

## **Kwigillingok (kwih-GILL-in-gawk)**



### **People and Place**

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

Kwigillingok, sometimes referred to as “Kwig,” is on the western shore of Kuskokwim Bay near the mouth of the Kuskokwim River on the Yukon-Kuskokwim Delta. It lies 77 miles southwest of Bethel and 388 miles west of Anchorage. The village of Kongiganak is nearby. Kwigillingok is located in the Bethel Recording District.

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

In 2010, there were 321 residents, ranking Kwigillingok 158<sup>th</sup> of 352 Alaskan communities with recorded populations that year. Overall, between 1990 and 2010, the population grew by 15.5%. Between 2000 and 2009, the population increased by 8% with an average annual growth rate of 1.25%, nearly twice statewide average of 0.75%. Data from the 2010 Decennial Census indicate that the population declined slightly from 2000. However, with the exception of the spike in 2009, the estimated population has decreased every year since 2007 based on Alaska Department of Labor and Workforce Development (DOLWD) population estimates. Further information regarding population trends can be found in Table 1.

Kwigillingok is a traditional Yup'ik Eskimo village. In the 2010 Decennial Census, the vast majority of Kwigillingok residents identified themselves as American Indian and Alaska Native (95%), along with 3.4% identifying themselves as White, and 1.6% individuals identifying with two or more races. No Kwigillingok residents identified themselves as Hispanic in 2010. Those who identified themselves as White made up 1.3% more of the population in 2010 compared to 2000, and American Indian and Alaska Natives made up 2.6% less of the population, while the percentage of individuals identifying with two or more races increased between 2000 and 2010 by 1.3%. Further information regarding race and ethnicity can be found in Figure 1.

In 2010, the average household size in Kwigillingok was 3.89, a slight decrease from 4.4 in 1990 and 4.63 in 2000. Also in 2010, there were a total of 106 housing units, compared to 78 in 1990 and 78 in 2000. Of those households surveyed in 2010, 47.2% were owner-occupied, compared to 78.2% in 2000; 30.2% were renter-occupied, compared to 15.4% in 2000; 22.6% were vacant, compared to 6.4% in 2000; and 3.8% were occupied seasonally, compared to 0% in 2000. There were also 2 residents living in group quarters in 2010, compared to 0 in 2000.

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

<sup>2</sup> U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

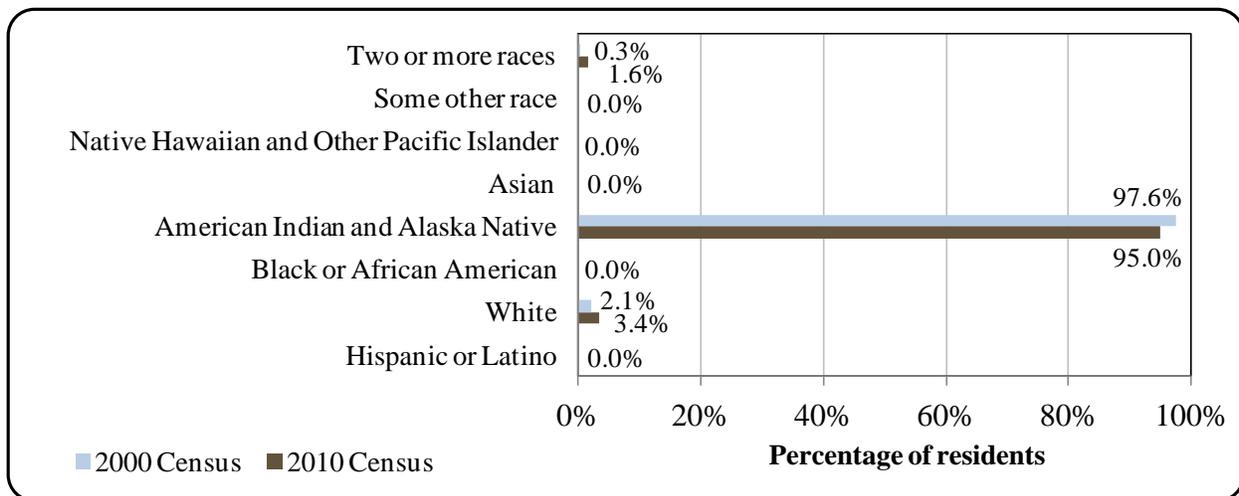
Table 1. Population in Kwigillingok from 1990 to 2010 by Source.

Year	U.S. Decennial Census <sup>1</sup>	Alaska Dept. of Labor Estimate of Permanent Residents <sup>2</sup>
1990	278	-
2000	338	-
2001	-	358
2002	-	338
2003	-	343
2004	-	363
2005	-	361
2006	-	377
2007	-	360
2008	-	352
2009	-	365
2010	321	-

<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>.

