

## **Naknek (NACK-neck)**

### **People and Place**

#### *Location*<sup>1</sup>

Naknek is situated on a 100-ft bluff overlooking the northern bank of the mouth of the Naknek River, at the northeastern end of Bristol Bay. It lies 297 miles southwest of Anchorage. The Census Designated Place (CDP) encompasses 84.2 square miles of land and 0.7 square miles of water. Naknek lies about 20 miles from the western border of Katmai National Park and Preserve, which contains Mt. Katmai, Mt. Novarupta, and the Valley of 10,000 Smokes. Naknek is located in the Bristol Bay Borough, the Bristol Bay Borough Census Area, and the Kvichak Recording District.

#### *Demographic Profile*<sup>2</sup>

In 2010, there were 544 inhabitants in Naknek, making it the 112<sup>th</sup> largest of 352 total Alaskan communities with recorded populations that year. The town first appeared in the 1890 U.S. Census. Overall from 1990 to 2010, the population of Naknek declined by 5.4%. Between 1990 and 2000, the population of Naknek grew by 18%, and between 2000 and 2010 declined again by 19.8%, which is reflected in the average annual growth rate from 2000 to 2009 of -1.95%. In 2010, a majority of Naknek residents identified themselves as White (45.5%) and American Indian and Alaska Native (30.3%). In addition, 24.1% of residents identified with two or more races, and a smaller percentage identified as Native Hawaiian and Other Pacific Islander (0.7%) or “some other race” (0.4%). In addition, in 2010, 2.6% of the population of Naknek identified themselves as Hispanic. Individuals identifying as White or as Alaska Native and American Indian both made up a smaller percentage of the population in 2010 compared to 2000, and individuals of mixed race made up 21.7% more of the population in 2010. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Naknek was 2.35, a decrease from 2.7 persons per household in 2000 and 2.6 in 1990. The total number of households in Naknek increased from 108 in 1990 to 247 in 2000, and then declined to 231 occupied housing units by 2010. Of the 460 housing units surveyed for the 2010 Decennial Census, 29.8% were owner-occupied, 20.4% were renter-occupied, and 49.8% of all housing units were vacant or used only seasonally. From 1990 to 2010 no residents of Naknek were reported to be living in group quarters.

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<sup>1</sup> 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](http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm).

<sup>2</sup> 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>.

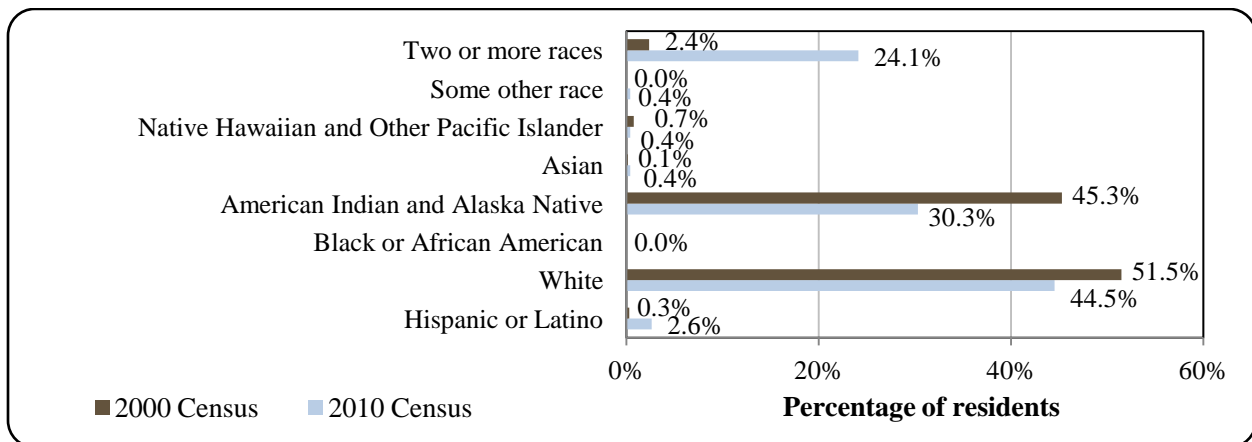
Table 1. Population in Naknek from 1990 to 2010 by Source.

Year	U.S. Decennial Census <sup>1</sup>	Alaska Dept. of Labor Estimate of Permanent Residents <sup>2</sup>
1990	575	-
2000	678	-
2001	-	657
2002	-	642
2003	-	612
2004	-	613
2005	-	582
2006	-	583
2007	-	542
2008	-	549
2009	-	516
2010	544	-

<sup>1</sup> (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>.

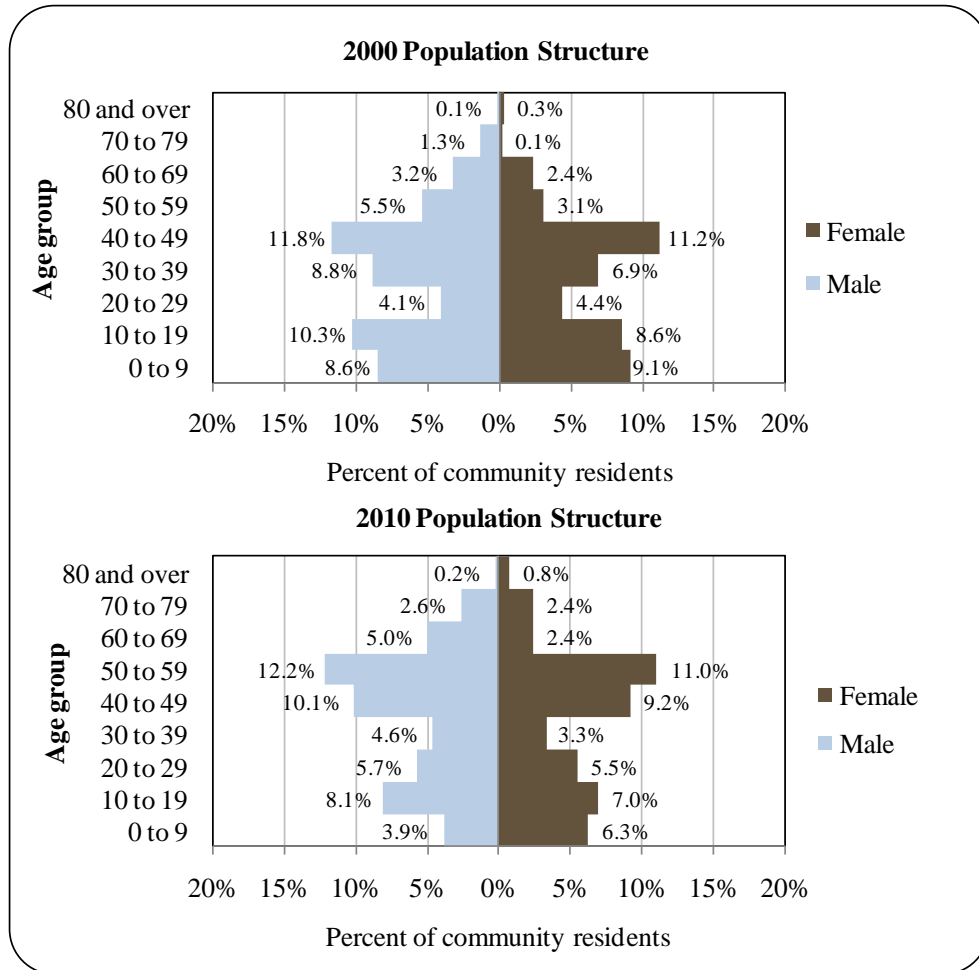
<sup>2</sup> Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

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



In 2010, the gender makeup in Naknek was 51.9% male and 48.1% female, very similar to the state population as a whole (52% male, 48% female). The median age was estimated to be 39.3 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, males outnumbered females in all age groups but 0 to 9 years and 80 years and over, and there were very similar numbers of males and females in the 20 to 29 age group. In 2010, 13.3% of the Naknek population was age 60 or older. The overall population structure of Naknek in 2000 and 2010 is shown in Figure 2.

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



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS), 90.2% of Naknek residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 7.5% of residents aged 25 and older were estimated to have less than a 9<sup>th</sup> grade education, compared to 3.5% of Alaska residents overall; 2.3% were estimated to have a 9<sup>th</sup> to 12<sup>th</sup> grade education but no diploma, compared to 5.8% of Alaska residents overall; 44.4% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 8.9% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; 11.5% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaska residents overall; and 3.5% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall. During community review of this profile, a representative of the Bristol Bay

Borough noted that the 2006-2010 ACS appears to underestimate the percentage of the adult population holding Bachelor's degrees.<sup>3</sup>

### *History, Traditional Knowledge, and Culture*

Naknek is a fishing community with a mixed population of non-Natives, Yup'ik Eskimo, Aleut, and Athabascan residents.<sup>4,5</sup> Starting 8,000 years ago there is evidence of seasonal camps along the Kvichak River by people of the Paleo-Arctic tradition. These people likely arrived following herds of caribou. By 6,000 years ago, ancestors of the Kodiak and Aleutian traditions made seasonal use of the Naknek area, probably utilizing both caribou and marine resources. By 1,900 B.C., ancestors of historic Yup'ik populations settled in the area. They were fishermen and hunters of caribou and marine mammals. Evidence of permanent settlements and river salmon fishing in the Naknek area starts around 400 B.C.<sup>6</sup>

By the time of European contact in the late 1700s, residents of villages used rivers to interact with each other and for transport in pursuit of seasonal subsistence resources. In 1821, the original Yup'ik village of "Naugeik" was noted by Capt. Lt. Vasiliev. The village was called Kinuyak and later spelled Naknek by the Russian Navy. The Russians built a fort near the village, and fur trappers inhabited the area prior to the U.S. purchase of Alaska in 1867.<sup>7</sup> Other abandoned village sites located on the Naknek River include Paugvik and New Savonoski.<sup>8</sup>

Soon after the sale of Alaska, the commercial fishing industry began to develop in the region, and the community of Naknek developed alongside this activity. The first salmon cannery opened on the Naknek River in 1890. The Homestead Act enabled canneries to acquire land for their plants, and also made land available to other institutions and individuals including the Russian Orthodox Church. People arrived from surrounding villages to build shelters on the church property, and were eventually sold lots in what became the center of Naknek.<sup>9</sup> Native Alaskan inhabitants of the area were joined by new residents who arrived to assist in the construction of canneries.<sup>10</sup>

The lack of fishermen and cannery labor led to a practice of importing cannery crews and fishermen from outside Alaska, increasing the non-Native presence in the community, especially during the summer salmon season. Historically this contributed to a low rate of hire of local Native residents as fishermen and cannery workers in the Bristol Bay salmon fishery. However,

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<sup>3</sup> 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.

