# Alakanuk (ah-LUCK-uh-nuck)

# **People and Place**

## Location<sup>1</sup>



Alakanuk is located at the east entrance of Alakanuk Pass, the major southern channel of the Yukon River, 15 mi from the Bering Sea. It is part of the Yukon Delta National Wildlife Refuge (YDNWR). It lies 8 mi southwest of Emmonak, approximately 162 mi northwest of Bethel and 492 mi west of Anchorage. It is the longest village on the lower Yukon; the development stretches over a 3-mi area along the pass. The area encompasses 32.4 sq mi of land and 8.7 sq mi of water. The community was incorporated as a Second-class city in 1969, is located in the Wade Hampton Census Area, and is not organized within a borough.

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

In 2010, there were 677 residents, ranking Alakanuk 91<sup>st</sup> of 352 Alaskan communities in terms of population size. Between 1990 and 2010 the population grew by 24.4%. Between 2000 and 2009, the population grew by 5.2% with an average annual growth rate of 0.37%, slightly less than the statewide average of 0.75% and indicative of a slowing rate of growth. However, in a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that the population of Alakanuk was in excess of 800 permanent residents; a notable difference when compared to U.S. Census figures. Alakanuk typically sees an influx of seasonal workers from June through October, with the population peaking in June. Population peaks are entirely driven by employment in fisheries sectors. Information regarding population trends can be found in Table 1.

The population of Alakanuk was predominately Yup'ik Eskimo in 2010. In that year 95.0% of residents identified themselves as American Indian or Alaska Native, compared to 95.4% in 2000; 2.5% identified themselves as two or more races, compared to 2.5% in 2000; 2.1% identified themselves as White, compared to 2.0% in 2000; and 0.4% identified themselves as Asian, compared to 0.2% in 2000. Information regarding racial and ethnic composition can be found in Figure 1.

In 2010, the average household size in Alakanuk was 4.23, compared 4.5 in 1990 and 4.69 in 2000. In that year, the total number of housing units was 186, compared to 140 in 1990 and 160 in 2000. Of the households surveyed in 2010, 59% were owner-occupied, compared to 66% in 2000; 27% were renter-occupied, compared to 21% in 2000; 13% were vacant, compared to 13% in 2000; and 1% was occupied seasonally, compared to 0% in 2000. There have not been any reports of anyone living in group quarters since 1990.

<sup>&</sup>lt;sup>1</sup> Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF\_BLOCK.htm.

<sup>&</sup>lt;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.

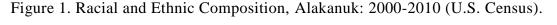
The gender distribution in Alakanuk was almost equal in 2010, at 50.7% male and 49.3% female. This was more even than both the statewide (52% male, 48% female) and 2000 (52.6% male, 47.4% female) distributions. The 2010 median age of 21.1 years was much younger than the statewide median (38.8 years) and slightly older than 20.4 years in 2000.

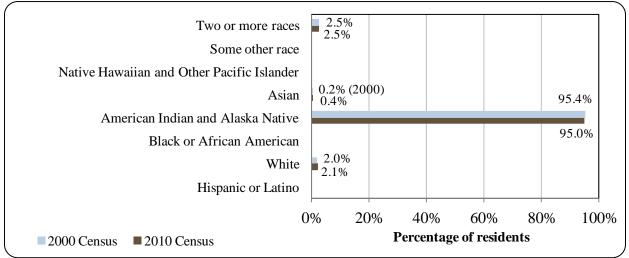
Year	U.S. Decennial Census <sup>1</sup>	Alaska Dept. of Labor Estimate of Permanent Residents <sup>2</sup>
1990	544	-
2000	652	-
2001	-	652
2002	-	658
2003	-	662
2004	-	669
2005	-	677
2006	-	664
2007	-	679
2008	-	670
2009	-	686
2010	677	-

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

<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.





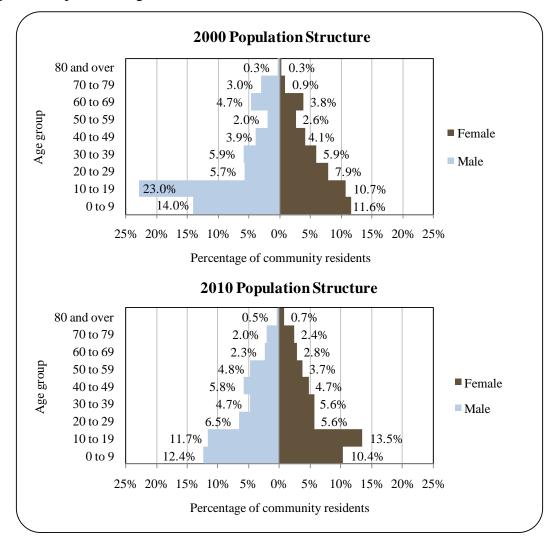


Figure 2. Population Age Structure in Alakanuk, 2000 and 2010 U.S. Decennial Census.

When compared with 2000, the population structure in 2010 was slightly less expansive with 48% of residents under the age of 20 years, compared to 59.3% in 2000. Also in that year, 10.7% of residents were over the age of 59, compared to 13.0% in 2000; 29.3% were between the ages of 30 and 59, compared to 24.4% in 2000; and 12.1% were between the ages of 20 and 29, compared to 13.6% in 2000.

