

Kokhanok (KOCK-hone-ack)



People and Place

*Location*¹

Kokhanok is located on the south shore of Iliamna Lake, 22 miles south of Iliamna, 88 miles northeast of King Salmon, and 207 miles southwest of Anchorage. The community occupies 21.3 square miles of land and 0.1 square miles of water. Kokhanok is unincorporated and is located in the Lake and Peninsula Borough.

*Demographic Profile*²

In 2010, there were 170 residents in Kokhanok ranking it as the 211th largest of 352 Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population increased by 11.8%. Between 2000 and 2009, the population grew by 5.8% and there was an average annual growth rate of 0.14%, which was lower than the statewide average of 0.75% and indicative of modest growth. However, the population declined between 2000 and 2010; highlighting differences between U.S. Decennial Census and State estimates. Information regarding population trends can be found in Table 1.

The population of Kokhanok is primarily Yup'ik, Athabascan, and Aleut. In 2010, 80.0% of residents identified themselves as American Indian or Alaska Native, compared to 86.8% in 2000; 9.4% identified themselves as White, compared to 8.0% in 2000; 10.0% identified themselves as two or more races, compared to 4.0% in 2000; and 0.6% identified themselves as some other race, compared to 1.1% in 2000 (Figure 1). In addition, 1.8% of residents identified themselves as Hispanic or Latino, compared to 1.1% in 2000.

In 2010, the average household size in Kokhanok was 3.27, compared to 4.0 in 1990 and 3.35 in 2000. In that year, there were a total of 65 housing units, compared to 41 in 1990 and 59 in 2000. Of the households surveyed in 2010, 54% were owner-occupied, compared to 54% in 2000; 26% were renter-occupied, compared to 34% in 2000; 5% were vacant, compared to 2% in 2000; and 15% were occupied seasonally, compared to 10% in 2000. No residents lived in group quarters between 1990 and 2010.

In 2010, the gender distribution of Kokhanok was 47.1% male and 52.9% female. This was more female biased than both the gender distribution statewide (52.0% male, 48.0% female) and distribution in 2000 (51.3% male, 48.7% female). The median age that year was estimated to be 27.0 years, which was lower than both the statewide median of 33.8 years and 2000 median of 29.5 years.

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

² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

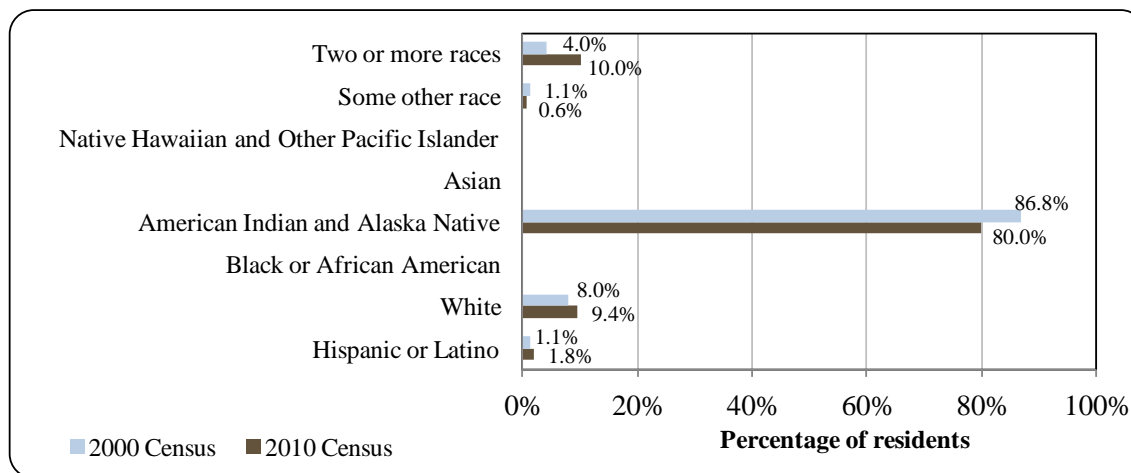
Table 1. Population in Kokhanok from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	152	-
2000	174	-
2001	-	172
2002	-	179
2003	-	181
2004	-	167
2005	-	179
2006	-	169
2007	-	174
2008	-	177
2009	-	184
2010	170	-

