

## **Newhalen (NOO-hale-en)**



### **People and Place**

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

Newhalen is located on the north shore of Iliamna Lake, at the mouth of the Newhalen River. The City is located 320 miles southwest of Anchorage across the Cook Inlet, and 100 miles northeast of Naknek. The City encompasses 6.1 square miles of land and 2.3 square miles of water. Newhalen is located in the Lake and Peninsula Borough Census Area and the Iliamna Recording District.

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

In 2010, there were 190 inhabitants in Newhalen, making it the 201<sup>st</sup> largest of 352 total Alaskan communities with recorded populations that year. The town first appeared in U.S. Census records in the 1890s with 16 inhabitants. Overall between 1990 and 2010, the population of Newhalen decreased by 18.8%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of Newhalen increased from 160 to 184 and then decreased again to 162 by 2009, resulting in an average annual growth rate of -0.63%. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that Newhalen's population is stable throughout the year and is not at all driven by employment in fishing sectors. They also reported the presence of seasonal or transient workers throughout the year.

In 2010, a majority of Newhalen residents identified themselves as American Indian and Alaska Native (80%), along with 7.4% identifying as White, 0.5% as Black or African American, and 12.1% identifying with two or more races. Also in 2010, 2.6% of Newhalen residents identified themselves as Hispanic. Individuals identifying as White made up 1.2% less of the population in 2010 compared to 2000, those identifying as American Indian and Alaska Natives made up 5% less of the population, and the percentage of individuals identifying with two or more races increased between 2000 and 2010 by 5.8%. It is also important to note the apparent increase in racial diversity from 2000 to 2010, with several additional racial and ethnic groups represented. 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.

---

<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>.

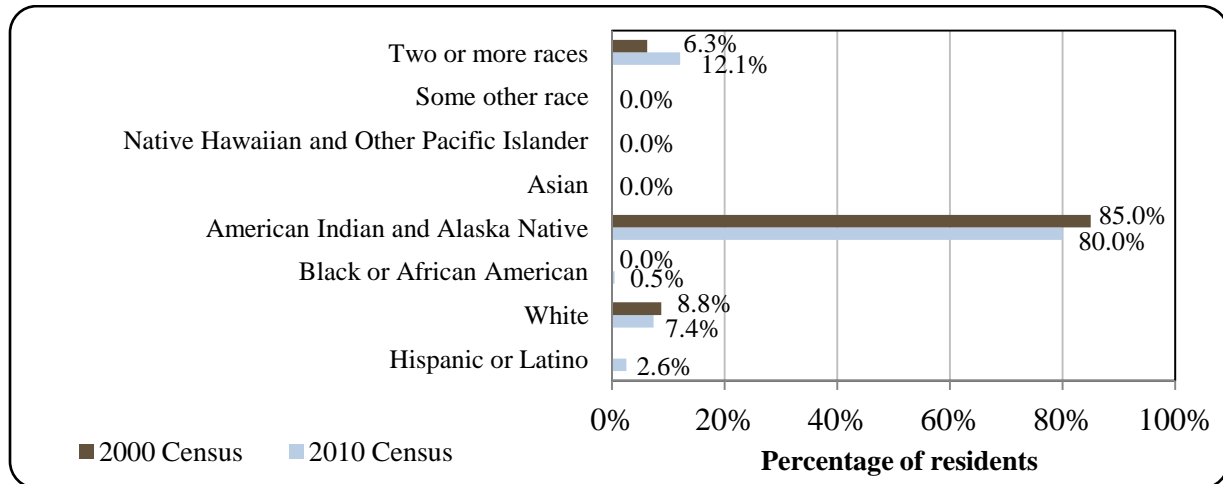
Table 1. Population in Newhalen from 1990 to 2010 by Source.

Year	U.S. Decennial Census <sup>1</sup>	Alaska Dept. of Labor Estimate of Permanent Residents <sup>2</sup>
1990	160	-
2000	160	-
2001	-	156
2002	-	166
2003	-	171
2004	-	184
2005	-	180
2006	-	168
2007	-	185
2008	-	171
2009	-	162
2010	190	-

<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>.

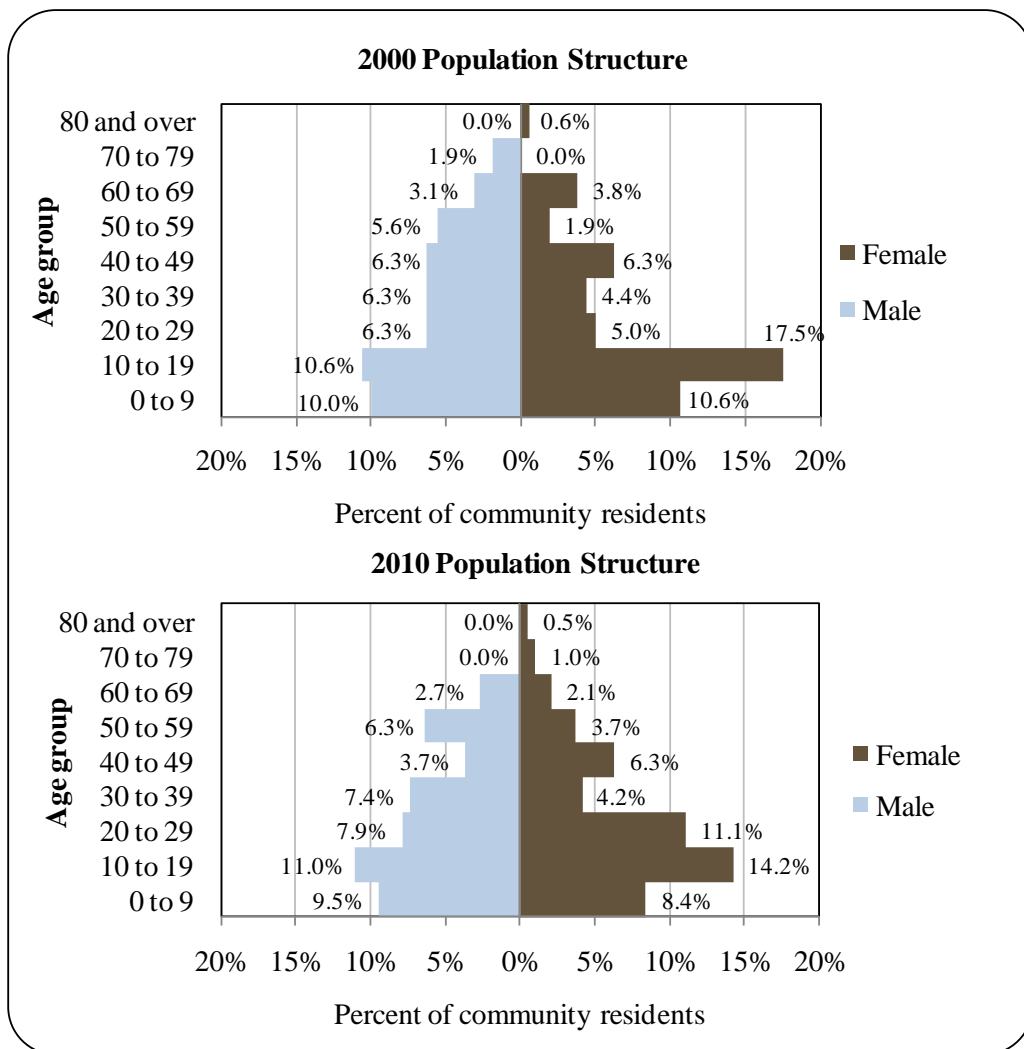
Figure 1. Racial and Ethnic Composition, Newhalen: 2000-2010 (U.S. Census).



