

Akiachak (ACK-ee-uh-chuck)



People and Place

*Location*¹

Akiachak is located on the west bank of the Kuskokwim River, on the Yukon-Kuskokwim (Y-K) Delta. It lies 18 mi northeast of Bethel and 386 mi west of Anchorage. The area encompasses 6.8 sq mi of land and 0.0 sq mi of water. The community is unincorporated, is located within the Bethel Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*²

In 2010, there were 627 residents, ranking it 98th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew 30.4%. Between 2000 and 2009, the population grew by 10.3% with an average annual growth rate of 0.43%, which was slightly less than the state average of 0.75% and indicative of steady growth. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that there were 998 permanent and 25 seasonal residents living in Akiachak in 2010. Temporary workers typically live in the community from February through September, and seasonal population peaks are somewhat driven by employment in fisheries sectors. Information regarding population trends can be found in Table 1.

Akiachak was predominately Yup'ik Eskimo in 2010. In that year, 95.1% of residents identified themselves as American Indian or Alaska Native, compared to 92.3% in 2000; 3.5% identified themselves as White, compared to 3.4% in 2000; 1.1% identified themselves as two or more races, compared to 4.3% in 2000; 0.2% of residents identified themselves as Black or African American, compared to 0.0% in 2000; and 0.2% identified themselves as Asian, compared to 0.0% in 2000. Residents who identified themselves as Hispanic or Latino made up 0.2% of the population in 2010, compared to 1.2% in 2000. Information regarding racial and ethnic trends can be found in Figure 1.

In 2010, the average household size was 4.18, compared to 4.20 in 1990 and 4.40 in 2000. In that year, there were a total of 183 housing units, compared to 129 in 1990 and 150 in 2000. Of the households surveyed in 2010, 48% were owner-occupied, compared to 75% in 2000; 34% were renter-occupied, compared to 13% in 2000; and 18% were vacant, compared to 11% in 2000. There were no reports of residents living in group quarters between 1990 and 2010.

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

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>.

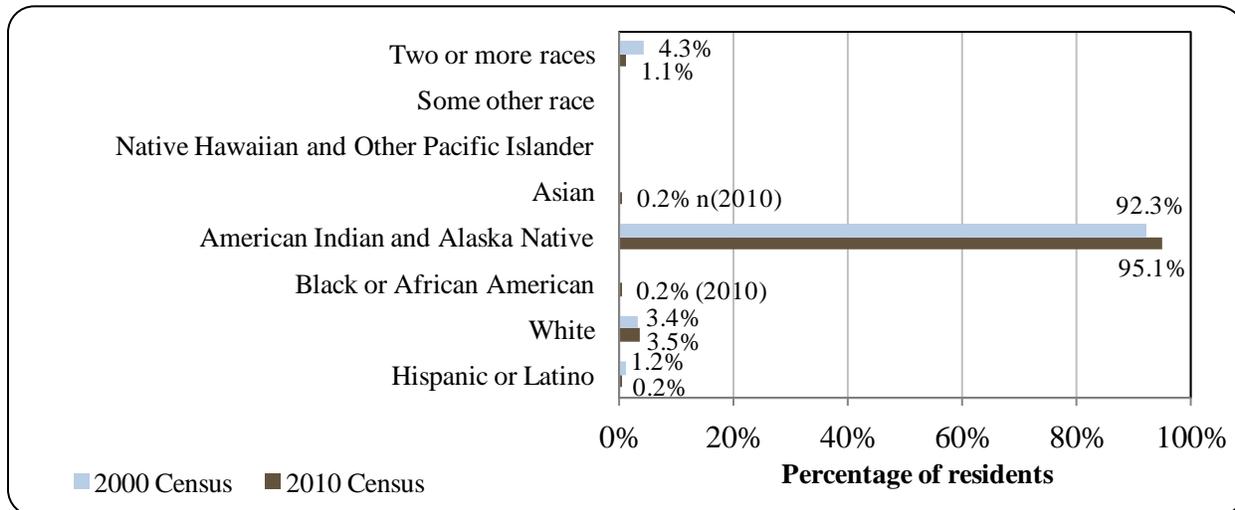
Table 1. Population in Akiachak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	481	-
2000	585	-
2001	-	597
2002	-	625
2003	-	633
2004	-	619
2005	-	645
2006	-	634
2007	-	626
2008	-	657
2009	-	645
2010	627	-