Gender distribution by age cohort was significantly more even in 2010 than in 2000, with modest female biases among most age ranges. The greatest absolute gender difference in 2010 occurred in the 0 to 9 range (12.4% male, 10.4% female), followed by the 10 to 19 (13.5% female, 11.7% male) and 50 to 59 (4.8% male, 3.7% female) ranges. Of those three, the greatest proportional difference occurred in the 50 to 59 range. Information regarding population structure can be found in Figure 2.

According to the U.S. Census' 2006-2010 American Community Survey (ACS),<sup>3</sup> an estimated 75.3% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 16% of residents had less than a 9<sup>th</sup> grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 8.7% had a 9<sup>th</sup> to 12<sup>th</sup> grade education, but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 28.3% of Alaska residents overall; an estimated 3% held an Associate's degree, compared to an estimated 8% of Alaska residents overall; an estimated 3% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 4.6% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

## History, Traditional Knowledge, and Culture

Evidence of occupation of the Lower Yukon Delta and coastal regions date back approximately 3,000 years to the Norton Tradition of Yup'ik, although evidence of occupation in the mountainous regions to the south may date back 6,000 to 8,000 years.<sup>4</sup> Trade routes with the Chukchis of Siberia predated European contact, and by the time Russian fur traders set up trading posts in the area an extensive trade network throughout the Norton Sound had already been established.<sup>5</sup> The village of Pastuliarraq, next to the Pastolik River east of present day Kotlik, became a trading hub for region trading over 36,000 lbs of beluga whale oil annually.

The flow of goods between Alaska and Siberia was so extensive that a Russian trading post at St. Michael was built in hopes of intercepting trade.<sup>6</sup> By the mid- to late nineteenth century, these routes were dismantled due to smallpox and influenza epidemics as well as the emergence of St. Michael as an economic center.<sup>7</sup> Alakanuk was first reported in 1899, by G.R. Putnam of the U.S. Coast and Geodetic Survey.

Originally settled by a Yup'ik shaman named Anguksuar and his family, Alakanuk means "wrong way" in Yup'ik. A Catholic mission school was built near the village, but was relocated to St. Mary's in 1948 at which time many families moved from the old school site to Alakanuk.<sup>8</sup> Today, Alakanuk depends heavily on subsistence practices, which sustains the community both economically and culturally. The sale, importation, and possession of alcohol is prohibited.

<sup>&</sup>lt;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>&</sup>lt;sup>4</sup> Shaw, R. D. (1998). An Archaeology of the Central Yupik: a Regional Overview for the Yukon-Kuskokwim Delta, Northern Bristol Bay, and Nunivak Island. *Arctic Anthropology*, *35*(1), 234-246.

<sup>&</sup>lt;sup>5</sup> Griffin, D. (1996). A Culture in Transition: a History of Acculturation and Settlement near the Mouth of the Yukon River, Alaska. *Arctic Anthropology*, *33*(1), 98-115.

<sup>&</sup>lt;sup>6</sup><sub>7</sub> Ibid.

<sup>&</sup>lt;sup>7</sup> Ibid.

<sup>&</sup>lt;sup>8</sup> Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF\_BLOCK.htm.

# **Natural Resources and Environment**

The climate of Alakanuk is subarctic, averaging 60 inches of snowfall and 19 inches of total precipitation per year. Temperatures range from -25 to 79 °F (-32 to 26 °C). Heavy winds are frequent during the fall and winter. The Yukon River is used as an ice road during freeze-up, from November through May.<sup>9</sup>

Alakanuk is located within the YDNWR, which occupies 26 million acres of the Yukon-Kuskokwim (Y-K) Delta region.<sup>10</sup> The local topography consists of shallow relief floodplains dotted with many lakes, sloughs, and old riverbeds. Soils are poorly drained coastal deposits, and a permafrost layer can generally be found at a depth of three feet. The delta's lowland tundra is dominated by wetlands and meadows supporting primarily sedges, forbs, and shrubs.<sup>11</sup> The YDNWR provides habitat for many types of terrestrial and aquatic wildlife. Terrestrial species include shrews, bats, rabbits, squirrels, mice, porcupines, wolves, foxes, lynx, bears, weasels, moose, caribou, and muskox. Aquatic mammals include walrus, seals, sea lions, and whales. Fish species include all five types of Pacific salmon, trout, smelt, lamprey, cisco, whitefish, stickleback, sheefish, char, blackfish, pike, perch, grayling, halibut, sole, flounder, greenling, and sculpin.<sup>12</sup>

Natural hazards threatening Alakanuk include severe storm events, flooding, river bank erosion and destabilization, and wildfires.<sup>13</sup> Ice jams on the Yukon River often flood the area and local buildings have been retrofitted with stilts to combat inundation. Several buildings have had to be relocated due to flooding and erosion,<sup>14</sup> and approximately 25 homes are currently threatened.<sup>15</sup> Severe storms often affect utilities, resulting in outages.

