

## **Noatak (NO-uh-tack)**



### **People and Place**

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

Noatak is located on the west bank of the Noatak River, 55 miles north of Kotzebue and 70 miles north of the Arctic Circle, just west of the 66-million acre Noatak National Preserve. This community is the only settlement on the 396 mile-long Noatak River. Noatak is in the Kotzebue Recording District and the Northwest Arctic Borough Census Area.

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

In 2010, there were 514 residents in Noatak, ranking it as the 115<sup>th</sup> largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population of Noatak increased by 54.4%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 21.3%. The average annual growth rate during this period was 0.68%, reflecting an overall positive population trend with small decreases in population in some years.

In 2010, the majority of the population of Noatak identified themselves as American Indian or Alaska Native (94.7%), while 2.5% identified as White, 1.1% as Asian, 0.4% as Black or African American, and 2.3% identified with two or more races. No residents of Noatak identified themselves as Hispanic in 2010. The percentage of the population identifying as White decreased over time, from 3.3% in 1990 and 3.7% in 2000, to 2.5% in 2010. The percentage of the population identifying as American Indians and Alaska Natives decreased between 1990 and 2000, from 96.7% to 93.7%, then increased again to 94.7% in 2010. The change in population from 1990 to 2010 is provided in Table 1, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

Based on household surveys conducted for the U.S. Census, the average household size in Noatak was fairly consistent between 1990 and 2010, with 4.5 persons per household in 1990, 4.23 in 2000, and 4.51 in 2010. The number of households in Noatak increased over time, from 74 households in 1990 to 100 in 2000, and 114 in 2010. All 114 of the total available housing units in Noatak were occupied in 2010. Of these, 69.3% were owner-occupied and 30.7% were rented. Between 1990 and 2010, no residents of Noatak 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>.

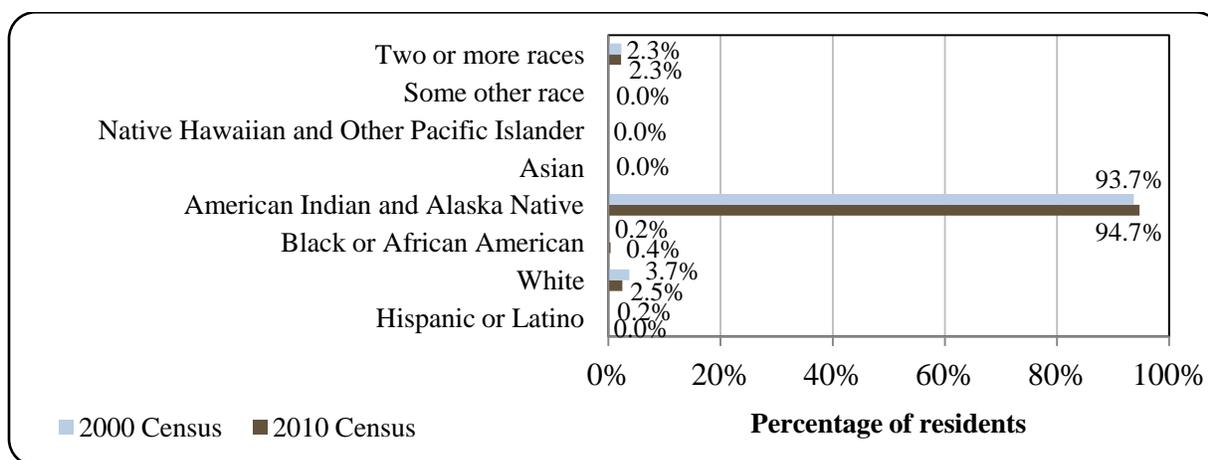
Table 1. Population in Noatak from 1990 to 2010 by Source.

Year	U.S. Decennial Census <sup>1</sup>	Alaska Dept. of Labor Estimate of Permanent Residents <sup>2</sup>
1990	333	-
2000	428	-
2001	-	438
2002	-	455
2003	-	468
2004	-	450
2005	-	474
2006	-	470
2007	-	488
2008	-	512
2009	-	486
2010	514	-

<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>.

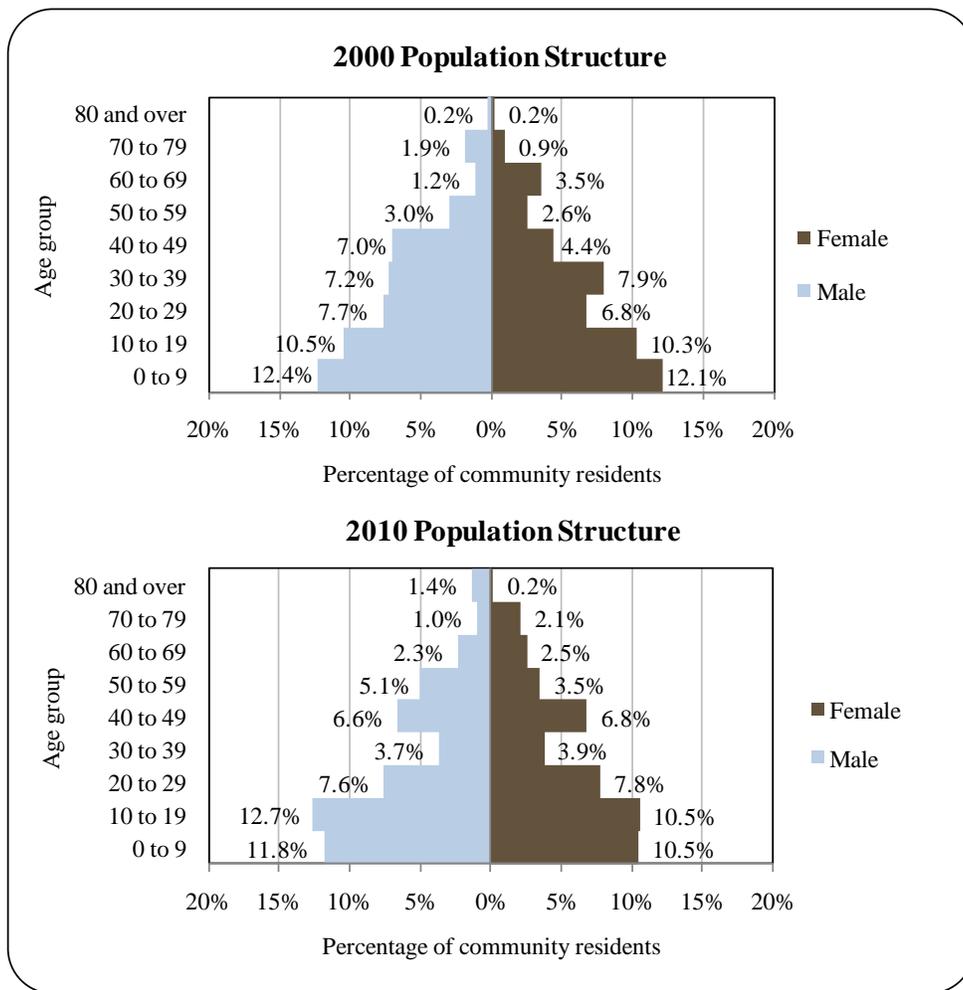
Figure 1. Racial and Ethnic Composition, Noatak: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Noatak’s population (52.1% male and 47.9% female) was very close to the balance of the state population as a whole, which was 52% male and 48% female. The median age of Noatak residents was 21.3 years in 2010, much younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 9.8% of Noatak’s population was 60 or older. The overall population structure of Noatak in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),<sup>3</sup> 78.5% of Noatak residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 13% of the population was estimated to have less than a 9<sup>th</sup> grade education, compared to 3.5% of Alaskan residents overall; 8.5% were estimated to have a 9<sup>th</sup> to 12<sup>th</sup> grade education but no diploma, compared to 5.8% of Alaskan residents overall; 4.9% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 3.1% were estimated to have an Associate’s degree, compared to 8% of Alaskan residents overall; 3.1% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and 0.9% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