<sup>4</sup> Visit Bristol Bay website. (n.d.). *Bristol Bay Cultures and History*. Retrieved November 7, 2013 from <http://www.visitbristolbay.com/visitor-guide/cultures.html>.

<sup>5</sup> Information updated during community review of this profile by a representative of the Bristol Bay Borough. Personal communication, October 2013.

<sup>6</sup> Morris, Judith (1985). *The Use of Fish and Wildlife Resources by Residents of the Bristol Bay Borough, Alaska. Alaska Dept. of Fish and Game Technical Paper Number 123*. Retrieved December 22, 2011 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp123.pdf>.

<sup>7</sup> 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](http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm).

<sup>8</sup> See footnote 4.

<sup>9</sup> Ibid.

<sup>10</sup> See footnote 6.

the start of World War II created a labor shortage and provided an opportunity for local residents to enter the fishery.<sup>11,12</sup> In 1920, the first official school was constructed, and the first aircraft landed in 1929. By the 1930s and 1940s, bush pilots were making regular flights to the area, and an Air Force Station was built in nearby King Salmon in 1942. In 1949, a 15-mile road was constructed between Naknek and King Salmon.<sup>13</sup> Today, Naknek is a hub of fishing and shipping activity in the Bristol Bay region.<sup>14</sup>

## Natural Resources and Environment

The climate of Naknek is mainly maritime, characterized by cool, humid, and windy weather. Average summer temperatures range from 42 to 63 °F; average winter temperatures range from 29 to 44 °F. Extremes from -60 to 88 °F are becoming more common. Total precipitation averages 20 inches annually, with 45 inches of snowfall. Precipitation patterns are also changing, with increasingly dry summers and more rain in the fall season. Fog is common during summer months.<sup>15,16</sup>

Naknek is located on the Alaska Peninsula, close to the Becharof National Wildlife Refuge (NWR) to the south, Katmai National Park and Preserve to the east, and the Alagnak National Wild and Scenic River to the northeast. The Becharof NWR covers an area of 1,157,000 acres and contains Becharof Lake, the second largest lake in Alaska, and Mt. Peulik, a 4,800-ft volcano. Wildlife present in the NWR includes brown bears, caribou, moose, and over 200 species of migratory and resident birds. It also provides an important nursery for Pacific salmon.<sup>17</sup> Katmai National Park and Preserve is a 7,383-square-mile wilderness area known for its high concentration of brown bears, the volcanoes Mt. Katmai and Mt. Novarupta, and the Valley of 10,000 Smokes. The National Park and Preserve is also a popular sportfishing destination.<sup>18</sup> The Alagnak River, also known as the “Branch River”, is a 79-mile-long river with headwaters in Katmai National Park and Preserve that joins the Kvichak River at the community of Levelock. Sixty-seven miles of the Alagnak River are designated as wild.<sup>19</sup> Nearby King Salmon is one of the primary departure points for charter flights to these wilderness destinations.<sup>20</sup> Minimal traffic passes through Naknek en route, however, as most visitors

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<sup>11</sup> Ibid.

<sup>12</sup> Bristol Bay Economic Development Corporation (2003). *An Analysis of Options to Restructure the Bristol Bay Salmon Fishery*. Retrieved December 22, 2011 from <http://www.bbsalmon.com/FinalReport.pdf>.

<sup>13</sup> See footnote 6.

<sup>14</sup> See footnote 7.

<sup>15</sup> Ibid.

<sup>16</sup> Comments about the changing climate patterns provided by a representative of the Bristol Bay Borough during community review of this profile in October 2013.

<sup>17</sup> U.S. Fish and Wildlife Service (2011). *Becharof National Wildlife Refuge*. Retrieved December 21, 2011 from <http://becharof.fws.gov/>.

<sup>18</sup> National Park Service (2011). *Katmai National Park & Preserve*. Retrieved November 17, 2011 from <http://www.nps.gov/katm/>.

<sup>19</sup> Lake Clark-Katmai Studies Center, National Park Service (n.d.). *Alagnak Wild River: An Illustrated Guide to the Cultural History of the Alagnak Wild River*. Retrieved November 17, 2011 from <http://www.nps.gov/alag/historyculture>.

<sup>20</sup> 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>.

transfer directly from the airport in King Salmon to transportation with smaller guide services. Many also charter flights directly to the wilderness areas from Anchorage or Homer.<sup>21</sup>

The Kvichak River system, including the Alagnak River and Iliamna Lake, is the single most important source of salmon in the Bristol Bay area, providing resources for commercial, subsistence, and recreational fisheries. The Alagnak River attracts a large number of anglers each year for salmon, Arctic grayling, Arctic char, and lake trout fisheries. The River's rainbow trout fishery has a world-class reputation.<sup>22</sup>

Significant mineral resources are present in the Bristol Bay region, including the Pebble copper-gold-molybdenum deposit northwest of Naknek, near Nondalton. The Pebble Mine site is located at the divide between the Kaktuli River and Upper Talarik Creek, north of Iliamna Lake.<sup>23</sup> Northern Dynasty Minerals Limited calls the Pebble deposit, "one of the greatest stores of mineral wealth ever discovered," and estimates that the deposit includes 80.6 billion lb of copper, 107.3 oz of gold, and 5.6 billion lb of molybdenum, including both indicated (high confidence) and inferred (low confidence) deposits.<sup>24</sup> Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon. According to the Pebble Partnership, 95% of the metal that would be produced by the Pebble Mine is copper. Dissolved copper is known to be toxic to fish.<sup>25</sup> If the Pebble Mine is developed, Bristol Bay salmon fisheries could be affected.<sup>26</sup>

The immediate Naknek area has no known mineral occurrences, but local potential exists for subsurface oil and gas resources. Reserves of oil and natural gas are also thought to be present on the outer continental shelf in the Bristol Bay Basin, which runs along the northern edge of the Aleutian Islands and Alaska Peninsula.<sup>27</sup> However, given the importance of Bristol Bay fisheries to the nation and the proximity of the Bristol Bay Basin to a number of protected areas, in March 2010 Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007 to 2012 program.<sup>28</sup> On March 31, 2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, whether for exploratory or production purposes, through 2017.<sup>29</sup>

According to the Bristol Bay Coastal Management Plan, the Naknek area is at risk of earthquakes and volcanic activity, landslides and avalanches, flooding and erosion, storm surges,

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<sup>21</sup> Information about visitation rates to Naknek provided by a representative of the Bristol Bay Borough during community review of this profile in October 2013.

<sup>22</sup> Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

<sup>23</sup> Parker, Geoffrey Y., Francis M. Raskin, Carol Ann Woody, and Lance Trasky (2008). Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska's Large Mine Permitting Process. *Alaska Law Review* 25:1.

<sup>24</sup> Northern Dynasty Minerals Limited website. 2012. *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

<sup>25</sup> See footnote 23.

<sup>26</sup> Pg. 36 in: Duffield, John., Christopher Neher, David A. Patterson, and Oliver S. Goldsmith (2007). *Economics of Wild Salmon Ecosystems: Bristol Bay, Alaska*. USDA Forest Service Proceedings RMRS-P-49. Retrieved December 21, 2011 from [http://www.fs.fed.us/rm/pubs/rmrs\\_p049/rmrs\\_p049\\_035\\_044.pdf](http://www.fs.fed.us/rm/pubs/rmrs_p049/rmrs_p049_035_044.pdf).

<sup>27</sup> See footnote 22.

<sup>28</sup> Minerals Management Service (2010). *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

<sup>29</sup> The White House, Office of the Press Secretary (2010). *Memorandum for the Secretary of the Interior: Withdrawal of Certain Areas of the United States Continental Shelf from Leasing Disposition*. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

and sea ice. A majority of earthquake activity takes place to the south of the Alaska Peninsula, in the Aleutian trench. As a result, communities located on the south side of the Peninsula are more vulnerable to tsunamis than communities inside the Bay. Soils in Bristol Bay are made up largely of glacial till left behind in moraines, and depending on slope, saturation, loading, or earthquake activity, these soils have a potential to slide. Floods are a potential hazard on almost every river in the Bristol Bay region. They can be caused by spring snowmelt and breakup, river ice jams, and heavy rainfall.<sup>30</sup>

Coastal erosion and land loss are the primary natural hazard concerns in the community of Naknek.<sup>31</sup> Coastal flooding and erosion is affected by wind, site exposure, and sea ice conditions. The Bristol Bay Coastal Management Plan notes the potential for climate change to augment erosion, as coastal areas of Alaska are freezing later in the season, leaving coastal areas more vulnerable to fall storms and storm surges. Changing temperatures are already beginning to shift the distribution of fish and wildlife, with possible consequences for commercial and subsistence activities.<sup>32</sup>

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Naknek as of July 2012.<sup>33</sup>

## **Current Economy<sup>34</sup>**

As the political and economic seat of the Bristol Bay Borough, Naknek is the business center for Bristol Bay. Naknek's local economy is driven by seasonal fluctuations of the fishing industry, in particular the huge Bristol Bay sockeye salmon fishery.<sup>35</sup> Herring and halibut are secondary commercial fish species harvested in the area.<sup>36</sup> In addition to fishing, other top employers in Naknek in 2010 included the Bristol Bay Borough, the School District, utilities such as Naknek Electric Association and Bristol Bay Telephone Cooperative, Peninsula Airways, the Bristol Bay Housing Authority, state government, and local retailers and restaurants.<sup>37</sup> Local residents supplement wage employment to some degree with subsistence practices (see the *Subsistence Fishing* section of this profile for more information).<sup>38</sup>

In 2010, more than 100 Naknek residents held commercial fishing permits (see the *Commercial Fishing* section of this profile), and several thousand additional people typically flood the area during the summer salmon fishing season. Millions of lb of frozen salmon are

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<sup>30</sup> Glenn Gray and Associates (2008). *Bristol Bay Coastal Resource Service Area Coastal Management Plan*. Retrieved February 7, 2012 from [http://alaskacoast.state.ak.us/District/DistrictPlans\\_Final/BBCRSA/BB\\_Final\\_Plan\\_Amendment.pdf](http://alaskacoast.state.ak.us/District/DistrictPlans_Final/BBCRSA/BB_Final_Plan_Amendment.pdf).