While there are no U.S. Environmental Protection Agency (EPA) established superfund sites in the area, the Alaska Department of Environmental Conservation (DEC) had been conducting a cleanup operation of petroleum contaminants left over from a now shuttered Alaska National Guard site as of 2010.<sup>16</sup>

# **Current Economy**<sup>17</sup>

Alakanuk's economy is heavily dependent on subsistence, commercial fishing, and public sector employment. In a survey conducted by the AFSC in 2011, community leaders stressed the importance of subsistence and commercial fishing to the community's economy.

<sup>&</sup>lt;sup>9</sup> Ibid.

<sup>&</sup>lt;sup>10</sup> U.S. Fish and Wildlife Service. (2009). Yukon Delta National Wildlife Refuge Contaminant Assessment. Retrieved December 13, 2011 from: http://alaska.fws.gov/fisheries/contaminants/pdf/cap\_yukon\_delta.pdf.

<sup>&</sup>lt;sup>11</sup> U.S. Forest Service. (1992). *The Alaska Vegetation Classification*. Retrieved December 13, 2011 from:

http://www.fs.fed.us/pnw/publications/pnw\_gtr286/pnw\_gtr286a.pdf.

<sup>&</sup>lt;sup>12</sup> U.S. Fish and Wildlife Service. (2008). *The Yukon Delta National Wildlife Refuge*. Retrieved December 13, 2011 from: http://yukondelta.fws.gov/fish.htm.

<sup>&</sup>lt;sup>13</sup> URS. (2007). City of Alakanuk Hazard Mitigation Plan. Retrieved December 13, 2011 from:

http://commerce.alaska.gov/dca/planning/nfip/Hazard Mitigation Plans/Alakanuk HMP.pdf.

<sup>&</sup>lt;sup>14</sup>Federal Emergency Management Administration. (2009). *Superfund Sites*. Retrieved December 13, 2011 from: http://www.ak-prepared.com/plans/mitigation/documents/Alakanuk%20BestPractice.pdf.pdf.

<sup>&</sup>lt;sup>15</sup> See footnote 8.

<sup>&</sup>lt;sup>16</sup>Alaska Department of Environmental Conservation. (n.d.). Contaminated Sites Program. Retrieved December 13, 2011 from: http://146.63.9.103/applications/spar/ccreports/Site\_Report.aspx?Hazard\_ID=3060 <sup>17</sup> Unless otherwise noted, all monetary data are reported in nominal values.

Top employers<sup>18</sup> for 2010 included: Lower Yukon School District, Kwikpak Fisheries LLC, Alakanuk City Council, Alakanuk Native Corp., the Native Village of Alakanuk, AVCP Housing Authority, Rural AK Community Action Program, DF Jorgensen Company, Association of Village Council Presidents, and Knik Construction Inc.

In 2010,<sup>19</sup> the estimated per capita income was \$14,929 and the estimated median household income was \$34,375, compared to \$6,884 and \$26,356 in 2000, respectively. However, after accounting for inflation by converting 2000 values into 2010 dollars,<sup>20</sup> the real per capita income (\$9,052) and real median household income (\$34,645) indicate that while individual earnings increased, household earnings remained unchanged. In 2010, Alakanuk ranked 204<sup>th</sup> of 305 communities from which per capita income was estimated, and 218<sup>th</sup> of 299 communities from which median household income was estimated. However, it should be noted that income statistics are based on wage income and other money sources. Therefore, relatively low income or high poverty rates reported in the ACS do not consider the value of subsistence in the local economy.

Alakanuk's small population size may have prevented the 2006-2010 ACS from accurately portraying economic conditions.<sup>21</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 the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, total wages earned by residents in 2010 was \$4.01 million.<sup>22</sup> When compared with the 2010 population, the estimated per capita income of \$5,926 indicates a decline in individual earnings compared to values reported by the U.S. Census in 2000.<sup>23</sup> In addition, Alakanuk 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. 24

According to 2006- 2010 ACS estimates,<sup>25</sup> 60.5% of residents aged 16 and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 19.9%, compared to an estimated 5.9% statewide; and an estimated 21.5% of residents were living below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed in the civilian labor force, an estimated 37% worked in the private sector while an estimated 63% worked in the public sector.

By industry, most (49.6%) of those employed were estimated to be working in education services, health care, and social assistance sectors in 2010; followed by arts, entertainment, recreation, accommodation, and food service sectors (12.6%) and retail trade sectors (11.9%). By occupation type, most (41.5%) of those employed in 2010 were estimated to hold management or

<sup>&</sup>lt;sup>18</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>&</sup>lt;sup>19</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>&</sup>lt;sup>20</sup> Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, http://labor.alaska.gove/research/cpi/inflationcalc.htm).

<sup>&</sup>lt;sup>21</sup> See footnote 3.

<sup>&</sup>lt;sup>22</sup> ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include selfemployed or federally employed residents.

<sup>&</sup>lt;sup>23</sup> See footnote 18.

<sup>&</sup>lt;sup>24</sup> Denali Commission. (2011). Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov. <sup>25</sup> See footnote 3.

professional positions; followed by service positions (23%), sales or office positions (19.3%), natural resources, construction, or maintenance positions (13.3%), and production, material moving, or transportation positions (3%). According to 2010 ALARI figures,<sup>26</sup> most (35.3%) employed residents were estimated to work in local government sectors; followed by trade, transportation, and utilities sectors (20.0%); manufacturing sectors (14.6%); and other undisclosed sectors (12.5%). Information regarding employment trends can be found in Figures 3 and 4.