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



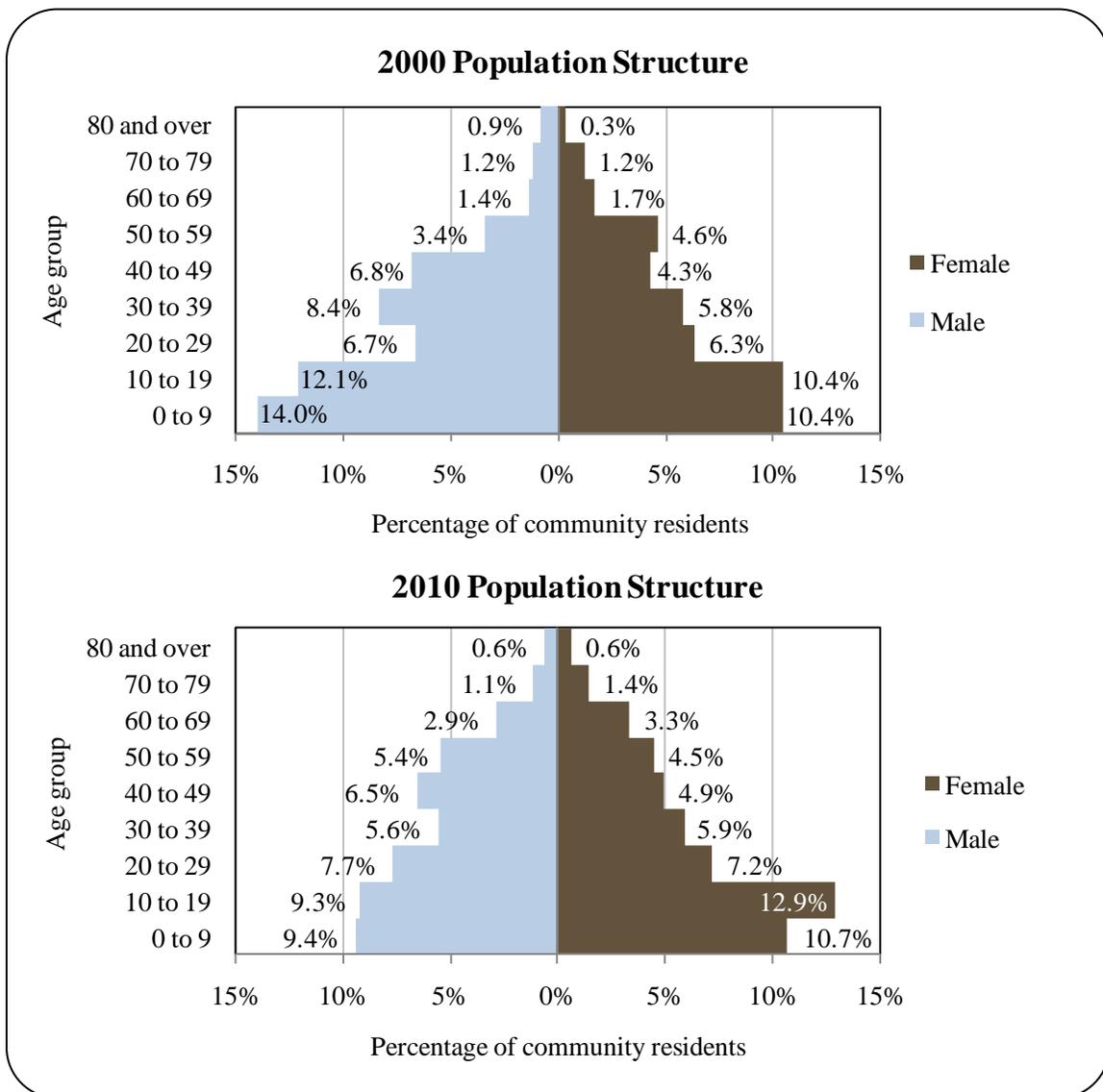
The gender distribution in 2010 was relatively even at 51.5% female and 48.5% male. This was slightly more even than both the statewide distribution (52.0% male, 48.0% female) and distribution in 2000 (54.9% male, 45.1% female). The median age was 24.6 years, significantly younger than the statewide median of 32.7 years and slightly older than the 2000 median of 22.2 years.

The population structure in 2010 was similar to 2000 in that it could be characterized as expansive. In that year, 42.3% of residents were under the age of 20, compared to 46.9% in

2000; 9.9% were over the age of 59, compared to 6.7% in 2000; 32.8% were between the ages of 30 and 59, compared to 33.3% in 2000; and 14.9% were between the ages of 20 and 29, compared to 13.0% in 2000.

Gender distribution by age cohort was somewhat more even in 2010 than in 2000, with slight female biases among most age ranges. In that year, the greatest absolute gender difference occurred in the 10 to 19 range (12.9% female, 9.3% male), followed by the 40 to 49 (6.5% male, 4.9% female) and 0 to 9 (10.7% female, 9.4% male) ranges. Of those three, the greatest relative gender difference occurred in the 10 to 19 range. Information regarding Akiachak’s population structure can be found in Figure 2.

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



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)³ estimated that 78.7% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 14.1% had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 7.2% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 26.2% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 1.3% had an Associate's degree, compared to an estimated 8% of Alaska residents overall; and an estimated 7.9% had a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall. No residents were estimated to hold a Bachelor's degree.

