

Chenega Bay (*chuh-NEE-guh*)



People and Place

*Location*¹

Chenega Bay is located on Evans Island at Crab Bay, 42 mi southeast of Whittier in Prince William Sound (PWS). It is 104 mi southeast of Anchorage and 50 mi east of Seward. The community occupies 28.8 sq mi of land and 0.3 sq mi of water. Chenega Bay is unincorporated, located in the Valdez-Cordova Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*²

In 2010, there were 76 residents ranking Chenega Bay 273rd of 352 Alaskan communities in terms of population size. Overall since 1990, the population has declined by 19.1%. Between 2000 and 2009, the population declined by 17.44% with an average annual growth rate of -0.23%; lower than the statewide average of 0.75% and indicative of a downward trend despite the large variation in annual Alaska Department of Labor (DOL) estimates.

In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there were 60 permanent and 10 to 15 seasonal or transient residents living in Chenega Bay according to a 2010 head count. On average, the number of seasonal workers living in the community peaks between April and September; however, the peak is only slightly driven by employment in the fishing sectors. Information regarding population trends can be found in Table 1.

Chenega Bay is predominately an Alutiiq community; however, in 2010 only 52.6% of the population identified themselves as American Indian or Alaska Native, compared to 73.3% in 2000. Also in 2010, 39.5% of the population identified themselves as White, compared to 22.1% in 2000; and 7.9% identified themselves as two or more races, compared to 4.7% in 2000. In addition, 2.6% of residents identified themselves as Hispanic or Latino, compared to 0.0% in 2000. The marked change in racial composition between 2000 and 2011 could coincide with the highly variable population, and might not reflect a long term trend. Information regarding trends in Chenega Bay's racial and ethnic composition can be found in Figure 1.

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

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

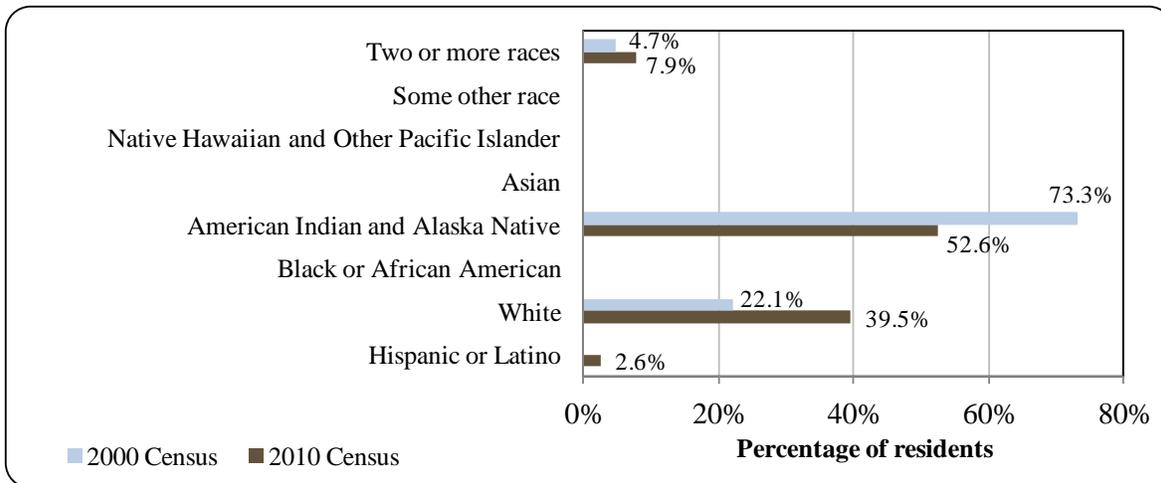
Table 1. Population in Chenega Bay from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	94	-
2000	86	-
2001	-	50
2002	-	59
2003	-	77
2004	-	49
2005	-	43
2006	-	85
2007	-	69
2008	-	77
2009	-	71
2010	76	-

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, Chenega Bay: 2000-2010 (U.S. Census).



