

Goodnews Bay



People and Place

*Location*¹

The community is located on the north shore of Goodnews Bay at the mouth of the Goodnews River. It is 116 air miles south of Bethel, 110 miles northwest of Dillingham, and 400 miles west of Anchorage. Goodnews Bay is located in the Bethel Census Area and the Bethel Recording District. The City encompasses 3.2 square miles of land and 0 square miles of water.

*Demographic Profile*²

In 2010, there were 243 residents in Goodnews Bay, ranking it the 180th largest community in Alaska in terms of population size. Between 1990 and 2010, the population increased by 9.9%. Between 2000 and 2009, the population increased by 9.4% with an average annual growth rate of -0.85%, which was under the statewide average of 0.75%. However, the population has remained relatively stable over time (Table 1). In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that the permanent population in 2010 was over 300, which was significantly greater than what is reported in the 2010 Decennial Census for that year. On average, seasonal workers live in Goodnews Bay from June through July, and population peaks are somewhat attributed to employment in fisheries sectors.

No significant changes in the racial and ethnic composition were observed between 2000 and 2010 (Figure 1). In 2010, the majority of Goodnews Bay residents identified themselves as American Indian and Alaska Native (94.7%), compared to 92.6% in 2000; 4.5% identified themselves as White, compared to 5.7% in 2000; 0.8% identified themselves as of two or more races, compared to 1.7% in 2000; 0.4% identified themselves as Hispanic or Latino, compared to 0.0% in 2000; 0.0% identified themselves as of some other race, compared to 0.0% in 2000; 0.0% identified themselves as Black or African American, compared to 0.0% in 2000; 0.0% identified themselves as Native Hawaiian and Other Pacific Islander, compared to 0.0% in 2000; and 0.0% identified themselves as Asian, compared to 0.0% in 2000.

In 2010, the average household size was 3.20, compared to 3.60 in 1990 and 3.24 in 2000. In that year, there were a total of 82 housing units, compared to 72 in 1990 and 87 in 2000. Of the households surveyed in 2010, 56% were owner-occupied, compared to 30% in 2000; 37% were renter-occupied, compared to 52% in 2000; 2% were vacant, compared to 17% in 2000; and 5% were occupied seasonally, compared to 1% in 2000. No residents lived in group quarters between 1990 and 2010.

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>.

In 2010, the gender distribution in Goodnews Bay was biased towards males at 55.6% male and 44.4% female. This was less even than both the distribution statewide (52.0% male, 48.0% female), and the distribution in 2000 (51.3% male, 48.7% female). In that year, the median age was 26.8 years, which was younger than both the statewide median of 33.8 years, and 2000 median of 30.7 years.

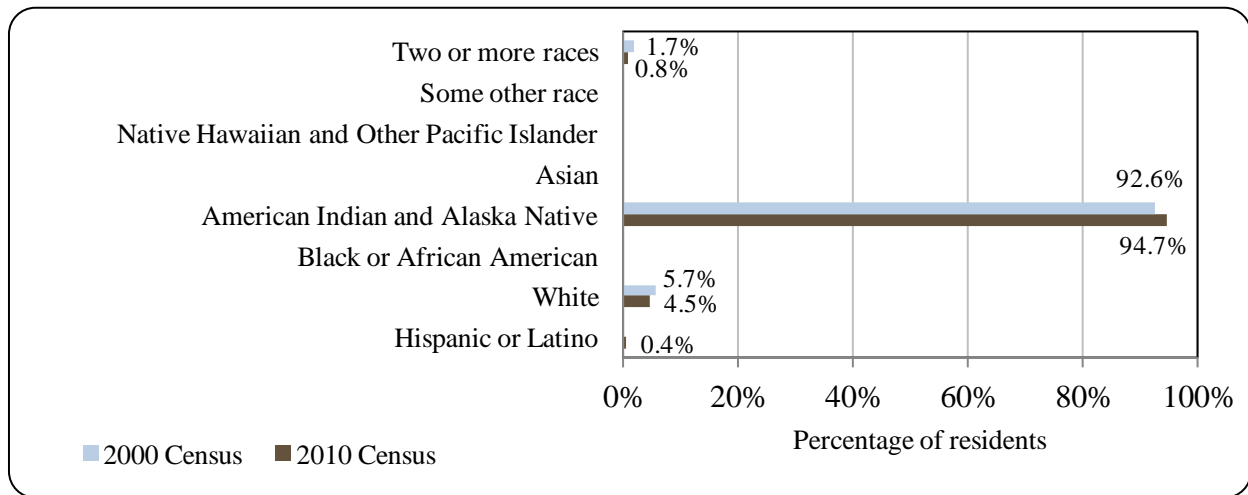
Table 1. Population in Goodnews Bay from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	241	-
2000	230	-
2001	-	228
2002	-	234
2003	-	245
2004	-	237
2005	-	238
2006	-	244
2007	-	234
2008	-	225
2009	-	237
2010	243	-

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>.

