Gustavus (*gus-TAY-vuhs*)

People and Place

Location [1]

Gustavus lies on the north shore of Icy Strait at the mouth of the Salmon River at the base of the St. Elias Mountains, 48 air miles northwest of Juneau. City lands are surrounded on three sides by Glacier Bay National Park and Preserve, and on one side by the waters of Icy Strait to the south. Gustavus is located in the Hoonah-Angoon Census Area and the Juneau Recording District. The area encompasses 29.2 square miles of land and 10.0 square miles of water.

Demographic Profile [2]

In 2010, there were 442 residents in Gustavus, ranking it the 128th of 352 communities in Alaska in terms of population size. Overall, between 1990 and 2000, the population increased by 5.8% and between 2000 and 2009 there was an average annual growth rate of 0.08%, reflecting slow growth over the decade with small declines in some years (Table 1). In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated than 350 seasonal workers or transients are also present in Gustavus, primarily between the months of May and September. They also indicated that Gustavus experiences an annual population between June and August, which is somewhat driven by employment in fishing sectors.

Very few changes were seen in the racial and ethnic composition of the population between 2000 and 2010. The majority of the population in both years was White. In 2010, the majority of Gustavus residents identified themselves as White (91.4%), compared to 89.3% in 2000; 4.3% identified themselves as of two or more races in 2010, compared to 4.4% in 2000; 2.7% identified themselves as American Indian and Alaska Native, compared to 4.2% in 2000; 1.6% identified themselves as Hispanic or Latino in 2010, compared to 1.4% in 2000; 0.2% identified themselves as of some other race in 2010, compared to 1.6%; 1.1% identified themselves as Asian in 2010, compared to 0.2% in 2000; 0.2% identified themselves as Native Hawaiian and Other Pacific Islander in 2010, compared to 0.2% in 2000; and 0.0% identified themselves as Black or African American in 2010, compared to 0.0% in 2000 (Figure 1).

[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.

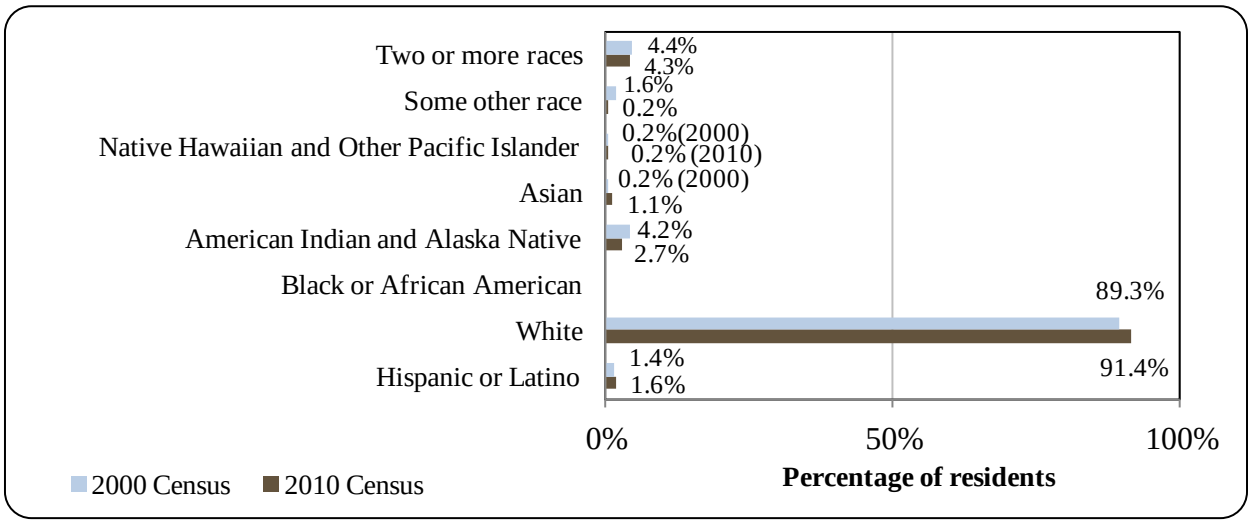
Table 1. Population in Gustavus from 1990 to 2010 by Source.

Year	U.S. Decennial Census[1]	Alaska Dept. of Labor Estimate of Permanent Residents[2]
1990	258	-
2000	429	-
2001	-	416
2002	-	420
2003	-	435
2004	-	449
2005	-	458
2006	-	439
2007	-	439
2008	-	446
2009	-	451
2010	442	-

[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.

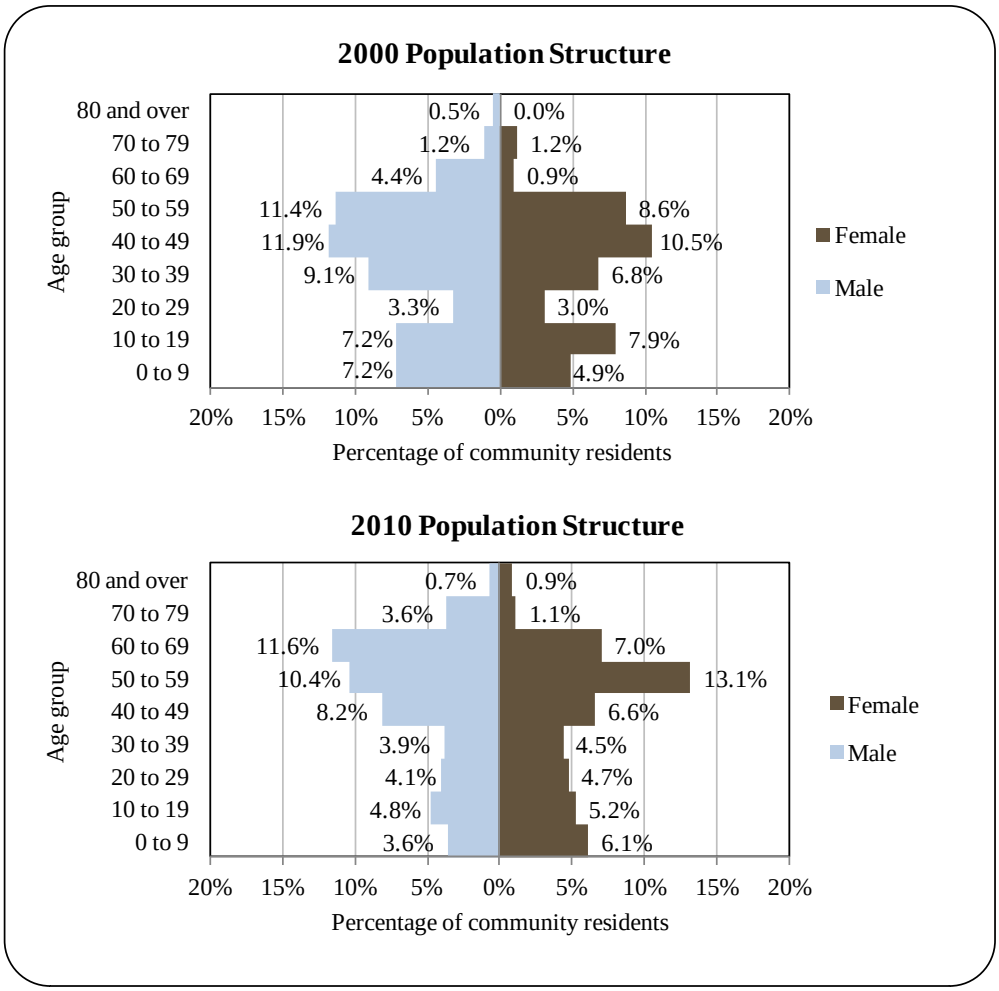
[2] Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from http://labor.alaska.gov/research/pop/popest.htm.

Figure 1. Racial and Ethnic Composition, Gustavus: 2000-2010 (U.S. Census).



The number of households in Gustavus increased steadily with the increase in population, from 101 occupied housing units in 1990 to 199 in 2000, and 212 in 2010. Between 1990 and 2000, the average number of persons per household increased from 2.5 to 2.89, and then declined to 2.08 by 2010. Of the 488 total housing units surveyed for the 2010 U.S. Census, 36.7% were owner-occupied, 6.8% were rented, and 56.6% were vacant. Of 276 vacant housing units, 194 were vacant due to seasonal use. Between 1990 and 2000, no Gustavus residents were reported to be living in group quarters.

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



In 2010, the gender makeup in Gustavus was 50.6% male and 49.3% female, similar to the balance of the state population as a whole (52% male, 48% female). That year, the median age was estimated to be 49.1 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, a smaller percentage of Gustavus residents were under the age of 20 (19.7%) compared to 27.3% in 2000, and a higher percentage was age 60 or older (24.9%) compared to 8.2% in 2000. The overall population structure of Gustavus in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)[3] estimated that 94.4% of Gustavus 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, 2.6% had less than a 9th grade education, compared to an estimated 3.5% of

[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.