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



<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.

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

Archaeological surveys conducted by the National Park Service have identified evidence of human habitation in the Noatak area dating back at least 11,000 years.<sup>4</sup> Noatak is located in the traditional territory of the Napaaqtugmiut, meaning “tree people,” who inhabited the lower Noatak River area. The name Noatak means “inland river people,”<sup>5</sup> and is derived from the name of the traditional inhabitants of the upper Noatak River, the Nuataagmiut.<sup>6</sup> The present Village of Noatak is home to descendants of both of these Iñupiaq societies, along with the Nunamuit, or “treeless land people.”<sup>7</sup>

In the early 1800s, there were an estimated 10 Napaaqtugmiut villages and 22 Nuataagmiut villages scattered along the Noatak River. The Napaaqtugmiut suffered from famine in the early 1800s, and many fled north or to the Kobuk River area. Many Nuataagmiut also relocated to the north in the 1880s due to the decline of the Western Arctic Caribou herd.<sup>8</sup> In the 1890s, missionaries asked families living in sod houses in different settlements along the river to select a permanent village site where they would construct a school and place of worship. Elders selected Noatak, previously a fishing and hunting camp, for the site of the settlement, due to the plentiful resources of the area and strategic location for access to other camp sites.<sup>9</sup> Construction of a mission and school was completed by 1908.<sup>10</sup>

The Native Village of Noatak was established in 1939 under the Indian Reorganization Act (IRA). A post office was established in 1940. In 1994, a 50-year flood event created a large shoal on the Noatak River downstream from the Village of Noatak, preventing barge access to the Village. Since then, all fuel, groceries, and other supplies must be flown in to the community.<sup>11</sup> Today, subsistence activities remain the central focus of the culture in Noatak. Families travel to coastal seasonal subsistence camps of Nuvguruk and Sisualik, as well as inland camps.<sup>12</sup> Noatak is a dry village; the sale and importation of alcohol is banned.<sup>13</sup>

### **Natural Resources and Environment**

Noatak is located in the transitional climate zone. Winter temperatures average between -21 and 15 °F, and average summer temperatures vary between 40 and 60 °F. Temperature extremes have been recorded from -59 to 75 °F. Annual snowfall averages 48 inches, with 10 to 13 inches

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<sup>4</sup> National Park Service (2011). *Noatak National Preserve*. Retrieved February 6, 2012 from <http://www.nps.gov/noat/>.

<sup>5</sup> Alaska Native Tribal Health Consortium (ANTHC) (2011). *Climate Change in Noatak, Alaska: Strategies for Community Health* (2011). Retrieved February 2, 2012 from [http://www.anthc.org/chs/ces/climate/upload/Climate\\_Change\\_in\\_Noatak\\_Strategies\\_for\\_Community\\_Health.pdf](http://www.anthc.org/chs/ces/climate/upload/Climate_Change_in_Noatak_Strategies_for_Community_Health.pdf).

<sup>6</sup> Magdanz, James S., Nicole S. Braem, Brad C. Robbins, and David S. Koster (2007). *Subsistence Harvests in Northwest Alaska, Kivalina and Noatak, 2007*. Alaska Department of Fish and Game, Technical Paper No. 354. Retrieved February 3, 2012 from <http://www.subsistence.adfg.state.ak.us/techpap/TP354.pdf>.

<sup>7</sup> NANA Regional Corporation, Inc (2010). *Noatak Village Profile*. Retrieved February 2, 2012 from <http://www.nana.com/regional/about-us/overview-of-region/noatak/>.

<sup>8</sup> See footnote 6.

<sup>9</sup> See footnote 7.

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

<sup>11</sup> Ibid.

<sup>12</sup> See footnote 5.

<sup>13</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).

of total precipitation. The Noatak River is navigable by shallow-draft boats from early June to early October.<sup>14</sup>

In 1980, much of the traditional area of the Iñupiaq was protected as national parks, preserves, monuments, and wildlife areas under the Alaska National Interest Lands Conservation Act (ANILCA).<sup>15</sup> One of the goals of the legislation was to protect subsistence uses of both Native and non-Native rural residents.<sup>16</sup> Noatak is located in close proximity to several of these protected areas. The closest are Cape Krusenstern National Monument, less than 10 miles west, and Noatak National Preserve, approximately 5 miles east of the Village. Also under ANILCA, 330 miles of the Noatak River were designated as a National Wild and Scenic River, from the River's source in Gates of the Arctic National Park to the Kelly River in Noatak National Preserve.<sup>17,18</sup>

