Tuntutuliak (tun-too-TOO-lee-ack)

People and Place

Location¹



Tuntutuliak is on the Qinaq River, approximately three miles from its confluence with the Kuskokwim River and about 40 miles from the Bering Sea coast. It lies 40 miles southwest of Bethel and 440 miles west of Anchorage. Tuntutuliak is located in the Bethel Recording District, the Bethel Census Area, and is not located within an organized Borough.

Demographic Profile²

In 2010, there were 408 inhabitants in Tuntutuliak, making it the 136th largest of 352 total Alaskan communities with recorded populations that year. Between 2000 and 2009, the population of Tuntutuliak grew by 3.78% with an average annual growth rate of 0.32%, indicating a slow rate of growth during the period. The change in population from 1990 to 2010 is provided in Table 1.

Almost all Tuntutuliak residents identified themselves as American Indian and Alaska Native (95.8%). Other ethnic groups present in Tuntutuliak in that year included White (2.9%) and two or more races (1.2%). The percentages of the population identifying themselves as American Indian and Alaska Native and Hispanic or Latino decreased between 2000 and 2010, with corresponding increases in the percentages of the population identifying themselves as White and as two or more races. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Tuntutuliak increased from 4.2 persons per household in 1990 to 4.4 in 2000, then decreased to 4.25 in 2010. The total number of households increased from 70 in 1990 to 84 in 2000 to 96 occupied housing units in 2010. Of the 106 housing units surveyed for the 2010 Decennial Census, 59 were owner-occupied, 37 were renter-occupied, and 10 units were vacant or used only seasonally. Throughout this period no residents of Tuntutuliak were reported to be living in group quarters.

In 2010, the gender makeup in Tuntutuliak was 52.9% male and 47.1% female, similar to the state as a whole (52% male, 48% female). The median age was estimated to be 21.4 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. The greatest percentage of the population fell within the age category 0 to 19 years in 2010, with the next largest percentage of the population in the age group 20 to 39 years. Relatively few individuals were age 60 or older in both 2000 and 2010. The overall population structure of Tuntutuliak in 200 and 2010 is shown in Figure 2.

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.

Year	U.S. Decennial	Alaska Dept. of Labor Estimate
	Census ¹	of Permanent Residents ²
1990	300	-
2000	370	-
2001	-	376
2002	-	378
2003	-	380
2004	-	400
2005	-	399
2006	-	407
2007	-	420
2008	-	416
2009	-	384
2010	408	-

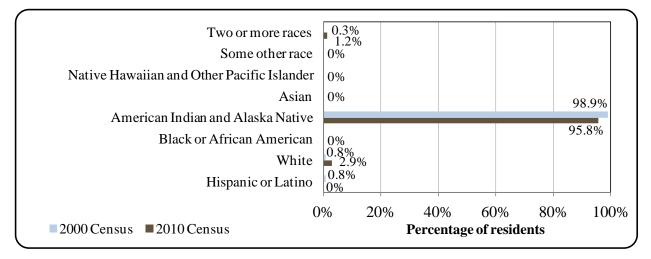
Table 1. Population in Tunt	tuliak from 1990 to 2010 by Source.
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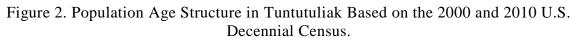
¹(1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from http://www.census.gov/prod/www/abs/decennial/1990.html. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places 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

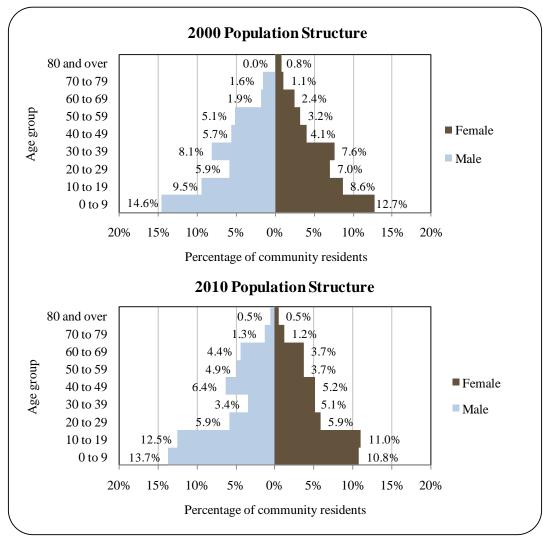
http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml.