Alaskan residents overall; an estimated 3.1% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 14.1% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; 3.8% held an Associate's degree, compared to an estimated 8% of Alaskan residents overall; 28.2% held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and 17.9% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

According to local legend, the ancestral home of the Hoonah (Huna) people was in Glacier Bay, and was destroyed by advancing glaciers. Historical accounts suggest that Tlingit people of the Huna Kaawu[4,5] occupied the northern portion of Chichigof Island and the mainland shore of Cross Sound and Icy Strait.[6] Oral traditions tell of times when the glaciers extended out of Glacier Bay as far as Point Adolphus, and people traveled under the ice back and forth in Icy Strait.[7] When Captain George Vancouver visited Icy Strait in 1974, the Grand Pacific Glacier completely covered the entrance to Glacier Bay. By 1916, the glacier had retreated 65 miles from the entrance to the Bay.[8]

Tlingit oral history also tells of a village, known as "Sand Mountain Town," that was located in Bartlett Cove before the Little Ice Age, 4,500 years ago. Just west of the City of Gustavus, the Woosh-Keetan Tlingit inhabited a clan house at Point Gustavus ("Clay Point") until 1922. Many fish camps and summer camps were also located in the Gustavus area, between Bartlett cove and Excursion Ridge. American homesteaders first arrived in 1913. Originally, three couples settled there, and the population fluctuated between 2 and 30 people over the following three decades. A timber mill was built by the Parker family, producing between 20 and 60 thousand board feet per year during the 1930s. The family also staked a gold claim in Glacier Bay at Ptarmigan Creek and began exploration there. Early homesteaders also lived from subsistence farming, cattle ranching, trapping, and hunting.[9]

Glacier Bay National Monument was established by President Calvin Coolidge in 1925. Homesteaders appealed to keep their land, and the Gustavus area was excluded from the Monument.[10] However, in 1939, the area of the Monument was increased from 1,820 square

[4] 'Kaawu' is a locally distinct terminology equating to the term 'Kwaan' used throughout the Tlingit Nation. (Source: Langdon, Steve J (2006). *Traditional Knowledge and Harvesting of Salmon by Huna and Hinyaa Tlingit: Final Report.* U.S. Fish and Wildlife Service, Fisheries Information Service Project 02-104. Retrieved October 10, 2012 from http://alaska.fws.gov/asm/pdf/fisheries/reports/02-104final.pdf.)

[5] 'Kwaan' is a Tlingit socio-geographical term meaning "inhabitants of," literally a contraction of the Tlingit verb "to dwell." It is most commonly used to refer to a geographic region consisting of those areas controlled by clans or house groups residing in a single winter village or several closely situated winter villages (Source: Thornton, T. 1997). Know Your Place: The Organization of Tlingit Geographic Knowledge. *Ethnology*, Vol. 36, No. 4.)

[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] Langdon, S. J. 2006. *Traditional Knowledge and Harvesting of Salmon by Huna and Hinyaa Tlingit: Final Report.* U.S. Fish and Wildlife Service, Fisheries Information Service Project 02-104. Retrieved October 10, 2012 from http://alaska.fws.gov/asm/pdf/fisheries/reports/02-104final.pdf.

[8] Gustavus Strategic Planning Committee (2005). *Gustavus Strategic Plan 2005: Protecting and Planning Our Future.* Retrieved June 15, 2012 from http://cms.gustavus-ak.gov/services/planning/strategic.

[9] Ibid.

[10] See footnote 6.

miles to 3,850, swallowing Gustavus, and many homesteaders moved away. New life was breathed into the community after the U.S. Army constructed a runway at Gustavus during World War II. Largely due to the presence of the Gustavus airfield, the National Park Service made nearby Bartlett Cove the headquarters of Glacier Bay National Monument in 1952. In 1955, President Eisenhower signed a proclamation that reopened 8,210 acres to homesteading. By 1958, the Gustavus School had reopened with 8 students.[11] Glacier Bay National Monument became a National Park in 1980 with the passage of the Alaska National Interest Lands Conservation Act (ANILCA). The City of Gustavus was incorporated on April 1, 2004.[12]

In addition to its permanent residents, many Juneau residents have seasonal-use homes in Gustavus.[13] The community is known as the "Gateway to Glacier Bay National Park and Preserve,"[14] and offers many tourism amenities and recreation opportunities, such as sportfishing and hunting, kayak tour companies, whale watching, lodges, and a golf course. Many local residents choose to live in Gustavus because of the unique lifestyle it affords, including the natural beauty, and opportunity to live a subsistence lifestyle. As one report of the community indicates, many residents "choose Gustavus for its remoteness and simplicity while others would prefer to bring more of the modern world in."[15]

Until 1998, Gustavus was located on federal land, within the boundaries of Glacier Bay National Park and Preserve. The Glacier Bay National Park Boundary Adjustment Act of 1998 provided for the exchange of federal and state lands, and allowed Gustavus to seek city status.[16] Gustavus was incorporated as a 2nd Class City in 2004.[17] Some National Park lands are still located within City Limits, and Gustavus receives "Payment In Lieu of Taxes" money from the federal government in exchange for its control of this land.[18] Gustavus was named after Point Gustavus, located just west of the City.[19]

Natural Resources and Environment

Gustavus is located in a maritime climate zone characterized by cool summers and mild winters. Summer temperatures range from 52 to 63 °F and winter temperatures from 26 to 39 °F. Most of the City is located on the "Gustavus Flats," a flat area formed by the outwash from the glacier.[20] The Gustavus flats continue to grow due to isostatic rebound of the land after the retreat of the glaciers. The eastern portion of the City boundary climbs up Excursion Ridge, an area that was not carved by the glacier and as a result has thicker soil, old-growth hemlock-spruce forest, and muskeg ecosystems. To the west, the Bartlett Cove area was scraped clean by glaciers, and the land is in early stages of succession. Spruce forest, alder brush, and meadows

[11] See footnote 8.
[12] See footnote 6.
[13] Ibid.
[14] National Park Service (2012). *Operating Hours & Seasons* and *Gustavus*. Retrieved October 26, 2012 from http://www.nps.gov/glba/planyourvisit/hours.htm.
[15] See footnote 8.
[16] H.R. 3903 (1998). *Glacier Bay National Park Boundary Adjustment Act of 1998.* Retrieved October 25, 2012 from http://thomas.loc.gov/cgi-bin/query/z?c105:H.R.+3903:.
[17] See footnote 6.
[18] See footnote 8.
[19] See footnote 6.
[20] Ibid.

are characteristic of this area, and some hemlock has begun to fill breaks in the spruce forest.[21] Inside Glacier Bay, the landscape is characterized by steep U-shaped, glacier-carved valleys. The Fairweather Mountain Range rises up steeply in the background.[22]

Gustavus is located at the southern entrance to Glacier Bay National Park and Preserve, which encompasses approximately 3,225,284 acres of mountains, ice fields, glaciers, and marine waters, including over 2.6 million acres of designated wilderness area. Glacier Bay shifted from National Monument status to a National Park and Preserve in 1980 with passage of ANILCA. The Park and Preserve begins at Gustavus and stretches north and west through the Fairweather and Saint Elias Mountain Ranges as far as Yakutat and Dry Bay. The glacier extended all the way to the mouth of Glacier Bay in 1794, when Captain George Vancouver explored the region. Today, the Bay provides a laboratory for scientists to study the way the landscape and animal and plant communities return to areas of the land and sea so recently covered by glaciers. A diversity of land and marine mammals, birds and fish are present in the Park and Preserve, including humpback, gray, and minke whales, orca whales, Dall's porpoise, harbor porpoise, Steller sea lions, harbor seals, sea otters, moose, bear, wolves, coyotes, mountain goats, smaller furbearers, 240 species of birds, and almost 200 species of fish.[23]

Other protected areas near Gustavus include the West Chichigof-Yakobi Wilderness and the Pleasant/Lemesurier/Inian Islands Wilderness. In addition, a large portion the Chichigof Roadless Area, which runs north-south through the central portion of Chichigof Island, is managed under land-use designation II (LUD II), which would be "permanently managed in a roadless state to retain their wildland characteristics".[24] The West Chichigof-Yakobi Wilderness Area was also designated in 1980 under the ANILCA. The Wilderness Area encompasses 265,286 acres of western Chichigof Island and Yakobi Island. The West Chichigof-Yakobi Wilderness is characterized by intricate bays, lagoons, estuaries, muskeg meadows, and natural hot springs.[25] Southwest of Gustavus, a group of islands in Cross Sound make up the Pleasant/Lemesurier/Inian Islands Wilderness. This Wilderness Area, totaling 23,151 acres, was designated in 1990.[26]

Natural hazards in Gustavus include high risk of severe weather – including wind and heavy precipitation – flooding, erosion, landslides, avalanche, earthquake, and drought, as well as medium risk from wildfire and tsunami and seiche events, and low risk of impacts from volcanic activity.[27] According to the Alaska Department of Environmental Conservation, there

[21] Gustavus Strategic Planning Committee (2005). *Gustavus Strategic Plan 2005: Protecting and Planning Our Future.* Retrieved June 15, 2012 from http://cms.gustavus-ak.gov/services/planning/strategic.
[22] National Park Service (2012). *Glacier Bay National Park & Preserve: Natural History of Glacier Bay*. Retrieved October 30, 2012 from http://www.nps.gov/glba/naturescience/natural-history-of-glacier-bay.htm.
[23] National Park Service (2011). *Glacier Bay National Park & Preserve*. Retrieved March 16, 2012 from http://www.nps.gov/glba/.
[24] U.S. Forest Service (2003). *Tongass Land Management Plan Revision: Final Supplemental Environmental Impact Statement. Roadless Area Evaluation for Wilderness Recommendations. Volume I: Final SEIS Appendix A, B, D, E.* Retrieved April 25, 2012 from http://www.tongass-seis.net/seis/pdf/Volume_I.pdf.
[25] U.S. Forest Service (n.d.). *West Chichigof- Yakobi Wilderness*. Retrieved June 28, 2012 from http://www.fs.fed.us/r10/tongass/forest_facts/resources/wilderness/chic.pdf.
[26] U.S. Forest Service (n.d.). *Pleant/Lemesurier/Inian Islands Wilderness*. Retrieved June 28, 2012 from http://www.fs.fed.us/r10/tongass/forest_facts/resources/wilderness/pleasant.pdf.
[27] State of Alaska (2002). *Hazard Mitigation Plan.* Retrieved February 8, 2012 from http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf.

are no notable active environmental cleanup sites located in Gustavus as of October 2012.[28]

Current Economy[29]

In the 2011 AFSC survey, community leaders reported that important economic drivers in Gustavus include fishing, ecotourism, sport hunting and fishing, and some logging and timber milling. The local economy is highly seasonal, and the population of the community almost doubles in summer months. Park headquarters and a Visitor Information Center for Glacier Bay National Park are located in Bartlett Cove, 10 miles northwest of Gustavus. The community of Gustavus is known as a "Gateway to Glacier Bay National Park.[30] In addition to companies offering Glacier Bay tours, a number of sport fish charter, moose hunting, whale watching and kayaking companies cater to summer tourists, along with several lodges and bed and breakfasts. The City also has a 9-hole golf course. Other employment opportunities are available from the National Park Service, school, airport, and several other small businesses. A number of Gustavus residents also participate in commercial fishing, and subsistence harvest is an important part of the local lifestyle.[31]

Based on household surveys conducted for the 2006-2010 ACS,[32] in 2010, the per capita income in Gustavus was estimated to be $34,128 and the median household income was estimated to be $50,750. These numbers represent increase from the per capita and median household incomes reported in the year 2000 ($21,089 and $34,766, respectively). The increase remains after inflation is taken into account by converting the 2000 values to 2010 dollars,[33] revealing a real per capita income in 2000 of $27,732 and a real median household income of $45,717. In 2010, Gustavus ranked 37th of 305 Alaskan communities with per capita income data that year, and 127th in median household income, out of 299 Alaskan communities with household income data.