The Noatak National Preserve is made up of 6.5 million acres. The National Preserve is surrounded by the Baird and DeLong Mountains of the Brooks Range. Within the area of the National Preserve, the boreal forest transitions into treeless tundra.<sup>19</sup> Cape Krusenstern National Monument stretches for 70 miles along the coast of the Chukchi Sea. The area is a coastal plain, characterized by sizeable lagoons along the coast and rolling tundra moving inland. Migratory birds use the system of wetlands. Many important archaeological sites are found within the National Monument, including a series of beach ridges that provide evidence of an estimated 9,000 years of human settlement. The outer beaches of the National Monument are an important location for subsistence hunting of marine mammals by local rural residents.<sup>20</sup>

The Western Arctic Caribou, numbering almost 500,000, migrates between the coastal plain of Cape Krusenstern National Monument and the tundra of Noatak National Preserve on its way to and from calving grounds. Many other animals, including hare, moose, fox, wolves, brown bear, and various birds and fish species are found in the Noatak area.<sup>21,22</sup> Bearded seals, an important subsistence resource, are present along the coast for a short period in June.<sup>23</sup> In addition, muskoxen were reintroduced to the area in 1970 as part of an Alaska-wide recovery effort. In 1934, 34 muskoxen were captured in East Greenland and transported to Nunivak Island. By 1968, the Nunivak Island herd numbered 750, and was used as a seed population to reintroduce muskoxen to areas around northern Alaska. By 2000, there were at least 450 muskoxen in northwestern Alaska.<sup>24,25</sup>

Many Arctic communities, including Noatak, are experiencing significant changes and increased risk as a result of climate change. Key among these changes are subsidence due to

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<sup>14</sup> Ibid.

<sup>15</sup> Alaska National Interest Lands Conservation Act (ANILCA). December 2, 1980. Public Law 96-487, 96<sup>th</sup> Congress. Retrieved February 6, 2012 from <http://alaska.fws.gov/asm/nilca/toc.html>.

<sup>16</sup> See footnote 4.

<sup>17</sup> National Wild and Scenic Rivers (n.d.) *Noatak River, Alaska*. Retrieved February 6, 2012 from <http://www.rivers.gov/wsr-noatak.html>.

<sup>18</sup> See footnote 15.

<sup>19</sup> See footnote 4.

<sup>20</sup> National Park Service (2011). *Cape Krusenstern National Monument*. Retrieved February 6, 2012 from <http://www.nps.gov/cakr/>.

<sup>21</sup> Ibid.

<sup>22</sup> See footnote 4.

<sup>23</sup> See footnote 20.

<sup>24</sup> Ibid.

<sup>25</sup> Alaska Dept. of Fish and Game (2008). *Muskox – Wildlife Notebook Series*. Retrieved December 15, 2011 from <http://www.adfg.alaska.gov/static/education/wns/muskox.pdf>.

thawing permafrost, erosion of river banks, changing water level in the river, increasing frequency and intensity of storm events, and warming temperatures. Infrastructure in Noatak, including building foundations and the water distribution system, is damaged or threatened by subsidence and erosion. Low water levels in the river reduce access to the community and increase the cost of living. Coastal subsistence camps are at increased risk of flooding due to increased storm activity along a shoreline made increasingly vulnerable due to reduced ice cover during fall storms. Higher temperatures bring increasing wildfires and impacted air quality, as well as instances of heat-related illness. Food security is also an increasing concern, as climate change affects both distribution of wildlife and access to resources. Changing water level in the Noatak River, as well as increased sediment discharge into Kotzebue Sound, has led to increasing boat groundings on the way to and from subsistence camps. Poor sea ice conditions have increased the risk of injury for subsistence hunters.<sup>26</sup>

Mining in Northwest Alaska is dominated by Red Dog Mine, the largest producer of zinc in Alaska. In 2010, the mine accounted for almost half of Alaska's mineral production value, making up 49% of the total value of mining operations in Alaska that year. The mine is 100% owned by Teck Resources Ltd., a Canadian mining company, under a 1982 agreement signed with the regional Native corporation, NANA<sup>27</sup> Regional Corporation, Inc., which owns the land.<sup>28</sup> The agreement specifies that the mine must 1) protect subsistence and the Inupiaq way of life, 2) create lasting jobs for NANA shareholders, 3) provide opportunities for NANA's youth, and 4) act as a catalyst for regional economic benefits.<sup>29</sup>

Compared to the Beaufort Sea, very little oil and gas exploration has taken place in the Chukchi Sea Outer Continental Shelf (OSC) area to date. Some exploration took place in the late 1980s, and several lease sales in the early 1990s allowed for follow-up exploration. In 2008, 488 tracts totaling 2,758,408 acres were leased during Lease Sale 193, primarily by Shell and ConocoPhillips, as well as international companies including StatoilHydro USA, Repsol, and Ente Nazionale Idrocarburi (ENI).<sup>30</sup> Following the Deepwater Horizon event in the Gulf of Mexico, Lease Sale 193 was remanded to the Department of the Interior for further National Environmental Protection Act (NEPA) analysis regarding the potential for a very large oil spill (VLOS) and its potential consequences for the Chukchi Sea ecosystem, local economy, and subsistence harvest patterns. In late 2011, Secretary of the Interior Ken Salazar affirmed the original Lease Sale 193.<sup>31,32</sup> This sale is expected to initiate a large-scale exploration effort in the

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<sup>26</sup> Alaska Native Tribal Health Consortium (ANTHC) (2011). *Climate Change in Noatak, Alaska: Strategies for Community Health* (2011). Retrieved February 2, 2012 from

[http://www.anthc.org/chs/ces/climate/upload/Climate\\_Change\\_in\\_Noatak\\_Strategies\\_for\\_Community\\_Health.pdf](http://www.anthc.org/chs/ces/climate/upload/Climate_Change_in_Noatak_Strategies_for_Community_Health.pdf).

<sup>27</sup> The name of the regional Native corporation for the Northwest Arctic was originally derived from a pre-existing non-profit organization known as the Northwest Alaska Native Association (NANA). To avoid confusion, the non-profit was renamed Mauneluk, and later the Manillaq Association, and the corporation is known as NANA Regional Corporation. Source: Manillaq Association website (2003). *Company Information*. Retrieved February 2, 2012 from <http://www.maniilaq.org/companyInfo.html>.