Overall, the 2006-2010 ACS purported significant declines in public administration, transportation, warehousing, and utilities sectors and significant increases in arts, entertainment, recreation, accommodation, and food service sectors between 2000 and 2010. However, it should be noted that sampling techniques may not have captured the true scope of industry representation. This may account for the extreme variances reported in some sectors for those years.

No individuals characterized themselves as working in natural resource based industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

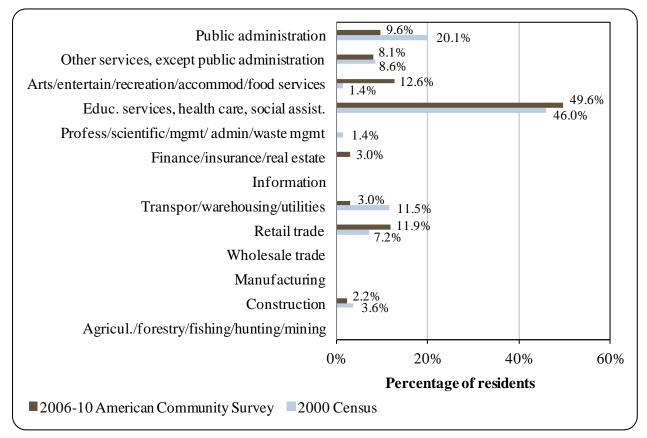


Figure 3. Local Employment by Industry in 2000-2010, Alakanuk (U.S. Census Bureau).

<sup>&</sup>lt;sup>26</sup> See footnote 18.

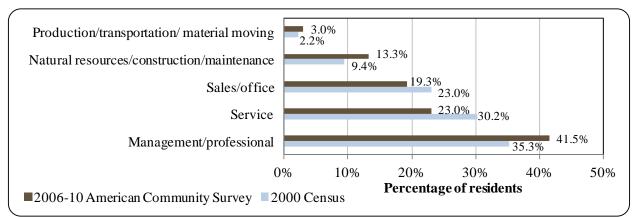


Figure 4. Local Employment by Occupation in 2000-2010, Alakanuk (U.S. Census Bureau).

# Governance

Alakanuk is a Second-class city consisting of a mayoral form of government. In addition, there is a U.S. Bureau of Indian Affairs (BIA) recognized Tribal government and an Alaska Native Claims Settlement Act (ANCSA) recognized village corporation (Alakanuk Native Corporation). The regional ANCSA Corporation representing Alakanuk is the Calista Corporation. The regional ANCSA non-profit corporation is the Association of Village Council Presidents. The closest Alaska Department of Fish and Game (ADF&G) and Bureau of Citizenship and Immigration Services offices are located in Nome, 128 mi north. The closest National Marine Fisheries Service (NMFS) office is located in Bethel, 162 mi south.

In 2010, the city administered a 4% sales tax. Total municipal revenues for that year was \$1.17 million, compared to \$798,771 in 2000; representing a 13.1% increase in total revenues after accounting for inflation.<sup>27</sup> Municipal revenues peaked in 2008 at \$1.49 million, and were at their lowest in 2002, at \$104,332. Between 2000 and 2003, Alakanuk collected an annual average of \$30,951 in State Revenue Sharing. In addition, the community collected approximately \$130,000 in Community Revenue Sharing in both 2009 and 2010. Federal and state grants received between 2000 and 2010 included \$131,160 in federal disaster relief for flood and erosion mitigation (Table 2).

<sup>&</sup>lt;sup>27</sup> Inflation calculated using Anchorage CPI for 2010 from Alaska DOL: http://labor.alaska.gov/research/cpi/cpi.htm.

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	\$798,771	\$88,872	\$29,000	n/a
2001	\$816,428	\$112,800	\$27,556	n/a
2002	\$104,322	\$56,579	\$27,600	n/a
2003	\$715,566	n/a	\$39,650	n/a
2004	\$645,584	\$0	-	n/a
2005	\$363,661	\$95,259	-	n/a
2006	\$365,615	\$92,532	-	n/a
2007	\$945,982	\$57,463	-	n/a
2008	\$1,492,488	\$57,463	-	\$47,080
2009	\$858,364	n/a	\$131,095	\$41,080
2010	\$1,168,441	\$150,981	\$130,179	\$43,000

# Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community ofAlakanuk From 2000 to 2010.

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

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

<sup>2</sup>Alaska Department of 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.

<sup>3</sup>Alaska Department of Revenue (n.d.). (2000-2009) Taxes and Fees Annual Report. Retrieved April 15, 2011from 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>3</sup>Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011from http://www.commerce.state.ak.us/dca/commdb/CF\_Grants.htm.