However, Gustavus' small population size may have prevented the ACS from accurately portraying economic conditions.[34] An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Decennial Census, the resulting per capita income estimate for Gustavus in 2010 is

[28] Alaska Dept. of Environmental Conservation (2011). *List of Contaminated Site Summaries By Region*. Retrieved October 12, 2012 from http://dec.alaska.gov/spar/csp/list.htm.
[29] Unless otherwise noted, all monetary data are reported in nominal values.
[30] National Park Service (2012). *Operating Hours & Seasons* and *Gustavus*. Retrieved October 26, 2012 from http://www.nps.gov/glba/planyourvisit/hours.htm.
[31] 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.
[32] U.S. Census Bureau (n.d.). *Profile of selected social and economic 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.
[33] 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).
[34] While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

$6,463.[35,36] This estimate is lower than the per capita income reported by the 2000 Decennial Census, suggesting that caution is warranted when citing an increase in per capita income between 2000 and 2010 based on 2006-2010 ACS estimates. This lower per capita income estimate derived from the ALARI database is reflected in the fact that the community was recognized as "distressed" by the Denali Commission in 2011,[37] indicating that over 70% of residents aged 16 and older earned less than $16,120 in 2010. It should also be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a similar percentage of Gustavus' population (65.8%) was estimated to be in the civilian labor force compared to the civilian labor force statewide (68.8%). In the same year, 5.7% of Gustavus residents were estimated to be living below the poverty line, under the statewide rate of to 9.5%, and the local unemployment rate was estimated to be 2%, under the statewide unemployment rate of 5.9%. An additional estimate of unemployment based on the ALARI database suggests a slightly higher unemployment rate of 14.5% in 2010, just over the ALARI statewide unemployment rate estimate of 11.5%.[38]

Also based on the 2006-2010 ACS, just over half of Gustavus' workforce was estimated to be employed in the private sector (53.2%), along with 29% in the public sector, 17.5% estimated to be self-employed, and 0.4% as unpaid family workers. Of the 252 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in arts, entertainment, recreation, accommodation, and food service industries (32.9%), along with 14.3% estimated to be employed in educational services, health care, and social assistance, 12.3% in retail trade, 11.9% in transportation, warehousing, and utilities, 8.7% in public administration, 8.3% in finance and insurance, real estate, rental, and leasing, and 7.1% in construction industries (Figure 3). The most notable shifts in employment by industry between 2000 and 2010 were a more than doubling of employment in retail trade and more than six times the employment in finance and insurance, real estate, rental, and leasing industries. Declines were observed in manufacturing, construction, and 'other services' (not including public administration). In 2010, 2.4% of the Gustavus workforce was also estimated to be employed in agriculture, forestry, fishing, hunting, and mining industries. It is also important to note that the number of individuals employed in the fishing industry is likely underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly.

When looking at employment from the perspective of occupation, there were shifts between 2000 and 2010 toward greater employment in management and professional occupations (36% increase) and natural resource, construction, and maintenance occupations (40.2% increase), as well as a 52.7% decrease in the percentage of the workforce employed in sales and office occupations (Figure 4).

[35] 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/.
[36] See footnote 32.
[37] Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.
[38] See footnote 35.

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

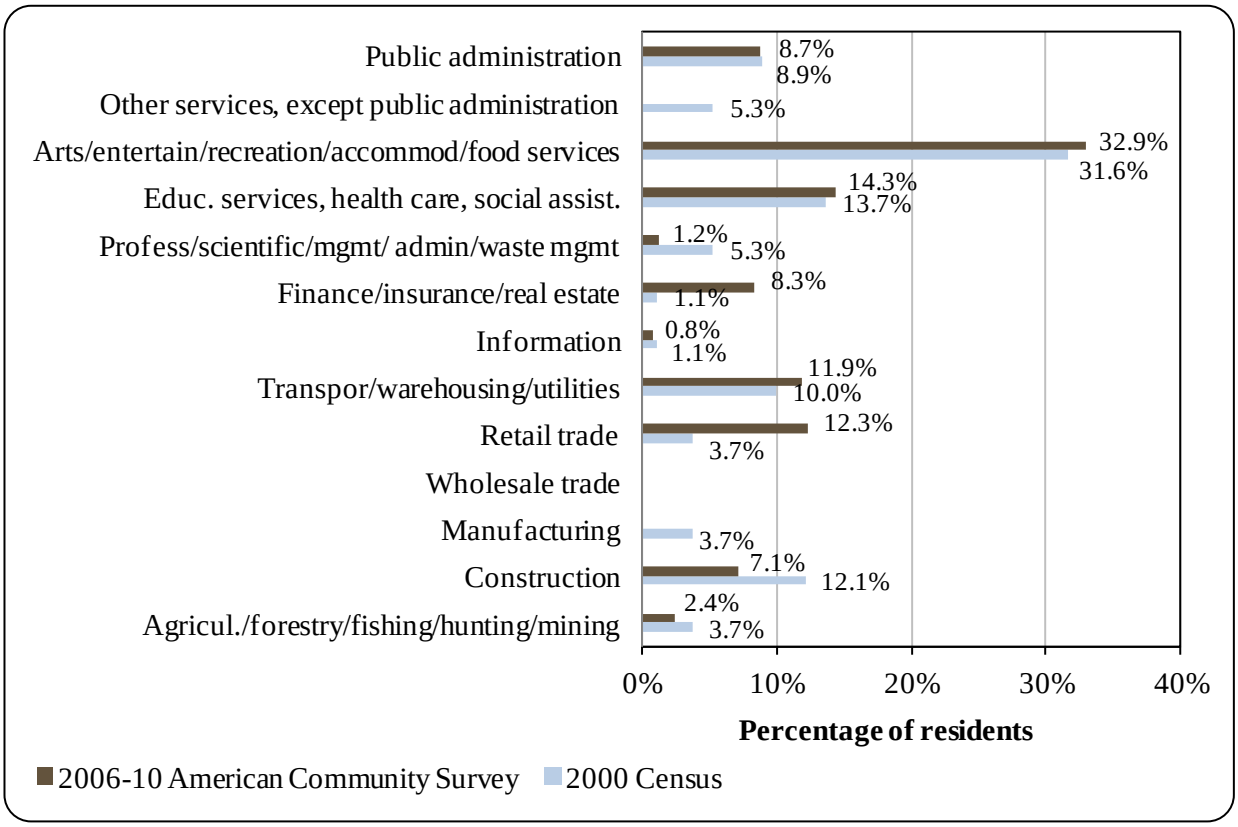
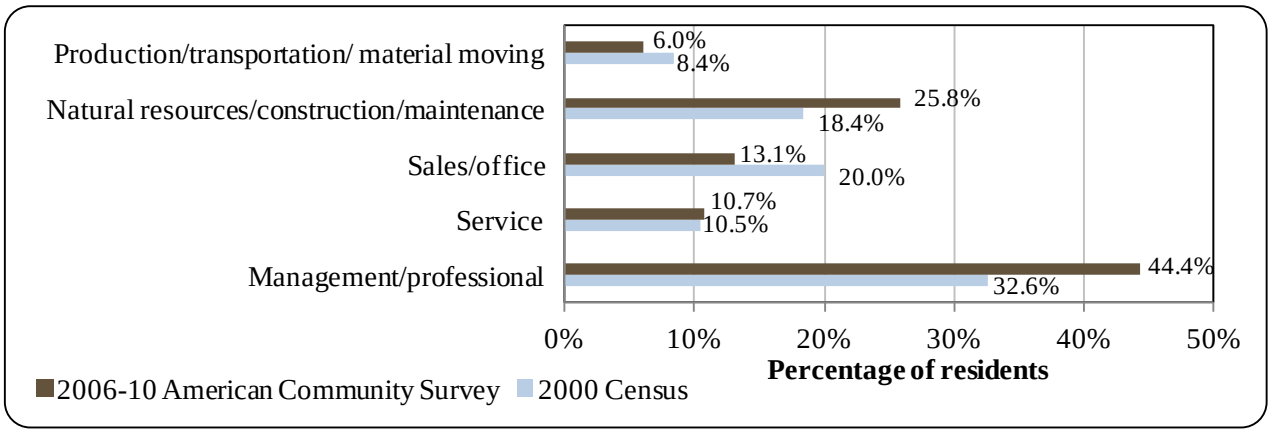


Figure 4. Local Employment by Occupation in 2000-2010, Gustavus (U.S. Census).