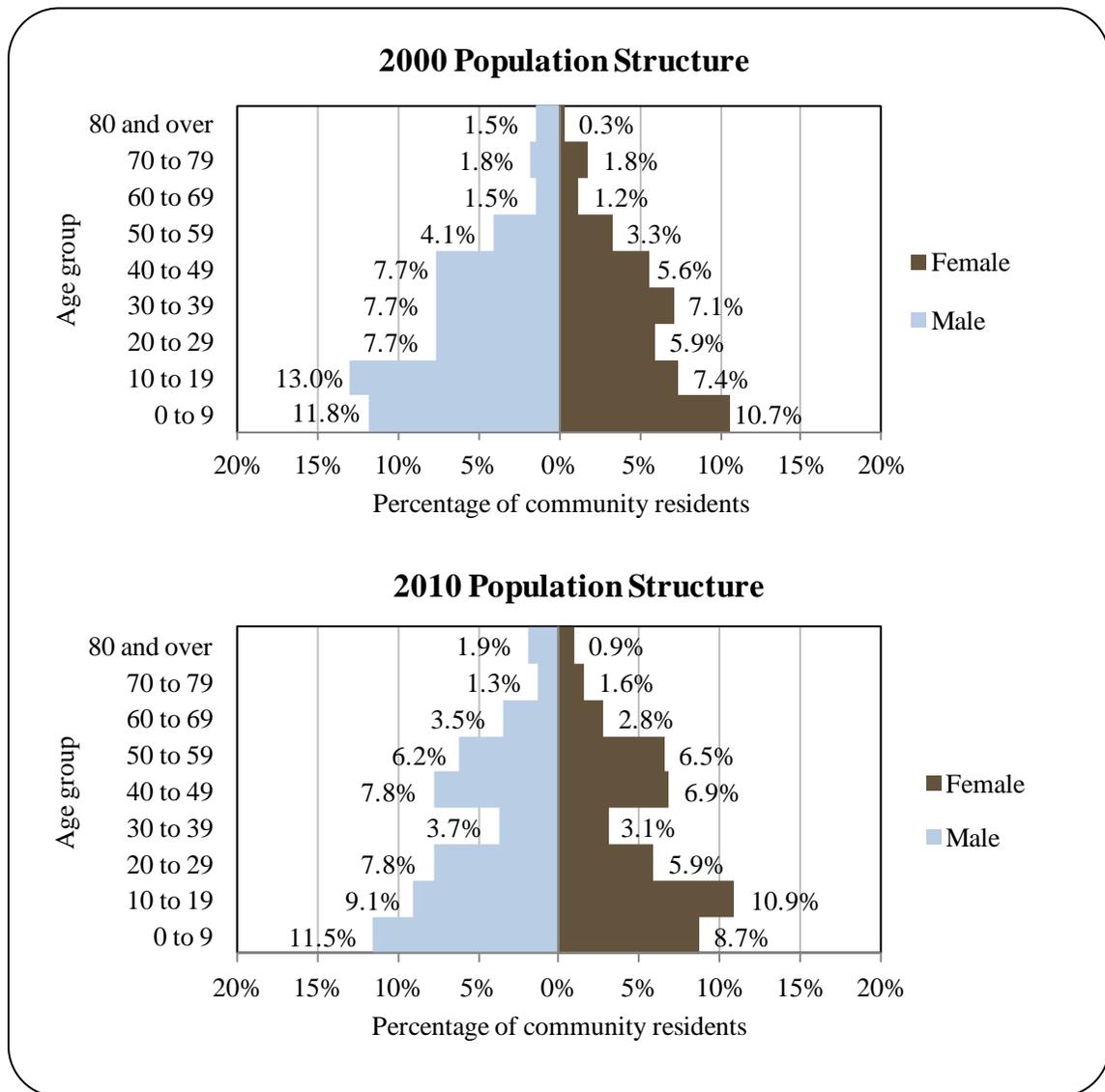
Figure 1. Racial and Ethnic Composition, Kwigillingok: 2000-2010 (U.S. Census).



There were more males than females recorded in 2010 (52.8% male, compared to 47.4% female), roughly in proportion to the gender distribution statewide (52% male, 48% female), and more evenly balanced than Kwigillingok's 2000 distribution (56.8% male, 43.2% female). The median age in 2010 was 26.9, which was younger than the statewide median of 33.8 but similar the village's median age in 2000 (26.0 years). In 2010, 40.2% of residents were under the age of 20, compared to 42.9% in 2000. Also in 2010, 11.9% of residents were over the age of 59, compared to 8.0% in 2000.

Gender distribution by age cohort was relatively even in both 2000 and 2010. In 2010, the greatest absolute gender difference occurred in the 60 to 69 range (2.7% male, 1.5% female), followed by the 20 to 29 range (9.6% male, 6.6% female) and 0 to 9 range (15.4% male, 11.4% female). Of those three, the greatest difference relative to cohort size occurred in the 0 to 9 range. In 2000, the greatest absolute gender difference also occurred in the 60 to 69 range (3.7% male, 2% female), followed by the 50 to 59 range (4% male, 2.4% female), the 30 to 39 range (9.4% male, 6.4% female), and the 10 to 19 range (13.8% male, 9.4% female). Of those four, the greatest difference relative to cohort size occurred in the 10 to 19 year old range. Further information regarding population structure trends can be found in Figure 2.

