

Seward (SOO-word)

People and Place

*Location*¹



Seward is situated on Resurrection Bay on the east coast of the Kenai Peninsula, 125 highway miles south of Anchorage. It lies at the foot of Mount Marathon and is the gateway to the Kenai Fjords National Park. Bear Creek and Lowell Point are adjacent to Seward. Seward is located in the Seward Recording District, the Kenai Peninsula Census Area, and the Kenai Peninsula Borough. The city boundaries encompass 14.4 square miles of land and 7.1 square miles of water.

*Demographic Profile*²

In 2010, there were 2,693 residents in Seward, making it the 36th largest of 352 total Alaskan communities with recorded populations that year. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents decreased by 7.81%. The average annual growth rate during this period was -0.72%, indicating a slow population decline. The change in population from 1990 to 2010 is provided in Table 1. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that Seward has approximately 1,500 seasonal workers or transients each year, primarily between February and October.

In 2010, the majority of Seward residents identified themselves as White (68.5%). Other ethnic groups present in Seward that year included American Indian and Alaska Native (16.7%), two or more races (8.1%), Hispanic or Latino (3.6%), Black or African American (3.1%), Asian (2.4%), Native Hawaiian and Other Pacific Islander (0.6%), and some other race (0.6%). Between 2000 and 2010, the percentage of the population identifying themselves as White decreased by 3.6%, with corresponding increases in the percentages of the population identifying themselves as two or more races, Asian, Black or African American, Hispanic or Latino, Native Hawaiian and Other Pacific Islander, and some other race. The percentage of the population identifying themselves as American Indian and Alaska Native did not change between 2000 and 2010. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Seward was 2.14, a decrease from 2.4 persons per household in both 1990 and 2000. The total number of households in Seward increased during this same period, from 886 in 1990 to 917 in 2000 to 1,097 in 2010. Of the 1,288 housing units surveyed for the 2010 Decennial Census, 600 were owner-occupied, 497 were renter-occupied, and 191 were vacant. In 2010, 709 Seward residents were reported to be living in group quarters.

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 Seward from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	2,699	-
2000	2,830	-
2001	-	2,758
2002	-	2,755
2003	-	2,744
2004	-	2,544
2005	-	2,598
2006	-	2,593
2007	-	2,649
2008	-	2,561
2009	-	2,609
2010	2,693	-

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

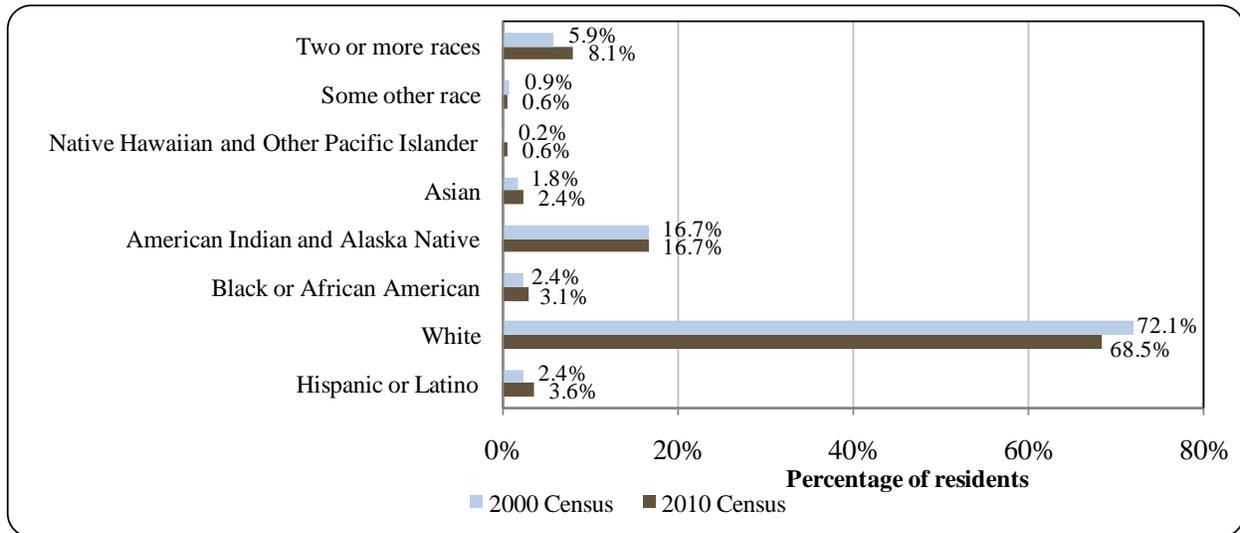
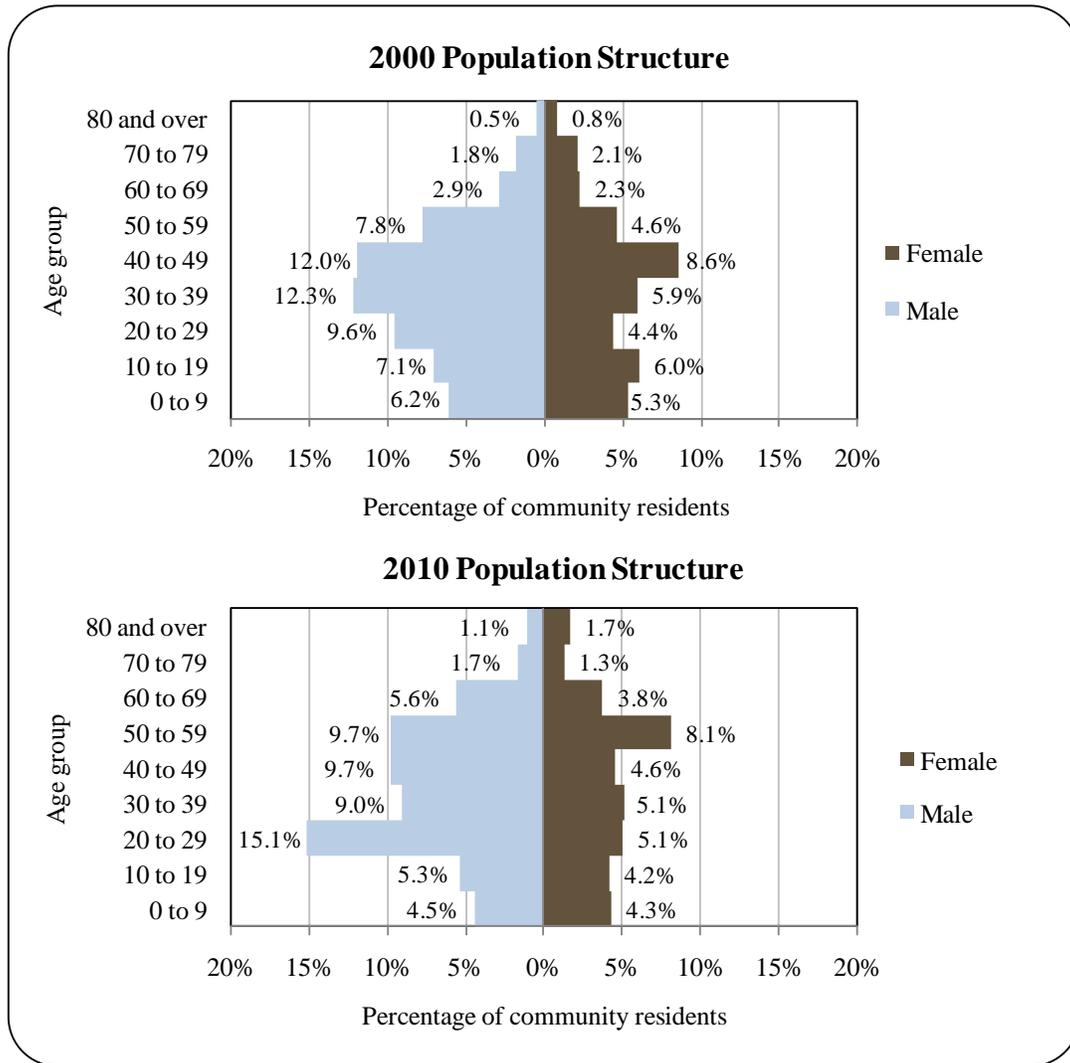


Figure 2. Population Age Structure in Seward Based on the 2000 and 2010 U.S. Decennial Census.



