

Kiana (*kai-ANN-uh*)

People and Place

Location

Kiana is located on a high bluff overlooking the confluence of the Kobuk and Squirrel Rivers. The community is 57 air miles east of Kotzebue, and 500 miles northwest of Anchorage. Kiana is located in the Northwest Arctic Borough and the Kotzebue Recording District. The area encompasses 0.2 square miles of land and zero square miles of water.^{1,2}

*Demographic Profile*³

In 2010, there were 361 residents in Kiana, making it the 146th largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population of Kiana remained relatively stable, falling from 385 to 361 (a decrease of 6.2%). According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased to just over 400 in the early part of the decade, before falling to just under the 1990 population level starting in 1998 (Table 1).

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that Kiana's population has a yearly peak during the spring, and that population fluctuations are not at all driven by employment in fishing sectors. Community leaders estimated the seasonal workforce and transient population to be roughly 30 people.

In 2010, the majority of Kiana residents identified themselves as American Indian and Alaska Native (90.3%), along with 6.6% that identified as White and 2.8% identifying with two or more races (Figure 1). Less than 1% of the population identified as Black or African American or as Hispanic or Latino. None of Kiana's residents identified as Native Hawaiian and Other Pacific Islander, Asian, or as some other race in 2010. Between 2000 and 2010, the percentage of the population identifying as American Indian and Alaska Native decreased slightly, and the percentage of the population identifying with two or more races increased by a similar margin.

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 Magdanz, J., D. Koster, L. Naves, and P. Fox. 2011. *Subsistence Harvests in Northwest Alaska Buckland and Kiana 2003 and 2006*. Alaska Dept. of Fish and Game, Technical Paper No. 363. Retrieved September 13, 2012 from <http://www.adfg.alaska.gov/techpap/TP%20363.pdf>.

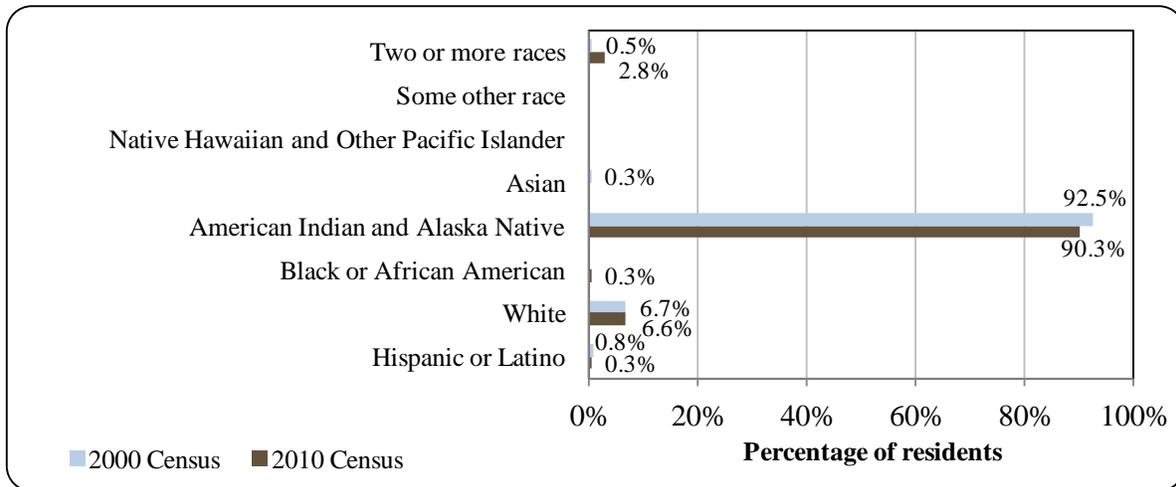
³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 1990 and 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

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

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	385	-
2000	388	-
2001	-	404
2002	-	400
2003	-	408
2004	-	396
2005	-	381
2006	-	399
2007	-	390
2008	-	383
2009	-	374
2010	361	-