<sup>28</sup> Szumigala, D.J., L.A. Harbo, and J.N. Adleman (2011). *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

<sup>29</sup> NANA Regional Corporation (2010). *Red Dog Mine*. Retrieved February 6, 2012 from <http://www.nana.com/regional/resources/red-dog-mine/>.

<sup>30</sup> U.S. Dept. of Energy (2009). *Alaska North Slope Oil and Gas: A Promising Future or an Area in Decline?* Retrieved December 30, 2011 from: [http://www.netl.doe.gov/technologies/oil-gas/publications/AEO/ANS\\_Potential.pdf](http://www.netl.doe.gov/technologies/oil-gas/publications/AEO/ANS_Potential.pdf).

<sup>31</sup> Minerals Management Service (2010). *Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/RP.pdf>.

Chukchi Sea.<sup>33</sup> Given the controversy surrounding Lease Sale 193, Secretary Salazar removed Chukchi Sea Sales 212 and 221 from the 2007-2012 program.<sup>34</sup> The Proposed 2012-2017 program schedules one sale in the Chukchi Sea, deliberately set late in the program (2016) to allow time for further study and infrastructure development.<sup>35</sup>

According to the Alaska Department of Environmental Conservation (DEC), no active environmental cleanup sites were located near Noatak as of August 2012.<sup>36</sup>

## Current Economy<sup>37</sup>

The economy of Noatak is heavily tied to subsistence activities, with a focus on chum salmon, whitefish, caribou, moose, and waterfowl.<sup>38</sup> Cash employment is also available with the school district, local government, local and regional Native corporations and non-profit organizations, the health clinic, mining and oil industries, Noatak Search and Rescue, the local Lion's Club, and retail stores.<sup>39,40</sup> Some residents work as commercial fishermen. Many travel to fish camps at Sheshalik during the summer, and some find seasonal work in Kotzebue or working as firefighters.<sup>41</sup>

Based on household surveys conducted for the 2006-2010 ACS,<sup>42</sup> in 2010, the per capita income in Noatak was estimated to be \$15,803 and the median household income was estimated to be \$68,000. This represents a large increase from the per capita and median household incomes reported in the year 2000 (\$9,659 and \$30,833, respectively). If inflation is taken into account by converting the 2000 values to 2010 dollars,<sup>43</sup> this income increase remains large, from a real median household income of \$40,545 and real per capita income of \$12,701 in 2000. In 2010, Noatak ranked 191<sup>st</sup> of 305 Alaskan communities with per capita income data that year, and 51<sup>st</sup> in median household income, out of 299 Alaskan communities with household income data.

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<sup>32</sup> Bureau of Ocean Energy Management (2011). *Chukchi Sea OCS Oil & Gas Lease Sale 193: Record of Decision*. Retrieved February 28, 2012 from <http://www.boemre.gov/pdfs/sale193rodwofinal.pdf>.

<sup>33</sup> See footnote 30.

<sup>34</sup> See footnote 31.

<sup>35</sup> Minerals Management Service (2011). *Proposed Outer Continental Shelf Oil and Gas Leasing Program 2012-2017*. Retrieved February 2, 2012 from [http://www.boem.gov/uploadedFiles/Proposed\\_OCS\\_Oil\\_Gas\\_Lease\\_Program\\_2012-2017.pdf](http://www.boem.gov/uploadedFiles/Proposed_OCS_Oil_Gas_Lease_Program_2012-2017.pdf).

<sup>36</sup> Alaska Dept. of Environmental Conservation (2012). *List of Contaminated Site Summaries By Region*. Retrieved August 24, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

<sup>37</sup> Unless otherwise noted, all monetary data are reported in nominal values.

<sup>38</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>39</sup> Ibid.

<sup>40</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>41</sup> See footnote 38.

<sup>42</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>43</sup> Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

Noatak's small population size may have prevented the ACS from accurately portraying economic conditions.<sup>44</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 Noatak in 2010 is \$9,796,<sup>45</sup> similar to the per capita income reported for the year 2000. This suggests that caution is warranted when citing an increase in per capita income in Noatak between 2000 and 2010, but provides additional evidence for income stability in the community during this period. Despite stable per capita income levels, the community was recognized as "distressed" by the Denali Commission in 2011,<sup>46</sup> indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a slightly smaller percentage of Noatak's population (65.3%) was estimated to be in the civilian labor force in 2010 compared to the percentage of the statewide population in the civilian labor force (68.8%). That same year, 3.7% of Noatak residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate in Noatak was estimated to be 25.7%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 23.3%, compared to a statewide unemployment rate estimate of 11.5%.<sup>47</sup>

Also based on the 2006-2010 ACS, the majority of Noatak's workforce was estimated to be employed in the private sector (67.2%), along with 28.1% in the public sector and 4.7% estimated to be self-employed. Of the 36 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in the following industries: agriculture, forestry, fishing and hunting, and mining (26.6%), educational services, health care, and social assistance (14.8%), and public administration (13.3%). Occupations in which the greatest percentages of the workforce were employed were natural resources/construction/maintenance (28.1%) and sales and office occupations (27.3%). It is important to note that, although the percentages of the workforce involved in natural resource-related industries and occupations are relatively high in Noatak, they do not reflect employment in the fishing industry. A breakdown of the natural resource/construction/maintenance occupation category reveals that 0% of the workforce is employed in farming, fishing, and forestry occupations. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 51 employed residents in Noatak in 2010, of which 36.6% were employed in local government, 15.2% in leisure and hospitality, 11.1% in natural resources and mining, 9.5% in professional and business services, 9.5% in education and

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<sup>44</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>45</sup> See footnotes 40 and 42.

<sup>46</sup> Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from [www.denali.gov](http://www.denali.gov).

<sup>47</sup> See footnote 40.

health services, 4.9% in trade, transportation, and utilities, 3.3% in construction, 1.2% in financial activities, 0.8% in information, and 7.8% in other industries.<sup>48</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.