In 2010 the average household size in Newhalen was 3.8, a decrease from 4.22 persons per household in 2000 and 4.4 in 1990. The total number of households in Newhalen increased between from 36 in 1990 and 39 in 2000, to 50 occupied housing units in 2010. Of the 51 housing units surveyed for the 2010 U.S. Census, 58.8% were owner-occupied, 39.2% were renter-occupied, and 1.9% were vacant or used only seasonally. Between 1990 and 2010, no residents of Newhalen lived in group quarters.

In 2010, the gender makeup in Newhalen was 48.5% male and 51.6% female. The greater number of women than men in Newhalen is anomalous compared to the population of Alaska as a whole, which overall has more men than women (52% male, 48% female in 2010). The median age in Newhalen was 22.8 years in 2010, much lower than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, gender distributions were particularly skewed toward females in age groups 10 to 19 and 20 to 29 years, while there were more males than females in age groups 30 to 39 and 50 to 59. Only 1.5% of Newhalen residents were age 60 or older in 2010. The overall population structure of Newhalen in 2000 and 2010 is shown in Figure 2.

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



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),<sup>3</sup> 98.6% of Newhalen 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, 1.4% 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; 0% 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; 35.1% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 14.9% were estimated to have an Associate's degree, compared to 8% of Alaska residents overall; 14.9% were estimated to have a Bachelor's degree, compared to 17.4% of Alaska residents overall; and 10.8% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

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

Newhalen is a Native village comprised primarily of Yup'ik Eskimos, Alutiiq, and Athabascan people.<sup>4</sup> The area of Newhalen has been occupied by humans since prehistory. Two distinct indigenous populations historically inhabited the Iliamna Lake region: the Central Yup'ik Eskimos south and west of the lake, and the Dena'ina Athabascans on the northern and eastern shores. Distinctions between Native populations were blurred during European contact as a result of population decline due to epidemic disease and movement of people to participate in activities surrounding the fur trade and emerging commercial salmon fishery in Bristol Bay.<sup>5</sup>

In 1910, when a schoolteacher named Hannah Breece arrived in the area, she noted a small community of Yup'ik people living along the Newhalen River, near the City's present site.<sup>6</sup> The name "Newhalen" is an Anglicization of "Noghelingamuit", meaning, "people of the Land of Prosperity or Abundance" in Yup'ik. The natural resources in the area are abundant and include salmon, trout, moose, rabbit, seal, and caribou. Most residents rely primarily on subsistence hunting and fishing for their livelihoods.<sup>7</sup>

### **Natural Resources and Environment**

Newhalen is located in a climatic transition zone, influenced by both maritime and continental weather patterns. Summer temperatures average between 42 and 62 °F, and winter temperatures between 6 and 30 °F. Newhalen receives 26 inches of rain and 64 inches of snow on average per year.<sup>8</sup> The immediate landscape in Newhalen is rolling tundra.<sup>9</sup> The Newhalen

---

<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> 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>5</sup> Fall, J. A., D. L. Holen, B. Davis, T. Krieg, and D. Koster (2006). *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

<sup>6</sup> Ibid.

<sup>7</sup> See footnote 4.

<sup>8</sup> Ibid.

River valley contains areas of spruce woodlands and shrubs, as well as open spruce forest-shrub-bog mosaic in some places.<sup>10</sup>

The Iliamna Lake and Kvichak River drainage is the single most important source of salmon in the Bristol Bay area, producing approximately 50% of the sockeye salmon caught in the Bristol Bay salmon fishery.<sup>11</sup> The Newhalen River and its source, Lake Clark, are a major sockeye salmon spawning area, producing 16% of the world's wild sockeye salmon commercial harvest.<sup>12</sup> A large number of sport fishermen travel to the Iliamna Lake area every year to participate in a trophy rainbow trout fishery<sup>13</sup> along with other sport fisheries (see the *Recreational Fishing* section of this profile). A number of lodges are present along the Newhalen River for sport hunters and fishermen.<sup>14</sup>

The area across Iliamna Lake to the south of Newhalen is protected as Katmai National Park and Preserve, a 7,383-square-mile wilderness area known for its high concentration of brown bears and the Valley of 10,000 Smokes. Katmai National Park tourism does not affect Newhalen directly, as visitors primarily pass through the King Salmon airport to access the park.<sup>15</sup> Lake Clark National Park and Preserve is located northeast of Newhalen, occupying 4 million acres at the north end of the Alaska Peninsula. This National Park and Preserve was established to protect scenic beauty, wild rivers and waterfalls, populations of fish and wildlife, watersheds essential for sockeye salmon, and the traditional lifestyle of local residents. Subsistence activities are permitted in Lake Clark National Park and Preserve. The National Park Service works closely with state and federal fish and wildlife management agencies to determine seasons, bag limits, and similar harvest controls.<sup>16</sup> A diversity of fish and wildlife are found in both of these National Parks and Preserves, including bears, caribou, moose, wolves, lynx, sea mammals, salmon, Arctic char, Arctic grayling, Dolly Varden char, northern pike, lake trout, rainbow trout, burbot, and whitefish.<sup>17</sup>

It is also of note that Iliamna Lake is home to a freshwater population of harbor seals.<sup>18</sup> Seal numbers consistently range between 150 and 220 during molting season, and some portion of the population over-winters in the lake. Local subsistence hunters harvest a small number of these seals each year.<sup>19</sup>

---

<sup>9</sup> LaRoche + Associates (2011). *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from

[http://alaskacoast.state.ak.us/District/DistrictPlans\\_Final/LakeandPen/revised\\_phd/vol1\\_rphd.pdf](http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf).

<sup>10</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>.

