws.gov/wildland.htm> on April 9, 2012.

⁸ U.S. Fish and Wildlife Service. 2011. *Togiak National Wildlife Refuge: Wildlife*. Retrieved from <http://togiak.fws.gov/wildlife.htm> on April 9, 2012.

⁹ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁰ See footnote 4.

According to the 2006-2010 ACS,¹¹ the per capita income in Quinhagak in 2010 was estimated at \$10,422, and the median household income in 2010 was estimated at \$30,833, compared to \$8,127 and \$25,156 in 2000, respectively. After accounting for inflation by converting the 2000 values to 2010 dollars,¹² the real per capita income (\$10,687) and the real median household income in 2000 (\$33,080) indicate that per capita income stayed relatively stable between 2000 and 2010, while median household income decreased during that same period. However, Quinhagak's small population size may have prevented the ACS from accurately portraying economic conditions.¹³ 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 (DOLWD). According to the ALARI database, the per capita income in Quinhagak in 2010 was \$6,863, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.¹⁴ This is supported by the fact that the community was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹⁵ However, it should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

In 2010, Quinhagak ranked 266th out of 305 Alaskan communities with per capita income that year, and 241st out of 299 Alaskan communities with household income data. Based on the ACS, in that same year, 58.9% of the civilian population aged 16 and over was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 25.8%, compared to the statewide unemployment rate of 5.9%. Approximately 38.9% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Quinhagak 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 Quinhagak. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 30.7%.

Based on household surveys conducted for the 2006-2010 ACS, the greatest percentage of workers was employed in the public sector (56.4%), while 43.6% were employed in the private sector in 2010. Out of 181 people aged 16 and over that were employed in the civilian labor force in 2010, the greatest percentage worked in public administration (27.8%), education services, health care, and social assistance (22.2%), retail trade (14.1%), transportation, warehousing, and utilities (11.6%), and construction (11.6%). Only 6.6% of the labor force worked in arts, entertainment, recreation, accommodations, and food services, 2.5% worked in

¹¹ See footnote 3.

¹² 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>).

¹³ 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.

¹⁴ 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/>.

¹⁵ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

other services, except public administration, 2.0% worked in manufacturing, and 1.5% worked in agriculture, forestry, fishing, hunting, and mining. However, given the data reported in the *Commercial Fishing* section below, 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, Quinhagak (U.S. Census).