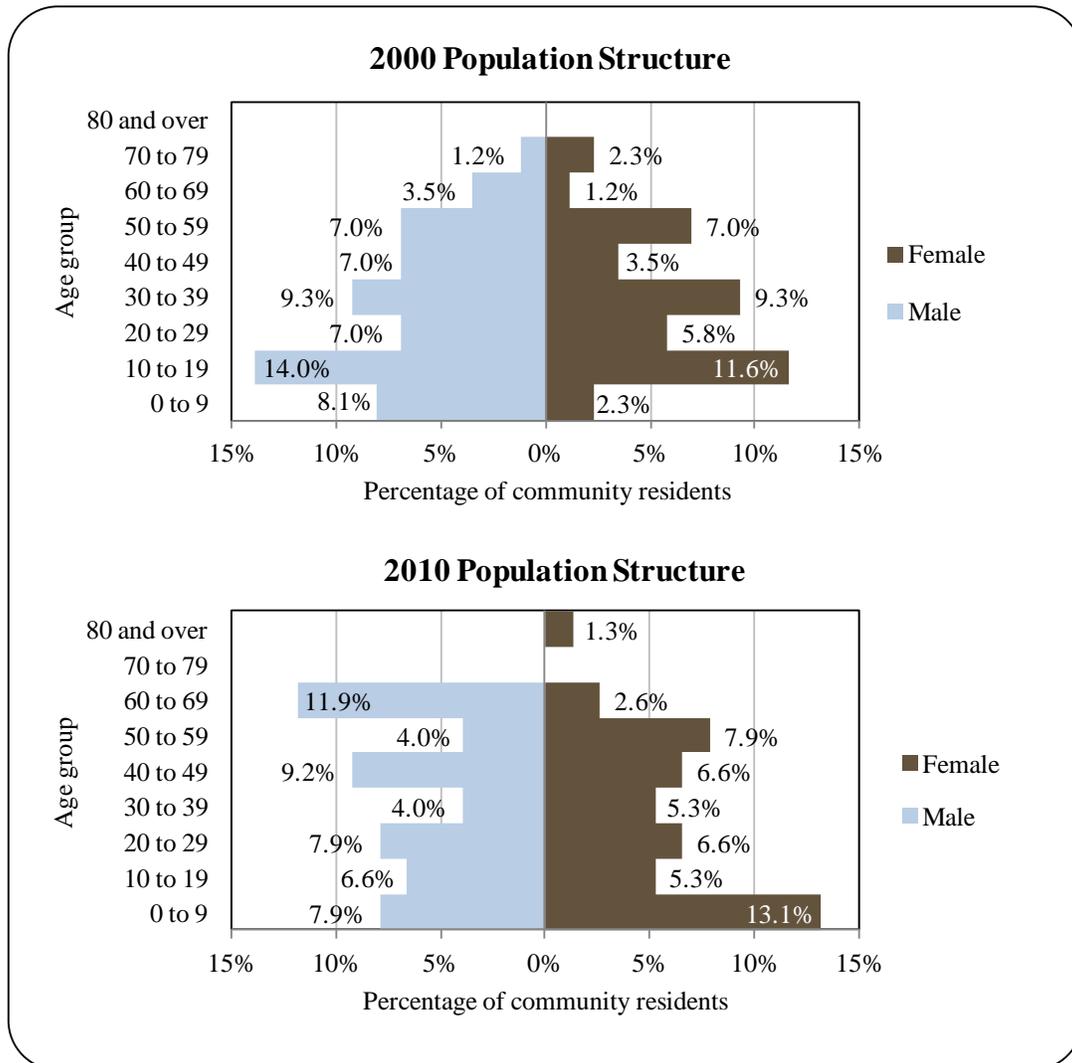
In 2010, the average household size was 2.45, compared to 3.0 in 1990 and 3.55 in 2000. In that year there were 51 total housing units, compared to 30 in 1990 and 27 in 2000. Of the households surveyed in 2010, 23.5% were owner-occupied, compared to 55.6% in 2000; 37.3% were renter-occupied, compared to 26% in 2000; 11.8% were vacant, compared to 11.1% in 2000; and 27.5% were occupied seasonally, compared to 7.4% in 2000. In 2010, there were no residents reported to be living in group quarters, compared to eight in 2000.

The gender distribution in 2010 was relatively even at 51.3% male and 48.7% female. This was similar to the statewide distribution (52.0% male, 48.0% female) and more even than the distribution in 2000 (57.0% male, 43.0% female). The median age was 35.0 years, which similar to the statewide median of 33.8 years, and older than the 2000 median of 30.6 years.

Because of the small and variable population, the population structure was irregular in both 2000 and 2010 making it difficult to discern a trend. In 2010, 32.9% of residents were under the age of 20, compared to 26.0% in 2000; 15.8% were over the age of 59, compared to 8.2% in 2000; 37.0% were between the ages of 30 and 59, compared to 43.1% in 2000; and 14.5% were between the ages of 20 and 29, compared to 12.8% in 2000.

Gender distribution by age cohort was significantly less even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 60 to 69 range (11.9% male, 2.6% female), followed by the 0 to 9 (13.1% female, 7.9% male) and 50 to 59 (7.9% female, 5.0% male) ranges. Of those three, the greatest relative gender difference occurred in the 60 to 69 range. Information regarding Chenega Bay’s population structure can be found in Figure 2.

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



In terms of educational attainment, the 2006-10 American Community Survey (ACS)³ estimated that 100% of Chenega Bay residents aged 25 years and older held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year, and estimated 33.3% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 59.3% had a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall, and an estimated 7.4% had a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*⁴

Founded before Russian contact in the late eighteenth century, Chenega was the longest occupied community in PWS, before the original community was destroyed by a tsunami resulting from the 1964 “Good Friday” Earthquake. In that event, all of the buildings in the community were destroyed with the exception of a single house and the community school. Over a third of the residents lost their lives, and survivors were evacuated initially to Cordova and later resettled in the community of Tatitlek by the U.S. Bureau of Indian Affairs (BIA).

With the passage of the Alaska Native Claims Settlement Act (ANCSA), former residents of Chenega formed the Chenega Corporation, which selected 76,093 acres around the original Chenega township as part of the ANCSA lands settlement. This land was acquired in order to one day re-establish the community of Chenega. Shareholders selected their new community site at Crab Bay on Evans Island in March of 1977. The Chenega Corporation and the Chenega Indian Reorganization Act (IRA) Council worked to find funds for roads, water and sewer systems, electric generators, a boat and floatplane dock, and a school. The new Chenega “Chenega Bay” was finally occupied in 1984 after the construction of 21 Housing and Urban Development homes.

On March 24, 1989 Chenega Bay was impacted by another disaster. The *Exxon Valdez* Oil Spill released approximately 11 million gallons of crude oil into the waters of PWS and Chenega Bay became a major center for cleanup operations. The Chenega Corporation participated in cleanup of the oil spill, and in 1997, sold a large portion of its land holdings to the U.S. Forest Service and State of Alaska for \$34 million in hopes of using the funds to diversify its business plan following the spill.

Today, the community of Chenega Bay still relies on some subsistence and/or commercial fishing resources, but a cash economy has become more important in the wake of the oil spill and many jobs in the community are dependent on cleanup.