<sup>11</sup> Nondalton Tribal Council (2006). *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew:Beck Consulting. Retrieved January 17, 2012 from [http://www.agnewbeck.com/pdf/bristolbay/Nondalton\\_LREP\\_Background.pdf](http://www.agnewbeck.com/pdf/bristolbay/Nondalton_LREP_Background.pdf).

<sup>12</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>13</sup> See footnote 4.

<sup>14</sup> See footnotes 10 and 11.

<sup>15</sup> National Park Service (2011). *Katmai National Park & Preserve*. Retrieved November 17, 2011 from <http://www.nps.gov/katm/>.

<sup>16</sup> National Park Service (2011). *Lake Clark National Park & Preserve Management*. Retrieved June 13, 2012 from <http://www.nps.gov/lac/parkmgmt/index.htm>.

<sup>17</sup> See footnotes 15 and 16.

<sup>18</sup> See footnote 12.

<sup>19</sup> Withrow, D. and K. Yano, J. Burns, C. Gomez, and T. Askoak (2011). *Freshwater Harbor Seals of Lake Iliamna, Alaska. Do They Pup and Over-Winter in the Lake?* Poster presented at the 2011 Alaska Marine Science

Significant mineral resources are present in the Bristol Bay region, including the Pebble copper-gold-molybdenum deposit. The Pebble Mine site is located approximately 25 miles north of Newhalen, at the divide between the Koktuli River and Upper Talarik Creek.<sup>20</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 5.94 billion tons in the measured and indicated category, including 55 billion lb of copper, 66.9 million oz of gold, and 3.3 billion lb of molybdenum, and 4.84 billion tons in the inferred category, including 25.6 billion lb of copper, 40.4 million oz gold, and 2.3 billion lb of molybdenum.<sup>21</sup> Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon. Iliamna Lake is the source of the Kvichak River System, the single most important salmon-producing watershed in the Bristol Bay area.<sup>22</sup> 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>23</sup> If the Pebble Mine is developed, Bristol Bay salmon fisheries could be affected.<sup>24</sup>

Potential hazards in Newhalen include wildfire, flooding, severe weather, and earthquakes. Firefighting capacity is lacking in the community, and terrain characterized by heavy vegetation, dry brush, and tall grasses leaves the area subject to wildfire fanned by winds. Flooding is a threat during ice break-up, when ice jams and ice overflows may funnel water into the community. Severe weather in the form of high winds (70 to 100 mph) affects the community approximately twice a year, leading to blackouts and brownouts. Extreme temperatures can also lead to frost heaves and frozen ground, severing or damaging electrical lines. Although no earthquakes have been recorded in Newhalen, seismic activity from volcanoes or fault shifts are a large threat in the area. Newhalen was rated as “not vulnerable” to tsunamis, although the community’s proximity to Iliamna Lake makes it vulnerable to seiche activity. See the *Additional Information* section for more information on seiches, “waves that oscillate in partially or totally enclosed bodies of water.”<sup>25</sup>

According to the Alaska Department of Environmental Conservation, one active environmental cleanup site was located on the south shore of Iliamna Lake as of May 2012. In 1956, the U.S. Air Force constructed a radio relay station on the southern shore of Iliamna Lake as part of a defense communication network and aircraft warning system throughout the State of Alaska. Hazardous materials were stored at the site, including diesel fuel and gasoline, oils, antifreeze, solvents, batteries, asbestos, and electrical transformers containing PCBs (polychlorinated biphenyls). Excavation and thermal treatment of petroleum-contaminated soils

---

Symposium. Retrieved January 18, 2012 from [ftp://ftp.afsc.noaa.gov/posters/pWithdraw04\\_freshwater-seals\\_2011.pdf](ftp://ftp.afsc.noaa.gov/posters/pWithdraw04_freshwater-seals_2011.pdf).

<sup>20</sup> Parker, G. Y., F. M. Raskin, C. A. Woody, and L. Trasky (2008). “Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska’s Large Mine Permitting Process.” *Alaska Law Review* 25:1.

<sup>21</sup> Northern Dynasty Minerals Limited (2012). *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

<sup>22</sup> See footnote 10.

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

<sup>24</sup> Pg. 36 in Duffield, J., C. Neher, D. A. Patterson, and O. 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>25</sup> Lake and Peninsula Borough (2009). *Multi-Hazard Mitigation Plan*. Retrieved January 17, 2012 from [http://commerce.alaska.gov/dca/planning/nfip/Hazard\\_Mitigation\\_Plans/Lake\\_Pen\\_Boro\\_MJ\\_HMP.pdf](http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf).

was undertaken in 2004 and 2005, removing the source of potential future groundwater contamination. Groundwater wells were also dug to monitor water quality at the site.<sup>26</sup>

## Current Economy<sup>27</sup>

Newhalen's economy is based on seasonal employment in commercial and recreational fishing sectors. Many residents travel to Bristol Bay to work in salmon fisheries, and many work in Iliamna.<sup>28</sup> Between 2000 and 2010, the number of Newhalen residents holding state Commercial Fisheries Entry Permits (CFEC) was equivalent to between 5% and 9% of the total local population. The tourism industry is important to the region, with thousands of sport fishermen visiting every year to participate in the trophy rainbow trout fishery.<sup>29</sup> Lodges for both hunting and fishing are common in the area.<sup>30</sup> Subsistence harvest of salmon, trout, grayling, moose, caribou, rabbit, porcupine, and seal are important for Newhalen residents. Most families travel to fish camps during the summer.<sup>31</sup>

In a survey conducted by the AFSC in 2011, community leaders projected that mining will become the most important natural resource-based industry in Newhalen in the future. The proposed site of the Pebble Mine, described above in the *Natural Resources and Environment* section, is located approximately 25 miles north of Newhalen.

Based on household surveys conducted for the 2006-2010 ACS,<sup>32</sup> in 2010, the per capita income in Newhalen was estimated to be \$16,000 and the median household income was estimated to be \$66,250. This represents a large increase from the per capita and median household incomes reported in the year 2000 (\$9,448 and \$36,250, respectively). The increase in income remains substantial even when inflation is taken into account by converting 2000 values to 2010 dollars,<sup>33</sup> revealing a real per capita income in 2000 of \$12,424 and a real median household income of \$47,668. In 2010, Newhalen ranked 185<sup>th</sup> of 305 Alaskan communities with per capita income data that year, and 56<sup>th</sup> in median household income, out of 299 Alaskan communities with household income data.

However, Newhalen's small population size may have prevented the ACS from accurately portraying economic conditions.<sup>34</sup> An alternative estimate of per capita income is

---

<sup>26</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>27</sup> Unless otherwise noted, all monetary data are reported in nominal values.

<sup>28</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>29</sup> Ibid.