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







According to the 2006-10 American Community Survey,³ in terms of educational attainment, 56.2% of Tuntutuliak 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, 32% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaska residents overall; 11.8% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 37.3% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaska residents overall; and 19% were estimated to have some college but no degree, compared to

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.

28.3% of Alaska residents overall. No residents of Tuntutuliak were estimated to have an Associate's degree, Bachelor's degree, or graduate or professional degree in 2010.

History, Traditional Knowledge, and Culture⁴

The village's Yup'ik name is Tuntutuliaq, meaning "place of many reindeer." It was originally located four miles to the east and called Qinaq, as noted in 1879 by Edward Nelson, who noted 175 residents at that time. In 1908, a Moravian missionary visited the village and reported 130 people living there. In 1909, a Bureau of Indian Affairs school was built, and the first teacher was well-liked in the community. Due to lack of confidence in the subsequent teachers, the school was closed in 1917, and was moved to the village of Eek. It is thought that some Qinaq villagers may have moved to Eek so their children could attend school. In 1923, the first Moravian chapel was built with lumber and other support from Eek. In the late 1920s, a trading post and store was opened by John Johnson. The community moved to its present site on higher ground and was renamed Tuntutuliak in 1945. The Bureau of Indian Affairs built a new school in the community in 1957. A post office opened in 1960.

Tuntutuliak is a traditional Yup'ik Eskimo village with a fishing and subsistence lifestyle. Salmon and seal are important food sources. Children are taught in Yup'ik until the third grade and then classes are taught in English. The sale, importation, and possession of alcohol is banned in the village.

Natural Resources and Environment⁵

Tuntutuliak's summer temperatures average from 42 to 62 °F (5.6 to 16.7 °C), and winter temperatures average -2 to 19 °F (-18.9 to -7.2 °C). Extremes have been recorded from 86 to -46 °F (30 to -43.3 °C). Annual precipitation averages 16 inches, with 50 inches of snow.

The lower Yukon-Kuskokwim River Delta (Y-K Delta), where Tuntutuliak is located, is an area of low elevation and shallow relief. The terrain is mostly made up of flat and low rolling plains crossed with low gradient streams, tributaries, sloughs, floodplains, wetlands, and shallow lakes. Most of the lower Y-K Delta was ice-free during the last major Ice Age. Sediments in the area are loamy or sandy textured fluvial and alluvial deposits. Soils are poorly drained and typically overlay a layer of permafrost.⁶

Tuntutuliak is located on Calista Corporation land encompassed by the Yukon Delta National Wildlife Refuge, which provides spawning, rearing, feeding, and wintering habitat for a range of terrestrial and aquatic wildlife.⁷ Terrestrial wildlife of economic and cultural importance include: waterfowl and gamebirds, moose, wolf, wolverine, bear, mink, beaver, muskrat, otter, fox, beaver, muskrat, muskox, hares, voles, ermines, squirrels, lemmings, shrews, and weasels.⁸ Aquatic resources include Chinook, chum, pink, sockeye, and coho salmon, whitefish, burbot,

 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 LKEDC. (2006). *Comprehensive Economic Development Strategy & Area Plan*. Retrieved February 1, 2012 from: http://www.commerce.state.ak.us/dca/plans/Bethel%20Region-SAP-2006.pdf.

⁷ U.S. Fish and Wildlife Service. (n.d.). *Yukon Delta National Wildlife Refuge*. Retrieved November 22, 2011 from: http://www.fws.gov/refuges/profiles/recEdMore.cfm?ID=74540.