ALARI employment data conflict somewhat with 2006-2010 ACS estimates, showing a greater percentage of the workforce employed in trade, transportation, and utilities and government service industries. According to the ALARI database, there were 136 employed residents in Gustavus in 2010, of which 29.4% were employed in trade, transportation industries, 23.5% in local government, 11.8% in leisure and hospitality, 10.3% in construction, 8.8% in state government, 4.4% in professional and business services, 3.7% in education and health services, 2.9% in natural resources and mining, 2.2% in information, 1.5% in financial activities,

and 1.5% in other industries.[39] It is not surprising that many local residents are employed in the tourism industry given that in recent years some 400,000 tourists visit Glacier Bay annually, the great majority on cruise ships that often accommodate more than 2,000 passengers.[40] As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Governance

Gustavus was incorporated in 2004 as a 2nd Class City. It has a manager, or "Strong Mayor", form of government, with a seven-person city council including the Mayor, a five-person school board, and several municipal employees. The City is not located in an organized borough. Gustavus was not included under the Alaska Native Claims Settlement Act (ANCSA), and is not federally recognized as a Native village. However, many Native residents of the area are shareholders in the regional Native corporation for Southeast Alaska, Sealaska Corporation.[41]

Reporting of municipal revenue began in the last 3 months of the 2004 fiscal year, following the incorporation of the City of Gustavus. Beginning in 2005, total municipal revenues reported in Table 2 below reflect the full fiscal year. The City collects a 3% sales tax and a 4% bed tax, but no property tax is collected. The City also levies a $10 Fishbox tax,[42] which applies to "packaged fish and/or seafood caught or taken and retained by fish charter customers as part of the fish charter."[43] Following incorporation of the City in 2004, annual municipal revenues followed an increasing trend through the end of the decade. In addition to local tax revenues, locally-generated revenue in Gustavus between 2004 and 2010 came from sources including building and land leases, library income, gaming income, fundraising, interest income, and from the Disposal and Recycling Center and Community Chest. The Disposal and Recycling Center accepts recyclables and also deposits items in a landfill for a fee. The Community Chest is a local second-hand store. Proceeds from the volunteer-staffed store benefit the Disposal and Recycling Center.[44]

Outside revenue sources during the 2005-2010 period included shared funds from state and federal sources, as well as grants. Federal shared funds came from the Payment in Lieu of Taxes program, and state funds came from the Community Revenue Sharing program in 2009 and 2010, as well as fish tax refunds (see the *Fisheries-Related Revenue* section for details). It is important to note that, before Gustavus was incorporated, the community received small State Revenue Sharing contributions, averaging approximately $3,700 annually between 2000 and 2004. A number of fisheries-related grants were received by Gustavus in the second half of the decade. These included $220,000 in 2006 from the U.S. Economic Development Administration

[39] 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/.
[40] Mackovjak, James (2010). *Navigating Troubled Waters: A History of Commercial Fishing in Glacier Bay, Alaska.* U.S. Department of the Interior, National Park Service, Glacier Bay National Park and Reserve.
[41] 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.
[42] Ibid.
[43] City of Gustavus (2008). *A Resolution by the Gustavus City Council Creating a Special Committee Called The Fish Box Tax Implementation Committee*. Retrieved October 26, 2012 from http://cms.gustavus-ak.gov/government/resolutions/2008/2008-07-resolution-special-committee-for-fish-box.pdf/view.
[44] City of Gustavu s (2007). *Disposal & Recycling Center and Community Chest*. Retrieved September 11, 2013 from http://cms.gustavus-ak.gov/services/DRC.

for a ramp at the barge landing site. Also that year, the Alaska Department of Commerce, Community and Economic Development (DCCED)'s Division of Community and Regional Affairs awarded $150,000 for planning and design of a dock and boat launch. In 2008, the Denali Commission granted a total of $95,200 and the Alaska Department of Transportation and Public Facilities (DOT&PF) provided $4,800 for design of a small boat float. In 2009, Gustavus received $812,500 from the Denali Commission for a transient vessel mooring facility, and in 2010, the DOT&PF provided an additional $2 million toward public docks and floats.

The closest offices of the Alaska Department of Fish and Game (ADF&G), Alaska Department of Natural Resources (DNR), National Marine Fisheries Service (NMFS), Alaska Department of Commerce, Community, and Economic Development, and U.S. Bureau of Citizenship and Immigration Services are all located in Juneau. In addition, the National Park Service maintains Glacier Bay National Park headquarters and a Visitor Information Station for boaters and campers in Bartlett Cove, 10 miles northwest of Gustavus.[45]

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

Year	Total Municipal Revenue[1]	Sales Tax Revenue[2]	State/Community Revenue Sharing[3,4]	Fisheries-Related Grants (State and Federal)[5]
2000	n/a	n/a	$4,170	n/a
2001	n/a	n/a	$3,707	n/a
2002	n/a	n/a	$3,681	n/a
2003	n/a	n/a	$3,631	n/a
2004	$50,024*	n/a	n/a	n/a
2005	$286,059	$86,965	n/a	n/a
2006	$688,077	$241,402	n/a	$370,000
2007	$970,966	$212,116	n/a	n/a
2008	$1,211,784	$251,591	n/a	$100,000
2009	$553,146	$223,260	$118,854	$812,500
2010	$885,211	$198,286	$118,618	$2,000,000

Note: * In 2004, the reported revenue reflects the last three months of the fiscal year only.
[1] Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.
[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, 2011from https://www.tax.state.ak.us.
[4] The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.
[5]Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

[45] National Park Service (2012). *Operating Hours & Seasons*. Retrieved October 26, 2012 from http://www.nps.gov/glba/planyourvisit/hours.htm.

Infrastructure

Connectivity and Transportation

Gustavus is accessible by air or water. The state-owned airport has two asphalt runways, one of which is 6,271 feet long and 150 feet wide, and the other which is 3,146 feet long and 60 feet wide.[46] Between early June and late August, Alaska Airlines provides daily jet service to Gustavus,[47] and smaller air taxis and charter flights are available year-round. In addition, float planes land at Bartlett Cove, 10 miles northwest of Gustavus by road.[48] As of June 2012, roundtrip airfare on Alaska Airlines from Anchorage to Juneau was $399.[49] The lowest cost roundtrip ticket on Alaska Airlines in summer 2013 between Juneau and Gustavus was $147,[50] and as of November 2012, a roundtrip flight on a smaller air carrier between Juneau and Gustavus was $178.[51]

In addition to air travel, Gustavus is accessible by private boat or ferry. As of November, 2010, the Alaska Marine Highway began providing bi-weekly summer service and weekly winter service to Gustavus.[52,53,54] Small boats, including smaller cruise ships, often dock in Gustavus in the summer.[55] Except for the largest cruise ships, a majority of tourists pass through the City of Gustavus on their way to tours of Glacier Bay Park and Preserve, giving Gustavus the title, "Gateway to Glacier Bay National Park."[56] Freight is primarily delivered by air or landing craft.[57]

Facilities

Half of the year-round homes in Gustavus are fully plumbed with individual water wells and private septic tanks. A community well source is available to provide water for remaining households. Outhouses are used by these remaining homes. Some concerns have been raised about water quality in Gustavus, given shallow wells and the presence of individual septic systems in the community. The school purchases water from the National Park Service. The City operates a landfill but does not provide refuse collection services; residents must haul their own garbage. Electricity in Gustavus is provided by a diesel powerhouse operated by the Gustavus

[46] Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.
[47] Personal communication, Alaska Airlines representative, October 30, 2012.
[48] National Park Service (2012). *Glacier Bay National Park & Preserve: Directions*. Retrieved October 29, 2012 from http://www.nps.gov/glba/planyourvisit/directions.htm.
[49] Airfare calculated using lowest fare from www.travelocity.com (Retrieved November 22, 2011).
[50] See footnote 47.
[51] Airfare calculated using lowest fare from http://www.wingsofalaska.com/. (Retrieved October 30, 2012).
[52] Gustavus.com (2012). *Getting to & Around Gustavus, Alaska*. Retrieved October 29, 2012 from http://www.gustavus.com/gethere/index.html.
[53] National Park Service (2012). *Glacier Bay National Park & Preserve: Ride the Ferry to Gustavus*. Retrieved October 29, 2012 from http://www.nps.gov/glba/planyourvisit/ak-state-ferry-to-gustavus.htm.
[54] State of Alaska (2011). *Alaska Marine Highway System*. Retrieved October 29, 2012 from http://www.dot.state.ak.us/amhs/index.shtml.
[55] See footnote 48.
[56] Gustavus Strategic Planning Committee (2005). *Gustavus Strategic Plan 2005: Protecting and Planning Our Future.* Retrieved June 15, 2012 from http://cms.gustavus-ak.gov/services/planning/strategic.
[57] See footnote 48.

Electric Company.[58] According to the 2011 AFSC survey, community leaders indicated that improvements to the diesel powerhouse have been completed in the last 10 years, as well as the addition of a hydroelectric energy source. Construction of the Falls Creek Hydroelectric facility at Falls Creek was completed in 2009. The facility generates 800 kW of electricity, and is connected via a 5-mi long buried transmission cable to the existing diesel powerhouse.[59]

Police services are provided by state troopers stationed in Juneau. Fire and rescue services are provided by Gustavus Emergency Response and the Glacier Bay National Park Volunteer Fire Department. Additional community infrastructure includes a Community Building and two libraries, one public and one located at the local school. Telephone and internet service are available in Gustavus, but no cable providers offers local service.[60]

With regard to fisheries-related infrastructure, community leaders reported in the 2011 AFSC survey that about 300 feet of dock space is available for transient vessel moorage (150 feet on either side of the float). Larger vessels of up to 400 feet in length can also access moorage at the Alaska Ferry dock. Community leaders reported that Gustavus has capacity to handle rescue vessels (i.e. Coast Guard), ferries, and fuel barges. The broad mudflats of the Salmon River are also used as an unofficial 'boat harbor'. Skiffs can enter the River at high tide on tides of at least +8 feet. Larger vessels can enter the River during high tide, but must anchor offshore or tie up at the Gustavus dock, the National Park Service dock in Bartlett Cove, or in Hoonah.[61]

In the 2005 Gustavus Strategic Plan, the Gustavus dock was identified as "the lifeline of the community." The dock was originally constructed in 1962, and although various improvements and repairs have been carried out through the years, but by the mid-2000s the dock was in poor condition.[62] A number of grants have been received from state and federal funding sources for upgrades to public docks, floats, and barge landing areas in the last 5 years,[63] and in the 2011 AFSC survey, community leaders reported that construction of a breakwater, new dock space, and a barge landing area was expected to be completed later that year.