<sup>30</sup> Fall, J. A., D. L. Holen, B. Davis, T. Krieg, and D. Koster (2006). *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

<sup>31</sup> See footnote 28.

<sup>32</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>33</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>).

<sup>34</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

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 Newhalen in 2010 is \$6,947.<sup>35,36</sup> This estimate is lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in Newhalen between 2000 and 2010. The lower per capita income estimate derived from the ALARI database is reflected in the fact that the community was recognized as “distressed” by the Denali Commission in 2011,<sup>37</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 much higher percentage of Newhalen residents was estimated to be in the civilian labor force (80.6%) than in the civilian labor force statewide (68.8%). In the same year, 15.6% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 12.9% in Newhalen, 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 31.8%, compared to a statewide unemployment rate estimate of 11.5%.<sup>38</sup>

Also based on the 2006-2010 ACS, 60.3% of the Newhalen workforce was estimated to be employed in the public sector, along with 38.1% in the private sector and 1.6% self-employed. Of the 63 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest numbers were estimated to be working in the following industries: educational services, health care, and social assistance (49.2%), agriculture, forestry, fishing, hunting, and mining (15.9%), and retail trade (11.1%). The occupations in which the greatest percentages of the workforce were estimated to be employed were management/professional (34.9%) and sales/office occupations (27%). This 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 the case of Newhalen, employment reported by the census in natural resource-related industries and occupations is primarily related to mining activity rather than fishing. In 2010, 15.9% of the population was estimated to be employed in agricultural, forestry, fishing, hunting, and mining industries and in natural resource/construction/maintenance occupations. A breakdown of the natural resource/construction/maintenance occupational category reveals that, of the 10 workers in this category, 9 were employed in construction and extraction occupations, and 1 was employed in an installation-related occupation.

---

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>35</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>36</sup> See footnote 32.

<sup>37</sup> Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from [www.denali.gov](http://www.denali.gov).

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



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

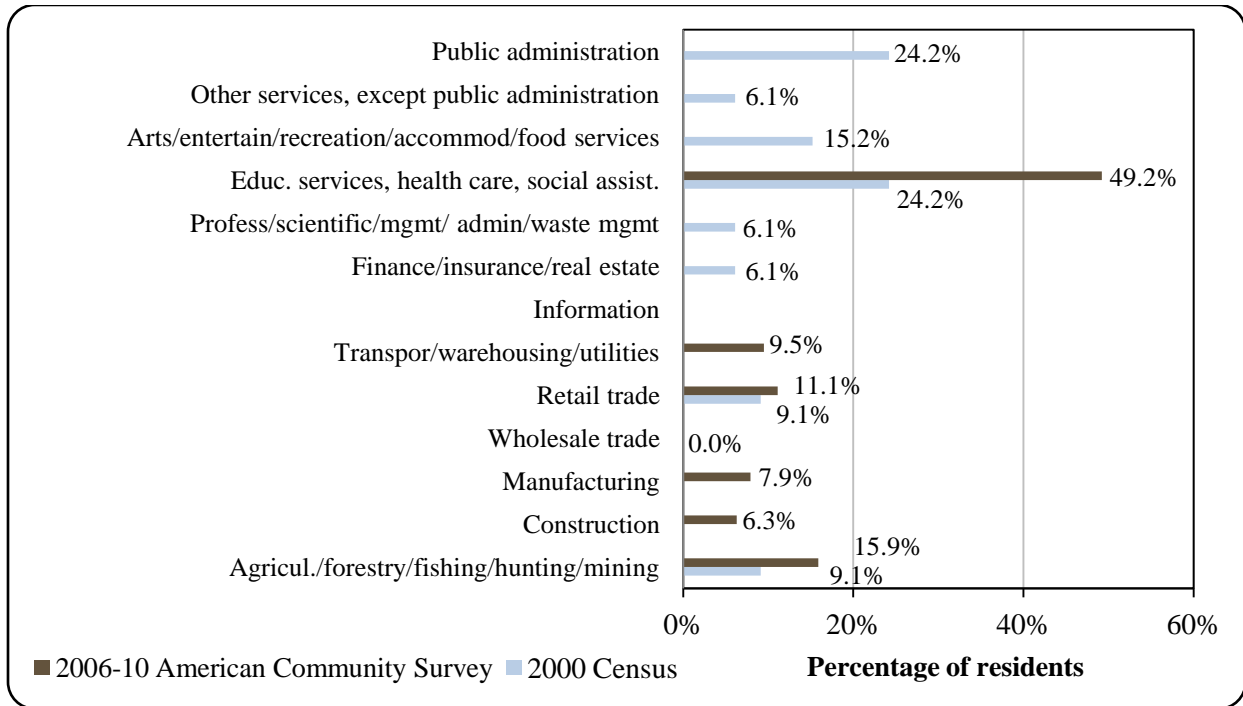
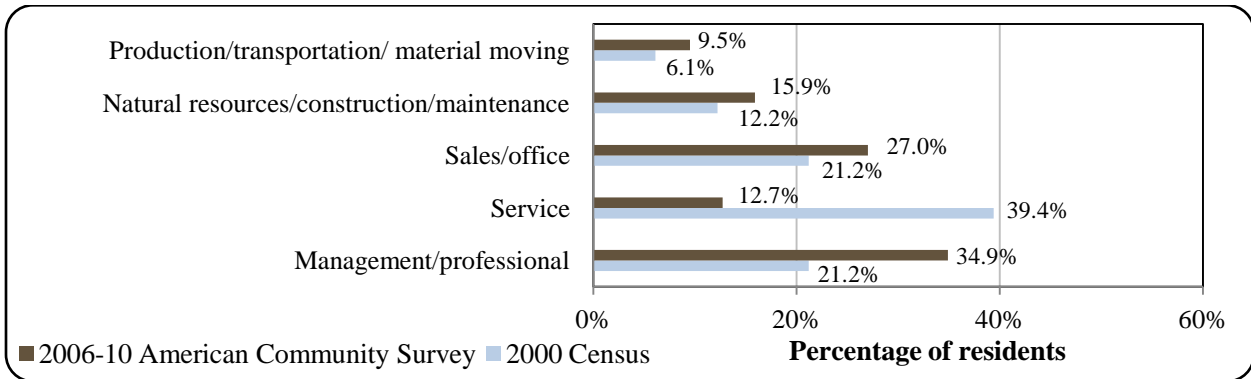


Figure 4. Local Employment by Occupation in 2000-2010, Newhalen (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 51 employed residents in Newhalen in 2010, of which 33.3% were employed in local government, 31.4% in professional and business services, 9.8% in trade, transportation, and utilities, 9.8% in education and health services, 5.9% in natural resources and mining, 5.9% in construction, 2% in manufacturing, and 2% in other industries.<sup>39</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.