⁸ Bethel Coastal District et al. (2006). *Bethel Coastal Management Plan*. Retrieved November 22, 2011 from: http://www.alaskacoast.state.ak.us/District_Pages/NW_Region/Bethel/.

northern pike, blackfish, smelt, lamprey, char, grayling, trout, sculpin, stickleback, and longnose sucker.⁹

Regional mineral resources include zinc, gold, silver, lead, antimony, tungsten, tin, copper, nickel, mercury, and platinum.¹⁰ Upriver from Tuntutuliak, Calista Corporation is undertaking several mineral and oil and gas projects near Red Devil. Downriver, Platinum and Goodnews Bay are sites of more mineral projects.¹¹

There are several natural hazards affecting the Yukon-Kuskokwim Delta region.¹² These hazards include flooding, river bank erosion and destabilization, brush fire, and soil destabilization due to permafrost melt. Spring flooding is a major factor contributing to natural hazards in the area. As melt-off and ice jamming occurs during spring break-up, flooding and erosion occur and climate change is thought to be a continuing factor in the seasonality and severity of flooding in the region. In addition, variation in the active permafrost layer caused by climate change and urban development further compound impacts from flood events.¹³

Current Economy¹⁴

The school, various services, commercial fishing, and fish processing provide most of the income. Trapping, basket weaving, skin-sewn products, and other Native handicrafts also provide cash. Subsistence foods comprise a majority of the diet, and about one-half of families go to a fish camp each summer.¹⁵ Top employers in 2010¹⁶ included Lower Kuskokwim School District, Qinarmiut Corp., Association of Village Council Presidents, AVCP Housing Authority, TTC/EPA, Yukon Kuskokwim Health Corp. 90, Tuntutuliak Traditional Council, Paul Andrews Trading Post, Tuntutuliak Community Services Association, and Pavila Store.

According to the 2006-10 American Community Survey (ACS),¹⁷ per capita income in Tuntutuliak was estimated to be \$10,349 and the median household income was estimated to be \$34,464, compared to \$7,918 and \$25,500 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹⁸ the real per capita income in 2000 is shown to have been \$10,412 and the real 2000 median household income was \$33,532. This shows that, while per capita income decreased slightly between 2000 and 2010, there was a slight increase in household income during this period. In 2010, Tuntutuliak ranked 270th of 305 Alaskan communities with per capita income that year, and 216th out of 299 Alaskan communities with household income data. Although Tuntutuliak's small population size may have prevented the American Community Survey from accurately portraying economic conditions, this decrease in per capita income in confirmed by economic data compiled by the Alaska Local and Regional

⁹ Ibid.

¹⁰ Alaska Dept. of Trans. and Pub. Facilities. (2002). *Yukon-Kuskokwim Delta Transportation Plan*. Retrieved November 22, 2011 from http://www.dot.state.ak.us/stwdplng/areaplans/pub/YKDelta_Plan_final.pdf

¹¹ Calista Corporation (n.d.). *Homepage*. Retrieved November 22, 2011 from: http://www.calistacorp.com.

¹² See footnote 8.

¹³ See footnote 6.

¹⁴ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁵ See footnote 4.

¹⁶ 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/.

¹⁷ See footnote 3.

¹⁸ 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).

Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, the per capita income in Tuntutuliak in 2010 was \$6,335, significantly less than the ACS estimates. 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. 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.

Based on the American Community Survey, in the same time frame, 49.8% 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 30.8%, compared to the statewide unemployment rate of 5.9%. Approximately 36.6% 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 Tuntutuliak 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 Tuntutuliak. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 26.7%.