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

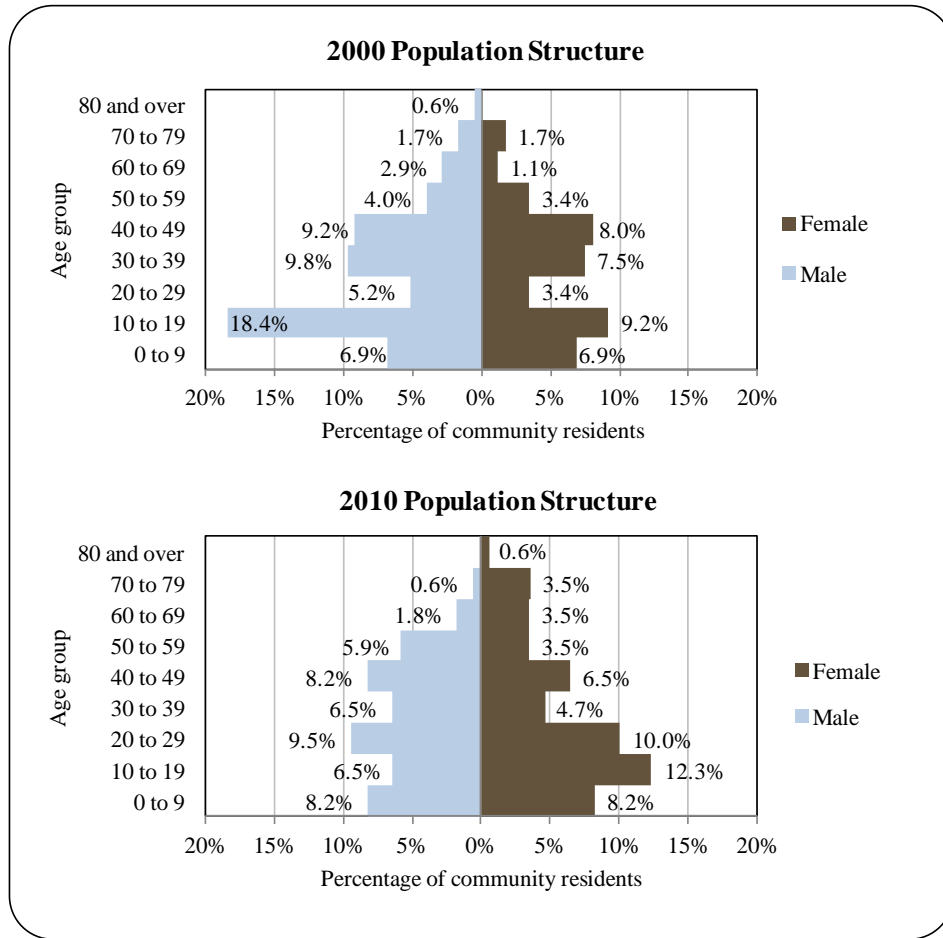


Compared with 2000, the population structure in 2010 was somewhat more constricted. In that year, 35.2% of residents were under the age of 20, compared to 41.4% in 2000; 6.5% were over the age of 59, compared to 8% in 2000; and 35.3% were between the ages of 30 and 59, compared to 41.9% in 2000. The largest change in distribution from 2000 to 2010 occurred in the 10 to 19 age group (18.8% in 2000 compared to 27.6% in 2000) and the 20 to 29 age group (19.5% in 2010 compared to 8.6% in 2000).

Gender distribution by age cohort was slightly more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 10 to 19 age range (6.5% male,

12.3% female), followed by the 70 to 79 (0.6% male, 3.5% female) and 40 to 49 (8.2% male, 6.5% female) ranges. Of those three, the greatest relative gender difference occurred within the 10 to 19 range. Further information regarding trends in Kokhanok’s population structure can be found in Figure 2.

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



In terms of educational attainment, the 2006-2010 American Community Survey (ACS)³ estimated that 93.8% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, no resident had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 6.3% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 50% had some college but no degree,

³ 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.

compared to an estimated 28.3% of Alaskan residents overall; 3.1% of resident held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and no resident held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

The Dena'ina people have occupied the Iliamna Lake region historically. During the early 1800s, Russian fur traders moved into the area, and conflicts with local inhabitants ensued. There are 14 historic, 14 prehistoric, and 2 mixed historic/prehistoric sites within the region.⁴

According to oral history, Kokhanok was founded by a group of “misfits” who were looking for a place to call home, where hunting and fishing were good. The village began as two settlements of familial groups living along the south shore of Lake Iliamna.⁵

This fishing village was first listed in the U.S. Census in 1890 by A.B. Schanz. The community was relocated to higher ground a few years ago when the rising level of Iliamna Lake threatened several community buildings.⁶

Natural Resources and Environment

Kokhanok lies in the transitional climatic zone. Average summer temperatures range from 40 to 64 °F (4 to 18 °C); winter temperatures average 3 to 30 °F (-16 to -1 °C). The record high is 84 °F (29 °C) and the record low -47 °F (-44 °C). Precipitation averages 32 inches annually, with 89 inches of snowfall. Wind storms and ice fog are common during winter.⁷

The region surrounding Kokhanok is characterized by a variety of landscapes, including mountains, fast-flowing rivers, tundra, marshy lowlands, and ponds. Most of the land is covered by, depending on elevation and location, alpine tundra, low or tall shrublands, or areas of mixed broadleaf and spruce trees. The region is characterized by steep and mountainous terrain except for the major river drainages and areas around the larger lakes. Drainage basins on the east end of Iliamna Lake include the Pike, Iliamna, and Copper rivers. Major waterbodies include east Iliamna Lake and Gibraltar, Kokhanok, Meadow, Moose, and Upper and Lower Copper lakes. Topographic relief is significant with over 4,600 feet from Iliamna Lake to the summit of Three Sisters Mountain, all within about six miles of the shore. Vegetation consists of alpine tundra and barrens at higher elevations, and a mixture of short and tall shrub thickets throughout the remainder. Riparian areas are populated by mixed spruce and broadleaf stands.⁸

Most of the region's resources are associated with subsistence uses by local communities, and commercial recreation related to sportfishing during the summer. There are no known areas of state land with grazing, agriculture, or commercial harvest potential.⁹

⁴ Alaska Dept. of Natural Resources. (n.d.). *Region 9: Eastern Iliamna Lake. Summary of Resources and Uses in the Region*. Retrieved September 6, 2012 from:

http://dnr.alaska.gov/mlw/planning/areaplans/bristol/pdf/bbap_ch3_reg09.pdf.

⁵ Kokhanok Tribal Council. (2004). *A Well Made Basket: The Kokhanok Community Plan*. Retrieved September 6, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Kokhanok-GCP-2004.pdf>.

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 Ibid.

⁸ See footnote 4.

⁹ Ibid.