In 2010, the gender makeup of Seward was 62% male and 38% female, more skewed than the state as a whole (52% male, 48% female). The age groups between 20 and 59 years of age were especially skewed towards males. The median age was estimated to be 38.3 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the largest age group was 20-39 years old, with the next largest percentage of residents falling within the age group 40-59 years old. The overall population structure of Seward in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),³ 89.7% Seward residents aged 25 and over were estimated to hold a high school

³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a

diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 1.7% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 8.6% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 37.6% were estimated to hold a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 24.1% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 3.4% were estimated to hold an Associate's degree, compared to 8% of Alaskan residents overall; 13.4% were estimated to hold a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 11.3% were estimated to hold a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

The earliest inhabitants of Resurrection Bay were the Unegkurmiut, a subgroup of the Alutiiq Chugach that lived along the outer coast of the Kenai Peninsula. Anthropologists disagree about whether the Unegkurmiut were closely affiliated with the Koniag people of Kodiak Island, or whether they had previously inhabited Cook Inlet and were pushed back into a smaller territory by the Koniag.⁴

Resurrection Bay received its modern name in 1792 when Russian explorer and fur trader Alexander Baranof found unexpected shelter in the bay en route from Kodiak to Yakutat. He gave it this name because the day he arrived was the Russian “Sunday of Resurrection.”⁵ The Russians never built a permanent settlement in Resurrection Bay, although Baranof did establish a camp near Tonsina Point, close to the current City of Seward. The Russians built a ship called the Phoenix at the site, which is believed to have been the first western ship to be constructed on the west coast of North America.⁶

In the late 1800s, following the discovery of gold and coal in Alaska, private investors in Seattle were in search of a port to serve as a transportation link for a railroad to the interior. A real-estate developer and journalist named John Ballaine ordered a survey of mineral, timber, and farming potential of the Kenai Peninsula. Resurrection Bay was chosen as the site for a railroad terminus, based on positive reports regarding the natural resources in the area, and the fact that it offered an ice-free harbor throughout the year. John and his brother Frank, along with a group of settlers, arrived in 1903 to found the town of Seward. They laid the townsite and built a wharf.^{7,8} They had formed a railroad company – Alaska Central Railway (ACR), and by 1905 they had already laid 50 miles of railroad track. ACR went bankrupt by 1907, and a second group, the Alaska Northern Railway (ANR), purchased the railroad and constructed an additional

representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴ Cook, Linda, and Frank Norris. (1998). *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved January 25, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

⁵ 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.

⁶ Alaska State Housing Authority. (1963). *Seward Comprehensive Plan*. Retrieved March 14, 2013 from <http://www.commerce.state.ak.us/dca/plans/Seward-CP-1968.pdf>.

⁷ Ibid.

⁸ Alaska History and Cultural Studies. (2013). *Southcentral Alaska: 1900-1915 Fight for a Railroad*. Retrieved March 15, 2013 from <http://www.akhistorycourse.org/articles/article.php?artID=87>.

21 miles of track by 1910.⁹ However, private construction was halted due to challenges in the construction and financing of the project, as well as a withdrawal of all coal lands by the federal government. Nevertheless, by 1910, 534 people were recorded as living in Seward, and the City was incorporated in 1912. Seward was named after U.S. Secretary of State William Seward, 1861-1869, who is best known for having negotiated the purchase of Alaska from Russia in 1867, often referred to at that time as “Seward’s Folly.”¹⁰

Railroad construction began again in 1915, after U.S. Congress agreed to fund, construct and operate the railway. The Alaska Railroad was completed in 1923.¹¹ Seward continued to grow as a supply center and ocean link to the interior. The Seward-Anchorage Highway was completed in 1950. Seward was heavily impacted by the Good Friday Earthquake of 1964. As much as 90% of the Seward’s industry, including docks, fishing boats, railway yards, warehouses, seafood processing plants, and oil tank farms, was destroyed by submarine landslides and the resulting sea waves, as well as by fire.¹²

Today, Seward remains a primarily non-Native community, although the Qutekcak Tribe is very active in the community.¹³

Natural Resources and Environment

Seward is located in a maritime climate zone. Winter temperatures average from 17 to 38 °F (-8.3 to 3.3 °C), and summer temperatures average 49 to 63 °F (9.4 to 17.2 °C). Annual precipitation averages 66 inches of rain and 80 inches of snowfall.¹⁴ Strong winds occasionally funnel up Resurrection Bay or down valleys from the north. The landscape surrounding Seward is typical of eroded glacial valleys, with steep mountain slopes rising to between 2,000 and 5,000 ft interspersed by low river valleys. The area is heavily forested up to tree line at about 1,000 ft, with stands of spruce, hemlock, birch, and cottonwood, along with underbrush of alder and devil’s club.¹⁵

Seward is located several miles from the eastern boundary of Kenai Fjords National Park, and hosts the primary information center for visitors preparing to enter the Park. This National Park was established in 1980 to “maintain unimpaired the scenic and environmental integrity of the Harding Icefield, its outflowing glaciers and coastal fjords and islands.” Fifty-six percent of the park is covered by ice. Animals living in the mountains, the shores, and the fjords of the National Park include black bear, brown bear, moose, mountain goat, sea otter, Steller sea lion, harbor seal, Dall’s porpoise, Pacific white-sided dolphin, orca, minke whale, humpback whale, fin whale, and birds including bald eagles, puffins, murre, steller’s jay, black-billed magpie, peregrine falcon, and marbled murrelet.¹⁶ A portion of Kenai Fjords National Park is included in the Kenai Wilderness, which covers a total of 1,354,247 acres on the Kenai Peninsula.¹⁷

⁹ Alaska Railroad Corporation. (n.d.). *Timber Trestle Bridges in Alaska Railroad History*. Retrieved March 15, 2013 from <http://alaskarailroad.com/Portals/6/pdf/projects/Timber%20bridge%20history%20booklet.pdf>.

¹⁰ See footnotes 5 and 6.

¹¹ See footnote 9.

¹² See footnote 6.

¹³ See footnote 5.

¹⁴ Ibid.

¹⁵ See footnote 6.

¹⁶ National Park Service. (2010). *Kenai Fjords National Park*. Retrieved December 27, 2011 from <http://www.nps.gov/kefj/>.

¹⁷ Wilderness.net (n.d.). *Kenai Wilderness*. Retrieved January 26, 2012 from <http://www.wilderness.net>.

Seward is also adjacent to the south-western boundary of the Chugach National Forest, the western and northern-most National Forest in the U.S., comprising 5.5 million acres. Of this area, 21% of the National Forest is located on the Kenai Peninsula.¹⁸

Natural hazards with the potential to occur in Seward include flooding, earthquake, wildfire, ash fall, snow avalanche, tsunami, severe weather, landslides, and erosion. All of these hazards have occurred historically in Seward. The hazards with the highest probability of occurring were identified to be flooding and earthquake, and hazards with the greatest extent include earthquake, ash fall, severe weather, and erosion.¹⁹

According to the Alaska Department of Environmental Conservation, there were no notable active environmental cleanup sites located in the Seward area as of March 2013.²⁰

Current Economy²¹

The local economy has long been based on Seward's strategic location as a transportation center, serving as the southern terminus for the Alaska Railroad and a road link to Anchorage and the Interior. Today the economy has diversified to include commercial fishing and fish processing, ship services and repairs, a coal export facility, educational and research facilities, a state prison, and tourism fueled by attractions such as Kenai Fjords National Park and the Alaska SeaLife Center. Seward is the location of the primary information center for Kenai Fjords National Park. Seward is a primary port of call for cruise ships during the summer season.²² In addition, in a survey conducted by the AFSC in 2011, community leaders indicated that Seward's economy also relies on mining, oil and natural gas exploration or drilling, and sport hunting and fishing.

According to the 2006-2010 ACS,²³ in 2010, the per capita income in Seward was estimated to be \$28,613, and the median household income was estimated to be \$43,188, compared to \$20,360 and \$44,306 in 2000, respectively. However, after taking inflation into account by converting the 2000 values to 2010 dollars,²⁴ the real per capita income in 2000 was \$26,773 and the median household income in 2000 was \$58,262. This shows that per capita income in Seward increased slightly between 2000 and 2010, while household income decreased during that same period. However, Seward's small population size may have prevented the ACS from accurately portraying economic conditions.²⁵ A potentially more accurate understanding of

¹⁸ National Park Service (n.d.). *Chugach National Forest: Forest Facts*. Retrieved December 14, 2011 from <http://www.fs.usda.gov/detail/chugach/about-forest/?cid=STELPRDB5053239>.