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

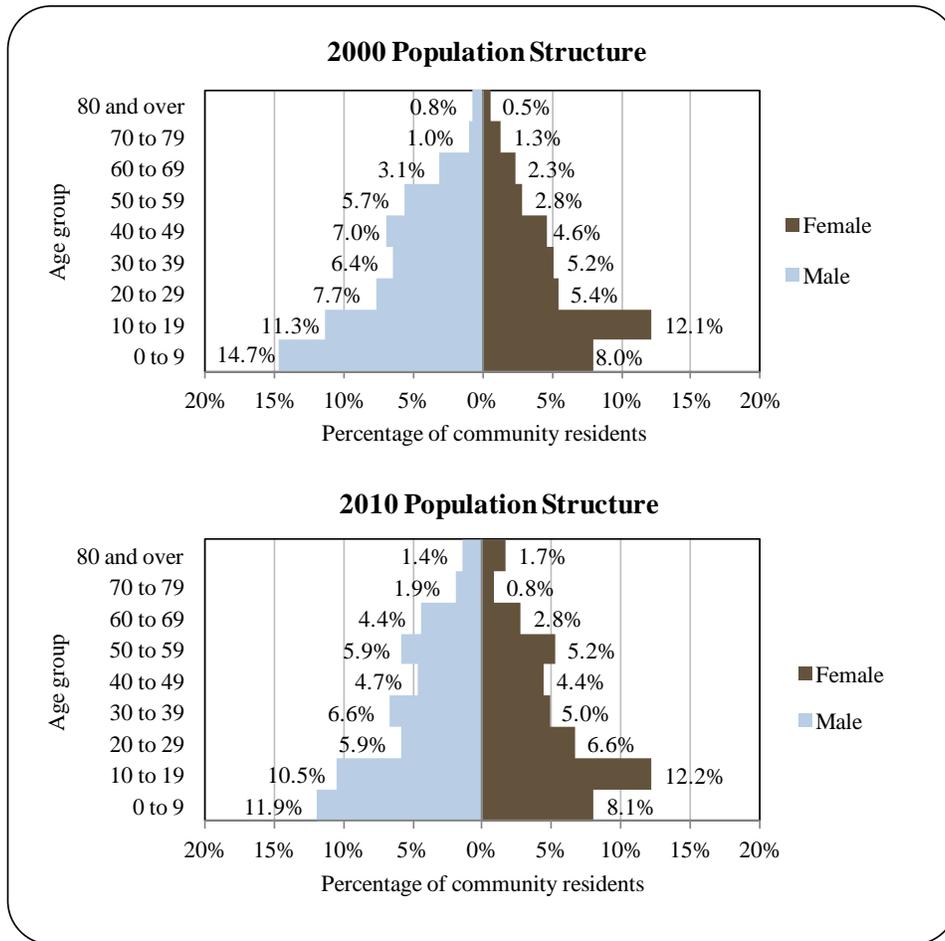


The average household size in Kiana decreased over time, from 4.2 persons per household in 1990 to 4 in 2000, and 3.57 persons per household in 2010. The decreasing number of individuals per household may be linked to an increase in the total number of occupied households over the same period, rising from 91 occupied housing units in 1990 to 97 in 2000, and 101 by 2010. The 2006 Kiana Community Comprehensive Development Plan reported that significant population increases in Kiana since the 1970s resulted in inadequate housing. The Northwest Inupiaq Housing Authority is the primary organization that has worked to construct

additional housing.⁴ Of the 142 housing units surveyed for the 2010 Decennial Census, 39.2% were owner-occupied, 31.5% were renter-occupied, and 29.4% were vacant. Between 1990 and 2010, no Kiana residents were reported to be living in group quarters.

In 2010, the gender makeup of Kiana’s population was 53.2% male and 46.8% female, slightly more weighted toward males than the gender distribution statewide (52% male, 48% female). That year, the median age in Kiana was estimated to be 26.9 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska of 33.8 years. Compared with 2000, the population structure in 2010 was slightly more evenly dispersed among age groups. For example, in 2000, 46.1% of residents were under the age of 20, compared to 42.7% in 2010, and 9% were over the age of 59 in 2000, compared to 13% in 2000. Age distribution by gender cohort was also slightly more even in 2010 than in 2000. In 2010, the greatest absolute gender difference occurred within the 0 to 9 age range (11.9% male, 8.1% female), followed by the 10 to 19 (10.5% male, 12.2% female) and 30 to 39 (6.6% male, 5.0% female) ranges. The overall population structure of Kiana in 2000 and 2010 is shown in Figure 2.

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



⁴ Northwest Arctic Borough Planning Department. 2006. *Kiana Community Comprehensive Development Plan 2006-2016*. Retrieved September 13, 2012 from <http://www.nwabor.org/forms/kianaplan.pdf>.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁵ estimated that 79.4% of Kiana residents aged 25 and over held a high school diploma or higher degree in 2010, significantly less than the estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 12.4% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 8.2% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 19.4% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; 1.8% of resident held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and 4.1% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Kiana is a traditional Inupiat Eskimo village practicing a subsistence lifestyle. The name Kiana means "a place where three rivers meet."⁶ The Kobuk River was one of the last areas of Alaska explored by Westerners, with the earliest expeditions in the 1880s. In the 1800s, the traditional Inupiat society in the Kiana area was the Akunigmiut, meaning "the people in between two other things". The 'other things' were the nearby Inupiat societies of Kuuṅmiut of the Kobuk delta and the Kuuvaum Kanjaniigmiut of the upper Kobuk River. Traditional Akugigmiut winter villages were all located upstream of the modern village of Kiana near productive subsistence areas by the Salmon and Hunt Rivers. Archaeological evidence from the eastern boundary of Akugigmiut territory suggests that the area has been inhabited for 8,500 years, with continuous Eskimo inhabitation for the past 4,000 years.⁷ The people of the Kobuk River are also known as Kowagmiut, or 'big river people'. Since the late 1800s, Kiana has been a central village of the Kowagmiut people.^{8,9}

With the Nome gold rush of 1898, hundreds of prospectors entered the Kobuk River. No gold was found during this first rush, and most of the prospectors left the following year. However, a small number of miners stayed and a gold deposit was later discovered in 1909 near Kiana at Klery Creek. A boom in development took place in Kiana following this discovery, including construction of a post office, hotel, saloon, jail, and restaurant. During this period, Inupiat from surrounding villages began to abandon old winter settlements and consolidate in Kiana.¹⁰ At its height, the Klery Creek gold mine supported as many as 200 miners, and by 1931, more than \$600,000 in gold had been removed from Klery Creek and five other creeks in the

⁵ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶ 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.

⁷ Magdanz, James, David Koster, Liliana Naves, and Patricia Fox. 2011. *Subsistence Harvests in Northwest Alaska Buckland and Kiana 2003 and 2006*. Alaska Dept. of Fish and Game, Technical Paper No. 363. Retrieved September 13, 2012 from <http://www.adfg.alaska.gov/techpap/TP%20363.pdf>.

⁸ Hodge, P. W., (ed.). 1907. *Handbook of American Indians North of Mexico, Part I*. Smithsonian Institution, Bureau of American Ethnology, Bulletin 30. Washington Government Printing Office.

⁹ See footnote 6.

¹⁰ See footnote 7.

area.¹¹ A post office was established in 1915, and the City was incorporated in 1964. Prior to the formation of the Northwest Arctic Borough in 1976, a Bureau of Indian Affairs (BIA) high school provided education for students from surrounding villages, including Noatak, Shungnak, and Ambler, who traveled to Kiana and boarded with local residents.¹²

Today, the way of life in Kiana continues to revolve around subsistence. Sale of alcohol in Kiana is limited the city-owned store.¹³

Natural Resources and Environment

Kiana is located in a transitional climate zone, influenced by both maritime and Arctic climates. Temperatures average -10 to 15 °F during winter and 40 to 60 °F during summer, and temperature extremes have been recorded from -54 to 87 °F. Snowfall averages 60 inches per year, along with 16 inches of total precipitation. The Kobuk River is ice-free from the end of May to early October.¹⁴ The Kobuk River is located at the northern boundary of the boreal forest, and much of the landscape is characterized by open woodlands and thick tundra.¹⁵

In 1980, much of the traditional area of the Iñupiaq was protected as national parks, preserves, monuments, and wildlife areas under the Alaska National Interest Lands Conservation Act (ANILCA).¹⁶ One of the goals of the legislation was to protect the viability of subsistence resources.¹⁷ Kiana is located in close proximity to several of these areas, including Kobuk Valley National Park and Wilderness, Noatak National Preserve, and the Selawik National Wildlife Refuge (NWR).