History, Traditional Knowledge, and Culture

Like many villages in the Y-K Delta region, Akiachak and the area surrounding was historically part of a network of seasonal Yup'ik and Athabaskan subsistence camps.⁴ With the introduction of European missionaries and Russian fur traders in the late eighteenth and early nineteenth centuries, several outbreaks of smallpox took a heavy toll on the area. Combined with the establishment of Bethel in 1885, permanent villages began to take root. After World War II, the population of Bethel swelled from 400 in 1940, to over 1,200 by 1960.⁵ During that time, Bethel saw a large amount of in-migration from surrounding villages as the area became an economic and cultural hub for the Y-K Delta.

The Akiachak area was used by the Yup'ik Eskimos as a seasonal subsistence site. Called "Akiachakchagamiut" in the 1890 census, the village had a population of 43 at that time. A post office was established in 1934. It was incorporated as a Second-class city on February 7, 1974. The city government was dissolved on January 31, 1990, in favor of traditional village council governance.⁶

Akiachak is a Yup'ik Eskimo village with a fishing and subsistence lifestyle. It has a strong traditional community and was the first city in Alaska to dissolve its city government in favor of the Native village government. The sale, importation, and possession of alcohol are banned in the village.⁷

Natural Resources and Environment

The area averages 16 in of precipitation annually, with snowfall of 50 in. Summer temperatures range from 42 to 62 °F (6 to 17 °C). Winter temperatures range from -2 to 19 °F (-19 to -7 °C). Ice seasonality on the Kuskokwim River is typically characterized by annual river freeze-up in October and break-up in May.

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.

⁴ Alaska Department of Transportation and Public 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.

⁵ Ibid.

⁶ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷ Ibid.

The lower Y-K Delta encompassing Akiachak 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 glacial maximum. Sediments in the area are loamy or sandy textured fluvial and alluvial deposits. Soils are poorly drained and typically overlay a layer of permafrost.⁸

Akiachak is located on Calista Corporation land encompassed by the Yukon Delta National Wildlife Refuge (YDNWR), which provides spawning, rearing, feeding, and wintering habitat for a range of terrestrial and aquatic wildlife.⁹ 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.¹⁰ Aquatic wildlife include Pacific salmon, whitefish, burbot, northern pike, blackfish, smelt, lamprey, char, grayling, trout, sculpin, stickleback, and longnose sucker.¹¹

Regional mineral resources include zinc, gold, silver, lead, antimony, tungsten, tin, copper, nickel, mercury, and platinum.¹² Upriver from Akiachak, the Calista Corporation is undertaking several mineral, oil and gas projects near Red Devil. Calista Corporation also has active projects in Platinum and Goodnews Bay.¹³

There are several natural hazards with the potential to affect the Y-K Delta region.¹⁴ These hazards include flooding, river bank erosion and destabilization, brush fire, and soil destabilization due to permafrost melt. Spring flooding is a major contributor to localized hazards. As melt-off and ice jamming occurs during spring break-up, flooding and erosion occur. 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.¹⁵

While there are no reported Environmental Protection Agency (EPA) established superfund sites in Akiachak, there is currently an evaluation being undertaken regarding the extent of heavy metal contaminants originating from the abandoned Red Devil mine upriver. As of April 2011, the site was not on the EPA's National Priority List.¹⁶ According to the Alaska Department of Environmental Conservation (DEC), there were no significant environmental remediation sites active within Akiachak as of 2010.¹⁷

⁸ 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>.

⁹ 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>.

¹⁰ 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/.

¹¹ Ibid.

¹² See footnote 4.

¹³ Calista Corporation. (n.d.). Retrieved November 22, 2011 from: <http://www.calistacorp.com>

¹⁴ See footnote 9.

¹⁵ See footnote 8.

¹⁶ U.S. Environmental Protection Agency. (2011). *Superfund Site Information*. Retrieved November 22, 2011 from: <http://cfpub.epa.gov/supercpad/cursites/srchrslt.cfm?Start=1&sortBy=npl>.

¹⁷ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved June 7, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm#Western>.

Current Economy¹⁸

The majority of year-round employment in Akiachak is in education and other public services. The Yupiit School District headquarters is located in the community, and provides a source of permanent employment. Otherwise, residents rely on seasonal employment such as commercial fishing, construction, and Bureau of Land Management (BLM) fire-fighting. In 2010, some residents worked at canneries in Bristol Bay. Subsistence activities provide most food sources, supplementing incomes when wage positions are not available. However, since 1997 poor fish returns have significantly affected harvests. The city of Bethel is a regional attraction in regards to wage employment, and many residents from Y-K Delta communities travel there in search of work during the winter.¹⁹ In a survey conducted by the AFSC in 2011, community leaders reported that Akiachak's economy is reliant on both the mining and fishing industries. Top employers in 2010²⁰ included Akiachak Native Community, Yupiit School District, Phillips and Jordan Inc., Yukon Kuskokwim Health Corp. 90, ACVP Housing Authority, Akiachak Enterprises Inc., Association of Village Council Presidents, Early Childhood Leadership Team Inc., Akiachak Fuel Sales Inc., and Akiachak Native Store.

