

## **White Mountain**



### **People and Place**

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

White Mountain is located on the west bank of the Fish River, near the head of Golovnin Lagoon, on the Seward Peninsula. It is 63 miles east of Nome. The area encompasses 1.8 square miles of land and 0.2 square miles of water. The City was incorporated in 1969, is located in the Nome Census Area, and is not under the jurisdiction of a borough.

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

In 2010, there were 190 residents, ranking White Mountain 202<sup>nd</sup> of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew by 5.6%. Between 2000 and 2009, the population fell by 0.5% with an average annual growth rate of -0.5%, which was less than the statewide average of 0.75% and indicative of very little population growth. In a survey conducted by NOAA's Alaska Fishery Science Center (AFSC) in 2011, community leaders reported that there were an estimated 209 to 225 permanent residents living in White Mountain in 2010. This estimate significantly varied from the 2010 Decennial Census, and more closely resembles the 2009 Alaska Department of Labor and Workforce Development (DOLWD) 2009 estimate. On average, seasonal workers live in White Mountain between June and October, and seasonal population peaks are mostly driven by employment in fisheries sectors. Information regarding population trends can be found in Table 1.

White Mountain's racial composition is predominately Ibaohiufmuit Eskimo, although there are historical influences by Kawerak and Yup'ik Eskimos. In 2010, 81.6% of residents identified themselves as American Indian or Alaska Native, compared to 83.7% in 2000; 12.1% identified themselves as White, compared to 13.3% in 2000; and 6.3% identified themselves as two or more races, compared to 2.5% in 2000. In addition, 1.1% of residents identified themselves as Hispanic or Latino in 2010, compared to 0.5% in 2000. Information regarding trends in race and ethnicity can be found in Figure 1.

In 2010, the average household size was 2.92, compared to 3.10 in 1990 and 2.94 in 2000. In that year there were a total of 79 housing units, compared to 69 in 1990 and 75 in 2000. Of the households surveyed in 2010, 58% were owner-occupied, compared to 71% in 2000; 24% were renter-occupied, compared to 21% in 2000; 18% were vacant, compared to 1% in 2000; and 0% were occupied seasonally, compared to 7% in 2000.

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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>.

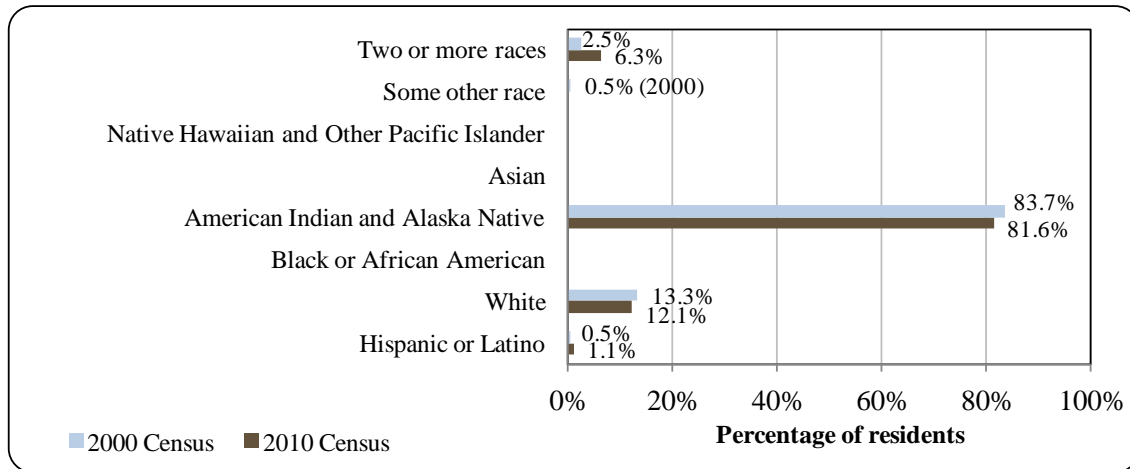
Table 1. Population in White Mountain from 1990 to 2010 by Source.

Year	U.S. Decennial Census <sup>1</sup>	Alaska Dept. of Labor Estimate of Permanent Residents <sup>2</sup>
1990	180	-
2000	203	-
2001	-	203
2002	-	210
2003	-	214
2004	-	213
2005	-	224
2006	-	224
2007	-	214
2008	-	191
2009	-	202
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, White Mountain: 2000-2010 (U.S. Census).