Mineral resources in the area are associated with mafic intrusive occurring north of Pedro Bay and east of Kokhanok. A wide range of minerals are represented by these occurrences including copper, molybdenum, gold, silver, and arsenic. Fog Lake presents the most significant gold deposit in the area, with secondary occurrences of silver and minor copper values. There has also been significant exploration. There is little oil and gas potential in the area as the bedrock in the region consists predominately of a mix of volcanic, intrusive, and metamorphic terrains. Wildlife within the region includes significant moose and caribou populations as well as many species of freshwater and anadromous fish. Moose rutting areas occur near Kokhanok, on non-state lands, and calving areas occur along the Pile River. Caribou frequent small portions of the region, although there are no known rutting or calving areas. Brown bears concentrate along streams throughout the region. Freshwater sport fish are generally prolific and, along with sockeye salmon, provide the basis for the commercial and sport fish industries.¹⁰

According to the *Lake and Peninsula Borough Hazard Mitigation Plan*, wildfire is the community's number one concern in terms of environmental hazards. The community is located in a heavily vegetated area, with a high concentration of standing dead spruce trees resulting from widespread spruce bark beetle infestation. Hot wildfires can easily be intensified by high winds, which are commonplace in the community. The village has responded to several wildfires in the past, although residents report that fire response equipment is nonexistent. In addition to wildfires, the community is also concerned about effects from nearby volcanism. These effects could manifest in the form of ash fallouts and reduced air quality.¹¹

The Pebble copper-gold-molybdenum site is located approximately 25 miles north of Newhalen, at the divide between the Kuktuli River and Uppler Talarik Creek.¹² Northern Dynasty Minerals Limited calls the Pebble deposit, "one of the greatest stores of mineral wealth ever discovered," and estimates that the deposit includes 5.94 billion tons in the measured and indicated category, including 55 billion lbs of copper, 66.9 million ounces of gold and 3.3 billion lbs of molybdenum, and 4.84 billion tons in the inferred category, including 25.6 billion lbs of copper, 40.4 million ounces of gold and 2.3 billion lbs of molybdenum.¹³ Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon. Iliamna Lake is the source of the Kvichak River System, the single most important salmon-producing watershed in the Bristol Bay area.¹⁴

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation projects active within Kokhanok in 2010.¹⁵

¹⁰ Ibid.

¹¹ Missal, J.; and Smith, M. (2009). *Lake and Peninsula Borough Multi-Hazard Mitigation Plan*. Retrieved September 6, 2012 from:

http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

¹² Parker, G. Y., F. M. Raskin, C. A. Woody, and L. Trasky. 2008. Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska's Large Mine Permitting Process. *Alaska Law Review* 25:1.

¹³ Northern Dynasty Minerals Limited website. 2012. *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

¹⁴ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹⁵ Alaska Dept. of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved September 6, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy¹⁶

Kokhanok's economy is largely subsistence based, as wage employment is limited. The largest year-round employer in the community is the local school, followed by the local Village Council. Commercial fishing provides seasonal employment, and many residents seek additional wage employment outside of Kokhanok in areas such as the North Slope oil fields. Residents identified several areas of potential economic growth including tourism, retail, construction, and other local services.¹⁷

In 2010,¹⁸ the per capita income was estimated at \$10,388 and the median household income was estimated at \$30,125, compared to \$7,732 and \$19,583 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,¹⁹ the real per capita income (\$10,167) and real median household income (\$25,751), indicating that while individual earnings remained largely the same, household earnings declined. In 2010, Kokhanok ranked 268th of 305 communities from which per capita income was estimated, and 247th of 299 communities from which median household income was estimated.

However, Kokhanok's small population size may have prevented the ACS from accurately portraying economic conditions.²⁰ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$1.54 million in total wages in 2010.²¹ When matched with the 2010 Decennial Census population, the per capita income equals \$9,088, which is slightly less than what the ACS estimated.²² This low level of per capita income led the Denali Commission to qualify the community as "distressed," indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.²³

According to 2006-2010 ACS estimates,²⁴ 55.0% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 8.8%, compared to an estimated 5.9% statewide; and an estimated 40.3% of residents lived below the poverty level, compared to an estimated 9.5% of Alaskan residents overall. Again, Kokhanok's small population size may have prevented the ACS from accurately capturing economic

¹⁶ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁷ Lake and Peninsula Borough. (n.d.). *Kokhanok Community Action Plan*. Retrieved September 6, 2012 from: [http://www.lakeandpen.com/vertical/sites/%7B0B64B15E-4D75-4DD6-ACBB-14563D943AB9%7D/uploads/Kokhanok_Community_Plan\(2\).pdf](http://www.lakeandpen.com/vertical/sites/%7B0B64B15E-4D75-4DD6-ACBB-14563D943AB9%7D/uploads/Kokhanok_Community_Plan(2).pdf).

¹⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁹ 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>).

²⁰ 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.

²¹ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

²² 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/>.

²³ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

²⁴ See footnote 20.

conditions. Based on 2010 ALARI estimates, which were based on unemployment insurance claimants, the unemployment rate (26.5%) was over three times the ACS estimate. In 2005, only 16% of employed residents were employed year-round.²⁵ It should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy. An elevated poverty or unemployment rate can be misleading considering that many residents are working full time in the subsistence economy. Nevertheless, opportunities for wage employment are still important considering that many supplies necessary for daily life require purchasing.

Of those employed in 2010,²⁶ an estimated 51.4% worked in the private sector and an estimated 48.6% worked in the public sector. By industry, most (37.8%) were estimated to work in public administration sectors; followed by transportation, warehousing, and utilities sectors (21.6%); and agriculture, forestry, fishing, hunting, and mining sectors (16.2%). Between 2000 and 2010, local employment by industry sector diversified significantly. In 2000, most employed residents worked in education services, healthcare, and social assistance sectors (66.7%), with public administration sectors and transportation, warehousing, and utilities sectors accounting for 5.1% and 7.7% of sector employment, respectively. By 2010, estimated employment in education services, healthcare, and social assistance sectors had declined to 8.1%. According to 2010 ALARI estimates,²⁷ most (65.3%) employed residents worked in local government sectors; followed by natural resources and mining sectors (7.1%); professional and business sectors (5.1%); and educational and health service sectors (5.1%). Both the ACS and DCRA estimates conflict with Lake and Peninsula Borough's report that the local school is the community's largest employer.²⁸ This may be attributed to the fact that many residents hold positions outside the community. Therefore, ALARI employment statistics on occupations may be more representative of regional employers than local ones.