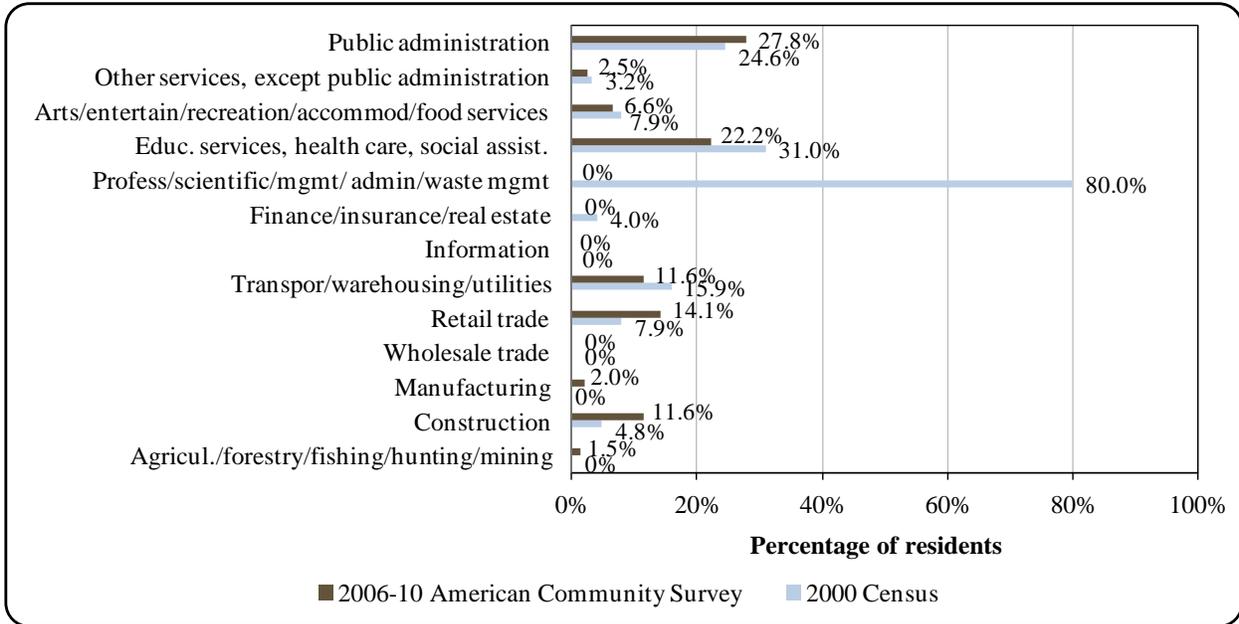
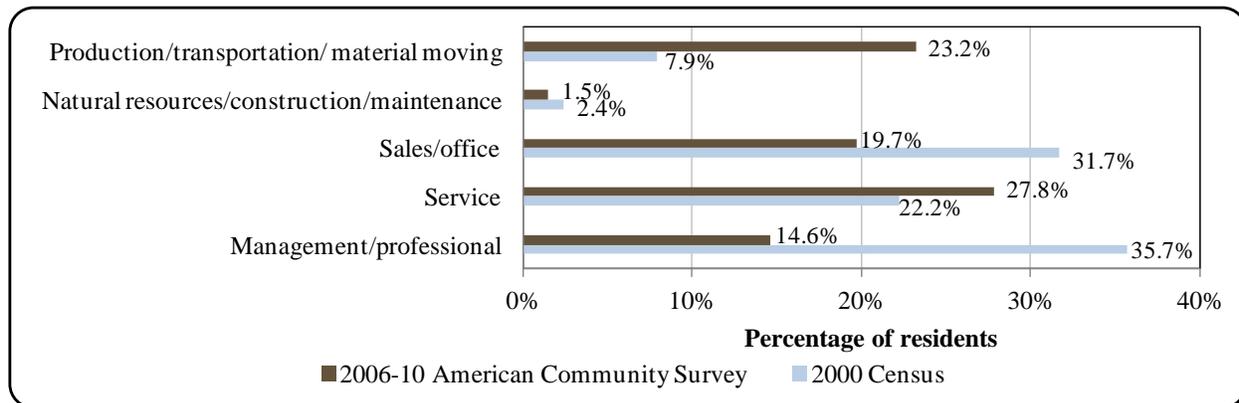


Figure 4. Local Employment by Occupation in 2000-2010, Quinhagak (U.S. Census).



Governance

Quinhagak is a Second-class city, governed by a mayor and city council, and is not located within an organized Borough. Quinhagak 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 Kwinhagak. The Native village corporation is Qanirtuuq, Incorporated, which manages 115,200 acres of land received under ANCSA. Quinhagak is also a member of the Calista Corporation, the regional Native corporation.¹⁶

The City of Quinhagak administered a 3% sales tax in 2010.¹⁷ When adjusted for inflation,¹⁸ total municipal revenues declined by 48.3% between 2000 and 2010 from \$5.45 million, to \$3.64 million. However, local revenues were heavily influenced by outside revenue sources between those years, which contributed to yearly variability. In contrast, inflation adjusted general fund revenues remained relatively constant. In 2010 general fund revenues were collected predominately from state revenue sharing sources, sales tax revenues, and other sources. However, general fund revenues accounted for only 22.3% of total municipal revenues that year. Most (33.1%) municipal revenues came from Federal Housing and Urban Development grants. Other sources included BIA, Indian Health Services, and Indian Community Development Block Grant renovation funds.¹⁹

Sales tax revenues accounted for 15.0% of total general fund revenues in 2010, compared to 8.6% in 2000. Also in that year, state allocated Community Revenue Sharing accounted for 16.0% of general fund revenues, compared to 4.1% from State Revenue Sharing in 2000.