According to the 2006-2010 ACS,²¹ the estimated per capita income in Akiachak was \$12,996 and the estimated median household income was \$39,167, compared to \$8,321 and \$35,833 in 2000, respectively. After accounting for inflation by converting the 2000 values into 2010 dollars,²² the real per capita income (\$10,942) and real median household income (\$47,120) indicate both an increase in individual earnings and decrease in household earnings. In 2010, Akiachak ranked 224th of 305 Alaskan communities from which per capita income was estimated, and 211th of 299 Alaskan communities from which median household income was estimated.

It should be noted that Akiachak's small population size may have prevented the ACS from accurately portraying economic conditions.²³ Another way of understanding per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, residents earned \$5.76 million in total wages in 2010.²⁴ When matched with the population in 2010, the per capita income of \$9,187 indicates an overall decrease compared to inflation adjusted values reported by the U.S. Census in 2000.²⁵ In addition, the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.²⁶ However, it

¹⁸ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁹ See footnote 6.

²⁰ 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/>.

²¹ See footnote 3.

²² Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²³ See footnote 3.

²⁴ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

²⁵ See footnote 20.

²⁶ Denali Commission. 2011. Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

should be noted that ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

According to 2006 to 2010 ACS estimates,²⁷ 65.8% of residents aged 16 years of over were part of the civilian labor force in 2010. Unemployment that year was estimated to be 16.6%, compared to 5.9% estimated statewide; and 27.6% of residents were estimated to be living below the poverty level, compared to an estimated 9.5% statewide. Of those employed in 2010, 70.4% worked in the public sector, 25.1% worked in the private sector, and 4.5% were self-employed.

By industry, most (47.7%) of those employed were estimated to work in education, health care, or social assistance sectors in 2010; followed by public administration sectors (17.6%); and transportation, warehousing, or utilities sectors (12.1%). By occupation type, most (34.7%) of those employed were estimated to hold management or professional positions; followed by service positions (22.6%); natural resources, construction, or maintenance positions (22.1%), sales or office positions (16.1%), and production, transportation, or material moving positions (4.5%). Between 2000 and 2010, there were slight increases in several industry sectors, although nothing significant. However, there was a somewhat notable decrease in education services, health care and social assistance sectors. In addition, there were significant increases in the number of natural resources, construction, and maintenance positions; while there was a significant decrease in the number of sales, office, production, transportation, and material moving positions. According to 2010 ALARI estimates,²⁸ most (65.4%) employed residents worked in local government sectors; followed by construction (9.6%); trade, transportation, and utilities sectors (7.7%); education and health service sectors (6.7%); and financial service sectors (5.1%). Only 1.0% of employed residents were estimated work in natural resource or mining sectors. In 2010, no individuals characterized themselves as working in natural resource based industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly. Finally, while there was a significant proportional rise in the number of employed residents holding natural resource, construction, and maintenance positions, it is impossible to discern how many of those positions are related to fisheries sectors. Information regarding employment trends can be found in Figures 3 and 4.

²⁷ 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 See footnote 20.