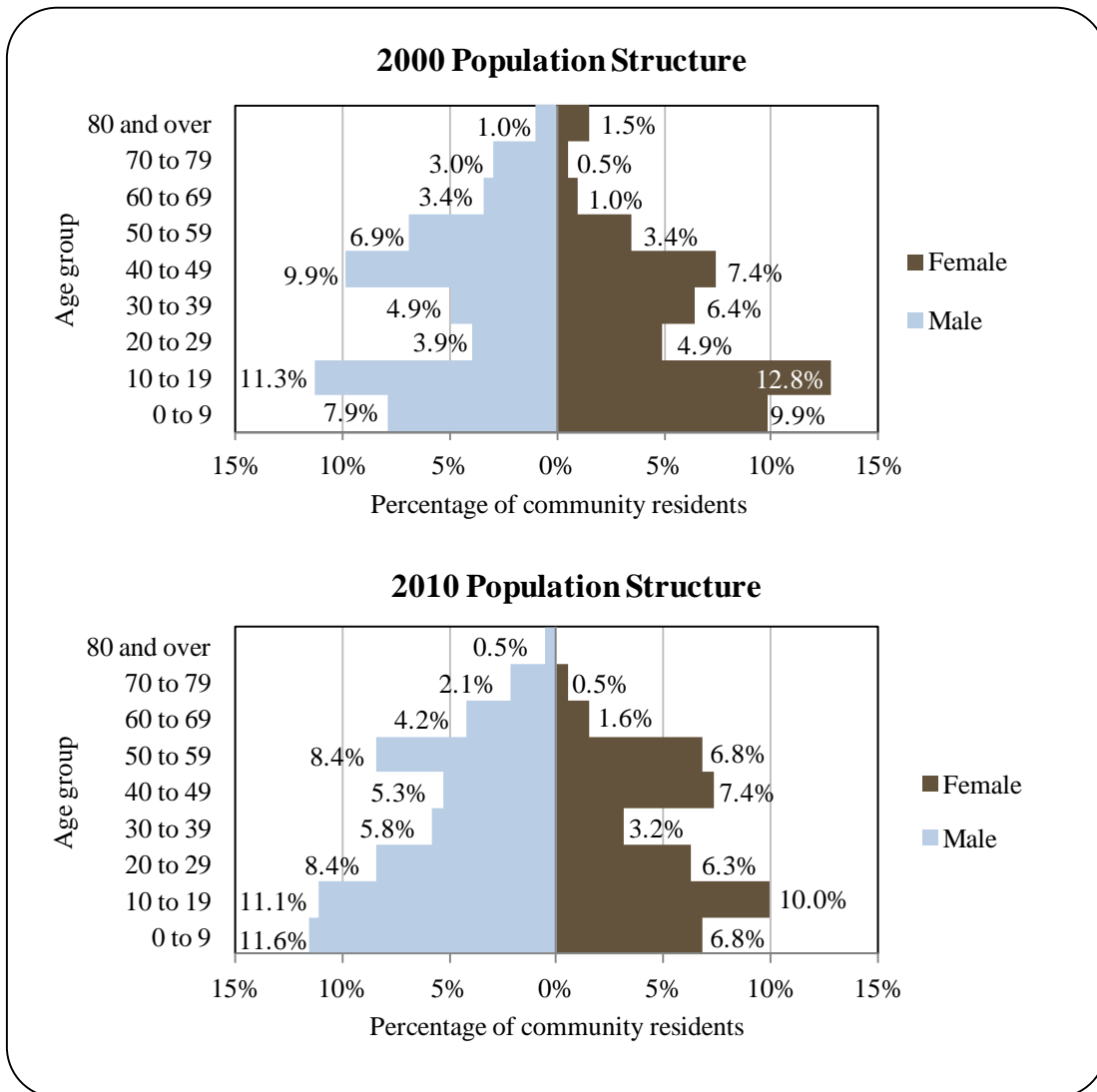
Gender distribution in 2010 was skewed towards males at 57.4% male and 42.6% female. This was less even than both the distribution statewide (52.0% male, 48.0% female), and distribution in 2000 (52.2% male, 47.8% female). The median age in 2010 was 27.2 years, which was younger than both the statewide median of 33.8 years and 2000 median of 29.3 years.

Overall, the population structure was expansive in both 2000 and 2010. Compared with 2000, cohorts in 2010 loosely retained their structural character as they aged, possibly indicating a relatively stable population. In that year, 39.5% of residents were under the age of 20, compared to 41.9% in 2000; 8.9% were over the age of 59, compared to 10.4% in 2000; 36.9%

were between the ages of 30 and 59, compared to 38.9% in 2000; and 14.7% were between the ages of 20 and 29, compared to 8.8% in 2000.

Gender distribution by age cohort was slightly less even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 0 to 9 range (11.6% male, 6.8% female), followed by the 30 to 39 (5.8% male, 3.2% female) and 60 to 69 (4.2% male, 1.6% female) ranges. Of those three, the greatest relative gender difference occurred within the 60 to 69 range (Figure 2).

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



In terms of educational attainment, the 2006-2010 American Community Survey (ACS)<sup>3</sup> estimated that 84.8% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 7.6% of residents had less than a ninth grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 7.6% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 26.1% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; and an estimated 5.4% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

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

The Seward Peninsula was the backbone of the Bering Land Bridge that once connected Asia with North America during the last Ice Age. Indigenous people settled the area over 4,000 years ago, and their ethnicity is reflected in the area's demographics. Siberian Yupik people made their home on St. Lawrence Island and Malemiut, Kauweramiut and Unalikiut Ekimos have occupied the Seward Peninsula historically, mostly around areas of abundant resources. Western Union surveyors seeking a route across Alaska and the Bering Sea reported gold around nearby Council in 1867. However, it was not until a major strike at Anvil Creek in the fall of 1898 that rumors of gold became widespread. By 1899, over 8,000 prospectors flocked to the area, and by 1900, nearby Nome had swelled to over 20,000 residents.<sup>4</sup>

Formerly the location of the Eskimo village of *Nutchirviq*, White Mountain grew during the gold rush of the early twentieth century. During that time, an influx of prospectors led to the establishment of the first non-Native structures including a warehouse built by Charles Lane to store supplies for his nearby gold claim. The warehouse later became the site of a government-subsidized orphanage, which became an industrial school in 1926. A Russian Orthodox Church was built in 1920 and the Covenant Church was built in 1937. A post office was opened in 1932, and a Tribal government was organized following the Indian Reorganization Act in 1939.<sup>5</sup>

There is an ancient village site 15-18 miles upriver from White Mountain. There are also a few grave sites in or near town. Ski trails are located on a valued historical recreational site to regional village.<sup>6</sup>

## **Natural Resources and Environment**

White Mountain has a transitional climate with less extreme seasonal and daily temperatures than Interior Alaska. Continental influences prevail in the ice-bound winter.

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<sup>3</sup> While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

<sup>4</sup> City of Nome (2003). *Nome Comprehensive Plan*. Retrieved August 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Nome-CP-2005.pdf>.

<sup>5</sup> Northwest Planning and Grants Development (2004). *Community Strategic Development Plan for White Mountain 2004-2024*. Retrieved August 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/WhiteMountain-EDP-2003.pdf>.