Figure 2. Population Age Structure in Kwigillingok 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, an estimated 73.3% of residents aged 25 and over 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 17% of residents had less than a 9<sup>th</sup> grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 9.8% 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 10.5% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 2.6% held an Associate's degree, compared to an estimated 8% of Alaska residents overall; an estimated 1.3% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 0.7% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

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

The first record of the village was in 1927 on the map of the Annual Report of the Governor of Alaska, when it was identified as “Quillingok.” A Moravian church was established around 1920. The area has long been occupied by the Yup'ik Eskimos and is still a traditional village with an active subsistence lifestyle.<sup>4,5</sup>

### **Natural Resources and Environment**

Kwigillingok is located in a marine climate. Annual precipitation averages 22 inches, with 43 inches of snowfall annually. Summer temperatures range from 41 to 57 °F, and winter temperatures average 6 to 24 °F.<sup>6</sup>

The entire Kuskokwim River system covers approximately 52,000 square miles of southwest Alaska, or 11 % of all the land area of Alaska. The river system originates on the northwest flank of the Alaska Range, where glacial streams merge to form the meandering, silt-laden Kuskokwim River which flows southwest between the high alluvial terraces. Fast, clear tributaries enter the river from the western Alaska Range. The river courses a broad valley, laden with tundra ponds and lakes, until finally emptying into the Bering Sea, at a point nearly 40 miles southwest of Bethel, Alaska.<sup>7</sup>

Kwigillingok is part of the Lower Kuskokwim Resource Conservation and Development region which encompasses the area from the boundary of the Lower Kuskokwim Regional Educational Attendance Area (defined by the villages of Newtok on Baird Inlet, Kasigluk, and Nunapitchuk on the Johnson River and Tuluksak on the Kuskokwim River) including the villages of Chevak and Hooper Bay to the north; the Kuskokwim River downriver of Tuluksak to

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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).

<sup>5</sup> Calista Corporation (n.d.). *Homepage*. Retrieved May 15, 2012 from <http://www.calistacorp.com/shareholders/village/kwigillingok>.

<sup>6</sup> See footnote 4.

<sup>7</sup> Lower Kuskokwim Economic Development Council (2006). *Comprehensive Economic Development Strategy & Area Plan*. Retrieved May 16, 2012 from <http://www.lkedc.org/ARDPLAN1.pdf>.

the east; the Ahklun and Kilbuck Mountains to the south; and the Bering Sea to the west. There are 27 communities located in this portion of southwest Alaska. The regional population is over 15,000, of which approximately 6,000 live in Bethel, the regional center. No roads connect any of the communities to each other—mechanized access is by air, boat, or snowmobile only. Most communities are located along the Kuskokwim River or near the Bering Sea. The area also includes Nunivak and Nelson Islands. There are no major agricultural or industrial enterprises on the Yukon-Kuskokwim Delta due to poor soil conditions and the area's remoteness from major markets in the rest of the state. Local residents use this remote area primarily for subsistence hunting, fishing, and gathering purposes.<sup>8</sup>

Kwigillingok is located within the boundaries of the Yukon Delta National Wildlife Refuge (YDNWR). The YDNWR was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.” Most of the YDNWR is a vast, flat wetland/tundra complex dotted by countless ponds, lakes, and meandering rivers. Approximately half of the refuge is covered by water. Many streams and sloughs are former tributaries of the two major rivers. Some forest habitat is present along rivers and in the Kilbuck Mountains, located in the southeastern part of the YDNWR, to the east of Kwigillingok. Moose, caribou, brown bear and black bear can be found in this mountain range, which rises to between 2,000 and 4,000 feet in elevation.<sup>9</sup>

Kwigillingok is also approximately 50 miles across the Kuskokwim Bay from the Togiak National Wildlife Refuge (TNWR) and the Wood-Tikchik State Park. TNWR covers 4.7 million acres, of which the northern 2.3 million acres are designated as Togiak Wilderness Area. Like the YDNWR, the TNWR protects the habitat of a wide array of birds, fish and mammals. East of TNWR, Wood-Tikchik is the largest state park in the United States. The park includes a diversity of terrain and ecosystems. The Wood River and Tilchik systems host all five species of Pacific salmon, along with rainbow trout, grayling, lake trout, Arctic char, Dolly Varden and northern pike. Tilchik Lake is an important site for whitefish subsistence harvest. Moose, caribou and brown bear are common in the park, along with black bear in a limited area of the park. Small game present in the area includes beaver, muskrat, otter, fox, wolverine, mink and porcupine. Ground squirrels and marmots are abundant, along with a variety of resident and migratory waterfowl and land birds.<sup>10</sup>

The Kuskokwim River generally freezes in October, and breakup is complete by mid-June. Warming temperatures have also led to thawing permafrost in the Kuskokwim area. Permafrost in the Yukon-Kuskokwim Delta varies in depth. While there is limited local data, permafrost depth in the region is known to extend to around 600 feet in some areas, with an active layer estimated to range between 1.5 and 3 feet deep depending on conditions.<sup>11</sup> Thawing permafrost can cause severe subsidence, which constrains development of resources, transportation and utility systems, and community expansion. Communities located along the

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<sup>8</sup> Ibid.

<sup>9</sup> U.S. Fish and Wildlife Service (2011). Yukon Delta National Wildlife Refuge website. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

<sup>10</sup> Alaska Dept. of Natural Resources. (n.d.) *Wood-Tilchik State Park*. Retrieved December 6, 2011 from <http://dnr.alaska.gov/parks/units/woodtik.htm>.