Natural Resources and Environment

Chenega Bay is located in dense coastal rain forests which extend from southeastern Alaska to Kodiak Island. The climate is marine influenced, with cool cloudy summers and relatively mild winters. Annual precipitation averages 66 in of rain and 80 in of snowfall.

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

⁴ GDM Inc. (2008). *Chenega Bay Masterplan*. Retrieved January 17, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ChenegaBay-MP-2008.pdf>.

Summer temperatures range from 49 to 63 °F (9 to 17 °C) and winter temperatures range from 17 to 28 °F (-8 to -2 °C).⁵

Chenega Bay is located in the Chugach National Forest, which covers 5.4 million acres of south-central Alaska. The surface soils and geology surrounding the community are characterized by exposed and peat-covered bedrock. Tree stands are typically found in areas where peat is relatively shallow; while areas of deeper poorly drained peat tends to form bogs or muskegs.⁶ Coastal forest vegetation includes mixed stands of Sitka spruce and western hemlock. Woodland lodge pole pine communities can be found in muskegs. Tidal areas and deltas are dominated by sedges and grass wet meadows.⁷ The PWS area provides habitat for a wide range of aquatic and terrestrial wildlife. Coastal areas host seals, sea lions, sea otters, whales, and an abundance of waterfowl. Fisheries include all five species of Pacific salmon, halibut, rockfish, lingcod, sablefish, cutthroat trout, and Dolly Varden char. The Chugach National Forest and Kenai Fjords National Park host Dall sheep, moose, mountain goats, deer, wolves, brown and black bears, and a small caribou herd. Other resources in the area include an inactive copper/silver mine on Latouche Island to the east, as well as several salmon hatcheries in PWS.⁸

No offshore oil and gas lease sales were scheduled in the Gulf of Alaska (GOA) for the 2012-2017 leasing program.⁹ A 2000 assessment of conventionally recoverable oil and gas estimated the presence of between 360 million to 3.27 billion barrels of oil and gas in the GOA region. This was slightly higher than estimates in Cook Inlet. The Pacific Margin Subregion (including Cook Inlet, GOA and Shumagin-Kodiak) was estimated to hold only 6.3% of all conventionally recoverable oil and gas in Alaska's offshore regions, while the Arctic Subregion was estimated to hold 84.6% and the Bering Shelf subregion was estimated to hold 9.1%.¹⁰

The community of Chenega Bay does not have a hazard mitigation plan; however, earthquakes and tsunamis have been hazards in the past and continue to impact the region as a whole. Other regional hazards include coastal erosion, avalanches, landslides, sea level rise, land subsidence, volcanoes, coastal flooding, and storm surges. Susceptibility and vulnerability to any one of these hazards on a community-specific level is not known.¹¹

Living marine resources in the Valdez area were negatively impacted and continue to show affects of the March 1989 *Exxon Valdez* Oil Spill, when 11 million gallons of crude oil spilled into PWS. The spill affected the food chain that supports the PWS commercial fishery, and impacted shorebirds, waterfowl, sea otters, harbor porpoises, harbor seals, Steller sea lions and several species of whale, among other species.¹² Harvest of shellfish declined dramatically

⁵ Ibid.

⁶ Ibid.

⁷ U.S Forest Service. (1992). *Alaska Vegetation Classification*. Retrieved January 17, 2012 from <http://www.treesearch.fs.fed.us/pubs/6941>

⁸ Aurora Consulting. (2008). *Community of Chenega Bay Comprehensive Economic Development Strategies*. Retrieved January 17, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ChenegaBay-EDP-2008.pdf>.

⁹ U.S. Department of the Interior, Minerals Management Service. November, 2011. *Proposed Outer Continental Shelf Oil and Gas Leasing Program 2012-2017*. Retrieved February 2, 2012 from http://www.boem.gov/uploadedFiles/Proposed_OCS_Oil_Gas_Lease_Program_2012-2017.pdf.

¹⁰ Bureau of Ocean Energy Management, Regulation and Enforcement. 2000. *Undiscovered Oil and Gas Resources, Alaska Federal Offshore, December 2000 Update*. Retrieved May 3, 2012 from <http://alaska.boemre.gov/re/uogr/uogr.pdf>.

¹¹ Alaska Department of Natural Resources. (n.d.). *Statewide Coastal Hazards*. Retrieved January 17, 2012 from: http://www.alaskacoast.state.ak.us/ACMPGrants/EGS_05/pdfs/CoastalHazards.pdf.

¹² United States Environmental Protection Agency. "Exxon Valdez." Retrieved December 2, 2011 from <http://www.epa.gov/emergencies/content/learning/exxon.htm>.

due to petrochemical contamination. Sea otter mortality was as high as 40% immediately following the spill. The 50% decline in the PWS orca population in the decades following the spill has been attributed to direct oil exposure and consumption of oiled marine mammals. Many other fish, marine mammals and bird populations declined following the spill, including harbor seals, Steller sea lions, marbled murrelets and black oyster catchers. Impacts on habitat and forage fishes created continued difficulties for recovery of many species.¹³ In particular, the 1993 collapse of the PWS herring fishery has made recovery for many species difficult, as it is a primary food source for harbor seal, Steller sea lion, and marbled murrelet, among other species. The relationship between the herring collapse and the oil spill remains unclear.^{14,15}

Current Economy¹⁶

Most residents of Chenega Bay still rely on some subsistence and commercial fishing resources; however, in the wake of the *Exxon Valdez* Oil Spill, fishing has declined and employment has shifted towards opportunities created by the spill.¹⁷ In a survey conducted by the AFSC in 2011, community leaders reported that the local economy was dependant on sport hunting and fishing. Top employers in 2010¹⁸ included Chenega IRA Council, Chugachmiut, PWS Aquaculture Corp., Native Village of Chenega Bay Public Health, Chugach School District, and Chenega Corp.