<sup>6</sup> Mikulski, P. (2008). *White Mountain Local Economic Development Plan 2008-2012*. Kawerak Inc. Retrieved August 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/WhiteMountain-EDP-2008.pdf>.

Average summer temperatures range from 43 to 80 °F (6 to 27 °C); winter temperatures average -7 to 15 °F (-22 to -9 °C). Annual precipitation averages 15 inches, with 60 inches of snow. The Fish River freezes up in November; break-up occurs in mid to late May.<sup>7</sup>

White Mountain lies at the edge of a large drainage basin which transitions into Golovnin Lagoon. To the north and east, White Mountain is surrounded by high, rolling hills covered with evergreen trees, willow, berry bushes, grass, and moss. To the south and west of the community lie the Fish River and a low, wet tundra marsh that drains the highlands of the Seward Peninsula.<sup>8</sup> Large areas of wetlands and tidal flats line the northwest end of Golovnin Lagoon to the south. Southern lowland soils consist of sands and gravels. Upland soils around White Mountain tend to be poorly drained, with a peaty surface layer and shallow permafrost.<sup>9</sup>

Vegetation on the Seward Peninsula is principally tundra, with alpine dryas-lichen tundra and barrens at high elevations and moist sedge-tussock tundra at lower elevations. Patches of low-growing ericaceous and willow-birch shrubs occur on better-drained areas. Vegetation in White Mountain is generally limited to evergreen trees, alder, cottonwood, and willow trees. Understory groundcover include berry bushes, wild flowers, lichens, shrubs, mosses, low bush berries, and various grasses. Local residents harvest a variety of berries, roots, mushrooms, and greens. Since 2005, there has been increasing concern of the impacts of birch-bark beetles. Infested wood have been a growing fire hazard in the area.<sup>10</sup>

Terrestrial wildlife includes moose, caribou, wolf, lynx, wolverine, beaver, and porcupine. Fish species include all five species of Pacific salmon, whitefish, lingcod, tomcod, smelt, pike, and trout. Marine mammal species include seal and beluga whale. No critical habitat areas, National Wildlife Refuges, or sanctuaries are present in the area surrounding White Mountain.<sup>11</sup>

There are no large scale mineral extraction projects in the immediate area of White Mountain. However, there are several active claims near the community including a gold deposit at Daniels Creek to the west and an inactive placer gold site and uranium occurrence near Eagle Creek to the east.<sup>12</sup>

Locally, subsistence and recreational natural resources are most abundant. A wide variety of subsistence foods are available, including birds, eggs, berries, plants, fish, and marine and terrestrial mammals. The vast tundra and wetland ecosystem provides protection from wind and snowdrifts. Local forests provide small scale timber harvesting opportunities. Tourism opportunities include fishing, sight-seeing, camping, hiking, and biking. There is also potential for the development of ski trails. Gravel resources are also abundant in the area.<sup>13</sup>

White Mountain lies in seismic risk zone three, which is subject to earthquakes of a magnitude 6.0 or greater. There is no record historically of damage in White Mountain from earthquakes or tsunamis. The community is subjected to ice-jams and stream-overflow flooding

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<sup>7</sup> Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from [http://www.commerce.state.ak.us/dca/commdb/CF\\_BLOCK.htm](http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm).

<sup>8</sup> Mikulski, P. (2008). *White Mountain Local Economic Development Plan 2008-2012*. Kawerak Inc. Retrieved August 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/WhiteMountain-EDP-2008.pdf>.

<sup>9</sup> Mikulski, P. (2009). *Golovin Local Economic Development Plan 2009-2013*. Kawerak Inc. Retrieved August 9, 2012 from: <http://www.kawerak.org/ledps/golovin.pdf>.

<sup>10</sup> See footnote 8.

<sup>11</sup> Ibid.

<sup>12</sup> U.S. Geological Survey (n.d.). *Distribution of Mineral Occurrences: Solomon Quadrangle*. Retrieved August 9, 2012 from: [http://ardf.wr.usgs.gov/ardf\\_data/Solomon.pdf](http://ardf.wr.usgs.gov/ardf_data/Solomon.pdf).

<sup>13</sup> See footnote 8.

from the Fish River. The U.S. Army Corps of Engineers reports that there is a low frequency of flooding at White Mountain and has found the community to be in a low flood hazard area. Seasonal low river levels have the potential to delay barge shipments and fuel deliveries.<sup>14</sup>

According to the Alaska Department of Environmental Conservation (DEC), there were no significant environmental remediation projects active in 2010. However, there were several less significant cleanup projects active including a diesel fuel spill at the White Mountain Washeteria and diesel contamination at a drum disposal site.<sup>15</sup>

## Current Economy<sup>16</sup>

White Mountain's economy is dependent on subsistence hunting and fishing, and most residents spend the entire summer at fish camps. Salmon, other fish, beluga whale, seal, moose, reindeer, and brown bear are utilized. The main sources of local employment include the Tribal government, city, school, Native store, and private guiding businesses. Seasonal employment includes construction, firefighting, and commercial fishing.<sup>17</sup>

In 2010,<sup>18</sup> the estimated per capita income was \$15,749 and the estimated median household income was \$29,375, compared to \$10,034 and \$25,833 in 2000. However, after adjusting for inflation by converting 2000 values into 2010 dollars,<sup>19</sup> the real per capita income (\$13,195), and real median household income (\$33,980) indicates that while individual earnings increase, household earnings declined. In 2010, White Mountain ranked 193<sup>rd</sup> of 305 communities from which per capita income was estimated, and 250<sup>th</sup> of 299 communities from which median household income was estimated.