Based on household surveys conducted for the 2006-2010 American Community Survey, the greatest percentage of workers was employed in the private sector (56.8%), while 43.2% were employed in the public sector. Out of 74 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in educational services, health care, and social assistance (38%), transportation, warehousing, and utilities (17%), and public administration (16%). Smaller percentages of the population were employed in finance, insurance, and real estate (5%), information (8%), retail trade (5%), construction (4%), and agriculture, forestry, fishing, hunting, and mining (5%). 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 in census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry and occupation are presented in Figures 3 and 4.

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

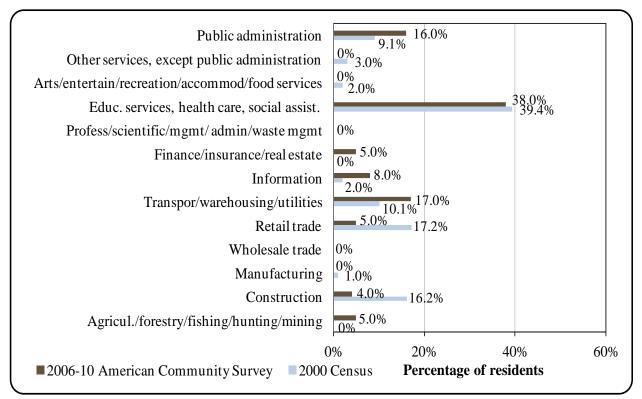
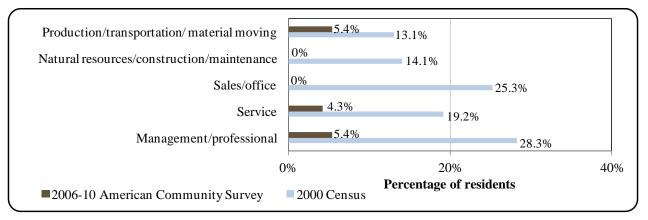


Figure 4. Local Employment by Occupation in 2000-2010, Tuntutuliak (U.S. Census).



Governance

Tuntutuliak is an unincorporated community that is not located within an organized Borough. Because of Tuntutuliak's unincorporated status, no municipal taxes were administered between 2000 and 2010. Tuntutuliak did receive State Revenue Sharing contributions in 2000, 2001, and 2003 ranging from approximately \$3,600 to approximately \$4,100. Tuntutuliak did not receive any fisheries-related grants between 2000 and 2010. Information about selected aspects of Tuntutuliak's community revenue is presented in Table 2.

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	\$4,170	n/a
2001	n/a	n/a	\$3,707	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	\$3,631	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

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

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. ²Alaska 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.

³Alaska 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.

⁵Alaska 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.

Tuntutuliak 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 Tuntutuliak Land, Limited. The regional Native corporation to which Tuntutuliak belongs is the Calista Corporation. The region Calista Corporation serves is a vast and beautiful corner of the world. Tucked between two of Southwest Alaska's mightiest rivers – the Yukon and the Kuskokwim – this unique isolated area is the traditional home of the state's indigenous Yup'ik, Cup'ik and Athabascan people, Calista Corporation's shareholders. The Calista Region encompasses 57,000 square miles and is the second largest ANCSA region in land size. The land entitlement to Calista, however, is only 6.5 million acres - less than 20 % of the land area. Approximately 75 % of the land within the Region is owned by the U.S. Fish and Wildlife Service. Most of the remaining lands are owned by federal and state governments, with a very small amount privately owned. Surrounded by mostly federally owned lands, the Region is about the size of New York State. It encompasses nearly 10 % of Alaska's land area and is comprised of 56 federally recognized tribes. There are no roads that connect the region with the rest of Alaska. Because everything must be flown or barged to each community, the cost of food, fuel, transportation and energy are extraordinarily high. Calista Corporation works hard and partners with many to improve and enrich the way of life for its Shareholders and Descendants.¹⁹

The nearest offices of Alaska Department of Fish and Game (ADF&G) and Alaska Department of Commerce, Community and Economic Development (DCCED) are located in

¹⁹ Calista Corporation. 2011. *Shareholder Overview: Our History*. Retrieved on May 11, 2012 from http://www.calistacorp.com/shareholders/shareholder-overview.