<sup>31</sup> Information provided by a representative of the Bristol Bay Borough during community review of this profile in October 2013.

<sup>32</sup> See footnotes 30 and 31.

<sup>33</sup> Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

<sup>34</sup> Unless otherwise noted, all monetary data are reported in nominal values.

<sup>35</sup> 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](http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm).

<sup>36</sup> Southwest Alaska Municipal Conference (n.d.). *Bristol Bay Borough*. Retrieved December 21, 2011 from <http://www.swamc.org/html/southwest-alaska/bristol-bay-borough-raquo.php>.

<sup>37</sup> 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/>.

<sup>38</sup> See footnote 35.

shipped from Naknek in containers each year, and fresh product is trucked over the road between Naknek and King Salmon where jets transport the fish to the lower 48.<sup>39</sup> Trident Seafoods, Ocean Beauty, and other fish processors operate facilities in Naknek.<sup>40</sup> For more information, see the *Processing Plants* section of this profile.

Based on household surveys conducted for the 2006-2010 ACS,<sup>41</sup> in 2010, per capita income in Naknek was estimated to be \$30,378 and the median household income was estimated to be \$93,750, compared to \$21,182 and \$53,393 reported in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,<sup>42</sup> the real per capita income in 2000 is shown to have been \$27,854 and the real 2000 median household income was \$70,211. This shows that per capita income stayed stable over the period, while there was a real increase in per capita income. In 2010, Naknek ranked 59<sup>th</sup> of 305 Alaskan communities with per capita income that year, and 11<sup>th</sup> out of 299 Alaskan communities with household income data.

However, Naknek's small population size may have prevented the ACS from accurately portraying economic conditions.<sup>43</sup> An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Naknek in 2010 is \$17,812.<sup>44</sup> Although this estimate is lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution may be warranted when citing an increase in per capita income in Naknek from 2000 to 2010. During community review of this profile, a representative of the Bristol Bay Borough noted that these estimates are low and would not cover the cost of living in Naknek. It should also be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not reflect the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, 70.3% of the Naknek population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. That year, approximately 5.1% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall, and the unemployment rate was estimated to be 7.4%, compared to the statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in Naknek in 2010 was 9.2%, compared to a statewide unemployment rate estimate of 11.5%.<sup>45</sup>

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<sup>39</sup> Details on shipping provided by a Bristol Bay Borough representative during community review of this profile in October 2013.

<sup>40</sup> Ibid.

<sup>41</sup> 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>.

<sup>42</sup> 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>).

<sup>43</sup> 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.

<sup>44</sup> See footnotes 37 and 41.

<sup>45</sup> See footnote 37.



Also based on the 2006-2010 ACS, the greatest percentage of the Naknek workforce was estimated to be employed in the private sector (48.1%), along with 36.3% in the public sector and 13.1% estimated to be self-employed, and 2.5% working as unpaid family workers. Out of 237 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest number worked in the following industries: educational services, health care, and social services (34.6%), transportation, warehousing, and utilities (18.1%), professional, scientific, management, and administrative and waste management services (11.8%), and retail trade (11.4%). The occupations in which the greatest percentages of the workforce were estimated to be employed were management/professional (42.4%) and sales/office occupations (23.3%). Between 2000 and 2010, there was a large increase in the percentage of the labor force employed in management/professional occupations, and a commensurate decrease in employment in service occupations. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

It is important to note that the number of individuals employed by fishing is probably underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly. In 2010, only 3.8% of the civilian labor force was estimated to be working in agriculture, forestry, fishing, hunting, and mining industries. Although 28 workers were estimated to be employed in natural resource/construction/maintenance occupations (20.9%), a breakdown of this category reveals that only 4 individuals were employed in the census category, “farming, fishing, and forestry occupations” (1.7% of the total labor force).

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 258 employed residents in Naknek in 2010, of which 32.6% were employed in local government, 26.7% in trade, transportation, and utilities, 6.6% in financial activities, 6.6% in leisure and hospitality, 5.8% in construction, 4.7% in information, 3.9% in professional and business services, 3.9% in education and health services, 3.9% in state government, 3.5% in manufacturing, 1.2% in natural resources and mining, and 0.8% in other industries.<sup>46</sup> As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

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<sup>46</sup> 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/>.

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

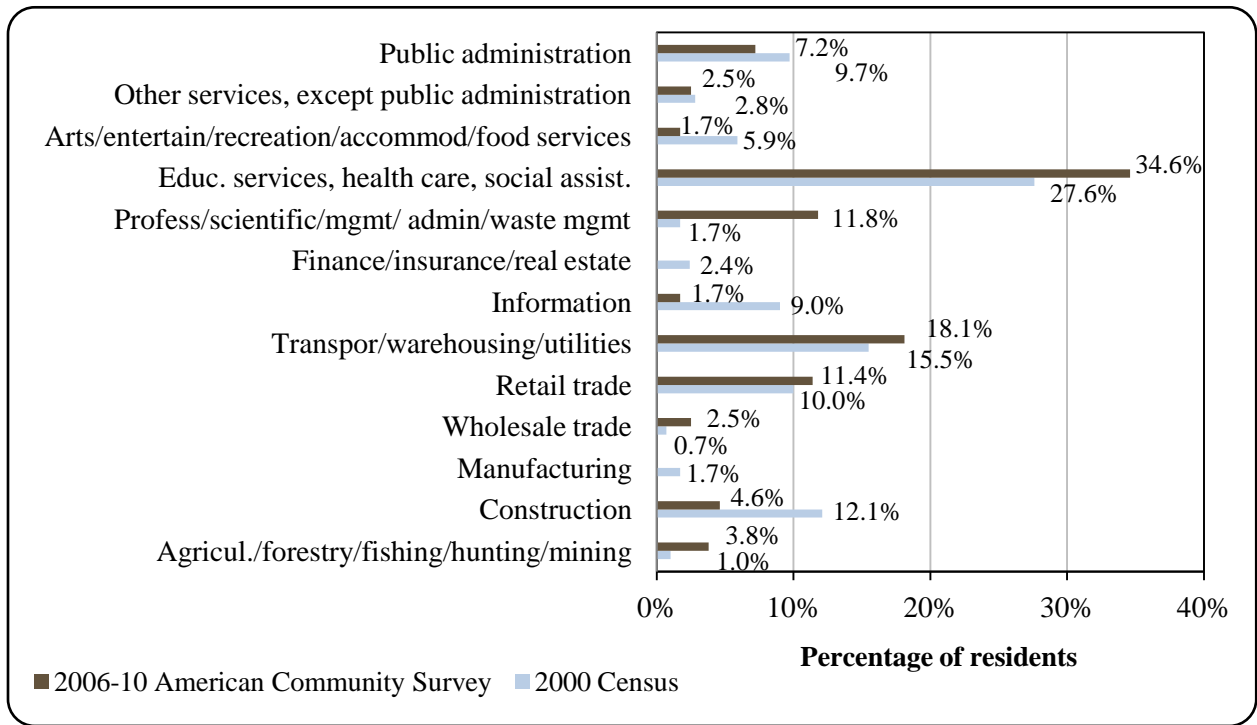
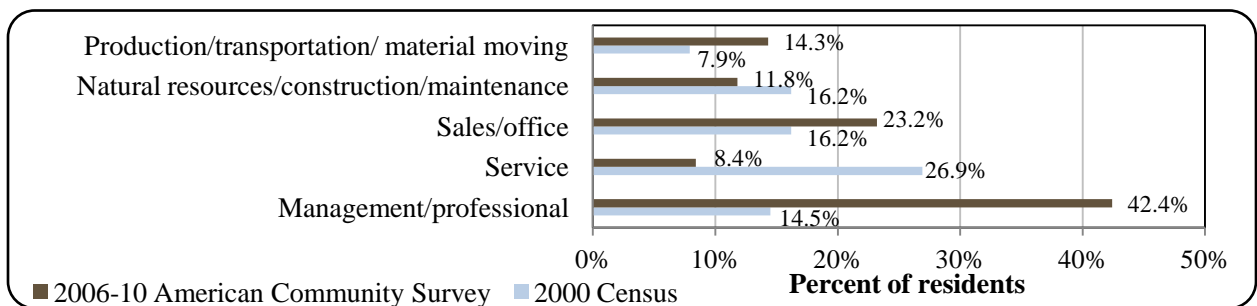


Figure 4. Local Employment by Occupation in 2000-2010, Naknek (U.S. Census).



## Governance

Naknek is an unincorporated community in the Bristol Bay Borough. The Borough was incorporated in 1962, making it the first borough in Alaska. It is also one of the smallest boroughs in the State. It contains three CDPs – Naknek, South Naknek, and King Salmon. The seat of the Bristol Bay Borough is located in Naknek.<sup>47</sup>

As of 2013, the Bristol Bay Borough did not administer a sales tax, but did levy a 12 mills property tax, 3% raw fish tax, and 12% bed tax (transient occupancy tax).<sup>48,49</sup> In addition to tax revenues, other locally-generated income sources received by the Bristol Bay Borough between 2000 and 2010 included building and equipment rental income, charges for services provided by the Borough such as water and sewer, ambulance fees, and pool fees, land sales, building permit fees, and investment income. Outside revenue sources included state and federal grants and revenue sharing programs, as well as some state contracts including jail and special services contracts. State of Alaska sources of shared revenue during the 2000-2010 period included the State Revenue Sharing program from 2000 to 2003, the Community Revenue Sharing program in 2009 and 2010, municipal energy assistance, and state fish tax refunds (see the *Fisheries-Related Revenue* section of this profile for more information). Federal shared revenue sources included funds from the Payment In Lieu of Taxes program. A variety of special project and capital project grants were also received from the state and federal governments during this period.<sup>50</sup> Fisheries-related grants were received for projects including Port of Bristol Bay dock engineering, expansion and repair, dock equipment, the design and development the Fisherman's Dock and Industrial Park, and funding for a Bristol Bay Salmon Camp.<sup>51</sup> A majority of this funding was received by Naknek community entities, while the Borough received \$70,671 in 2008 toward purchase of land for development of the Fisherman's Dock and Industrial Park. Information regarding selected community revenue sources is found in Table 2.