<sup>39</sup> Ibid.

## Governance

Newhalen was incorporated as a 2<sup>nd</sup> Class City in 1971. The City is located in the Lake and Peninsula Borough. Newhalen has a Strong Mayor form of government, including a seven-person city council, including the mayor, a seven-person advisory school board, and several municipal employees. The City administers a 2% sales tax but has no other taxes. In addition, the Borough administers a 6% bed tax, \$3 per person/day Guide Tax and \$1 per person/day lodge Guide Tax.<sup>40</sup> Municipal revenue in Newhalen averaged over \$150,000 per year between 2000 and 2010. Locally-generated revenue sources during the decade included facility and equipment lease fees, building and equipment rentals, water and sewer service fees, and gravel sales. Outside revenue sources included various state revenue sharing contributions and capital project grants. Between 2000 and 2003, Newhalen received approximately \$25,000 per year in State Revenue Sharing contributions, and in 2009 and 2010 received just over \$104,000 per year in Community Revenue Sharing contributions. Newhalen also received Federal Magnuson-Stevens Commercial Fishery Disaster Assistance grants in 2000 and 2001. Information about selected aspects of Newhalen's community revenue sources is presented in Table 2.

Newhalen was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Newhalen Village. The Native village corporation is the Alaska Peninsula Corporation, which manages 71,526 acres of land. The regional Native corporation to which Newhalen belongs is the Bristol Bay Native Corporation.<sup>41</sup>

Newhalen 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>42</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>43</sup>

The closest regional offices of the Alaska Department of Fish and Game (ADF&G) are in Dillingham and King Salmon, and the Alaska Department of Commerce, Community, and Economic Development also has an office in Dillingham. Kodiak and Homer have the nearest offices of the Alaska Department of Natural Resources and the National Marine Fisheries Service (NMFS), and Kodiak is also the location of the nearest U.S. Bureau of Citizenship and Immigration Services office. However, the Anchorage offices of these agencies are perhaps more accessible for the people of the Iliamna Lake region.

---

<sup>40</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>41</sup> Ibid.

<sup>42</sup> Bristol Bay Native Association (n.d.). *BBNA homepage*. Retrieved November 16, 2011 from <http://www.bbna.com>.

<sup>43</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>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Newhalen 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	\$164,438	n/a	\$27,332	n/a\$61,089
2001	\$249,160	n/a	\$25,677	n/a\$50,135
2002	n/a	n/a	\$25,674	n/a
2003	\$118,425	n/a	\$25,821	n/a
2004	\$63,763	n/a	n/a	n/a
2005	\$111,905	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	\$147,286	n/a	n/a	n/a
2008	\$163,284	n/a	n/a	n/a
2009	\$175,367	n/a	\$104,264	n/a
2010	\$277,874	n/a	\$104,125	n/a

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 at [http://www.commerce.state.ak.us/dcra/commfin/CF\\_FinRec.cfm](http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm). Data retrieved April 15, 2011.

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

<sup>3</sup> Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at [www.tax.state.ak.us](http://www.tax.state.ak.us). Data retrieved April 15, 2011.

<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 Department of Commerce, Community, and Economic Development. (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.

## Infrastructure

### *Connectivity and Transportation*

Due to a lack of infrastructure in the Newhalen region, travel between communities is usually by small plane, and seasonally by boat, four-wheeler, or snowmobile. Individuals also use personal vehicles, ATVs, and skiffs.<sup>44</sup> Barges deliver bulk goods to the Newhalen area via the Kvichak River, which are lightered to shore. A state-owned, 4,800-ft runway is located approximately 3 miles north of Newhalen, between Newhalen and Iliamna. A paved road connects these communities and the airport.<sup>45</sup> Iliamna Air Taxi, Inc. provides scheduled mail, freight, and passenger air service to several Iliamna Lake communities. As of June 2012, a roundtrip flight from the Iliamna Airport to Anchorage cost \$460.<sup>46</sup>

<sup>44</sup> Bristol Bay Native Association (2011). *Bristol Bay Comprehensive Economic Development Strategy, 2011-2016*. Funded by the U.S. Department of Commerce, Economic Development Administration. Retrieved January 17, 2012 from [http://www.bbna.com/website/BBCEDS\\_2011-10-31.pdf](http://www.bbna.com/website/BBCEDS_2011-10-31.pdf).

<sup>45</sup> See footnote 40.

<sup>46</sup> Personal communication, Iliamna Air Taxi reservation agent, June 13, 2012.

During the winter, a road is passable between Newhalen and Nondalton, 22 miles to the north, although the road is only paved half way.<sup>47</sup> An unimproved trail, the Iliamna-Pile Bay Trail, runs along the northern shore of Iliamna Lake, connecting Newhalen with the communities of Pedro Bay and Pile Bay Village to the east. Pile Bay Village is also connected to the Cook Inlet by road.<sup>48</sup>

### *Facilities*

The Tazimina Hydroelectric Project provides electricity to the communities of Iliamna, Newhalen and Nondalton. The Iliamna – Newhalen – Nondalton Electric Cooperative owns 50 miles of distribution line connecting the three member communities, and also owns a backup diesel powerhouse in Newhalen.<sup>49,50</sup> According to a survey conducted by the AFSC in 2011, Newhalen community leaders indicated that construction of a new diesel powerhouse and alternative energy sources is currently in progress. The City of Newhalen operates a piped water system serving all homes in the community. Water is derived from a well and filtered. The City also operates a piped sewer system serving 10 homes and facilities. Individual septic tanks are used by remaining homes, and outhouses are also in use. A sewage lagoon is used for sewage treatment. The City operates a landfill, but does not provide refuse collection services.<sup>51</sup>

The Village Council operates a washeteria.<sup>52, 53</sup> Newhalen and Iliamna share a post office and a school.<sup>54</sup> The school provides aluminum and paper recycling services, and also offers public use of the school library and gymnasium. Additional community facilities include a Teen Recreation Center, City Hall, and a city holding cell.<sup>55</sup> Public safety services are provided by a VPSO (Village Public Safety Officer) stationed in Newhalen<sup>56</sup> and state troopers stationed nearby in the City of Iliamna.<sup>57</sup> Fire and rescue services are provided by the Iliamna/Newhalen Rescue Squad. Taxi service is available in the City, and visitor accommodations are provided by Gram's Bed and Breakfast. Telephone and internet service are available from Interior Telephone

---

<sup>47</sup> Fall, J. A., D. L. Holen, B. Davis, T. Krieg, and D. Koster (2006). *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

<sup>48</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>49</sup> Nondalton Tribal Council. 2006. *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew:Beck Consulting. Retrieved January 17, 2012 from [http://www.agnewbeck.com/pdf/bristolbay/Nondalton\\_LREP\\_Background.pdf](http://www.agnewbeck.com/pdf/bristolbay/Nondalton_LREP_Background.pdf).