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

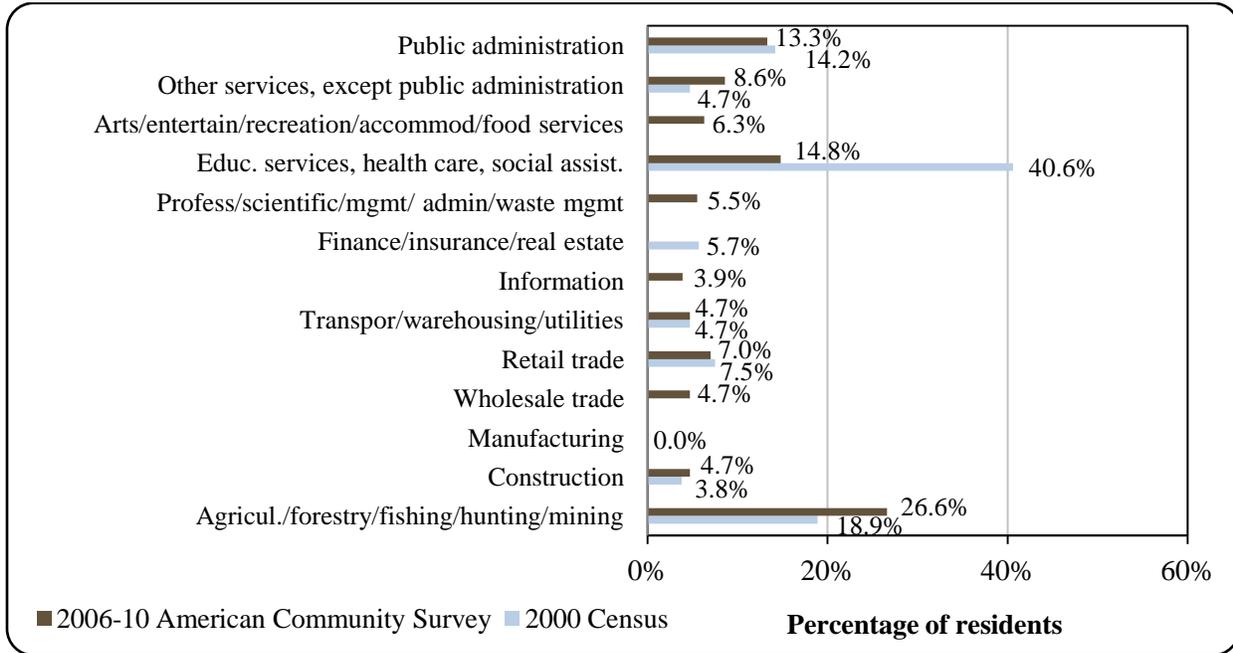
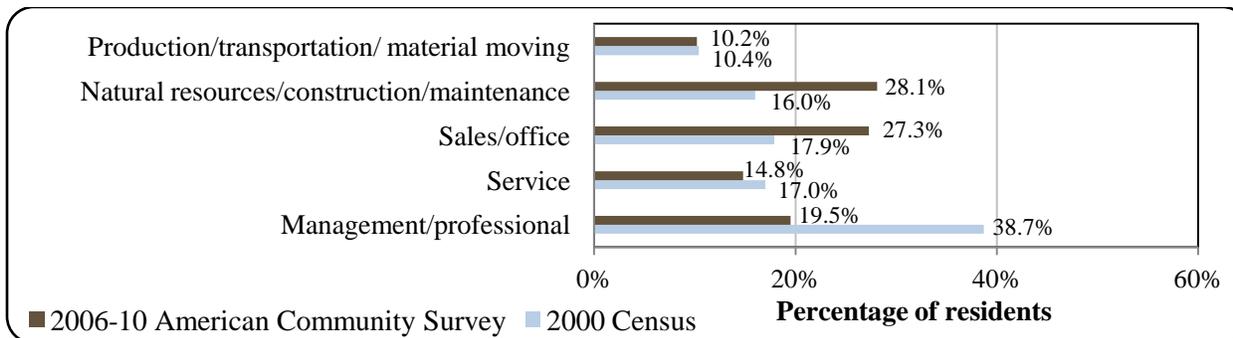


Figure 4. Local Employment by Occupation in 2000-2010, Noatak (U.S. Census).



<sup>48</sup> Ibid.

## Governance

Noatak is an unincorporated community in the Northwest Arctic Borough. Neither the community nor the Borough administers any local taxes.<sup>49</sup> Given that Noatak is not incorporated, there was no municipal revenue or municipal sales tax revenue between 2000 and 2010. No information was reported regarding State or Community Revenue Sharing contributions received by the community between 2000 and 2010. However, one fisheries-related grant was received by Noatak in 2002. The \$750,000 grant was awarded for design and construction of a harbor in Noatak, along with an initial feasibility study.<sup>50</sup> This information about selected aspects of revenue sources in Noatak are presented in Table 2.

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

Year	Total Municipal Revenue <sup>1</sup>	Sales Tax Revenue <sup>2</sup>	State/Community Revenue Sharing <sup>3,4</sup>	Fisheries-Related Grants (State and Federal) <sup>5</sup>
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	\$750,000
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

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

<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/commfina/CF\\_FinRec.cfm](http://www.commerce.state.ak.us/dcra/commfina/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).

Noatak was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Native Village of Noatak. The regional Native corporation to which Noatak belongs is the NANA Regional Corporation. In 1972, most village corporations in the region merged with NANA Regional Corporation, with the exception of the village

<sup>49</sup> Alaska Dept. of Comm. And Rural Affairs (n.d.). *Community Information Summaries*. Retrieved December 27, 2011 from [http://www.commerce.state.ak.us/dca/commdb/CF\\_CIS.htm](http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm).

<sup>50</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).

corporation for Kotzebue, known as Kikiktagruk Inupiat Corporation (KIC). NANA Regional Corporation now has title to 2,082,052 surface acres, including 115,200 that were originally titled to the Noatak Village Corporation.<sup>51,52</sup>

Noatak is a member village of the Maniilaq Association, a tribal non-profit corporation that provides health and social services to residents of Northwest Alaska. The Maniilaq Association is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. It was originally called the Northwest Alaska Native Association (NANA), but was renamed Maniilaq when the NANA Regional Corporation was formed to avoid confusion between the names.<sup>53</sup> Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.<sup>54</sup> The Maniilaq Association coordinates tribal and traditional assistance programs, and environmental and subsistence protection services in the region.<sup>55</sup>

The closest offices of the Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Commerce, Community, and Economic Development (DCCED) are located in Kotzebue. The closest offices of the Alaska Department of Natural Resources (DNR) and U.S. Bureau of Citizenship and Immigration Services are located in Fairbanks, although the Anchorage offices of these agencies may be more accessible by air to people of this region. The closest office of the National Marine Fisheries Service (NMFS) is located in Anchorage.