Kobuk Valley National Park is 1.7 million acres stretching from the Baird Mountains in the north to the Kobuk Sand Dunes of the Kobuk River in the south.¹⁸ The Noatak National Preserve is made up of 6.5 million acres. The National Preserve is surrounded by the Baird and DeLong Mountains of the Brooks Range.¹⁹ The 2.15 million acre Selawik NWR, managed by the U.S. Fish and Wildlife Service, is situated east of Kotzebue Sound. Refuge lands include 240,000 acres of designated Wilderness Area. The approximately 21,000 lakes on NWR lowlands create a very large Arctic tundra lake complex that is comparable in scale and ecological significance to any found on Alaska's other NWR lands, providing important habitat for migratory waterfowl.²⁰

¹¹ Reed, I. 1932. *Report on the Placer Deposits of the Squirrel River Gold Field*. Territory of Alaska, Department of Mines.

¹² See footnote 6.

¹³ Ibid.

¹⁴ Ibid.

¹⁵ National Park Service. 2012. *Kobuk Valley National Park*. Retrieved September 13, 2012 from <http://www.nps.gov/kova/>.

¹⁶ Alaska National Interest Lands Conservation Act (ANILCA). December 2, 1980. Public Law 96-487, 96th Congress. Retrieved February 6, 2012 from <http://alaska.fws.gov/asm/anilca/toc.html>.

¹⁷ See footnote 15.

¹⁸ Ibid.

¹⁹ National Park Service. 2011. *Noatak National Preserve*. Retrieved February 6, 2012 from <http://www.nps.gov/noat/>.

²⁰ U.S. Fish and Wildlife Service website. *Selawik National Wildlife Refuge*. Retrieved February 15, 2012 from <http://selawik.fws.gov/>.

Also under ANILCA, 330 miles of the Noatak River, 70 miles of the Salmon River, and 160 miles of the Selawik River were designated as a National Wild and Scenic Rivers.^{21,22} Historically, these rivers served as important travel corridors for local residents to access subsistence harvest areas, and they remain important travel routes for both humans and wildlife today.²³ The Western Arctic Caribou herd – the largest caribou herd in Alaska at about 490,000 individuals – migrates between the coastal plain and the tundra of these protected areas on its way to and from calving grounds. A large variety of animals and plants are found in the region. Mammals include brown bear, black bear, wolves, lynx, Dall's sheep, moose, red fox, wolverine, and numerous other furbearers.²⁴

Gold mining began in the Kiana area in the early 1900s, and limited gold development interest is still present in the region.²⁵ Today, mining in Northwest Alaska is dominated by Red Dog Mine, the largest producer of zinc in Alaska. In 2010, the mine accounted for almost half of Alaska's mineral production value, making up 49% of the total value of mining operations in Alaska that year. The mine is 100% owned by Teck Resources Ltd., a Canadian mining company, under a 1982 agreement signed with the regional Native corporation, Northwest Alaska Native Association (NANA) Regional Corporation, Inc., which owns the land.²⁶ The agreement specifies that the mine must 1) protect subsistence and the Inupiaq way of life, 2) create lasting jobs for NANA shareholders, 3) provide opportunities for NANA's youth, and 4) act as a catalyst for regional economic benefits.²⁷ In addition, jade is mined at the Jade Mountain Mine in the Kiana mining district.^{28,29}

With regard to natural hazards, Kiana is particularly susceptible to risks of erosion, flooding, wildfire, and severe weather, including cold temperatures and high winds.³⁰ Warming temperatures due to climate change have exacerbated some of these risks, leading to increased erosion rates of riverbanks and thawing permafrost along rivers, under lakes, and across the tundra. Climate changes have also led to shifts in species distributions, affecting harvest of some traditional subsistence resources such as caribou.³¹

²¹ National Wild and Scenic Rivers System. (n.d.) *Alaska Rivers*. Retrieved September 13, 2012 from <http://www.rivers.gov/rivers/alaska.php>.

²² See footnote 16.

²³ Ibid.

²⁴ See footnotes 15 and 19.

²⁵ Magdanz, James, David Koster, Liliana Naves, and Patricia Fox. 2011. *Subsistence Harvests in Northwest Alaska Buckland and Kiana 2003 and 2006*. Alaska Dept. of Fish and Game, Technical Paper No. 363. Retrieved September 13, 2012 from <http://www.adfg.alaska.gov/techpap/TP%20363.pdf>.

²⁶ Szumigala, D.J., L.A. Harbo, and J.N. Adleman. *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

²⁷ NANA Regional Corporation. 2010. *Red Dog Mine*. Retrieved February 6, 2012 from <http://www.nana.com/regional/resources/red-dog-mine/>.

²⁸ Mindat.org. 2011. *Jade Mountain Mine*. Retrieved September 13, 2012 from <http://www.mindat.org/loc-198197.html>.

²⁹ 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.

³⁰ Rural Alaska Mitigation Planning. 2009. *Northwest Arctic Borough Multi-Jurisdictional All-Hazards Mitigation Plan*. Retrieved September 13, 2012 from <http://www.nwabor.org/forms/FinalPlan.pdf>.

³¹ ANTHC Center for Climate and Health. 2011. *Climate Change in Kiana, Alaska: Strategies for Community Health*. Retrieved September 14, 2012 from http://www.tribesandclimatechange.org/docs/tribes_412.pdf.