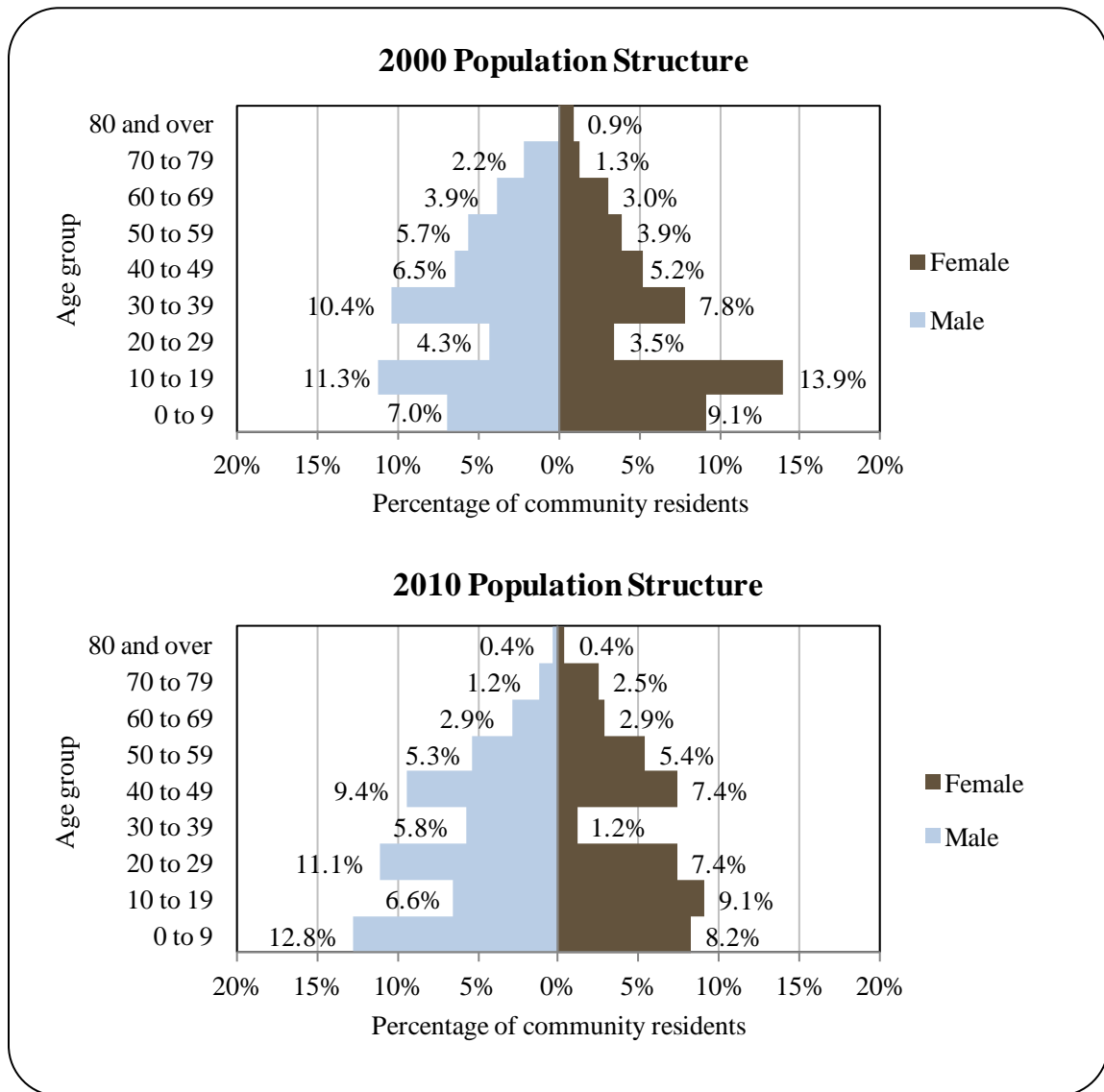
Figure 1. Racial and Ethnic Composition, Goodnews Bay: 2000-2010 (U.S. Census).



The population structure was somewhat irregular in both 2000 and 2010; however, in both years it could be described as expansive. In 2010, 36.7% of residents were under the age of 20, compared to 41.3% in 2000; 10.3% were over the age of 59, compared to 11.3% in 2000; 34.5% were between the ages of 30 and 59, compared to 39.5% in 2000; and 18.5% were between the ages of 20 and 29, compared to 7.8% in 2000.

Gender distribution by age cohort was less even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 0 to 9 range (12.8% male, 8.2% female), followed by the 30 to 39 (5.8% male, 1.2% female) and 20 to 29 (11.1% male, 7.4% female) ranges. Of those three, the greatest relative gender difference occurred within the 30 to 39 range. Information regarding population structure trends can be found in Figure 2.

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



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)³ estimated that 58.2% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. If accurate, this estimate highlights a significant difference between local educational attainment, and that of the state as a whole. Also in that year, an estimated 22.6% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 19.2% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 15.3% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 4% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 2.3% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Stone tools and implements found from the Norton Tool tradition indicates that the Goodnews Bay/Platinum area has been occupied continuously for at least 2,000 years.⁴ One site, at nearby Security Cove, shows evidence of possible habitation dating to 4,000 or 5,000 years ago. Historical inhabitants of the region utilized fish and marine mammal resources, as well as caribou.⁵ The original inhabitants of the coastal area between the Kuskokwim River mouth and Chavgan Bay were known as the *Kukowogamiut*, and the Goodnews Bay area may also have been used by the *Togiagamiut*, who historically populated the Togiak/Dillingham area from Nanvak Bay east to Cape Constantine.⁶

Captain James Cook was the first European to make contact with the indigenous peoples of this region, when his expedition encountered them in kayaks north of Cape Newenham on July 16, 1778. Russians established fur trading in the region in the following century. Gold was discovered in the 1890s in Alaska. By the turn of the century, mineral discoveries in the Goodnews Bay area brought a flood of miners to the region.⁷

Yup'ik Eskimos referred to Goodnews Bay as the village of *Mumtraq*. The community was forced to relocate in the early 20th century due to storm surges and constant flooding. In the 1930s, a government school and post office were built, and the City was incorporated in 1970. A high school was built in 1979.⁸

As a traditional Yup'ik village, Goodnews Bay residents practice a subsistence, trapping, and fishing lifestyle. The Native People of Mumtraq (Goodnews Bay) have always had strong values that centers around the Yup'ik culture. Current values in the community are strongly

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.

⁴ The Native Village of Goodnews Bay. (2005). *Goodnews Bay Community Plan*. Retrieved October 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/GoodnewsBay-GCP-2005.pdf>.

⁵ U.S. Fish and Wildlife Service. (n.d.). *Togiak National Wildlife Refuge Overview*. Retrieved April 11, 2012 from <http://www.fws.gov/refuges/profiles/index.cfm?id=74535>.

⁶ Alaska Department of Natural Resources. (2005). *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁷ Ibid.

⁸ 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.

informed by Yup'ik culture, yet residents still exhibit a strong need for economic, physical, and spiritual independence upon themselves. The sale, importation, and possession of alcohol is banned in the village. Bureau of Indian Affairs schools operated from the 1930s until 1980, when the State of Alaska built a high school in 1979, under the newly established Lower Kuskokwim School District.⁹

Natural Resources and Environment

Goodnews Bay is located in a transitional climatic zone and is impacted by both continental and marine influences. Average annual precipitation is 22 inches, with 43 inches of snowfall. Summer temperatures range from 41 to 57 °F (5 to 14 °C); winter temperatures average 6 to 24 °F (-14 to -4 °C).¹⁰

The discovery of white gold platinum in the Goodnews Bay area was made in 1926 by a villager from Kakanagamute, a village in Chagvan Bay (south of Goodnews Bay), and shortly after placer mining operations began, with the eventual development of the Goodnews Bay Mining Company in 1934. The mining company supplied platinum for the Johnson, Matthey and Company, Inc. in New York, and the crude platinum was shipped in moose-hide or calfskin bags called “pokes” which were then doublesacked in canvas for transport.¹¹