White Mountain's small population size may have prevented the ACS from accurately portraying economic conditions.<sup>20</sup> A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by DOLWD.<sup>21</sup> According to the ALARI database, residents earned \$1.80 million in total wages in 2010.<sup>22</sup> When matched with the 2010 Decennial Census population, the estimated per capita income equals \$9,459, which was less than the per capita income reported by the U.S. Census in 2000 (when adjusted for inflation). This is

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<sup>14</sup> Ibid.

<sup>15</sup> Alaska Dept. of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved August 9, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

<sup>16</sup> Unless otherwise noted, all monetary data are reported in nominal values.

<sup>17</sup> Northwest Planning and Grants Development (2004). *Community Strategic Development Plan for White Mountain 2004-2024*. Retrieved August 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/WhiteMountain-EDP-2003.pdf>.

<sup>18</sup> U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

<sup>19</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>20</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>21</sup> ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

<sup>22</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/>.

supported by the fact that the community was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.<sup>23</sup>

According to 2006-2010 ACS estimates,<sup>24</sup> 51.7% of residents aged 16 and over were part of the civilian workforce in 2010, compared to an estimated 62.9% of Alaskan residents overall. In that year, unemployment was estimated at 16.1%, compared to an estimated 5.9% statewide; and an estimated 38.3% of residents were living below the poverty line, compared to an estimated 9.5% of Alaskan residents overall. However, it should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy. Of those employed in 2010, an estimated 41.2% worked in the private sector, an estimated 54.9% worked in the public sector, and an estimated 3.9% were self-employed.

By industry, most (35.3%) of those employed were estimated to work in public administration sectors; followed by education services, health care, and social assistance sectors (23.5%); construction sectors (13.7%); retail trade sectors (11.8%); and other service sectors (11.8%) (Figure 4).<sup>25</sup> Between 2000 and 2010, there was a strong proportional declines in education services, healthcare, and social assistance sectors in favor of a more diversified economy.<sup>26</sup> However, White Mountain’s small population size may have impacted the ability of the ACS to accurately gather a representative sample of the community’s economic character. According to 2010 ALARI estimates,<sup>27</sup> most (64.9%) employed residents worked in local government sectors; followed by education and health service sectors (20.2%); and trade, transportation, and utility sectors (6.4%). By occupation type, most (35.3%) of employed residents were estimated to hold management or professional positions; followed by service positions (27.5%); sales or office positions (23.5%); and natural resources, construction, or maintenance positions (13.7%) (Figure 4). Between 2000 and 2010, there was a significant proportional decline in the number of service positions, as well as a significant proportional increase in the number of natural resources, construction, and maintenance positions.

No individuals who were surveyed by the 2006-2010 ACS characterized themselves as working in natural resource based occupations or industries that include fishing. Data reported in the *Commercial Fishing* section below may support ACS estimates since no commercial permits were actively fished in 2010.

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<sup>23</sup> Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: [www.denali.gov](http://www.denali.gov).

<sup>24</sup> See footnote 20.

<sup>25</sup> U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

<sup>26</sup> Ibid.

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

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

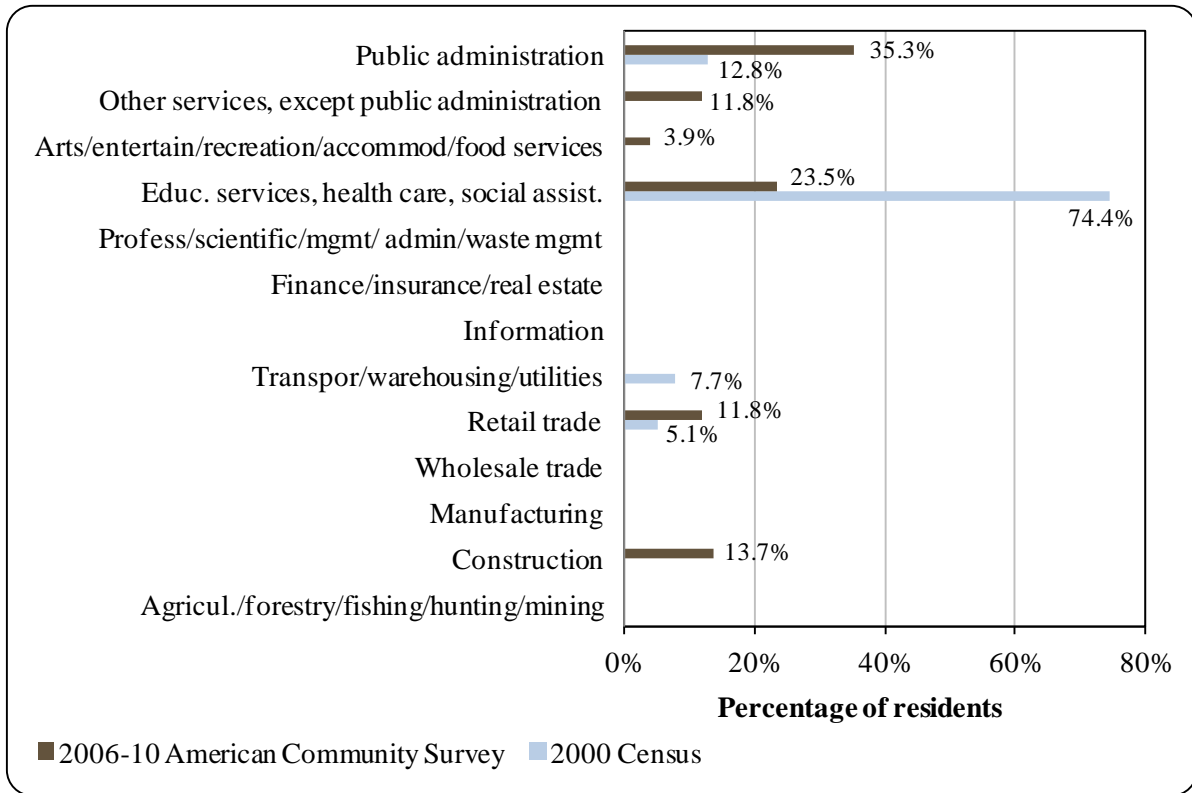
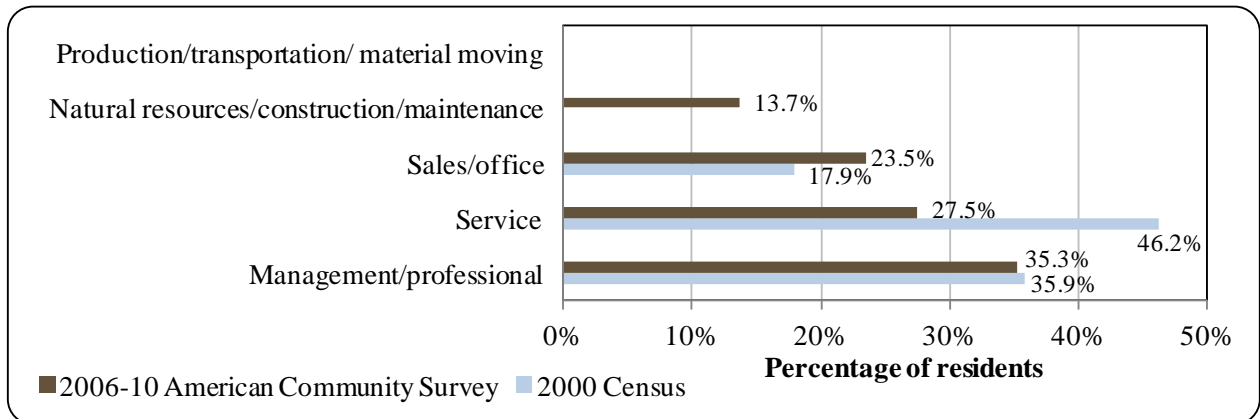