According to the Alaska Department of Environmental Conservation, no active environmental cleanup sites were located near Kiana as of August 2012.³²

Current Economy³³

In the 2011 AFSC survey, community leaders indicated that the Kiana economy depends heavily on subsistence fishing and sport hunting and fishing. Some of the most important subsistence resources include chum salmon, freshwater fish, moose, caribou, waterfowl, and berries. In addition to subsistence harvest activities, local residents supplement their income with cash employment. Some of the top year-round employers in Kiana include the school, City, the three local general stores, and the regional Native association, the Maniilaq Association. Seasonal employment is also available on river barges, firefighting for the Bureau of Land Management.³⁴ Some mining also provides employment in the area, including jade produced from Jade Mountain Mine in the Kiana mining district,³⁵ and zinc produced at Red Dog Mine.³⁶ Between 2000 and 2010, a small number of Kiana residents were also involved in the Kotzebue salmon gillnet fishery, although no permits were actively fished during this period (see *Commercial Fishing* section). In addition, there is local interest in development of a freshwater fish processing facility, and the City is interested in developing an ecotourism industry focused on guided river trips to the Great Kobuk Sand Dunes.³⁷

Based on household surveys conducted for the 2006-2010 ACS,³⁸ in 2010, the per capita income in Kiana was estimated to be \$15,682 and the median household income was estimated to be \$43,438. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$11,534 and \$39,688, respectively). However, if inflation is taken into account by converting the 2000 values to 2010 dollars,³⁹ per capita income appears to have remained relatively stable, increasing only slightly from a real per capita income of \$15,167, and real median household income appears to have declined, from a \$52,189 in 2000. In 2010, Kiana ranked 197th of 305 Alaskan communities with per capita income data that year, and 171st in median household income, out of 299 Alaskan communities with household income data.

Kiana's small population size may have prevented the ACS from accurately portraying economic conditions.⁴⁰ An alternative estimate of per capita income is provided by economic

³² Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved August 24, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

³³ Unless otherwise noted, all monetary data are reported in nominal values.

³⁴ See footnote 29.

³⁵ See footnote 28.

³⁶ See footnote 26.

³⁷ Northwest Arctic Borough Planning Department. 2006. *Kiana Community Comprehensive Development Plan 2006-2016*. Retrieved September 13, 2012 from <http://www.nwabor.org/forms/kianaplan.pdf>.

³⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 1990 and 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁴⁰ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Noatak in 2010 is \$9,391,^{41,42} slightly lower than the per capita income reported for the year 2000. This suggests that caution is warranted when citing per capita income stability in Kiana between 2000 and 2010. Low per capita income levels are supported by the fact that the community was recognized as “distressed” by the Denali Commission in 2011,⁴³ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a smaller percentage of Kiana’s population (60.7%) was estimated to be in the civilian labor force in 2010 compared to the percentage of the statewide population in the civilian labor force (68.8%). That same year, 30.2% of Kiana residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate in Kiana was estimated to be 16.4%, more than twice the statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 21.6%, almost double the statewide unemployment rate estimate of 11.5%.⁴⁴

Also based on the 2006-2010 ACS, approximately half of Kiana’s workforce was estimated to be employed in the public sector (51.6%), and the other half in the private sector (48.4%). Of the 95 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in the following industries: educational services, health care, and social assistance industries (22.1%), public administration (18.9%), services other than public administration (15.8%), retail trade (12.6%), and transportation, warehousing, and utilities (11.6%). Occupations in which the greatest percentages of the civilian labor force were estimated to be employed included management, business, science and arts (44.2%), production, transportation, and material moving occupations (29.5%), and service occupations (15.8%). Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 182 employed residents in Kiana in 2010, of which 64.8% were employed in local government occupations, 9.9% in educational and health services, 9.3% in natural resources and mining, 4.9% in professional and business services, 1.6% in information, 1.6% in leisure and hospitality, 1.1% in financial activities, 1.1% in state government, 0.5% in construction, and 1.1% in other industries.⁴⁵ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

⁴¹ 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/>.

⁴² See footnote 38.

⁴³ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁴⁴ See footnote 41.

⁴⁵ Ibid.

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

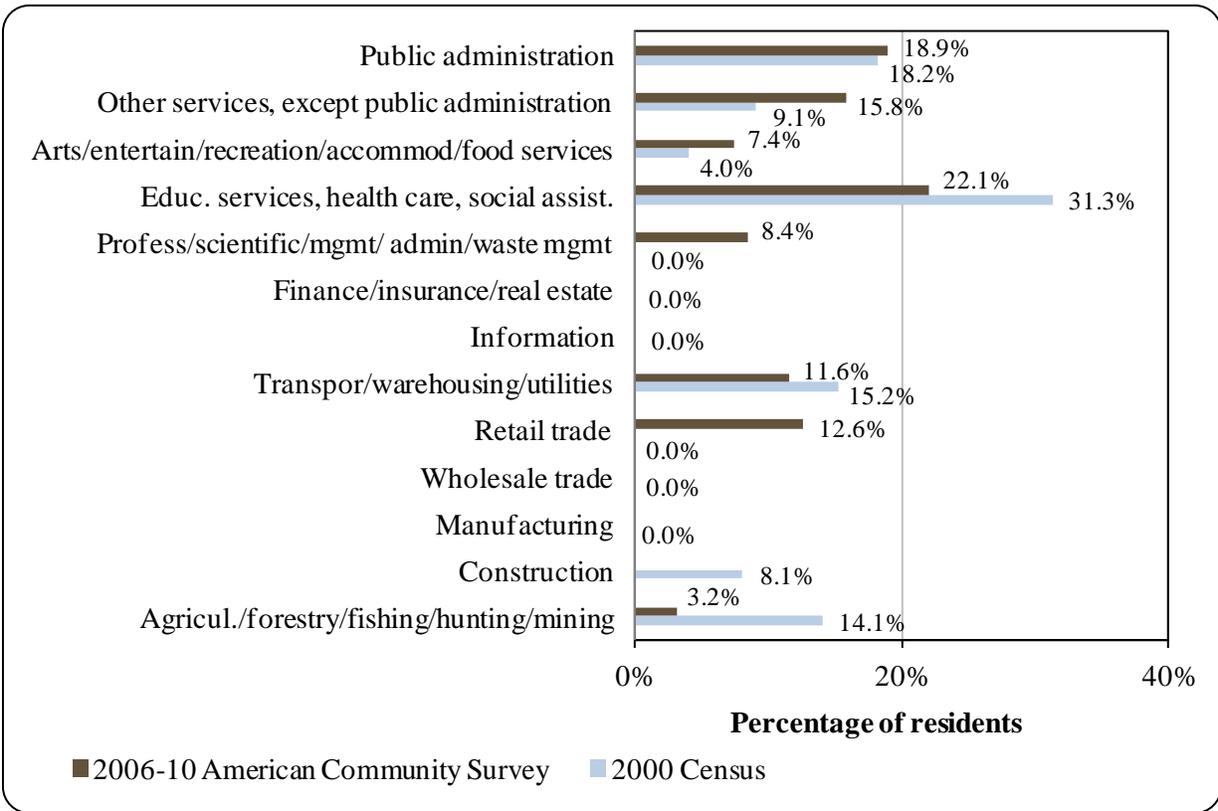
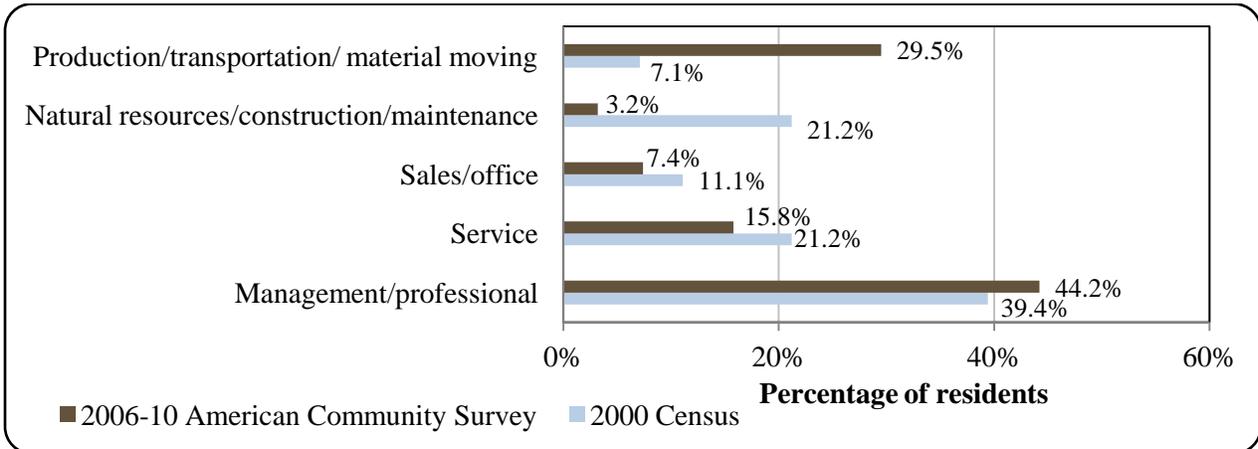


