

## **Tanana (TAN-uh-naw)**



### **People and Place**

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

Tanana is located in Interior Alaska about two miles west of the junction of the Tanana and Yukon Rivers; 130 mi west of Fairbanks. The community encompasses 11.6 square miles of land and 4.0 square miles of water. Tanana is incorporated as a First-class city, is located in the Yukon-Koyukuk Census Area, and is not under the jurisdiction of a borough.

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

In 2010, there were 246 inhabitants in Tanana, ranking it the 179<sup>th</sup> largest of 352 total Alaskan communities with recorded populations that year. Overall, the population declined by 29.0% between 1990 and 2010. Tanana’s population decreased by 18.51% between 2000 and 2009, with an average annual growth rate of -1.31%, indicating a slow rate of decline. The change in population from 1990 to 2010 is provided in Table 1.

Tanana is a traditional Athabascan community. In 2010, 86.6% of residents identified themselves as American Indian or Alaska Native, compared to 79.9% in 2000. Also in that year, 9.8% of residents identified themselves as White, compared to 17.9% in 2000; 0.4% identified themselves as Asian, compared to 0% in 2000; 2.8% identified themselves as two or more races, compared to 2.3% in 2000; and 0.4% identified themselves as some “other” race, compared to 0% in 2000. In addition, 0.4% of residents identified themselves as Hispanic or Latino, compared to 0.6% in 2000 (Figure 1).

The average household size in 2010 was 2.41, compared to 2.55 in 2000 and 2.70 in 1990. In that year, there were a total of 136 housing units, compared to 166 in 2000 and 169 in 1990. Of the households surveyed in 2010, 50% were owner-occupied, compared to 42% in 2000; 24% were renter-occupied, compared to 31% in 2000; 15% were vacant, compared to 2% in 2000; and 11% were occupied seasonally, compared to 25% in 2000. In addition, five residents lived in group quarters in 2010, compared to 0 in 2000.

The gender distribution in 2010 was skewed at 53.3% male, and 46.7% female. This was slightly less even than the statewide distribution (52.0% male, 48.0%), and more even than the distribution in 2000 (56.8% male, 43.2% female). The median age that year was 42.3, which was significantly older than both the statewide median of 33.8 years, and 2000 median of 34.2 years.

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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>.

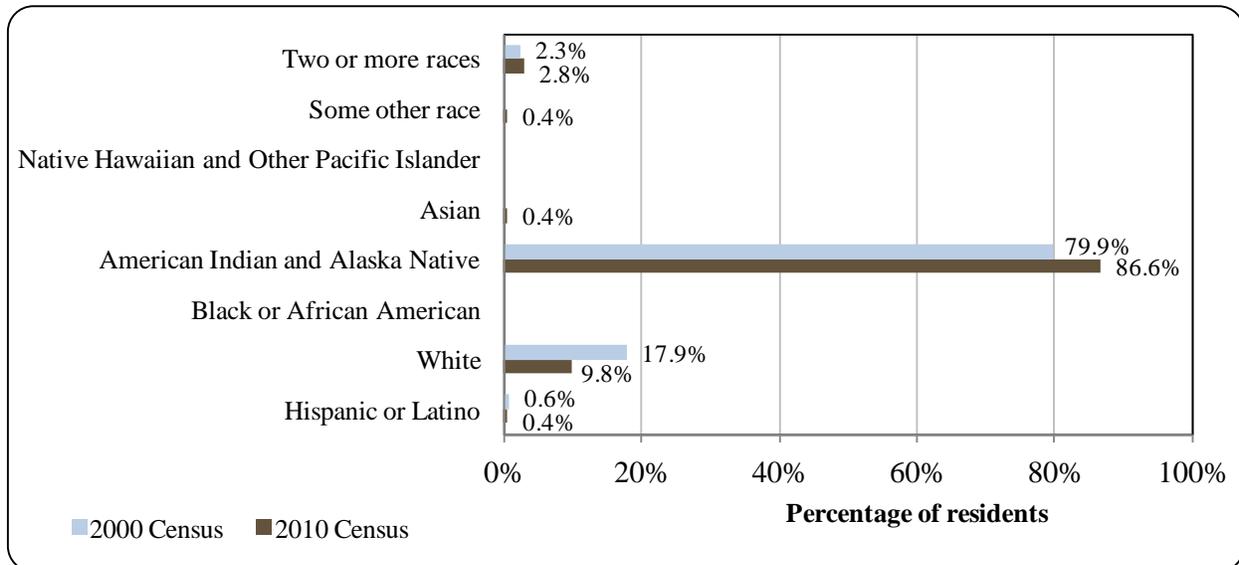
Table 1. Population in Tanana from 1990 to 2010 by Source.

Year	U.S. Decennial Census <sup>1</sup>	Alaska Dept. of Labor Estimate of Permanent Residents <sup>2</sup>
1990	345	-
2000	308	-
2001	-	302
2002	-	272
2003	-	282
2004	-	303
2005	-	282
2006	-	260
2007	-	257
2008	-	251
2009	-	251
2010	246	-

<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, Tanana: 2000-2010 (U.S. Census).