¹⁹ Kenai Borough. (2010). *City of Seward All Hazard Mitigation Plan*. Retrieved March 15, 2013 from <http://www2.borough.kenai.ak.us/emergency/hazmit/Final%20Drafts/Annexes/Annex%20E%20City%20of%20Seward.pdf>.

²⁰ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved March 15, 2013 from <http://dec.alaska.gov/spar/csp/list.htm>.

²¹ Unless otherwise noted, all monetary data are reported in nominal values.

²² 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.

²³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not

per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. 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 Seward in 2010 is \$11,901.^{26,27} This alternative 2010 per capita estimate is lower than the 2000 Census per capita income estimate, suggesting that caution is warranted when citing an increase in per capita income in Seward between 2000 and 2010.

Based on household surveys conducted for the 2006-2010 ACS, in 2010, Seward ranked 72nd of 305 Alaskan communities with per capita income that year, and 174th of 299 Alaskan communities with household income data. In that same year, 62.3% of the population age 16 and over was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 6.7%, compared to the statewide unemployment rate of 5.9%. Approximately 14.5% of local residents were living below the poverty line in 2010, compared to 9.6% of Alaskan residents overall. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Seward are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the population of Seward. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 17.3%.

Also based on the 2006-2010 ACS, the greatest number of workers was estimated to be employed in the private sector (61.2%), along with 30.4% in the public sector and 8.4% self-employed. Out of 1,231 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage were employed in education services, health care, and social assistance (32.2%), arts, entertainment, recreation, accommodation and food services (17.9%), and public administration (13.4%) industries. Compared to 2000, there was a 55.6% increase in the percentage of the workforce estimated to be employed in educational services, health care, and social assistance. There were declines of more than 50% in the percentage of the workforce employed in several industries, including retail trade, manufacturing, wholesale trade, information, and ‘other services except public administration’. When viewing employment in terms of occupation, an increase can be observed in the percentage of the workforce employed in management/professional occupations between 2000 and 2010. Small decreases were observed in other occupational categories. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

With regard to commercial fishing employment, 8.1% of the workforce was estimated to be employed in agriculture, forestry, fishing, hunting, and mining industries in 2010, and 4.2% was estimated to be employed in farming, fishing, and forestry occupations (out of a total of 9.1% estimated to be employed overall in the combined category of “natural resource, construction, or maintenance occupations”). It is important to note that the number of individuals employed in the fishing industry may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly.

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.

²⁶ 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/>.

²⁷ See footnote 23.

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

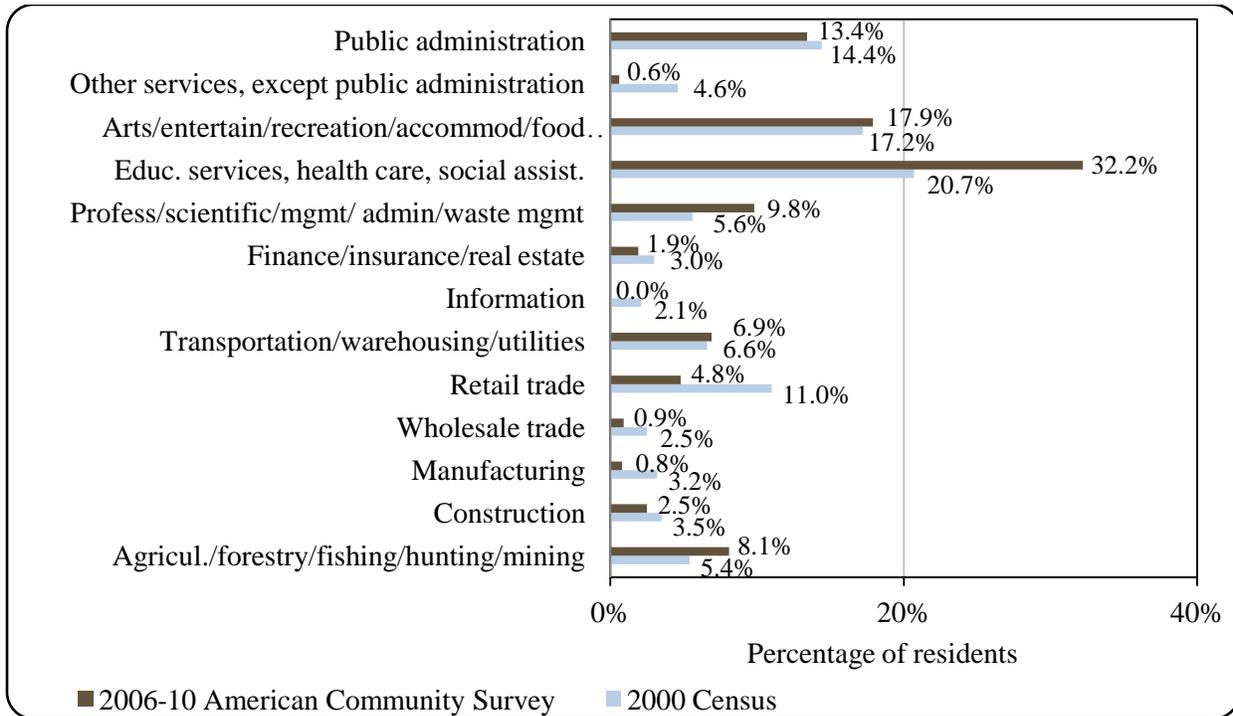
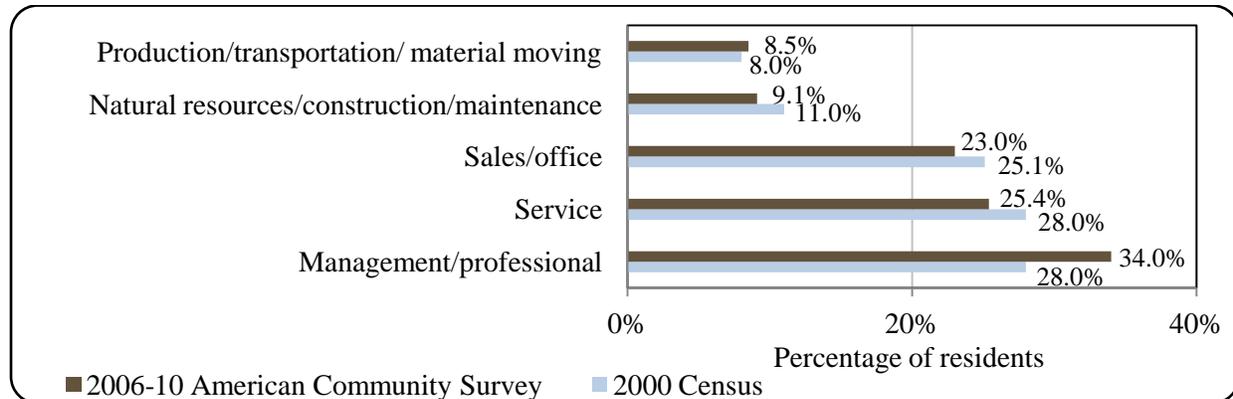


Figure 4. Local Employment by Occupation in 2000-2010, Seward (U.S. Census).



Governance

Seward is a Home Rule City located in the Kenai Peninsula Borough and is governed by a mayor and city council. The City of Seward administers a 4% sales tax and a 4% bed tax. The Borough administers an additional 3% sales tax, and together, the City and Borough levy a combined 8.12 mills property tax.²⁸ Total annual municipal revenues received by the City followed an increasing trend between 2000 and 2010, in part due to increasing sales tax revenues. In addition to local tax revenue, other locally-generated income sources in Seward

²⁸ 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.

during the decade included license and permit fees, fines and bails, and charges for city services. Intergovernmental revenue sources included shared revenues, capital and special projects grants, and Exxon Valdez settlement funds. Sources of shared revenues included the State Revenue Sharing program from 2000 to 2003 (between \$83,647 and \$100,000 per year) and the Community Revenue Sharing program (almost \$230,000 each year in 2009 and 2010) (Table 2).