Figure 4. Local Employment by Occupation in 2000-2010, White Mountain (U.S. Census).





## Governance

White Mountain is a Second-class city with a mayoral form of government. In addition, there is a U.S. Bureau of Indian Affairs recognized Tribal government. The local Alaska Native Claims Settlement Act (ANCSA) chartered village council is White Mountain Native Corporation. The regional ANCSA chartered for-profit corporation is the Bering Straits Native Corporation and the regional ANCSA chartered non-profit corporation is Kawerak Inc. The closest Alaska Department of Fish and Game (ADF&G) and U.S. Bureau of Citizenship and Immigration Services offices are located in Nome, 63 miles west. The closest National Marine Fisheries Service (NMFS) office is located in Anchorage, 480 miles southeast.

The City of White Mountain administered a 1% sales tax in 2010. Total municipal revenue figures were taken from Certified Financial Statements, with the exception of 2003 which was referenced by audit.<sup>28</sup> When adjusted for inflation,<sup>29</sup> total municipal revenues increased by 2.9% between 2000 and 2010 from \$877,012, to \$1.18 million. Revenues varied significantly between 2000 and 2010, reaching their peak in 2009 at \$1.45 million, and their lowest in 2002 at \$454,416. In 2010, locally generated revenues accounted for 62.7% of total municipal revenues. In that year, most (80.7%) locally generated revenues were collected from enterprise sources including utilities, water/sewer, fuel sales, and cable television charges. Rentals contributed 6.2% of local revenues, while finance charges and contracted services contributed 4.1% and 3.8%, respectively. Most (65.1%) outside revenues were collected from Norton Sound Economic Development Corporation (NSEDCC) grants and state grants for a elementary school demolition project. Other sources of outside revenues include state allocated Community Revenue Sharing, payments in lieu of taxes, and library grants. Overall, Community Revenue Sharing accounted for 9.0% of the total municipal budget in 2010, compared to 2.7% from State Revenue Sharing in 2000. In addition, sales taxes accounted for 1.2% of total revenues that year, compared to less than one-percent in 2000. Federal and state fisheries-related grants awarded to White Mountain between 2000 and 2010 included \$101,298 for a bulk fuel storage project, and \$38,716 for a fish/meat cutting facility. Information regarding municipal finances can be found in Table 2.

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<sup>28</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/dkra/commfin/CF\\_FinRec.cfm](http://www.commerce.state.ak.us/dkra/commfin/CF_FinRec.cfm).

<sup>29</sup> Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of White Mountain 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	\$887,012	\$3,750	\$24,129	\$50,000
2001	\$795,144	\$3,750	\$23,260	\$27,660
2002	\$454,416	\$7,965	\$23,256	n/a
2003	\$581,498	n/a	\$23,377	n/a
2004	\$1,068,382	\$16,646	-	n/a
2005	\$1,053,832	\$6,864	-	n/a
2006	\$979,358	\$14,176	-	\$23,638
2007	\$691,989	\$9,126	-	n/a
2008	\$1,063,034	\$16,733	-	\$38,716
2009	\$1,449,197	\$19,574	\$104,213	n/a
2010	\$1,180,148	\$14,713	\$105,744	n/a

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

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

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

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

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

## Infrastructure

### *Connectivity and Transportation*<sup>30</sup>

Access to White Mountain is by air and sea. There are no roads. The 3,000-foot long by 60-foot wide gravel runway is operated by the state, and scheduled flights are available daily from Nome. Roundtrip airfare between Anchorage and White Mountain in June 2012 was \$702.<sup>31</sup> Airline services include Bering Air, ERA Alaska, and Ryan Air Service. There is no dock in the village; supplies are lightered from Nome and offloaded on the beach. Cargo barges cannot land at White Mountain.