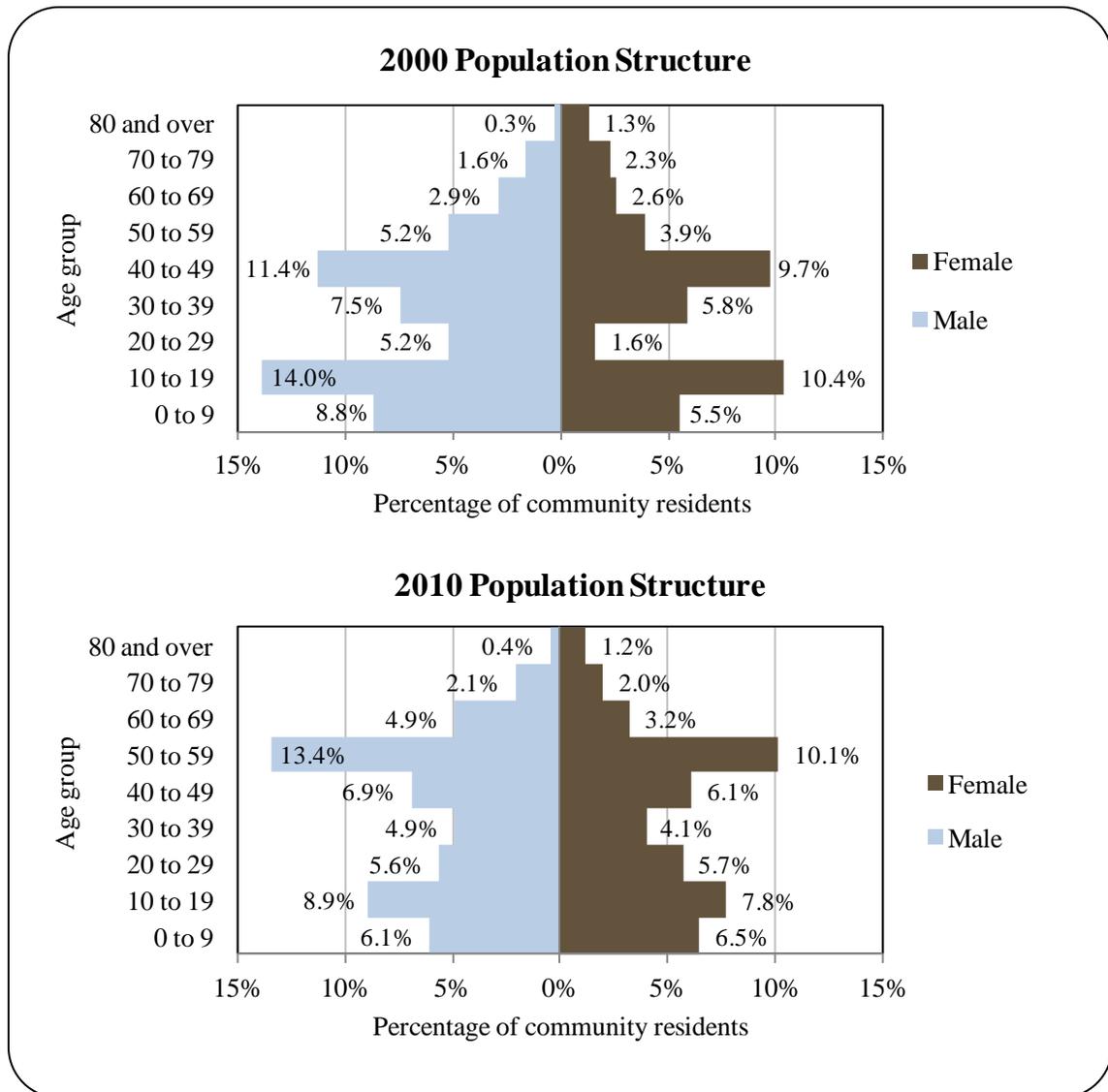


Compared with 2000, the population structure was less expansive in 2010, with marked proportional increases in older age ranges; possibly indicating struggles in youth retention. In that year, 29.3% of residents were under the age of 20, compared to 38.7% in 2000; 13.8% were over the age of 59, compared to 11.0% in 2000; 45.5% were between the ages of 30 and 59,

compared to 43.5% in 2000; and 11.3% were between the ages of 20 and 29, compared to 6.8% in 2000.

Overall, gender distribution by age cohort was more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 50 to 59 range (13.4% male, 10.1% female), followed by the 60 to 69 (4.9% male, 3.2% female) and 10 to 19 (8.9% male, 7.8% female) ranges. The greatest relative gender difference occurred in the 60 to 69 range. Information regarding trends in Tanana’s population structure can be found in Figure 2.

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



According to the 2006-10 American Community Survey (ACS),<sup>3</sup> in terms of educational attainment, 86.3% of Tanana residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 8.1% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 5.6% were estimated to have a ninth to 12<sup>th</sup> grade education but no diploma, compared to 5.8% of Alaskan residents overall; 37.6% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 44.7% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 2.5% were estimated to hold a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 1.5% were estimated to hold a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

### *History, Traditional Knowledge, and Culture*<sup>4</sup>

Due to its location at the confluence of the Tanana and Yukon Rivers, Tanana was a traditional trading settlement for Koyukon and Tanana Athabascans long before European contact. In 1880, Harper's Station, an Alaska Commercial Company trading post, was established 13 miles downriver from the present site. In 1881, Church of England missionaries from Canada built a mission eight miles downriver. Between 1887 and 1900, an elaborate school and hospital complex, the St. James Mission, was constructed. It became an important source of services and social change along both rivers. In 1898, Fort Gibbon was founded at Tanana to maintain the telegraph line between Fairbanks and Nome. A post office was also established, and several other trading posts developed around the turn of the century. Gold seekers left the Yukon after 1906. Ft. Gibbon was abandoned in 1923. The St. James Hospital was transferred to Bureau of Indian Affairs (BIA) administration in the 1920s. During World War II, an air base was established near Tanana as a refueling stop for the lend-lease aircraft program. New hospital facilities were built in 1949. During the 1950s, hospital administration was transferred to the U.S. Public Health Service.

The City of Tanana was incorporated in 1961. The hospital complex was a major employer during this period, employing 54 persons with a payroll of \$1.6 million, but it closed in 1982. That same year, Tanana incorporated as a First-class city in order to assume control of the local school system. The hospital facilities were remodeled for use as a health clinic, counseling center, tribal office, and regional elders' residence.