In 2010,¹⁹ the estimated per capita income in Chenega Bay was \$26,092 and the estimated median household income was \$46,458, compared to \$13,382 and \$53,750 in 2000, respectively. After accounting for inflation by converting 2000 values into 2010 dollars,²⁰ the real per capita income (\$17,597) and real median household income (\$70,681) indicate that individual earnings increased while household earnings decreased. In 2010, Chenega Bay ranked 95th of 305 communities reporting per capita income, and 155th of 299 communities reporting median household income. It should be noted that ACS estimates are based on wage income and do not account for the value subsistence resources have within the community.

Chenega Bay's small population size may have prevented the ACS from accurately portraying economic conditions.²¹ Another way of 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.

¹³ Chugachmiut. 2009. *Chugach Region Comprehensive Economic Development Strategy*. Retrieved April 30, 2012 from <http://www.chugachmiut.org/services/enterprise/Chugach%20Region%20CEDS%20draft%20v5.pdf>.

¹⁴ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁵ Alaska Department of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

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

¹⁷ See footnote 8.

¹⁸ 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/>.

¹⁹ 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>.

²⁰ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²¹ See footnote 3.

According to the ALARI database, residents earned \$740,349 in total ages in 2010.²² When matched with the population in 2010, the per capita income equals \$9,741, suggesting that caution should be used when comparing 2010 ACS estimates with the 2000 Census.²³ However, it should be noted that Chenega Bay was not recognized as “distressed” by the Denali Commission indicating that less than 70% of residents aged 16 and older earned less than \$16,120 in 2010.²⁴

Based on 2006-10 ACS estimates,²⁵ 62.3% of residents aged 16 years and over were in the civilian labor force in 2010. In the same year, unemployment was estimated at 0.0%, compared to an estimated 5.9% statewide; and no residents were estimated to be living below the poverty line, compared to 9.5% statewide. There is a possibility that these figures are inaccurate, as they conflict with ALARI wage estimates; however, DOLWD did estimate a low unemployment rate of 6.7% for that year.

Of those employed in 2010, an estimated 39.5% worked in the private sector, an estimated 36.8% worked in the public sector; and an estimated 23.7% were self-employed; which possibly explains the significant variation between ACS and ALARI estimates as DOLWD does not include self-employed workers in their estimates. By industry, most (26.3%) employed residents were estimated to work in education services, health care, and social assistance sectors in 2010; followed by other services sectors, other than public administration (26.3%); public administration sectors (23.7%); and agriculture, forestry, fishing, hunting, and mining sectors (10.5%). By occupation type, most (78.9%) employed residents were estimated to hold management or professional positions; followed by sales or office positions (13.2%); and service positions (7.9%). Overall, there was significant variation in employment by industry sector and occupation type between 2000 and 2010. Most notably, there was a significant decline in the public administration sector, and significant increase in management and professional positions. These variations may be attributed to either the significantly volatile population or sampling errors within the ACS. Information regarding employment trends can be found in Figures 3 and 4.

²² ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

²³ See footnote 18.

²⁴ Denali Commission. 2011. Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

²⁵ 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.