Figure 4. Local Employment by Occupation in 2000-2010, Kiana (U.S. Census).



Governance

Kiana is a 2nd Class City located in the Northwest Arctic Borough. It was incorporated in 1964, and has a “Strong Mayor” form of government, with a 6-person city council including the Mayor, an 11-person school board, 7-person planning commission, and a number of municipal employees. The City administers a 3% sales tax.⁴⁶ In addition to sales tax revenue, other locally-generated revenue sources in Kiana between 2000 and 2010 included leases and rentals of buildings, enterprise revenues including fees for water and sewer, cable TV, and fuel sales, property sale, and equipment rentals. Outside revenue sources included shared funds from a variety of programs and grants in some years. Shared funds came from the State of Alaska through the State Revenue Sharing program from 2000-2003 (approximately \$30,000 per year) and the Community Revenue Sharing program in 2009 and 2010 (approximately \$115,000 each year). Kiana also received state shared funds through a telephone / electric co-op tax refund and the SAFE Communities program (public safety, utilities, infrastructure, etc.). State grants provided funds toward building renovations, water and sewer line improvements, landfill cleanup, and purchase of bulk fuel. This information about selected municipal revenue streams in Kiana is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kiana 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	\$615,356	\$25,407	\$30,841	n/a
2001	\$740,943	\$24,797	\$30,841	n/a
2002	\$791,339	\$34,614	\$29,803	n/a
2003	\$646,463	\$24,438	\$29,679	n/a
2004	\$852,255 ⁶	\$35,000 ⁶	n/a	n/a
2005	\$732,140	\$22,810	n/a	n/a
2006	\$789,597	\$26,078	n/a	n/a
2007	\$641,159	\$48,852	n/a	n/a
2008	\$746,236	\$30,905	n/a	n/a
2009	\$483,157	\$28,279	\$116,150	n/a
2010	\$905,011	\$58,813	\$115,538	n/a

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

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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

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

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

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

⁶ This number reflects the year’s budget estimate rather than actual figures reported in a certified financial statement.

⁴⁶ 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.

Kiana was included under the Alaska Native Claims Settlement Act (ANCSA) and is federally recognized as a Native village. The authorized traditional entity, recognized by the BIA, is the Native Village of Kiana. The regional Native corporation to which Kiana belongs is the NANA Regional Corporation. In 1972, most village corporations in the region merged with NANA Regional Corporation, with the exception of the village corporation for Kotzebue, known as Kikiktagruk Inupiat Corporation. NANA Regional Corporation now has title to 2,082,052 surface acres, including 115,200 that were originally titled to Kiana's Native village corporation.^{47,48}

Kiana is a member village of the Maniilaq Association, a tribal non-profit corporation that provides health and social services to residents of Northwest Alaska. The Maniilaq Association is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Originally called NANA, it was renamed Maniilaq when the NANA Regional Corporation was formed to avoid confusion between the names.⁴⁹ Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.⁵⁰ The Maniilaq Association coordinates tribal and traditional assistance programs, and environmental and subsistence protection services in the region.⁵¹

The closest offices of the Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Commerce, Community, and Economic Development are located in Kotzebue. The closest offices of the Alaska Department of Natural Resources and U.S. Bureau of Citizenship and Immigration Services are located in Fairbanks, although the Anchorage offices of these agencies may be more accessible by air to people of this region. The closest office of the National Marine Fisheries Service (NMFS) is located in Anchorage.

Infrastructure

Connectivity and Transportation

Kiana is primarily accessible by air, as well as small boat and snowmobile. The state-owned Bob Baker Memorial Airport has a 3,400 feet long by 100 feet wide lighted gravel runway. Daily scheduled flights and charter flights are provided by Bering Air, ERA Alaska, and Ryan Air Service.⁵² An air taxi service operates in Kiana. As of June 2012, roundtrip airfare from Anchorage to Kiana was \$700.⁵³

Crowley Marine Services barges fuel and supplies to Kiana each summer and local store owners have large boats to bring supplies upriver. Local transportation takes place using boats, ATVs, snowmachines, and some trucks owned locally. A road connects Kiana to Kobuk camp,

⁴⁷ Ibid.