## Infrastructure

### *Connectivity and Transportation*

Noatak's primary means of connection to the outside world is by air. A state-owned, lighted, 4,000 ft by 60 ft, gravel runway is located in the Village. Commercially scheduled passenger flights serve Noatak, and the air strip is also used for delivery of cargo and mail. Currently, no barge service is able to access Noatak. Local residents use small boats, ATVs, and snowmachines for travel locally and to nearby villages. Historic trails are still used for inter-village travel and subsistence activities.<sup>56</sup>

### *Facilities*

Water in Noatak is derived from three shallow wells in the Noatak River, two of which provide drinking water. At the village water treatment plant, water is filtered to remove solids, and chlorine is used for disinfection. Treated water is stored in a 97,000-gallon tank which provides approximately three days of water supply for Noatak. The water level in the river has

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<sup>51</sup> NANA Regional Corporation (2003). Introduction. *NANA Lands website*. Retrieved February 2, 2012 from <http://www.nanalands.com/introduction.htm>.

<sup>52</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>53</sup> Maniilaq Association (2003). *Company Information*. Retrieved February 2, 2012 from <http://www.maniilaq.org/companyInfo.html>.

<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>.

<sup>55</sup> See footnote 53.

<sup>56</sup> See footnote 52.

been decreasing in recent year, and the primary community well occasionally runs dry. All three wells are threatened by erosion.<sup>57</sup> The Village Council operates a piped water and sewer system that serves 77 of 100 homes, the school, and businesses in Noatak. The remaining residences use honeybuckets, and the Village Council offers honeybucket haul service. Sewage is treated in Noatak using a sewage lagoon. The Village Council also operates a landfill, but refuse collection is left to individual residents. A diesel powerhouse, operated by the Alaska Village Energy Cooperative (AVEC), provides electricity in Noatak.<sup>58</sup>

Other community facilities in Noatak include a fire hall that houses the Volunteer Fire Department, a school gymnasium, and school library.<sup>59</sup> Safety services are provided by Village Public Safety Officer stationed in Noatak.<sup>60</sup> The nearest state trooper post is located in Kotzebue.<sup>61</sup> Telephone, internet, and cable are available in the Village.<sup>62</sup>

With regard to fishing-related facilities, no docking facilities are available in Noatak. Small boats are used for river travel to subsistence camps, and pull-up areas are located along the riverbank by the Village.<sup>63</sup>

### *Medical Services*

Medical services in Noatak are provided at the Esther Berger Memorial Health Clinic, owned by the Village Council and operated by the Maniilaq Association. Noatak is a Community Health Aid Program site. Emergency services have river and air access, and are provided by volunteers and a health aide.<sup>64</sup> The nearest hospital is located in Kotzebue.

### *Educational Opportunities*

One school is present in Noatak. The Napaaqtugmiut School serves preschool through 12<sup>th</sup> grade. As of 2011, the school had 159 students and 12 teachers.<sup>65</sup>

## **Involvement in North Pacific Fisheries**

### *History and Evolution of Fisheries*

The Noatak area has been used by the Inupiat people for at least 1,000 years. Today, subsistence harvest of marine resources remains a primary economic activity for Noatak residents, continuing historic resource use patterns. Noatak residents travel to seasonal

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<sup>57</sup> Alaska Native Tribal Health Consortium (ANTHC) (2011). *Climate Change in Noatak, Alaska: Strategies for Community Health* (2011). Retrieved February 2, 2012 from [http://www.anthc.org/chs/ces/climate/upload/Climate\\_Change\\_in\\_Noatak\\_Strategies\\_for\\_Community\\_Health.pdf](http://www.anthc.org/chs/ces/climate/upload/Climate_Change_in_Noatak_Strategies_for_Community_Health.pdf).

<sup>58</sup> See footnote 52.

<sup>59</sup> Ibid.

<sup>60</sup> Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

<sup>61</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>62</sup> See footnote 52.

<sup>63</sup> See footnote 57.

<sup>64</sup> See footnote 62.

<sup>65</sup> Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

subsistence camps along the coast each summer.<sup>66</sup> Today, some Noatak residents are also involved in the commercial salmon harvest, and a number of residents purchase sport fish licenses each year (see *Commercial Fishing* and *Recreational Fishing* sections below).

The Kotzebue Sound salmon fishery is the northernmost commercial salmon fishery in Alaska. Over 99% of the salmon harvested in this fishery are chum salmon returning to the Kobuk and Noatak Rivers. Commercial harvest of salmon first occurred in the Kotzebue area in 1909 when Native fishermen sold salmon to gold miners. Starting in 1914, salmon were canned and sold to miners in the upper Kobuk drainage. This small industry ceased after 1918. The modern commercial salmon fishery began in 1962, and catch peaked in 1981 with 680,000 chum commercially harvested. Since 1995, poor market conditions and variable processing capacity and interest have caused harvests to fall short of their potential. Due to limited opportunities to sell their catch, the number of active permits in the Kotzebue salmon fishery has declined over the last 30 years. Very few of the 173 total set gillnet permits have been actively fished in recent years.<sup>67</sup>

A chum salmon hatchery was built in 1981 at Sikasuilaq Springs, a tributary of the Noatak River. The hatchery operated until 1995. The peak of hatchery production was approximately 90,000 chum salmon per year.<sup>68</sup>

Noatak is located in the Arctic Management Area. A Fishery Management Plan (FMP) for the Arctic Management Area was approved by the Secretary of Commerce in August 2009. Initially, the FMP prohibits commercial fishing in the Beaufort and Chukchi seas until more information is available to support sustainable fisheries management.<sup>69</sup> Noatak is not eligible to participate in either the Community Quota Entity (CQE) or the Community Development Quota (CDQ) programs.

### *Processing Plants*

ADF&G's 2010 Intent to Operate list did not list a registered processing plant in Noatak. However, between one and five fish buyers were active in the nearby City of Kotzebue between 2000 and 2010, as well as one shore-side processor in 2004 and 2005 (see the Community Profile for Kotzebue).

### *Fisheries-Related Revenue*

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Noatak (Table 3).

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<sup>66</sup> See footnote 57.

<sup>67</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>68</sup> Ibid.