Bethel. A National Marine Fisheries Service (NMFS) field office is also located in Bethel, and a larger office is located in Anchorage. The nearest Alaska Department of Natural Resources (DNR), Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement offices are located in Anchorage.

Infrastructure

Connectivity and Transportation

Tuntutuliak relies on air transportation for passengers, mail, and cargo service. A stateowned 3,025 foot long by 75 foot wide gravel runway and a public seaplane base on the Qinaq River are available. Barge services deliver goods approximately six times a year. Boats and snowmobiles are used for local travel. Winter trails are marked to Kipnuk (77 mi), Toundra (60 mi), and Kongiganak (29 mi).²⁰ In June 2012, round-trip airfare between Tuntutuliak and Anchorage was \$626.²¹

*Facilities*²²

A flush/haul system, unpermitted landfill, sewage lagoon, and 4-mile sanitation boardwalk are available. The school has its own well and sewage lagoon. Law enforcement services are provided by a Village Public Safety Officer (VPSO) and by state troopers in Bethel. Fire and rescue services are provided by a state VPSO, and a volunteer fire department with Project Code Red Equipment. There is a Village Council jail, a community hall, and a school library in Tuntutuliak.

Medical Services²³

Medical care is provided by the Kathleen Daniel Memorial Clinic, which is owned by the Village Council and operated by the Yukon Kuskokwim Health Corporation. The clinic is a Community Health Aid Program site. Emergency services have coastal and air access and are provided by a health aide. The closest Acute Care facility and qualified Emergency Care Center is located in Bethel.

²⁰ 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.

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 20.

²³ Ibid.

Educational Opportunities²⁴

The Lewis Angapak Memorial School provides instruction to students from pre-school through 12th grade. The first 3 years of instruction are entirely in Yup'ik, with remaining years primarily in English. In 2011 the school had 155 students and 10 teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

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 levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management 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.²⁵

Commercial catch of herring for bait began in Alaska 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.²⁶

On the lower Kuskokwim, subsistence sockeye, chum, and Chinook harvesting typically begins by June 1st, and is concluded by mid-July. Coho and pink salmon are harvested in August and September. Fishing effort is based from either a fish camp or from a home village. Drift gill nets, fish wheels, and rods and reels are used for harvesting. Soon after river ice breaks up in May, smelt move into the lower Kuskokwim area. Residents use fine-meshed nets to catch smelt, and thread them through willow sticks before drying and smoking them. Whitefish, sheefish, Arctic grayling, and northern pike are harvested year-round. Blackfish and burbot are harvested during fall and winter months. Dolly Varden are typically harvested from June through December; while trout are typically harvested in the early spring and summer, and again in the

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

²⁵ 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.

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.

late summer and early fall. Spotted seal, bearded seal, ringed seal, and walrus are harvested in the late spring.^{27,28}

Tuntutuliak is on the Qinaq River, approximately three miles from its confluence with the Kuskokwim River and about 40 miles from the Bering Sea coast.²⁹ Tuntutuliak is adjacent to Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Tuntutuliak participates in the Community Development Quota (CDQ) Program through the Coastal Villages Region Fund (CVRF). The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.³⁰ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ. The community is located in Federal Reporting Area 508, International Pacific Halibut Commission (IPHC) Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District. The mission of CVRF is to provide the means for development of its member communities by sensibly creating tangible, long-term opportunities for all residents who want to fish and work. On behalf of the 20 member communities, CVRF has grown to be the largest seafood owner/operator headquartered in Alaska. CVRF is now able to take a broader and more balanced approach to managing the Kuskokwim Delta and Bering Sea seafood resources. For its residents, CVRF must continue to protect its fisheries and its investments in these fisheries, grow in a strategic and sustainable manner, and remain adaptable to take advantage of all positive opportunities. CVRF's investments in the Bering Sea fisheries enables CVRF to provide fishing opportunities in salmon, halibut, and herring in the region.³¹ The community is not eligible for the Community Quota Entity program.