Traditional Athabascan ways of life persist in Tanana; subsistence, potlatches, dances, and foot races are part of the culture. The sale of alcohol is limited to the city-owned package store.

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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> 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).

## Natural Resources and Environment<sup>5</sup>

Tanana experiences a cold, continental climate with temperature extremes. Daily maximum temperatures during July range from 64 to 70 °F (18 to 21 °C); daily minimum temperatures during January are -14 to -48 °F (-26 to -44 °C). Extremes have been measured from -71 to 94 °F (-57 to 34 °C). Average annual precipitation is 13 inches, with 50 inches of snowfall. The river is ice-free from mid-May through mid-October.

Tanana is located just north of Denali National Park. The following information about Denali National Park and Preserve (National Park) is from the U.S. National Park Service.<sup>6</sup>

Denali, the "High One," is the name Athabascan native people gave the massive peak that crowns the 600-mi-long Alaska Range. Denali is also the name of an immense national park and preserve created from the former Mount McKinley National Park. In 1917, Mount McKinley National Park was established as a game refuge. The park, including North America's highest peak, were named for former senator - later President - William McKinley. In 1980, the Alaska National Interest Lands Conservation Act (ANILCA) enlarged the boundary of the park by 4 million acres and redesignated it as Denali National Park and Preserve. The National Park exemplifies interior Alaska's character as one of the world's last great frontiers; its wilderness is largely unspoiled.

More than 650 species of flowering plants as well as many species of mosses, lichens, fungi, algae, and others grace the slopes and valleys of the National Park. Only plants adapted to long, cold winters and short growing seasons can survive in this subarctic wilderness. Permafrost ground underlies many areas of the park, where only a thin layer of topsoil is available to support life. After the continental glaciers retreated from most of the park 10,000 to 14,000 years ago, hundreds of years were required to begin building new soils and revegetation. The dynamic glaciated landscape provides large rivers, countless lakes and ponds, and unique landforms which form the foundation of the ecosystems that thrive in the National Park.

The National Park is well-known for its diversity of wildlife. There are 39 species of mammals, 169 species of birds, 14 species of fish, and one species of amphibian known to occur in the area. There are no reptiles recorded in the National Park. Animal life and activity is dictated by the seasons. Winter is the longest season and the animals that are year-round residents are well-adapted to life in the subarctic. The brief spring season brings the return of 80% of the National Park's bird life, the waking of hibernating bears, and an increase in activity levels of wildlife. Summer is a time for raising young and preparing for migration, hibernation, or survival during the winter. Summer also brings hordes of insects, including mosquitoes. In late summer, king and chum salmon run in the multitude of streams and rivers. In autumn, migrating birds fill the skies and bull moose gather their harems of cows for the mating season.

There are no active mineral projects within the immediate vicinity of Tanana, although the Money Knob/Livengood gold development is approximately 100 mi northeast. As of 2009, the site was believed to contain over 4 million ounces of recoverable gold.<sup>7</sup>

Environmental hazards which can potentially impact Tanana include floods, wildland fires, earthquakes, severe weather, and erosion. While historic flood events are uncommon,

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<sup>5</sup> Ibid.

<sup>6</sup> U.S. National Park Service (2012). *Denali National Park and Preserve: Nature and Science*. Retrieved from <http://www.nps.gov/dena/naturescience/index.htm> on March 29, 2012.

<sup>7</sup> Myers, R. 2009. *The Money Knob Gold Deposit*. International Tower Hill Mines, LTD. Retrieved March 13, 2013 from: [http://www.arcticminers.org/presentations/Russell\\_Myers.pdf](http://www.arcticminers.org/presentations/Russell_Myers.pdf).

Tanana did experience a major flood event resulting in damages ranging in the millions of dollars. Tanana experiences a yearly ice breakup and snowmelt which can result in ice-jams and localized flooding. The 2009 flood resulted in expensive damage to property and required the evacuation of 75 residents from their homes. Wildland fire risk is also high due to the large expanses of grasses and black spruce throughout the area. Spruce bark beetle infestation of local tree stands also increases the risk of fire. Effects of wildland fires include risks to property and decreased air quality. The City of Tanana has experienced many historic wildland fire events in the past, many of which resulted in loss or damage to property. Tanana is located near the Denali Fault, which in 2002 produced a magnitude 7.9 earthquake; the largest inland earthquake in 150 years. There is an approximate 20-25% chance of a magnitude 6.0 or above earthquake occurring within 50 years. For Tanana, severe weather manifests itself as heavy snow, ice buildup, extreme cold, thunderstorms, and high winds. The community has experienced many severe weather events, although they are not well documented. Based on historical data, damaging weather events occur every 3 years with an annual probability of 33%. Erosion mainly occurs along the banks of the Yukon River, and can result from flooding and stormwater runoff. Tanana is currently experiencing erosion along Front Street and 1<sup>st</sup> Avenue, along the Yukon River bank. Other high risk areas include areas near Airport Road and a small plane parking and gravel site along White Alice Site Road.<sup>8</sup>

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation sites active in Tanana in 2010.<sup>9</sup>

### **Current Economy**<sup>10</sup>

Local government provides the most permanent employment in Tanana. The majority of workers are employed with the City, Native Village, and school district. Seasonal jobs include Bureau of Land Management (BLM) firefighting, trapping, wood cutting, and construction. Post-flood rehabilitation efforts have led to the city employing 19 seasonal construction employees. The City also employs individuals to gather and cut wood for biomass energy systems, wood boiler installers and operators, foresters, and engineering biomass systems. Tozitna, Limited, the village corporation for Tanana, runs a gas station and fuel delivery service. Limited wage employment is supplemented by subsistence activities including hunting, fishing, and harvesting wild berries.<sup>11</sup> Top employers in 2010 included Tanana Native School, City of Tanana, Tanana City School District, American Mechanical Inc., Tanana Chiefs Conference, Tanana Commercial Co. LLC, Too'gha Inc., Doyon Drilling Inc., The IBEX Group Inc., and VSW Tanana Project.<sup>12</sup>