According to 2010 ALARI estimates, most employed residents held education related occupations; followed by construction or labor, oil and gas, and janitorial occupations. According to ACS, estimates of occupational employment, most (32.4%) employed residents held sales or office positions; followed by production, transportation, or material moving (27.0%); management or professional (18.9%); service (10.8%); and natural resources, construction, or maintenance positions (10.8%). As with employment by industry sector, employment by occupation type diversified between 2000 and 2010. In 2000, a significant proportion of employed residents held management or professional positions (61.5%). However, by 2010, only an estimated 18.9% of residents held those occupation types, while all other occupations (with the exception of service occupations) experienced significant proportional gains. Information regarding ACS employment trends can be found in Figures 3 and 4.

²⁵ Krieg, T. M.; Holen, D. L.; and Koster, D. (2009). *Subsistence Harvests and Uses of Wild Resources in Igiugig, Kokhanok, Koliganek, Levelock, and New Stuyahok, Alaska, 2005*. Technical Paper No. 322. Retrieved September 7, 2012 from: <http://www.subsistence.adfg.state.ak.us/TechPap/tp322.pdf>.

²⁶ See footnote 18.

²⁷ See footnote 22.

²⁸ See footnote 17.

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

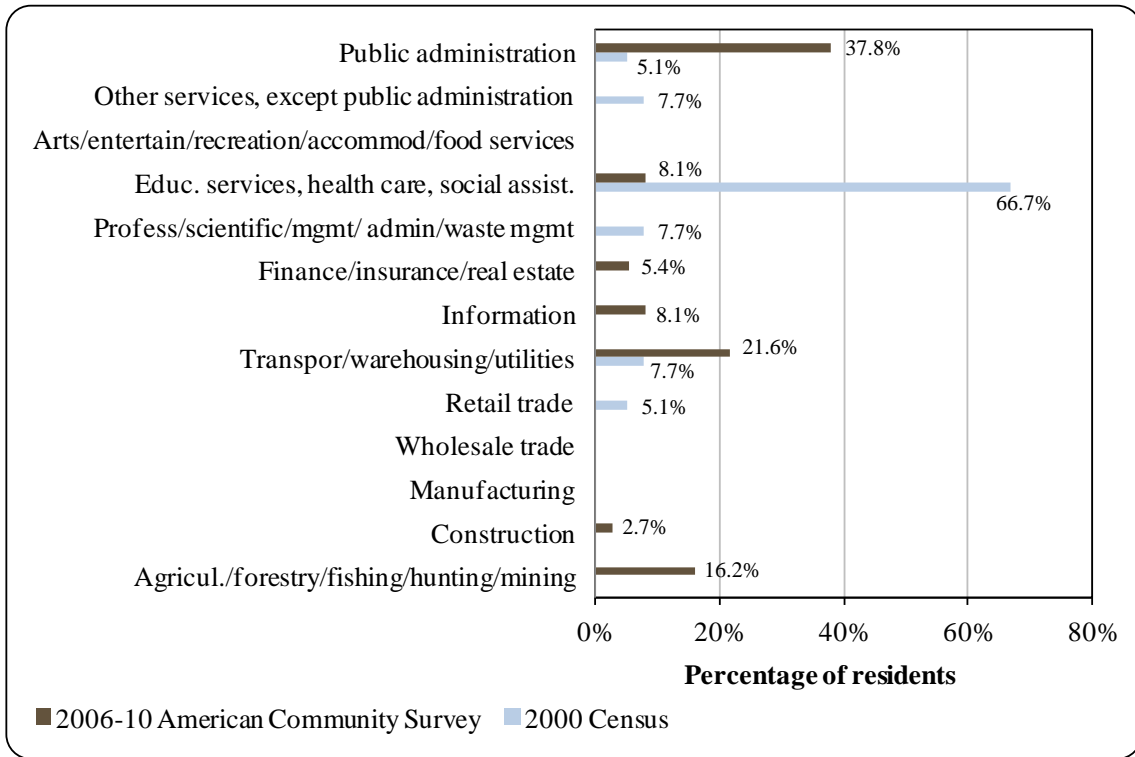
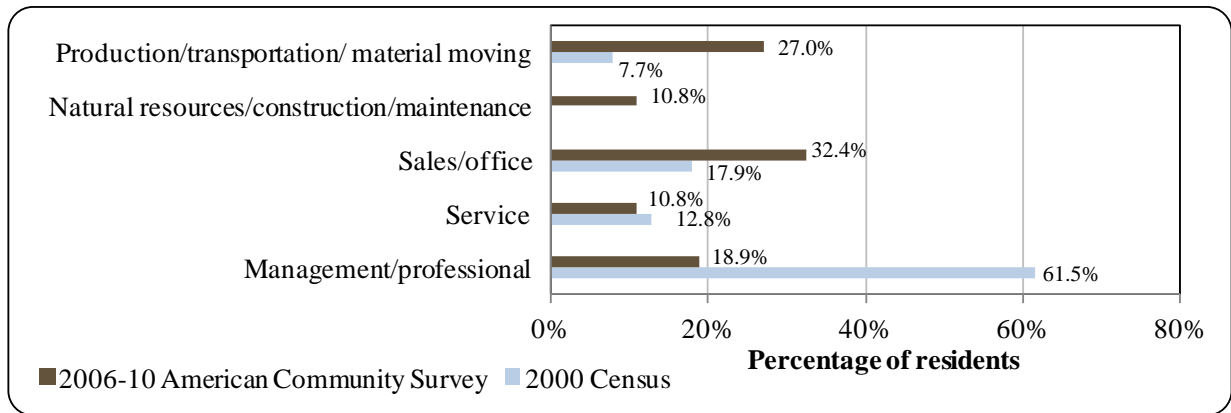


Figure 4. Local Employment by Occupation in 2000-2010, Kokhanok (U.S. Census).