In 2001-2004 and 2006-2010, Seward received a number of fisheries-related grants for purposes such as harbor expansion, harbor/construction, the Seward Shipyard portable workstation, an algae rearing system, upgrades to the Portage Distributing processing plant, funds for marketing of smoked salmon sausage, construction of a floating oyster smokehouse, a T-dock and bulkhead, the Alutiiq Pride Shellfish Hatchery, a shellfish enhancement project, East Harbor reconstruction, fish ditch restoration, and dredging of cruise ship berthing basins and approaches. The total amount received in fisheries-related grants varied from year to year from 2001 to 2010, though in most years total funds received were in excess of \$1 million. Grants were received for purposes including dredging cruise ship berthing basins and approaches, fish ditch restoration, shellfish enhancement, East harbor reconstruction, T-dock and bulkhead construction, the Alutiiq Pride Shellfish Hatchery, an algae rearing system, upgrades to the Portage Distributing processing plant, marketing of smoked salmon sausage, floating oyster smokehouse construction for Pristine Products, harbor construction (Phases I and II), a Seward Shipyard portable work station, harbor expansion, and improvements to the small boat harbor. Information on selected revenue streams for Seward from 2000 to 2010 is provided in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Seward 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	\$9,035,747	\$2,197,561	\$102,439	n/a
2001	\$9,091,665	\$2,165,586	\$90,570	\$4,225,000
2002	\$8,300,675	\$2,250,081	\$89,187	\$3,500,000
2003	\$8,198,766 ⁶	\$2,671,613	\$83,647	\$8,468,050
2004	\$8,538,656	\$3,123,314	n/a	\$601,799
2005	\$8,910,517	\$3,411,283	n/a	n/a
2006	\$10,862,496	\$3,518,435	n/a	\$2,000,000
2007	\$10,396,325	\$4,068,600	n/a	\$2,350,000
2008	\$12,032,612	\$4,137,758	n/a	\$1,250,000
2009	\$14,186,121	\$3,585,304	\$229,606	\$61,250
2010	\$14,987,430	\$3,742,751	\$226,846	\$4,500,000

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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

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

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

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

⁶ This number reflects the 2003 budget projection rather than the total reported in the 2003 comprehensive annual financial report.

The office of the Qutekcak Native Tribe is located in Seward. The Tribe is governed by a seven-person Tribal Council, including the President. Tribal members are a mix of Alaska Native people from around the State. The Tribe offers a variety of cultural activities and services for members, including elder and youth programs, cultural education, jobs, and scholarships. The Tribe was not included in the Alaska Native Claims Settlement Act (ANCSA), and is not currently federally recognized as a Native village. However, the Qutekcak Native Tribe is seeking federal recognition.²⁹

The nearest offices of the Alaska Department of Fish and Game (ADF&G) and the National Marine Fisheries Service (NMFS) are located in Seward. The Alaska Department of Natural Resources, Department of Commerce, Community, and Economic Development, the Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement all have offices in Anchorage.

Infrastructure

*Connectivity and Transportation*³⁰

Seward is connected to the Alaska Highway system by the Seward Highway. Bus and commercial trucking services to and from Anchorage are available daily. The port serves cruise ships, cargo barges, and ocean freighters from Seattle and overseas. The small boat harbor has moorage for 650 boats and two boat launch ramps. Seward is a major transit site for the Alaska Railroad. Seasonal passenger transportation is available by rail. Air services and charters are available at the state-owned airport. Two paved runways are utilized; one is 4,240 feet long by 100 feet wide, and the other is 2,279 feet long by 75 feet wide. Regular commercial air service between Seward and Anchorage is not available.

*Facilities*³¹

Water is supplied by nine wells and is treated and distributed throughout Seward. Sewage is collected via pipes and sent to a secondary treatment lagoon. Almost all homes are fully plumbed. Refuse collection is provided by the City under contract; the borough provides solid waste disposal. The borough operates a refuse transfer facility in the community. Seward Electric System purchases power from Chugach Electric and owns six standby diesel generators. Police services are provided the City Police Department and the local state troopers post.

In a survey conducted by the AFSC in 2011, community leaders reported that a number of infrastructure projects have been completed in Seward within the past 10 years, including a fish cleaning station, barge landing area, construction of new dock space, improvements to existing dock structure, electricity and water serving the dock, roads serving the dock, pilings, fuel tanks at the dock, a breakwater and jetty, harbor dredging, drydock space, haulout facilities, broadband internet access, roads, airport/seaplane base, water and sewer pipelines, a diesel powerhouse, sewage treatment, water treatment, a new landfill/solid waste site, public

²⁹ Qutekcak Native Tribe. (n.d.). *Qutekcak Native Tribe, Seward's Native Pride*. Retrieved September 9, 2013 from <http://sewardaknatives.com/index.php>.

³⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³¹ *Ibid*.

safety/police department, emergency response, fire department, school, telephone service, post office, and fire/safety. In addition, community leaders indicated that an Environmental Protection Agency-certified boat cleaning station and a community center/library are currently in progress and that infrastructure for wind energy is planned to be completed within the next 10 years. In the same survey, community leaders noted that Seward has 25,465 feet of dock space available for permanent vessels and 2,300 feet of dock space available for transient vessels, and that vessels up to 800-900 feet long can use moorage in Seward. Community leaders also indicated that Seward is capable of handling a number of different types of vessels, including rescue vessels, cruise ships, ferries, fuel barges, and hazardous materials.

*Medical Services*³²

Medical services in Seward are provided by the Providence Seward Medical Center North Star health Clinic, which is privately owned and operated. The hospital is a Community Health Aid Program site and a qualified Acute Care facility. Long-term care is available at the Wesley Rehabilitation and Care facility. Specialized care is available at the Seward Life Action Council Counseling Facility. Emergency Services have highway and limited marine and airport access and are provided by 911 telephone service and volunteers. Alternate health care is provided by the Seward Volunteer Ambulance Corporation and the Bear Creek Fire/Emergency Medical Services Department.

*Educational Opportunities*³³

Instruction is provided to students in Seward by one of four schools. The William H. Seward Elementary school provides instruction to students in pre-school through sixth grade, and in 2011, the school had 275 students and 20 teachers. The Seward Middle School provides instruction to students in 7th and 8th grades, and in 2011, the school had 93 students and 6 teachers. The Seward High School provides instruction to students in grades 9 through 12, and in 2011 the school had 168 students and 13 teachers. The Spring Creek School also provides instruction to students in grades 9 through 12, and in 2011, the school had 17 students and 4 teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Seward is located within Resurrection Bay, an inlet from the Gulf of Alaska (GOA). In addition to fisheries that take place in the GOA, Seward fishermen have access to productive fisheries located on either side of the Kenai Peninsula, in Cook Inlet and Prince William Sound (PWS). Fisheries that occur within 3 nautical miles (nmi) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nmi in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission.

³² Ibid.

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

Seward is located immediately within the Eastern district of the Lower Cook Inlet commercial salmon fishery, and the Southwestern district of the Prince William Sound commercial salmon fishery is located approximately 25 miles east of Resurrection Bay. The marine waters at the outlet of Resurrection Bay are included within Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA Sablefish Regulatory Area.

Commercial fisheries developed in Alaska after the 1867 purchase of Alaska from Russia by the United States. Commercial harvest of salmon in Cook Inlet began in 1882,³⁴ with the development of a cannery at the mouth of the Kasilof River, in English Bay. An additional 17 canneries had been built in central Alaska by 1890. The first commercial salmon fishery in PWS developed along the Copper River Delta around 1900.³⁵ Commercial exploitation of halibut and groundfish first extended into the Gulf of Alaska (GOA) in the 1920s after development of diesel engines, which allowed fishing vessels to undertake longer trips.³⁶ In the 1920s, herring had become increasingly valued for oil and meal, and a number of reduction plants were built. Commercial crab fisheries began to develop in the GOA in the 1930s. Historically, commercial fisheries for herring took place in both Cook Inlet and PWS. Currently, the Cook Inlet herring fishery is closed due to low stock abundance.³⁷ In PWS, the herring stock collapsed in 1993 in conjunction with an outbreak of hemorrhagic septicemia virus, and since 1998 the fishery has been closed. The relationships between the *Exxon Valdez* Oil Spill of 1989, the virus, and the stock collapse remain unclear, and the population has shown little sign of recovery since that time.^{38,39}

Historically, both Cook Inlet and PWS also supported commercial fisheries for Dungeness, king, and Tanner crab. However, crab fisheries are currently closed in these areas due to low stock abundance.^{40,41} Between 2000 and 2010, Seward residents participated in Tanner crab fisheries in other areas of Alaska (see *Commercial Fishing* section). In contrast to the closures of herring and crab fisheries, spot shrimp (*Pandalus platyceros*) pot fisheries reopened in PWS in 2010 after almost two decades of closure due to low abundance.⁴²

In addition to federal groundfish fisheries that take place in the Central and Eastern GOA, state groundfish fisheries take place in the inland waters of Cook Inlet and PWS for rockfish,

³⁴ 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/afbr/clarv12n1.pdf>.