⁴⁸ NANA Regional Corporation. 2003. "Introduction." *NANA Lands website*. Retrieved February 2, 2012 from <http://www.nanalands.com/introduction.htm>.

⁴⁹ Maniilaq Association website. 2003. *Company Information*. Retrieved February 2, 2012 from <http://www.maniilaq.org/companyInfo.html>.

⁵⁰ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁵¹ See footnote 49.

⁵² See footnote 46.

⁵³ Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

and a network of old trading trails is still in use.⁵⁴ Community leaders reported in the 2011 AFSC survey that there are plans to expand the road system within the next 10 years.

Facilities

In 2004, provision of city services shifted from the City of Kiana to the Village Council.⁵⁵ The Village Council operates a piped water and sewer system which serves the clinic, school, community hall, and 73 homes. Water is sourced from two wells near the Kobuk River. A 200,000 is intermittently filled, and water is chlorinated prior to distribution. Sewage is collected via a 6-inch buried gravity sewer system, which is piped to a sewage lagoon northeast of the village for treatment. Nineteen households that are not connected to the pipe system haul water and use honeybuckets or septic tanks. Some outhouses are also in use in Kiana.⁵⁶ In the 2011 AFSC survey, community leaders indicated that improvements to water and sewer pipelines are expected within the next 10 years. The Village Council does not provide refuse collection services, and individuals are responsible delivering their own refuse to a landfill operated by UIC Construction, Inc. The landfill is located west of the sewage disposal lagoon.⁵⁷ Community leaders reported in the 2011 AFSC survey the relocation of the landfill should be completed within the next 10 years.

Electricity in Kiana is provided by a diesel plant operated by the Alaska Village Electric Cooperative. Safety services are provided by state troopers posted in Kotzebue as well as a Village Police Officer stationed in Kiana. The City has a public safety building that includes holding cells. Fire and rescue services are provided by the City Fire Hall, the City Volunteer Fire Department, and Project Code Red. The City also maintains its own volunteer fire department with equipment provided by Project Code Red. Additional community facilities include the City Office, the Council Building, a bingo hall, a Boys and Girls Club, a school gymnasium, a school library, and post office. Visitor accommodations are provided by Kiana Lodge. Local telephone services are provided by OTZ Telephone Co-op Inc, and long distance service is provided by four different private companies.⁵⁸ In the 2011 AFSC survey, community leaders reported that Kiana plans to install broadband internet access within the next ten years. Community leaders also indicated that improvements are currently underway on the local fire department and emergency response system, as well as the local library. In addition, community leaders reported the presence of job placement services, publicly subsidized housing, and a food distribution program in Kiana.

Additional development priorities identified in the 2006 Kiana Community Comprehensive Plan included access to a gravel source, construction of a multi-purpose building to be used by the Village Council and post office, a bigger office complex with improved facilities, a Native Store, home construction, weatherization, renovation, and additions for tribal members, development of a new valley subdivision, and a community park for outdoor recreation.⁵⁹

⁵⁴ 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.

⁵⁵ Northwest Arctic Borough Planning Department. 2006. *Kiana Community Comprehensive Development Plan 2006-2016*. Retrieved September 13, 2012 from <http://www.nwabor.org/forms/kianaplan.pdf>.

⁵⁶ See footnote 54.

⁵⁷ Ibid.

⁵⁸ Ibid.

⁵⁹ See footnote 55.

With regard to fisheries-related infrastructure, community leaders reported in the 2011 AFSC survey that the community is planning to build a new barge landing area in 2013, and that the construction of new dock space and improvement of existing docks is currently in progress. Currently they reported there is not public dock space for permanent and transient vessels moorage. Community leaders indicated that mechanical boat repair services are available in Kiana. In addition, they noted the presence of sport fish lodges in the community.

Medical Services

The Kiana Health Clinic, operated by the Maniilaq Association, provides residents with basic medical services. The Clinic is a Community Health Aide Program site. Emergency Services have river and air access. Emergency service is provided by volunteers and the health aide.⁶⁰ The nearest hospital is located in Kotzebue.

Educational Opportunities

There is one school in Kiana. As of 2011, the school had 112 students and 13 teachers. Kiana is located in the Northwest Arctic Borough School District.⁶¹

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest historically formed the basis of life for Native people living along the Kobuk River. According to one elder interviewed for an oral history project, “Before Kiana was established, there were Inupiat living along the river and fishing and hunting all through the area. For their settlements, people selected sites which were ideal for fishing and hunting.”⁶² Historically, in summer Akunigmiut women historically operated fish camps along the main river and focused on harvest and preservation of whitefish and salmon. Akunigmiut men walked north to hunt for caribou and sheep in the Baird Mountains during the summer season. In winter, families returned to winter villages and continued subsistence harvest using fish traps, snared caribou and small game, and made preparations for the summer harvest season.⁶³

Subsistence remains fundamental to the economy and way of life in Kiana today.⁶⁴ According to a survey of subsistence harvest conducted by ADF&G in 2007, the most important aquatic subsistence species in Kiana, in terms of harvest volume, are chum salmon, whitefish, and sheefish. Burbot, northern pike, coho salmon, bearded seal, and other resources are also harvested in Kiana.⁶⁵ In the 2011 AFSC survey, community leaders reported that subsistence

⁶⁰ See footnote 54.

⁶¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁶² Piquik Lee, L., R. Tatqaviñ Sampson, and E. Tennant, Eds. 1992. *Lore of the Inupiat: The Elders Speak, Volume 3*. Northwest Arctic Borough School District.

⁶³ Magdanz, James, David Koster, Liliana Naves, and Patricia Fox. 2011. *Subsistence Harvests in Northwest Alaska Buckland and Kiana 2003 and 2006*. Alaska Dept. of Fish and Game, Technical Paper No. 363. Retrieved September 13, 2012 from <http://www.adfg.alaska.gov/techpap/TP%20363.pdf>.

⁶⁴ See footnote 54.