<sup>11</sup> Association of Village Council Presidents. (2000). *2000 Yukon-Kuskokwim Strategic Plan*. Retrieved January 12, 2012 from: <http://www.commerce.state.ak.us/dca/plans/YukonKuskokwimDelta-EDP-2000.pdf>

Kuskokwim River are also at high risk of flooding, erosion, and severe weather, and at low risk of wildfire and earthquakes.<sup>12,13</sup>

According to the Alaska Department of Environmental Conservation,<sup>14</sup> there were no significant environmental remediation projects active in Kwigillingok in 2010.

### **Current Economy<sup>15</sup>**

Most employment in Kwigillingok is with the school, village government, stores, or commercial fishing. However, a local arts cooperative markets local handicrafts, and income is further supplemented by subsistence activities.<sup>16</sup>

Kwigillingok's top employers in 2010 included the Kwigillingok IRA Council; the Lower Kuskokwim School District; the Native Village of Kwigillingok; Kwik Incorporated; Yukon-Kuskokwim Health Corporation 90; the Kwig Power Co.; Coastal Villages Seafoods Inc; the Coastal Villages Region Fund; Qayanek; and the AVCP Housing Authority.<sup>17</sup> In 2010, the per capita income in Kwigillingok was estimated at \$10,376, and the median household income was estimated at \$40,833, compared to \$7,577 and \$36,250 in 2000, respectively.<sup>18</sup> After accounting for inflation by converting 2000 values to 2010 dollars,<sup>19</sup> the real per capita income (\$9,964) and real median household income (\$47,668) indicate a fall in both individual and household earnings.<sup>20</sup> In 2010, Kwigillingok ranked 249<sup>th</sup> of 305 communities from which per capita income was estimated, and 149<sup>th</sup> of 299 communities from which median household income was estimated. Although Kwigillingok's small population size may have prevented the ACS from accurately portraying economic conditions, this decrease in per capita income is confirmed by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the DOLWD. According to the ALARI database, the per capita income in Kwigillingok in 2010 was \$8,959, which also indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.<sup>21</sup> This is supported by the fact that the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. However, it should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

In 2010, 46.7% of residents aged 16 or older were estimated to be in the civilian labor force, compared to 68.8% in the civilian labor force statewide. In the same year, the

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<sup>12</sup> City of Aniak and Bechtol Planning and Development (2005). *The City of Aniak, Alaska: All-Hazards Mitigation Plan*. Retrieved February 9, 2012 from

[http://www.dced.state.ak.us/dca/planning/nfip/Hazard\\_Mitigation\\_Plans/Aniak\\_HMP.pdf](http://www.dced.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Aniak_HMP.pdf).

<sup>13</sup> City of Bethel. 2008. *Local Hazards Mitigation Plan*. Retrieved February 7, 2012 from [http://www.dced.state.ak.us/dca/planning/nfip/Hazard\\_Mitigation\\_Plans/Bethel\\_LHMP.pdf](http://www.dced.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Bethel_LHMP.pdf).

<sup>14</sup> Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved from: <http://www.dec.state.ak.us/spar/csp/list.htm>.

<sup>15</sup> Unless otherwise noted, all monetary data are reported in nominal values.

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

<sup>17</sup> Alaska Department of Labor (n.d.). *Alaska Local and Regional Information Network*. Retrieved May 17, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

<sup>18</sup> U.S. Census and American Community Survey 2006-2010 estimates.

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

<sup>20</sup> See footnote 3.

<sup>21</sup> See footnote 17.

unemployment rate was estimated to be 10.7% in Kwigillingok, compared to a statewide unemployment rate of 5.9%, and approximately 24.1% of local residents were estimated to be living below the poverty line in 2010, compared to 9.5% of Alaska residents overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Kwigillingok are not reflective of the value of subsistence to the local economy.

Also based on the 2006-2010 ACS, 37% of the Kwigillingok workforce was estimated to be employed in the private sector, along with an estimated 63% in the public sector. Of the 54 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number were estimated to be working in educational services, health care and social assistance (44.4%), transportation, warehousing, public administration (20.4%), retail trade (16.7%), public administration (11.1%), and information (7.4%). An estimated 0% of the civilian labor force was working in agriculture, forestry, fishing, hunting and mining; however, the number of individuals employed in farming, fishing and forestry industries is probably underestimated in census statistics (see *Commercial Fisheries* section below). Fishermen may hold another job and characterize their employment accordingly. As with income and poverty statistics, employment figures reported for Kwigillingok are not reflective of the value of subsistence to the local economy. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