Processing Plants

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

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Tuntutuliak (Table 3).

²⁷ Coffing, M. (1991). *Kwethluk Subsistence: Contemporary Land Use Patterns, Wild Resource Harvest and Use, and the Subsistence Economy of the Lower Kuskokwim River.* Retrieved July 12, 2012 from: http://www.subsistence.ADFG.state.ak.us/TechPap/tp157.pdf

²⁸ Andrews, E.; and Coffing, M. (1986). *Kuskokwim River Subsistence Chinook Fisheries: An Overview*. Retrieved July 12, 2012 from: http://www.nativeknowledge.org/db/files/tp146.htm.

²⁹ Ibid.

³⁰ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from

http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf. ³¹ Coastal Villages Region Fund (2010). *CVRF: Who We Are*. Retrieved on May 11, 2012 from http://www.coastalvillages.org/.

Commercial Fishing

In 2010, 54 community residents held 65 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for salmon net, herring roe, and halibut fisheries. Overall between 2000 and 2010, the total number of CFEC permits issued to community residents declined while the number of permit holders remained relatively stable. The number of permits reported as fished decreased during this period. The majority of the CFEC permits issued between 2000 and 2010 were for the salmon fishery (an average of 44 per year), and the number of salmon permits and permit holders remained relatively stable during this period. The number of salmon CFEC permits reported as fished each year was variable. In 2010, the majority of the salmon CFEC permits issued were for the Kuskokwim gill net fishery, with the remainder issued for the Bristol Bay drift gill net fishery. The number of herring CFEC permits declined slightly during the period while the number of permit holders remained relatively stable, though herring CFEC permits were only reported as fished in 2000 and 2003. In 2010, permits were issued for the Goodnews Bay and Cape Avinof roe herring gill net fisheries. The number of halibut CFEC permits declined substantially between 2000 and 2010, as did the number of permit holders. One halibut CFEC permit was reported as fished in each of the following years: 2003, 2004, and 2009. In 2010, one CFEC permit was issued for the statewide long line fishery using vessels under 60 feet. There were no Tuntutuliak residents holding Federal Fisheries Permits or License Limitation Program (LLP) permits during this period. Information on commercial fishing permits and permit holders by species between 2000 and 2010 is presented in Table 4.

The number of crew license holders decreased from 47 to 4 between 2000 and 2003, then increased again to a total of 53 crew license holders in Tuntutuliak in 2010, representing 12.9% of the population. There were no fish buyers or shore-side processing facilities located in Tuntutuliak between 2000 and 2010. Both the number of commercial fishing vessels owned primarily by Tuntutuliak residents and the number of vessels homeported in Tuntutuliak decreased between 2000 and 2010. There were no vessels landing catch in the community between 2000 and 2010, and thus there are no commercial landings or ex-vessel values to report during this period. Information on characteristics of the commercial fishing sector in Tuntutuliak is presented in Table 5.

There were no Tuntutuliak residents holding quota shares for halibut or sablefish between 2000 and 2010 (Tables 6 and 7), and no community residents holding crab quota shares between 2005 and 2007 (Table 8). As previously stated there were no commercial landings or associated ex-vessel revenue recorded in the community between 2000 and 2010 (Table 9). Commercial landings by Tuntutuliak residents were considered confidential between 2000 and 2010 for all species due to a small number of participants, with the exception of herring landings in 2000 and salmon landings in 2000, 2004, 2005, and 2007. Information on landings and associated ex-vessel revenue by community residents between 2000 and 2010 is presented in Table 10.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a										
Shared Fisheries Business Tax ¹	n/a										
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										
Port/dock usage ²	n/a										
Fishing gear storage on public land ³	n/a										
Marine fuel sales tax ³	n/a										
Total fisheries-related revenue ⁴	n/a										
Total municipal revenue ⁵	n/a										

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

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.