³⁵ Cook, Linda, and Frank Norris. 1998. *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved January 25, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

³⁶ Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

³⁷ Alaska Dept. of Fish and Game. 2012. *Commercial Fisheries Overview: Lower Cook Inlet Management Area*. Retrieved June 19, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyarealci.main>.

³⁸ 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>.

³⁹ Alaska Dept. of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

⁴⁰ See footnote 38.

⁴¹ See footnote 37.

⁴² Alaska Dept. of Fish and Game. 2012. *Spot Shrimp Species Profile: Status, Trends and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=spotshrimp.main>.

lingcod, pollock, sablefish, and Pacific cod. The Cook Inlet and PWS Pacific cod fisheries are managed as parallel fisheries, which take place at the same time as the federal cod fishery. The Total Allowable Catch (TAC) set by NMFS applies to both federal and state fisheries. Beginning in 1997, additional ‘state-waters fisheries’ for Pacific cod were initiated in Cook Inlet and PWS. Management plans for state-waters fisheries are approved by the Alaska Board of Fish, and guideline harvest limits (GHL) are set by ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition to Pacific cod fisheries, a Cook Inlet open access sablefish fishery is managed by ADF&G under a GHL, and the State also manages directed mechanical jig fisheries for lingcod and rockfish in Cook Inlet. In PWS, a pelagic trawl fishery for pollock began in 1995. The PWS limited entry sablefish fishery is also managed separately under a GHL.⁴³

Seward is not eligible for the Community Development Quota or Community Quota Entity programs. In a survey conducted by the AFSC in 2011, community leaders reported that the annual peak in population each summer is “mostly” driven by employment in the fishing sectors, such as processing plants, commercial fishing, subsistence fishing, recreational/sportfishing, and charter fishing. Community leaders also indicated that Seward participates in the fisheries management process in Alaska through a representative that sits on regional fisheries advisory and/or working groups run by the ADF&G, a reliance on regional organizations to provide information on fisheries management issues, financially supporting research organizations, industry coalitions, and trade organizations such as the Alaska SeaLife Center, and by helping obtain funding for hatchery and other research programs.

Processing Plants

ADF&G’s 2010 Intent to Operate list indicates that six shore-based processing plants were operating in Seward in 2010. Detailed information is available about three of the plants. Captain Jack’s Seafood Locker is a seafood market and small processing facility located in Seward. They sell halibut, king crab, black cod, white fish, shrimp, scallops, and Chinook and sockeye salmon. Captain Jacks Seafood Locker also provides custom processing for sport fishermen. Their facility contains a blast freezer and a vacuum packing machine.⁴⁴

Since 1978, Icicle Seafoods has owned a seafood processing facility in the small harbor of the town of Seward. This facility was originally established in 1968 as Seward Fisheries.⁴⁵ Icicle processes halibut and black cod beginning in March until November. The facility also cans and freezes various species of salmon from June until the end of August. July and August are peak salmon seasons for the plant. During this time over 300 people are employed to work at the Seward facility. In 2010, the workforce in July and August totaled 350.⁴⁶ Icicle’s Seward facility has a bunkhouse (with laundry facilities, showers, and a recreation room with satellite TV and DVD/VHS player) for its fish processing workforce and can accommodate 50 workers. April through May its galley serves one meal a day to workers Monday through Friday. June through August the galley serves three meals a day. Icicle also has a campground with laundry facilities,

⁴³ See footnote 38.

⁴⁴ Captain Jack’s Seafood Locker. 2012. *Homepage*. Retrieved on May 7, 2012 from <http://www.captainjacksalaska.com/default.asp>.

⁴⁵ This information is based on the results of a survey of processing plant managers conducted by AFSC in 2011.

⁴⁶ *Ibid*.

showers, restrooms, and canvas tents. The company provides its workers rain gear, gloves, boots, ear protection and other required safety gear for free.⁴⁷

Sea Level Seafoods LLC processes halibut, Pacific cod, rockfish, and sablefish from March through November in its Seward facility. The plant began operations in 1975 and employs up to 30 workers each year.⁴⁸ The facility offers services to local fishermen including ice, laundry facilities, showers, bait and Internet access.⁴⁹

According to ADF&G's 2010 Intent to Operate list, Polar Seafoods, T-n-T Custom Smoke & Processing LLC, and Pure Pacific Seafood Inc. also operate seafood processing facilities in Seward.

Fisheries-Related Revenue

Between 2000 and 2010, Seward received fisheries-related revenue from the Shared Fisheries Business Tax, the Fisheries Resources Landing Tax, and harbor usage fees. Amounts received from the Shared Fisheries Business Tax and harbor usage fees increased between 2000 and 2010, however, revenue received from the Fisheries Resource Landing Tax decreased substantially during the same period. The revenue received from fisheries-related sources varied from 2000 to 2009, from a low of \$421,190 in 2010 to a high of \$3.1 million in 2009 (Table 3).⁵⁰

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing vessels of all sizes use Seward as their base of operations during the fishing season and that there are more commercial fishing boats in Seward now as compared to 5 years ago. Community leaders also noted that commercial fishing boats that use Seward as their base of operations during the fishing season use the following gear types: trawl, pots, longline, gillnet, purse seine, and troll. In 2010, Seward ranked 12th of 67 communities in Alaska with commercial landings data for that year, and the ex-vessel value of catch landed in Seward ranked 8th of 67 communities with ex-vessel value information. In 2010, there were 25 Seward residents holding 30 groundfish License Limitation Program (LLP) permits, and 20% of those permits were reported as fished. Overall between 2000 and 2010, the number of groundfish LLP permits, permit holders, and permits reported as fished has decreased slightly. While there were four individuals holding four crab LLP permits in 2010 (both of which decreased between 2000 and 2010), none of the crab LLP permits were reported as fished between 2003 and 2010. For Federal Fisheries Permits, there were 15 individuals holding 18 permits in 2010, and 67% of those permits were reported as fished. While the number of Federal Fisheries Permits and permit holders decreased between 2000 and 2010, the number of permits reported as fished increased during that same period.

⁴⁷ Icicle Seafoods, Inc. 2012. *Homepage*. Retrieved on May 7, 2012 from <http://www.americangoldseafoods.com/locations/swd/>.

⁴⁸ See footnote 45.

⁴⁹ Pacific Seafood Group. 2012. *Homepage*. Retrieved on May 7, 2012 from <http://www.pacseafood.com/default.aspx?page=1>.

⁵⁰ 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.

Also in 2010, there were 66 Seward residents holding 126 Commercial Fisheries Entry Commission (CFEC) permits for the following fisheries: crab, other shellfish, halibut, herring, sablefish, groundfish, and salmon. In that same year, 64% of CFEC permits held by Seward residents were reported as fished. For crab CFEC permits, the number of permit holders and permits held decreased between 2000 and 2010, though the number of permits actively fished varied between one and three per year. While permits for other shellfish have been held in each year between 2000 and 2010, permits were only reported as actively fished in 2005 and 2010. The number of permit holders and permits held exhibited a sharp increase between 2009 and 2010 for other shellfish CFEC permits. While the number of halibut CFEC permit holders and permits held both decreased between 2000 and 2010, the number of permits reported as actively fished in each of those years was relatively stable. Both number of permit holder and number of permits held decreased between 2000 and 2010 for the herring CFEC fishery, and no permits were reported as actively fished in that fishery between 2006 and 2010. For sablefish CFEC permits, the number of permits held and permit holders have both decreased between 2000 and 2010, however, the number of permits reported as actively fished remained relatively stable from year to year. The number of groundfish CFEC permit holders and permits held both decreased sharply between 2000 and 2010, though the number of permits actively fished in each year was variable during that period. While there have been other finfish CFEC permits held between 2000 and 2010, none of those permits were reported as fished during that period and there were no other finfish CFEC permits held in 2009 or 2010. The number of salmon CFEC permits held remained relatively stable between 2000 and 2010, though the number of permit holders decreased during that same period. The number of salmon CFEC permits reported as actively fished varied between 2000 and 2010, first experiencing a decrease and then an increase. Further information about commercial fishing permits and permit holders by species is presented in Table 4.

Of the 24 halibut CFEC permits issued in 2010, the majority (19) was issued for the statewide longline fishery using vessels under 60 feet, with 4 issued for the statewide longline fishery using vessels 60 feet or over and 1 issued for the statewide hand troll fishery.