According to the 2006-10 ACS,<sup>13</sup> in 2010, the per capita income in Tanana was estimated to be \$17,675 and the median household income was estimated to be \$46,250, compared to

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<sup>8</sup> City of Tanana and Tanana Tribal Council (2011). *Tanana Local Hazard Mitigation Plan*. Retrieved March 13, 2013 from: <http://www.commerce.alaska.gov/dca/plans/Tanana%20-%20Sep%202011.pdf>.

<sup>9</sup> Alaska Department of Environmental Conservation (n.d). *Contaminated Sites Program*. Retrieved March 13, 2013 from: <http://www.dec.state.ak.us/spar/csp/list.htm#Fairbanks>.

<sup>10</sup> Unless otherwise noted, all monetary data are reported in nominal values.

<sup>11</sup> See footnote 8.

<sup>12</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>13</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

\$12,077 and \$29,750 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,<sup>14</sup> the real per capita income in 2000 was \$15,881 and the real household income was \$39,121. This shows that both per capita and household income increased between 2000 and 2010. In 2010, Tanana ranked 172<sup>nd</sup> of 305 Alaskan communities with estimated per capita income that year, and 159<sup>th</sup> of 299 Alaskan communities with estimated household income data.

Tanana's small population size may have prevented the American Community Survey from accurately portraying economic conditions.<sup>15</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. According to the ALARI database, the per capita income in Tanana in 2010 was \$13,520, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.<sup>16</sup>

Based on household surveys conducted for the 2006-2010 ACS, an estimated 60.5% of the population age 16 and over was estimated to be in the civilian labor force, compared to the estimated statewide rate of 68.8%. The local unemployment rate was estimated at 11.8%, compared to the estimated statewide unemployment rate of 5.9%. Approximately 9.9% of local residents were living below the poverty line, compared to an estimated 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Tanana are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Tanana. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 28.8%.

The greatest number of workers were estimated to be employed in the private sector (50.7%), while an estimated 43.7% were employed in the public sector and an estimated 5.6% were self-employed. Out of an estimated 142 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in transportation, warehousing, and utilities (30.1%), public administration (17.6%), educational services, health care, and social assistance (16.3%), and construction (15.7%). Smaller percentages of the workforce were employed in other services, except public administration (2%), professional, scientific, management, administration, and waste management (8.5%), retail trade (7.2%), and agriculture, forestry, fishing, hunting, and mining (2.6%). However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the agriculture, fishing, and forestry industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. According to 2010 ALARI estimates, most (63.1%) employed residents work in local government sectors; followed by construction (8.7%); trade, transportation, and utilities (8.1%); and education and health service sectors (5.4%). Information regarding industry employment trends can be found in Figure 3.

By occupation, most (21.6%) employed residents were estimated to hold management or professional positions; followed by production, transportation, and material moving (20.9%);

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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>14</sup> Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

<sup>15</sup> See footnote 13.

<sup>16</sup> See footnote 12.

sales or office (20.3%); and service positions (17.6%). No employed residents were estimated to hold natural resources, construction, or maintenance positions, which conflicts with both ALARI estimates and local accounts of employment. There were significant proportional declines in the number of residents employed in service and natural resources, construction, and maintenance positions between 2000 and 2010. Conversely, there were significant proportional gains in the number of residents employed in production, transportation, and material moving positions. Information regarding occupational employment trends can be found in Figure 4.