Community leaders also reported in the 2011 AFSC survey that a number of fisheries-related businesses and services are present in Gustavus. These include boat repair services (electrical, welding, and mechanical services), sale of bait and tackle for sportfishing and sale of boat fuel, a small cold storage facility, and a processing facility geared toward sport catch, as well as a number of fishing lodges. For fisheries-related businesses and services not available in Gustavus, community leaders indicated that residents travel to Juneau, Hoonah, or Excursion Inlet.

[58] 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.
[59] Gustavus Electric Company (n.d.). *Falls Creek Hydroelectric Project.* Retrieved October 26, 2012 from http://www.gustavuselectric.com/index.php?option=com_content&task=view&id=13&Itemid=26.
[60] See footnote 58.
[61] See footnote 56.
[62] Ibid.
[63] Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Funding Database*. Retrieved April 15, 2011from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Medical Services

Local residents access medical services at the Gustavus Community Clinic, a qualified Emergency Care Center. The Clinic is owned and operated by the Gustavus Community Association. Emergency services have coastal, air, and floatplane access, as well as limited highway access. Emergency service is provided by volunteers, and alternative health care is provided by Gustavus Emergency Response.[64] The nearest hospital is located in Juneau.

Educational Opportunities

There is one school in Gustavus, which offers Kindergarten through 12th grade. As of 2011, the Gustavus School had 57 students and 5 teachers. Gustavus is located in the Chatham School District.[65]

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Hoonah Tlingit historically used Glacier Bay and the Gustavus area for fish camps, and subsistence harvest of fisheries resources was a foundation of life in the region.[66,67] Salmon were perhaps the most important resource for the Tlingit. Traditionally, fish trap, gaffs, and spears were used to catch salmon. Steelhead, herring, herring eggs, ooligans (eulachon), and Dolly Varden were also caught and eaten. The Tlingit also utilized marine mammals (e.g., seal), deepwater fish (e.g., halibut), marine invertebrates (e.g., 'gumboot' chitons), and sea plants (e.g., seaweed, beach asparagus and goose tongue). A system of property ownership was in place over harvesting places, including streams, halibut banks, berry patches, hunting areas, intertidal areas, and egg harvesting sites.[68,69]

Commercial harvest of salmon began in Southeast Alaska in the late 1870s.[70] Bartlett Cove was the site of a salmon saltery in the early 1880s, and by 1889 a salmon cannery began operations at the site, owned by Bartlett Bay Packing Company. The cannery was purchased in 1897 by Icy Strait Packing Company, owned by a pioneering canneryman named Peter Buschmann. However, planned improvements to the cannery facility were abandoned in 1901, in part because of the remoteness of the location and difficulties with ice, and also because Buschmann was nearly bankrupt. Icy Strait Packing Company was sold to Pacific Packing and

[64] See footnote 58.
[65] Ibid.
[66] Brock, M., P. Coiley-Kenner and the Sitka Tribe of Alaska. 2009. *A Compilation of Traditional Knowledge about the Fisheries of Southeast Alaska*. ADF&G Technical Paper No. 332. Retrieved March 30, 2012 from http://alaska.fws.gov/asm/pdf/fisheries/reports/04-652Final.pdf.
[67] Walter R., and T. H. Haas Goldschmidt. 1998. *Haa Aaní, Our Land: Tlingit and Haida Land Rights and Use*, ed. Thomas F. Thornton. Seattle, WA: University of Washington Press.
[68] Alaska Native Heritage Center (2008). *Eyak, Tlingit, Haida & Tsimshian: Who We Are*. Retrieved November 23, 2011 from www.alaskanative.net/en/main_nav/education/culture_alaska/eyak.
[69] See footnote 66.
[70] Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf.

Navigation Company, which in turn went bankrupt in 1903.[71] No large-scale processors have operated at Bartlett Cove or at Gustavus since that time; although smaller businesses offer processing services (see the *Processing Plants* section for details).

Today, Southeast Alaska salmon fisheries utilize purse seines, drift gillnets, trolls, and set gillnet gear. The highest volume of salmon landings in the region are harvested by purse seines, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (i.e., sockeye, coho, and Chinook). Because of Southeast Alaska's proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty. The Treaty was originally negotiated in 1985, and renegotiated in 1999 with increased emphasis on implementation of abundance-based management strategies.[72]

In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska. The U.S. and Canada signed the Convention for the Preservation of the Halibut Fishery of the North Pacific Ocean in 1923, and since the Convention took effect in 1924, Pacific halibut fisheries have been managed by the International Pacific Halibut Commission.[73] Halibut fisheries are restricted to use of hook and line gear, although a limited number of halibut can be caught and retained as incidental catch in salmon troll fisheries and sablefish trap fisheries, as well as bycatch in a variety of fisheries using diverse gear types.[74,75] Sablefish were first harvested in Southeast Alaska as bycatch in the halibut fishery.[76] By the 1930s, several state-managed sablefish fisheries began in Southeast inside waters, including a fishery in Chatham Strait. Sablefish are harvested using longline or pot gear, and the state fisheries that take place in inside waters are managed independently of the federal fishery.[77]

In 1995, management of Alaskan halibut and sablefish fisheries shifted from limited entry to a system of Individual Fishing Quotas (IFQ). Motivations for the shift included overcapitalization, short seasons, and the derby-style fishery that led to loss of product quality and safety concerns. As a result of program implementation, the number of shareholders and total vessels participating in the halibut and sablefish fisheries declined substantially, and product quality has improved. This shift to catch shares has been controversial, raising concerns about equity of catch share allocation, reduced crew employment needs, and loss of quota from

[71] Mackovjak, J. 2010. *Navigating Troubled Waters: A History of Commercial Fishing in Glacier Bay, Alaska.* U.S. Department of the Interior, National Park Service. Retrieved October 26, 2012 from http://www.nps.gov/glba/historyculture/history-of-commercial-fishing-in-glacier-bay.htm.
[72] See footnote 70.
[73] International Pacific Halibut Commission (2006). *History*. Retrieved September 12, 2012 from http://www.iphc.int/publications/pamphlet/1IPHCHistoryPage.pdf.
[74] International Pacific Halibut Commission (2012). *Pacific Halibut Fishery Regulations 2012.* Retrieved September 12, 2012 from http://www.iphc.int/publications/regs/2012iphcregs.pdf.
[75] Williams, Greg (2010). "Halibut Bycatch limits in the 2010 Alaska groundfish fishery." *IPHC Report of Assessment and Research Activities*. Retrieved September 12, 2012 from http://www.iphc.washington.edu/publications/rara/2010/2010.299.Halibutbycatchlimitsinthe2010Alaskagroundfishfishery.pdf.
[76] Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska.* Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf.
[77] Carroll, K., and K. Green. 2012. *The Southeast Alaska Northern Southeast Inside Sablefish Fishery Information Report, With Outlook for the 2011 Fishery.* Alaska Dept. of Fish and Game, Fishery Management Report No. 08-44. Retrieved September 11, 2012 from http://www.adfg.alaska.gov/FedAidpdfs/FMR12-28.pdf.

coastal communities to outside investors.[78]

Pacific cod and lingcod are also harvested in Southeast Alaska under state regulations, independent of federal fisheries for these species. Pacific cod fisheries utilize longline gear, while the Southeast Alaska lingcod fishery uses dinglebar troll gear, a salmon power troll gear modified with a heavy metal bar to fish for groundfish. Management of the Southeast Alaska lingcod fishery includes a winter closure for all users (except longliners) to protect nest-guarding males. Demersal rockfish are caught as bycatch in the halibut longline and trawl fisheries. A small directed fishery for flatfish (other than halibut) has also taken place in Southeast inside waters in recent decades, but effort has declined since 1999.[79]

Crab fisheries in Southeast Alaska target red, golden and blue king crab, Tanner crab, and Dungeness crab.[80] Glacier Bay was an important center of of early Dungeness crab harvests in Southeast Alaska. Commercial harvest of Dungeness crab began in Southeast Alaska in 1909, and the first processing facility was built in Petersburg in 1921. In 1924, a Dungeness crab cannery began operating in Hoonah, and a large portion of the crab harvested came from Glacier Bay.[81] Larger-scale commercial crab fisheries did not begin in Southeast Alaska until the 1950s.[82]

A pot-gear fishery for spot shrimp (*Pandalus platyceros*) has grown in Southeast Alaska since the 1990s, and dive fisheries for sea cucumber and sea urchin also developed in recent decades.[83] The impact of an increasing sea otter population in Southeast Alaska on stocks of Dungeness crab, sea cucumber, and sea urchin has led to significant economic losses in these fisheries in recent years.[84]

When President Calvin Coolidge proclaimed Glacier Bay a National Monument in February, 1925, fisheries were of little interest to the ecologists and other scientists who hoped to see the glaciers and fjords protected.[85] However, concern grew about the impact of commercial fisheries on the ability of the Park Service to preserve the Park as an ecological reserve. With the passage of the Wilderness Act of 1964 and ANILCA in 1980, the National Monument became a National Park and Preserve, including In 1983, the National Park Service (NPS) proposed a rule that would close waters in the wilderness designated areas (referred to here as 'wilderness waters') to all forms of commercial fishing, and prohibit trawling in all areas of the Glacier Bay National Park. Local fishermen were angered and dismayed by this proposal, and NPS officials eventually discarded this original proposal. In 1983-1984, NPS officials negotiated with representatives of the State of Alaska, as well as Park employees, commercial fishermen, and environmentalists, but no agreement was reached. In 1990, a regulation was proposed to prohibit commercial fishing in wilderness waters, and to allow commercial fishing in non-wilderness