Governance

Kokhanok is an unincorporated village under the jurisdiction of the Lake and Peninsula Borough. In addition, there is a federally recognized tribal government located in Kokhanok. The sale of alcohol is prohibited within the community. Kokhanok is unincorporated and unable to collect municipal taxes or fees. However, it was reported that in 2002, the community was awarded \$2.5 million in public grants for a harbor feasibility and design project (Table 2)

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

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	\$2,500,000
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 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.

The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Kokhanok is the Bristol Bay Native Corporation, and the local ANCSA chartered non-profit is the Bristol Bay Native Association. The ANCSA chartered village corporation is Alaska Peninsula Corporation. Kokhanok is also a member of the Nilavena Consortium of Villages.

The closest National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services offices are located in Anchorage, 207 miles northeast. The closest Alaska Department of Fish and Game (ADF&G) office is located in King Salmon, 88 miles southwest.

Infrastructure

*Connectivity and Transportation*²⁹

Kokhanok is accessible by air and water. There is a state-owned 3,300-ft long by 75-ft wide gravel airstrip and a seaplane base. Freight service is provided by air and barge, and large amounts of freight are delivered in the summer by barge either up the Kvichak River from

²⁹ Kokhanok Tribal Council. (2004). *A Well Made Basket: The Kokhanok Community Plan*. Retrieved September 6, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Kokhanok-GCP-2004.pdf>.

Naknek, or by Cook Inlet or Pile Bay portages. Small freight is delivered by Desert Air, Iliamna Air Taxi, or Lake and Peninsula Air.

Residents can generally travel to Iliamna and Anchorage through Iliamna Air Taxi or Birchwood Air Service, with Iliamna Air Taxi providing scheduled air service. Travel to Dillingham, King Salmon, and other communities typically require chartering. Local travel is done primarily by ATV, skiff, or snowmobile.

Facilities

Kokhanok generates power only during the summer months; in winter, electricity is purchased from the school district. Kokhanok Electric is operated by the village council. The village council also operates a piped water and sewer system that serves 35 households. Water is also available through a central watering point, a community well source, and individual wells. Water is neither filtered nor chlorinated before distribution. The school operates its own well and water treatment facility. The Kokhanok Improvement Corporate operates a “washeteria” in the community, and privies pits and sewage pits are available in the community. The Village Council collects refuse.³⁰

Safety services are provided by a Village Public Safety Officer in Kokhanok and a state trooper post in McGrath. The community also maintains its own volunteer fire department with equipment provided through Project Code Red and additional fire and rescue services provided by the Kokhanok First Responders. Kokhanok also has a post office and local and long-distance telephone services provided by Alaska Communications Systems of the Northland and AT&T. Internet access is currently only available in the school and is provided by GCI.³¹

Kokhanok lacks port or harbor infrastructure. There is a local boat landing area, and a new barge landing is scheduled for completion in 2013.³²

*Medical Services*³³

The Kokhanok Clinic provides residents with basic medical needs and is operated by the Bristol Bay Area Health Corporation. Kokhanok is an isolated location it is part of the Southern Emergency Medical Services Region. Emergency services are provided by a community health aide. Additional long-term, specialized, and acute medical services are provided in Dillingham and Anchorage.

Educational Opportunities

Kokhanok School provides preschool through 12th grade instruction. As of 2011, there were 28 students enrolled and 6 teachers employed.³⁴ Some residents participate in distance

³⁰ 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.

³¹ Ibid.

³² Lake and Peninsula Borough. (n.d.). *Kokhanok Community Action Plan*. Retrieved September 6, 2012 from: [http://www.lakeandpen.com/vertical/sites/%7B0B64B15E-4D75-4DD6-ACBB-14563D943AB9%7D/uploads/Kokhanok_Community_Plan\(2\).pdf](http://www.lakeandpen.com/vertical/sites/%7B0B64B15E-4D75-4DD6-ACBB-14563D943AB9%7D/uploads/Kokhanok_Community_Plan(2).pdf).

³³ See footnote 30.

³⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

learning opportunities through the Rural Alaska Native Adult Program provided by the University of Alaska and Alaska Pacific University.³⁵

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The region surround Iliamna Lake is both a historic and contemporary subsistence use area and is heavily used by villages along the Lake and Nushagak/Mulchatna drainages. Most subsistence activity in the region is concentrated around the Nondalton area, north of Kokhanok.³⁶ Iliamna Lake and surrounding drainages and lakes provide popular subsistence areas, and many locals rely on sockeye salmon and freshwater seal.

Kokhanok residents participate exclusively in the Bristol Bay salmon fishery, which began in 1888 (although residents did not participate until later). In 1883, the exploratory vessel *Neptune* anchored in Nushagak Bay to assess potential commercial salmon prospects. Plentiful runs prompted a cannery to be built at the village of Kanulik. By the late 1880s, canneries were built at Scandinavian Creek, Kanakanak, and Clark's Point. Gillnetters flocked to the region and by 1890, canneries were producing more product than there were buyers. This posed a problem for packers, who reacted by forming the Alaska Packers Association in order to control production. By 1895, landings in Bristol Bay reached five million sockeye and new canneries were built on the Ugashik, Egegik, Naknek, and Kvichak Rivers.³⁷

The Spanish American War and Klondike Gold Rush bolstered the demand for canned salmon in the late nineteenth and early twentieth century's. By 1901, there were 18 canneries throughout Bristol Bay, and landings reached 10 million sockeye. Mechanization and industry expansion increased production substantially, causing it to peak in 1912 at 20 million salmon landed by over 1,000 gillnetters. For the next seven years, production would range between 20 and 25 million. Fueled by demand for canned salmon during World War I, canneries operated 24 hours a day, seven days a week, and recorded record profits. This caused a major crash in sockeye runs throughout Bristol Bay in 1919.³⁸

Following the salmon crash, the White Act of 1924 assigned the federal government with managing the Alaska salmon fishery and mandated a 50% escapement rate. This prompted fishery closures and gear restrictions including the abolishment of powerboats, purse seines, and fish traps. However, new regulations being put in place were rarely enforced during the early years following the passage of the White Act.³⁹

Commercial salmon fishing prospered in the 1920s and early 1930s and accounted for 80% of tax revenues collected by the territorial government. However, variable runs, foreign

³⁵ See footnote 29.