In 2000, Quinhagak received \$200,000 in fisheries-related grants for work on the salmon processing plant. In 2002, Quinhagak received a \$50,000 grant for harbor feasibility and design and a \$750,000 grant for harbor pre-construction.

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

¹⁶ 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.

¹⁷ 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

¹⁸ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

¹⁹ 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.

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

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$5,445,975	\$57,828	\$27,430	\$200,000
2001	\$5,319,962	\$66,712	\$26,417	n/a
2002	\$7,254,061	\$70,150	\$26,415	\$800,000
2003	\$7,894,321	\$81,826	\$26,805	n/a
2004	\$5,189,834	\$77,506	-	n/a
2005	\$5,347,418	\$84,913	-	n/a
2006	\$3,380,866	\$79,618	-	n/a
2007	\$2,261,699	\$88,290	-	n/a
2008	\$2,783,727	\$103,683	-	n/a
2009	\$2,511,300	\$117,206	\$129,720	n/a
2010	\$3,642,115	\$121,380	\$130,103	n/a

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

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved at http://www.commerce.state.ak.us/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.

Infrastructure

*Connectivity and Transportation*²⁰

Quinhagak relies on air transportation for passenger mail and cargo service. A state-owned 4,000 foot long by 75 foot wide gravel airstrip is available. Float planes land on the Kanektok River. A harbor and dock serves barge deliveries of heavy goods at least twice per year. Boats, all-terrain vehicles, snowmobiles, and some vehicles are used for local transportation. Quinhagak is not connected to the state of Alaska road system. Winter trails are marked to Eek (39 miles) and Goodnews (39 miles). In June 2012, roundtrip airfare to Anchorage was approximately \$680.²¹

*Facilities*²²

All services are provided by the Native Village of Kwinhagak, under an agreement with the City. Services include water, sewage collection, and operation of the Class 3 landfill. Water

²⁰ See footnote 16.

²¹ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

²² See footnote 16.

is derived from a well near the Kenektok River. Forty homes are served by a flush/haul system. An old Bureau of Indian Affairs (BIA) building has been renovated as a new washeteria and health clinic. The school and washeteria are connected directly to the water plant. Eighty-nine households still haul water and use honeybuckets, a 5-gallon form of an outhouse. The Village also operates a community center, and the school has a portable pool and a library. A City Village Police Officer and two Village Public Safety Officers provide law enforcement services locally, along with state troopers stationed in Bethel.

*Medical Services*²³

The Quinhagak (Kwinhagak) Clinic provides medical care and is operated by the Native Village of Kwinhagak and owned by the Village Council. The facility is a Community Health Aid Program site. Alternate health care is available through the Quinhagak Emergency Medical Services (EMS) Quick Response Team. Emergency services have coastal air and floatplane access. Emergency service is provided by a health aide. The nearest hospital is located in Bethel.

*Educational Opportunities*²⁴

There is one school in Quinhagak that provides instruction for students from pre-school through 12th grade. In 2011, Kuinerrarmiut Elitnaurviat had 13 teachers and 225 students.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest has been important to residents of the Kuskokwim Bay area for thousands of years.²⁵ In addition to salmon, spring harvest of herring roe on kelp or hemlock boughs was an important subsistence resource for coastal people in this region.²⁶ Today, subsistence remains an important part of residents' livelihoods. Salmon and seal are both staples of the local diet.²⁷ In addition, between 2000 and 2010, Quinhagak residents participated in commercial fisheries for salmon, halibut, and herring.

Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. At the time of statehood, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest

²³ Ibid.

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

²⁵ Alaska Native Heritage Center. (n.d) *Yup'ik & Cup'ik - Who We Are*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

²⁶ 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>.

²⁷ See footnote 16.

levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management by ADF&G is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.²⁸ Quinhagak is located in District 4 of the Kuskokwim salmon fishery (the Quinhagak fishing district, a marine fishing district that encompasses five miles of shoreline adjacent to the village of Quinhagak).

Commercial exploitation of halibut first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed fishing vessels to undertake longer trips.²⁹ Today, Pacific halibut fisheries are managed under the International Pacific Halibut Commission. Quinhagak is located in Pacific Halibut Fishery Regulatory Area 4E.

Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island, and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.³⁰

The community is also located in Federal Statistical and Reporting Area 514 and the Bering Sea Sablefish Regulatory Area. Quinhagak is a member of the Coastal Villages Region Fund (CVRF), the Community Development Quota (CDQ) group for Kuskokwim Delta and Bering Sea communities from Cape Newenham to Scammon Bay. CVRF promotes employment opportunities for residents, as well as participation in the Bering Sea crab and groundfish fisheries.³¹ Quinhagak is not eligible to participate in the Community Quota Entity program. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that Quinhagak received \$20,000 in funding or grants and \$10,000 in special allocations from CVRF in 2010.

Processing Plants

According to the ADF&G's 2010 Intent to Operate list, Coastal Villages Seafoods (CVS), a subsidiary of the CVRF, one seafood processing plant was located in Quinhagak. However, CVS ceased operation of the plant in 2010 due to various reasons, including the strain the facility placed on local water supply and the short window of time available to make deliveries each day due to fast-changing tides. The closure of the Quinhagak plant coincided with the opening of a new processing facility in Platinum, located approximately 50 miles to the south.³²

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

²⁹ 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://www.iphc.int/publications/scirep/Report0005.pdf>.

³⁰ See footnote 26.

³¹ Coastal Villages Region Fund. (n.d.). *Homepage*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

³² Coastal Villages Region Fund. 2010. "Fishing Season 2010." *The Sound of Fishermen Newsletter*, Volume 12, Issue 2. Retrieved July 17, 2012 from <http://www.coastalvillages.org/sites/www.coastalvillages.org/files/documents/Spring%202010.pdf>.

This new facility in Platinum, known as the “Goodnews Bay Regional Processing Plant,” currently processes salmon between June and August.³³ CVS also has processing facilities in Toksook Bay, Mekoryuk, Tununak, Chefornek, Kipnuk, and Hooper Bay. Many of these facilities process halibut in June and July.^{34,35} In 2010, herring processing was planned at the Platinum facility, but the herring fishery planned for CVSs’ districts was canceled that year and is not expected to resume in the near future.^{36,37}

Fisheries-Related Revenue

In 2010, Quinhagak received \$39,807 from fisheries-related taxes and fees (Table 3).³⁸ These revenue sources include the Shared Fisheries Business Tax and a marine fuel sales tax. Revenue from fisheries-related taxes and fees varied between 2000 and 2010, increasing from \$807 in 2000 to \$39,807 in 2010. 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 harbor maintenance, hospital/medical clinic/emergency response, educational scholarships, roads, and police/enforcement/fire protection are all at least partially funded by fisheries-related revenue sources.

Commercial Fishing

In 2010, 94 Quinhagak residents held 109 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). Salmon permits made up 82% of the CFEC permits issued in 2010, compared with 62% in 2000. Residents of Quinhagak also held CFEC permits for halibut and herring in 2010, though none of the herring permits were fished in that year. There were no Quinhagak residents holding Federal Fisheries Permits between 2000 and 2010. Overall, 72% of the commercial fishing permits issued to Quinhagak residents were actively fished, including 85% of the salmon permits recorded as fished and 25% of the halibut permits fished. In 2010, salmon CFEC permits were issued for the Bristol Bay drift gill net and set gill net fisheries and the Kuskokwim gill net fishery. Halibut CFEC permits were issued in 2010 for the statewide hand troll and mechanical jig fisheries. Twelve residents held herring CFEC permits in 2010, though none of those permits were recorded as fished. All herring CFEC permits issued in 2010 were for the Goodnews Bay roe herring gill net fishery. Information on permits and permit holders by species is presented in Table 4.

Also in 2010, 15 vessels landed catch in Quinhagak and there were 46 registered crew license holders. In 2009, eight vessels landed catch in Quinhagak and there were 60 registered

³³ Coastal Villages Region Fund. 2011. *2011 Benefits Catalog: Coastal Villages Region Fund*. Retrieved April 11, 2012 from http://www.coastalvillages.org/sites/www.coastalvillages.org/files/documents/benefits_catalog_2011.pdf.