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

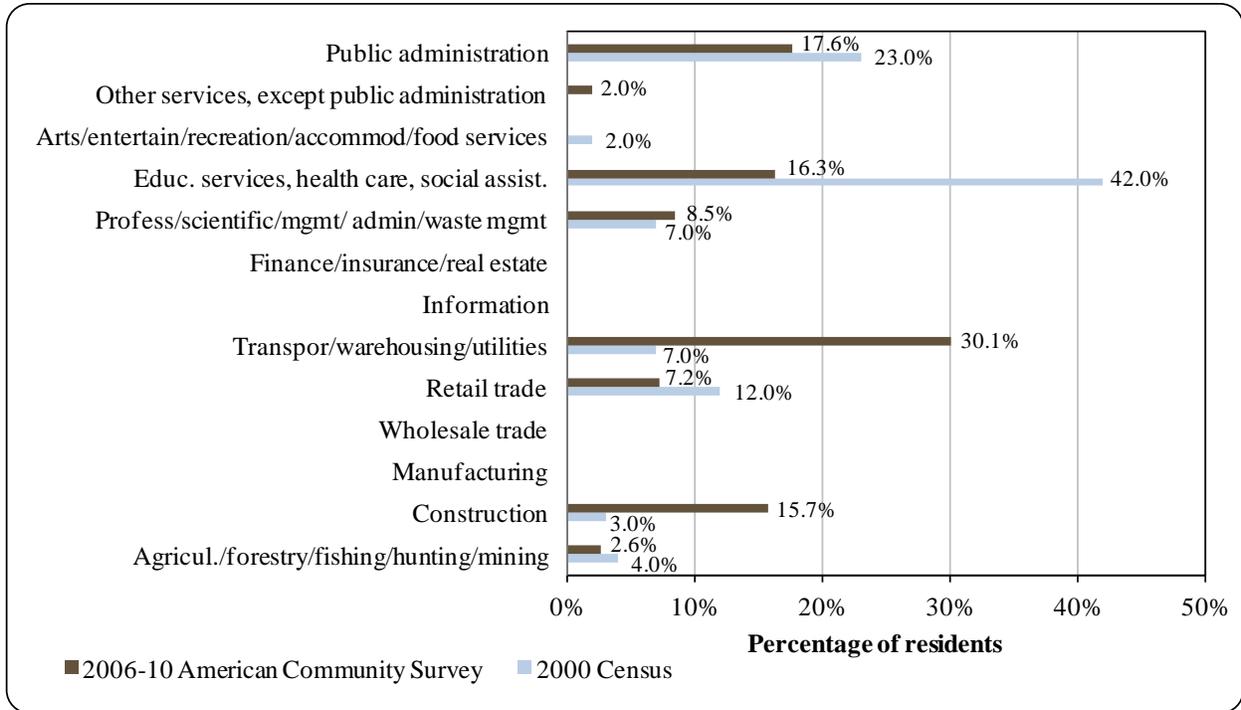
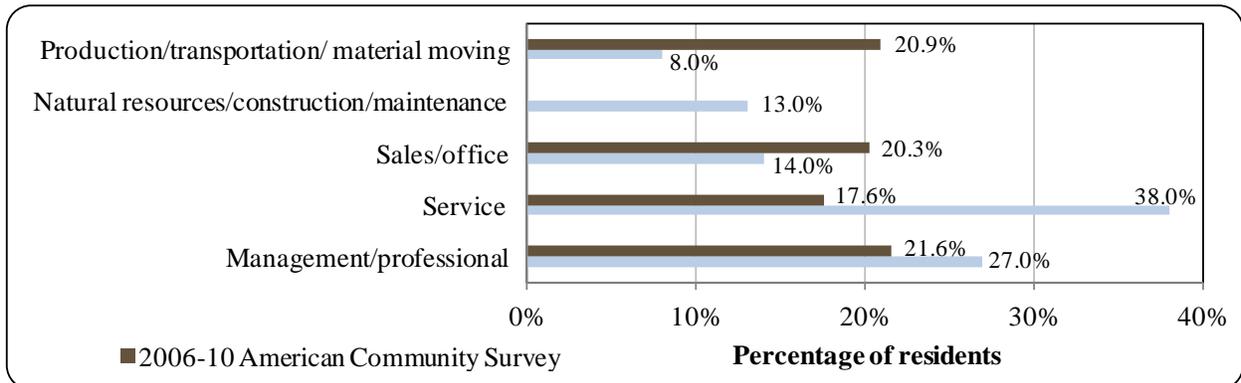


Figure 4. Local Employment by Occupation in 2000-2010, Tanana (U.S. Census).



## Governance

Tanana is a First-class city that is not located within an organized Borough. Tanana administers a municipal budget, including revenues from a 2% sales tax. When adjusted for inflation,<sup>17</sup> total municipal revenues increased by 142.0% between 2000 and 2010 from \$521,913, to \$1.63 million. The significant increase in municipal revenues that followed a declining trend from 2000 to 2005 can be attributed to both a sharp increase in general fund revenues, as well as grants attributed to both FEMA flood relief and other outside revenues. In 2010, locally generated revenues accounted for 29.5% of the total municipal budget, compared to 27.5% in 2000. Total general fund revenues accounted for 48.8% of total municipal revenues (including special revenues) in 2010, compared to 34.5% in 2000. In 2005, when municipal revenues were at their lowest, general fund revenues accounted for 100% of total municipal revenues.<sup>18</sup>

In 2010, most (86.1%) locally generated revenues were collected from service charges; followed by “other” revenues (8.5%) and sales tax revenues (5.4%). Most (34.5%) outside revenues came from state allocated Community Revenue Sharing; followed by USDA dust control grants (18.0%) and payments in lieu of taxes (17.5%). Tanana did not receive any fisheries-related grants between 2000 and 2010. Information about selected aspects of Tanana’s community revenue is presented in Table 2.

Tanana was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is Tozitna, Limited. The regional Native corporation to which Tanana belongs is Doyon, Limited. Doyon, Limited, the Native regional corporation for Interior Alaska, is a for-profit corporation with more than 18,500 shareholders. Established under ANCSA, Doyon is the largest private landowner in Alaska, with more than 12.5 million acres allocated to the corporation under ANCSA. Doyon’s mission is to continually enhance their position as a financially strong Native corporation in order to promote the economic and social well-being of their shareholders and future shareholders, to strengthen their Native way of life, and to protect and enhance their land and resources. As one of the top 10 Alaska-owned businesses, Doyon operates a diverse Family of Companies, including more than a dozen for-profit businesses across the nation in the areas of oil field services, utility management, security, engineering management, land and natural resource development, facility management, construction and tourism.<sup>19</sup>

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<sup>17</sup> Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

<sup>18</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>19</sup> Doyon, Limited (n.d.). *Company Overview*. Retrieved on May 11, 2012 from [http://www.doyon.com/corporate\\_profiles/companyoverview.aspx](http://www.doyon.com/corporate_profiles/companyoverview.aspx).

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Tanana 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	\$521,913	\$21,110	\$38,735	n/a
2001	\$457,973	\$28,325	\$30,496	n/a
2002	\$483,923	\$25,370	\$30,496	n/a
2003	\$405,408	\$21,049	\$30,496	n/a
2004	\$428,696	\$20,505	-	n/a
2005	\$228,541	\$21,608	-	n/a
2006	\$236,430	\$21,461	-	n/a
2007	\$587,740	\$17,145	-	n/a
2008	\$751,964	\$23,953	-	n/a
2009	\$1,075,786	\$20,693	\$109,296	n/a
2010	\$1,633,465	\$25,865	\$108,856	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).