³⁶ The Pebble Partnership. (2012). *Subsistence & Traditional Knowledge Studies*. Retrieved September 7, 2012 from: <http://www.arlis.org/docs/vol2/Pebble/2012%20Agency%20Meetings/29%20Subsistence%20and%20Traditional%20Resources%20-%20Steven%20Braund.pdf>.

³⁷ The Bristol Bay Economic Development Corporation. (2003). *An Analysis of Options to Restructure the Bristol Bay Salmon Fishery*. Retrieved March 14, 2012 from: <http://www.bbsalmon.com/FinalReport.pdf>.

³⁸ Ibid.

³⁹ Ibid.

encroachment, and the Great Depression stressed the industry and in 1935, only 3 million salmon were caught almost prompting a total shut-down of the Bristol Bay salmon fishery.⁴⁰

World War II brought significant changes to the Bristol Bay commercial fishing industry. Worker shortages prompted canneries to hire local labor and local fishermen and communities began to organize. In Dillingham, fishermen and cannery workers formed co-ops in 1944 to counter what was seen as an overly influential industry. Following World War II, salmon runs were once again in decline, although the Pacific Decadal Oscillation coupled with lower ocean productivity was to blame this time. However, further threats faced the industry from overfishing in the Bering Sea. By 1955, deep-sea catches by Japanese vessels reached 50 million salmon. Inshore catches on the other hand, averaged at 6.7 million sockeye annually during the 1950s. At this point, many seafood producers switched to more lucrative tuna, which became the iconic fish of the baby boom years.⁴¹

Following statehood in 1959, salmon management responsibility shifted to state managers. In Bristol Bay, this meant more aggressive forms of in-season management and escapement monitoring. Seasons were regulated according to in-season run strength indicators instead of pre-season forecasts. Despite rigorous management, salmon recovery was slow. Bristol Bay salmon fell to historic lows in 1973 when fewer than one million sockeye salmon were harvested. The state's response was both a scathing indictment of Japanese fishing effort and limits to fishery entry. Following an amendment to Alaska's constitution in 1972, the state issued transferable limited entry permits based on experience and economic dependence to the fishery. In 1976, the U.S. asserted jurisdiction over much of the outer continental shelf surrounding its coastlines. The 200-mile exclusive economic zone, along with revised Bering Sea fishing boarders and favorable environmental conditions, set the stage for salmon recovery.⁴²

Salmon returned to the Bristol Bay region in 1978, when after a weak sockeye season, a surge in pink salmon into the Nushagak River overwhelmed processing capacity for the region. Sockeye returned in force the following year, and strong demands elevated prices over \$1.00 per lb. In 1980, over 64 million sockeye returned to Bristol Bay and subsequent seasons remained strong. By 1988, sockeye prices rose to \$2.40 per lb. Average gross earnings by drift boat exceeded \$100,000 and the value of Bristol Bay drift permits surged to almost \$250,000. As permit value rose, entry into the fishery became increasingly contested and litigated, resulting in additional permits being issued. However, during this time Chile began exporting farmed salmon to Japan. While insignificant at first, salmon farming would soon subvert the Alaska salmon industry and cause a significant drop in prices. A year after salmon prices peaked, they dropped to \$1.09 per lb. By 1991, seafood processors were offering \$0.50 per lb which resulted in fishermen striking. Once again, the Japanese were the focus of ire, with many fishermen making accusations of price-fixing from Japanese-owned seafood processors. During that time, Bristol Bay still maintained record salmon harvests, with 45 million fish taken in 1995. Revenues remained high despite low prices due to large harvests. However, once again the fishery would falter, and once again the Pacific Decadal Oscillation was to blame.

In previous lean years, production shortages would drive prices up. However, the abundance of farmed fish within the market changed this. By 1997, the overall value of Bristol Bay salmon was cut in half from the previous year to \$63 million. Runs in years following were characterized by modest rebounds followed by more declines. In that time, Bristol Bay was

⁴⁰ Ibid.

⁴¹ Ibid.

⁴² Ibid.

declared both a state and federal disaster area and many permit holders opted to not participate in the 2001 season. In 2002, additional fishermen as well as several canneries and cold storage facilities opted out as well. In that year, the Bristol Bay drift permit once valued at \$250,000 was valued at less than \$20,000. In addition, total ex-vessel value of the fishery was down 90% from its peak in 1992.⁴³

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

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Kokhanok does not have a registered processing plant. The closest seafood processing facility is located in Naknek.

Fisheries-Related Revenue

Between 2000 and 2010 there was no known fisheries-related revenue received by the community of Kokhanok (Table 3).

Commercial Fishing

In 2010, 11 residents, or 6.5% of the population, held 10 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2010, eight residents held nine CFEC permits. The number of CFEC permits held in the community peaked in 2007 at 12. Of the CFEC permits held in 2010, 100% were for salmon and were used to fish in the Bristol Bay drift and set gillnet salmon fisheries.⁴⁴ Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits. In addition, no residents held halibut, crab, or sablefish quota between 2010 and when the programs began.