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

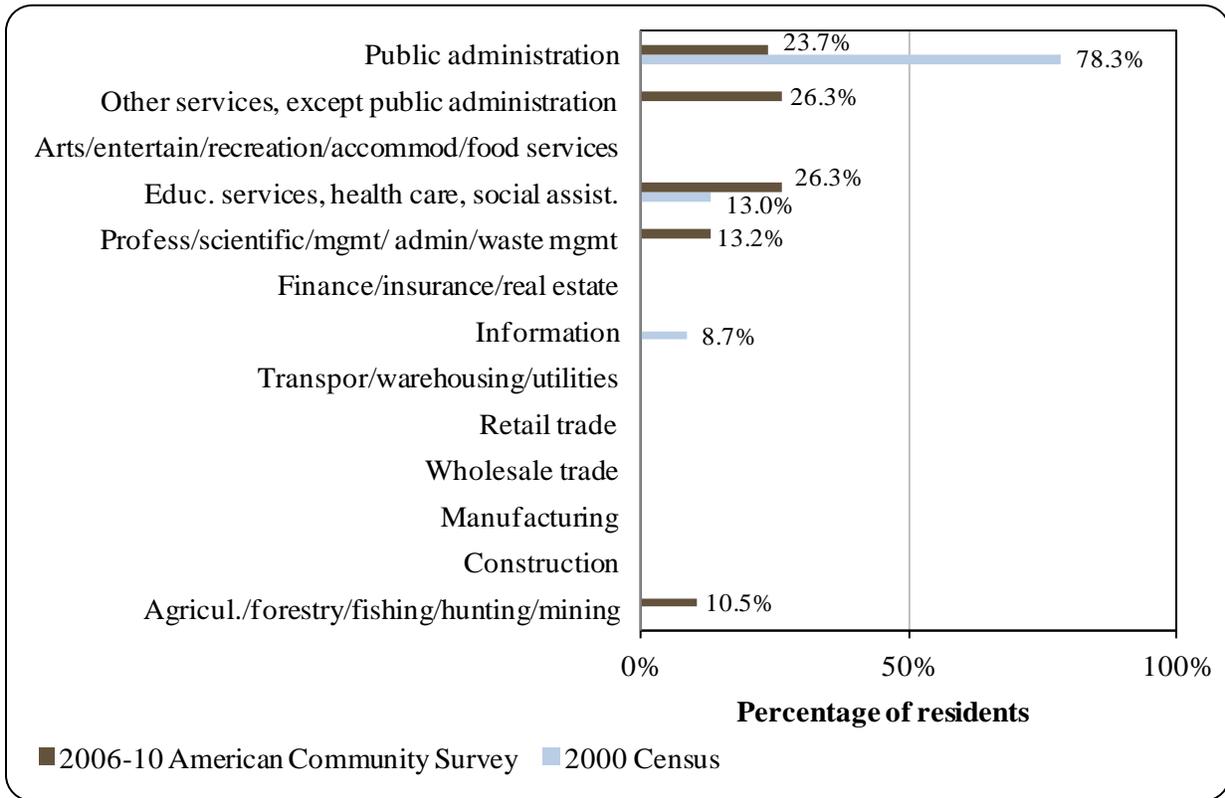
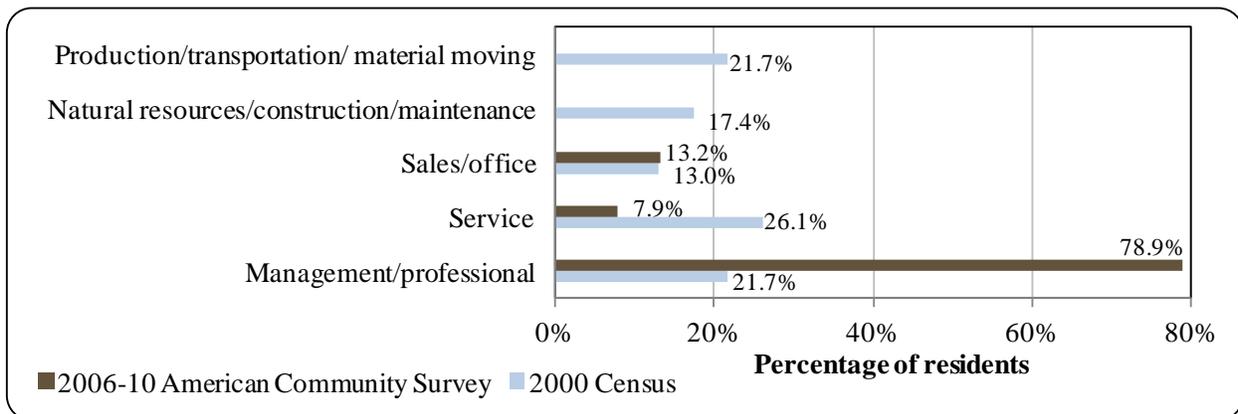


Figure 4. Local Employment by Occupation in 2000-2010, Chenega Bay (U.S. Census).



Governance

Chenega Bay is unincorporated and not under the jurisdiction of a municipal or borough government. There is however, a BIA recognized Tribal government (Native Village of Chenega), as well as an ANCSA chartered Native village corporation (Chenega Corporation). The regional ANCSA corporation representing Chenega Bay is the Chugach Alaska Corporation. The closest Alaska Department of Fish and Game (ADF&G) and National Marine Fisheries Service (NMFS) offices are located in Seward, 46 mi west. The closest U.S. Bureau of Citizenship and Immigration Services office is located in Anchorage, 104 mi northwest.

Since the community is unincorporated, the community is unable to collect revenue through taxes. However, there were several state and federal fisheries-related grants awarded to the community between 2000 and 2010 including \$109,402 for harbor upgrades in 2005 and \$1.1 million for a small boat harbor rehabilitation project in 2009. Information regarding community revenue streams can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Chenega Bay 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	n/a
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	\$109,402
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	\$1,138,813
2010	n/a	n/a	n/a	n/a

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

³ Alaska Department 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 Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*²⁶

Chenega Bay has a state-owned 3,000-ft gravel airstrip and floatplane landing area in the harbor. Charter flights are available from Anchorage, Cordova, Seward, and Valdez. The community has a small boat harbor and dock and freight is brought in by air or barge. The Alaska Maine Highway System maintains a dock facility in the community. Ferry service departing from Seward arrives in Chenega Bay monthly during the winter and three times a month in the summer. Ferry service from Valdez arrives in Chenega Bay once a month. Skiffs, cars, trucks, ATVs, and snow machines are used for local transportation. Alaska Air Transit operates scheduled flights between Anchorage and Chenega Bay for \$225 one-way.²⁷

*Facilities*²⁸

Chenega Bay Utilities operates three diesel generators which distribute power via underground powerlines at a maximum capacity of 217 kW. As of 2008, the residential rate was 19 cents per kW hour and the commercial rate was 40 cents per kW hour. Piped water service is provided via a surface water collection system with dam, treatment, and 50,000 gal storage capacity. Sewage is piped to a 20,000 gal community septic tank, and some homes maintain private septic systems. In 2001, a new landfill was completed and refuse is collected twice a week. Fuel is typically purchased twice annually from Valdez and distributed to households directly as well as the local tank farm. Internet is only provided at the school. Visitor accommodations include the Chenega Bay Hotel. Public safety services are provided by state troopers based in Seward. Fire and rescue services are provided by Chenega Bay Emergency Medical Services. Additional public facilities include a youth center, community center, school gym, and school library. Communications services include state and long distance telephone, internet (at the school only), local television, and local radio.

In a survey conducted by the AFSC in 2011, community leaders reported that infrastructure projects completed between 2000 and 2010 included new dock space, existing dock improvements, dockside water and power service, port road access, pilings, airport improvements, water treatment improvements, and landfill improvements. Projects which were under development in 2010 included broadband internet infrastructure and road improvements. There is 20 ft of public dock space available for permanent moorage. Regulated vessels which Chenega Bay is capable of handling include ferries and fuel barges. During the fishing season, vessels using the community as a base of operations are typically less than 60 ft in length. The community has seen a lot less vessels over 60 ft in length since 2005, while seeing more private vessels, commercial fishing vessels, and vessels less than 60 ft in length. Fisheries-related businesses and services include a machine shop, and commercial and recreational fishing moorage.