[78] Fina, M. (2011). "Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific." *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.
[79] See footnote 76.
[80] Ibid.
[81] See footnote 71.
[82] See footnote 76.
[83] Ibid.
[84] McDowell Group (2011). *Sea Otter Impacts on Commercial Fisheries in Southeast Alaska*. Prepared for Southeast Alaska Regional Dive Fisheries Association. Retrieved September 11, 2012 from http://www.scribd.com/doc/74857876/MCDOWELL-GROUP-2011-Sea-Otter-Impacts-Report.
[85] Mackovjak, J. 2010. *Navigating Troubled Waters: A History of Commercial Fishing in Glacier Bay, Alaska.* U.S. Department of the Interior, National Park Service. Retrieved October 26, 2012 from http://www.nps.gov/glba/historyculture/history-of-commercial-fishing-in-glacier-bay.htm.

waters of the Park until December 31, 1997. This regulation was intended to provide enough time for fishermen to plan ahead for the change.[86] The number of Dungeness crab permits held by Gustavus residents declined significantly after fishing ceased in Glacier Bay in 1997.[87] In addition to closure of commercial fisheries, subsistence harvest of fish and wildlife is prohibited within the boundaries of Glacier Bay National Park and Preserve.[88,89]

Gustavus is located in Pacific Halibut Fishery Regulatory Area 2C and Federal Statistical and Reporting Area 659. The closest federal Sablefish Regulatory Area is "Southeast Outside." Gustavus is eligible to participate in the Community Quota Entity (CQE) program, but as of October 2012, no CQE non-profit had been established for Gustavus.[90] Gustavus is not eligible to participate in the Community Development Quota program.

In a survey conducted by the AFSC in 2011, community leaders reported that Gustavus community members are actively engaged in fisheries management processes in Alaska through providing comments on management practices. When asked to describe challenges facing Gustavus' fishing economy, community leaders noted limited moorage for larger vessels, lack of a fish processor or ice availability, and the challenge of establishing sustainable harvest levels for all species. When asked about past fisheries management decisions that have had the greatest impact on the community, community leaders pointed to the closure/restrictions of fishing in Glacier Bay. Community leaders also indicated that future decisions with the potential to impact Gustavus include management of commercial charter and sportfishing activity, and also emphasized the critical importance of maintaining access to subsistence, or 'personal use', fishing opportunities for Gustavus residents.

Processing Plants

Based on ADF&G's 2010 Intent to Operate List, there was one shore-side processing plant operating in Gustavus. According to a survey of plant managers conducted by the AFSC in 2011, Pep's Packing is a family-run fish processing and smoking facility in Gustavus that began operations in 1992. Pep's is centrally located in the community and specializes in custom processing (mostly smoking) of halibut and Chinook salmon caught during fishing charter. Pep, the owner, prides herself in being a native Gustavite who provides employment to her townspeople.[91]

[86] Catton, T. 1993. *Glacier Bay Administrative History.* Retrieved May 25, 2012 from: http://www.gustavushistory.org/articles/booksnarticles.aspx.
[87] City of Gustavus Strategic Planning Committee (2005). *Gustavus Strategic Plan*. Retrieved October 25, 2012 from http://cms.gustavus-ak.gov/services/planning/strategic/current/2005SPComplete.pdf.
[88] U.S. Fish and Wildlife Service (2011). *Subsistence Management Regulations for the Harvest of Fish and Shellfish on Federal Public Lands and Waters in Alaska*. Retrieved October 29, 2012 from http://alaska.fws.gov/asm/pdf/fishregs11/entire.pdf.
[89] U.S. Fish and Wildlife Service, Federal Subsistence Management Program (2010). *Maps: Wildlife Management Units and Fisheries Management Areas.* Retrieved October 31, 2012 from http://alaska.fws.gov/asm/maps.cfml?maps=4.
[90] NOAA Fisheries, Alaska Regional Office (2012). *Name and Contact Information of Community Quota Entities*. Retrieved August 20, 2012 from http://www.fakr.noaa.gov/ram/daily/cqenamescontacts.pdf.
[91] Black Rock Charters (n.d.). *Pep's Packing and Fish Processing.* Retrieved August 22, 2012 from http://www.blackrockcharters.com/content/gustavus_alaska/peps_packing.asp

Fisheries-Related Revenue

Following its incorporation in 2004, the City began receiving fisheries-related revenue in 2006. Sources of fisheries-related revenues received between 2006 and 2010 included the Shared Fisheries Business Tax, harbor usage fees, the City Fishbox tax, and launch ramp fees. In 2010, known fisheries-related revenue totaled $1,207,546. Information about selected fisheries-related revenue sources in Gustavus between 2000 and 2010 is presented in Table 3.[92]

Commercial Fishing

Between 2000 and 2010, Gustavus residents were engaged in commercial fishing as state and federal permit holders, quota share account holders, vessel owners, and crew license holders. According to the 2011 AFSC survey, community leaders indicated that salmon and halibut are two of the most important commercial fisheries for local fishermen, with emphasis on salmon troll and halibut longline fisheries. They reported that salmon trolling takes place almost all year, and the halibut season is generally March through November. In addition to these important fisheries, Gustavus residents also held permits in crab, groundfish fisheries (lingcod, sablefish, demersal shelf rockfish, and miscellaneous saltwater finfish), and 'other shellfish' fisheries (shrimp, sea cucumber, sea urchin, and geoduck) between 2000 and 2010 (Table 4).

The total number of state and federal permits held by Gustavus residents remained relatively stable between 2000 and 2010 (Table 4), as did the number of crew license holders. In contrast, the number of vessels that were primarily owned by Gustavus residents showed a decreasing trend over the period, from 50 in 2000 to 26 in 2010. The number of vessels homeported in Gustavus also decreased, from 43 in 2000 to 25 in 2010. In the 2011 AFSC survey, community leaders echoed this decrease, indicating there were fewer commercial fishing boats in Gustavus compared to five years earlier. The number of commercial vessels delivering landings in Gustavus varied widely, ranging from a high of 18 in 2000 to a low of 3 in 2003. while the number of shore-side processors operating in the community between 2000 and 2010 remained relatively stable (1 in all years except 2002, when 2 processors were present) (Table 5).

Of 65 Commercial Fisheries Entry Commission (CFEC) permits held by Gustavus permit holders in 2010, 34 (52.3%) were held in salmon fisheries, 11 (16.9%) in halibut fisheries, 11 (16.9%) in crab fisheries, 6 (9.2%) in shellfish fisheries, 2 (3.1%) in sablefish fisheries, and 1 (1.5%) in other groundfish fisheries. Permit numbers are presented in Table 4, and more details regarding permit types and trends are provided below.

Of 34 salmon CFEC permits held in 2010, a majority (21) were statewide troll permits, 11 were statewide power gurdy troll permits, 1 was for the Southeast drift gillnet, and 1 was held in the Yakutat set gillnet fishery. That year, 47 (50%) of these salmon permits were actively fished. The number of salmon permit holders and the total number of permits held increased slightly between 2000 and 2010, and the percentage of permits actively fished also stayed stable or increased slightly. Troll permits were held in all years during the period, while the Yakutat set gillnet permit was held from 2002 to 2010, and the Southeast drift gillnet permit was held from 2007 to 2010.

In 2010, all of the 11 halibut CFEC permits held by Gustavus residents were for the statewide longline fishery, using vessels under 60 feet in length. In 2000 and 2001, several

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

halibut permits were also held in the statewide longline fishery using vessels greater than 60 feet in length. Both the number of permit holders and the total number of permits held increased in the first half of the 2000-2010 period, and then declined to close to 2000 levels by 2010. The percentage of halibut permits actively fished varied between 77% and 100%, with a slightly increasing trend over time.

Of the 11 crab CFEC permits held in 2010, 6 were held for Southeast Dungeness crab, 4 for Southeast Tanner crab, and 1 for Southeast brown king/Tanner crab. The Dungeness and king/Tanner permits were associated with pot gear, while the strictly Tanner crab permits were for ring net gear. The number of Dungeness crab permits decreased slightly, from eight in 2000 to six in 2010, while the number of Tanner crab permits decreased from seven to four. Other than 2010, the only years in which combined king/Tanner crab permits were held were 2000, 2008, and 2009. The number of permit holders and total crab permits held declined slightly over the period, and the percentage of crab permits that were actively fished was variable, with a low of 11% in 2007 and a high of 44% in 2008.

In 2000, five sablefish CFEC permits were held in Gustavus, including three in the statewide longline fishery using vessels over 60 feet in length, one in the statewide fishery (not including Southeast or Prince William Sound) using vessels under 60 feet in length, and one in the Northern Southeast longline fishery. The number of sablefish permits declined steadily to one by 2010, which was held in the statewide longline fishery (not including Southeast or Prince William Sound). The percentage of sablefish permits that were actively fished was high in all years, varying from 75% to 100%.

Like sablefish, the number of other groundfish permits decreased between 2000 and 2010, 11 in 2000 to 1 in 2010, and the number of groundfish permit holders decreased from five to one over this period. Groundfish permits held in 2000 included three demersal rockfish permits (one Southeast permit associated with longline gear for use on vessels under 60 feet in length, one Southeast permit for longline on vessels over 60 feet, and one statewide mechanical jig permit), two lingcod permits (one statewide longline and one statewide mechanical jig), and six ‘miscellaneous saltwater finfish’ permits (three statewide longline permits for use on vessels under 60 feet in length, two statewide longline for use on vessels over 60 feet, and one statewide mechanical jig). In 2010, the only groundfish permit was held in the statewide lingcod fishery, and was associated with dinglebar troll gear.