A wide variety of fish and wildlife are present around Goodnews Bay. The coastal waterways consist of birds, seal, whale, walrus and many varieties of fish. The bay and offshore waters are a major herring fishery, drawing residents of many other villages during the height of the season. Goodnews River is home to Chinook, sockeye, chum, pink, and coho salmon. Other species such as rainbow trout, Arctic grayling, Dolly Varden, and Arctic char can be found in the Goodnews River. To the west, Steller sea lions are present in the offshore waters. Village lands are bounded on the north, south, and east by the Togiak National Wildlife Refuge, which was initially created in 1980 as part of a larger collection of public land withdrawals. The Refuge itself provides critical habitat for threatened and endangered species including spectacled eider, Steller's eider, and Steller sea lion.¹²

Black bears, brown bears, moose, wolverines, wolves, red and arctic foxes, land otters, mink, marten, weasel, lynx, beavers, muskrat, and hares inhabit the Goodnews Bay area. The Yukon-Kuskokwim Delta is an important migratory route for numerous species of waterfowl and other migratory birds, and provides suitable habitat for various predatory, game, shore, and songbirds, including gyrfalcons, peregrine falcons, ptarmigan, snipes, cranes, and loons. A rookery is located south of Goodnews Bay at Cape Newenham; species include horned and tufted puffins and glaucous-winged gulls.¹³

Goodnews Bay is also surrounded by wetland habitat used for migratory birds in the spring and fall. Essential Fish Habitat in the Goodnews Bay area includes the Goodnews River and its tributaries. No other Essential Fish Habitat was identified by the National Marine Fisheries Service (NMFS) in the Goodnews Bay area. No wild and scenic rivers are located in

⁹ Ibid.

¹⁰ See footnote 8.

¹¹ Johnston, Charles. (1962). Platinum Mining in Alaska: Dredge and Dragline Operations at Goodnews Bay. *Platinum Metals Review* 6(2): 68-74.

¹² National Park Service (n.d.). *Togiak National Wildlife Refuge*. Retrieved October 22, 2012 from <http://togiak.fws.gov/>.

¹³ Goodnews Bay Community Plan. (2005). Retrieved February 22, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_Results.cfm.

the vicinity of Goodnews Bay. Consultation with the U.S. Fish and Wildlife Service, NMFS, and the Alaska Department of Fish and Game (ADF&G) will be required for development in the community.¹⁴

The Native Village of Goodnews Bay entered into a 638 contract with the Bureau of Indian Affairs to manage the Natural Resources Program for the Village of Goodnews Bay. The purpose of the Natural Resources Program is to ensure the protection, conservation, and sustainable utilization of the natural resources of the Tribe, to promote a healthy and clean environment, and promote Native co-management of these resources. The goal of the Natural Resource program is to enhance and protect the natural resources the Tribe depends on for subsistence and economic needs. The primary objectives are to provide the necessary services, liaison, and detailed follow through to achieve protection and enhancement of the Tribes natural resources.¹⁵

The general geology of the area consists of older coastal deposits of interlayered alluvial and marine sediments including coastal delta deposits. The area surrounding the community is characterized by low mountains, plateaus, and a generally rolling topography. Goodnews Bay is located on lowland coastal areas which are underlain by isolated masses of permafrost with a predominant presence of fine-grained deposits. Soils conditions in Goodnews Bay generally exhibit features of recently glaciated valleys consisting of small lakes and streams, moraines, and gravelly outwash terraces. Frost features such as frost scars, low mounds, and solifluction lobes are frequent. The Goodnews Bay area is primarily flat, surrounded by tundra and muskeg, with irregular shaped moraine knolls and ridges, and dotted with lakes and water bodies. The community is located in a coastal plain, consisting of lowland tundra. Low bush willow's make up a majority of the trees within the outlying area. Birch trees line the riverbanks all the way up to the Goodnews Lake, some 35 miles east of the village of Goodnews Bay.¹⁶

Local natural hazards come primarily in the form of flooding and erosion. Most flooding in the area is a result of storm surges. Although located within a relatively protected bay, erosion is most prevalent along the coastline around Goodnews Bay.¹⁷ Snowdrifts are of concern due to scarce vegetation and frequent high winds. The Goodnews River is prone to flooding, and flood events occurred in 2004, 1989, and 1979. All flood events resulted from wind-driven waves.¹⁸

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation projects active in Goodnews Bay in 2010.¹⁹

Current Economy²⁰

The community of Goodnews Bay relies on a mixed subsistence and cash economy. Important subsistence resources for local community members include salmon, seal, walrus, birds, berries, moose, and bear. Residents also depend on seasonal employment including

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ City of Dillingham. (2006). *City of Dillingham Comprehensive Plan*. Retrieved March 13, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Dillingham-CP-2006.pdf>.

¹⁸ The Native Village of Goodnews Bay. (2005). *Goodnews Bay Community Plan*. Retrieved October 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/GoodnewsBay-GCP-2005.pdf>.

¹⁹ Alaska Dept. of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved October 19, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm#Western>.

²⁰ Unless otherwise noted, all monetary data are reported in nominal values.

commercial fishing, ivory carving, and other Native arts and crafts. Many residents engage in trapping.²¹ The city, school, local businesses, and commercial fishing provide the majority of the income, supplemented by subsistence activities.²² In a survey conducted by the AFSC in 2011, community leaders reported that fishing is the natural resource-based industry on which Goodnews Bay's economy most depends. In 2010, Goodnews Bay residents held commercial fishing permits for salmon and herring roe fisheries (see the *Commercial Fisheries* section).

Based on household surveys conducted for the 2006-2010 ACS,²³ In 2010, the estimated per capita income in Goodnews Bay was estimated to be \$9,908, and the estimated median household income was \$30,313. These numbers represent increases from the per capita and median household income levels reported in 2000 (\$6,851 and \$16,250, respectively). If inflation is taken into account by converting the 2000 values to 2010 dollars,²⁴ the real per capita income in 2000 (\$9,009) is shown to have been very similar to the 2010 per capita income estimate, while there appears to have been a real increase in household income, from a \$21,369 real median household income. In 2010, Goodnews Bay ranked 278th of 305 Alaskan communities with per capita income data, and 245th in median household income, out of 299 Alaskan communities with household income data that year.