Residents held 21 commercial crew licenses in 2010, compared to 32 in 2000; which was also the year the number of crew licenses held in the community peaked. Also in 2010, residents held majority ownership of one commercial fishing vessel, compared to four in 2000.

No commercial landings were reported in Kokhanok between 2000 and 2010. Landings reported by residents of Kokhanok between 2000 and 2010 are considered confidential, with the exception of salmon landings in 2000 and 2001. In 2001, residents reported landing 134,415 lbs of salmon valued at \$56,641, compared to 115,309 lbs valued at \$75,642 in 2000. Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁴³ Ibid.

⁴⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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

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

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

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

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

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

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

Table 4. Permits and Permit Holders by Species, Kokhanok: 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	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	9	9	10	10	8	9	9	12	11	11	10
	Fished permits	8	8	7	8	6	8	8	11	9	9	7
	% of permits fished	89%	89%	70%	80%	75%	89%	89%	92%	82%	82%	70%
	Total permit holders	8	9	10	10	8	9	9	12	11	11	11
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>9</i>	<i>9</i>	<i>10</i>	<i>10</i>	<i>8</i>	<i>9</i>	<i>9</i>	<i>12</i>	<i>11</i>	<i>11</i>	<i>10</i>
	<i>Fished permits</i>	<i>8</i>	<i>8</i>	<i>7</i>	<i>8</i>	<i>6</i>	<i>8</i>	<i>8</i>	<i>11</i>	<i>9</i>	<i>9</i>	<i>7</i>
	<i>% of permits fished</i>	<i>89%</i>	<i>89%</i>	<i>70%</i>	<i>80%</i>	<i>75%</i>	<i>89%</i>	<i>89%</i>	<i>92%</i>	<i>82%</i>	<i>82%</i>	<i>70%</i>
	<i>Permit holders</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>10</i>	<i>8</i>	<i>9</i>	<i>9</i>	<i>12</i>	<i>11</i>	<i>11</i>	<i>11</i>

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

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

Table 5. Characteristics of the Commercial Fishing Sector in Kokhanok: 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 Kokhanok ²	Total Net Lbs Landed In Kokhanok ²	Total Ex-Vessel Value Of Landings In Kokhanok ²
2000	32	0	0	4	2	0	0	\$0
2001	21	0	0	4	2	0	0	\$0
2002	18	0	0	4	7	0	0	\$0
2003	25	0	0	6	4	0	0	\$0
2004	16	0	0	4	4	0	0	\$0
2005	26	0	0	4	3	0	0	\$0
2006	14	0	0	1	2	0	0	\$0
2007	16	0	0	1	3	0	0	\$0
2008	19	0	0	1	2	0	0	\$0
2009	16	0	0	1	1	0	0	\$0
2010	21	0	0	1	2	0	0	\$0

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

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

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

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

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

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

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lbs)
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 Kokhanok: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lbs)
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 Kokhanok: 2000-2010.

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

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

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

	<i>Total Net Lbs¹</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>

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 lbs 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 Kokhanok Residents:
2000-2010.

	<i>Total Net Lbs¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	115,309	134,415	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>115,309</i>	<i>134,415</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	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$75,642	\$56,641	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>\$75,642</i>	<i>\$56,641</i>	--	--	--	--	--	--	--	--	--

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

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

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

² Totals only represent non-confidential data.

Recreational Fishing

The Bristol Bay salmon sportfishing season typically begins by the end of May when Chinook salmon begin to enter Bristol Bay drainages. Dolly Varden, Arctic char, and grayling can often be found feeding on out-migrating salmon fry, and northern pike are active as well. Most of the Kvichak River and drainages flowing into Iliamna Lake remained closed to fishing until June 8, when rainbow trout fishing opens in eastern sections of the river. Chinook become more accessible in eastern portions of Bristol Bay drainages, and Arctic char, Dolly Varden, northern pike, and grayling remain active. Sockeye salmon become popular targets for anglers in July, and are plentiful in the Kvichak River early in the month. Chum salmon are found in abundance by mid-July, and some coho can be found by the end of the month. Chinook salmon are closed to sportfishing in most Bristol Bay drainages by the end of July. Coho salmon are most plentiful in August and September, and by October, sportfishing opportunities are primarily limited to resident fish. Throughout the winter months, rainbow trout, Dolly Varden, grayling, smelt, Arctic char, and northern pike can be targeted.⁴⁵

Because of Kokhanok's remote location and lack of visitor infrastructure, recreational fishing from within the community is limited. No sport fish guide businesses were registered within the community between 2002 and 2010, and only one was registered in 2000 and 2001 (although not active). In addition, no sportfishing licenses were sold within the community between 2000 and 2010. Residents held 19 sportfishing licenses in 2010, compared to 7 in 2000. The number of sportfishing licenses held by residents peaked in 2010.

Kokhanok is located in the Kvichak River Drainage ADF&G Harvest Survey Area, which includes all lakes and tributaries of the Kvichak River drainage. In 2010, there was a total of 25,681 freshwater angler days fished, compared to 31,145 in 2000. In that year, non-Alaska residents accounted for 78.1% of freshwater angler days fished, compared to 66.9% in 2000. Total angler days fished peaked in 2007 at 33,417. In each year, Alaska residents accounted for significantly less freshwater angler days fished than non-Alaska residents. Saltwater sportfishing made up a comparatively insignificant portion of angler days fished within the Survey Area. In 2010, there were 22 saltwater angler days fished, compared to 236 in 2000. In that year, non-Alaska residents accounted for 100% of saltwater angler days fished, compared to 28.8% in 2000. The number of saltwater angler days fished peaked in 2002 at 449. Further information regarding sportfishing trends can be found in Table 11.