<sup>69</sup> NOAA National Marine Fisheries Service, Alaska Regional Office (n.d.). *Arctic Fisheries*. Retrieved February 6, 2012 from <http://www.fakr.noaa.gov/sustainablefisheries/arctic/>.

### *Commercial Fishing*

In 2010, 14 Noatak residents held a total of 13 Commercial Fisheries Entry Commission (CFEC) permits, of which 5 were actively fished that year. All of these permits were held in the Kotzebue set gillnet salmon fishery. According to data reported by ADF&G, the percentage of permits actively fished that year (38%) was the highest of any year between 2000 and 2010.<sup>70</sup> The number of salmon permits actively fished in the Kotzebue commercial salmon fishery has declined steadily over the past 30 years, and in some years between 2000 and 2010 only 3 or 4 permits out of a total of 173 Kotzebue gillnet permits were active.<sup>71</sup> Also in 2010, no residents of Noatak held Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP). In addition, no residents held quota share accounts or quota shares in federal catch share fisheries for halibut, sablefish, or crab. Information about permits held by Noatak residents is presented in Table 4, and information about federal catch share participation is presented in Tables 6 through 8.

Between 2000 and 2010, no fishing vessels were primarily owned by Noatak residents, and no fishing vessels were homeported in the Village. During this period, the number of Noatak residents holding commercial crew licenses varied between zero and five. No fish buyers or shore-side processors were reported to be present in Noatak between 2000 and 2010. Given that no fish buyers were present in Noatak, and no residents of Noatak were the primary owner of a fishing vessel, no landings or ex-vessel revenue were generated in the community or by Noatak vessel owners. Information about the commercial fishing sector in Noatak is presented in Table 5, and information about landings and ex-vessel revenue is presented in Tables 9 and 10.

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<sup>70</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>71</sup> See footnote 67.

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax <sup>1</sup>	n/a										
Shared Fisheries Business Tax <sup>1</sup>	n/a										
Fisheries Resource Landing Tax <sup>1</sup>	n/a										
Fuel transfer tax <sup>2</sup>	n/a										
Extraterritorial fish tax <sup>2</sup>	n/a										
Bulk fuel transfers <sup>1</sup>	n/a										
Boat hauls <sup>2</sup>	n/a										
Harbor usage <sup>2</sup>	n/a										
Port/dock usage <sup>2</sup>	n/a										
Fishing gear storage on public land <sup>3</sup>	n/a										
Marine fuel sales tax <sup>3</sup>	n/a										
<i>Total fisheries-related revenue<sup>4</sup></i>	<i>n/a</i>										
<i>Total municipal revenue<sup>5</sup></i>	<i>n/a</i>										

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

<sup>1</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>2</sup> Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at [http://www.commerce.state.ak.us/dcra/commfin/CF\\_FinRec.cfm](http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.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 city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at [http://www.commerce.state.ak.us/dcra/commfin/CF\\_FinRec.cfm](http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm).

Table 4. Permits and Permit Holders by Species, Noatak: 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	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits <sup>1</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
Crab (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
Other shellfish (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
Halibut (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
Herring (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

Table 4 cont'd. Permits and Permit Holders by Species, Noatak: 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	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
Groundfish (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
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	12	13	13	13	12	11	11	12	13	14	13
	Fished permits	2	2	0	0	2	0	0	1	1	4	5
	% of permits fished	17%	15%	-	-	17%	-	-	8%	8%	29%	38%
	Total permit holders	12	13	14	13	12	11	11	12	13	15	14
<i>Total CFEC Permits<sup>2</sup></i>	<i>Permits</i>	<i>12</i>	<i>13</i>	<i>13</i>	<i>13</i>	<i>12</i>	<i>11</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>14</i>	<i>13</i>
	<i>Fished permits</i>	<i>2</i>	<i>2</i>	<i>0</i>	<i>0</i>	<i>2</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>1</i>	<i>4</i>	<i>5</i>
	<i>% of permits fished</i>	<i>17%</i>	<i>15%</i>	<i>-</i>	<i>-</i>	<i>17%</i>	<i>-</i>	<i>-</i>	<i>8%</i>	<i>8%</i>	<i>29%</i>	<i>38%</i>
	<i>Permit holders</i>	<i>12</i>	<i>13</i>	<i>14</i>	<i>13</i>	<i>12</i>	<i>11</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>15</i>	<i>14</i>

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

<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 Noatak: 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 Noatak <sup>2</sup>	Total Net Pounds Landed In Noatak <sup>2,5</sup>	Total Ex-Vessel Value Of Landings In Noatak <sup>2,5</sup>
2000	5	0	0	0	0	0	0	\$0
2001	4	0	0	0	0	0	0	\$0
2002	0	0	0	0	0	0	0	\$0
2003	0	0	0	0	0	0	0	\$0
2004	1	0	0	0	0	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	1	0	0	0	0	0	0	\$0
2010	5	0	0	0	0	0	0	\$0

<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 Noatak: 2000-2010.

<b>Year</b>	<b>Number of Halibut Quota Share Account Holders</b>	<b>Halibut Quota Shares Held</b>	<b>Halibut IFQ Allotment (pounds)</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 7. Sablefish Catch Share Program Participation by Residents of Noatak: 2000-2010.

<b>Year</b>	<b>Number of Sablefish Quota Share Account Holders</b>	<b>Sablefish Quota Shares Held</b>	<b>Sablefish IFQ Allotment (pounds)</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 Noatak: 2000-2010.

<b>Year</b>	<b>Number of Crab Quota Share Account Holders</b>	<b>Crab Quota Shares Held</b>	<b>Crab IFQ Allotment (pounds)</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 Noatak: 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	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total<sup>2</sup></i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total<sup>2</sup></i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

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

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

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

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Noatak Residents: 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	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total<sup>2</sup></i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total<sup>2</sup></i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

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

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

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

### Recreational Fishing

Between 2000 and 2010, no active sport fish guide businesses or licensed sport fish guides were reported to be present in Noatak. However, the number of sportfishing licenses purchased each year by residents of Noatak (irrespective of point of sale) varied between 35 and 92 during this period. Prior to 2008, no sportfishing licenses were sold in the Village of Noatak. Between 2008 and 2010, a small number of licenses were purchased in the community, but a majority of residents continued to purchase their licenses elsewhere, indicating that Noatak residents travel to other communities for sportfishing.