<sup>50</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>51</sup> Ibid.

<sup>52</sup> Ibid.

<sup>53</sup> “Washeteria” is another word for laundromat. In Alaska, washeterias often include shower facilities.

<sup>54</sup> Lake and Peninsula Borough. February 2009. *Multi-Hazard Mitigation Plan*. Retrieved January 17, 2012 from [http://commerce.alaska.gov/dca/planning/nfip/Hazard\\_Mitigation\\_Plans/Lake\\_Pen\\_Boro\\_MJ\\_HMP.pdf](http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf).

<sup>55</sup> See footnote 50.

<sup>56</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>57</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>.

Co./TelAlaska and GCI. However, no cable carriers provide service in the community.<sup>58</sup> In the 2011 AFSC survey, community leaders reported that Newhalen has publicly subsidized housing.

With regard to fisheries-related infrastructure, community leaders also reported that no dock space is available for moorage in Newhalen, and the community does not have the capacity to handle regulated vessels. Further, they indicated that no private vessels use Newhalen as a base of operations for fishing. They noted that residents typically travel to Iliamna when they need to access fisheries-related businesses and services not available in Newhalen.

### *Medical Services*

The local health clinic is the Newhalen Clinic. The Clinic is a Community Health Aide Program site. Emergency Services have lake, floatplane, and air access. Emergency services are provided by volunteers and a health aide, and rescue services are provided by the Iliamna/Newhalen Rescue Squad.<sup>59</sup> The nearest hospitals are located in Dillingham and Homer, although hospitals in Anchorage may be equally accessible by air for residents of Newhalen.

### *Educational Opportunities*

The Newhalen School offers a pre-school through 12<sup>th</sup> grade education. As of 2011, there were 8 teachers and 77 students attending the school.<sup>60</sup> The Newhalen School also serves students from the community of Iliamna.<sup>61</sup>

## **Involvement in North Pacific Fisheries**

### *History and Evolution of Fisheries*

Subsistence harvest of fisheries resources has been important for residents of the Iliamna Lake region since prehistory. Commercial exploitation of salmon resources 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, along with several other species harvested in lower volumes.<sup>62</sup> Subsistence harvest continues to be an important foundation for the local economy in Newhalen,<sup>63</sup> and tourism related to sportfishing activity has grown in importance in the Iliamna Lake region,<sup>64,65</sup> as outlined in the *Subsistence Fishing* and *Recreational Fishing* sections of this profile.

---

<sup>58</sup> See footnote 50.

<sup>59</sup> Ibid.

<sup>60</sup> Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

<sup>61</sup> See footnote 54.

<sup>62</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>63</sup> See footnote 50.

<sup>64</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>.

Bristol Bay is the nearest marine area to the community of Newhalen. The Bay is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and Bering Sea Sablefish Regulatory Area. Newhalen is not eligible to participate in the Community Development Quota (CDQ) program or the Community Quota Entity (CQE) program. According to a survey conducted by the AFSC in 2011, community leaders reported that Newhalen does not actively participate in fisheries management processes in Alaska, but they do stay informed through participation in a yearly fisheries meeting. One community leader expressed concern that commercial fisheries are declining, and that Newhalen residents may become more dependent on the mining industry for employment in the future.

### *Processing Plants*

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Newhalen. Several processing facilities were listed in nearby communities in Bristol Bay, including Naknek, Egegik, and Dillingham.

### *Fisheries-Related Revenue*

Overall, in 2010, the City of Newhalen received \$6,489 from fisheries-related taxes and fees, representing a steady increase in annual fisheries-related revenue since 2000. Revenue sources reported in Newhalen's annual budgets included the Shared Fisheries Business Tax and the Fisheries Resource Landing Tax. Table 3 presents the annual revenue for these categories.<sup>66</sup>

### *Commercial Fishing*

Newhalen is an inland community, located on the northern shore of Iliamna Lake. Even though it is not located on the coast, Newhalen's economy is still tied to commercial fishing activities. Between 2000 and 2010, local residents participated in state fisheries as permit holders, crew members, and vessel owners. Over this period, the number of Newhalen residents holding state Commercial Fisheries Entry Permits (CFEC) per year was equivalent to between 5% and 9% of the local population.

In the 2011 AFSC survey, community leaders reported that Newhalen residents primarily participate in the Bristol Bay salmon fishery, which takes place each year in June and July. In 2010, 12 Newhalen residents held a total of 11 CFEC permits in salmon fisheries, including 6 in the Bristol Bay drift gill net fishery, 4 in the Bristol Bay set gill net fishery, and 1 in the Lower Yukon gill net fishery. Of these, five Bristol Bay drift gill net and four Bristol Bay set gill net permits were actively fished that year. One Lower Yukon permit was held per year between 2000 and 2010, with the exception of 2000 and 2008. The Lower Yukon permit was actively fished during this period in 2002-2004 and 2006 only. The number of salmon permits held in Newhalen remained relatively stable between 2000 and 2010. No Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) were issued to Newhalen residents between 2000 and

---

<sup>65</sup> Nondalton Tribal Council. 2006. *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew:Beck Consulting. Retrieved January 17, 2012 from [http://www.agnewbeck.com/pdf/bristolbay/Nondalton\\_LREP\\_Background.pdf](http://www.agnewbeck.com/pdf/bristolbay/Nondalton_LREP_Background.pdf).

<sup>66</sup> A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

2010. This permit information is presented in Table 4. Between 2000 and 2010, no quota share accounts or quota shares were held by Newhalen residents in federal catch share fisheries for halibut, sablefish, or crab (Tables 6 through 8).

Since no fish buyers or processing plants were present in Newhalen (Table 5), no ex-vessel revenue was generated in the community between 2000 and 2010 (Table 9). Newhalen vessel owners delivered their catches elsewhere. In 2010, Newhalen vessel owners landed 205,650 net lb of salmon, earning \$193,517 in ex-vessel revenue. For those year in which information can be reported, this was slightly lower than average for salmon landings and ex-vessel revenue. Salmon landings and ex-vessel revenue information are considered confidential in 2001 and 2009 due to the small number of participants. This information about landings and ex-vessel revenue generated by Newhalen vessel owners is presented in Table 10.

In 2010, only 1 Newhalen resident held a crew license, a precipitous decrease from 20 licenses held in the year 2000. The number of Newhalen residents that were the primary owner of a fishing vessel initially increased from 5 in 2000 to 10 in 2005, and then declined again to 6 vessels by 2010. Between four and six vessels were homeported in Newhalen over this period. These characteristics of the commercial fishing sector are presented in Table 5. Although several vessels may call Newhalen their homeport, according to a survey conducted by the AFSC in 2011, community leaders reported that no vessels use Newhalen as a base of operations during the fishing season.