The closest regional offices of the Alaska Department of Natural Resources (DNR), Alaska Department of Fish and Game (ADF&G), and the Department of Commerce, Community, and Economic Development are located in Fairbanks. The nearest offices of the National Marine Fisheries Service (NMFS), Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

## Infrastructure

### *Connectivity and Transportation*

Tanana is accessible only by air and river transportation. The city maintains 32 miles of local roads. The city operates a dock on the river and barged goods can be offloaded at a staging and storage area. The state owns and operates the Ralph M. Calhoun Memorial Airport, which has a 4,400-foot long by 150-foot wide lighted gravel runway. Float planes land on the Yukon River. Cars, trucks, snowmobiles, ATVs, and riverboats are used for local transportation.<sup>20</sup> Round-trip airfare between Tanana and Anchorage in June 2012 was \$494.<sup>21</sup>

<sup>20</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>21</sup> Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

### *Facilities*<sup>22</sup>

Water and sewer utilities are operated by Too'gha, Inc., a non-profit utility board. Water is derived from three wells near the Yukon River, and four watering points are available. Nearly all residents now haul their own water from the “washeteria” and use privies and “honeybuckets”. A piped water and sewer system serves the Tanana Hospital, clinic, regional elders' residence, and the tribal council building. Water is treated locally. The landfill uses an incinerator and provides recycling services.

Law enforcement services are provided by the city police department, a Village Public Safety Officer, and state troopers in Fairbanks. Fire and rescue services are provided by the Tanana Tribal Emergency Medical Services. A community hall is operated by the Tanana Tribal Council, as is the Elders Residential Facility. There is both a public and a school library in Tanana.

### *Medical Services*<sup>23</sup>

Health care is provided by the Tanana Health Center, which is owned by the Village Council and operated by the Tanana Tribal Council. The health center is a Community Health Aid Program (CHAP) site. Alternate health care is provided by Tanana Emergency Medical Services. The clinic is a qualified Emergency Care Center, and x-ray and pharmacy services are available. Emergency services have limited highway, river, and airport access and are provided by 911 telephone service volunteers and a health aide. The nearest hospital is located in Fairbanks.

### *Educational Opportunities*<sup>24</sup>

The Maudrey J. Sommer School in Tanana provides instruction for students in Kindergarten through 12<sup>th</sup> grade. In 2011 the school had 35 students enrolled and 5 teachers employed.

## **Involvement in North Pacific Fisheries**

### *History and Evolution of Fisheries*<sup>25,26</sup>

Commercial salmon fishing is permitted along the entire 1,200 mi stretch of the main stem Yukon River in Alaska, as well as the lower 225 mi of the Tanana River. The first recorded commercial salmon harvest in the Yukon River drainage occurred in 1918, although much of the harvest occurred at the river mouth, far from Tanana. Relatively large harvests of Chinook, chum, and coho salmon occurred from 1919 to 1921. The commercial fishery was closed from

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<sup>22</sup> See footnote 20.

<sup>23</sup> Ibid.

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

<sup>25</sup> Clark, J. H. et al. (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fishery Research Bulletin*, 12(1). Retrieved July 10, 2012 from: <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

<sup>26</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.

1925 to 1931 because of concerns over the upriver subsistence fishery. In 1932, commercial fishing was allowed to continue, but at a reduced level. Commercial fishing of chum and coho salmon resumed in 1952. During the 1970s and 1980s, commercial fishing became integrated with subsistence fishing within village economies. Local residents who held commercial fishing permits also operated small-scale nets or fish wheels within family production groups. Among the middle and upper Yukon River, participation rates by local commercial fishermen have been much lower and more variable than in the lower Yukon due to 90% of the commercial Chinook quota amounts being allocated to the lower river districts by the Board of Fisheries in the early 1970s. Peak Chinook salmon harvests occurred in the 1980s when almost 130,000 fish were commercial harvested per year. Commercial harvests averaged about 97,000 fish per year in the 1990s and reduced to 27,000 fish after 2000. Harvests continued to decline, and no commercial harvests occurred during the 2009 through 2012 seasons. Significant reductions in subsistence fishing occurred throughout the entire Yukon system during that time as well.

Annual chum salmon harvests in the area typically totaled over 150,000 fish before 1989. By 2000, the annual catch fell to 19,300 due to run failures. Although chum runs have recovered, annual catches have yet to return to historic levels. Total coho salmon catches increased from around 5,000 to 10,000 fish in the 1960s, to 30,000 to 40,000 by the 1980s. Coho catch declined during the 1990s to levels barely supporting local subsistence needs. In recent decades, Chinook salmon has increased as a part of the subsistence diet in middle Yukon villages, from about three fish per person in 1981, to six fish in 2006. Chum salmon harvests peaked prior to the 1980s, when village residents harvested them for dog food. Chum harvests declined sharply following the sharp reduction of that practice. According to a 2006 ADF&G survey of Tanana households, 50% reported that fewer salmon had impacted their livelihoods.

Tanana is located in Interior Alaska about two mi west of the junction of the Tanana and Yukon Rivers. Due to the inland location of the community, Tanana is not located in a Federal Statistical and Reporting Area, a Pacific Halibut Fishery Regulatory Area, or a Sablefish regulatory area. The community is not eligible for either the Community Development Quota or Community Quota Entity program.

### *Processing Plants*

According to ADF&G's 2010 Intent to Operate list, Tanana does not have a registered processing plant. The nearest processing plant is located in Fairbanks.