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<sup>47</sup> Southwest Alaska Municipal Conference. (n.d.) *Bristol Bay Borough*. Retrieved October 21, 2013 from <http://www.swamc.org/html/southwest-alaska/bristol-bay-borough-raquo/bristol-bay-borough.php>.

<sup>48</sup> Alaska Department of Commerce, Community, and Economic Development. 2013. *Alaska Taxable 2012*. Retrieved October 18, 2013 from <http://commerce.alaska.gov/dnn/Portals/4/pub/OSA%20TAXABLE%202012%20-%20FINAL%202013-02-05.pdf>.

<sup>49</sup> Tax information updated by a representative of the Bristol Bay Borough during community review of this profile in October 2013.

<sup>50</sup> Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from [http://www.commerce.state.ak.us/dcra/commfin/CF\\_FinRec.cfm](http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm).

<sup>51</sup> Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Funding Database*. Retrieved at [http://www.commerce.state.ak.us/dca/commdb/CF\\_Grants.htm](http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm). Data retrieved April 15, 2011.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Bristol Bay Borough, including Naknek, from 2000 to 2010.

Year	Total Borough Revenue <sup>1</sup>	Sales Tax Revenue <sup>2</sup>	State/Community Revenue Sharing <sup>1,4</sup>	Fisheries-Related Grants (State and Federal) <sup>5</sup>
2000	\$7,175,572	n/a	\$29,923	n/a
2001	\$6,318,332	n/a	\$27,975	\$39,918
2002	\$4,801,219	n/a	\$27,960	\$84,895
2003	\$4,163,996	n/a	\$28,013	\$174,900
2004	\$6,098,710	n/a	n/a	n/a
2005	\$4,213,625	n/a	n/a	\$213,930
2006	\$5,475,184	n/a	n/a	n/a
2007	\$6,248,803	n/a	n/a	\$400,000
2008	\$8,374,133	n/a	n/a	\$1,770,671
2009	\$8,489,105	n/a	\$498,484	\$3,740,000
2010	\$8,839,652	n/a	\$497,231	n/a

<sup>1</sup> 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](http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm).

<sup>2</sup> 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](http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm).

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

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

<sup>5</sup> 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](http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm).

In addition to the Borough, Naknek Native Village serves as a governing body for the Native population in the community. Naknek Native Village was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized by the Bureau of Indian Affairs. The Native village corporation is Paug-Vik Incorporated, Limited, which manages 115,000 acres of land. The regional Native corporation to which Naknek belongs is the Bristol Bay Native Corporation.<sup>52</sup>

Naknek Native Village is also a member of the Bristol Bay Native Association (BBNA), a regional non-profit organization headquartered in Dillingham that provides social, economic, cultural, and educational opportunities and initiatives for the benefit of the Tribes and the Native people of Bristol Bay.<sup>53</sup> The BBNA 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.<sup>54</sup>

The closest regional offices of the Alaska Department of Fish and Game (ADF&G) are in Dillingham and King Salmon. Nearby King Salmon also hosts offices of the National Park Service and U.S. Fish and Wildlife Service, and Dillingham has an office of the Alaska

<sup>52</sup> See footnote 49.

<sup>53</sup> Bristol Bay Native Association (n.d.). *BBNA homepage*. Retrieved November 16, 2011 from [www.bbna.com](http://www.bbna.com).

<sup>54</sup> 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>.

Department of Commerce, Community, and Economic Development's Division of Community and Regional Affairs. Kodiak and Homer have the nearest National Marine Fisheries Service (NMFS) offices. However, the Anchorage office of NMFS may be more easily accessible for the people of the Bristol Bay region. The Alaska Department of Natural Resources and the U.S. Bureau of Citizenship and Immigration Services also have offices in Anchorage.

## Infrastructure

### *Connectivity and Transportation*

Naknek is accessible both by air and sea. The main road in Naknek, the Alaska Peninsula Highway, connects overland to King Salmon, approximately 15 miles to the east. Scheduled Alaska Airlines and Peninsula Air commercial flights serve the King Salmon airport, including summer jet service.<sup>55,56</sup> The airport has a state-owned 8,901-ft by 150-ft asphalt runway.<sup>57</sup> The price of a roundtrip ticket by plane from King Salmon to Anchorage in early June of 2012 was \$425.<sup>58</sup> The state-owned Naknek Airport is located one mile north of Naknek. It has a 1,950-ft-long by 50-ft-wide lighted gravel runway, a 1,850-ft-long and 45-ft-wide gravel runway, and 2,000-ft floatplane landing area, and is open to general aviation and air taxi service. A private 1,700-ft-long by 60-ft-wide gravel cross strip is also available at Tibbetts Field, located south of the Naknek Airport, just off the Alaska Peninsula Highway.<sup>59,60</sup>

The Borough operates a cargo dock at Naknek, which is the Port of Bristol Bay. It has 800 ft of berthing space, a concrete surface, and several cranes. No commercial docking facilities are available at the canneries. Pickup trucks and cars are common, and taxis are available.<sup>61</sup>

### *Facilities*

A majority of public and private buildings in Naknek have individual wells. A community well source is also available for the HUD public housing project, operated by the Naknek Village Council. Most homes are fully plumbed with a piped sewer system that feeds into a sewage lagoon operated by the Bristol Bay Borough. Some homes have individual septic tanks, and the Borough is available to provide septic pumping services. Some of the collective sewage network is shared with the nearby community of King Salmon. The community landfill is operated by the Borough, and private refuse collection services are provided by Patterson Sanitation Company. Electricity is provided to the community by a diesel powerhouse operated by the Naknek Electric Association. The Borough Police Department headquarters are located in King Salmon. The Department provides local police services throughout the Borough area,

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<sup>55</sup> 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](http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm).

<sup>56</sup> Information about summer jet service updated by a representative of the Bristol Bay Borough during community review of this profile in October 2013.

<sup>57</sup> Airport information retrieved December 20, 2011 from <http://www.airnav.com/>.

<sup>58</sup> This price was calculated on November 21, 2011 using kayak.com.

<sup>59</sup> See footnote 57.

<sup>60</sup> See footnote 55.

<sup>61</sup> Ibid.

including Naknek and South Naknek.<sup>62,63</sup> An Alaska State Trooper post is also located in King Salmon.<sup>64</sup> A variety of facilities are available to accommodate tourists in Naknek. These include retail stores, hotels, restaurants, a public library, public beaches, fishing lodges, boat rentals, sport rentals including ATVs and kayaks, and a U.S. post office. Local telephone and cable services are offered by Bristol Bay Telephone Cooperative (BBTC), and internet service is provided by GCI. Cellular service is available via BBTC or GCI.<sup>65</sup>

Fishing-related facilities in Naknek include the Port of Bristol Bay, which consists of a cargo dock operated by the Borough. A fisherman's dock, freight dock, and Industrial Park have recently been completed, and the freight dock is being expanded. A number of cannery facilities are also in operation in Naknek (see the *Processing Plants* section of this profile). Two public boat launches are available: one in Naknek and one in King Salmon.<sup>66</sup>

### *Medical Services*

Local health care is provided at the Camai Community Health Center and the Naknek Clinic. The Camai Community Health Center is operated through grant funding under the municipal guidance of the Bristol Bay Borough. The Naknek Clinic is located in the Naknek Native Village Council Building. It is operated by the Bristol Bay Area Health Corporation (BBAHC), primarily on behalf of Naknek Village tribal members. The Naknek clinic is staffed by health aides and supported by BBAHC doctors.<sup>67</sup> Emergency Services have coastal, river, floatplane, and air access, as well as limited highway access. Ambulance and EMT services are provided by the Bristol Bay Borough Fire Department, which is supported by volunteers as well as paid staff. Emergency service is provided through a 911 Telephone System.<sup>68</sup> The nearest hospital is located in Dillingham.

### *Educational Opportunities*

Naknek is within the Bristol Bay Borough School District. The Bristol Bay Borough School is located in Naknek and also serves students from King Salmon and South Naknek. The Bristol Bay Borough School has an Elementary School wing and a Middle/High School wing. As of 2011, the Elementary School (grades preschool through 6<sup>th</sup>) was attended by 93 students and had 7 teachers. That same year, the Middle/High School had 85 students and 8 teachers.<sup>69</sup> During community review of this profile, a representative of the Bristol Bay Borough noted that enrollment numbers have been steadily decreasing in the Bristol Bay School District system.

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<sup>62</sup> Ibid.

<sup>63</sup> Bristol Bay Borough. (n.d.). *Police*. Retrieved November 8, 2013 from <http://www.bristolbayboroughak.us/administration/police/index.html>.

<sup>64</sup> Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

<sup>65</sup> Information provided by a representative of the Bristol Bay Borough during community review of this profile in October 2013.

<sup>66</sup> See footnotes 55 and 65.

<sup>67</sup> See footnote 65.

<sup>68</sup> See footnotes 55 and 65.