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

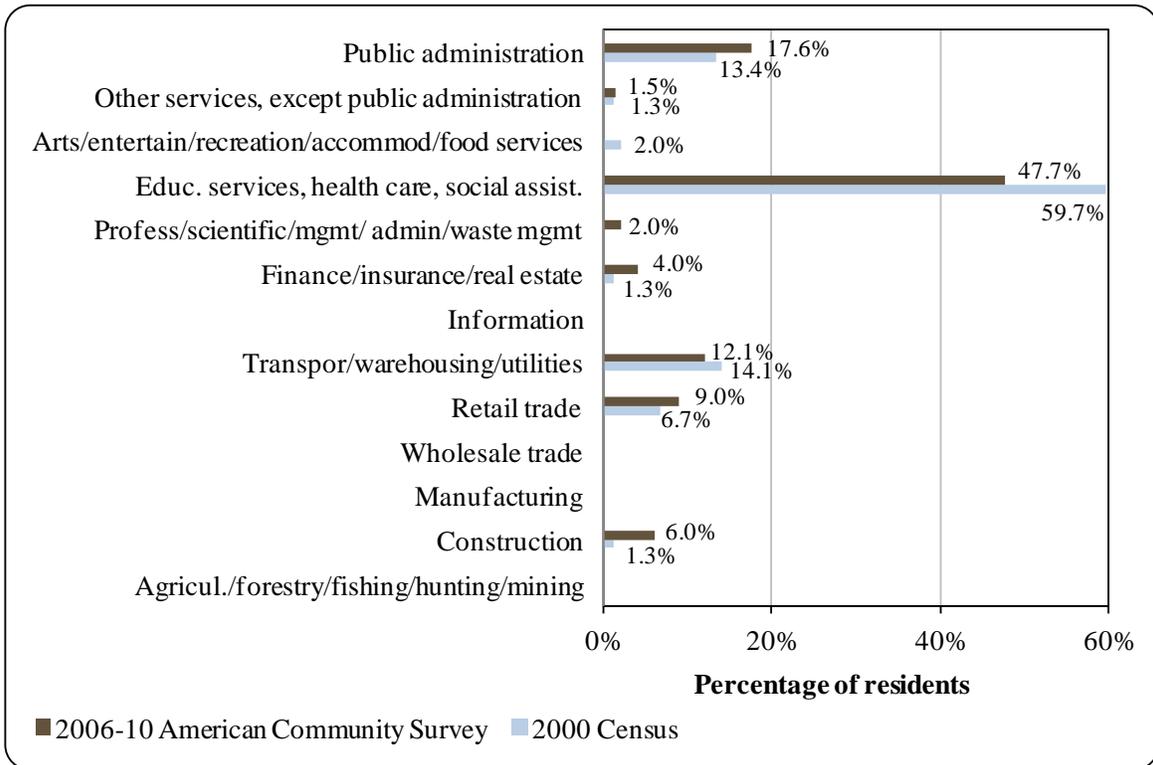
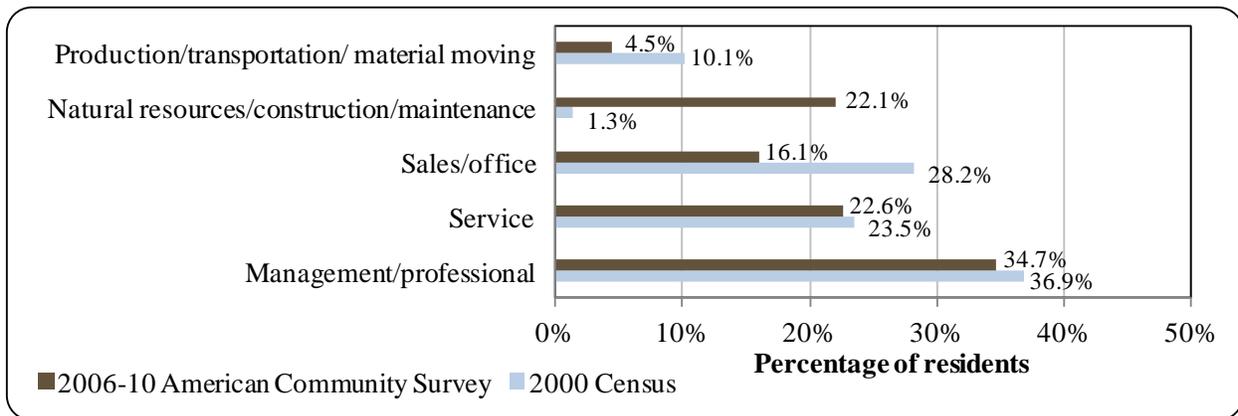


Figure 4. Local Employment by Occupation in 2000-2010, Akiachak (U.S. Census).



Governance

Akiachak is governed by the Akiachak Native Community, a U.S. Bureau of Indian Affairs (BIA) recognized Tribal council. There is an Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporation (Akiachak Limited) and the regional ANCSA chartered Native corporation is Calista Corporation. The closest Alaska Department of Fish and Game (ADF&G) office is located in Dillingham, 117 mi to the southeast. The closest National Marine Fisheries Service (NMFS) field office is located in Bethel, 18 mi to the southwest. The

closest Bureau of Citizenship and Immigration Services (BCIS) office is located in Anchorage, 386 mi to the east. The community is not incorporated into a municipality or borough; therefore, the majority of government operating revenues comes from state and federal grants and contracts. Information regarding community finances can be found in Table 2.

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

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	\$4,170	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	\$3,631	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	n/a
2010	n/a	n/a	n/a	n/a

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

¹ Alaska Department of Community 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 Department of Community and Economic Development (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 Department of Revenue (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 Department of Community 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*²⁹

A state-owned 1,649-ft long by 40-ft wide gravel airstrip and public seaplane facility provides scheduled and chartered services year-round to Akiachak. Boats, snowmachines, and ATVs are used extensively by locals on the Kuskokwim River. Mail is often delivered by hovercraft. A winter trail exists to Bethel. Barges deliver bulk fuel and supplies during the summer. Bethel provides full jet service to Anchorage year-round as well as limited drivable ice-

²⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

roads in the winter. Road networks are severely limited due to the delta's topography, especially in the summer. In June 2012, roundtrip airfare between Anchorage and Bethel was \$364.³⁰

*Facilities*³¹

Currently, 12 facilities and the school and teacher's housing are served by a piped system; most residents haul treated water from the "washeteria". Twenty-five households have outhouses hauled by the village and the others haul their own outhouses or use septic tanks. Refuse collection and disposal is provided by the Village Council. Electricity is provided by a diesel generator, which is also operated by the Village Council. There are six bulk fuel tanks in the community. Public safety is provided by Alaska state troopers in Bethel and Akiachak Village police. There is a village volunteer fire department and public safety building. Additional facilities include a Youth/Elder Center, recreation center, community library, cable television and internet infrastructure, and charter air services.