However, Goodnews Bay's small population size may have prevented the ACS from accurately portraying economic conditions.²⁵ An alternative understanding 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. Census, the resulting per capita income estimate for Goodnews Bay in 2010 is \$7,061.^{26,27} Given that this figure is lower than the 2010 ACS estimate, caution should be used when citing per capita income stability in Goodnews Bay between 2000 and 2010. These relatively low per capita income estimates are reflected in the fact that the community was recognized as "distressed" by the Denali Commission,²⁸ prioritizing it for economic assistance. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

²¹ See footnote 18.

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 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>.

²⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

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.

²⁸ Denali Commission. 2011. Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

Based on the 2006-2010 ACS, in 2010, a much lower percentage of Goodnews Bay residents (42.9%) were estimated to be in the civilian labor force than in the civilian labor force statewide (68.8%). In the same year, 38.6% of local residents were estimated to be living below the poverty line, more than 3 times higher than the poverty rate in Alaska overall (9.5%). The unemployment rate in Goodnews Bay was 12.1%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment, based on the ALARI database, indicates that the unemployment rate in Goodnews Bay was much higher in 2010 (23.7%), more than double the statewide unemployment rate estimate of 11.5%.²⁹ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Also based on the 2006-2010 ACS, a majority of the Goodnews Bay civilian labor force was estimated to be employed in the public sector (66.2%), along with 17.6% in the private sector, and 16.2% estimated to be self-employed. There were 74 people aged 16 and over that were estimated to be employed in the civilian labor force. These workers were spread relatively evenly across six industries, with 31.1% estimated to be working in public administration (31.1%), 21.6% in educational services, health care, and social assistance, 13.5% in retail trade, 13.5% in transportation, warehousing, and utilities, 12.2% in finance and insurance, real estate, rental, and leasing, and 8.1% in services other than public administration. Occupations in which the greatest percentages of the workforce were estimated to be employed were management, business, science, and arts (55.4%) and sales and office occupations (25.7%). Compared to 2000, employment in arts, entertainment, recreation, and accommodation and food service industries appears to have been eliminated, along with employment in construction industries. At the same time, a significant amount of employment in finance and insurance industries appears to have developed between 2000 and 2010. Information regarding employment trends can be found in Figures 3 and 4.

It should be noted that no individuals were estimated to be working in natural resource-based occupations or industries that include fishing in 2010. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

²⁹ See footnote 26.

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

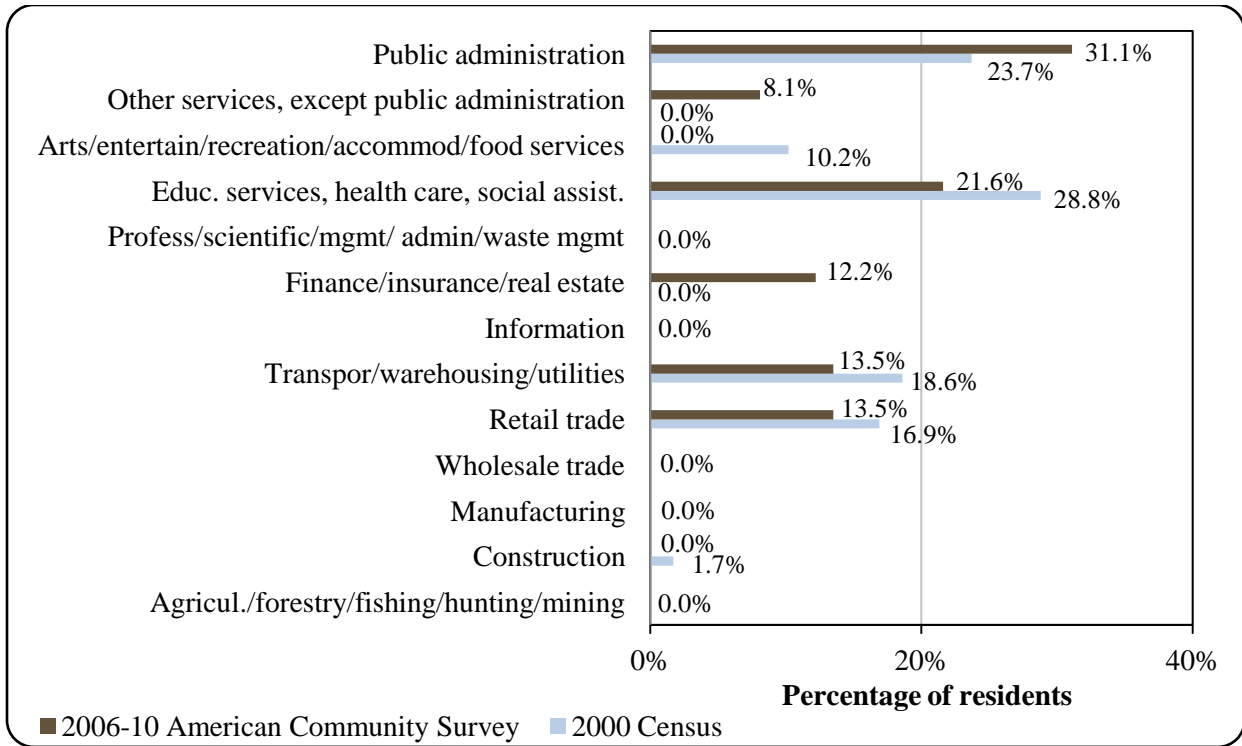
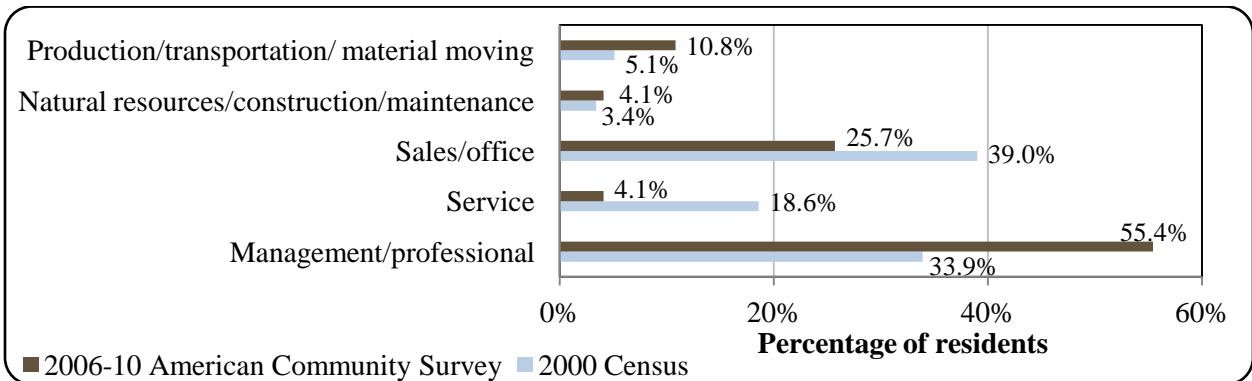


Figure 4. Local Employment by Occupation in 2000-2010, Goodnews Bay (U.S. Census).