<sup>69</sup> Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

## Involvement in North Pacific Fisheries

### *History and Evolution of Fisheries*

Starting in 6,000 B.C., there is evidence of Ocean Bay peoples – ancestors of the Kodiak and Aleutian traditions – living in the Bristol Bay region. These people likely made use of marine resources along the coast. By 400 B.C., there is archaeological evidence of fishing activity by people of the Norton tradition in the Naknek area. Notched pebbles used as sinkers allowed access to fishing sites along the Naknek River where deep swift water made wading impossible.<sup>70</sup>

The present community of Naknek developed alongside the development of the commercial fishing industry in Bristol Bay. An influx of workers arrived from outside Alaska to help in the construction of canneries. The continued need for fishermen and cannery labor led to a practice of importing cannery crews and fishermen from outside Alaska.<sup>71</sup> Historically this contributed to a lack of participation by local Native residents as fishermen in the Bristol Bay salmon fishery, although the start of World War II created a labor shortage in the country and provided an opportunity for local residents to enter the fishery.<sup>72,73</sup> Today, over 80% of the workforce in a majority of Naknek processing facilities consists of non-residents,<sup>74</sup> and includes many foreign workers.<sup>75</sup>

A majority of commercial fishery permit holders in Naknek participate in the Bristol Bay salmon fishery, although many also participate in fisheries for halibut, herring, crab, groundfish, sablefish, and “other shellfish”. The commercial salmon fishery began to develop in Bristol Bay in the 1890s, and today is one of the most important commercial salmon fisheries in the world. Harvest primarily consists of sockeye salmon returning to spawn in the many lakes of the Bristol Bay region, although several other species are harvested in lower volumes.<sup>76</sup> 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. The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, southwest of the Nushagak River near the Village of Togiak.<sup>77</sup> Commercial exploitation of halibut first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed

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<sup>70</sup> Morris, J. 1985. “The Use of Fish and Wildlife Resources by Residents of the Bristol Bay Borough, Alaska.” *Alaska Dept. of Fish and Game Technical Paper Number 123*. Retrieved December 22, 2011 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp123.pdf>.

<sup>71</sup> Ibid.

<sup>72</sup> Ibid.

<sup>73</sup> Bristol Bay Economic Development Corporation (2003). *An Analysis of Options to Restructure the Bristol Bay Salmon Fishery*. Retrieved December 22, 2011 from <http://www.bbsalmon.com/FinalReport.pdf>.

<sup>74</sup> Alaska Dept. of Labor and Workforce Development (2011). *Nonresidents Working in Alaska 2009*. Prepared by Jeff Hadland, Economist. Retrieved December 21, 2011 from <http://www.cfec.state.ak.us/plook/>.

<sup>75</sup> Public Radio International’s The World. (2011). *Why Foreign Students are Hired for Alaskan Fish Processing* August 15, 2011). Retrieved December 21, 2011 from <http://www.theworld.org/>.

<sup>76</sup> Clark, McGregor, Mecum, Krasnowski and Carroll (2006). “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

<sup>77</sup> 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>.

fishing vessels to undertake longer trips.<sup>78</sup> Today, Pacific halibut fisheries are managed under the International Pacific Halibut Commission (IPHC).

Naknek is located at the mouth of the Naknek River, which empties into Bristol Bay. The area is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Naknek participates in the Community Development Quota (CDQ) program as a member of the Bristol Bay Economic Development Corporation (BBEDC). The community is not eligible for the Community Quota Entity (CQE) program. The Naknik/Kvichak Advisory Committee for the Alaska Board of Fish (BOF) hosts local meetings in Naknek. The activities of the advisory committee include developing regulatory proposals; evaluating regulatory proposals and making recommendations to the BOF; providing a local forum for fish and wildlife conservation and use, including matters relating to habitat; advising the appropriate regional council on resources; and consulting with individuals, organizations, and agencies.<sup>79</sup>

### *Processing Plants*

According to ADF&G's 2010 Intent to Operate list, nine processing facilities were in operation in Naknek. History and current information about the Naknek operations of Alaska General Seafoods, Great Ruby Fish Company, Leader Creek Fisheries, Naknek Family Fisheries, LLC, North Pacific Seafoods, Ocean Beauty Seafoods, Inc., Trident Seafoods Corporation, Wild Alaska Salmon and Seafood, and Yarmarm Knot Fisheries is presented below.

The Alaska General Seafoods (AGS) Naknek cannery is located ¼ mile east of the community of Naknek. A saltery was opened on the site of the current plant in the 1940s by Allen Nelson, and was operated until the mid-1950s. The property was then leased to American Pacific Company, which operated a floating cannery on site. In the late 1950s, Nelson Brothers Fisheries purchased the operations of American Pacific. In 1961, the Nelson Brothers founded the Nelbro Packing Company. The cannery operated under Nelbro Packing Co. until Nelbro's merger with Kanaway Seafoods and Alaska General Seafoods in 1999. Today, Alaska General Seafoods processes pink, sockeye, chum, and coho salmon at its Naknek facility, with an operating season from June 16<sup>th</sup> to July 22<sup>nd</sup>. Alaska General provides free room, board, shower, and laundry facilities to its fish processing workforce.<sup>80</sup>

Leader Creek Fisheries began operating a seafood processing plant in Naknek in 2000.<sup>81</sup> In late 2010, a Canadian company called Canfisco agreed to purchase Leader Creek Fisheries. Canfisco is also the owner of Alaska General Seafoods.<sup>82</sup> Leader Creek focuses on processing

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<sup>78</sup> 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://ww.iphc.int/publications/scirep/Report0005.pdf>.

<sup>79</sup> Southwest Alaska Municipal Conference (2010). *Southwest Alaska Comprehensive Economic Development Strategy*. Prepared for the U.S. Department of Commerce Economic Development Association. Retrieved December 21, 2011 from <http://www.swamc.org/>.

<sup>80</sup> Alaska General Seafoods (2013). *Locations: Naknek*. Retrieved August 9, 2013 from [http://www.akgen.com/locations/index\\_naknek.asp](http://www.akgen.com/locations/index_naknek.asp)

<sup>81</sup> This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

<sup>82</sup> Bluemink, E. December 9, 2013. "Canadian firm acquiring Bristol Bay seafood processor." *Anchorage Daily News*. Retrieved November 8, 2013 from <http://community.adn.com/node/154734>.



sockeye salmon from mid-June to as late as mid-August, with a fish processor workforce of up to 450. It also processes herring from late April to mid-May, with an approximate workforce of 150. Leader Creek Fisheries provides free room and board to its fish processor workforce. Facilities and services available to workers including laundry service and shower facilities, a large communal TV and VCR, Wi-fi “hotspot” in the company galley, and free transportation from and to Anchorage or Kodiak. The on-site company store sells items like cigarettes, candy, and phone cards for the local pay phones. As of 2010, Leader Creek hired “a diverse mix of hardworking and motivated men and women from across the country and around the world.” Foreign workers include students on J1 visas from Eastern European countries like Slovakia, the Czech Republic, and Poland, as well as people of other nationalities provided they have appropriate documentation.<sup>83</sup> During community review of this profile, a representative of the Bristol Bay Borough noted that Leader Creek Fisheries has expanded its workforce since 2010, and also noted that modifications to the J1 visa program have changed the way that canneries hire their workers. In 2012, the U.S. State Department removed “food manufacturing” from the J-1 program and put new restrictions on working hours. As of 2013, legislation was pending in Congress regarding alternative worker visas.<sup>84</sup>

The Great Ruby Fish Co. facility in Naknek primarily processes sockeye salmon.<sup>85</sup> According to a survey of plant managers conducted by NOAA’s Alaska Fisheries Science Center (AFSC) in 2011, the plant began operations in 2002, and is a small business that employs between six and eight workers during June and July.

Naknek Family Fisheries, LLC was formed by fishing family members from within the village of Naknek. Naknek Family Fisheries processes salmon, and from May through early June it also processes halibut.<sup>86</sup>

The North Pacific Seafoods Naknek-area plant is known as “Pederson Point”. It is located 3.5 miles north of the village of Naknek, situated on Kvichak Bay. The plant was built in the 1890s as a saltery, and was later converted to a salmon canning operation. The facility was purchased by North Pacific Seafoods in 1983. Currently, the plant processes herring during early May and salmon and salmon roe from mid-June until the end of July. It employs 225 people during peak season. The facility provides free raingear and bunkhouse accommodations (including shared showers) for its fish processor workforce. It also provides free meals to workers.<sup>87</sup>

Ocean Beauty Seafoods, Inc. originated in 1910 as Washington Fish & Oyster in Seattle and began operations in Alaska in the 1930s. Ocean Beauty purchased its present Naknek facility in 1988. The Naknek facility processes red salmon and herring from late April to mid-August. The facility employs approximately 360 people and offers optional transfer work until September

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<sup>83</sup> Leader Creek Fisheries (n.d.). *Employment with Leader Creek Fisheries*. Retrieved August, 2011 from <http://leadercreekfisheries.com/employment.php>.

<sup>84</sup> Matheson, B. June 24, 2013. “Senate to Consider Reinstating J1 Visa Program for Seafood Processors.” *KDLG Public Radio, Dillingham*. Retrieved November 8, 2013 from <http://kdllg.org/post/senate-consider-reinstating-j1-visa-program-seafood-processors>.

<sup>85</sup> Alaska Seafood Marketing Institute (2005). *Supplier Information*. Retrieved August 2011 from <http://alaskaseafood.org/industry/suppliers/detail.cfm?Supplier=317>.

<sup>86</sup> Naknek Family Fisheries (2007). *Our Family Tradition*. Retrieved August, 2011 from <http://naknekfish.com/>.

<sup>87</sup> North Pacific Seafoods (n.d.). *Production Facilities: Pederson Point*. Retrieved August, 2011 from [http://northpacificseafoods.com/index.php?option=com\\_content&task=view&id=41&Itemid=51](http://northpacificseafoods.com/index.php?option=com_content&task=view&id=41&Itemid=51).