³⁴ Alaska Seafood Marketing Institute. 2005. *Supplier Information: Coastal Villages Seafoods, LLC*. Retrieved April 11, 2012 from <http://alaskaseafood.org/>.

³⁵ Coastal Villages Region Fund. 2010. *Halibut Commercial Fishing*. Retrieved April 11, 2012 from <http://coastalvillages.org/commercial-fishing/halibut>.

³⁶ Coastal Villages Region Fund. (n.d.). *Herring Fishery Cancelled*. Retrieved April 11, 2012 from <http://coastalvillages.org/current-issues/herring-fishery-cancelled>.

³⁷ Personal communication, Nick Souza, Coastal Villages Seafoods, April 16, 2012.

³⁸ 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.

crew license holders. Between 2000 and 2008, there were no vessels recorded as landing catch in Quinhagak. During that same period, the number of crew license holders varied from 38 to 56. Information on characteristics of the commercial fishing sector in Quinhagak is presented in Table 5. There were no Quinhagak residents holding Individual Fishing Quota (IFQ) account shares between 2000 and 2010 for halibut (Table 6) or sablefish (Table 7) and no Quinhagak residents holding IFQ account shares for crab between 2005 and 2010 (Table 8).

Between 2000 and 2008, no landings were recorded in Quinhagak. In 2009 and 2010, data regarding total pounds landed and ex-vessel value of 2010 landings were considered confidential due to the small number of participants (Table 9). In 2010, Quinhagak ranked 35th in total landings out of 67 communities that received landings in that year and 37th overall for the total ex-vessel revenue earned in the community. Landings recorded by Quinhagak residents were considered confidential between 2000 and 2010 due to a small number of participants, with the exception of halibut landings between 2000-2004 and 2006-2009, herring landings in 2000, and salmon landings in 2000-2001 and 2003-2010. Landings and ex-vessel revenue for these species varied considerably during the years for which data were available. Information on landings and ex-vessel revenue reported by Quinhagak residents is presented in Table 10.

In a survey conducted by the AFSC in 2011, community leaders reported that Quinhagak is home to a lot more commercial fishing boats compared to five years prior.

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a										
Shared fisheries business tax ¹	\$807	\$622	\$3,711	\$5,671	\$3,985	\$7,789	\$18,165	\$14,389	\$16,611	\$15,570	\$34,807
Fisheries resource landing tax ¹	n/a										
Fuel transfer tax ²	n/a										
Extraterritorial fish tax ²	n/a										
Bulk fuel transfers ¹	n/a										
Boat hauls ²	n/a										
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	\$7,000	\$1,600	\$1,600	n/a	n/a
Port/dock usage ²	n/a										
Fishing gear storage on public land ³	n/a										
Marine fuel sales tax ³	n/a	\$5,000									
Total fisheries-related revenue⁴	\$807	\$622	\$3,711	\$5,671	\$3,985	\$7,789	\$25,165	\$15,989	\$18,211	\$15,570	\$39,807
Total municipal revenue⁵	\$5.45 M	\$5.32 M	\$7.25 M	\$7.89 M	\$5.19 M	\$5.35 M	\$3.38 M	\$2.26 M	\$2.78 M	\$2.51 M	\$3.64 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.

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Table 4. Permits and Permit Holders by Species, Quinhagak: 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	44	37	21	17	15	10	11	12	11	10	8
	Fished permits	18	11	4	4	4	3	5	6	10	6	2
	% of permits fished	41%	30%	19%	24%	27%	30%	45%	50%	91%	60%	25%
	Total permit holders	38	32	18	15	13	9	11	12	11	10	8
Herring (CFEC) ²	Total permits	9	14	14	14	14	14	14	14	14	13	12
	Fished permits	4	2	0	0	1	1	0	0	0	0	0
	% of permits fished	44%	14%	-	-	7%	7%	-	-	-	-	-
	Total permit holders	9	14	14	14	15	14	14	14	14	13	12