⁶⁵ See footnote 63.

harvest is the primary fishing activity in Kiana, and indicated that there are no local commercial fisheries. However, it is important to note that several Kiana residents did participate in commercial fisheries between 2000 and 2010 as permit holders, crew license holders, or vessel owners (see *Commercial Fishing* section), and some sportfishing activity was also reported in Kiana and the Northwest Arctic region (see *Recreational Fishing* section).

Kiana is located in the Arctic Management Area. A Fishery Management Plan (FMP) for the Arctic Management Area was approved by the Secretary of Commerce in August 2009. Initially, the FMP prohibits commercial fishing in the federal waters of the Beaufort and Chukchi seas until more information is available to support sustainable fisheries management.⁶⁶ In state regulated waters of the Arctic Management Area, several small fisheries occur, including a small fishery for chum salmon in the Kotzebue Sound region.⁶⁷ The Kotzebue Sound salmon fishery is the northernmost commercial salmon fishery in Alaska. Over 99% of the salmon harvested in this fishery are chum salmon returning to the Kobuk and Noatak Rivers. Commercial harvest of salmon first occurred in the Kotzebue area in 1909 when Native fishermen sold salmon to gold miners. Starting in 1914, salmon were canned and sold to miners in the upper Kobuk drainage. This small industry ceased after 1918. The modern commercial fishery began in 1962, and catch peaked in 1981 with 680,000 chum commercially harvested. Since 1995, poor market conditions and variable processing capacity and interest have caused harvests to fall short of their potential. Due to limited opportunities to sell their catch, the number of active permits in the Kotzebue salmon fishery had declined over the last 30 years. Very few of the 173 total set gillnet permits have been used in recent years.⁶⁸ Fish caught in the Kotzebue salmon fishery are primarily sold to local markets, although some are shipped to markets outside the Arctic region.⁶⁹

In the 2011 AFSC survey, community leaders reported that Kiana actively participates in fisheries management processes in Alaska. This participation includes sending a representative to sit on regional fishery advisory and/or working groups run by ADF&G and a representative to participate in the Federal Subsistence Board or Federal Regional Advisory Council process. Kiana is not eligible to participate in the Community Development Quota or Community Quota Entity programs.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Kiana does not have a registered processing plant. However, between one and five fish buyers were active in the nearby City of Kotzebue between 2000 and 2010, as well as one shore-side processor in 2004 and 2005 (see the Community Profile for Kotzebue). In addition, there is local interest in Kiana to develop a freshwater fish processing facility.⁷⁰

⁶⁶ NOAA National Marine Fisheries Service, Alaska Regional Office. (n.d.). *Arctic Fisheries*. Retrieved February 6, 2012 from <http://www.fakr.noaa.gov/sustainablefisheries/arctic/>.

⁶⁷ North Pacific Fishery Management Council. August 2009. *Arctic Fishery Management Plan*. Retrieved February 29, 2012 from <http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/Arctic/ArcticFMP.pdf>.

⁶⁸ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁶⁹ See footnote 67.

⁷⁰ Northwest Arctic Borough Planning Department. 2006. *Kiana Community Comprehensive Development Plan 2006-2016*. Retrieved September 13, 2012 from <http://www.nwabor.org/forms/kianaplan.pdf>.

Fisheries-Related Revenue

Between 2000 and 2010, no information was reported regarding fisheries-related revenue was received by the community of Kiana (Table 3).⁷¹ Although no information was available regarding these revenue sources, community leaders reported in the 2011 AFSC survey that a number of public services in Kiana are at least partially supported or funded by fisheries-related revenue. These services include the Kiana Health Clinic, road maintenance, the water and sewer system, police enforcement, fire protection, educational scholarships, and other social services.

Commercial Fishing

Between 2000 and 2010, Kiana residents held a small number of Commercial Fisheries Entry Commission (CFEC) permits in all years, and in some years during the period were also engaged in fisheries as crew license holders and vessel owners. The number of Kiana residents holding state CFEC permits fluctuated between two and three per year. All of these permits were held in the Kotzebue salmon gillnet fishery, and none were actively fished in any year during the 2000-2010 period. No other permits were held by Kiana residents in state or federal fisheries between 2000 and 2010, and no residents held quota share accounts in federal catch share fisheries for halibut, sablefish, or crab. Permit information is presented in Table 4, and federal catch share information is presented in Tables 6 through 8.

From 2000 to 2002, two fishing vessels were primarily owned by Kiana residents, and two vessels were homeported in the community, while no vessels were owned or homeported locally from 2003 to 2010 (Table 5). Given the lack of fish buyers or processing facilities in Kiana, no vessels were recorded as delivering landings locally, and no ex-vessel revenue was generated in the community. This information about the commercial fishing sector in Kiana is presented in Table 5, and Kiana landings and revenue information is also presented in Table 9. Information about landings and ex-vessel revenue generated by Kiana vessel owners, including all delivery locations, is considered confidential from 2000 to 2002 due to the small number of participants, and given the lack of vessel owners from 2003 to 2010, no landings by Kiana vessel owners are reported in those years (Table 10).

⁷¹ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared fisheries business tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries resource landing tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>\$615,356</i>	<i>\$740,943</i>	<i>\$791,339</i>	<i>\$646,463</i>	<i>\$852,255⁶</i>	<i>\$732,140</i>	<i>\$789,597</i>	<i>\$641,159</i>	<i>\$746,236</i>	<i>\$483,157</i>	<i>\$905,011</i>

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

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

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

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

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

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

⁶ This number reflects the year's budget estimate rather than actual figures reported in a certified financial statement.

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

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

Table 4 cont'd. Permits and Permit Holders by Species, Kiana: 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	2	2	2	2	2	2	3	3	3	2	2
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	2	2	2	2	2	3	3	3	2	2
<i>Total CFEC Permits²</i>	<i>Permits</i>	2	2	2	2	2	2	3	3	3	2	2
	<i>Fished permits</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>% of permits fished</i>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	<i>Permit holders</i>	2	2	2	2	2	2	3	3	3	2	2

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

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

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

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

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

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

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

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

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

Source: (NMFS) 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 Kiana: 2000-2010.

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

Source: (NMFS) 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 Islands Crab Catch Share Program Participation by Residents of Kiana: 2000-2010.