### *Facilities*

Water is derived from a well near the Fish River and is treated. Forty-eight (48) households and facilities are connected to the piped water and sewer system. Eighteen (18) additional households haul honeybuckets. The school operates its own water and sewer system. Accommodations include the high school, city office guest room, and the village council office

<sup>30</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>31</sup> Airfare was calculated using lowest fare. Retrieved November 7, 2011 from: [www.travelocity.com](http://www.travelocity.com).

Bed and Breakfast. Public safety services are provided by local Village Public Safety Office. Fire and rescue services are provided by White Mountain volunteer fire department. Additional public facilities include a community building and two libraries. Communication services include local and long distance telephone, internet, local and cable television, and local radio.<sup>32</sup>

In a survey conducted by the AFSC in 2011, community leaders reported that infrastructure projects completed between 2000 and 2010 included a fish cleaning station, barge landing area, water and sewer pipelines, diesel generator, sewage treatment, water treatment, new landfill site, community center/library improvements, fire department improvements, school improvements, telephone service improvements, and post office improvements. Infrastructure projects underway as of 2010 included broadband internet service, airport improvements, alternative energy projects, public safety improvements, and emergency response improvements. Fisheries-related businesses and services available in White Mountain include fishing gear sales, boat repair (welding), recreational fishing vessel moorage, tackle sales, fish lodges, fishing related bookkeeping, water taxi services, air taxi services, and sport fish guide services. Additional public services include publicly-subsidized housing. Residents typically travel to Nome, Golovin, and Anchorage for services not available locally.

### *Medical Services*<sup>33</sup>

The Natchirsvik Health Clinic provides basic health care. There are several local health aides, and a public health nurse visits annually to conduct vaccinations. A medical doctor and a physical therapist visit bi-annually to White Mountain to see patients. Physician's assistants visit every two months. Eye doctors, dentists, and audiologists visit annually. The closest hospital is located in Nome.

### *Educational Opportunities*<sup>34</sup>

White Mountain School provides preschool through 12<sup>th</sup> grade instruction. As of 2011, there were 52 students enrolled and 11 teachers.

## **Involvement in North Pacific Fisheries**

### *History and Evolution of Fisheries*

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on the Seward Peninsula. Settlements on the west coast of the Peninsula targeted marine mammals, and other people moved between seasonal settlements to

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<sup>32</sup> See footnote 30.

<sup>33</sup> Northwest Planning and Grants Development (2004). *Community Strategic Development Plan for White Mountain 2004-2024*. Retrieved August 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/WhiteMountain-EDP-2003.pdf>.

<sup>34</sup> Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

access fish and wildlife resources. Today, residents of White Mountain are active in subsistence and recreational fishing.<sup>35</sup>

Commercial salmon fisheries began to develop shortly after the purchase of Alaska by the U.S. in 1867. However, the Norton Sound commercial salmon fishery developed later than in other regions of the State. In 1959 and 1960, biologists from the Division of Commercial Fisheries conducted an inventory of salmon resources and determined that harvestable surpluses were present in several Norton Sound river systems. They encouraged processors to develop the fishery after statehood as part of an effort to bring economic benefits to this area of rural Alaska. The first commercial harvest occurred in 1961, and salmon markets in the area have been sporadic since that time. Harvests increased through the 1990s, and have declined since then.<sup>36</sup>

Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s.<sup>37</sup> Commercial exploitation of halibut and groundfish first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed fishing vessels to undertake longer trips.<sup>38</sup> King crab fisheries developed in the Bering Sea beginning in the 1950s. Norton Sound is one of the historical centers of this fishery.<sup>39</sup>

Norton Sound has the northernmost fisheries for both Pacific herring and red king crab. Although the Norton Sound herring spawning biomass has been relatively stable in recent times, the market for herring roe has declined due to decreasing consumption of herring roe in Japan. Processor interest in the Norton Sound sac roe fishery has declined more than in other areas of the State, largely due to the timing of the fishery, which takes place later than sac roe fisheries elsewhere in the state and conflicts with the opening of the first salmon fisheries of the season. In addition, ice floes are often present in Norton Sound during the herring season.<sup>40</sup> In contrast, the Norton Sound red king crab stock has shown an increasing trend since a population low in the 1990s, and today provides small summer and winter fisheries. NMFS and ADF&G jointly manage Bering Sea king crab stocks.<sup>41</sup> Nome king crab fishermen hold both state-issued king crab permits and permits used to participate in the Community Development Quota (CDQ) king crab fishery. The CDQ program “allocates a percentage of all Bering Sea and Aleutian Island quotas for groundfish, prohibited species, halibut, and crab to eligible communities.”<sup>42</sup> In this region, communities are represented by the NSEDC.

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<sup>35</sup> Scientific Technical Committee, Norton Sound Steering Committee (2003). *Research and Restoration Plan for Norton Sound Salmon*. Retrieved February 21, 2012 from <http://69.93.224.39/~aykssi/wp-content/uploads/NS-RR-Plan-rev.pdf>.

<sup>36</sup> Clark, McGregor, Mecum, Krasnowski and Carroll (2006). *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from [http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1\\_p4.pdf](http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf).

<sup>37</sup> Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

<sup>38</sup> Thompson, William F. and Norman L. Freeman (1930). *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

<sup>39</sup> See footnote 37.

<sup>40</sup> Ibid.

<sup>41</sup> Alaska Dept. of Fish and Game (2012). *Red King Crab Species Profile*. Retrieved June 20, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=redkingcrab.main>.

<sup>42</sup> NOAA Fisheries (n.d.). *Community Development Quota (CDQ) Program*. Retrieved June 20, 2012 from <http://www.fakr.noaa.gov/cdq/default.htm>.

According to a survey conducted by the AFSC in 2011, community leaders reported that residents participate in salmon fisheries from mid-June through September. However, there is very limited commercial fishing in White Mountain, and most participate solely in recreational or subsistence fisheries. In addition, community leaders reported that White Mountain does not participate directly in the fisheries management process in Alaska. However, NSEDC does represent White Mountain's interests as their CDQ entity.