²⁶ Aurora Consulting. (2008). *Community of Chenega Bay Comprehensive Economic Development Strategies*. Retrieved January 17, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ChenegaBay-EDP-2008.pdf>.

²⁷ Alaska Air Transit. (n.d.). Retrieved June 21, 2012 from: <http://www.alaskaairtransit.com/>.

²⁸ Ibid.

Medical Services

Arch Priest Nicholas Kompkoff Clinic is a Primary Health Care facility and Community Health Aid Program (CHAP) site. Acute, long-term, and specialized care is provided in Seward and Anchorage.

Educational Opportunities

Chenega Bay School provides preschool through 12th grade instruction. As of 2011, there were 24 students enrolled and three teachers employed.²⁹

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Chenega Bay's character as a fishing-based community dates back thousands of years; however, both the 1964 Good Friday Earthquake and 1989 *Exxon Valdez* Oil Spill have dramatically reshaped the community and its participation in North Pacific Fisheries. Although local participation in commercial fishing has been in decline in recent years, participation in subsistence and sport fisheries is still an important part of Chenega Bay's identity. In a survey conducted by the AFSC in 2011, community leaders reported that Chenega Bay is not involved nor does it advocate for itself in the fishery management process in Alaska.

However, the community is eligible to participate in the Community Quota Entity (CQE) program, and its interests are represented by the non-profit Chenega Heritage Incorporated. The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead to decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf. As of Fall 2013, Chenega Heritage Incorporated had not yet purchased any commercial halibut Individual Fishing Quota (IFQ) or non-trawl groundfish License Limitation Program permits. However, the non-profit had acquired seven halibut charter permits for lease to community members.³⁰

²⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

³⁰ NOAA Fisheries. (2013). Community Quota and License Programs and Community Quota Entities. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

ADF&G manages the PWS salmon fishery. The PWS salmon management area is divided into 11 commercial fishing districts, covering the coastal area from Cape Suckling (northwest of Yakutat) to Cape Fairfield (east of Seward), and the inland waters of PWS. Valdez is located in the Eastern district. Purse seine gear is the most common gear type, and is allowed in eight of the nine inland fishing districts. Drift gillnet gear is allowed in three districts, and set gillnet gear is only allowed in the Eshamy District. It is important to note that a salmon hatchery program was initiated in PWS in the early 1970s, and hatchery returns have consistently contributed to harvests since the 1980s.³¹

Groundfish and crab fisheries that occur within 3 nmi of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nmi in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. PWS is located in Federal Statistical and Reporting Area 649 and Pacific Halibut Fishery Regulatory Area 3A. The outlet of PWS is at the boundary between the Central GOA and Eastern GOA federal Sablefish Regulatory Areas.

In addition to federal groundfish fisheries that take place in the Central and Eastern GOA, state groundfish fisheries take place in the inland waters of PWS for rockfish, lingcod, pollock, sablefish, and Pacific cod. The PWS Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal cod fishery. The Total Allowable Catch (TAC) set by NMFS applies to both fisheries. Beginning in 1997, an additional ‘state-waters fishery’ for Pacific cod was initiated in PWS. A pelagic trawl fishery for pollock began in PWS in 1995, and is managed under a guideline harvest limit (GHL) determined by ADF&G, and is not conducted as a parallel fishery. Typically, state-waters fisheries are opened once federal and parallel fisheries close. The PWS limited entry sablefish fishery is also managed separately under a GHL.³²

A majority of lingcod are found in nearshore rocky reef habitat from 10-100 m in depth. ADF&G manages all lingcod fisheries in state and EEZ waters off Alaska. Lingcod in PWS are primarily harvested as incidental catch in longline fisheries, although lingcod fisheries have increased in importance in recent decades. The state manages rockfish harvest in PWS, and since 1998 also has jurisdiction of blue and black shelf rockfish in the western GOA, and all rockfish in the eastern GOA.³³

PWS historically had a productive herring fishery. However, in 1993, 4 years after the Exxon Valdez, the stock collapsed in conjunction with an outbreak of hemorrhagic septicemia virus. Since 1998, the PWS herring fishery has been closed. The relationships between the oil spill, the virus and the stock collapse remain unclear, and the population has shown little sign of recovery.^{34,35} PWS was also a historical center for Dungeness crab fisheries, but this stock has also collapsed. Possible causes for the Dungeness collapse include overfishing, sea otter

³¹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” Alaska Fisheries Research Bulletin 12(1):1-146. Alaska Department of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

³² Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

³³ Ibid.

³⁴ Ibid.

³⁵ Alaska Department of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

predation, and adverse climatic changes. Red king crab and Tanner crab fisheries in PWS are also closed due to low stock abundance.³⁶ In contrast to the closures of herring and crab fisheries, spot shrimp (*Pandalus platyceros*) pot fisheries reopened in PWS in 2010 after almost two decades of closure due to low abundance.³⁷

Chenega Bay is located in Federal Reporting Area 649, International Pacific Halibut Commission (IPHC) regulatory area 3A, and the Central GOA Sablefish Regulatory District.

Processing Plants

According to the 2010 Alaska Department of Fish and Game's Intent to Operate list, Chenega Bay does not have a registered processing plant. The closest seafood processor is located in Whittier.

Fisheries-Related Revenue

Between 2000 and 2010, there was no reported fisheries-related revenue collected in Chenega Bay.