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

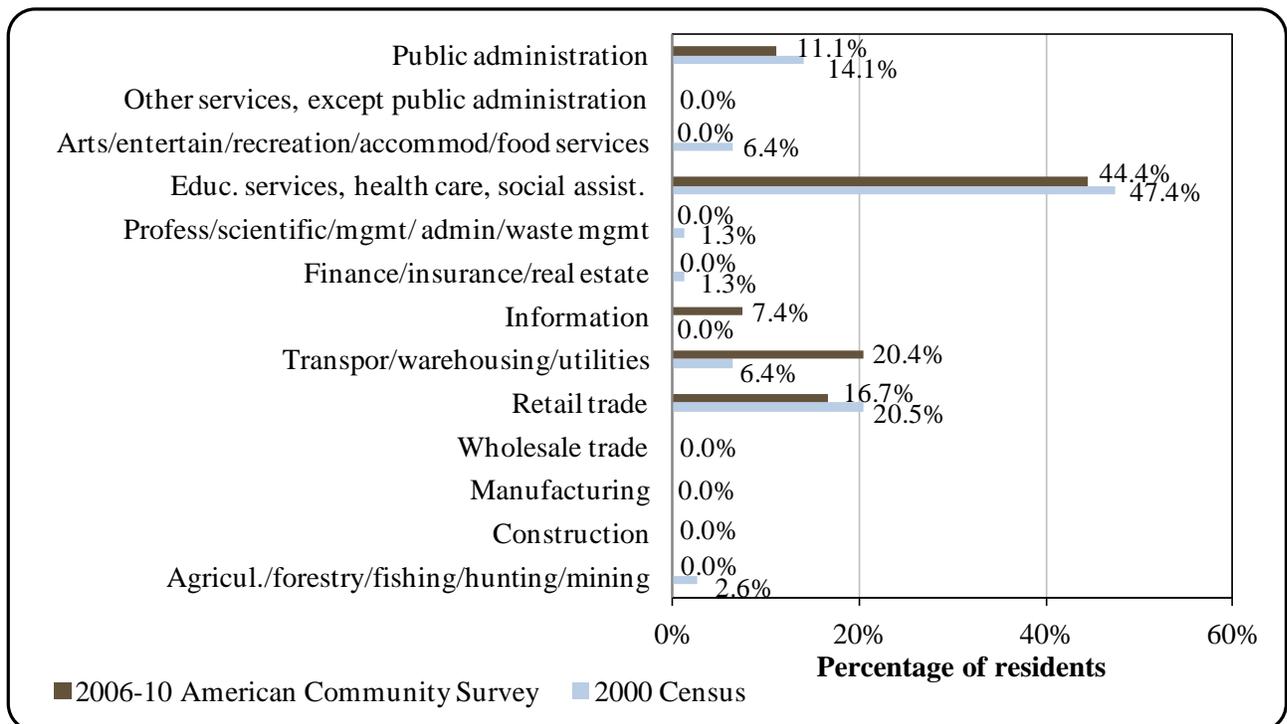
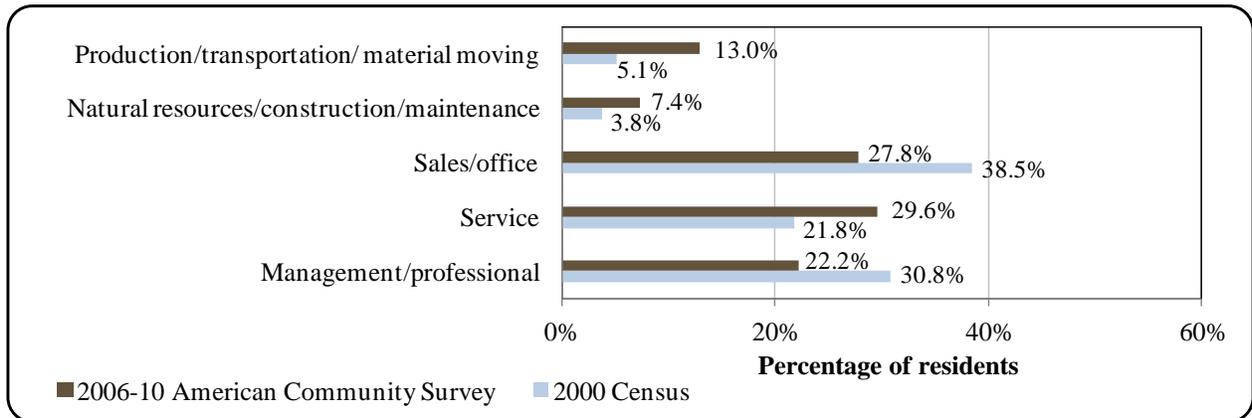


Figure 4. Local Employment by Occupation in 2000-2010, Kwigillingok (U.S. Census).



## Governance

Kwigillingok is unincorporated and is not part of an organized borough. Because Kwigillingok is unincorporated, the community has no city or borough “officials,” and there is no local taxing authority. Given this, a municipal budget was not available between 2000 and 2010. The community received State Revenue Sharing between 2000 and 2003, ranging from a low of \$3,631 in 2003, to a high of \$4,170 in 2000. Kwigillingok did not receive fisheries-related state or federal grants between 2000 and 2010, nor did the village receive a Community Benefits Share from its Community Development Quota (CDQ) entity (Coastal Villages Regional Fund) in 2010. Information regarding municipal finances can be found in Table 2.

Kwigillingok was included under the Alaska Native Claims Settlement Act (ANCSA) and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Native Village of Kwigillingok. There is also an ANCSA chartered Native Village Corporation (Kwik Incorporated); Calista Corporation is the regional ANCSA Corporation.