### *Fisheries-Related Revenue*

Tanana received fisheries-related revenue in 2010 from the Shared Fisheries Business Tax; however, the amount received was minimal. This was the only fisheries-related revenue reported between 2000 and 2010. Information on known fisheries-related revenue received by Tanana is presented in Table 3.<sup>27</sup>

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<sup>27</sup> A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

### *Commercial Fishing*

In 2010, there were 16 commercial salmon permits issued by the Commercial Fisheries Entry Commission (CFEC) to 16 permit holders in Tanana. The number of salmon CFEC permits and permit holders in Tanana decreased slightly between 2000 and 2010, though those permits were only reported as fished between 2002 and 2008. During this period, between 19% and 28% of salmon CFEC permits were reported as fished in any given year. Of the salmon CFEC permits issued in 2010, the majority were for a fishwheel fishery in the upper Yukon, with the remainder issued for the Upper Yukon gillnet fishery. There were no other CFEC permits, License Limitation Program (LLP) permits, or Federal Fisheries Permits (FFP) in Tanana between 2000 and 2010. Information on permits and permit holders by species between 2000 and 2010 is presented in Table 4. No residents held quota share for halibut, sablefish, or crab fisheries between 2010 and when the programs began (Tables 6 to 8).

In 2010, there were no crew license holders in Tanana, and between 2000 and 2010 there were very few crew license holders in any given year. Between 2000 and 2010, there were no fish buyers or shore-side processing facilities located in Tanana. In 2010, Tanana residents held majority ownership of one vessel (a decrease from two in 2000) and there was one vessel homeported in that year (a decrease from three in 2000). Information on characteristics of the commercial fishing sector in Tanana between 2000 and 2010 is presented in Table 5.

No vessels reported landings in Tanana between 2000 and 2010 (Table 9). In addition, no residents reported landings in 2000, 2001, 2009, and 2010. Landings reported by residents in other years are considered confidential (Table 10).

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax <sup>1</sup>	n/a	n/a	n/a								
Shared Fisheries Business Tax <sup>1</sup>	n/a	n/a	\$180								
Fisheries Resource Landing Tax <sup>1</sup>	n/a	n/a	n/a								
Fuel transfer tax <sup>2</sup>	n/a	n/a	n/a								
Extraterritorial fish tax <sup>2</sup>	n/a	n/a	n/a								
Bulk fuel transfers <sup>1</sup>	n/a	n/a	n/a								
Boat hauls <sup>2</sup>	n/a	n/a	n/a								
Harbor usage <sup>2</sup>	n/a	n/a	n/a								
Port/dock usage <sup>2</sup>	n/a	n/a	n/a								
Fishing gear storage on public land <sup>3</sup>	n/a	n/a	n/a								
Marine fuel sales tax <sup>3</sup>	n/a	n/a	n/a								
<i>Total fisheries-related revenue<sup>4</sup></i>	<i>n/a</i>	<i>n/a</i>	<i>\$180</i>								
<i>Total municipal revenue<sup>5</sup></i>	<i>\$521,913</i>	<i>\$457,973</i>	<i>\$483,923</i>	<i>\$405,408</i>	<i>\$428,696</i>	<i>\$228,541</i>	<i>\$236,430</i>	<i>\$587,740</i>	<i>\$751,964</i>	<i>\$1.08 M</i>	<i>\$1.63 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).

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) <sup>1</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) <sup>1</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits <sup>1</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) <sup>2</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) <sup>2</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) <sup>2</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) <sup>2</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) <sup>2</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) <sup>2</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) <sup>2</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) <sup>2</sup>	Total permits	19	20	20	20	18	18	18	18	16	16	16
	Fished permits	0	0	4	4	4	4	5	4	3	0	0
	% of permits fished	0%	0%	20%	20%	22%	22%	28%	22%	19%	0%	0%
	Total permit holders	20	20	21	20	18	18	18	18	16	16	16
<i>Total CFEC Permits<sup>2</sup></i>	<i>Permits</i>	<i>19</i>	<i>20</i>	<i>20</i>	<i>20</i>	<i>18</i>	<i>18</i>	<i>18</i>	<i>18</i>	<i>16</i>	<i>16</i>	<i>16</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>5</i>	<i>4</i>	<i>3</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>0%</i>	<i>0%</i>	<i>20%</i>	<i>20%</i>	<i>22%</i>	<i>22%</i>	<i>28%</i>	<i>22%</i>	<i>19%</i>	<i>0%</i>	<i>0%</i>
	<i>Permit holders</i>	<i>20</i>	<i>20</i>	<i>21</i>	<i>20</i>	<i>18</i>	<i>18</i>	<i>18</i>	<i>18</i>	<i>16</i>	<i>16</i>	<i>16</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 Tanana: 2000-2010.

Year	Crew Licenses 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 Tanana <sup>2</sup>	Total Net Pounds Landed In Tanana <sup>2,5</sup>	Total Ex-Vessel Value Of Landings In Tanana <sup>2,5</sup>
2000	2	0	0	2	3	0	0	\$0
2001	1	0	0	2	3	0	0	\$0
2002	0	0	0	2	3	0	0	\$0
2003	0	0	0	1	2	0	0	\$0
2004	0	0	0	1	2	0	0	\$0
2005	0	0	0	1	2	0	0	\$0
2006	1	0	0	1	2	0	0	\$0
2007	2	0	0	1	2	0	0	\$0
2008	1	0	0	1	1	0	0	\$0
2009	0	0	0	1	1	0	0	\$0
2010	0	0	0	1	1	0	0	\$0

*Note: Cells showing – indicate that the data are considered confidential.*

<sup>1</sup> Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

<sup>2</sup> Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

<sup>3</sup> Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

<sup>4</sup> Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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

Table 6. Halibut Catch Share Program Participation by Residents of Tanana: 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 Tanana: 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 Tanana: 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 Tanana: 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>

*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.