In a survey conducted by the AFSC in 2011, community leaders reported several fisheries related business and services including gear sales, boat repair services (electrical, welding, and machine shop), and boat fuel sales. However, the community lacks harbor facilities and commercial fishing support services.

*Medical Services*³²

General medical care is provided by the Akiachak Native Community Clinic, a Primary Health facility and Community Health Aid Program (CHAP) member. Long-term, acute, and specialized medical services are provided in Bethel.

*Educational Opportunities*³³

Akiachak has one school providing Kindergarten through 12th grade instruction. As of 2011, there were 197 students enrolled and 18 teachers employed. Akiachak is also home to the Yupiit School District, which operates three schools consisting of 453 students and 45 teachers as of 2011.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Fisheries participation in the Lower Kuskokwim Delta dates back thousands of years to the original Central Yup'ik occupants. 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. During early years, local salmon were cured and salted and by 1920, the largest commercial season to-date took place on the Kuskokwim, with five operators processing

³⁰ Airfare was calculated using lowest fare. Source: <http://www.travelocity.com> (retrieved November 22, 2011),

³¹ See footnote 29.

³² Ibid.

³³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

approximately 35,000 Chinook salmon that year. In 1922, there were four salteries operating near the mouth of the Kuskokwim, processing Chinook and sockeye salmon. The Kuskokwim area was closed to all fishing for export from 1926 through 1929. In 1930, regulations were modified to allow commercial fishing in part of Kuskokwim Bay. A floating cannery operated for that year, and by 1932, three companies engaged in commercial fishing. 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. Information on commercial fishing during the late 1930s through the 1950s is limited. However in 1952, poor salmon runs prompted the closure of the Kuskokwim River and Bay. Management was finally shifted to the State of Alaska in 1960, and commercial fishing resumed.³⁴

At the time of statehood in 1959, 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.³⁵

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.³⁶

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 late summer and early fall. Spotted seal, bearded seal, ringed seal, and walrus are harvested in the late spring.^{37,38}

³⁴ Pennoyer, S., K. R. Middleton, and M. E. Morris. 1968. *Arctic-Yukon-Kuskokwim Area Salmon Fishing History*. Retrieved April 11, 2012 from: <http://www.sf.ADFG.state.ak.us/fedaidpdfs/afrbIL.070.pdf>.

³⁵ 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.

³⁶ 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>.

³⁷ 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>

³⁸ Andrews, E., and M. Coffing. 1986. *Kuskokwim River Subsistence Chinook Fisheries: An Overview*. Retrieved July 12, 2012 from: <http://www.nativeknowledge.org/db/files/tp146.htm>.

Involvement in commercial fishing, particularly within the herring and salmon fisheries, is an important part of the local economy in Akiachak.³⁹ In a survey conducted by the AFSC in 2011, community leaders reported that the community's economy relies on fishing. In addition, community leaders observed that the number of commercial fishing vessels within the community during fishing seasons increased between 2005 and 2010. Akiachak does not participate in the fisheries management process in Alaska, although it is eligible to participate in the Community Development Quota (CDQ) program and is represented by 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.⁴⁰ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

Processing Plants

According to the 2010 ADF&G Intent to Operate list, Akiachak does not have a registered processing plant. Kuskokwim Seafoods, in Bethel, is the closest processor to the community, processing Chinook, sockeye, chum, and coho salmon. Other processors in the area include Coastal Villages Seafoods operates facilities in Quinhagak, which processes salmon and herring; Kipnuk, which processes halibut; and Tununak, which also processes halibut.⁴¹

Fisheries-Related Revenue

The community of Akiachak did not report any fisheries-related revenue between 2000 and 2010. In a survey conducted by the AFSC in 2011, community leaders reported that Akiachak did not receive any direct revenue from CVRF in 2010, although the community most likely indirectly benefits from the CDQ Program in other ways. Information regarding fisheries-related revenue trends can found in Table 3.

Commercial Fishing

In 2010, 83 residents, or 13.2% of the population, held a total 93 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 78 residents held 89 CFEC permits. Of the CFEC permits held in 2010, 85% were for salmon and 15% were for herring. One halibut CFEC permit was issued in 2007, and CFEC permits for other finfish were issued between 2000 and 2005. No residents were issued Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits for crab or groundfish fisheries between 2000 and 2010. In addition, no residents held halibut, sablefish, or crab quota share between 2010 and when the programs began.

³⁹ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses. Retrieved from: <http://www.cfec.state.ak.us/gpbycen/2010/mnu.htm>.

⁴⁰ 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.

⁴¹ Alaska Seafood Marketing Institute. 2011. Directory of Alaska Seafood Suppliers. Retrieved December 12, 2011 from <http://www.alaskaseafood.org/industry/suppliers/index.cfm>.