Governance

Goodnews Bay is a 2nd Class City, and is not located in an organized borough. The City was incorporated in 1970. It has a Manager, or “Strong Mayor”, form of government, with a seven-person city council including the Mayor, a nine-member school board, and several municipal employees. The City administers a 3% sales tax.³⁰ However, no sales tax revenue was reported between 2000 and 2010. Total annual municipal revenues remained relatively stable between 2000 and 2010. In addition to locally-generated revenue sources, the City received on

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.

average \$25,000 in State Revenue Sharing contributions in the early half of the decade. When the Community Revenue Sharing Program was instituted, the City received substantially more revenue, earning a total of \$104,162 in 2010 (Table 2).

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

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$193,058	n/a	\$26,943	n/a
2001	\$351,611	n/a	\$25,543	n/a
2002	\$246,671	n/a	\$25,546	n/a
2003	\$163,321	n/a	\$25,745	n/a
2004	\$160,565	n/a	n/a	n/a
2005	\$214,073	n/a	n/a	n/a
2006	\$203,846	n/a	n/a	n/a
2007	\$243,846	n/a	n/a	n/a
2008	\$212,579	n/a	n/a	n/a
2009	\$205,436	n/a	\$104,606	n/a
2010	\$210,397	n/a	\$104,162	n/a

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

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

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

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

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

Goodnews Bay was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Native Village of Goodnews Bay. The Native village corporation is Kuitsarak, Incorporated, which manages 115,200 acres of land.³¹ Goodnews Bay belongs to the Calista Corporation, the regional Native corporation of the lower Yukon River, the central and lower Kuskokwim River, and the Bering Sea coast from the mouth of the Yukon River south to Cape Newenham.³²

Goodnews Bay is also a member of the Association of Village Council Presidents (AVCP), a tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-

³¹ Ibid.

³² Calista Corporation. (n.d.) *Region/Land Description*. Retrieved December 6, 2011 from http://www.calistacorp.com/about/region_description.html.

determination and self-governance and to work to protect tribal culture and traditions.”³³ The AVCP is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.³⁴ AVCP is made up of 56 villages and 45 village corporations.³⁵

The closest offices of the ADF&G and the Alaska Department of Commerce, Community, and Economic Development are located in Bethel and Dillingham. Anchorage offers the closest offices of the NMFS, Alaska Department of Natural Resources (DNR), and U.S. Bureau of Citizenship and Immigration Services.

Infrastructure

Connectivity and Transportation

A state-owned 2,835-foot long by 80-foot wide gravel airstrip is available for chartered or private planes year-round. However, regularly scheduled flights must be taken from or to Dillingham. As of June 2012, roundtrip airfare from Anchorage to Dillingham (the nearest airport to Goodnews Bay) was \$428.³⁶ There are no docking facilities, although locals use boats and skiffs extensively during the summer months. Snowmachines are the primary means of travel during the winter. Winter trails are marked along the Coastal Trail (60.3 mi) and the Arolik Trail (60.1 mi). Barges deliver fuel and other supplies during the summer months.³⁷

*Facilities*³⁸

The City Multi-Purpose building, which was built in 1970 and is 3,240 square feet, serves as the village clinic, Head Start program, mental health office, drug and alcohol prevention program and city offices, the washeteria, water plant, Coastal Villages Region Fund office, and utilities office. The Kuitsarak, Inc. Corporation operates a cooperative store and bulk fuel facility. The store was built in 1997 and it is 5,664 square feet. The village post office also operates out of the building. Visitor accommodations include Daniel Schouten B&B. Public safety services are provided by local Village Public Safety Officer and state troopers based in Bethel. Fire and rescue services are provided by city volunteer fire and Goodnews Bay first responders. Additional public facilities include a community hall and school library.

³³ Association of Village Council Presidents. (n.d.). *AVCP homepage*. Retrieved December 6, 2011 from www.avcp.org.

³⁴ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

³⁵ Calista Corporation. 2011. *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

³⁶ Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

³⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved February 22, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁸ The Native Village of Goodnews Bay. (2005). *Goodnews Bay Community Plan*. Retrieved October 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/GoodnewsBay-GCP-2005.pdf>.

Communications services include local and long distance telephone, internet (school only), local and cable television, and local radio.³⁹

The Goodnews Bay power plant is currently equipped with two peak load generator sets capable of individually meeting the current peak load requirements. One of the highest output units, an Allis Chalmers 685Is, is no longer manufactured. Based upon the 2006 peak load projection from the latest Power Requirements Study, the power plant will not have redundant peak load engine capacity beyond the next 2 years. The Goodnews Bay power plant is also equipped with two remote radiators which provide redundant cooling capacity along with a separate heat exchanger for transfer of heat to the adjacent water plant. The Goodnews Bay tank farm has adequate useable fuel storage capacity to meet the annual requirements of the next 2-year period.

In April of 2004 a door-to-door survey was conducted to obtain the community's opinion of the current facilities located in Goodnews Bay. Facilities in the survey included: airstrip, tribal and city offices, power plant, community hall, water treatment plant, landfill and sewage lagoon, walkways, armory, high school, dock, health clinic, post office, trailmarks and the local gas station. The results from the survey indicate that the majority of those surveyed were displeased with the current barge landing area (or lack thereof). Residents were equally dissatisfied with the existing airstrip and the landfill and sewage lagoon. Local residents were more satisfied with the existing post office, power plant and gas station.

In a survey conducted by the AFSC in 2011, community leaders reported that public facilities projects completed between 2000 and 2010 included water and sewer pipelines, sewage treatment, water treatment, new landfill/solid waste site, public safety improvements, emergency response improvements, school improvements, telephone service improvements, and post office improvements. Public facilities projects under development in 2010 included a barge landing area and broadband internet access. Fisheries-related businesses and services available locally include fishing gear sales, boat repair (welding, mechanical services), fish lodges, and boat fuel sales. According to community leaders, there is no dock space available for permanent or transient moorage.