5th. Ocean Beauty offers free laundry service to its fish processing workforce, as well as raingear, boots, gloves, and safety equipment.<sup>88</sup>

Trident Seafoods Corporation was founded in 1973 and its North Naknek facility is located on the Naknek River, across the river from the company's South Naknek boat storage facility. The North Naknek plant processes canned, frozen, and fresh sockeye salmon during the summer season, which ranges from mid-June through the end of July. Plant employment varies between 200 and 225 employees. Trident offers room and board (including shared bathroom facilities) at a nominal charge and free air transportation from and to Seattle to its fish processing workers, provided they fulfill their contractual obligations.<sup>89</sup>

According to the 2011 survey of plant managers conducted by the AFSC, Wild Alaska Salmon and Seafood is a small processor that began operations in Naknek in 2008. The survey also found that the plant employs a total of 12 workers between June and September. The plant specializes in sockeye salmon more than any other salmon or fish.<sup>90</sup>

The Yardarm Knot Fisheries facility, known as Red Salmon Cannery, processes herring from mid-April to mid-May and salmon (sockeye, Chinook, and chum) from mid-June to late July. The facility was constructed in the early 1920s by Red Salmon Canning Company. Freezing capacity was added in 1985, and Yardarm Knot Fisheries upgraded both the freezing and cannery operating in 2004 and 2005. At the peak of the salmon season, Yardarm Knot employs a workforce of approximately 450 employees. The facility provides room and board (including shared bathroom facilities) for free to its fish processing workforce. Yardarm Knot also provides free air transportation from and to Anchorage or Seattle if workers fulfill their contractual obligations.<sup>91</sup>

It is important to note that, in addition to the processing facilities listed above that were in operation in 2010, two new plants were under construction in Naknek as of 2013. Sitka-based Silver Bay Seafoods was in the process of constructing a Naknek plant, and hoped to begin operations in the 2014 season. The fishermen-owned company hoped to process a large portion of the salmon from the Bristol Bay drift gillnet fishery, as well as herring from the Togiak sacroe fishery.<sup>92</sup> In addition, during community review of this profile in October 2013, a representative of the Bristol Bay Borough noted that Extreme Seafoods is constructing a new plant in Naknek.

### *Fisheries-Related Revenue*

Between 2000 and 2010, the primary sources of revenue to the Bristol Bay Borough that were directly tied to fisheries included income from both a borough and a state raw fish tax, as well as revenue sharing from the state Fisheries Business Tax. Based on information reported in

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<sup>88</sup> Ocean Beauty Seafoods (n.d.). *Production locations: Naknek, Alaska*. Retrieved August, 2011 from <http://www.oceanbeauty.com/about/naknek.htm>.

<sup>89</sup> Trident Seafoods (2011). *Alaska Plants*. Retrieved August, 2011 from [http://www.tridentseafoods.com/company/plants\\_alaska.php](http://www.tridentseafoods.com/company/plants_alaska.php).

<sup>90</sup> Wild Alaska Salmon and Seafood (2010). *Homepage*. Retrieved August, 2011 from <http://www.wildalaskasalmonandseafood.com>.

<sup>91</sup> Yardarm Knot Inc. (n.d.) *Red Salmon Cannery*. Retrieved August, 2011 from <http://yardarm.net/>.

<sup>92</sup> Mason, M. December 26, 2012. "Silver Bay to open Bristol Bay plant in '14." *KCAW Public Radio, Sitka*. Retrieved November 8, 2013 from <http://www.kcaw.org/2012/12/26/silver-bay-to-open-bristol-bay-plant-in-14/>.

the Bristol Bay Borough's yearly audits, the local raw fish tax remained a more stable source of revenue than the state raw fish tax through the decade, and the shared Fisheries Business Tax increased in importance over time, rising to \$1.5 million per year in several later years of the period. Information about fisheries-related revenue sources is presented in Table 3.

It is important to note that the BBEDC uses fisheries revenue from the CDQ program to provide grants for infrastructure, fuel, and electrical assistance to member communities. The BBEDC also offers educational scholarships, vocational training, and fishing permit acquisition and financing assistance to residents of its member communities.<sup>93</sup>

### *Commercial Fishing*

Naknek is a hub of commercial fishing activity in Bristol Bay. A large fishing fleet is based in Naknek. In 2010, 251 vessels were homeported in Naknek, and 942 vessels landed catch in the community (Table 5). Permit holders come from all over Alaska and the rest of the country each summer to work in the salmon set and drift gill net fisheries. In 2010, over half of the current permit holders were from Alaska and another quarter were from Washington State. The remaining permit holders came from every corner of the country, with particular representation from California, Oregon, Montana, Minnesota, and Idaho.<sup>94</sup> The processing sector also draws employees from a wide geographical area. Over 80% of the workforce in a majority of Naknek processing facilities were non-Alaska residents,<sup>95</sup> continuing the early tradition of importing labor to work in this fishery.<sup>96,97</sup> Today, processing labor includes many foreign workers as well.<sup>98</sup>

Naknek was among the top ports in Alaska in landings and ex-vessel revenue in 2010, ranking 10<sup>th</sup> in landings and 7<sup>th</sup> in ex-vessel revenue out of 67 Alaskan communities that received commercial fisheries landings. That year, 66,678,398 net lb of salmon were landed at Naknek processing facilities, generating \$61,939,904 in ex-vessel revenue. Herring and halibut were also landed during some years between 2000 and 2010 in Naknek. For most years information about herring and halibut landings and ex-vessel revenue is considered confidential due to the small number of participants, with the exception of herring landings in 2000. That year, 4,619,819 net lb of herring were landed in Naknek, representing an ex-vessel value of \$20,277,288. Information about landings and ex-vessel revenue generated in Naknek is presented in Table 9.

Residents of Naknek participated in state and federal fisheries as vessel owners, permit and quota share account holders, and crew members. In 2010, 116 Naknek residents held

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<sup>93</sup> Bristol Bay Economic Development Corporation. *Annual Report 2010*. Retrieved November 16, 2011 from <http://www.bbdc.com>.

<sup>94</sup> Alaska Dept. of Fish and Game (n.d.). *CFEC Public Lookup Database*. Retrieved December 21, 2011 from <http://www.cfec.state.ak.us/plook/>.

<sup>95</sup> Clark, McGregor, Mecum, Krasnowski and Carroll (2006). "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

<sup>96</sup> Morris, Judith (1985). The Use of Fish and Wildlife Resources by Residents of the Bristol Bay Borough, Alaska. *Alaska Dept. of Fish and Game Technical Paper Number 123*. Retrieved December 22, 2011 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp123.pdf>.

<sup>97</sup> Bristol Bay Economic Development Corporation (2003). *An Analysis of Options to Restructure the Bristol Bay Salmon Fishery*. Retrieved December 22, 2011 from <http://www.bbsalmon.com/FinalReport.pdf>.

<sup>98</sup> See footnote 95.

commercial fishing crew permits and 50 fishing vessels were primarily owned by residents (Table 5). Naknek vessel owners landed 3,198,634 net lb of salmon in 2010 (including all delivery locations), valued at \$2,768,181 in ex-vessel revenue. Other landings and ex-vessel revenue are considered confidential that year due to the small number of participants. Information about salmon harvest by Naknek residents was reported for all years, while herring and halibut landings were only reported for some years. From 2000 to 2003, Naknek vessel owners landed an average of 546,269 net lb of herring per year, earning an average of \$47,784 in ex-vessel revenue. In the year 2000, Naknek vessel owners landed 64,516 net lb of halibut, earning \$159,281 in ex-vessel revenue. Landings and ex-vessel revenue earned by Naknek vessel owners are presented in Table 10.

In 2010, a total of 125 Naknek residents held 127 state-issued Commercial Fisheries Entry Commission (CFEC) permits. A majority of these permits (119) were held for Bristol Bay salmon drift and set gill net fisheries. Of these, 105 were actively fished in 2010. The number of salmon permit holders and total salmon permits decreased slightly between 2000 and 2010, from 131 permit holders and 127 permits in 2000 to 123 permit holders and 119 permits held in 2010. The percentage of salmon permits fished did not change substantially over this period. Other CFEC permits held in 2010 included three herring permits held by three individuals (Norton Sound herring roe and food/bait fishery; one permit fished in 2010), two halibut permits held by two individuals (statewide halibut fishery; longline vessel under 60 ft; one permit actively fished in 2010), one crab permit held by one individual (Norton Sound king crab fishery; pot gear; vessel under 60 ft; permit actively fished in 2010), one sablefish permit held by one individual (statewide sablefish fishery; longline vessel under 60 ft; one permit actively fished in 2010), and one “other shellfish” permit held by one individual in the Southeast Alaska sea urchin dive fishery (not actively fished in 2010).

It is important to note that several Naknek residents held groundfish CFEC permits in earlier and middle years of the decade. In 2000, 2004, and 2005, the groundfish permits were held in the Gulf of Alaska mechanical jig fishery, while the permit issued in 2001 was for the groundfish longline fishery. It is also important to note dramatic declines in the number of permits and permit holders in several fisheries in Naknek between 2000 and 2010. In the herring fishery, numbers declined from 29 permits held by 20 Naknek permit holders in 2000 to 3 permits and permit holders in 2010. In the halibut fishery, 17 permits were held by 17 permit holders in 2000, declining to 2 permits and permit holders in 2010. CFEC permit information is presented in Table 4.

Between 2003 and 2010, one active License Limitation Program permit (LLP) was held by a Naknek resident each year in a federal crab fishery, and one inactive Federal Fisheries Permit (FFP) was held between 2000 and 2005. No LLPs were held in federal groundfish fisheries during the decade (Table 4). In 2000, five Naknek residents held quota share accounts in the federal halibut catch share fishery, declining to two by 2010. The annual halibut individual fishing quota (IFQ) allotment also declined over the period. No quota share accounts were held by Naknek residents in federal crab or sablefish catch share fisheries during this period. Information about federal catch share participation is presented in Tables 6 through 8.