White Mountain is located within Federal Reporting Area 514, International Pacific Halibut Commission Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District.

### *Processing Plants*

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

### *Fisheries-Related Revenue*

White Mountain received very little in fisheries-related revenue between 2000 and 2010 (Table 3). In 2010, \$128 was collected from raw fish taxes and Shared Fisheries Business Tax, compared to \$373 in 2000. Fisheries-related revenue peaked in 2006 at \$377. In addition, White Mountain also received \$100,000 from its CDQ entity in 2010, according to a survey conducted by the AFSC in 2011.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

### *Commercial Fishing*

Commercial fishing is not practiced in White Mountain, as evidenced by the lack of permit activity between 2001 and 2010 noted in Table 4. In 2010, three residents, or 1.5% of the population, held three salmon permits issued by the Commercial Fisheries Entry Commission (CFEC); although none were actively fished. In 2000, five residents held a total of five CFEC permits; three of which were for salmon, and two for crab. In that that year, only one salmon permit was actively fished. That year was also the only year permits were actively fished between 2000 and 2010. Between 2000 and 2010, no residents held Federal Fisheries Permits, of License Limitation Program permits. In addition, no residents participated in the halibut, crab, or sablefish catch share programs during this period (Tables 6 to 8).

In 2010, one resident held a commercial crew license, compared to none in 2000. In addition, no residents held primary ownership of any vessels (Table 5). No landings were reported in White Mountain between 2000 and 2010 (Table 9). No landings were reported by residents in 2010, and landings reported in 2000 are considered confidential (Table 10).

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax <sup>1</sup>	\$320	n/a	\$158	\$158	\$157	\$62	\$188	\$188	\$188	\$80	\$58
Shared Fisheries Business Tax <sup>1</sup>	\$53	\$109	\$158	n/a	\$62	\$157	\$188	\$148	\$80	\$58	\$69
Fisheries Resource Landing Tax <sup>1</sup>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax <sup>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
<i>Total fisheries-related revenue<sup>4</sup></i>	<i>\$373</i>	<i>\$109</i>	<i>\$316</i>	<i>\$158</i>	<i>\$219</i>	<i>\$219</i>	<i>\$377</i>	<i>\$336</i>	<i>\$268</i>	<i>\$138</i>	<i>\$128</i>
<i>Total municipal revenue<sup>5</sup></i>	<i>\$887,012</i>	<i>\$795,144</i>	<i>\$454,416</i>	<i>\$581,498</i>	<i>\$1.07 M</i>	<i>\$1.05 M</i>	<i>\$979,358</i>	<i>\$691,898</i>	<i>\$1.06 M</i>	<i>\$1.45 M</i>	<i>\$1.18 M</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).

NOAA-TM-AFSC-259 – Volume 12  
Community Profiles for North Pacific Fisheries – Alaska: White Mountain

Table 4. Permits and Permit Holders by Species, White Mountain: 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	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) <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	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits <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	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) <sup>2</sup>	Total permits	2	1	1	1	1	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	2	1	1	1	1	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	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) <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	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
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	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, White Mountain: 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	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) <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	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) <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	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) <sup>2</sup>	Total permits	3	3	3	3	3	3	3	3	3	3	3
	Fished permits	1	0	0	0	0	0	0	0	0	0	0
	% of permits fished	33%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	3	3	3	3	3	3	3	3	3	3	3
<i>Total CFEC Permits<sup>2</sup></i>	<i>Permits</i>	<i>5</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>
	<i>Fished permits</i>	<i>1</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>% of permits fished</i>	<i>20%</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>Permit holders</i>	<i>5</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</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 White Mountain: 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 White Mountain <sup>2</sup>	Total Net Pounds Landed in White Mountain <sup>2,5</sup>	Total Ex-Vessel Value of Landings in White Mountain <sup>2,5</sup>
2000	0	0	0	4	5	0	0	\$0
2001	0	0	0	3	3	0	0	\$0
2002	0	0	0	3	2	0	0	\$0
2003	0	0	0	3	2	0	0	\$0
2004	2	0	0	3	2	0	0	\$0
2005	1	0	0	0	0	0	0	\$0
2006	1	0	0	0	0	0	0	\$0
2007	1	0	0	0	0	0	0	\$0
2008	3	0	0	0	0	0	0	\$0
2009	6	0	0	0	0	0	0	\$0
2010	1	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 in White Mountain: 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 White Mountain: 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 White Mountain: 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 White Mountain: 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 White Mountain 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
Finfish	--	--	--	--	--	0	0	0	0	0	0
Halibut	--	--	--	--	--	0	0	0	0	0	0
Herring	--	--	--	--	--	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
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
<i>Total<sup>2</sup></i>	--	--	--	--	--	0	0	0	0	0	0
	<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
Finfish	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
Herring	--	--	--	--	--	\$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
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
<i>Total<sup>2</sup></i>	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0

*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 pounds refers to the landed weight recorded in fish tickets.

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

*Recreational Fishing*

Recreational fishing is practiced in the community, although participation is minimal. At least one licensed sport fish guide was present in the community in all years of the 2000-2010 period except 2009, although no active sport fish guide businesses were registered in any year of the decade. However, nearby Alaskan Northwest Adventures specializes in grayling fly fishing on the Niukluk River. Private angler fishing is equally minimal. In 2010, 16 sport fishing licenses were sold in White Mountain, and residents held a total of 30 sport fishing licenses, compared to 10 and 12 in 2000, respectively. This indicates that residents are travelling to other communities to undertake recreational fishing activities. The number of sport fishing licenses held by residents peaked in 2002 at 53 (Table 11).