# Infrastructure

## Connectivity and Transportation

A state-owned and -managed 2,200-ft long by 55-ft wide gravel airstrip is available. Alakanuk is easily accessible from the Yukon River and Bering Sea by barge and riverboat. Most passengers and mail arrive by air. There are no roads connecting Alakanuk with other population centers in the region, but ice roads are used in winter. Snowmobiles and boats are used for local travel.<sup>28</sup> Alakanuk is approximately 8 mi from Emmonak and 12 mi from Sheldon Point. Roundtrip airfare between Anchorage and Alakanuk in June 2012 was \$840.<sup>29</sup>

# Facilities<sup>30</sup>

The city operates the piped water and sewer system and the central watering point. Approximately 90% of homes are connected. There is a sewage lagoon available for individuals to dump their "honeybuckets". The city council is the policy-making body for the utility. Water

<sup>&</sup>lt;sup>28</sup> Alaska Department of Communty and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF\_BLOCK.htm.

<sup>&</sup>lt;sup>29</sup> Airfare was calculated using lowest fare from www.travelocity.com. (Retrieved November 22, 2011).

<sup>&</sup>lt;sup>30</sup> See footnote 28.

is derived from the Alakanuk Slough and is treated, stored in a tank, and piped to most of the community. The landfill is active.

In a survey conducted by the AFSC in 2011, community leaders reported that port facilities in Alakanuk include 125 ft of dock space capable of mooring vessels up to 100 ft in length, although typically only vessels under 35 ft in length homeport in the community. In addition, facilities are equipped to handle rescue vessels, hazardous materials, cargo vessels, and fuel barges. Facilities in progress as of 2010 included a barge landing area, new dock space, dock improvements, new pilings, broadband internet, and roads. Fisheries related businesses and services located within the community include commercial and recreational fishing moorage, dry dock storage, boat fuel sales, and fishing gear storage. Public services available in the community include medical services, food bank, subsidized housing, sauna, and washeteria.

## Medical Services<sup>31</sup>

Medical services are provided by the Alakanuk clinic, a primary care facility and Community Health Aid Program (CHAP) site. Long-term and acute care is provided in Nome and Bethel.

# Educational Opportunities<sup>32</sup>

There is currently one school in Alakanuk providing pre-school through twelfth grade instruction. As of 2011, there were 229 students enrolled and 16 teachers.

# **Involvement in North Pacific Fisheries**

# History and Evolution of Fisheries<sup>33</sup>

The history and evolution of fisheries in Alakanuk is largely based on subsistence and commercial fishing within the Yukon Delta region. The salmon fishery is the largest commercial fishery in which residents participate, although other finfish species are targeted as well.

An attempt at creating a commercial salmon fishery at the mouth of the Yukon River first occurred between 1918 and 1924; however, it was halted because of negative impacts to upriver subsistence fisheries. A smaller commercial salmon fishery began in the 1930s and was later expanded in the 1960s. Commercial fishing peaked in the 1970s and 1980s and became integrated with the region's subsistence economy. Local residents held the majority of commercial fishing permits and operated within small family-based groups. Catch was sold to third-party buyers and income was reinvested into the local subsistence economy.

Salmon runs crashed in the 1990s with near complete shutdowns of the Yukon River commercial fisheries. Because of low salmon runs and strict escapement rules, many local commercial fishermen were unable to fish their permits and much of the Yukon drainage was declared an economic disaster area in 1998 and 2001.

<sup>&</sup>lt;sup>31</sup> Ibid.

<sup>&</sup>lt;sup>32</sup> Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from http://eed.alaska.gov/stats/.

<sup>&</sup>lt;sup>33</sup> Wolfe, R. J.; Scott, C. (2010). *Continuity and Change in Salmon Harvest Patterns, Yukon River Drainage, Alaska.* Final Report for Study 07-253, U.S. Fish and Wildlife Service.

In a survey conducted by the AFSC in 2011, community leaders reported that commercial salmon seasons typically run from June through August. The community itself participates in the fisheries management process through assigning representatives to ADF&G regional fisheries advisory/working groups as well as participating in the Federal Subsistence Board/Regional Advisory Council process. In addition, the community is eligible to participate in the Community Development Quota (CDQ) program and is represented by the Yukon Delta Fisheries Development Association (YDFDA). The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.<sup>34</sup> Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ. Alakanuk is located within Federal Reporting Area 514, International Pacific Halibut Commission (IPHC) regulatory area 4E, and the Bering Sea Sablefish Reporting District.

## **Processing Plants**

According to the 2010 ADF&G Intent to Operate list, Alakanuk did not have a registered processing plant. Kwikpak operates a seafood processor located in Emmonak, 8 mi to the northeast.

#### Fisheries-Related Revenue

The amount of municipal fisheries-related revenue Alakanuk received between 2000 and 2010 was minimal, indicating that it does not constitute a significant part of Alakanuk's annual budget. In 2010, \$99 was collected from Shared Fisheries Business Taxes, and \$9,000 was collected from public dock usage fees. In a survey conducted by the AFSC in 2011, community leaders reported that the community did not receive any funds from their representative CDQ entity in 2010, nor does the community administer any fisheries related fees to support local fisheries infrastructure. Information regarding fisheries-related revenue can be found in Table 3.

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**

Since the 1990s, commercial fishing has been relatively depressed due to fishing restrictions and low fish runs. In addition, there are limited buyers on the Lower Yukon, making it difficult to sell landings. Seafood processors at Emmonak and St. Mary's provide the only market for Lower Yukon commercial fishermen, which is a significant reduction in processing capacity compared to previous years. Salmon prices are also depressed compared to previous years, and many residents claim they can no longer make a living from commercial fishing alone. Additional pressures including gear restrictions, fishery closures, and fuel prices contribute to economic hardships in the area.