*Medical Services*⁴⁰

Bristol Bay Area Health Corporation (BBAHC) provides primary health care services in Goodnews Bay through the Community Health Aid Program (CHAP). BBAHC has provided health care services for the Bristol Bay region under the Alaska Tribal Health Compact with federal Indian Health Services (IHS) funding and grants. The City of Goodnews Bay owns and maintains the clinic with IHS lease funds and operates on a referral basis for medical, dental, behavioral health and human services. Goodnews Bay has two full-time CHAP employees trained to deal with emergencies and provide the general health care to village residents and are often Emergency Medical Technicians. The CHAPs receive direction from physicians located at the Dillingham Kakanak Hospital, in which residents go to for higher level of care. Residents are also referred to the Alaska Native Medical Center or a private hospital in Anchorage for higher level of care. Telemedicine through the internet has become a major factor in improved health care at the community level. Goodnews Bay receives itinerant care including dentists who travel to the village four weeks per year, a public health nurse, pediatrician and doctor who visit

³⁹ See footnote 37.

⁴⁰ Ibid.

quarterly, and optometry, audiology and behavioral health. The Native Village of Goodnews Bay is currently in the process of re-activating the Indian Child Welfare Act program for the community.

*Educational Opportunities*⁴¹

Goodnews Bay has one school, the Rocky Mountain School, which offers preschool through 12th grade instruction. In 2011, there were a total of 59 students enrolled and 9 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvests have been important to residents of the Goodnews Bay area for thousands of years.⁴² Most subsistence activities are conducted from seasonal camps, where residents spend the majority of the spring and summer months. In the spring, spotted, ringed, and bearded seals have historically been hunted until the first salmon runs in June. In addition, beluga whale have occasionally been harvested. During summer subsistence season, residents net salmon, smelt, herring, and capelin along the Goodnews River. During fall and winter months, smelt, Dolly Varden, blackfish, burbot, northern pike, and Arctic char are harvested.⁴³

Goodnews Bay is located in District 5 (Goodnews Bay) of the Kuskokwim salmon fishery. In 1996, the Coastal Villages Regional Fund (CVRF) was created as part of six regional non-profit corporations formed under the newly implemented Community Development Quota (CDQ) program. The CVRF represents 20 member communities within the region from Platinum to Scammon Bay. Its mission is to improve social conditions in member communities through fisheries development, and has assisted Goodnews Bay by providing a tender vessel to Platinum for local salmon and herring fisheries. The CVRF also operates a shoreside seafood processing facility in nearby Platinum. In 1998, the community was impacted by the Western Alaska Fisheries Disaster, and commercial fishermen received just under \$40,000 in financial relief.⁴⁴

Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. At the time of statehood, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels

⁴¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁴² Alaska Native Heritage Center. (n.d) *Yup'ik & Cup'ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁴³ LaVine, R.; Lisac, M. J.; and Coiley-Kenner, P. (2007). *Traditional Ecological Knowledge of 20th-Century Ecosystems and Fish Populations in the Kuskokwim Bay Region*. Fisheries Resource Monitoring Program FIS 04-351. Retrieved October 22, 2012 from: <http://alaska.fws.gov/asm/pdf/fisheries/reports/04-351final.pdf>.

⁴⁴ The Native Village of Goodnews Bay. (2005). *Goodnews Bay Community Plan*. Retrieved October 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/GoodnewsBay-GCP-2005.pdf>.

and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.⁴⁵

Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island, and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.⁴⁶

Goodnews Bay is located in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Given the community's location outside the Gulf of Alaska, it is not eligible for the Community Quota Entity program. However, it is eligible to participate in the CDQ program and is represented by the CVRF. In a survey by the AFSC in 2011, community leaders reported that Goodnews Bay participates in the fisheries management process in Alaska through a representative who sits on regional fisheries advisory and/or working group run by ADF&G, and through cooperation with the U.S. Fish and Wildlife Service.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Goodnews Bay does not have a registered processing plant. The closest seafood processor is located in Platinum.

Fisheries-Related Revenue

Between 2000 and 2010, fisheries-related revenue collected by Goodnews Bay was minimal. In 2010, known fisheries-related revenue totaled \$275, compared to \$1,186 in 2000. Between 2000 and 2010, fisheries-related revenues were at their highest in 2001, totaling \$9,815. Raw fish tax collections made up the majority of known fisheries-related revenues between 2000 and 2010, followed by shared fisheries business tax collections, which ranged from \$84 to \$5,139 between 2000 and 2010. Further information of known fisheries-related revenue for Goodnews Bay is provided in Table 3.⁴⁷ In a survey conducted by the AFSC in 2011, community leaders reported that Goodnews Bay received \$10,000 from the CVRF in 2010.

It should be noted that 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.

⁴⁵ Clark, McGregor, Mecum, Krasnowski and Carroll. (2006). Kuskokwim Commercial Salmon Fishery. In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

⁴⁶ 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>.

⁴⁷ 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.

Commercial Fishing

In 2010, 47 Goodnews Bay residents (equivalent to 19.3% of the local population) held a total of 59 Commercial Fisheries Entry Commission (CFEC) permits, including 27 salmon permits, 24 herring permits, and 8 halibut permits (Table 4). Most recently, residents have engaged in statewide halibut fisheries using longline vessels under 60 feet and dinglebar trolling, herring gill net fishing on Nelson Island, roe herring gill net fishing in Goodnews Bay, salmon drift and set gill net fishing in Bristol Bay, and salmon gill net fishing in Kuskokwim. In a survey conducted by the AFSC in 2011, community leaders reported that the number of commercial fishing vessels (under 35 feet long) within the community increased between 2005 and 2010. In addition, commercial salmon fishermen from other communities often use Goodnews Bay as a base of operation during fishing seasons.

In 2010, 19 fishing vessels were primarily owned by Goodnews Bay residents and 39 residents held a commercial crew license, compared to 31 vessels primarily owned by residents and 37 crew license holders in 2000. Between 2000 and 2010, the number of vessels primarily owned by Goodnews Bay residents declined by 38.7%, and the number of vessels homported also declined by 53.5% during that time period. In 2010, non-confidential ex-vessel landings by resident totaled \$92,050, compared to \$40,122 in 2000. Non-confidential pounds landed were at their lowest in 2009, and at their highest in 2004 (Table 10). By species, residents landed 111,677 pounds of salmon valued at \$92,050 ex-vessel in 2010, compared to 93,443 pounds valued at \$38,120 ex-vessel in 2000; an increase of \$0.26 per pound ex-vessel after adjusting for inflation,⁴⁸ and without considering the species composition of landings. Residents landed 150,455 pounds of herring valued at \$7,657 ex-vessel, compared to 21,143 pounds valued at \$2,002 in 2000; a decrease of \$0.08 per pound ex-vessel after adjusting for inflation.⁴⁹ Between 2000 and 2010, no fish buyers or shoreside processors reported activity or the intent to operate out of Goodnews Bay. Following this, no landings were recorded in the community during this timeframe (Tables 5 and 9).