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Borough raw fish tax <sup>1</sup>	\$1,376,536	\$529,759	\$337,112	\$131,111	\$311,369	\$464,884	\$729,623	\$838,199	\$1,143,108	\$1,587,484	\$1,170,907
State raw fish tax <sup>1</sup>	\$789,759	\$1,439,586	\$918,305	\$504,399	n/a	n/a	n/a	n/a	n/a	n/a	n/a
State Shared Fisheries											
Business Tax <sup>1</sup>	\$8,232	\$14,275	\$12,108	n/a	\$393,836	\$460,752	\$834,661	\$1,178,357	\$29,353	\$1,581,617	\$1,559,831
State Fisheries Resource											
Landing Tax <sup>1</sup>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax <sup>1</sup>	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 <sup>1</sup>	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 <sup>2</sup>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls <sup>1</sup>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage <sup>1</sup>	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 <sup>1</sup>	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 <sup>3</sup>	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 <sup>3</sup>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue received by the Bristol Bay Borough<sup>4</sup></i>	<i>\$2,174,527</i>	<i>\$1,983,620</i>	<i>\$1,267,525</i>	<i>\$635,510</i>	<i>\$705,205</i>	<i>\$925,636</i>	<i>\$1,564,284</i>	<i>\$2,016,556</i>	<i>\$1,172,461</i>	<i>\$3,169,101</i>	<i>\$2,730,738</i>
<i>Total municipal revenue reported by the Bristol Bay Borough<sup>5</sup></i>	<i>\$7,175,572</i>	<i>\$6,318,332</i>	<i>\$4,801,219</i>	<i>\$4,163,996</i>	<i>\$6,098,710</i>	<i>\$4,213,625</i>	<i>\$5,475,184</i>	<i>\$6,248,803</i>	<i>\$8,374,133</i>	<i>\$8,489,105</i>	<i>\$8,839,652</i>

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

<sup>1</sup> Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at [http://www.commerce.state.ak.us/dcra/commfin/CF\\_FinRec.cfm](http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm).

<sup>2</sup> Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from [http://www.commerce.state.ak.us/dca/osa/osa\\_summary.cfm](http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm).

<sup>3</sup> Reported by community leaders in a survey conducted by the AFSC in 2011.

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

<sup>5</sup> Total municipal revenue represents the total revenue that the Bristol Bay Borough reports each year in its audit. Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at [http://www.commerce.state.ak.us/dcra/commfin/CF\\_FinRec.cfm](http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm).

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) <sup>1</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) <sup>1</sup>	Total permits	0	0	0	1	1	1	1	1	1	1	1
	Active permits	0	0	0	1	1	1	1	1	1	1	1
	% of permits fished	-	-	-	100%	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	0	0	0	1	1	1	1	1	1	1	1
Federal Fisheries Permits <sup>1</sup>	Total permits	1	1	1	1	1	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	-	-	-	-	-
	Total permit holders	1	1	1	1	1	1	0	0	0	0	0
Crab (CFEC) <sup>2</sup>	Total permits	0	0	1	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	1	1	1	1	1	1	1	1
	% of permits fished	-	-	0%	100%	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	0	0	1	1	1	1	1	1	1	1	1
Other shellfish (CFEC) <sup>2</sup>	Total permits	0	0	0	0	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	1	1	1	1	1	1	1
Halibut (CFEC) <sup>2</sup>	Total permits	17	12	12	12	9	9	6	7	4	2	2
	Fished permits	4	2	2	3	3	2	2	2	0	1	1
	% of permits fished	24%	17%	17%	25%	33%	22%	33%	29%	0	50%	50%
	Total permit holders	17	12	12	12	9	9	6	7	4	2	2
Herring (CFEC) <sup>2</sup>	Total permits	29	26	17	13	10	9	11	7	5	2	3
	Fished permits	17	14	9	4	2	2	2	0	0	0	1
	% of permits fished	59%	54%	53%	31%	20%	22%	18%	0%	0%	0%	33%
	Total permit holders	20	17	13	11	8	8	9	6	4	2	3

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) <sup>2</sup>	Total permits	0	0	0	0	0	0	0	0	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	1	1	1
	% of permits fished	-	-	-	-	-	-	-	-	100%	100%	100%
	Total permit holders	0	0	0	0	0	0	0	0	1	1	1
Groundfish (CFEC) <sup>2</sup>	Total permits	2	1	0	0	2	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	-	-	0%	0%	-	-	-	-	-
	Total permit holders	2	1	0	0	2	1	0	0	0	0	0
Other Finfish (CFEC) <sup>2</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) <sup>2</sup>	Total permits	127	122	125	124	120	119	119	119	119	119	119
	Fished permits	121	108	98	106	101	106	108	108	104	101	105
	% of permits fished	95%	89%	78%	85%	84%	89%	91%	91%	87%	85%	88%
	Total permit holders	131	129	130	130	121	130	126	125	123	126	123
<i>Total CFEC Permits<sup>2</sup></i>	<i>Permits</i>	<i>175</i>	<i>161</i>	<i>155</i>	<i>150</i>	<i>143</i>	<i>140</i>	<i>138</i>	<i>135</i>	<i>131</i>	<i>126</i>	<i>127</i>
	<i>Fished permits</i>	<i>142</i>	<i>124</i>	<i>109</i>	<i>114</i>	<i>107</i>	<i>111</i>	<i>113</i>	<i>111</i>	<i>106</i>	<i>104</i>	<i>109</i>
	<i>% of permits fished</i>	<i>81%</i>	<i>77%</i>	<i>70%</i>	<i>76%</i>	<i>75%</i>	<i>79%</i>	<i>82%</i>	<i>82%</i>	<i>81%</i>	<i>83%</i>	<i>86%</i>
	<i>Permit holders</i>	<i>132</i>	<i>132</i>	<i>133</i>	<i>130</i>	<i>123</i>	<i>131</i>	<i>128</i>	<i>126</i>	<i>124</i>	<i>128</i>	<i>125</i>

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

<sup>2</sup>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 Naknek: 2000-2010.

Year	Crew License Holders <sup>1</sup>	Count Of All Fish Buyers <sup>2</sup>	Count Of Shore-Side Processing Facilities <sup>3</sup>	Vessels Primarily Owned By Residents <sup>4</sup>	Vessels Homeported <sup>4</sup>	Vessels Landing Catch In Naknek <sup>2</sup>	Total Net Lb Landed In Naknek <sup>2,5</sup>	Total Ex-Vessel Value Of Landings In Naknek <sup>2,5</sup>
2000	161	17	13	72	312	912	35,571,247	\$20,724,575
2001	157	3	11	64	286	308	-	-
2002	120	18	9	63	246	432	9,768,235	\$4,678,612
2003	117	17	9	72	260	517	21,750,985	\$11,078,875
2004	109	18	10	64	249	552	29,305,128	\$14,949,781
2005	106	22	15	58	242	663	45,067,021	\$27,223,900
2006	120	16	10	56	258	820	44,789,762	\$27,996,185
2007	111	21	12	56	253	703	53,506,374	\$34,663,590
2008	112	21	12	47	242	772	62,499,589	\$45,848,482
2009	109	23	13	43	246	636	53,982,801	\$40,563,513
2010	116	23	9	50	251	942	66,679,699	\$61,941,233

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

<sup>1</sup> 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.]

<sup>2</sup> 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.]

<sup>3</sup> 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.]

<sup>4</sup> 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.]

<sup>5</sup> Totals only represent non-confidential data.



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

<b>Year</b>	<b>Number Of Halibut Quota Share Account Holders</b>	<b>Halibut Quota Shares Held</b>	<b>Halibut IFQ Allotment (Lb)</b>
2000	5	147,551	46,094
2001	5	193,826	62,186
2002	4	18,919	2,297
2003	4	63,247	17,395
2004	4	64,598	13,221
2005	4	63,247	12,737
2006	2	7,778	535
2007	2	7,778	501
2008	2	6,921	349
2009	2	6,921	312
2010	2	6,921	284

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 Naknek: 2000-2010.

<b>Year</b>	<b>Number Of Sablefish Quota Share Account Holders</b>	<b>Sablefish Quota Shares Held</b>	<b>Sablefish IFQ Allotment (Lb)</b>
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 Naknek: 2000-2010.

<b>Year</b>	<b>Number Of Crab Quota Share Account Holders</b>	<b>Crab Quota Shares Held</b>	<b>Crab IFQ Allotment (Lb)</b>
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 Naknek: 2000-2010.

	<i>Total Net Pounds<sup>1</sup></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	-	-	-	-	-	-	-	-	-	-	-
Herring	4,619,819	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-
Groundfish											
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	30,951,428	-	9,768,235	21,750,985	29,305,128	45,067,021	44,789,762	53,506,374	62,499,589	52,015,163	66,678,398
<i>Total<sup>2</sup></i>	<i>35,571,247</i>	<i>-</i>	<i>9,768,235</i>	<i>21,750,985</i>	<i>29,305,128</i>	<i>45,067,021</i>	<i>44,789,762</i>	<i>53,506,374</i>	<i>62,499,589</i>	<i>52,015,163</i>	<i>66,678,398</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	-	-	-	-	-	-	-	-	-	-	-
Herring	\$447,288	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-
Groundfish											
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$20,277,288	-	\$4,678,612	\$11,078,875	\$14,949,781	\$27,223,900	\$27,996,185	\$34,663,590	\$45,848,482	\$40,413,632	\$61,939,904
<i>Total<sup>2</sup></i>	<i>\$20,724,575</i>	<i>-</i>	<i>\$4,678,612</i>	<i>\$11,078,875</i>	<i>\$14,949,781</i>	<i>\$27,223,900</i>	<i>\$27,996,185</i>	<i>\$34,663,590</i>	<i>\$45,848,482</i>	<i>\$40,413,632</i>	<i>\$61,939,904</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.]

<sup>1</sup> Net lb refers to the landed weight recorded in fish tickets.

<sup>2</sup> Totals only represent non-confidential data.