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw 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
Shared Fisheries Business Tax <sup>1</sup>	\$2,832	\$4,898	\$4,286	\$3,316	\$2,979	\$3,569	\$4,531	\$5,454	\$10,617	\$6,395	\$6,077
Fisheries Resource Landing Tax <sup>1</sup>	n/a	n/a	n/a	n/a	n/a	n/a	\$24	\$62	\$234	\$393	\$412
Fuel transfer tax <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
Extraterritorial fish tax <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
Bulk fuel transfers <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
Boat hauls <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
Harbor usage <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
Port/dock usage <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
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
<b>Total fisheries-related revenue<sup>4</sup></b>	<b>\$2,832</b>	<b>\$4,898</b>	<b>\$4,286</b>	<b>\$3,316</b>	<b>\$2,979</b>	<b>\$3,569</b>	<b>\$4,554</b>	<b>\$5,516</b>	<b>\$10,851</b>	<b>\$6,788</b>	<b>\$6,489</b>
<b>Total municipal revenue<sup>5</sup></b>	<b>\$164,438</b>	<b>\$249,160</b>	<b>\$118,425</b>	<b>\$118,425</b>	<b>\$63,763</b>	<b>\$111,905</b>	<b>n/a</b>	<b>\$147,286</b>	<b>\$163,284</b>	<b>\$175,367</b>	<b>\$277,874</b>

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



Table 4. Permits and Permit Holders by Species, Newhalen: 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, Newhalen: 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	8	9	9	10	12	13	14	13	12	11	11
	Fished permits	8	7	9	10	12	12	13	11	10	8	9
	% of permits fished	100%	78%	100%	100%	100%	92%	93%	85%	83%	73%	82%
	Total permit holders	8	9	9	10	13	15	15	14	16	12	12
<i>Total CFEC Permits<sup>2</sup></i>	<i>Permits</i>	8	9	9	10	12	13	14	13	12	11	11
	<i>Fished permits</i>	8	7	9	10	12	12	13	11	10	8	9
	<i>% of permits fished</i>	100%	78%	100%	100%	100%	92%	93%	85%	83%	73%	82%
	<i>Permit holders</i>	8	9	9	10	13	15	15	14	16	12	12

<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 Newhalen: 2000-2010.

<b>Year</b>	<b>Crew License Holders<sup>1</sup></b>	<b>Count Of All Fish Buyers<sup>2</sup></b>	<b>Count Of Shore-Side Processing Facilities<sup>3</sup></b>	<b>Vessels Primarily Owned By Residents<sup>4</sup></b>	<b>Vessels Homeported<sup>4</sup></b>	<b>Vessels Landing Catch In Newhalen<sup>2</sup></b>	<b>Total Net Lb Landed In Newhalen<sup>2,5</sup></b>	<b>Total Ex-Vessel Value Of Landings In Newhalen<sup>2,5</sup></b>
2000	20	0	0	5	5	0	0	\$0
2001	11	0	0	4	6	0	0	\$0
2002	5	0	0	5	4	0	0	\$0
2003	2	0	0	7	6	0	0	\$0
2004	10	0	0	9	6	0	0	\$0
2005	10	0	0	10	5	0	0	\$0
2006	13	0	0	9	6	0	0	\$0
2007	0	0	0	9	6	0	0	\$0
2008	1	0	0	8	6	0	0	\$0
2009	3	0	0	6	6	0	0	\$0
2010	1	0	0	6	5	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 Newhalen: 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 Newhalen: 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 Newhalen: 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 Newhalen: 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 lb 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 Newhalen 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	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	85,297	-	59,063	97,802	209,088	427,265	245,184	359,737	296,754	-	205,650
<i>Total<sup>2</sup></i>	<i>85,297</i>	<i>-</i>	<i>59,063</i>	<i>97,802</i>	<i>209,088</i>	<i>427,265</i>	<i>245,184</i>	<i>359,737</i>	<i>296,754</i>	<i>-</i>	<i>205,650</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	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$56,827	-	\$28,830	\$49,898	\$107,438	\$265,574	\$160,762	\$239,654	\$221,337	-	\$193,517
<i>Total<sup>2</sup></i>	<i>\$56,827</i>	<i>-</i>	<i>\$28,830</i>	<i>\$49,898</i>	<i>\$107,438</i>	<i>\$265,574</i>	<i>\$160,762</i>	<i>\$239,654</i>	<i>\$221,337</i>	<i>-</i>	<i>\$193,517</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 or licensed sportfishing guides in Newhalen, and no sportfishing licenses were sold in the community. However, Newhalen community members participated in sport fisheries. In 2010, Newhalen residents purchased 17 sportfishing licenses (irrespective of point of sale). It is important to note that economic activity in Newhalen is very tied to economic activity in the City of Iliamna, located only 5 miles away by road. Between 7 and 18 licensed sport fish guides were present each year in Iliamna over the 2000-2010 period, and sportfishing licenses are sold in the City (see the community profile for Iliamna for more information). Newhalen and Iliamna attract a large number of recreational fishermen each year to participate in the trophy rainbow trout fishery on Iliamna Lake, as well as fisheries for numerous other species, including salmon. Numerous sportfishing and hunting lodges are present along the Newhalen River.<sup>67,68,69</sup>

In a survey conducted by the AFSC in 2011, community leaders reported that local residents use private boats for sportfishing, and non-residents fish out of lodges. They also indicated that sockeye salmon is the primary salmon species targeted, along with trout and northern pike. The Alaska Statewide Harvest Survey,<sup>70</sup> conducted by ADF&G between 2000 and 2010, confirmed this and noted the following species targeted by private anglers in Iliamna-Newhalen: sockeye salmon, rainbow trout, Dolly Varden char, and Arctic grayling. No kept/release log book data were reported for fishing charters out of Newhalen between 2000 and 2010.<sup>71</sup>

Newhalen is located within Alaska Sport Fishing Survey Area S – Kvichak River Drainage. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Non-Alaska resident anglers fished consistently more days than Alaska resident anglers in both freshwater and saltwater between 2000 and 2010, reflective of the large amount of sportfishing-related tourism in the region. Freshwater sportfishing activity was significantly more important than saltwater fishing in the region. The number of freshwater angler days for non-Alaska resident sport fishermen varied between 17,234 and 30,340 between 2000 and 2010, while Alaska resident freshwater angler days varied between 3,077 and 10,297. This information about the sportfishing sector in and near Newhalen is displayed in Table 11.