Kwigillingok is also a member of the Bering Sea Elders Advisory Group (BSEAG), whose mission is “to bring together elders as one voice to protect our traditional ways of life, the ocean web of life that supports the resources we rely on, and our children’s future.”<sup>22</sup> The BSEAG was established in 2007 due to the elders’ concerns about the proximity of bottom trawling to some of their villages in the Yukon-Kuskokwim and Bering Strait region, and the potential movement of industrial fisheries into northern Bering Sea Waters.

The closest Office of the Alaska Department of Fish and Game (ADF&G) is located in Dillingham, and the closest Alaska Department of Commerce, Community and Economic Development is located in Bethel. A National Marine Fisheries Service (NMFS) field office is also located in Bethel, and a larger office is located in Anchorage. The nearest Alaska Department of Natural Resources and U.S. Bureau of Citizenship and Immigration Services offices are located in Anchorage.

<sup>22</sup> Bering Sea Elders Advisory Group (n.d.). *Homepage*. Retrieved May 18, 2012 from <http://www.beringseaelders.org/>.

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

Year	Total Municipal Revenue <sup>1</sup>	Sales Tax Revenue <sup>2</sup>	State and Community Revenue Sharing <sup>3,4</sup>	Fisheries-Related Grants (State and Federal) <sup>5</sup>
2000	n/a	n/a	\$4,170	n/a
2001	n/a	n/a	\$3,707	n/a
2002	n/a	n/a	\$3,681	n/a
2003	n/a	n/a	\$3,631	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	n/a
2010	n/a	n/a	n/a	n/a

<sup>1</sup> Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

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

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

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

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

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

## Infrastructure

### *Connectivity and Transportation*

The Lower Kuskokwim River is a remote area of Alaska. There are no roads, except within some cities and villages on the Kuskokwim River. Kwigillingok itself has no roads.<sup>23</sup> In summer, residents use skiffs and other boats for travel to Bethel and other nearby villages. Snowmobiles and all-terrain vehicles provide transportation during winter. Winter trails are marked to Kipnuk (38 miles) and Kongiganak (11.1 miles).<sup>24</sup>

There are no docking facilities in the Village, but there is a state-owned, public-use seaplane base (the Kwigillingok Seaplane Base) located in the Kwigillingok River which measures 2,000 feet long by 300 feet wide. No services of any type are provided at the base, but there is a beaching area on the river bank adjacent to the Village.<sup>25</sup> Furthermore, there is a state-owned public-use airport (Kwigillingok Airport) with a gravel airstrip that measures 2,510 feet

<sup>23</sup> Alaska Department of Fish and Game. *Kuskokwim Management Area: Overview*. Retrieved May 17, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=ByAreaInteriorKuskokwim.moreoverview>.

<sup>24</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>25</sup> U.S. Department of Transportation Federal Aviation Administration (n.d.). *Airport Master Record*. Retrieved May 17, 2012 from <http://www.gcr1.com>.

long by 60 feet wide.<sup>26</sup> Improvements are currently underway for this airport to create a 3,300 foot gravel runway, taxiway, apron, airport lighting system, and two single bay snow removal equipment buildings.<sup>27</sup> Airline services are provided by Era Aviation, Alaska Grant Aviation, Ryan Air Service, and Yute Air.<sup>28</sup> The price of round-trip airfare between Anchorage and Kwigillingok in June 2012 was \$714,<sup>29</sup> and the price of round-trip airfare between Bethel and Kwigillingok was \$328.<sup>30</sup>

### *Facilities*<sup>31</sup>

Water is currently derived from snow melt and a lake reservoir and is treated and hauled by residents from the washeteria which is operated by the Village Council. The school operates its own surface water treatment facility but shares a sewage lagoon with the washeteria. Homes are not plumbed. Honeybuckets are disposed of by residents. Electricity is provided by the Kwig Power Company. Refuge collection services are unavailable, and the Village Council operates the landfill. Public safety services are provided by the Village Public Safety Officers (VPSO), the Native Village Police Department, and troopers in Bethel. Fire and rescue services are provided by the State VPSO Fire Department.<sup>32</sup> Public services available in Kwigillingok include medical services, job placement services, publicly subsidized housing, a community hall, and school library. Communications services include cable television and internet, radio, local television, and local and long distance telephone.<sup>33</sup>

### *Medical Services*<sup>34</sup>

One health clinic, the Kwigillingok Health Clinic, is located in the community. The nearest hospital (Yukon-Kuskokwim Delta Regional Hospital) is located in Bethel.<sup>35</sup> Emergency services have coastal and air access. Emergency service is provided by a health aide.<sup>36</sup>

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<sup>26</sup> See footnote 24.

<sup>27</sup> State of Alaska Department of Transportation & Public Facilities (n.d.). *Kwigillingok Airport Improvements*. Retrieved May 17, 2012 from <http://dot.alaska.gov/creg/kwigillingok/>.

<sup>28</sup> See footnote 24.

<sup>29</sup> Airfare was calculated using lowest fare from <http://www.travelocity.com/>. Retrieved May 18, 2012.

<sup>30</sup> Grant Aviation. *Website*. Retrieved May 17, 2012 from <http://www.flygrant.com/schedule-bethel.php#kwigillingok>.

<sup>31</sup> See footnote 24.

<sup>32</sup> Ibid.

<sup>33</sup> Ibid.

<sup>34</sup> Ibid.