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	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	86	87	88	88	91	91	91	88	92	92	89
	Fished permits	70	62	67	66	70	74	71	63	72	77	76
	% of permits fished	81%	71%	76%	75%	77%	81%	78%	72%	78%	84%	85%
	Total permit holders	89	91	98	93	97	93	95	91	97	96	91
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>139</i>	<i>138</i>	<i>123</i>	<i>119</i>	<i>120</i>	<i>115</i>	<i>116</i>	<i>114</i>	<i>117</i>	<i>115</i>	<i>109</i>
	<i>Fished permits</i>	<i>92</i>	<i>75</i>	<i>71</i>	<i>70</i>	<i>75</i>	<i>78</i>	<i>76</i>	<i>69</i>	<i>82</i>	<i>83</i>	<i>78</i>
	<i>% of permits fished</i>	<i>66%</i>	<i>54%</i>	<i>58%</i>	<i>59%</i>	<i>63%</i>	<i>68%</i>	<i>66%</i>	<i>61%</i>	<i>70%</i>	<i>72%</i>	<i>72%</i>
	<i>Permit holders</i>	<i>103</i>	<i>100</i>	<i>102</i>	<i>100</i>	<i>103</i>	<i>97</i>	<i>99</i>	<i>96</i>	<i>101</i>	<i>100</i>	<i>94</i>

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

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

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

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

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Quinhagak ²	Total Net Pounds Landed In Quinhagak ^{2,5}	Total Ex-Vessel Value Of Landings In Quinhagak ^{2,5}
2000	55	0	1	57	82	0	0	\$0
2001	39	0	1	55	85	0	0	\$0
2002	38	0	1	48	78	0	0	\$0
2003	49	0	1	43	70	0	0	\$0
2004	40	0	1	43	73	0	0	\$0
2005	54	0	1	32	31	0	0	\$0
2006	53	0	1	27	26	0	0	\$0
2007	56	0	1	34	34	0	0	\$0
2008	51	0	1	40	39	0	0	\$0
2009	60	1	2	36	33	8	--	--
2010	46	1	1	33	32	15	--	--

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 Total only represent non-confidential data.

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

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

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

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

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

² Totals only represent non-confidential data.

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

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	7,409	2,946	1,504	636	587	--	954	2,200	5,175	908	--
Herring	6,084	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	115,918	119,608	--	50,238	224,611	187,603	248,516	228,965	225,552	173,759	54,827
<i>Total²</i>	<i>129,411</i>	<i>122,554</i>	<i>1,504</i>	<i>50,874</i>	<i>225,198</i>	<i>187,603</i>	<i>249,470</i>	<i>231,165</i>	<i>230,727</i>	<i>174,667</i>	<i>54,827</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$9,264	\$3,709	\$1,530	\$796	\$734	--	\$3,362	\$9,384	\$16,026	\$2,378	--
Herring	\$516	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$53,465	\$42,146	--	\$23,100	\$88,001	\$89,553	\$114,184	\$111,089	\$122,363	\$109,916	\$48,473
<i>Total²</i>	<i>\$63,244</i>	<i>\$45,855</i>	<i>\$1,530</i>	<i>\$23,895</i>	<i>\$88,735</i>	<i>\$89,553</i>	<i>\$117,546</i>	<i>\$120,473</i>	<i>\$138,389</i>	<i>\$112,295</i>	<i>\$48,473</i>

Note: Not Reported indicates that no data were reported for that year. 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

Based on estimates reported in the ADF&G Statewide Harvest Survey, Chinook salmon, coho salmon, sockeye salmon, and Dolly Varden are caught by private anglers in Quinhagak.³⁹ In addition, according to 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 Quinhagak: chum salmon, Chinook/king salmon, coho/silver salmon, sockeye/red salmon, and halibut.

A total of 20 sportfishing licenses were sold to residents of Quinhagak (irrespective of the location of the point of sale) in 2010. In comparison, a total of 16 sportfishing licenses were sold in Quinhagak. No sportfishing licenses were sold locally between 2000 and 2004. Sportfishing licenses sales remained relatively high until 2010, when sales declined significantly. The number of sportfishing licenses sold to residents remained relative stable between 2000 and 2010, with the exception of 2005, when sales peaked at 48. No locally registered sport fish guide businesses were active between 2000 and 2010.