Between 2000 and 2010, no Federal Fisheries Permits (FFP) or License Limitation Program permits (LLP) were held by Goodnews Bay residents in federal crab or groundfish fisheries (Table 4). In that time period, however, residents did hold federal quota share accounts in federal catch share fisheries for halibut, but not for sablefish or crab (Tables 6 through 8). In 2010, there was one halibut quota share account holder who held a total of 5,155 shares, compared to two account holders holding 13,287 shares in 2000.

⁴⁸ Inflation calculated using 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>

⁴⁹ Ibid.

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$593	\$4,676	\$4,676	\$115	\$7,905	\$400	\$0	\$138	\$100	\$100	\$88
Shared Fisheries Business Tax ¹	\$593	\$5,139	\$88	\$115	\$92	\$231	\$261	\$139	\$100	\$84	\$88
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	\$99
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$1,186	\$9,815	\$4,764	\$230	\$7,997	\$631	\$261	\$277	\$200	\$184	\$275
Total municipal revenue⁵	\$193,058	\$351,612	\$246,671	\$163,321	\$160,566	\$214,073	\$203,847	\$243,847	\$212,579	\$205,436	\$210,397

Note: n/a refers to data that was not available at the time of printing.

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

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

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

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

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

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	1	1	4	4	0	1	0	0	0	9	8
	Fished permits	0	0	0	0	0	0	0	0	0	4	2
	% of permits fished	0%	0%	0%	0%	n/a	0%	n/a	n/a	n/a	44%	25%
	Total permit holders	1	1	4	4	0	1	0	0	0	9	8
Herring (CFEC) ²	Total permits	23	26	24	24	24	25	24	24	24	24	24
	Fished permits	7	11	5	11	10	6	5	0	0	0	0
	% of permits fished	30%	42%	21%	46%	42%	24%	21%	0%	0%	0%	0%
	Total permit holders	25	28	24	25	24	26	24	24	24	24	25

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	30	28	27	28	28	25	27	26	25	25	27
	Fished permits	29	21	18	19	17	20	22	22	21	21	26
	% of permits fished	97%	75%	67%	68%	61%	80%	81%	85%	84%	84%	96%
	Total permit holders	34	32	27	31	29	28	31	29	27	29	30
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>54</i>	<i>55</i>	<i>55</i>	<i>56</i>	<i>52</i>	<i>51</i>	<i>51</i>	<i>50</i>	<i>49</i>	<i>58</i>	<i>59</i>
	<i>Fished permits</i>	<i>36</i>	<i>32</i>	<i>23</i>	<i>30</i>	<i>27</i>	<i>26</i>	<i>27</i>	<i>22</i>	<i>21</i>	<i>25</i>	<i>28</i>
	<i>% of permits fished</i>	<i>67%</i>	<i>58%</i>	<i>42%</i>	<i>54%</i>	<i>52%</i>	<i>51%</i>	<i>53%</i>	<i>44%</i>	<i>43%</i>	<i>43%</i>	<i>47%</i>
	<i>Permit holders</i>	<i>48</i>	<i>46</i>	<i>41</i>	<i>45</i>	<i>43</i>	<i>44</i>	<i>44</i>	<i>43</i>	<i>42</i>	<i>45</i>	<i>47</i>

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 Goodnews Bay: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Goodnews Bay ²	Total Net Pounds Landed in Goodnews Bay ^{2,5}	Total Ex-Vessel Value of Landings in Goodnews Bay ^{2,5}
2000	37	0	0	31	43	0	0	\$0
2001	36	0	0	33	45	0	0	\$0
2002	28	0	0	29	39	0	0	\$0
2003	34	0	0	29	36	0	0	\$0
2004	32	0	0	29	37	0	0	\$0
2005	26	0	0	27	19	0	0	\$0
2006	32	0	0	20	17	0	0	\$0
2007	28	0	0	19	18	0	0	\$0
2008	26	0	0	18	18	0	0	\$0
2009	35	0	0	20	20	0	0	\$0
2010	39	0	0	19	20	0	0	\$0

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

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

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

³ National Marine Fisheries Service. (2011). Alaska processors' Weekly Production Reports (WPR) 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.]

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

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Goodnews Bay: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	2	13,287	805
2001	1	5,155	0
2002	1	5,155	0
2003	1	5,155	0
2004	1	5,155	0
2005	1	5,155	0
2006	1	5,155	0
2007	1	5,155	0
2008	1	5,155	0
2009	1	5,155	0
2010	1	5,155	0

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

Table 7. Sablefish Catch Share Program Participation by Residents of Goodnews Bay: 2000-2010.

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

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

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

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

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

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

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

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

¹ Net 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 Goodnews Bay Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	756	--
Herring	21,143	77,199	101,187	133,881	150,376	209,876	150,455	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	93,443	148,348	--	103,871	181,480	94,062	108,370	133,008	106,346	--	111,677
<i>Total²</i>	<i>114,586</i>	<i>225,547</i>	<i>101,187</i>	<i>237,752</i>	<i>482,232</i>	<i>303,938</i>	<i>258,825</i>	<i>133,008</i>	<i>106,346</i>	<i>756</i>	<i>111,677</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	\$1,894	--
Herring	\$2,002	\$4,565	\$5,168	\$6,387	\$15,726	\$10,348	\$7,657	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$38,120	\$48,250	--	\$43,790	\$64,172	\$42,454	\$44,488	\$65,512	\$59,876	--	\$92,050
<i>Total²</i>	<i>\$40,122</i>	<i>\$52,815</i>	<i>\$5,168</i>	<i>\$50,177</i>	<i>\$79,898</i>	<i>\$52,802</i>	<i>\$52,145</i>	<i>\$65,512</i>	<i>\$59,876</i>	<i>\$1,894</i>	<i>\$92,050</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

Between 2000 and 2010, a limited amount of recreational fishing activity was reported out of Goodnews Bay. Although no active sport fish guide businesses were present during this period, from 2002 to 2010 at least one licensed sport fish guide was registered in the community each year. Between 2000 and 2010, the number of residents that purchased sportfishing licenses (irrespective of the point of sale) steadily increased from 6 in 2000 to 35 in 2010. However, no sportfishing licenses were sold in Goodnews Bay itself until 2010. The Alaska Statewide Harvest Survey,⁵⁰ conducted by ADF&G between 2000 and 2010, did not report information regarding species targeted by Goodnews Bay sport fishermen. However, the survey did list species targeted in freshwater by sport fishermen in nearby Quinhagak: Chinook, coho and sockeye salmon, and Dolly Varden.