<sup>35</sup> Alaska Department of Health and Social Services (n.d.). *Emergency Medical Services Directory*. Retrieved April 11, 2012 from [http://hss.state.ak.us/dph/emergency/ems/assets/EMS\\_Directory3\\_Norton\\_Sound.pdf](http://hss.state.ak.us/dph/emergency/ems/assets/EMS_Directory3_Norton_Sound.pdf).

<sup>36</sup> See footnote 24.

### *Educational Opportunities*<sup>37</sup>

The Kwigillingok School, part of the Lower Kuskokwim School District, accommodates grades kindergarten through 12<sup>th</sup> grade and is the only school in the community. In 2011, there were approximately 119 students enrolled and 7 teachers employed.

## **Involvement in North Pacific Fisheries**

### *History and Evolution of Fisheries*

Harvest of marine resources has been important to residents of the Kwigillingok area since prehistory. Yup'ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources.<sup>38</sup> Subsistence salmon harvest continues to be a primary economic activity along the Kuskokwim River. In addition to salmon, spring harvest of herring roe on kelp or hemlock boughs is an important subsistence resource for coastal Alaskan communities.<sup>39</sup>

Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. At the time of statehood, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s, commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current state dictated management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.<sup>40</sup>

Commercial catch of herring for bait began in Alaska around 1900, and herring sac roe fisheries developed in the late 1970s.<sup>41</sup> Between 2000 and 2010, Kwigillingok residents held permits in the roe and gillnet herring fisheries of Cape Avinof and Bristol Bay.<sup>42,43</sup> (For more information see the *Commercial Fisheries* section of this profile.) The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, near the village of Togiak. Spawning herring are harvested using purse seines and gillnets in the Togiak sac roe fishery. A

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<sup>37</sup> Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

<sup>38</sup> Alaska Native Heritage Center (n.d). *Yup'ik & Cup'ik - Who We Are*. Retrieved December 8, 2011 from [http://www.alaskanative.net/en/main\\_nav/education/culture\\_alaska/Yup'ik/](http://www.alaskanative.net/en/main_nav/education/culture_alaska/Yup'ik/).

<sup>39</sup> Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

<sup>40</sup> Clark, McGregor, Mecum, Krasnowski and Carroll (2006). Kuskokwim Commercial Salmon Fishery. In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from [http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1\\_p4.pdf](http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf).

<sup>41</sup> See footnote 39.

<sup>42</sup> Alaska Dept. of Fish and Game (2010). *2010 Permit & Fishing Activity by Year, State, Census Area, or City*. Retrieved December 13, 2011 from <http://www.cfec.state.ak.us/gpbycen/2010/mnu.htm>.

<sup>43</sup> Alaska Dept. of Fish and Game (n.d.). *Current CFEC Fishery Codes Description Table*. Retrieved December 13, 2011 from <http://www.cfec.state.ak.us/misc/FshyDesC.htm>.

spawn-on-kelp harvest is also taken, primarily by local residents. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.<sup>44</sup>

Kwigillingok is located in Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. The Village is a member of the Coastal Villages Regional Fund, a CDQ group that promotes training and employment opportunities for residents, community and development programs for member villages, and offers loans to facilitate involvement of locals in Bering Sea crab and groundfish fisheries. 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>45</sup> Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

### *Processing Plants*

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Kwigillingok. The closest processing plants are in Bethel and Dillingham.

### *Fisheries-Related Revenue*

Between 2000 and 2010, no data were reported about fisheries-related revenue received from taxes or fees in Kwigillingok (Table 3). However, in a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that the village did receive an unspecified amount of state and federal funding during 2010.

### *Commercial Fishing*

Between 2000 and 2010, Kwigillingok residents participated in commercial fisheries as crew members, vessel owners and permit holders. In 2010, 24 Kwigillingok residents held a total of 26 Commercial Fisheries Entry Commission (CFEC) permits, including 16 salmon permits in the Kuskokwim gillnet fishery, and 3 herring permits in the Cape Avinof roe and gillnet herring fishery.<sup>46</sup> These permit numbers decreased steadily overall between 2000 and 2010 (from 55 permits in 2000 to 26 permits in 2010), and the number of permits fished dropped considerably over that period. In 2000, 35% of the 20 herring permits held were actively fished. However, herring permit activity declined significantly in years following, falling to 0% by 2004. No herring permits were actively fished between 2004 and 2010. Halibut permit activity remained low between 2000 and 2010, with no more than one permit active in any given year. No halibut permit activity was recorded between 2005 and 2010. In terms of total CFEC permits held in Kwigillingok, salmon accounted for not only most of the permits held, but most of the permits actively fished as well. In 2010, salmon permits accounted for 88.5% of permits held locally,

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<sup>44</sup> See footnote 39.

<sup>45</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 [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).

<sup>46</sup> See footnotes 42 and 43.

compared to 50.6% in 2000. In that year 30% of the 23 salmon permits held were actively fished, compared to 46% of the 28 held in 2000. Permit ownership remained steady, although activity declined early in the decade. Between 2000 and 2010, no Kwigillingok residents held either Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP). Information about permits held by Kwigillingok residents is presented in Table 4. Likewise, no Kwigillingok residents participated in the federal halibut, sablefish or crab catch share fisheries between 2000 and 2010 (Tables 6, 7 and 8).