⁴⁵ Alaska Dept. of Fish and Game. (n.d.). *Sport Fish Area Fishing Report – Bristol Bay*. Retrieved September 10, 2012 from: http://www.adfg.alaska.gov/sf/FishingReports/index.cfm?ADFG=R2.summary&Area_key=19&RecordID=40.

Table 11. Sport Fishing Trends, Kokhanok: 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 Kokhanok ²
2000	0	1	7	0
2001	0	0	12	0
2002	0	0	17	0
2003	0	0	8	0
2004	0	0	12	0
2005	0	0	14	0
2006	0	0	17	0
2007	0	1	15	0
2008	0	1	18	0
2009	0	1	17	0
2010	0	1	19	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	68	168	20,848	10,297
2001	214	43	21,554	8,202
2002	435	14	19,495	6,618
2003	74	50	18,248	5,831
2004	129	101	20,785	5,263
2005	38	79	22,156	4,179
2006	114	28	28,013	4,054
2007	229	38	30,340	3,077
2008	179	65	24,104	5,127
2009	0	0	17,234	6,514
2010	0	22	20,068	5,613

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

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence is an essential part of daily life for residents of Kokhanok. Without easy access to regional centers, the community is substantially dependent upon subsistence resources. Many families spend their summers at fish camps near the Gibraltar River.⁴⁶ Residents commonly harvest sockeye salmon along Iliamna Lake using set gillnets. Coho salmon are harvested at fish camps on Gibraltar Lake in late fall; spawning sockeye are harvested as well. Freshwater species are harvested along bays east of Kokhanok, as well as the surrounding smaller lakes and streams. Ice fishing for Arctic grayling and northern pike is popular in the spring. While sockeye are the most harvested subsistence species, moose and caribou are also extremely important. However, many residents feel that sport and predation management needs to be more responsive to the subsistence needs of community members. Freshwater harbor seals are an important subsistence food. Many residents hunt seal on islands or around haul-out points on the ice created by pressure cracks.

According to a survey conducted by ADF&G in 2005, 93% of Kokhanok households surveyed participated in salmon subsistence activities, 14% participated in halibut subsistence activities, 40% participated in marine mammal subsistence activities, 4% participated in marine invertebrate subsistence activities, and 43% participated in non-salmon fish subsistence activities (Table 12). Per capita harvest of those species was estimated at 556.5 lbs. In a similar ADF&G study of household subsistence participation in 2005, most (97.1%) of surveyed households reported using sockeye salmon; followed by Chinook (31.4%), coho (25.7%), chum (14.3%), and pink (11.4%) salmon. In addition, 65.7% reported using rainbow trout, 51.4% reported using Arctic char, 41.7% reported using Dolly Varden, 34.3% reported using grayling, 34.3% reported using northern pike, 34.3% reported using whitefish, 14.3% reported using halibut, 11.4% reported using lake trout, 17.1% reported using smelt, and 2.9% reported using lingcod. Finally, 40.0% of households reported using bearded seal, and 40.0% reported using freshwater harbor seal.⁴⁷

Of the species reported by ADF&G in Table 13, residents reported harvesting sockeye salmon the most often, followed by coho, chum, pink, and Chinook salmon. In 2008, residents reported harvesting 15,698 salmon, compared to 8,835 in 2000. Reported salmon harvests peaked in 2007 at 19,078 fish. In 2005, residents reported harvesting 6,544 lbs of non-salmon fish, and 73 lbs of marine invertebrates. Between 2009 and 2003, no residents were issued Subsistence Halibut Registration Certificates (SHARC) (Table 14). Although there is no data available specific to marine mammal harvests between 2000 and 2010 (Table 15), it is understood that residents harvest freshwater harbor seals. According to ADF&G's Community Subsistence Information System (CSIS),⁴⁸ species that Kokhanok residents have historically harvested or used include butter clams, Dungeness crab, freshwater clams, horse clams, octopus, littleneck clams, pinkneck clams, razor clams, shrimp, Tanner crab, bearded seal, harbor seal

⁴⁶ Lake and Peninsula Borough. (n.d.). *Kokhanok Community Action Plan*. Retrieved September 6, 2012 from: [http://www.lakeandpen.com/vertical/sites/%7B0B64B15E-4D75-4DD6-ACBB-14563D943AB9%7D/uploads/Kokhanok_Community_Plan\(2\).pdf](http://www.lakeandpen.com/vertical/sites/%7B0B64B15E-4D75-4DD6-ACBB-14563D943AB9%7D/uploads/Kokhanok_Community_Plan(2).pdf).

⁴⁷ Krieg, T. M., D. L. Holen, and D. Koster, D. (2009). *Subsistence Harvests and Uses of Wild Resources in Igiugig, Kokhanok, Koliganek, Levelock, and New Stuyahok, Alaska, 2005*. Technical Paper No. 322. Retrieved September 10, 2012 from: <http://www.subsistence.adfg.state.ak.us/TechPap/tp322.pdf>.

⁴⁸ 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).

(freshwater and saltwater), ringed seal, Steller sea lion, blackfish, broad whitefish, sculpin, burbot, Arctic char, Dolly Varden, flounder, grayling, herring, humpback whitefish, lake trout, cisco, lingcod, rainbow trout, rockfish, round whitefish, smelt, sucker, and stickleback.

Table 12. Subsistence Participation by Household and Species, Kokhanok: 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 (lbs)
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	93%	14%	40%	4%	43%	556.5
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, Kokhanok: 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	25	22	18	2	n/a	1	8,814	n/a	n/a
2001	n/a	n/a	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	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	25	21	18	6	12	43	11,869	n/a	n/a
2005	34	33	30	321	392	125	17,101	73	6,544
2006	28	21	12	17	13	8	19,028	n/a	n/a
2007	29	20	6	22	26	1	15,705	n/a	n/a
2008	26	21	7	5	n/a	2	15,684	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, Kokhanok: 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, Kokhanok: 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.