The Alaska Statewide Harvest Survey,<sup>72</sup> conducted by ADF&G between 2000 and 2010, noted sportfishing activity in freshwater only. The following species were listed as targeted by private anglers in Noatak: Chinook, coho, sockeye, pink, and chum salmon, Dolly Varden, whitefish, and northern pike. No kept/release log book data were reported for fishing charters out of Noatak between 2000 and 2010.<sup>73</sup>

Noatak is located within Alaska Sport Fishing Survey Area X – Northwest Alaska. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, Alaska resident anglers consistently fished a greater number of days than non-Alaska resident anglers in both freshwater and saltwater, and freshwater sportfishing activity was significantly higher than in saltwater. On average between 2000 and 2010, Alaska resident anglers fished 3,251 fresh water days and 582 saltwater days, while non-Alaska resident anglers fished on average 1,690 freshwater and 64 saltwater days. This information about the sportfishing sector in and near Noatak is also displayed in Table 11.

Table 11. Sport Fishing Trends, Noatak: 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 Noatak <sup>2</sup>
2000	0	0	83	0
2001	0	0	57	0
2002	0	0	53	0
2003	0	0	58	0
2004	0	0	40	0
2005	0	0	35	0
2006	0	0	52	0
2007	0	0	92	0
2008	0	0	78	17
2009	0	0	47	15
2010	0	0	39	11

<sup>72</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>73</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, Noatak: 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	14	1,875	1,779	3,388
2001	296	114	2,986	2,508
2002	0	132	1,297	4,988
2003	15	1,698	1,807	2,601
2004	17	332	1,892	3,463
2005	19	35	1,309	1,755
2006	0	452	1,764	4,570
2007	65	62	1,146	3,754
2008	0	407	2,421	1,593
2009	138	815	1,160	5,318
2010	137	478	1,027	1,828

<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 fishing and hunting are the primary economic activities in Noatak, in combination with employment in other local industries.<sup>74</sup> Subsistence activities take place up-river at Noatak, and residents also travel to seasonal subsistence camps on the coast, the most important being Nuvguruk and Sisualik.<sup>75</sup> According to a subsistence survey conducted in Noatak by ADF&G Division of Subsistence, the most important aquatic subsistence species for residents of Noatak in 2007, by harvest weight, included Dolly Varden, chum salmon, bearded seal, and whitefish. That year, two times as much non-salmon fish was harvested in Noatak as salmon.<sup>76</sup>

<sup>74</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>75</sup> Alaska Native Tribal Health Consortium (ANTHC) (2011). *Climate Change in Noatak, Alaska: Strategies for Community Health* (2011). Retrieved February 2, 2012 from [http://www.anthc.org/chs/ces/climate/upload/Climate\\_Change\\_in\\_Noatak\\_Strategies\\_for\\_Community\\_Health.pdf](http://www.anthc.org/chs/ces/climate/upload/Climate_Change_in_Noatak_Strategies_for_Community_Health.pdf).

<sup>76</sup> Magdanz, J.S., N.S. Braem, B.C. Robbins, and D.S. Koster (2007). *Subsistence Harvests in Northwest Alaska, Kivalina and Noatak, 2007*. Alaska Department of Fish and Game, Technical Paper No. 354. Retrieved February 3, 2012 from <http://www.subsistence.adfg.state.ak.us/techpap/TP354.pdf>.

According to ADF&G's Community Subsistence Information System (CSIS), in 2007, 86% of households participated in salmon subsistence, 69% in marine mammals subsistence, and 74% in non-salmon fish subsistence (other than halibut). No information was reported regarding the percentage of households participating in halibut or marine invertebrate subsistence, or per capita harvest of marine and land-based resources that year. Information about household participation and per capita subsistence harvest is presented in Table 12.

The ADF&G survey of 2007 subsistence harvest includes species-level information about household use of non-salmon fish and marine mammals. Noatak households reported harvesting sheefish, Arctic grayling, northern pike, lake trout, Arctic char, burbot, tomcod, herring, smelt, Dolly Varden, and whitefish. In addition, Noatak households reported harvesting bearded seal, ringed seal, spotted seal, walrus, and beluga whale. In the case of most of the species listed above, a greater percentage of households reported using the species than reported harvesting them, suggesting the presence of sharing networks in Noatak. In addition, although bowhead whale was not harvested by any Noatak households in 2007, 1% of households reported using this resource, suggesting that trading also takes place between communities. It is also important to note that, although no harvest of marine invertebrates was reported by Noatak households in 2007, 1% of households did report using king crab.<sup>77</sup>

Information was also reported by ADF&G regarding subsistence salmon permits during the 2000-2010 period. Between 2000 and 2004, an average of 102 subsistence salmon permits were issued to Noatak households. In 2005, the reported number of permits issued fell to one, no information was reported for 2006, and in 2007 one permit was again issued. For those years in which data were reported, chum salmon were the most heavily harvested salmon species, with an average of 3,746 chum harvested per year. On average, several hundred coho and pink salmon were also harvested, along with a small number of sockeye per year. This information about subsistence harvest of salmon in Noatak is presented in Table 13. Also reported in Table 13, 51,476 total pounds of non-salmon fish (not including halibut; see species listed in previous paragraph) were harvested by Noatak residents in 2007.

No information was reported by management agencies regarding halibut or marine mammal subsistence harvest by Noatak residents during the 2000-2010 period (Tables 14 and 15). However, as noted earlier in this section, some Noatak households reported harvesting and using bearded seal, ringed seal, spotted seal, walrus, and beluga whale.

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<sup>77</sup> Ibid.

Table 12. Subsistence Participation by Household and Species, Noatak: 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	86%	n/a	69%	n/a	74%	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

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

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

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Noatak: 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>	Lbs of Marine Inverts <sup>2</sup>	Lbs of Non-Salmon Fish <sup>2</sup>
2000	102	61	n/a	7,293	87	3	2	n/a	n/a
2001	96	68	n/a	2,326	116	n/a	n/a	n/a	n/a
2002	101	90	n/a	2,937	11	n/a	n/a	n/a	n/a
2003	104	103	1	2,177	28	17	10	n/a	n/a
2004	105	103	10	3,997	518	756	12	n/a	n/a
2005	1	1	1	n/a	n/a	n/a	29	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	1	1	1	n/a	n/a	n/a	22	n/a	51,476
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	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, Noatak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	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, Noatak: 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	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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

<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.