---

<sup>67</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>68</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>69</sup> Nondalton Tribal Council. 2006. *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew:Beck Consulting. Retrieved January 17, 2012 from [http://www.agnewbeck.com/pdf/bristolbay/Nondalton\\_LREP\\_Background.pdf](http://www.agnewbeck.com/pdf/bristolbay/Nondalton_LREP_Background.pdf).

<sup>70</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>71</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. Sport Fishing Trends, Newhalen: 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 Newhalen <sup>2</sup>
2000	0	0	5	0
2001	0	0	14	0
2002	0	0	24	0
2003	0	0	21	0
2004	0	0	22	0
2005	0	0	21	0
2006	0	0	15	0
2007	0	0	14	0
2008	0	0	15	0
2009	0	0	26	0
2010	0	0	17	0

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	68	168	20,848	10,297
2001	214	43	21,554	8,202
2002	435	14	19,495	6,618
2003	74	50	18,248	5,831
2004	129	101	20,785	5,263
2005	38	79	22,156	4,179
2006	114	28	28,013	4,054
2007	229	38	30,340	3,077
2008	179	65	24,104	5,127
2009	0	0	17,234	6,514
2010	0	22	20,068	5,613

<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 harvest remains a fundamental aspect of Newhalen's local economy.<sup>72</sup> In a survey conducted by the AFSC in 2011, community leaders reported that fish, caribou, and moose are three of the most important subsistence resources for Newhalen residents. During fieldwork for a 2004 survey of subsistence resource use in Newhalen and surrounding communities, researchers recorded current resource concerns in the communities of Newhalen and Iliamna. Local residents' concerns centered around caribou, and particularly the Mulchatna Herd. They expressed concern about overharvest of the herd by nonlocal hunters, and were also concerned about lichen being too thin to support the formerly large herd of caribou near the Mulchatna River. They indicated that lichen was thicker around the Nushagak River, and felt that the herd may not return to the Mulchatna River for 10 years.<sup>73</sup>

In addition to caribou, sockeye salmon are an important subsistence resource in Newhalen, as they return in great numbers to the Newhalen River. Other salmon species are also used for subsistence purposes, along with trout and Arctic grayling. In addition, harbor seals are utilized for subsistence purposes by Newhalen residents.<sup>74</sup> Iliamna Lake is home a freshwater population of harbor seals.<sup>75</sup> Local subsistence hunters harvest a small number of these seals each year.<sup>76,77</sup>

In 2004, the only year between 2000 and 2010 that a full focused household subsistence survey was conducted by ADF&G in the community of Newhalen, 99% of households were recorded as participating in salmon subsistence, 70% in halibut subsistence, 52% in marine mammal subsistence, 56% in marine invertebrate subsistence, and 61% in non-salmon fish subsistence (other than halibut). The per capita annual subsistence harvest of land and sea based resources in Newhalen was 691 lb in 2004. In addition, ADF&G reported that 85% of households surveyed in 2008 participated in salmon subsistence that year. Information about per capita subsistence harvest and subsistence participation by household and species is presented in Table 12.

Information about subsistence salmon permits is available for six years between 2000 and 2008. During this period, the number of subsistence salmon permits issued to Newhalen households varied between 20 and 32. Sockeye salmon was by far the most heavily harvested salmon species in the area. Information about subsistence salmon harvest is presented in Table 13, along with information regarding marine invertebrate and non-salmon fish subsistence use by residents of Newhalen. The 2004 ADF&G subsistence household survey found that a total of 312 lb of marine invertebrates and 3,887 lb of non-salmon fish were harvested in 2004. ADF&G also

---

<sup>72</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>73</sup> Fall, J. A., D. L. Holen, B. Davis, T. Krieg, and D. Koster (2006). *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

<sup>74</sup> Ibid.

<sup>75</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>76</sup> Ibid.

<sup>77</sup> Withrow, David and Kymberly Yano, Jennifer Burns, Courternay Gomez, and Tatiana Askoak. 2011. *Freshwater Harbor Seals of Lake Iliamna, Alaska. Do They Pup and Over-Winter in the Lake?* Poster presented at the 2011 Alaska Marine Science Symposium. Retrieved January 18, 2012 from [ftp://ftp.afsc.noaa.gov/posters/pWithrow04\\_freshwater-seals\\_2011.pdf](ftp://ftp.afsc.noaa.gov/posters/pWithrow04_freshwater-seals_2011.pdf).

reported harvest of 13,572 lb of non-salmon fish by New Stuyahok residents in 2003 (Table 13). Specific species of marine invertebrates harvested by Newhalen residents in 2004 included butter, horse, Pacific littleneck, pinkneck, razor, and freshwater clams, mussels, cockles, scallops, Dungeness, Tanner, and king crab, octopus, and shrimp. Specific species of non-salmon fish harvested by Newhalen residents included Arctic char, Dolly Varden char, rainbow and lake trout, humpback, broad, and round whitefish, burbot, black, red, and unknown rockfish, lingcod, Pacific cod, unknown cod, sablefish, walleye pollock, wolf fish, smelt, least cisco, sucker, stickleback (needlefish), unknown pike, unknown flounder, unknown sole, unknown sturgeon, unknown greenling, and unknown shark. Species harvested by the highest percentage of Newhalen households included Dolly Varden, grayling, rainbow trout, pike, and lake trout. It is of note that a number of species were reported as used by additional households that did not engage directly in harvest, suggesting that they received these fish through sharing networks.<sup>78</sup>

No information was reported by the NMFS regarding the number of Subsistence Halibut Registration Certificates (SHARC) issued to residents of Newhalen between 2003 and 2010 (Table 14), despite the fact that ADF&G reported a high percentage of households participating in halibut subsistence (Table 12). Some information about subsistence harvest of marine mammals was reported in several years during the 2000-2010 period. According to data reported by NMFS, a small number of beluga whales were harvested in 5 different years during the decade. No information was reported by management agencies regarding subsistence harvest of sea otter, walrus, polar bear, Steller sea lion, harbor seal, or spotted seal (Table 15), although harbor seals are a known subsistence resource locally.

Table 12. Subsistence Participation by Household and Species, Newhalen: 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	99%	70%	52%	56%	61%	691
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	85%	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).

<sup>78</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 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Newhalen: 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	20	19	31	45	n/a	n/a	3,023	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	13,572
2004	32	29	105	n/a	n/a	n/a	15,565	312	3,887
2005	20	17	n/a	n/a	n/a	n/a	6,574	n/a	n/a
2006	20	16	n/a	n/a	n/a	n/a	6,338	n/a	n/a
2007	20	16	n/a	n/a	n/a	n/a	6,338	n/a	n/a
2008	31	29	1	11	n/a	8	7,698	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, Newhalen: 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, Newhalen: 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	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	3	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	1	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	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