Commercial Fishing

In 2010, no residents held crew licenses or owned majority share of any vessels. In addition, no vessels made landings in Chenega Bay that year. Participation in commercial fisheries has declined in recent years with no residents holding any fisheries permits between 2007 and 2010. In 2006, 1 resident held 1 salmon permit issued by the Commercial Fisheries Entry Commission (CFEC); however, that permit was not fished. Permit activity peaked in 2000 when 3 residents held 3 CFEC salmon permits, all of which were fished that year. Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits. Between 2000 and 2010, 1 account held 628 halibut quota shares. No residents held sablefish or crab quota between 2010 and when the programs began. In a survey conducted by the AFSC in 2011, community leaders reported that commercial vessels that use Chenega Bay as a base of operations typically use pots, longline, gill net, purse seine, and troll gear types.

Between 2000 and 2010, no landings were made in the community. Landings were made by residents between 2000 and 2005; however, reports for these landings are considered confidential. No landings were made by residents between 2006 and 2010. Information regarding commercial fishing trends can be found in Tables 4 through 10.

³⁶ See footnote 32.

³⁷ Alaska Department of Fish and Game. 2012. *Spot Shrimp Species Profile: Status, Trends and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=spotshrimp.main>.

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a										
Shared Fisheries Business Tax ¹	n/a										
Fisheries Resource Landing Tax ¹	n/a										
Fuel transfer tax ²	n/a										
Extraterritorial fish tax ²	n/a										
Bulk fuel transfers ¹	n/a										
Boat hauls ²	n/a										
Harbor usage ²	n/a										
Port/dock usage ²	n/a										
Fishing gear storage on public land ³	n/a										
Marine fuel sales tax ³	n/a										
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>										
<i>Total municipal revenue⁵</i>	<i>n/a</i>										

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

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

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

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

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

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

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Table 4 cont'd. Permits and Permit Holders by Species, Chenega Bay: 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	1	1	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	0%	0%	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	1	1	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	3	4	3	2	2	2	1	0	0	0	0
	Fished permits	3	3	2	1	1	1	0	0	0	0	0
	% of permits fished	100%	75%	67%	50%	50%	50%	0%	n/a	n/a	n/a	n/a
	Total permit holders	3	5	3	2	2	3	1	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>3</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>4</i>	<i>2</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Fished permits</i>	<i>3</i>	<i>3</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>100%</i>	<i>75%</i>	<i>67%</i>	<i>33%</i>	<i>25%</i>	<i>50%</i>	<i>0%</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
	<i>Permit holders</i>	<i>3</i>	<i>5</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

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

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.]

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Table 5. Characteristics of the Commercial Fishing Sector in Chenega Bay: 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 Chenega Bay ²	Total Net Lbs Landed In Chenega Bay ^{2,5}	Total Ex-Vessel Value Of Landings In Chenega Bay ^{2,5}
2000	0	0	0	6	5	0	0	\$0
2001	2	0	0	4	4	0	0	\$0
2002	1	0	0	3	3	0	0	\$0
2003	1	0	0	3	3	0	0	\$0
2004	1	0	0	3	3	0	0	\$0
2005	1	0	0	2	2	0	0	\$0
2006	1	0	0	0	0	0	0	\$0
2007	2	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	1	0	0	0	1	0	0	\$0
2010	0	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 Chenega Bay: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	1	628	62
2001	1	628	74
2002	1	628	76
2003	1	628	76
2004	1	628	85
2005	1	628	86
2006	1	628	85
2007	1	628	88
2008	1	628	82
2009	1	628	73
2010	1	628	67

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 Chenega Bay: 2000-2010.

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

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

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

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

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

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Chenega Bay: 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 lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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

	<i>Total net pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	0	0	0	0	0
Finfish	--	--	--	--	--	--	0	0	0	0	0
Halibut	--	--	--	--	--	--	0	0	0	0	0
Herring	--	--	--	--	--	--	0	0	0	0	0
Other Groundfish	--	--	--	--	--	--	0	0	0	0	0
Other Shellfish	--	--	--	--	--	--	0	0	0	0	0
Pacific Cod	--	--	--	--	--	--	0	0	0	0	0
Pollock	--	--	--	--	--	--	0	0	0	0	0
Sablefish	--	--	--	--	--	--	0	0	0	0	0
Salmon	--	--	--	--	--	--	0	0	0	0	0
<i>Total²</i>	--	--	--	--	--	--	0	0	0	0	0
	<i>Ex-vessel value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Halibut	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Herring	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Other Groundfish	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Other Shellfish	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Pacific Cod	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Pollock	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Sablefish	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Salmon	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	--	--	--	--	--	--	\$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 lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Chenega Bay is located in North Gulf Coast/PWS ADF&G Harvest Survey Area which includes all drainages from east of Cape Suckling, through PWS to Gore Point. In 2010, there was 41 sport fishing licenses sold in the community and 30 sold to residents, compared to 0 and 5 in 2000, respectively. The number of sport fishing licenses sold to both the community and residents increased steadily between 2000 and 2010, with each peaking in 2010. There was never more than one active sport fish guide businesses registered in Chenega Bay at any given year between 2000 and 2010. During 2000 and 2009 there were no active sport fish guide businesses registered. In addition, there was never more than one sport fish guide license held in the community during those years, with the exception of 2007 when there were two.

In 2010, there were a total of 212,793 saltwater angler days fished, compared to 122,459 in 2000; representing a 74% increase. Non-Alaska residents accounted for 30.4% of total saltwater angler days fished in 2010, compared to 32.3% in 2000. Saltwater angler days fished peaked at 300,205 in 2007. There was a total of 22,979 freshwater angler days fished in 2010, compared to 12,108 in 2000; an increase of 90%. Non-Alaska residents accounted for 57% of freshwater angler days fished in 2010, compared to 26% in 2000. Total freshwater angler days fished peaked in 2010.