Residents held 78 commercial crew licenses, compared to 98 in 2000. In addition, residents held majority ownership of 22 vessels that year, compared to 25 in 2000. Of the CFEC permits issued in 2010, 70% were actively fished, compared to 84% in 2000. This varied by fishery from 82% of salmon permits being fished to 0% of herring permits being fished. Kuskokwim gillnet salmon was the only fishery prosecuted by Akiachak residents in 2010.⁴²

No landings were made in the community between 2000 and 2010, although landings were still made by residents. In 2010, a total of 19,027 lbs of salmon valued at \$10,550 ex-vessel were landed, compared to 82,317 lbs valued at \$39,377 ex-vessel in 2000; a decrease of \$0.11 per pound landed ex-vessel after adjusting for inflation⁴³ and without considering the species composition of landings. Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁴² 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.]

⁴³ Inflation calculated using 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Akiachak: 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	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										
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>										
<i>Total municipal revenue⁵</i>	<i>n/a</i>										

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

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

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

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

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

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

NOAA-TM-AFSC-259 – Volume 10
Community Profiles for North Pacific Fisheries – Alaska: Akiachak

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a										
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a										
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a										
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a										
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a										
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	1	0	0
	Fished permits	0	0	0	0	0	0	0	0	1	0	0
	% of permits fished	n/a	100%	n/a	n/a							
	Total permit holders	0	0	0	0	0	0	0	0	1	0	0
Herring (CFEC) ²	Total permits	14	16	15	16	15	14	14	13	12	13	14
	Fished permits	10	1	0	1	0	0	0	0	0	0	0
	% of permits fished	71%	6%	0%	6%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	14	16	15	15	15	14	15	13	12	13	14

NOAA-TM-AFSC-259 – Volume 10
Community Profiles for North Pacific Fisheries – Alaska: Akiachak

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a										
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a										
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	4	2	1	1	1	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	n/a	n/a	n/a	n/a	n/a
	Total permit holders	3	2	1	1	1	1	0	0	0	0	0
Salmon (CFEC) ²	Total permits	71	73	72	72	73	73	72	71	73	76	79
	Fished permits	65	64	54	62	66	59	66	60	62	55	65
	% of permits fished	92%	88%	75%	86%	90%	81%	92%	85%	85%	72%	82%
	Total permit holders	77	77	75	74	81	78	78	72	74	80	83
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>89</i>	<i>91</i>	<i>88</i>	<i>89</i>	<i>89</i>	<i>88</i>	<i>86</i>	<i>84</i>	<i>86</i>	<i>89</i>	<i>93</i>
	<i>Fished permits</i>	<i>75</i>	<i>65</i>	<i>54</i>	<i>63</i>	<i>66</i>	<i>59</i>	<i>66</i>	<i>60</i>	<i>63</i>	<i>55</i>	<i>65</i>
	<i>% of permits fished</i>	<i>84%</i>	<i>71%</i>	<i>61%</i>	<i>71%</i>	<i>74%</i>	<i>67%</i>	<i>77%</i>	<i>71%</i>	<i>73%</i>	<i>62%</i>	<i>70%</i>
	<i>Permit holders</i>	<i>78</i>	<i>79</i>	<i>76</i>	<i>75</i>	<i>81</i>	<i>78</i>	<i>78</i>	<i>73</i>	<i>75</i>	<i>80</i>	<i>83</i>

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

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

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

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

Year	Crew licenses 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 Akiachak ²	Total net pounds landed in Akiachak ^{2,5}	Total ex-vessel value of landings in Akiachak ^{2,5}
2000	98	0	0	25	25	0	0	\$0
2001	24	0	0	22	24	0	0	\$0
2002	44	0	0	20	21	0	0	\$0
2003	80	0	0	16	19	0	0	\$0
2004	59	0	0	18	19	0	0	\$0
2005	69	0	1	24	26	0	0	\$0
2006	80	0	0	22	25	0	0	\$0
2007	18	0	0	20	20	0	0	\$0
2008	13	0	0	21	20	0	0	\$0
2009	71	0	0	19	18	0	0	\$0
2010	78	0	0	22	20	0	0	\$0

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

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

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

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

⁵ Totals only represent non-confidential data.

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

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

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

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

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

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

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

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

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

NOAA-TM-AFSC-259 – Volume 10
Community Profiles for North Pacific Fisheries – Alaska: Akiachak

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

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

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

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

² Totals only represent non-confidential data.