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	Total permits	0	0	0	0	0	0	0	0	0	0	0
Permits ¹	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	11	13	7	6	4	2	1	3	1	1	1
	Fished permits	0	0	0	1	1	0	0	0	0	1	0
	% of permits fished	0%	0%	0%	17%	25%	0%	0%	0%	0%	100%	0%
	Total permit holders	11	12	7	6	4	2	1	3	1	1	1
Herring (CFEC) ²	Total permits	22	21	19	20	20	19	18	18	17	15	17
	Fished permits	9	0	0	1	0	0	0	0	0	0	0
	% of permits fished	41%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	17	18	17	18	19	18	17	17	17	15	16

Table 4. Permits and Permit Holders by Species, Tuntutuliak: 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	44	45	44	44	43	41	44	42	44	43	47
	Fished permits	43	24	27	29	31	36	37	34	40	39	42
	% of permits fished	98%	53%	61%	66%	72%	88%	84%	81%	91%	91%	89%
	Total permit holders	50	48	48	46	47	43	46	46	46	44	50
Total CFEC Permits ²	Permits	77	79	70	70	67	62	63	63	62	59	65
	Fished permits	52	24	27	31	32	36	37	34	40	40	42
	% of permits fished	68%	30%	39%	44%	48%	58%	59%	54%	65%	68%	65%
	Permit holders	57	56	53	54	54	50	53	52	51	49	54

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

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.]

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 Tuntutuliak ²	Total Net Pounds Landed in Tuntutuliak ^{2,5}	Total Ex-Vessel Value of Landings in Tuntutuliak ^{2,5}
2000	47	0	0	38	34	0	0	\$0
2001	25	0	0	38	33	0	0	\$0
2002	5	0	0	27	22	0	0	\$0
2003	4	0	0	27	22	0	0	\$0
2004	17	0	0	25	22	0	0	\$0
2005	34	0	0	26	24	0	0	\$0
2006	26	0	0	22	18	0	0	\$0
2007	31	0	0	17	14	0	0	\$0
2008	35	0	0	13	14	0	0	\$0
2009	47	0	0	10	11	0	0	\$0
2010	53	0	0	19	20	0	0	\$0

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

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.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000			0
2000	0	0	0
2002	0	0	ů 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

Table 6. Halibut Catch Share Program Participation in Tuntutuliak: 2000-2010.	Table 6.	Halibut	Catch Shar	e Program	Participation	in Tuntutuliak: 2000-2010.
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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 Tuntutuliak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2000	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 Tuntutuliak: 2000-2010.

Year	Number of Crab Quota	Crab Quota Shares	Crab IFQ
	Share Account Holders	Held	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.]

				Total N	et Pound	ls 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

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

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 Tuntutuliak Residents: 2000-2010.

Total Net Pounds ¹											
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab											
Finfish											
Halibut											
Herring	19,843										
Other Groundfish											
Other Shellfish											
Pacific Cod											
Pollock											
Sablefish											
Salmon	77,980				48,634	46,789		25,971			
$Total^2$	97,82 <i>3</i>				48,634	46,789		25,971			
Ex-vessel Value (nominal U.S. dollars)											
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab											
Finfish											
Halibut											
Herring	\$1,812										
Other Groundfish											
Other Shellfish											
Pacific Cod											
Pollock											
Sablefish											
Salmon	\$41,423				\$14,694	\$17,528		\$11,921			
$Total^2$	\$43,235				\$14,694	\$17,528		\$11,921			

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 were no Tuntutuliak residents holding sport fish guide licenses and there were no sport fish guide businesses located in Tuntutuliak. Given this, no kept/released log book data were reported for fishing charters out of Tuntutuliak between 2000 and 2010.³² The number of sportfishing licenses sold to community residents (irrespective of the location of the point of sale) varied considerably during this period, with 9 licenses issued in 2004 and 74 licenses issued in 2009. The number of sportfishing licenses sold within the community also varied from 0 between 2002 and 2004 to 73 in 2009. In 2010, there were 24 sportfishing licenses sold to Tuntutuliak residents and 20 sportfishing licenses were sold in the community. In most years, the number of licenses sold in the community was only slightly lower than the number sold to community residents, indicating the potential that a few community residents may travel to other communities to participate in sportfishing activities.