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

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

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

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

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

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

² Totals only represent non-confidential data.

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

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

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

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

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

² Totals only represent non-confidential data.

Recreational Fishing

Sportfishing activity was minimal in Kiana between 2000 and 2010. In some years during the period, one licensed sport fish guide was present in the community, while no active sport fish guide businesses were present in any year. The number of sportfishing licenses purchased each year by residents of Kiana (irrespective of point of sale) varied between 18 and 42 per year. From 2002 to 2010, the number of sportfishing licenses sold in the community fluctuated between 14 and 50 per year. In most years, the number of sportfishing licenses sold in Kiana was slightly greater than the number sold to Kiana residents, indicating that sportfishing activities may attract a small number of visitors to the community.

According to the 2011 AFSC survey, community leaders reported that most sportfishing in Kiana takes place from private boats owned by local residents. They also indicated that chum and coho salmon are the primary species targeted by sport fishermen near Kiana. The Alaska Statewide Harvest Survey,⁷² conducted by ADF&G between 2000 and 2010, noted sportfishing activity in freshwater only, and noted the following species as targeted by private anglers in Kiana: chum salmon, Arctic grayling, northern pike, and sheefish. No kept/release log book data were reported for sportfishing charters out of Kiana between 2000 and 2010.⁷³

Kiana is located within Alaska Sport Fishing Survey Area X – Northwest Alaska. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, Alaska resident anglers consistently fished a greater number of days than non-Alaska resident anglers in both freshwater and saltwater, and freshwater sportfishing activity was significantly higher than in saltwater. On average between 2000 and 2010, Alaska resident anglers fished 3,251 fresh water days and 582 saltwater days, while non-Alaska resident anglers fished on average 1,690 freshwater and 64 saltwater days. This information about the sportfishing sector in and near Kiana is also displayed in Table 11.

⁷² 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).

⁷³ Alaska Department of Fish and Game. 2011. Alaska sport fish charter logbook database, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Kiana: 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 Kiana ²
2000	0	1	24	0
2001	0	1	23	0
2002	0	1	31	21
2003	0	1	22	34
2004	0	0	21	38
2005	0	0	23	14
2006	0	0	18	24
2007	0	0	42	50
2008	0	1	36	42
2009	0	1	21	28
2010	0	1	31	45

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	14	1,875	1,779	3,388
2001	296	114	2,986	2,508
2002	0	132	1,297	4,988
2003	15	1,698	1,807	2,601
2004	17	332	1,892	3,463
2005	19	35	1,309	1,755
2006	0	452	1,764	4,570
2007	65	62	1,146	3,754
2008	0	407	2,421	1,593
2009	138	815	1,160	5,318
2010	137	478	1,027	1,828

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

In the 2011 AFSC survey, community leaders reported that subsistence harvest is the primary fishing activity in Kiana, and that close to 60% of local residents participate in subsistence fishing activities. Further, an ADF&G survey of 2006 subsistence harvest activity in Kiana found only one household that did not use some type of subsistence foods.⁷⁴ According to ADF&G's Community Subsistence Information System (CSIS), in 2006, 63% of households participated in salmon subsistence, 14% in marine mammals subsistence, 4% in marine invertebrate subsistence, and 51% in non-salmon fish subsistence (other than halibut). No information was reported regarding the percentage of households participating in halibut subsistence. CSIS data suggest that Kiana residents harvested 348 pounds of marine and land-based resources per capita that year. This information about household participation and per capita subsistence harvest is presented in Table 12.

Results of the 2006 ADF&G subsistence survey included species-level information about household harvest and use of marine invertebrates, non-salmon fish, and marine mammals. Kiana households reported harvesting two species of marine invertebrates: king crab and clams. Non-salmon fish species harvested by Kiana households included sheefish, whitefish, burbot, Dolly Varden char, northern pike, smelt, herring, least cisco, and saffron cod.⁷⁵ According to data reported in the CSIS, a total of 1,346 lbs of marine invertebrates and 38,274 lbs of non-salmon fish were harvested by Kiana residents in 2006 (Table 13). In addition, Kiana households reported using a variety of marine mammal resources. A small percentage of Kiana households (5%) were reported to be involved in the harvest of one marine mammal species – bearded seal, while a higher percentage (14%) was reported to use bearded seal for subsistence. A number of other marine mammal species were also reported used by Kiana households, although no households were reported to participate in their harvest. These species included ringed seal, spotted seal, and bowhead whale. The fact that a significant percentage of households had access to marine mammal resources without participating directly in harvest can be explained by strong subsistence support ties between households in Kiana and the coastal communities of Kotzebue and Barrow.⁷⁶

Information about subsistence salmon permits was available from ADF&G for four years of the 2000-2010 period. During these four years, Kiana households were issued an average of 90 subsistence salmon permits, and an average of 71 permits was returned. Chum were the most targeted salmon species, with an average of 3,791 chum harvested per year. A smaller number of coho, pink, sockeye, and Chinook salmon were also harvested by Kiana residents in each of the four years. Information about subsistence salmon harvest is presented in Table 13.

Between 2000 and 2010, no additional data were reported by management agencies regarding subsistence harvest of Pacific halibut (Table 14) or marine mammals (Table 15).

⁷⁴ Magdanz, J., D. Koster, L. Naves, and P. Fox. 2011. Subsistence Harvests in Northwest Alaska Buckland and Kiana 2003 and 2006. Alaska Dept. of Fish and Game, Technical Paper No. 363. Retrieved September 13, 2012 from <http://www.adfg.alaska.gov/techpap/TP%20363.pdf>.

⁷⁵ Ibid.

⁷⁶ Ibid.

Table 12. Subsistence Participation by Household and Species, Kiana: 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	63%	n/a	14%	4%	51%	348
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, Kiana: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	88	51	n/a	2,876	107	n/a	74	n/a	n/a
2001	88	67	n/a	5,379	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	95	90	15	3,010	68	80	n/a	n/a	n/a
2004	87	77	3	3,897	61	45	n/a	n/a	n/a
2005	n/a	n/a	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	1,346	38,274
2007	n/a	n/a	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	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, Kiana: 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	n/a	n/a	n/a
2010	n/a	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, Kiana: 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.