White Mountain is located in the Seward Peninsula-Norton Sound ADF&G Harvest Survey Area which includes all waters north of the Yukon River drainage and south of the Selawik River Drainage. In 2010, there were 77 total saltwater angler days fished in the region, compared to 2,859 in 2000. In that year, non-Alaska residents accounted for 55.8% of saltwater angler days fished in the region, compared to 6.9% in 2000. Although annual Alaska resident saltwater angler days fished varied between 2000 and 2010, there was a significant decline in 2010 compared to previous years. Also in 2010, there was a total of 10,533 freshwater angler days fished, compared to 15,584 in 2000. Of that total, non-Alaska residents accounted for 41.1%, compared to 24.3% in 2000. Information regarding sport fishing trends can be found in Table 11.

According to ADF&G harvest survey records, local private anglers target coho salmon and Pacific halibut.<sup>43</sup> In a survey conducted by the AFSC in 2011, private anglers also target pink, chum, and Chinook salmon, and trout. Recreational fishing is conducted by private boat owned by both local residents, and non-residents.

Table 11. Sport Fishing Trends, White Mountain: 2000-2010.

<b>Year</b>	<b>Active Sport Fish Guide Businesses<sup>1</sup></b>	<b>Sport Fish Guide Licenses<sup>1</sup></b>	<b>Sport Fishing Licenses Sold to Residents<sup>2</sup></b>	<b>Sport Fishing Licenses Sold in White Mountain<sup>2</sup></b>
2000	0	4	12	10
2001	0	2	46	29
2002	0	5	53	23
2003	0	5	49	16
2004	0	6	37	34
2005	0	2	46	22
2006	0	2	49	26
2007	0	3	46	28
2008	0	1	49	10
2009	0	0	42	8
2010	0	1	30	16

<sup>43</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).

Table 11 cont'd. Sport Fishing Trends, White Mountain: 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	196	2,663	3,789	11,795
2001	64	988	2,087	7,816
2002	94	1,650	4,321	12,260
2003	30	1,530	3,632	7,211
2004	204	497	4,183	8,439
2005	56	1,940	8,307	6,764
2006	90	1,400	3,547	12,535
2007	49	530	3,688	12,400
2008	n/a	655	3,761	17,579
2009	133	897	4,198	11,995
2010	43	34	4,334	6,199

<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/sport\\_fishingsurvey/](http://www.adfg.alaska.gov/sf/sport_fishingsurvey/) (Accessed September 2011).

### Subsistence Fishing

Subsistence fishing is an important part of community life in White Mountain. Subsistence fishing has been practiced widely by the areas inhabitants for thousands of years and by the 19<sup>th</sup> century, the Niukluk River community *Iialuit* was a prominent fish camp. Chum and pink salmon harvests are cyclical with more chum salmon being harvested on odd years. Beach seines are the most popular type of gear for catching salmon; however, set gill nets and rods and reels are also used. In a community survey conducted in 2011, elders commented that salmon harvests had been in decline over the years.<sup>44</sup>

The community's economy depends on subsistence fishing, hunting, and gathering; and most residents spend the entire summer at fish camps.<sup>45</sup> ADF&G subsistence data are limited, and information on subsistence participation by household is unavailable (Table 12). However, in a survey conducted by the AFSC in 2011, community leaders reported that pink salmon, crab,

<sup>44</sup> Magdanz, J. S.; Tahbone, S.; Kamletz, K.; and Ahmasuk, A. (2001). *Subsistence Salmon Fishing by Residents of Nome, Alaska, 2001*. Technical Paper 274. Retrieved August 10, 2012 from: <http://alaska.fws.gov/asm/pdf/fisheries/reports/01-224final.pdf>.

<sup>45</sup> Northwest Planning and Grants Development (2004). *Community Strategic Development Plan for White Mountain 2004-2024*. Retrieved August 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/WhiteMountain-EDP-2003.pdf>.

and chum salmon are the three most important subsistence resources to residents of White Mountain.

ADF&G does report use of marine resources for subsistence at the community level. Of the species listed by ADF&G in Table 13, while all five species of salmon are used, residents report harvesting pink salmon most often; followed by chum, coho, Chinook, and sockeye salmon. In 2010, residents reported harvesting 5,667 salmon, compared to 7,941 in 2000. In each year (with the exception of 2001 and 2007), pink salmon were harvested at a significant majority.

Halibut are not fished extensively for subsistence purposes by White Mountain residents. Between 2003 and 2007, one residents held a Subsistence Halibut Registration Certificate (SHARC) although no halibut was reported harvested in any of those years (Table 14). No specific harvest data are available for marine mammals (Table 15).

### Additional Information

In a survey conducted by the AFSC in 2011, community leaders reported that current challenges facing the portion of White Mountain’s economy based on fishing included the cost of fishing gear, catch limits, low harvest levels, and the lack of a local commercial fishing industry. Fisheries policies or management actions that have had a positive influence on the community include conservation and escapement practices that have ensured that most fish are allowed to return and spawn. Negative influences include bag limits that create a difficult environment for residents who are dependent on fisheries.

Table 12. Subsistence Participation by Household and Species, White Mountain: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

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

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

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, White Mountain: 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	67	65	120	289	932	6,600	n/a	n/a	n/a
2001	65	63	21	2,083	557	1,497	4	n/a	n/a
2002	65	59	27	706	581	6,014	n/a	n/a	n/a
2003	62	56	79	961	131	4,484	n/a	n/a	n/a
2004	55	55	21	404	318	6,941	6	n/a	n/a
2005	60	59	20	1,083	406	5,892	5	n/a	n/a
2006	48	48	24	440	685	6,253	4	n/a	n/a
2007	54	53	101	2,342	524	2,022	214	n/a	n/a
2008	56	56	59	78	886	4,644	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, White Mountain: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	1	n/a	n/a
2004	1	n/a	n/a
2005	1	n/a	n/a
2006	1	n/a	n/a
2007	1	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, White Mountain: 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.