NOAA-TM-AFSC-259 – Volume 10
Community Profiles for North Pacific Fisheries – Alaska: Akiachak

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

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	6,053	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	82,317	75,269	--	--	72,186	56,656	--	--	38,646	56,106	19,027
<i>Total²</i>	<i>88,370</i>	<i>75,269</i>	--	--	<i>72,186</i>	<i>56,656</i>	--	--	<i>38,646</i>	<i>56,106</i>	<i>19,027</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	\$520	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$39,377	\$26,765	--	--	\$22,632	\$20,456	--	--	\$15,981	\$26,122	\$10,550
<i>Total²</i>	<i>\$39,898</i>	<i>\$26,765</i>	--	--	<i>\$22,632</i>	<i>\$20,456</i>	--	--	<i>\$15,981</i>	<i>\$26,122</i>	<i>\$10,550</i>

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

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

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

² Totals only represent non-confidential data.

Recreational Fishing

The Kuskokwim River is a popular sportfishing destination for both resident and non-Alaskan resident private anglers. Areas along the river and drainages are home to sportfishing lodges which advertise themselves as exotic and remote destinations to non-resident anglers in the contiguous United States. In 2010, 160 sportfishing licenses were sold to residents; an increase from 70 in 2000 although none were sold in the community. There was no registered sport fish guide or charter businesses operating in the community between 2000 and 2010 and non-Alaskan resident sportfishing that takes place in the area is likely based out of Bethel since Akiachak currently lacks visitor accommodations.⁴⁴

Akiachak is located in the Kuskokwim River and Bay ADF&G Harvest Survey Area which includes all drainages flowing into Kuskokwim Bay as well as saltwater from Cape Newenham north to Naskonat Peninsula. The majority of sportfishing targets freshwater fisheries and in 2010, angler days fished totaled 19,455, compared to 19,990 in 2000. In that year, non-Alaska residents accounted for 72% of total angler days fished, compared to 67% in 2000. The Kuskokwim River's popularity among non-Alaska residents and the fact that most local residents typically engage in subsistence fishing likely contributed to the high ratio of non-Alaskan resident to resident angler days fished between 2000 and 2010. In a survey conducted by the AFSC in 2011, community leaders reported that local private anglers target all five species of Pacific salmon. Typically, sportfishing is done by private boat owned by local residents. There have been no reports of charter operations within the community between 2000 and 2010. Trends regarding recreational fishing trends can be found in Table 11.

Subsistence Fishing

Subsistence activities are an important part of the local economy and culture of Akiachak. In a survey conducted by the AFSC in 2011, community leaders reported that the three most important types of subsistence resources include salmon, moose, and caribou. Of the marine species documented by ADF&G in Table 13, residents reported harvesting Chinook salmon the most, followed by sockeye, coho, and chum. The number of subsistence salmon permits issued grew by 15.5% between 2000 and 2008, although permits returned in 2008 was the lowest of all the reported years. The number of fish harvested increased steadily between 2000 and 2008 with the exception of chum salmon. Between 2000 and 2008, Chinook harvests increased by 53%, coho harvests increased by 61%, and sockeye harvests increased by 29%. Chum salmon harvests decreased by 13%. Still, considering Akiachak's population, a comparatively large number of salmon are harvested annually; an indication that salmon are a principal subsistence species. In 2010, one Subsistence Halibut Registration Certificate (SHARC) was issued by NMFS, although no halibut was reported harvested. Marine mammal harvest data was unreported between 2000 and 2010. According to ADF&G's *Community Subsistence Information System*,⁴⁵ subsistence species that have been harvested or used by Akiachak residents include mussels, bearded seals, bowhead whales, ribbon seals, ringed seals, spotted seals, Steller sea lions, blackfish, whitefish,

⁴⁴ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁵ 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).

burbot, cisco, Dolly Varden, grayling, herring, lake trout, lamprey, pike, rainbow smelt, rainbow trout, sheefish, sticklebacks, and suckers. In a survey conducted by the AFSC in 2011, community leaders reported that the subsistence fishing season runs from June through August. Information regarding subsistence trends can be found in Tables 12 through 15.

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

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Akiachak ²
2000	0	0	70	0
2001	0	0	40	0
2002	0	0	92	0
2003	0	0	101	0
2004	0	0	86	0
2005	0	0	131	0
2006	0	0	106	0
2007	0	0	121	0
2008	0	0	48	0
2009	0	0	123	0
2010	0	0	160	0

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

Table 12. Subsistence Participation by Household and Species, Akiachak: 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, Akiachak: 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 Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	125	94	6,124	4,589	2,509	n/a	3,597	n/a	n/a
2001	129	89	6,445	2,872	1,633	n/a	4,300	n/a	n/a
2002	132	102	6,860	5,048	1,620	n/a	2,440	n/a	n/a
2003	134	79	5,346	3,943	2,611	n/a	3,016	n/a	n/a
2004	124	88	6,647	3,635	2,130	n/a	2,894	n/a	n/a
2005	134	81	4,611	2,126	1,572	n/a	2,134	n/a	n/a
2006	132	83	4,389	3,179	1,215	212	1,999	n/a	n/a
2007	139	86	7,021	4,407	2,167	672	2,896	n/a	n/a
2008	148	37	9,344	3,971	4,038	n/a	4,631	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, Akiachak: 2003-2010.

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

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

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

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

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

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

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

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

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