Of the 17 sablefish CFEC permits issued in 2010, 7 were issued for the statewide longline fishery using vessels under 60 feet. Two were issued for the fixed gear sablefish fishery using vessels under 60 feet in length in Prince William Sound, one was issued for the fixed gear sablefish fishery using vessels under 35 feet in length in Prince William Sound, three were issued for the longline fishery in the northern southeast, three for the statewide longline fishery using vessels 60 feet or over, and one for the longline fishery in the southern southeast.

Of the eight herring CFEC permits issued in 2010, three were issued for the roe herring purse seine fishery in Prince William sound, two were issued for the herring roe purse seine fishery in Cook Inlet, two were issued for the herring gill net fishery in Norton Sound, and one was issued for the herring spawn on kelp pound fishery in Prince William Sound.

Of the 48 salmon CFEC permits issued in 2010, 12 were issued for the purse seine fishery in Prince William Sound, 10 were issued for the drift gill net fishery in Prince William Sound, 6 were issued for the purse seine fishery in Cook Inlet, 6 for the purse seine fishery in Kodiak, 5 for the purse seine fishery in Chignik, and 2 for the purse seine fishery in the Peninsula/Aleutians. Two salmon CFEC permits were issued for the drift gill net fishery in Cook Inlet, three for the drift gill net fishery in the Peninsula/Aleutians, one for the set gill net fishery in Bristol Bay, and one for the statewide power gurdy troll fishery.

Other shellfish CFEC permits were held in 2010 for the shrimp pot fishery in Prince William Sound using vessels under 60 feet, sea cucumber using diving gear in the southeast, the statewide clam mechanical digger fishery, the Tanner crab pot fishery using vessels under 60 feet in Kodiak, the Tanner crab pot fishery using vessels under 60 feet in the Peninsula/Aleutians, and the Tanner crab pot fishery using vessels under 60 feet in Kodiak.

Other CFEC permits issued in Seward in 2010 include the statewide lingcod hand troll and mechanical jig fisheries, the statewide and Gulf of Alaska miscellaneous saltwater finfish hand troll fisheries, the statewide and Gulf of Alaska miscellaneous saltwater finfish longline fisheries using vessels under 60 feet, the statewide and Gulf of Alaska saltwater finfish mechanical jig fisheries, and the southeast demersal shelf rockfish mechanical jig fishery.

In 2010, there were 119 crew license holders in Seward. While this number varied from year to year between 2000 and 2010, overall there has been a decrease in crew license holders during this period. Also in 2010, there were 13 fish buyers in Seward, which represents an overall decrease between 2000 and 2010, but a slight increase from a time-series low of 10 fish buyers in 2008. The number of shore-side processing facilities in Seward remained relatively stable between 2000 and 2010, varying between four and six facilities. Both the number of vessels owned primarily by Seward residents in the number of vessels homeported in Seward decreased substantially during this period, with the number of vessels owned primarily by Seward residents decreasing from 128 to 61 and the number of vessels homeported in Seward decreasing from 185 to 85. The number of vessels landing catch in Seward varied during this period, with the highest number of vessels landing catch in the year 2000 (327 vessels) and 227 vessels landing catch in Seward in 2010. Both total net pounds landed and the ex-vessel value of landings in Seward increased between 2000 and 2010. Additional information about characteristics of the commercial fishing sector in Seward between 2000 and 2010 is presented in Table 5.

The number of individuals holding halibut quota share accounts in Seward decreased between 2000 and 2010, though the number of halibut quota shares held remained stable during this same period. The overall halibut Individual Fishing Quota (IFQ) allotment for account holders in Seward increased steadily from 2000 to 2007, but decreased again from 2008 to 2010 (Table 6). While the number of sablefish quota share accounts decreased from 2000 to 2010, the number of sablefish quota shares held increased during this same period. However, after a slight increase in sablefish IFQ allotment, the 2010 allotment was similar to the 2000 allotment (Table 7). There were no residents of Seward holding crab quota share shareholder accounts, crab quota shares, or crab IFQ allotment between 2000 and 2010 (Table 8).

Information on landings and ex-vessel value for finfish, herring, other shellfish, and pollock landed in Seward were considered confidential between 2000 and 2010 due to the small number of participants. However, landings and ex-vessel value for catch of halibut, other groundfish, Pacific cod, sablefish, and salmon landed in Seward during this period are reportable. Overall, the total number of pounds landed in Seward increased between 2000 and 2010, though there was some variability between years during this period. The ex-vessel value of landings in Seward also increased overall between 2000 and 2010, though, like landings, the ex-vessel value was variable from year to year. The most notable trends in landings during this period are the sharp decrease in landings (and ex-vessel value) of Pacific cod between 2000 and 2010 as well as the sharp increase in landings (and ex-vessel value) of salmon during this same period. Information regarding landings and ex-vessel value for catch landed in Seward between 2000 and 2010 is presented in Table 9.

For catch landed by Seward residents, landings and ex-vessel value for crab, finfish, herring, other shellfish, and pollock are considered confidential between 2000 and 2010 due to the small number of participants. Landings and ex-vessel value for catch of halibut, other groundfish, Pacific cod, sablefish, and salmon landed by Seward residents are available for this time period. Overall, landings by Seward residents and ex-vessel value of those landings increased between 2000 and 2010, though both landings and value were variable from year to year during this period. While landings for halibut remained relatively stable during this period, the ex-vessel value of those landings increased. Landings of other groundfish and ex-vessel value of those landings both decreased between 2000 and 2010. Landings of Pacific cod and ex-vessel value of those landings increased during this period. While landings and ex-vessel value of landings of sablefish remained relatively stable during this period, the landings and ex-vessel value of salmon increased substantially between 2000 and 2010. Information regarding landed pounds and ex-vessel revenue by species for Seward residents is provided in Table 10.

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a									
Shared Fisheries Business Tax ¹	\$198,284	\$265,068	\$354,644	\$243,100	\$242,763	\$514,336	\$317,786	\$371,609	\$314,796	\$407,558	\$421,190
Fisheries Resource Landing Tax ¹	\$11,132	\$9,053	\$18,591	\$28,654	\$7,795	\$5,994	\$5,856	\$230	\$4,663	\$236	n/a
Fuel transfer tax ²	n/a	n/a									
Extraterritorial fish tax ²	n/a	n/a									
Bulk fuel transfers ¹	n/a	n/a									
Boat hauls ²	n/a	n/a									
Harbor usage ²	\$1,518,452	\$1,569,560	\$1,590,082	\$1,830,301	\$1,818,674	\$1,900,090	\$2,366,568	\$1,632,213	\$2,743,521	\$2,756,993	n/a
Port/dock usage ²	n/a	n/a									
Fishing gear storage on public land ³	n/a	n/a									
Marine fuel sales tax ³	n/a	n/a									
<i>Total fisheries-related revenue⁴</i>	<i>\$1,727,867</i>	<i>\$1,843,681</i>	<i>\$1,963,317</i>	<i>\$2,102,055</i>	<i>\$2,069,232</i>	<i>\$2,420,420</i>	<i>\$2,690,209</i>	<i>\$2,004,052</i>	<i>\$3,062,980</i>	<i>\$3,164,787</i>	<i>\$421,190</i>
<i>Total municipal revenue⁵</i>	<i>\$9 Million</i>	<i>Million</i>	<i>\$15 M</i>								

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

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

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

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

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

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

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	38	36	32	32	32	31	31	31	30	30	30
	Active permits	10	11	10	9	9	8	8	9	8	9	6
	% of permits fished	26%	30%	31%	28%	28%	25%	25%	29%	26%	30%	20%
	Total permit holders	31	30	27	27	27	26	26	27	25	25	25
Crab (LLP) ¹	Total permits	9	9	5	5	4	4	4	4	4	4	4
	Active permits	3	4	1	1	0	0	0	0	0	0	0
	% of permits fished	33%	44%	20%	20%	-	-	-	-	-	-	-
	Total permit holders	8	8	5	5	4	4	4	4	4	4	4
Federal Fisheries Permits ¹	Total permits	24	24	25	17	18	18	18	19	22	17	18
	Fished permits	1	1	1	11	13	10	10	10	12	12	12
	% of permits fished	4%	4%	4%	65%	72%	56%	56%	53%	55%	71%	67%
	Total permit holders	22	22	23	16	17	17	16	16	19	14	15
Crab (CFEC) ²	Total permits	7	7	5	3	5	6	4	4	1	1	3
	Fished permits	3	2	1	1	3	3	2	2	1	1	1
	% of permits fished	43%	29%	20%	33%	60%	50%	50%	50%	100%	100%	33%
	Total permit holders	5	6	4	3	5	5	4	4	1	1	2
Other shellfish (CFEC) ²	Total permits	2	2	4	1	1	4	5	2	2	1	8
	Fished permits	0	0	0	0	0	1	0	0	0	0	6
	% of permits fished	-	-	-	-	-	25%	-	-	-	-	75%
	Total permit holders	2	2	3	1	1	4	3	2	2	1	8
Halibut (CFEC) ²	Total permits	31	32	29	27	25	28	30	30	27	27	24
	Fished permits	29	25	24	24	25	23	23	23	23	22	23
	% of permits fished	94%	78%	83%	89%	100%	82%	77%	77%	85%	81%	96%
	Total permit holders	31	32	29	26	24	25	27	27	26	26	24
Herring (CFEC) ²	Total permits	14	11	10	9	7	7	8	8	7	7	8
	Fished permits	2	2	1	1	1	1	1	0	0	0	0
	% of permits fished	14%	18%	10%	11%	14%	14%	13%	-	-	-	-
	Total permit holders	9	7	6	5	4	4	4	4	4	4	5