Goodnews Bay is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between 0 and 28 non-resident angler days fished per year, and between 0 and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). Further information about the sportfishing trends in and near Goodnews Bay is displayed in Table 11.

Table 11. Sport Fishing Trends, Goodnews Bay: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Goodnews Bay ²
2000	0	0	6	0
2001	0	0	3	0
2002	0	1	20	0
2003	0	1	28	0
2004	0	5	16	0
2005	0	4	24	0
2006	0	3	22	0
2007	0	2	21	0
2008	0	2	39	0
2009	0	4	34	0
2010	0	5	35	34

⁵⁰ 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).

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

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

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

Many Native people in Goodnews Bay region continue the traditional ways of their ancestors, living a subsistence lifestyle and maintaining their cultural beliefs. Subsistence users rely on the plants and wildlife as a source of food, clothing, and raw materials. Residents harvest all five species of Pacific salmon, rainbow trout, Dolly Varden, Arctic char, lake trout, Arctic grayling, rainbow smelt, burbot, Bering cisco, least cisco, round whitefish, pigmy whitefish, northern pike, and Alaska blackfish. Popular subsistence areas include the Goodnews River and accompanying drainages, Goodnews Lake, Goodnews Bay, and other ponds, lakes, and drainages throughout the region. Marine species harvested in coastal areas by residents include starry flounder, yellow fin sole, Pacific and saffron cod, Pacific tomcod, Pacific halibut, and Pacific herring. Pacific walrus, spotted seals, ringed seals and Pacific bearded seals are hunted on the ice during the spring, and some seal hunting continues during summer months in bays and estuaries. In a survey conducted by the in 2011, community leaders reported that the most

important subsistence marine and aquatic resources included salmon, marine mammals, halibut, and herring.⁵¹

No information is available from ADF&G between 2000 and 2010 regarding the percentage of Goodnews Bay households participating in the harvest of various subsistence resources, or per capita subsistence harvest (Table 12). However, data were available regarding total subsistence harvests of salmon, halibut, and walrus.

From 2000 to 2008, the number of subsistence salmon permits issued to Goodnews Bay each year households increased from 53 to 73. In contrast, the number of salmon permits that were reported as actively fished declined over the period. Of the five salmon species, residents reported harvesting the greatest quantities of sockeye salmon. Sizeable annual harvests of Chinook, coho, and chum salmon were also reported. A small number of pink salmon were reported harvested in two years of the 2000-2008 period. Further information about subsistence salmon permits and harvest of marine invertebrates and non-salmon fish is presented in Table 13.

Between 2003 and 2010, the number of residents participating in subsistence halibut fisheries declined significantly. In 2000, 17 residents held Subsistence Halibut Registration Certificates (SHARC), compared to 4 in 2010. The total number of pounds reported harvest also declined over the period, although in 2010, the volume of halibut harvested was higher than preceding years. Information about halibut subsistence harvest is presented in Table 14.

Limited information is reported regarding marine mammal harvest in Goodnews Bay between 2000 and 2010. Two walrus were harvested in 2000 and one was harvested 2001. No data were reported by management agencies regarding subsistence harvest of sea otter, beluga whale, polar bear, spotted seal, harbor seal, or Steller sea lion (Table 15).

Although little information was available regarding subsistence activities in Goodnews Bay in recent decades, an earlier ADF&G household subsistence survey conducted in the nearby village of Quinhagak (about 67 miles north of Goodnews Bay) provides insight in to subsistence harvest patterns in the region. During the 1982 season, species of non-salmon fish harvested by the greatest percentage of Quinhagak households included: Dolly varden (100% of households reported harvesting), cod (100%), smelt (75%), cisco (50%), and blackfish (8%). The species of marine mammal reported to be harvested by the greatest number of Quinhagak households that year included: ringed seal (50% of household reported harvesting), spotted seal (50%), bearded seal (25%), and Steller sea lion (17%).⁵²

Additional Information

In a survey conducted by the AFSC in 2011, community leaders reported concerns that the commercial trawl fishery is impacting the Goodnews River subsistence salmon fishery. They emphasized that the bycatch of Chinook, sockeye, and chum salmon negatively affects the livelihoods of both local commercial and subsistence fishermen. When asked what potential future fisheries policy or management actions concerns Goodnews Bay the most, community

⁵¹ LaVine, R., M. J. Lisac, and P. Coiley-Kenner. (2007). *Traditional Ecological Knowledge of 20th-Century Ecosystems and Fish Populations in the Kuskokwim Bay Region*. Fisheries Resource Monitoring Program FIS 04-351. Retrieved October 22, 2012 from: <http://alaska.fws.gov/asm/pdf/fisheries/reports/04-351final.pdf>.

⁵² 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).

leaders reported that future restriction of subsistence fishing and commercial fishing due to low salmon escapement would have the most significant impact.

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

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	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, Goodnews Bay: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	53	52	601	280	414	n/a	1,028	n/a	n/a
2001	61	51	859	182	508	n/a	921	n/a	n/a
2002	55	43	703	312	202	n/a	794	n/a	n/a
2003	64	42	649	126	1,110	n/a	672	n/a	n/a
2004	64	50	851	221	1,411	n/a	805	n/a	n/a
2005	61	49	794	187	615	1	1,143	n/a	n/a
2006	61	48	630	544	592	20	947	n/a	n/a
2007	62	3	24	7	20	n/a	66	n/a	n/a
2008	73	20	1,428	958	1,790	n/a	3,914	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). 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, Goodnews Bay: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	17	12	3,919
2004	17	14	2,173
2005	17	9	2,986
2006	15	5	375
2007	16	7	102
2008	4	n/a	n/a
2009	4	n/a	n/a
2010	4	1	2,120

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, Goodnews Bay: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	2	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	1	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.