The Alaska Statewide Harvest Survey,³³ conducted by ADF&G between 2000 and 2010, did not report any species as targeted by private anglers in Tuntutuliak. Tuntutuliak 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 Tuntutuliak is displayed in Table 11.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Tuntutuliak ²
2000	0	0	24	18
2001	0	0	34	20
2002	0	0	11	0
2003	0	0	13	0
2004	0	0	9	0
2005	0	0	30	20
2006	0	0	27	18
2007	0	0	24	19
2008	0	0	44	42
2009	0	0	74	73
2010	0	0	24	20

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

³² 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.]

³³ 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 Ficheries Science Center, Seattle, http://www.adfg.alaska.gov/sf/sportfishingsurvey/ (Accessed

Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sportfishingsurvey/ (Accessed September 2011).

	Saltw	ater	Freshwater		
Year	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	

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

Tuntutuliak is a traditional Yup'ik Eskimo village with a fishing and subsistence lifestyle. Salmon and seal are important food sources. Subsistence foods comprise a majority of the diet for community residents.³⁴

In 2005, the only year that a subsistence survey was conducted by ADF&G in the community of Tuntutuliak between 2000 and 2010, 23% of households were recorded as using halibut for subsistence, while 52% of households were using non-salmon fish (other than halibut). Information on subsistence participation for other species and per capita subsistence harvest was not reported during this period. Information on subsistence participation by household and species is presented in Table 12.

In years for which data were reported between 2000 and 2010, an average of 83 subsistence salmon permits was issued to Tuntutuliak residents, with an average of 61 of those permits returned (Table 13). Chinook salmon were the primary species harvested under subsistence permits (an average of 3,401 Chinook per year), followed closely by chum salmon (an average of 2,917 per year), along with sockeye salmon (an average of 1,479 per year), coho

³⁴ 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.

salmon (an average of 1,352 per year), and pink salmon (an average of 72 per year). In 2005, the per capita harvest of non-salmon fish was 100,681 pounds in Tuntutuliak (Table 13). Data were not reported on the subsistence harvest of marine invertebrates (Table 13), halibut (Table 14), or subsistence harvest of marine mammals (Table 15).

The ADF&G Division of Subsistence reported that the following species of non-salmon fish were used for subsistence in Tuntutuliak during this period: Arctic char, Bering cisco, blackfish, broad whitefish, burbot, Dolly Varden, grayling, herring, humpback whitefish, lamprey, least cisco, Pacific tom cod, pike, rainbow trout, rockfish, round whitefish, sheefish, smelt, stickleback (needlefish), and sucker.³⁵

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	23%	n/a	n/a	52%	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

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

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).

³⁵ 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).

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	74	63	2,939	2,735	3,435	n/a	1,236	n/a	n/a
2001	77	62	2,993	2,621	337	n/a	1,701	n/a	n/a
2002	76	64	3,632	3,845	1,153	n/a	972	n/a	n/a
2003	79	66	3,095	2,514	2,329	n/a	1,555	n/a	n/a
2004	82	66	3,402	2,262	1,205	n/a	1,446	n/a	n/a
2005	86	54	4,508	3,525	1,132	163	2,102	n/a	100,681
2006	95	64	3,341	3,410	778	45	1,447	n/a	n/a
2007	88	46	3,295	2,421	443	7	1,374	n/a	n/a
2008	92	n/a	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

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

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).

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

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

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.

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

Table 15. Subsistence	e Harvests of	f Marine	Mammal Resourc	es, Tuntutuliak:	2000-2010.
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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.