<sup>&</sup>lt;sup>34</sup> Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from <a href="http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch\_shares/Fina\_CatchShare\_411.pdf">http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch\_shares/Fina\_CatchShare\_411.pdf</a>.

In 2010, 83 residents, or 12.3% of the population, held a total of 84 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). Salmon made up 88% of CFEC permits issued in 2010, compared to 92% in 2000. In that same year, "other" finfish made up 7%, compared to 0% in 2000; herring made up 4%, compared to 5% in 2000; and crab made up 1%, compared to 3% in 2000. One resident held one License Limitation Program (LLP) groundfish permit and five residents held five LLP crab permits in 2010. No LLP permits were actively fished that year. In addition, no residents held halibut, sablefish, or crab quota share between 2010 and when the programs began. Fisheries prosecuted by residents of Alakanuk in 2010 included Lower Yukon gillnet salmon and statewide set gillnet fresh water finfish.<sup>35</sup>

Residents held 56 commercial crew licenses in 2010, compared to 83 in 2000. In addition, residents held majority ownership of 13 commercial vessels, compared to 7 in 2000. Overall, approximately 64% of CFEC permits held were actively fished in 2010, compared to 70% in 2000. This varied by species from 68% of salmon permits being fished, to 67% of other finfish permits. No crab or herring permits were actively fished in 2010. No landings were made in Alakanuk between 2000 and 2010. Landings made by residents of Alakanuk were considered confidential in 2010. In 2007, 16,649 lbs of salmon were landed valued at \$15,941 ex-vessel; or \$17,884 after adjusting for inflation<sup>36</sup>. Total pounds landed and ex-vessel revenue peaked in 2006, when 21,324 lbs of salmon was valued at \$19,286 ex-vessel; or \$22,129 after accounting for inflation.<sup>37</sup>

In a survey conducted by the AFSC in 2011, community leaders reported that the number of commercial vessels in the community was about the same in 2010 as it was in 2005. Gillnets are typically the only gear type used on commercial vessels homeporting in Alakanuk. Information regarding commercial fisheries trends can be found in Tables 4 through 10.

<sup>&</sup>lt;sup>35</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>&</sup>lt;sup>36</sup> Inflation calculated using 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, http://www.bls.gov/ppi/#data <sup>37</sup> Ibid.

P	••••				••••				••••	••••	
Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax <sup>1</sup>	\$194	\$68	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>	n/a	\$68	n/a	\$112	n/a	n/a	n/a	\$77	\$78	\$95	\$99
Fisheries Resource Landing Tax <sup>1</sup>	n/a	n/a	n/a	n/a							
Fuel transfer tax <sup>2</sup>	n/a	n/a	n/a	n/a							
Extraterritorial fish tax <sup>2</sup>	n/a	n/a	n/a	n/a							
Bulk fuel transfers <sup>1</sup>	n/a	n/a	n/a	n/a							
Boat hauls <sup>2</sup>	n/a	n/a	n/a	n/a							
Harbor usage <sup>2</sup>	n/a	n/a	n/a	n/a							
Port/dock usage <sup>2</sup>	n/a	n/a	n/a	\$9,000*							
Fishing gear storage on public land <sup>3</sup>	n/a	n/a	n/a	n/a							
Marine fuel sales $\tan^3$	n/a	n/a	n/a	n/a							
Total fisheries-related revenue <sup>4</sup>	\$194	\$136	n/a	\$112	n/a	n/a	n/a	\$77	\$78	\$95	\$9,099*
Total municipal revenue <sup>5</sup>	\$798,771	\$816,428	\$104,322	\$715,566	\$645,584	\$363,661	\$365,615	\$945,982	\$1.49 M	\$858,364	\$1.17 M

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

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

\* Information taken from the 2011 AFSC Alaska Community Survey.

<sup>1</sup> Alaska Department of 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.

<sup>2</sup> Alaska Department of Community 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.

<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 Community 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.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) <sup>1</sup>	Total permits	0	0	1	1	1	1	1	1	1	1	1
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	1	1	1	1	1	1	1	1	1
Crab (LLP) <sup>1</sup>	Total permits	4	4	5	5	5	5	5	5	5	5	5
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	4	4	5	5	5	5	5	5	5	5	5
Federal Fisheries	Total permits	0	0	0	0	0	0	0	0	0	0	0
Permits <sup>1</sup>	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a										
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) <sup>2</sup>	Total permits	3	3	6	3	3	3	2	2	2	2	1
	Fished permits	0	0	1	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	17%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	3	3	5	3	3	3	2	2	2	2	1
Other shellfish (CFEC) $^2$	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a										
	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										
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) <sup>2</sup>	Total permits	4	4	4	4	3	3	4	4	4	4	3
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	4	4	4	4	3	3	4	4	4	4	3