In 2010, Gustavus residents also held ‘other shellfish’ permits in the Southeast sea cucumber and geoduck dive fisheries and the Southeast pot gear shrimp fishery. The number of shrimp permits held increased from one between 2000 and 2007 to two from 2008-2010. One shrimp permit was actively fished from 2008 to 2010. The number of sea cucumber permits increased from two in 2000 to three between 2001 and 2010, and two of these permits were actively fished in each year during the period. One geoduck permit was held in 2000 and 2001 and from 2006 to 2010, but was not actively fished in any of these years. In addition to these fisheries, two permits were held in 2000 in the Southeast dive fishery for sea urchin, but were not actively fished that year. Overall, there was a slight increasing trend in shellfish permit holders, while the total number of shellfish permits remained even at six, after a slight decrease in the middle of the decade. CFEC permit numbers are presented in Table 4.

In addition to CFEC permit, Gustavus residents also held federal License Limitation Program (LLP) permits and Federal Fisheries Permits (FFP) between 2000 and 2010. In 2010, seven Gustavus residents held a total of 7 LLP permits in federal groundfish fisheries. Of these, two were actively fished that year (28%). The number of groundfish LLPs held remained very

stable over the decade. No crab LLPs were held in Gustavus between 2000 and 2010. Also in 2010, four Gustavus residents held a total of four FFPs, of which one was actively fished (25%). Information about federal fisheries permits is also presented in Table 4.

In the year 2000, 15 Gustavus residents held quota share accounts in the federal halibut catch share fishery. This number increased to a high of 20 in 2007, and then declined to 13 by 2010. Total quota shares rose from 519,800 in 2000 to a peak of 713,421 in 2004, and then declined to a low of 475,093 in 2009. The annual halibut individual fishing quota (IFQ) allotment increased by approximately 8% higher than 2000 levels by 2004, and then decreased to approximately 36% below 2000 levels in 2010. Sablefish catch share participation was more stable, with three quota share account holders in all years except 2005 and 2009, when two Gustavus residents held accounts. Total sablefish quota shares also remained stable, increasing slightly from 478,951 in 2000 to 499,356 in 2010. Sablefish IFQ allotment increased to 20% above 2000 levels in 2004 before decreasing to 16% below 2000 levels by 2010. No quota share accounts or quota shares were held by Gustavus residents in federal crab catch share fisheries between 2005 and 2010. Further information about federal catch share participation is presented in Tables 6 through 8.

Gustavus also had one shore-side processor throughout the decade and a second processor in 2002. The number of fish buyers present each year in Gustavus fluctuated between a high of five and low of one. The greatest volume of landings, for those years in which data can be reported, was delivered in 2006. That year, 95,918 net pounds were delivered for a total ex-vessel revenue of $71,304. Information about local landings and revenue is considered confidential in six years during the period due to the small number of fish buyers present in Gustavus in those years. In 2010, when four fish buyers were present, 3,257 net pounds were delivered in Gustavus, for a total ex-vessel revenue of $13,187. That year, Gustavus ranked 64th in landings and 62nd in ex-vessel revenue out of 67 Alaskan communities that received commercial fisheries landings that year. Further information about the commercial fishing sector in Gustavus is presented in Table 5.

At the species level, a majority of landings and ex-vessel revenue information in Gustavus is considered confidential due to the small number of participants in these fisheries. Salmon landings can be reported in 2006, 2007, and 2010, with the greatest landings volume reported in 2006 with 89,142 net pounds of salmon valued at $46,651 in ex-vessel revenue (Table 9).

More information can be reported regarding landings delivered by Gustavus vessel owners, including all delivery locations. Landings of salmon and halibut can be reported for all years, while ‘other groundfish’ landings can be reported in eight years, and crab landings can be reported in 2000 only. On average between 2000 and 2010, Gustavus vessel owners landed 181,223 net pounds of salmon and 79,411 net pounds of halibut. These landings were valued, respectively, at $273,576 and $250,112 in ex-vessel revenue, on average. For those years in which information can be reported for ‘other groundfish’, an average of 4,756 net pounds was landed, with an average ex-vessel revenue of $2,990. In 2000, 16,505 net pounds of crab were landed, with total ex-vessel revenue of $39,124. Further information about landings and ex-vessel revenue generated by Gustavus vessel owners is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Gustavus: 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	$2,722	$3,185	$2,733	$2,971	$2,546
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	$70,000	$739,600	$12,000	$1,205,000
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
City fish box tax[3]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	$18,000
Launch ramp fees[3]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	$1,500
Total fisheries-related revenue[4]	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*$2,722*	*$73,185*	*$742,333*	*$14,971*	*$1,207,546*
Total municipal revenue[5]	*n/a*	*n/a*	*n/a*	*n/a*	*$50,024**	*$286,059*	*$688,077*	*$970,966*	*$1,211,784*	*$553,146*	*$885,211*

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

*Note: * In 2004, the reported municipal revenue reflects the last three months of the fiscal year only, following City incorporation that year.*

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

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

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

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

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

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) [1]	Total permits	7	7	7	7	7	6	6	7	7	7	7
	Active permits	2	4	4	2	1	1	1	2	2	1	2
	% of permits fished	28%	57%	57%	28%	14%	16%	16%	28%	28%	14%	28%
	Total permit holders	7	7	7	7	7	6	6	7	7	7	7
Crab (LLP) [1]	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries	Total permits	4	4	4	2	2	2	2	4	4	4	4
Permits[1]	Fished permits	0	0	0	1	1	1	1	1	1	1	1
	% of permits fished	0%	0%	0%	50%	50%	50%	50%	25%	25%	25%	25%
	Total permit holders	3	3	3	2	2	2	2	4	4	4	4
Crab (CFEC) [2]	Total permits	16	12	12	10	8	8	9	9	9	8	11
	Fished permits	4	4	5	2	3	3	2	1	4	2	3
	% of permits fished	25%	33%	42%	20%	38%	38%	22%	11%	44%	25%	27%
	Total permit holders	14	10	9	8	6	7	8	8	8	7	8
Other shellfish (CFEC) [2]	Total permits	6	5	4	4	4	4	5	5	6	6	6
	Fished permits	2	2	1	0	2	2	2	2	2	3	2
	% of permits fished	33%	40%	25%	0%	50%	50%	40%	40%	33%	50%	33%
	Total permit holders	3	4	4	4	4	4	5	4	5	5	5
Halibut (CFEC) [2]	Total permits	10	13	13	15	15	15	15	14	14	12	11
	Fished permits	8	10	12	13	14	15	12	12	12	10	10
	% of permits fished	80%	77%	92%	87%	93%	100%	80%	86%	86%	83%	91%
	Total permit holders	10	13	13	15	15	15	15	14	14	12	11
Herring (CFEC) [2]	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) [2]	Total permits	5	4	4	4	4	4	4	4	4	2	2
	Fished permits	4	4	4	4	4	4	3	3	3	2	2
	% of permits fished	80%	100%	100%	100%	100%	100%	75%	75%	75%	100%	100%
	Total permit holders	4	3	3	3	3	3	3	3	3	2	2
Groundfish (CFEC) [2]	Total permits	11	12	7	5	4	3	3	3	3	4	1
	Fished permits	1	1	1	0	0	0	0	0	0	1	1
	% of permits fished	9%	8%	14%	0%	0%	0%	0%	0%	0%	25%	100%
	Total permit holders	5	5	5	4	3	2	2	2	2	3	1
Other Finfish (CFEC) [2]	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) [2]	Total permits	25	26	25	25	28	30	33	32	34	32	34
	Fished permits	11	12	10	10	14	11	16	15	15	16	17
	% of permits fished	44%	46%	40%	40%	50%	37%	48%	47%	44%	50%	50%
	Total permit holders	26	25	24	25	25	28	32	31	31	30	29
Total CFEC Permits[2]	*Permits*	*73*	*72*	*65*	*63*	*63*	*64*	*69*	*67*	*70*	*64*	*65*
	Fished permits	*30*	*33*	*33*	*29*	*37*	*35*	*35*	*33*	*36*	*34*	*35*
	% of permits fished	*41%*	*46%*	*51%*	*46%*	*59%*	*55%*	*51%*	*49%*	*51%*	*53%*	*54%*
	Permit holders	*39*	*36*	*36*	*37*	*38*	*40*	*44*	*42*	*41*	*39*	*39*

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

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

Table 5. Characteristics of the Commercial Fishing Sector in Gustavus: 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 Gustavus[2]	Total Net Pounds Landed in Gustavus[2,5]	Total Ex-Vessel Value of Landings in Gustavus[2,5]
2000	17	4	1	50	43	18	73,168	$216,362
2001	12	3	1	44	38	10	--	--
2002	18	4	2	39	32	4	17,313	$36,202
2003	8	3	1	39	34	3	--	--
2004	20	3	1	40	34	9	--	--
2005	15	2	1	23	19	5	--	--
2006	19	5	1	29	19	11	95,918	$71,304
2007	27	5	1	28	19	17	14,746	$54,293
2008	18	3	1	27	20	11	--	--
2009	19	1	1	25	20	8	--	--
2010	20	4	1	26	25	15	3,257	$13,187

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.]

[2] Total only represent non-confidential data.

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

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	15	519,800	80,880
2001	19	690,244	111,868
2002	19	684,228	107,333
2003	17	663,989	103,021
2004	18	713,421	119,665
2005	19	642,353	105,116
2006	18	628,267	100,440
2007	20	642,048	91,504
2008	17	630,993	76,357
2009	15	475,093	44,258
2010	13	637,162	63,147

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 Gustavus: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	3	478,951	50,948
2001	3	478,951	49,613
2002	3	478,951	49,590
2003	3	478,951	57,632
2004	3	478,951	61,025
2005	2	307,891	36,648
2006	3	478,951	57,113
2007	3	478,951	55,148
2008	3	478,951	51,010
2009	2	307,891	28,189
2010	3	499,356	44,583

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 Gustavus: 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.]