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	21	26	21	17	19	22	24	22	20	17	17
	Fished permits	15	21	18	16	17	21	19	19	17	15	15
	% of permits fished	71%	81%	86%	94%	89%	95%	79%	86%	85%	88%	88%
	Total permit holders	18	22	17	13	14	17	19	16	14	11	12
Groundfish (CFEC) ²	Total permits	42	36	23	22	24	26	20	22	14	18	18
	Fished permits	12	9	4	2	1	4	3	5	8	4	6
	% of permits fished	29%	25%	17%	9%	4%	15%	15%	23%	57%	22%	33%
	Total permit holders	28	23	17	15	15	14	14	15	13	15	14
Other Finfish (CFEC) ²	Total permits	3	3	1	1	0	0	0	1	1	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	1	1	1	1	0	0	0	1	1	0	0
Salmon (CFEC) ²	Total permits	49	47	46	42	42	42	48	46	51	45	48
	Fished permits	32	22	21	15	17	25	23	26	30	29	30
	% of permits fished	65%	47%	46%	36%	40%	60%	48%	57%	59%	64%	63%
	Total permit holders	46	43	44	40	42	42	42	40	43	39	38
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>169</i>	<i>164</i>	<i>139</i>	<i>122</i>	<i>123</i>	<i>135</i>	<i>139</i>	<i>135</i>	<i>123</i>	<i>116</i>	<i>126</i>
	<i>Fished permits</i>	<i>93</i>	<i>81</i>	<i>69</i>	<i>59</i>	<i>64</i>	<i>78</i>	<i>71</i>	<i>75</i>	<i>79</i>	<i>71</i>	<i>81</i>
	<i>% of permits fished</i>	<i>55%</i>	<i>49%</i>	<i>50%</i>	<i>48%</i>	<i>52%</i>	<i>58%</i>	<i>51%</i>	<i>56%</i>	<i>64%</i>	<i>61%</i>	<i>64%</i>
	<i>Permit holders</i>	<i>86</i>	<i>82</i>	<i>77</i>	<i>70</i>	<i>71</i>	<i>74</i>	<i>73</i>	<i>69</i>	<i>69</i>	<i>63</i>	<i>66</i>

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

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

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

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ⁴	Vessels Primarily Owned by Residents ⁵	Vessels Homeported ⁵	Vessels Landing Catch in Seward ²	Total Net Pounds Landed in Seward ^{2,3}	Total Ex-Vessel Value of Landings in Seward ^{2,3}
2000	198	18	5	128	185	327	22,146,235	\$37,227,769
2001	150	17	4	114	172	255	43,924,453	\$31,270,657
2002	120	16	5	108	158	222	39,129,371	\$31,915,162
2003	115	20	4	116	159	224	36,877,097	\$41,628,850
2004	118	18	4	116	159	194	25,415,929	\$39,613,583
2005	120	16	5	61	79	166	33,975,508	\$34,685,445
2006	142	13	5	58	73	168	24,854,047	\$42,126,154
2007	129	14	5	57	75	160	58,915,998	\$48,529,903
2008	146	10	4	54	82	201	44,476,820	\$52,580,345
2009	124	12	5	58	86	187	29,537,765	\$35,194,431
2010	119	13	6	61	85	227	55,124,215	\$56,060,412

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 Totals only represent non-confidential data.

⁴ 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.]

⁵ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	45	3,506,372	442,390
2001	41	3,587,741	541,081
2002	39	3,343,434	524,355
2003	35	3,349,245	520,408
2004	38	3,760,404	605,923
2005	38	3,880,807	616,559
2006	38	3,739,847	565,319
2007	36	3,974,978	610,928
2008	33	3,644,822	506,988
2009	32	3,690,919	473,000
2010	31	3,598,299	424,203

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 Seward: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	19	5,348,346	481,446
2001	19	5,408,767	461,975
2002	18	5,012,574	420,204
2003	17	5,173,394	513,571
2004	20	5,726,463	642,698
2005	18	5,724,345	630,657
2006	16	5,079,591	504,183
2007	16	5,973,059	583,000
2008	15	6,957,195	620,731
2009	16	7,299,663	580,137
2010	15	6,659,312	480,714

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 Seward: 2000-2010.

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

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

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

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	6,240,238	6,259,705	7,742,997	7,487,167	7,250,654	5,933,412	6,122,494	5,634,393	5,446,739	4,904,301	5,168,213
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	882,122	438,635	226,865	289,046	228,422	251,893	289,648	326,962	321,003	376,400	776,079
Groundfish											
Other	--	--	--	--	--	--	--	--	--	--	--
Shellfish											
Pacific Cod	2,132,461	1,022,955	1,107,134	889,572	153,150	32,202	152,398	874,205	1,206,364	1,122,688	893,616
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	4,373,076	3,434,248	3,401,426	4,248,284	5,006,334	4,102,749	4,522,260	4,506,013	3,973,421	3,340,217	3,091,138
Salmon	8,194,207	32,628,086	26,647,898	23,953,507	11,267,371	23,083,174	13,767,247	46,997,323	33,520,285	18,648,728	45,095,884
<i>Total²</i>	<i>21,822,104</i>	<i>43,783,629</i>	<i>39,126,320</i>	<i>36,867,576</i>	<i>23,905,931</i>	<i>33,403,430</i>	<i>24,854,047</i>	<i>58,338,896</i>	<i>44,467,812</i>	<i>28,392,334</i>	<i>55,024,930</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$16,073,372	\$13,025,565	\$17,046,697	\$21,773,187	\$22,252,947	\$18,235,976	\$23,082,219	\$24,812,004	\$23,597,370	\$14,978,754	\$24,031,030
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	\$312,546	\$155,180	\$140,481	\$109,243	\$113,115	\$155,069	\$192,858	\$187,718	\$159,829	\$186,847	\$235,998
Groundfish											
Other	--	--	--	--	--	--	--	--	--	--	--
Shellfish											
Pacific Cod	\$855,862	\$353,995	\$296,888	\$300,946	\$37,331	\$7,264	\$69,360	\$491,465	\$734,783	\$384,201	\$253,436
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	\$16,129,222	\$10,774,509	\$10,688,918	\$15,380,217	\$15,489,666	\$13,275,785	\$15,650,528	\$13,553,843	\$13,567,445	\$12,062,346	\$13,196,011
Salmon	\$3,025,427	\$6,380,240	\$3,742,076	\$4,065,257	\$1,489,389	\$2,864,531	\$3,131,189	\$9,396,979	\$14,520,184	\$7,390,544	\$18,330,541
<i>Total²</i>	<i>\$36,396,428</i>	<i>\$30,689,488</i>	<i>\$31,915,061</i>	<i>\$41,628,850</i>	<i>\$39,382,448</i>	<i>\$34,538,625</i>	<i>\$42,126,154</i>	<i>\$48,442,010</i>	<i>\$52,579,610</i>	<i>\$35,002,692</i>	<i>\$56,047,017</i>

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

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

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

² Totals only represent non-confidential data.