# Table 4. Permits and Permit Holders by Species, Alakanuk: 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	1	1	9	8	5	4	13	6
	Fished permits	0	0	0	0	0	6	3	4	3	5	4
	% of permits fished	n/a	n/a	n/a	0%	0%	67%	38%	80%	75%	38%	67%
	Total permit holders	0	0	0	1	1	9	8	5	4	13	6
Salmon (CFEC) <sup>2</sup>	Total permits	80	76	78	78	82	88	84	84	82	79	74
	Fished permits	61	0	65	66	69	79	73	68	60	50	50
	% of permits fished	76%	0%	83%	85%	84%	90%	87%	81%	73%	63%	68%
	Total permit holders	86	77	82	82	87	93	93	89	88	88	82
Total CFEC Permits <sup>2</sup>	Permits	87	83	88	86	89	103	98	95	92	98	84
	Fished permits	61	0	66	66	69	85	76	72	63	55	54
	% of permits fished	70%	0%	75%	77%	78%	83%	78%	76%	68%	56%	64%
	Permit holders	86	77	83	82	87	<del>9</del> 8	<u>98</u>	90	89	92	83

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

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

<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.]

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 Alakanuk <sup>2</sup>	Total Net Lbs Landed In Alakanuk <sup>2,5</sup>	Total Ex-Vessel Value Of Landings In Alakanuk <sup>2,5</sup>
2000	83	0	0	7	7	0	0	\$0
2001	3	0	0	6	8	0	0	\$0
2002	48	0	0	10	12	0	0	\$0
2003	82	0	0	10	12	0	0	\$0
2004	87	0	0	9	11	0	0	\$0
2005	11	0	0	15	16	0	0	\$0
2006	85	0	0	14	15	0	0	\$0
2007	76	0	0	24	21	0	0	\$0
2008	74	0	0	18	15	0	0	\$0
2009	50	0	0	20	18	0	0	\$0
2010	56	0	0	13	14	0	0	\$0

## Table 5. Characteristics of the Commercial Fishing Sector in Alakanuk: 2000-2010.

<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.

Year	Number of Halibut Quota Share	Halibut Quota	Halibut IFQ Allotment (pounds)
	Account Holders	Shares Held	
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

Table 6.	Halibut	Catch	Share	Program	Particit	oation l	bv 1	Residents	of	Alakanuk	: 2000-2	010.

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 Alakanuk: 2000-2010.

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

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

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

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

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

	Total Net Pounds <sup>1</sup>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
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
$Total^2$	0	0	0	0	0	0	0	0	0	0	0
		1	Ex-vessel	Value (r	nominal	U.S. doll	lars)				
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
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
$Total^2$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

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

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 lbs refers to the landed weight recorded in fish tickets. <sup>2</sup> Totals only represent non-confidential data.

	Total Net Pounds <sup>1</sup>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab											
Finfish											
Halibut											
Herring											
Other Groundfish											
Other Shellfish											
Pacific Cod											
Pollock											
Sablefish											
Salmon						15,808	21,324	16,649			
$Total^2$						15,808	21,324	16,649			
			Ex-vess	el Value	e (nomin	al U.S. do	ollars)				
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab											
Finfish											
Halibut											
Herring											
Other Groundfish											
Other Shellfish											
Pacific Cod											
Pollock											
Sablefish											
Salmon						\$13,626	\$19,286	\$15,941			
$Total^2$						\$13,626	\$19,286	\$15,941			

# Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Alakanuk Residents:2000-2010.

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

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

#### **Recreational Fishing**

Because of its remote location, non-Alaska resident sport fishing in Alakanuk is limited. In a survey conducted by the AFSC in 2011, community leaders reported that local private anglers target chum, Chinook, and coho salmon. There were no sport fish guides or charter businesses operating in the community between 2000 and 2010. In addition no sport fishing licenses were sold within the community during that time. Residents held 129 sport fishing licenses in 2010, compared to 71 in 2000.

Alakanuk is located within the Yukon River Drainage ADF&G Harvest Survey Area which includes all Yukon River drainages from the south side of the Brooks Range to the Bering Sea; and from the Canadian border to the Bering Sea; and all drainages of the Koyukuk and Alatna Rivers. In 2010, there were 9,134 total freshwater angler days fished, compared to 11,223 in 2000. In that year, non-Alaska residents accounted for 43.6% of angler days fished, compared to 29.8% in 2000. ADF&G Harvest Survey data on species targeted by local private anglers are unavailable. Information regarding sport fishing trends can be found in Table 11.

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 Alakanuk <sup>2</sup>
2000	0	0	71	0
2001	0	0	59	0
2002	0	0	84	0
2003	0	0	23	0
2004	0	0	108	0
2005	0	0	55	0
2006	0	0	98	0
2007	0	0	51	0
2008	0	0	93	0
2009	0	0	104	0
2010	0	0	129	0

Table 11. Sport	t Fishing	Trends,	Alakanuk:	2000-	-2010.
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	Saltw	ater	Freshwater		
Year	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	81	45	3,345	7,878	
2001	29	14	4,063	6,454	
2002	n/a	89	5,761	9,194	
2003	n/a	17	3,344	5,756	
2004	17	n/a	5,479	7,613	
2005	n/a	n/a	4,182	4,783	
2006	n/a	n/a	3,607	7,816	
2007	n/a	n/a	3,168	8,226	
2008	n/a	n/a	2,573	10,400	
2009	n/a	n/a	2,969	7,639	
2010	n/a	n/a	3,983	5,151	

<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/ (Accessed September 2011).