Quinhagak is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between zero and 28 non-Alaska resident angler days fished per year, and between zero and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the sportfishing sector in and near Quinhagak is displayed in Table 11.

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

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Quinhagak²
2000	0	7	21	0
2001	0	9	14	0
2002	0	12	18	0
2003	0	12	25	0
2004	0	5	28	0
2005	0	5	48	70
2006	0	9	27	58
2007	0	7	17	72
2008	0	11	23	61
2009	0	17	22	71
2010	0	10	20	16

³⁹ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey Results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

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

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

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 remains an important part of residents' livelihoods. Seal and salmon are staples of the diet.⁴⁰ While data were not available for 2000-2010 in terms of the percentage of households utilizing various marine resources for subsistence purposes or per capita subsistence harvest (Table 12), other data clearly indicate a reliance of Quinhagak residents on subsistence resources (Tables 13 and 14). There is considerable annual harvest of salmon by Quinhagak households holding subsistence salmon permits (Table 13).

In 2008, the last year for which data are available regarding subsistence salmon permits, the total subsistence harvest of salmon appeared to increase from previous years even though the number of subsistence salmon permits returned in that year was less than the number of permits returned in previous years. The most important salmon species recorded by permit holders included Chinook, sockeye, and coho salmon, in order of importance. Halibut harvests were extremely variable between 2003 and 2010. Years when reported harvests were significant included 2003 (an estimated 1,164 pounds on 12 SHARC), and 2005 (an estimated 2,907 pounds on 10 SHARC). All other years were significantly lower, and no harvests were reported in 2009 or 2010. Permit ownership and activity also significantly declined between 2003 and 2010.

⁴⁰ See footnote 1.

Finally, an estimated 7 walrus and 4 beluga whales were harvested between 2000 and 2010 (Table 15).

According to a survey conducted by the AFSC in 2011, community leaders reported that fur seals, salmon, and beluga whales are the three most important subsistence marine or aquatic resources for residents of Quinhagak. Although no data were reported during the 2000-2010 period, a survey conducted by the ADF&G Division of Subsistence in the early 1980s provides some information about species harvested for subsistence purposes by Quinhagak residents. In 1982, Quinhagak households reported harvesting several species of marine mammal (bearded seal, ringed seal, spotted seal, and Steller sea lion. Species of non-salmon fish (not including halibut) that were harvested for subsistence purposes by Quinhagak households in 1982 included blackfish, cisco, cod, Dolly Varden, and smelt.⁴¹ According to the ADF&G *Community Subsistence Information System*,⁴² “other” (non-salmon, non-halibut) species which Quinhagak residents harvest or acquire through other means include bearded seal, ringed seal, spotted seal, Steller sea lion, blackfish, cisco, cod, Dolly Varden, and smelt.

⁴¹ 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).

⁴² Ibid.

Table 12. Subsistence Participation by Household and Species, Quinagak: 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, Quinagak: 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	130	107	3,106	912	1,088	n/a	1,341	n/a	n/a
2001	131	101	2,923	747	1,525	n/a	914	n/a	n/a
2002	139	101	2,475	1,839	1,099	n/a	855	n/a	n/a
2003	143	104	3,898	1,129	2,047	n/a	1,622	n/a	n/a
2004	147	96	3,726	1,112	1,209	n/a	1,086	n/a	n/a
2005	144	102	3,083	915	1,443	32	1,633	n/a	n/a
2006	152	81	3,521	1,865	1,019	109	2,177	n/a	n/a
2007	152	81	3,521	1,865	1,019	109	2,177	n/a	n/a
2008	177	44	4,204	1,579	2,320	n/a	2,649	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, Quinhagak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	15	12	1,164
2004	14	8	936
2005	16	10	2,907
2006	14	8	791
2007	14	3	158
2008	7	3	44
2009	6	4	n/a
2010	5	2	n/a

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

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

Table 15. Subsistence Harvests of Marine Mammal Resources, Quinhagak: 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	5	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	2	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	1	n/a	n/a	n/a	n/a
2009	n/a	n/a	1	n/a	n/a	n/a	n/a
2010	2	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.