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

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	911,739	1,126,178	1,156,667	1,225,545	1,350,607	1,127,755	1,064,476	1,190,762	1,096,331	1,070,704	986,908
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	165,745	90,051	72,902	52,856	62,437	80,759	66,091	82,090	96,752	63,436	96,022
Groundfish											
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	170,652	135,608	139,905	100,336	9,530	62,029	46,509	169,038	643,457	1,008,026	593,986
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	709,647	553,916	709,897	809,802	987,157	906,253	917,729	1,009,464	923,154	809,789	757,685
Salmon	4,965,549	4,713,359	3,251,802	1,893,972	897,871	2,151,596	3,000,495	10,331,657	7,458,274	3,219,207	11,062,524
<i>Total²</i>	<i>6,923,331</i>	<i>6,619,112</i>	<i>5,331,173</i>	<i>4,082,511</i>	<i>3,307,602</i>	<i>4,328,392</i>	<i>5,095,300</i>	<i>12,783,011</i>	<i>10,217,967</i>	<i>6,171,162</i>	<i>13,497,126</i>
<i>Ex-vessel Value (nominal U.S. dollars)</i>											
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$2,299,913	\$2,246,127	\$2,519,459	\$3,446,295	\$4,012,325	\$3,403,564	\$3,924,556	\$5,135,470	\$4,725,209	\$3,242,129	\$4,527,407
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	\$154,463	\$67,573	\$56,901	\$48,435	\$57,951	\$67,821	\$63,033	\$74,760	\$60,524	\$52,179	\$64,830
Groundfish											
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	\$64,416	\$46,465	\$39,819	\$34,872	\$2,574	\$22,226	\$21,052	\$86,835	\$385,980	\$264,903	\$185,587
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	\$2,955,728	\$2,004,843	\$2,614,132	\$3,274,966	\$3,305,226	\$3,204,989	\$3,371,660	\$3,356,557	\$3,470,668	\$3,274,852	\$3,412,354
Salmon	\$1,860,592	\$1,215,321	\$847,731	\$647,164	\$711,495	\$1,059,682	\$1,447,201	\$3,237,465	\$3,965,264	\$1,677,089	\$5,278,885
<i>Total²</i>	<i>\$7,335,111</i>	<i>\$5,580,329</i>	<i>\$6,078,043</i>	<i>\$7,451,732</i>	<i>\$8,089,572</i>	<i>\$7,758,281</i>	<i>\$8,827,503</i>	<i>\$11,891,088</i>	<i>\$12,607,645</i>	<i>\$8,511,152</i>	<i>\$13,469,063</i>

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

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

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

² Totals only represent non-confidential data.

Recreational Fishing

Seward is a popular destination for recreational fishermen, with 28 active sport fish guide businesses and 73 local community members holding sport fish guide licenses in 2010.

Compared to 2000, these numbers show relatively stability in the recreational fishing industry in Seward. In some years in the 2000-2010 period, guide activity increased, with a peak of 38 active guide businesses in Seward in 2008, and a peak 87 sport fish guide licenses in 2006. In 2010, 1,723 sportfishing licenses were sold to Seward residents (irrespective of the location of sale), while 6,789 sportfishing licenses were sold in Seward. This indicates the potential that many visitors to Seward are pursuing sportfishing activities. While the number of sportfishing licenses sold to community residents increased moderately between 2000 and 2010, the number of sportfishing licenses sold in Seward more than doubled during the same period.

Seward is located in North Gulf Coast/Prince William Sound Statewide Harvest Survey Area which includes all drainages from east of Cape Suckling, through Prince William Sound to Gore Point. In 2010, there were a total of 212,793 saltwater angler days fished in the region, compared to 122,459 in 2000, representing a 74% increase. Non-Alaska residents made up 30.4% of total saltwater angler days fished in 2010 in the region, compared to 32.3% in 2000. Regional saltwater angler days fished peaked at 300,205 in 2007. Total freshwater angler days fished was 22,979 in 2010, compared to 12,108 in 2000; an increase of 90%. Non-Alaska residents made up 57% of freshwater angler days fished in 2010 in the region, compared to 26% in 2000. Total freshwater angler days fished in the region peaked in 2010. Information regarding these regional sportfishing trends can also be found in Table 11.

The Alaska Statewide Harvest Survey,⁵¹ conducted by ADF&G between 2000 and 2010, noted numerous species targeted by private anglers in Seward, including all five species of salmon, rainbow trout, Dolly Varden, whitefish, burbot, Arctic grayling, Pacific halibut, rockfish, lingcod, Pacific cod, shark, smelt, razor clam, hardshell clam, shrimp, other fish, and other shellfish. In addition, logbook data for fishing charter trips out of Seward between 2000 and 2010 indicated that the following species were caught by anglers on charter vessels: all five species of salmon, halibut, lingcod, other rockfish, pelagic rockfish, sablefish, shark, and yelloweye rockfish.⁵²

In a survey conducted by the AFSC in 2011, community leaders reported that recreational/sportfishing in Seward takes place aboard charter boats or party boats, private boats owned by local residents, private boats owned by non-local residents, and by shore-based or dock fishing by local residents and by non-local residents. Community leaders also indicated that the following species are targeted by recreational fishermen that use boats based in Seward: pink, Chinook, coho and sockeye salmon, halibut, rockfish, crab, sablefish, and shrimp.

⁵¹ 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).

⁵² Alaska Department of Fish and Game. 2011. *Alaska sport fish charger 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, Seward: 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 Seward ²
2000	25	79	1,679	3,190
2001	28	84	1,679	3,385
2002	26	72	1,664	3,644
2003	29	75	1,806	4,073
2004	32	86	1,767	4,789
2005	34	72	1,831	6,098
2006	36	87	1,698	5,788
2007	34	83	1,790	5,611
2008	38	85	1,612	6,612
2009	29	74	1,784	6,819
2010	28	73	1,723	6,789

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

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

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

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

Subsistence Fishing

Information regarding subsistence participation by household and species in Seward between 2000 and 2010 was not available (Table 12). However, in a survey conducted by the AFSC in 2011, community leaders reported that salmon, halibut, and rockfish are the three most important subsistence marine resources to the residents of Seward. In addition, ADF&G provides total harvest level reported for salmon and halibut, and some information is provided by management agencies regarding subsistence marine mammal harvest. The number of permits issued for the subsistence harvest of salmon in Seward increased between 2000 and 2010, with an associated increase in the number of those permits reported as fished and the number of salmon harvested for subsistence purposes. Available data indicate that sockeye are the most heavily harvested salmon species in Seward for subsistence use; however, harvest levels are relatively low compared to other communities in Alaska. Both Chinook and coho salmon were also harvested in low numbers by Seward residents between 2000 and 2010 (Table 13).

Data for Subsistence Halibut Registration Certificate (SHARC) cards issued between 2003 and 2010 indicate an overall increase in SHARC cards issued and reported as actively fished during this period, though the number of pounds of halibut harvested for subsistence each year decreased from 1,126 pounds in 2005 to 200 pounds in 2010 (Table 14).

Data for subsistence harvest of marine mammals in Seward are extremely limited between 2000 and 2010. Data reported by the U.S. Fish and Wildlife Service indicate that a small amount of subsistence harvest of sea otters took place in 2000 and 2002. Data were not reported by ADF&G between 2000 and 2008 for subsistence harvest of Steller sea lions or spotted seals. However, in both 2000 and 2002, ADF&G reported harvest of four harbor seals for subsistence purposes. No data were available from management agencies regarding subsistence harvest of beluga whale or walrus by Seward residents during the 2000-2010 period. Information about marine mammal subsistence harvest is presented in Table 15.

Additional Information

Seward was named All-American City in 1963, 1965, and 2005 and is also home to Mile 0 of the Iditarod Trail.⁵³

⁵³ City of Seward (n.d.). *City Profile*. Retrieved from <http://www.cityofseward.us> on February 27, 2012.

Table 12. Subsistence Participation by Household and Species, Seward: 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, Seward: 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	13	11	7	n/a	n/a	n/a	218	n/a	n/a
2001	10	13	2	n/a	n/a	n/a	120	n/a	n/a
2002	12	11	5	n/a	n/a	n/a	112	n/a	n/a
2003	7	10	4	n/a	7	n/a	118	n/a	n/a
2004	16	14	4	n/a	n/a	n/a	110	n/a	n/a
2005	15	14	5	n/a	n/a	n/a	180	n/a	n/a
2006	14	11	4	n/a	3	n/a	195	n/a	n/a
2007	15	15	18	n/a	n/a	n/a	280	n/a	n/a
2008	29	28	12	n/a	n/a	n/a	129	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, Seward: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	10	n/a	n/a
2004	9	n/a	n/a
2005	10	1	1,126
2006	12	2	n/a
2007	14	2	560
2008	17	6	635
2009	15	6	376
2010	12	1	200

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, Seward: 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	4	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	1	n/a	n/a	n/a	4	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.