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

	<i>Total Net Pounds</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	64,516	-	-	-	-	-	-	-	-	-	-	-
Herring	841,394	679,376	408,375	255,932	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-	-
Salmon	2,115,873	2,298,785	1,143,290	2,013,733	2,815,380	3,395,241	2,834,125	3,279,465	2,411,253	2,646,197	3,198,634	3,198,634
<i>Total<sup>2</sup></i>	<i>3,021,783</i>	<i>2,978,161</i>	<i>1,551,665</i>	<i>2,269,665</i>	<i>2,815,380</i>	<i>3,395,241</i>	<i>2,834,125</i>	<i>3,279,465</i>	<i>2,411,253</i>	<i>2,646,197</i>	<i>3,198,634</i>	<i>3,198,634</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	\$159,281	-	-	-	-	-	-	-	-	-	-	-
Herring	\$84,610	\$54,281	\$30,747	\$21,498	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$1,382,800	\$956,740	\$550,959	\$998,509	\$1,414,045	\$2,056,578	\$1,802,387	\$2,115,838	\$1,741,948	\$1,983,408	\$2,768,181	\$2,768,181
<i>Total<sup>2</sup></i>	<i>\$1,626,690</i>	<i>\$1,011,021</i>	<i>\$581,706</i>	<i>\$1,020,008</i>	<i>\$1,414,045</i>	<i>\$2,056,578</i>	<i>\$1,802,387</i>	<i>\$2,115,838</i>	<i>\$1,741,948</i>	<i>\$1,983,408</i>	<i>\$2,768,181</i>	<i>\$2,768,181</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.]

<sup>1</sup> Net lb refers to the landed weight recorded in fish tickets.

<sup>2</sup> Totals only represent non-confidential data.

*Recreational Fishing*

Between 2000 and 2010, there were no active sport fish guide businesses registered in Naknek, although there were licensed sport fish guides present each year except 2005. In 2010, Naknek residents purchased 174 sportfishing licenses (irrespective of point of sale), and 18 sportfishing licenses were sold in the community. Between 2000 and 2010, residents consistently purchased more licenses than the total number of licenses purchased in Naknek, suggesting that residents may travel to other areas or nearby communities to participate in sportfishing activity.

Naknek is located within Alaska Sport Fishing Survey Area R – Alaska Peninsula / Aleutian Islands. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity in this region varied considerably. For saltwater sportfishing, non-Alaska resident angler days fished varied between 1,603 and 4,126 during this period, while Alaska resident angler days fished varied between 3,261 and 12,721 days. Alaska resident anglers fished consistently more saltwater days than non-Alaska resident anglers during this period. In contrast, non-Alaska resident anglers fished more angler days in freshwater in the Alaska Peninsula / Aleutian Islands region on average (18,462 per year on average) than Alaska resident anglers (15,290 per year on average). This information about the sportfishing sector in and near Naknek is also displayed in Table 11.

The Alaska Statewide Harvest Survey,<sup>99</sup> conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Naknek: Chinook, coho, sockeye, and pink salmon, rainbow trout, Dolly Varden char, Arctic grayling, Pacific halibut, “other whitefish”, northern pike, and smelt. The survey also noted sport harvest of razor and hardshell clams in Naknek. No kept/release log book data were reported for fishing charters out of Naknek between 2000 and 2010.<sup>100</sup>

Table 11. Sport Fishing Trends, Naknek: 2000-2010.

Year	Active Sport Fish Guide Businesses <sup>1</sup>	Sport Fish Guide Licenses <sup>1</sup>	Sport Fishing Licenses Sold to Residents <sup>2</sup>	Sport Fishing Licenses Sold in Naknek <sup>2</sup>
2000	0	3	194	42
2001	0	3	193	31
2002	0	3	177	30
2003	0	3	159	54
2004	0	4	161	16
2005	0	0	170	23
2006	0	3	178	20
2007	0	3	165	42
2008	0	2	191	23
2009	0	1	216	39
2010	0	2	174	18

<sup>99</sup> 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).

<sup>100</sup> Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents <sup>3</sup>	Angler Days Fished – Alaska Residents <sup>3</sup>	Angler Days Fished – Non-Residents <sup>3</sup>	Angler Days Fished – Alaska Residents <sup>3</sup>
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

<sup>1</sup> 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.]

<sup>2</sup> 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.]

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

### *Subsistence Fishing*

Subsistence resources provide an important supplement to wage employment opportunities for Naknek residents. Local people utilize marine and land-based resources, including salmon, halibut, waterfowl, moose, and caribou.<sup>101,102</sup> Statistics presented in this section relate to marine subsistence resource harvest only. However, it is important to note that during community review of this profile, a representative from the Bristol Bay Borough noted that local participation in subsistence hunting has declined sharply due to changes in Tier II subsistence hunting regulations.

In 2007, the only year that a subsistence survey was conducted by ADF&G in the community of Naknek between 2000-2010, 54% of households were recorded as participating in salmon subsistence activities, 36% in halibut subsistence, 33% used non-salmon fish subsistence (other than halibut), 4% in marine mammal subsistence, and 32% in marine invertebrate subsistence. Per capita, residents of Naknek harvested 142 lb of land and sea-based subsistence

<sup>101</sup> 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](http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm).

<sup>102</sup> Information about species utilized updated during community review of this profile in October 2013.

resources that year. This is similar to the 2005 per capita harvest of residents in Levelock, a subsistence-based village north of Naknek on the Kvichak River. Compared to Levelock, a greater percentage of Naknek households participated in halibut and marine invertebrate subsistence activity (36% and 32% respectively, compared to 0% and 19% in Levelock), but fewer households participated in salmon, marine mammal, and non-salmon fish subsistence (not including halibut). Information about per capita subsistence harvest and household participation in subsistence activities is presented in Table 12.

In years for which data were reported between 2000 and 2010, an average of 104 subsistence salmon permits was issued to Naknek households. Sockeye salmon were the primary species harvested using subsistence permits (an average of 9,923 sockeye per year), along with several hundred Chinook, chum, coho, and pink salmon each year. In addition, in 2007, per capita harvest of marine invertebrates was 2,208 lb, and per capita harvest of non-salmon fish was 7,259 lb in Naknek. Information about total subsistence harvest of salmon, marine invertebrates, and non-salmon fish (not including halibut) is presented in Table 13.

Between 2003 and 2010, an average of nine Subsistence Halibut Registration Certificates (SHARC) was issued to Naknek residents. In 2010, nine SHARC cards were issued and one was returned. That year, no information was reported regarding the total lb of halibut harvested. These numbers represent a large decline from the middle of the decade. In 2005, 11 SHARC cards were issued and 8 were returned, with a reported harvest of 598 lb of halibut. Information about subsistence halibut harvest is presented in Table 14.

Information about subsistence harvest of several species of marine mammals was reported between 2000 and 2010. An AFSC study reported beluga whale harvests of between 1 and 4 animals per year (for those years in which information was available), and ADF&G reported harbor seal harvests varying between 6 and 26 animals per year during the 2000-2010 period. No information was reported by management agencies regarding harvest of sea otters, walrus, Steller sea lion, or spotted seal between 2000 and 2010. Information about subsistence harvest of marine mammals is presented in Table 15.

## **Additional Information**

The 1890 Census observed that Bristol Bay was “dotted with the sails of over 100 fishing smacks.” By the early 1900s, sailboats began to be replaced by power boats. In response to an early crash of sockeye runs in 1919, the White Act was passed in 1924. This early fisheries management legislation gave the federal government responsibility for management of the fishery, mandated 50% escapement of the annual salmon run and a 36-hour closed period each week, and banned power boats, purse seines, and fish traps in Bristol Bay.<sup>103</sup> Sailboats continued to be the only vessel type allowed in the Bristol Bay salmon fishery until the 1950s.<sup>104,105</sup>

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<sup>103</sup> Bristol Bay Economic Development Corporation (2003). *An Analysis of Options to Restructure the Bristol Bay Salmon Fishery*. Retrieved December 22, 2011 from <http://www.bbsalmon.com/FinalReport.pdf>.

<sup>104</sup> Atkinson, C. E. (1988). Fisheries Management: An Historical Overview. *Marine Fisheries Review* 50(4). Retrieved January 23, 2012 from <http://spo.nmfs.noaa.gov/mfr504/mfr50423.pdf>.

<sup>105</sup> See footnote 103.

Table 12. Subsistence Participation by Household and Species, Naknek: 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	54%	36%	4%	32%	33%	142
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, Naknek: 2000-2010.

Year	Subsistence Salmon Permits Issued <sup>1</sup>	Salmon Permits Returned <sup>1</sup>	Chinook Salmon Harvested <sup>1</sup>	Chum Salmon Harvested <sup>1</sup>	Coho Salmon Harvested <sup>1</sup>	Pink Salmon Harvested <sup>1</sup>	Sockeye Salmon Harvested <sup>1</sup>	Lb Of Marine Inverts <sup>2</sup>	Lb Of Non-Salmon Fish <sup>2</sup>
2000	108	96	311	177	314	177	10,873	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	108	86	359	349	206	885	8,877	n/a	n/a
2005	104	92	383	137	271	19	10,165	n/a	n/a
2006	109	92	434	158	236	514	9,798	n/a	n/a
2007	94	86	249	114	408	82	10,682	2,208	7,259
2008	100	91	335	184	769	417	9,141	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.

<sup>1</sup> 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.

<sup>2</sup> 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, Naknek: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lb Harvested
2003	5	3	40
2004	7	4	28
2005	10	8	598
2006	11	7	422
2007	10	5	75
2008	9	2	21
2009	9	8	n/a
2010	9	1	n/a

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

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Naknek: 2000-2010.

Year	# of Beluga Whales <sup>1</sup>	# of Sea Otters <sup>2</sup>	# of Walrus <sup>2</sup>	# of Polar Bears <sup>2</sup>	# of Steller Sea Lions <sup>3</sup>	# of Harbor Seals <sup>3</sup>	# of Spotted Seals <sup>3</sup>
2000	1	n/a	n/a	n/a	n/a	16	n/a
2001	n/a	n/a	n/a	n/a	n/a	15	n/a
2002	n/a	n/a	n/a	n/a	n/a	26	n/a
2003	n/a	n/a	n/a	n/a	n/a	11	n/a
2004	1	n/a	n/a	n/a	n/a	15	n/a
2005	1	n/a	n/a	n/a	n/a	6	n/a
2006	4	n/a	n/a	n/a	n/a	15	n/a
2007	2	n/a	n/a	n/a	n/a	20	n/a
2008	3	n/a	n/a	n/a	n/a	15	n/a
2009	1	n/a	n/a	n/a	n/a	n/a	n/a
2010	1	n/a	n/a	n/a	n/a	n/a	n/a

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

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> 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.