# Subsistence Fishing<sup>38</sup>

Residents of Alakanuk rely on subsistence resources extensively. In a survey conducted by the AFSC in 2011, community leaders listed fish, seals, and moose as the three most important subsistence resources targeted by residents. Salmon are a principle subsistence resource for Lower Yukon residents. Between 1961 and the 1980s, the total annual subsistence catch of Chinook salmon increased from approximately 10,000 to 20,000 fish, to approximately 40,000 to 50,000 fish. Between 1990 and 2008, Chinook harvests remained relatively stable. Annual chum salmon harvests in the area typically totaled over 150,000 fish before 1989. By 2000, the annual harvest fell to 19,300. Although chum runs have recovered, annual catches do not meet the number necessary for subsistence uses. Total coho salmon harvests increased from around 5,000 to 10,000 fish in the 1960s, to 30,000 to 40,000 by the 1980s. Coho harvests declined during the 1990s to levels barely supporting local subsistence needs.

In 2008, Alakanuk residents reported harvesting 9,193 salmon total, compared to 8,002 salmon in 2000. Reported salmon harvests peaked in 2007 at 11,105 fish. Gill nets are the dominant gear type used in harvesting salmon. In a 2008 survey, 75% of Alakanuk respondents reported problems meeting subsistence needs, and 65% reported that fewer salmon had caused changes for households. Fish camps are less popular with Lower Yukon communities, and only 15% of surveyed residents reported using them. This may be attributed to decline in fish trap and fish wheel use by Lower Yukon residents, reducing to need to maintain traps from a remote location. Declining commercial fishing activity and increasingly common fishery closures might also have contributed to the declining use of fish camps.

Many families on the Lower Yukon River prefer to harvest Chinook and summer chum salmon soon after river ice break-up. Additional subsistence harvesting also takes place as needed during commercial fishing seasons. Management practices typically try to limit harvesting during early runs following break-up in order to achieve escapement goals early; while still allowing opportunities for subsistence harvesting. However, Alakanuk residents report that schedules often fall short of supplying subsistence users with sufficient salmon.

Per capita harvest of wild foods was 322 lbs in 2007. Chinook salmon accounted for 13.8% of harvested wild foods. In addition, summer chum accounted for 22.3%, fall chum accounted for 9.7%; and coho salmon accounted for less than 2.0%. Finally, terrestrial mammals accounted for 18.2% while marine mammals accounted for 20.2% of wild food harvested that year. Halibut are not a substantial contributor to Alakanuk's subsistence economy. Only one resident held a Subsistence Halibut Registration Certificate (SHARC) between 2006 and 2008. No halibut was reported harvested during those years. In addition, an estimated 106 beluga whales were harvested between 2000 and 2006, with beluga whale harvests peaking in 2005 at 37 whales. According to ADF&G's *Community Subsistence Information System*,<sup>39</sup> residents have also harvested or used bearded seal, ringed seal, spotted seal, Steller sea lion, blackfish, whitefish, burbot, cisco, eel, herring, Pacific cod, pike, sculpin, sheefish, smelt, and stickleback. Information regarding subsistence resources can be found in Tables 12 through 15.

<sup>&</sup>lt;sup>38</sup> Wolfe, R. J.; Scott, C. (2010). *Continuity and Change in Salmon Harvest Patterns, Yukon River Drainage, Alaska.* Final Report for Study 07-253, U.S. Fish and Wildlife Service.

<sup>&</sup>lt;sup>39</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).

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

	Table 12. Subsistence	Participation by	Household and S	pecies, Alakan	uk: 2000-2010.
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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-<br/>Salmon Fish, Alakanuk: 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	152	32	1,109	6,771	84	38	n/a	n/a	n/a
2001	144	45	973	7,024	414	n/a	n/a	n/a	n/a
2002	131	39	1,773	7,860	183	130	n/a	n/a	n/a
2003	126	30	1,712	5,768	258	n/a	n/a	n/a	n/a
2004	124	58	1,328	7,569	209	233	n/a	n/a	n/a
2005	123	51	860	6,314	322	49	n/a	n/a	n/a
2006	123	47	690	8,414	101	115	n/a	n/a	n/a
2007	125	54	1,257	8,959	857	32	n/a	n/a	n/a
2008	123	48	1,238	7,304	157	494	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).

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	1	n/a	n/a
2007	1	n/a	n/a
2008	1	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Table 14. Subsistence Halibut Fishing Participation, Alakanuk: 2003-2010.

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, Alakanuk: 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	9	n/a	n/a	n/a	n/a	n/a	n/a
2001	13	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	32	n/a	n/a	n/a	n/a	n/a	n/a
2005	37	n/a	n/a	n/a	n/a	n/a	n/a
2006	15	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.
 Anabarage, Alaska, Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Informatice Information Network for Ala

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.

# **Additional Information**

In a survey conducted by the AFSC in 2011, community leaders expressed concern over regulations pertaining to salmon bycatch in the Bering Sea pollock fishery. Specifically, community leaders expressed concern over the rolling "hot spot" system as bycatch limitation.