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

	<i>Total Net Pounds<sup>1</sup></i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total<sup>2</sup></i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total<sup>2</sup></i>	--	--	--	--	--	--	--	--	--	--	--

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

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

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

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

### *Recreational Fishing*

While there were sport fish guide businesses registered in Tanana between 2000 and 2003, none were reported as active during that time. Residents held several sport fish guide licenses during that time as well. No sport fish guide businesses were registered in the community, nor did any residents hold sport fish guide licenses between 2004 and 2010. There were 58 sportfishing licenses sold to Tanana residents in 2010 (irrespective of the location of the point of sale), a number which varied between 2000 and 2010. There were no sportfishing licenses sold within the community until 2007, and the number of licenses sold in Tanana has increased slightly since that time to a total of 45 in 2010. The number of sportfishing licenses sold in Tanana was lower than the number of licenses sold to Tanana residents during this period, indicating that some community residents may purchase their licenses and pursue sportfishing in other communities.

Tanana is located within the Yukon River Drainage Alaska Sport Fishing Survey Area. There were no saltwater angler days fished reported in this survey area between 2005 and 2010. Between 2000 and 2004, the number of saltwater angler days fished by non-Alaska residents decreased from 81 in 2000 to 17 in 2004, though there were no angler days fished by non-Alaska residents in 2002 and 2003. The number of saltwater angler days fished by Alaska residents was highly variable between 2000 and 2003, and there were no saltwater angler days fished by Alaska residents between 2004 and 2010. During this period, freshwater angler days fished varied considerably for both Alaska residents and non-Alaska residents. Alaska residents fished consistently more angler days in freshwater in this region between 2000 and 2010, averaging 7,355 angler days fished per year compared to an average of 3,861 angler days fished by non-Alaska residents. Information about the sportfishing sector in and near Tanana is presented in Table 11.

The Alaska Statewide Harvest Survey,<sup>28</sup> conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Tanana: coho salmon, sockeye salmon, whitefish, burbot, Arctic grayling, northern pike, Pacific halibut, rockfish, and other fish. No kept/released log book data were reported for fishing charters out of Tanana between 2000 and 2010.<sup>29</sup>

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<sup>28</sup> Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000-2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

<sup>29</sup> Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000-2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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

Year	Active Sport Fish Guide Businesses <sup>1</sup>	Sport Fish Guide Licenses <sup>1</sup>	Sport Fishing Licenses Sold to Residents <sup>2</sup>	Sport Fishing Licenses Sold in Tanana <sup>2</sup>
2000	0	4	55	0
2001	0	2	52	0
2002	0	3	48	0
2003	0	1	56	0
2004	0	0	48	0
2005	0	0	64	0
2006	0	0	69	0
2007	0	0	50	31
2008	0	0	50	35
2009	0	0	57	39
2010	0	0	58	45

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	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	0	89	5,761	9,194
2003	0	17	3,344	5,756
2004	17	0	5,479	7,613
2005	0	0	4,182	4,783
2006	0	0	3,607	7,816
2007	0	0	3,168	8,226
2008	0	0	2,573	10,400
2009	0	0	2,969	7,639
2010	0	0	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/sportfishingsurvey/> (Accessed September 2011).

*Subsistence Fishing*

Subsistence foods for residents of Tanana include salmon, whitefish, moose, bear, ptarmigan, waterfowl, and berries.<sup>30</sup> With the exception of the percentage of households using non-salmon fish in 2006 (17%), data were not available for subsistence participation by household between 2000 and 2010. In 2006, the per capita harvest of non-salmon fish (except halibut) was 28,763 pounds (Table 13). According to the ADF&G Division of Subsistence, non-salmon fish species harvested for subsistence use in Tanana in 2006 included burbot, Dolly Varden, grayling, pike, sheefish, sucker, and whitefish.<sup>31</sup>

For years which data were reported between 2000 and 2010, an average of 102 subsistence salmon permits were issued to Tanana residents, with an average of 43 of those permits reported as fished each year (Table 13). Chum salmon were the primary species harvested under subsistence permits (an average of 19,580 chum salmon per year), along with an average of over 3,000 Chinook salmon and coho salmon each year. Subsistence participants typically harvest Chinook and chum salmon during July and early August, and chum and coho salmon from mid-August through September.<sup>32</sup>

Between 2000 and 2010, data were not reported for subsistence halibut fishing participation (Table 14) or subsistence harvest of marine mammal resources (Table 15).

Table 12. Subsistence Participation by Household and Species, Tanana: 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	17%	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).

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

<sup>32</sup> Alaska Department of Fish and Game (n.d.). *Tanana River Personal Use Salmon Fishery*. Retrieved March 21, 2013 from: <http://www.adfg.alaska.gov/index.cfm?adfg=PersonalUsebyAreaInteriorTanana.main>.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Tanana: 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>	Pounds of Marine Inverts <sup>2</sup>	Pounds of Non-Salmon Fish <sup>2</sup>
2000	122	45	2,896	12,266	6,285	n/a	29	n/a	n/a
2001	113	37	4,112	11,186	6,675	n/a	n/a	n/a	n/a
2002	102	35	2,379	9,576	2,032	n/a	n/a	n/a	n/a
2003	97	34	5,332	17,383	3,480	n/a	n/a	n/a	n/a
2004	90	45	2,689	24,608	1,049	n/a	n/a	n/a	n/a
2005	98	51	3,729	25,377	1,616	n/a	n/a	n/a	n/a
2006	104	47	3,794	28,641	3,619	n/a	n/a	n/a	28,763
2007	99	48	5,498	26,825	2,369	n/a	n/a	n/a	n/a
2008	97	48	3,981	20,355	1,511	80	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, Tanana: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

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

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

Table 15. Subsistence Harvests of Marine Mammal Resources, Tanana: 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.