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

	Total Net Pounds[1]										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	89,142	6,574	--	--	3,257
Total[2]	--	--	--	--	--	--	*89,142*	*6,574*	--	--	*3,257*
	Ex-vessel Value (nominal U.S. dollars)										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	$46,651	$20,515	--	--	$13,187
Total[2]	--	--	--	--	--	--	$46,651	$20,515	--	--	$13,187

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

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

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

[2] Totals only represent non-confidential data.

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

	Total Net Pounds[1]										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	16,505	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	42,337	99,572	118,684	87,502	77,536	98,365	122,555	96,110	67,285	37,511	26,060
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	5,267	8,459	5,206	--	1,030	--	3,262	3,328	4,344	7,149	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	91,533	103,164	60,732	69,089	171,168	150,358	263,572	278,155	278,739	276,481	250,459
Total[2]	*155,642*	*211,195*	*184,622*	*156,591*	*249,734*	*248,723*	*389,389*	*377,593*	*350,368*	*321,141*	*276,519*
	Ex-vessel Value (Nominal U.S. dollars)										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	$39,124	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	$110,701	$189,139	$258,349	$254,917	$230,686	$297,905	$462,360	$415,703	$292,222	$111,867	$127,387
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	$3,158	$4,478	$2,502	--	$573	--	$1,667	$1,785	$2,000	$7,761	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	$96,307	$97,827	$55,313	$76,645	$261,881	$242,519	$486,595	$405,247	$510,712	$370,187	$406,098
Total[2]	*$249,290*	*$291,444*	*$316,164*	*$331,562*	*$493,140*	*$540,424*	*$950,622*	*$822,735*	*$804,934*	*$489,815*	*$533,485*

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

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

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

2 Totals only represent non-confidential data.

Recreational Fishing

According to the 2011 AFSC community survey, Gustavus community leaders reported that a majority of sportfishing activity takes place on charter boats and using private boats owned by both local residents and non-residents. They indicated that some of the most important species targeted by sport fishermen include Chinook and coho salmon, halibut, and crab. In addition, community leaders emphasized the importance of charter halibut and charter salmon fisheries, noting them as two of the most important local fisheries, along with commercial halibut and salmon fisheries. Community leaders also indicated that sport hunting and fishing is one of the most important local industries in Gustavus.

Between 2000 and 2010, the number of active sport fish guide businesses located in Gustavus remained relatively stable, varying between 10 and 14 operating per year. The number of licensed sport fish guides registered in the community appears to have declined slightly, from 27 in 2000 to 17 in 2010. The total number of sportfishing licenses sold in the community increased dramatically over the period, from 610 sold in 2000 to between 1,000 and 2,000 sold each year in the last 5 years of the decade. The number of sportfishing licenses sold to Gustavus residents was much lower than total local sales, averaging 224 per year, reflecting the large number of tourists that come to Gustavus each year and participate in sportfishing activities.

The Alaska Statewide Harvest Survey,[93] conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Gustavus: in freshwater, coho, chum, pink, and sockeye salmon, Dolly Varden, and cutthroat trout; in saltwater, Chinook, chum, coho, sockeye, pink, and chum salmon, Dolly Varden, cutthroat trout, Pacific halibut, rockfish, lingcod, Pacific cod, and smelt. The survey also noted sport harvest of Dungeness and Tanner crab, hardshell clams, and shrimp by Gustavus residents. Kept/released statistics from charter logbook data reported by ADF&G[94] show that salmon and halibut were the most important charter targets out of Gustavus, and that coho and pink salmon made up the greatest portion of charter salmon catch. On average between 2000 and 2010, 6,074 halibut, 3,472 coho salmon, and 2,210 pink salmon were kept per year. Other species that were also caught during charters out of Gustavus between 2000 and 2010 included Chinook, chum, and sockeye salmon, yelloweye, pelagic, and other rockfish, lingcod, sablefish, and several sharks. It is also important to note that halibut was by far the most often released species during charters, with an average of 6,732 halibut released per year between 2000 and 2010 during Gustavus charter trips.

Gustavus is located within Alaska Sport Fishing Survey Area G – Glacier Bay. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. In saltwater, non-Alaska resident anglers fished consistently more days than Alaska resident anglers, while in freshwater the two groups fished about the same number of angler days on average. Saltwater sportfishing was much more important in this region than freshwater between 2000 and 2010. Information about the sportfishing sector in and near Gustavus is displayed in Table 11.

[93] 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).

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

Table 11. Sport Fishing Trends, Gustavus: 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 Gustavus[2]
2000	14	27	273	610
2001	13	21	250	560
2002	12	19	225	698
2003	11	21	240	686
2004	12	23	232	802
2005	13	27	238	837
2006	12	24	225	1,017
2007	12	22	204	1,920
2008	10	20	181	1,833
2009	10	20	175	1,207
2010	12	17	222	1,045

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	6,920	3,647	623	563
2001	7,822	3,403	654	544
2002	6,868	2,689	516	475
2003	6,519	3,933	365	365
2004	9,765	3,178	604	330
2005	10,892	4,080	725	579
2006	10,469	3,512	445	860
2007	14,273	3,738	695	478
2008	13,702	2,559	565	275
2009	11,109	3,678	744	504
2010	9,595	2,644	792	308

[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

During a public meeting in Gustavus in preparation for the community's 2005 Strategic Plan, the freedom and opportunity to live a subsistence lifestyle was identified as one of the primary positive values of the Gustavus way of life.[95] According to the 2011 AFSC survey, community leaders indicated that halibut, salmon, and shellfish are three of the most important aquatic resources utilized by Gustavus residents for subsistence. Community leaders also emphasized the importance of subsistence harvest opportunities to the way of life in Gustavus, and indicated that maintaining subsistence opportunities is one of the community's most important policy concerns related to future fisheries management.

Between 2000 and 2010, no information was reported by ADF&G regarding the percentage of Gustavus households utilizing various marine resources for subsistence purposes or per capita subsistence harvest (Table 12). However, information is available from an earlier ADF&G subsistence survey regarding the percentage of Gustavus households involved in the harvest of non-salmon fish, marine invertebrates, and marine mammals in 1987. That year, the species of marine invertebrates harvested by the greatest percentage of Gustavus households included Dungeness crab (64% of households reported harvesting), clams (31%), Tanner crab (16%), king crab (13%), octopus (10%), shrimp (6%), and sea urchin (4%). Species of non-salmon fish harvested by the greatest percentage of Gustavus households in 1987 included Dolly Varden (45% of households harvested), Pacific cod (29%), flounder (16%), rockfish (15%), and herring (4%). In addition, 4% of Gustavus households participated in harvest of herring roe in spawn on kelp fisheries in 1987.[96] It is important to note than in many cases, the number of households reporting use of these subsistence resources was greater than the number involved in harvest, indicating the presence of sharing networks in Gustavus.

Information was reported by ADF&G regarding subsistence harvest of salmon in Gustavus during the 2000-2010 period. In 2008, the most recent year for which salmon subsistence data are available, 22 subsistence salmon permits were issued to Gustavus households, of which 20 were returned. The highest number of subsistence salmon permits was issued in 2001 and 2002 (26 permits), and the lowest number was issued in 2007 (11 permits). Sockeye salmon were the most heavily harvested species, with an average of 233 sockeye taken per year. Smaller numbers of chum and pink salmon were harvested in most years, and subsistence harvest of Chinook and coho was reported in 2008 only.[97] Information about subsistence salmon harvest is presented in Table 13, while no information was available regarding marine invertebrate or non-salmon fish (other than halibut) harvest during the 2000-2010 period.

Information was also available from ADF&G between 2003 and 2010 about subsistence halibut harvest in Gustavus. In 2003, 52 Subsistence Halibut Fishing Certificates (SHARC) were issued to residents of Gustavus. This number increased to a high of 81 SHARC cards issued to residents in 2009, but declined again to 58 in 2010. The number of SHARC cards that were actively fished varied between 20 and 46 per year. Maximum halibut harvest during the 2003-

[95] City of Gustavus Strategic Planning Committee (2005). *Gustavus Strategic Plan*. Retrieved October 25, 2012 from http://cms.gustavus-ak.gov/services/planning/strategic/current/2005SPComplete.pdf.
[96] 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).
[97] Ibid.

2010 period took place in 2005, when 8,357 pounds were reported harvested on 37 active SHARC cards. Total halibut harvests appear to have declined through the second half of the decade. This information about subsistence halibut harvest is presented in Table 14.

No information was available from management agencies regarding subsistence harvest of marine mammals by Gustavus residents between 2000 and 2010 (Table 15).

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

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

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

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

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Gustavus: 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	14	12	n/a	18	n/a	4	138	n/a	n/a
2001	26	22	n/a	60	n/a	44	302	n/a	n/a
2002	26	20	n/a	2	n/a	2	264	n/a	n/a
2003	18	16	n/a	n/a	n/a	2	516	n/a	n/a
2004	19	15	n/a	n/a	n/a	2	327	n/a	n/a
2005	21	14	n/a	2	n/a	38	119	n/a	n/a
2006	12	8	n/a	3	n/a	6	102	n/a	n/a
2007	11	7	n/a	n/a	n/a	n/a	134	n/a	n/a
2008	22	20	16	n/a	5	2	196	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, Gustavus: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	52	27	4,369
2004	61	29	7,291
2005	77	37	8,357
2006	67	35	6,779
2007	70	46	7,264
2008	74	38	5,175
2009	81	26	4,328
2010	58	20	2,475

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, Gustavus: 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.