According to ADF&G Harvest Survey data, species targeted by private anglers in Chenega Bay include coho, sockeye, and pink salmon, rainbow trout, Dolly Varden char, Pacific halibut, rockfish, lingcod, hardshell clams, and shrimp. In a survey conducted by the AFSC in 2011, community leaders reported that local private anglers target all five species of Pacific salmon, halibut, rockfish, crab, sablefish, shrimp, clams, and octopus.

Chenega Bay hopes to boost its sport fishing and tourism economy through the development of lodging facilities, cultural activities, and improvements to recreational fishing infrastructure, businesses, and services.³⁸ Information regarding sport fishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Chenega Bay: 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 Chenega Bay ²
2000	0	1	5	0
2001	1	1	14	0
2002	1	1	13	5
2003	1	1	17	19
2004	1	1	16	18
2005	1	1	14	14
2006	1	1	19	16
2007	1	2	18	40
2008	1	1	17	31
2009	0	0	21	18
2010	1	1	30	41

³⁸ Ibid.

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

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	39,551	82,908	3,168	8,940
2001	66,450	135,248	8,587	8,610
2002	67,698	133,508	5,132	8,126
2003	70,549	150,086	10,657	10,235
2004	76,173	184,492	9,199	10,349
2005	87,033	165,559	6,894	6,187
2006	79,313	157,194	8,886	5,655
2007	90,002	210,203	8,446	9,944
2008	67,410	181,381	8,056	5,489
2009	59,505	189,563	8,730	10,938
2010	64,776	148,017	13,118	9,861

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 hunting, fishing, and gathering are essential components to Chenega Bay's economy and culture. The community's participation in subsistence fisheries was severely impacted following the 1989 *Exxon Valdez* Oil Spill, and residents continue to be concerned over the long-term impacts on subsistence resources. In a survey conducted by the AFSC in 2011, community leaders expressed concern over the impacts commercial fishing has on local access to subsistence resources. Community leaders also reported that residents depend mostly on deer, salmon, crab, and shrimp for subsistence purposes. According to the ADF&G *Community Subsistence Information System*,³⁹ species which residents of Chenega Bay harvest or use include chitons, butter clams, Dungeness crab, horse clams, king crab, limpets, octopus, littleneck clams, razor clams, shrimp, snails, Tanner crab, harbor seal, Steller sea lion, rockfish, Dolly Varden, eel, eulachon, grayling, herring, lake trout, lingcod, Pacific cod, tom cod, rainbow trout, sablefish, sea bass, skates, flounder, greenling, Irish lord, shark, whitefish, and walleye pollock.

Information on subsistence participation is limited; however, in a 2003 ADF&G household survey, 86% of households participated in subsistence salmon activities, 94% participated in subsistence halibut activities, 44% participated in subsistence marine mammal

³⁹ 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).

activities, 60% participated in subsistence marine invertebrate activities, and 39% participated in subsistence non-salmon fish activities; totaling approximately 406 lbs harvested per capita.

In 2008, ADF&G⁴⁰ reported 277 salmon harvested by residents, a significant decrease from 722 in 2004. Of the species documented, sockeye salmon was harvested most often, although the number of fish harvested dropped significantly between 2004 and 2008. In 2010, an estimated 3,440 lbs of halibut was harvested using 6 Subsistence Halibut Registration Certificates (SHARC), compared to an estimated 5,644 lbs harvested using 13 SHARC in 2003. Subsistence halibut harvests peaked in 2006 at an estimated 8,260 lbs harvested on 11 SHARC. Between 2000 and 2010, an estimated 23 sea otters were harvested. Sea otter harvests peaked in 2000 at an estimated 11 otters. Finally, an estimated 180 harbor seals and 4 Steller sea lions were harvested between 2000 and 2008. Estimated harbor seal harvests peaked in 2003 at 45 seals. Estimated Steller sea lion harvests peaked in 2007 at 3 sea lions. Information regarding subsistence trends can be found in Tables 12 through 15.

Table 12. Subsistence Participation by Household and Species, Chenega Bay: 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	86%	94%	44%	60%	39%	406.12
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

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

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁴⁰ Ibid.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Chenega Bay: 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	n/a	n/a	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	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	353	2,282
2004	8	5	3	84	44	56	535	n/a	n/a
2005	9	5	6	174	84	124	469	n/a	n/a
2006	5	5	n/a	111	1	28	155	n/a	n/a
2007	3	3	2	55	27	4	293	n/a	n/a
2008	10	3	4	30	75	70	97	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, Chenega Bay: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	13	13	5,644
2004	17	14	5,434
2005	18	13	6,237
2006	19	11	8,260
2007	19	15	5,134
2008	11	8	5,462
2009	8	4	959
2010	8	6	3,440

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, Chenega Bay: 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	11	n/a	n/a	n/a	15	n/a
2001	n/a	n/a	n/a	n/a	1	13	n/a
2002	n/a	n/a	n/a	n/a	n/a	9	n/a
2003	n/a	n/a	n/a	n/a	n/a	45	n/a
2004	n/a	7	n/a	n/a	n/a	21	n/a
2005	n/a	n/a	n/a	n/a	n/a	5	n/a
2006	n/a	n/a	n/a	n/a	n/a	21	n/a
2007	n/a	n/a	n/a	n/a	3	40	n/a
2008	n/a	2	n/a	n/a	n/a	11	n/a
2009	n/a	3	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.