In 2010, a total of 20 Kwigillingok residents held commercial crew licenses and 11 fishing vessels were primarily owned by Kwigillingok residents. The number of crew license holders fluctuated during the decade, with 26 in 2000 falling to between seven and 12 in 2002-2004, and climbing again to 20 in 2010. The number of vessels owned by Kwigillingok residents declined substantially from 2000, when 31 vessels were owned. The number of vessels homeported in Kwigillingok followed a similar pattern, with 25 in 2000 and only eight in 2010. According to a survey conducted by the AFSC in 2011, community leaders indicated that the only vessels using Kwigillingok as a base of operations during the fishing season were gillnet and longline boats under 35 ft in length. Information about the commercial fishing sector in Kwigillingok is presented in Table 5.

No landings or ex-vessel revenue were recorded in Kwigillingok (Tables 5 and 9), given the lack of fish buyers in the community (Table 5). Information about landings and ex-vessel revenue generated by vessels owned by Kwigillingok residents is largely considered confidential between 2000 and 2010, with the exception of herring harvest data for 2000 and salmon harvest data in 2000, 2001, 2005, 2006 and 2009. In the 2000, Kwigillingok vessel owners landed over 210,000 pounds of salmon, nearly twice as much as the amount landed the next year. Furthermore, in 2000, the ex-vessel value of the catch for salmon was \$138,691, while it was only worth \$44,710. Even when compensating for the smaller harvest, this total reflects lower prices and possibly a different species catch composition. Salmon landings rose again in 2009, with a total harvest of 165,185 pounds for an ex-vessel value of \$129,955. This higher catch is significant given the fewer total vessels owned by Kwigillingok residents in 2009 (11) compared to 31 vessels owned in 2000. Information about commercial harvest and ex-vessel revenue earned by vessel owners residing in Kwigillingok is presented in Table 10.

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

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

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

\*Reported by community leaders in a survey conducted by the AFSC in 2011.

<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).

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Table 4. Permits and Permit Holders by Species, Kwigillingok: 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	7	3	1	1	1	0	5	4	0	0	0
	Fished permits	1	1	0	0	1	0	0	0	0	0	0
	% of permits fished	14%	33%	0%	0%	100%	-	0%	0%	-	-	-
	Total permit holders	6	2	1	1	1	0	5	4	0	0	0
Herring (CFEC) <sup>2</sup>	Total permits	20	11	7	5	3	1	1	1	1	0	3
	Fished permits	7	1	2	1	0	0	0	0	0	0	0
	% of permits fished	35%	9%	29%	20%	0%	0%	0%	0%	0%	-	0%
	Total permit holders	19	11	7	5	3	1	1	1	1	0	3

Table 4 cont'd. Permits and Permit Holders by Species, Kwigillingok: 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	28	27	26	27	25	24	24	23	22	24	23
	Fished permits	13	8	4	5	5	6	7	5	4	6	7
	% of permits fished	46%	30%	15%	19%	20%	25%	29%	22%	18%	25%	30%
	Total permit holders	31	28	27	28	25	25	24	22	22	23	23
<i>Total CFEC Permits<sup>2</sup></i>	<i>Permits</i>	<i>55</i>	<i>41</i>	<i>34</i>	<i>33</i>	<i>29</i>	<i>25</i>	<i>30</i>	<i>28</i>	<i>23</i>	<i>24</i>	<i>26</i>
	<i>Fished permits</i>	<i>21</i>	<i>10</i>	<i>6</i>	<i>6</i>	<i>6</i>	<i>6</i>	<i>7</i>	<i>5</i>	<i>4</i>	<i>6</i>	<i>7</i>
	<i>% of permits fished</i>	<i>38%</i>	<i>24%</i>	<i>18%</i>	<i>18%</i>	<i>21%</i>	<i>24%</i>	<i>23%</i>	<i>18%</i>	<i>17%</i>	<i>25%</i>	<i>27%</i>
	<i>Permit holders</i>	<i>41</i>	<i>33</i>	<i>30</i>	<i>29</i>	<i>27</i>	<i>26</i>	<i>26</i>	<i>24</i>	<i>22</i>	<i>23</i>	<i>24</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 Kwigillingok: 2000-2010.

Year	Crew License Holders <sup>1</sup>	Count Of All Fish Buyers <sup>2</sup>	Count Of Shore-Side Processing Facilities <sup>3</sup>	Vessels Primarily Owned By Residents <sup>4</sup>	Vessels Homeported <sup>4</sup>	Vessels Landing Catch In Kwigillingok <sup>2</sup>	Total Net Pounds Landed In Kwigillingok <sup>2,5</sup>	Total Ex-Vessel Value Of Landings In Kwigillingok <sup>2,5</sup>
2000	26	0	0	31	25	0	0	\$0
2001	18	0	0	22	17	0	0	\$0
2002	12	0	0	16	12	0	0	\$0
2003	9	0	0	13	11	0	0	\$0
2004	7	0	0	10	9	0	0	\$0
2005	12	0	0	9	8	0	0	\$0
2006	14	0	0	9	7	0	0	\$0
2007	10	0	0	9	8	0	0	\$0
2008	13	0	0	7	6	0	0	\$0
2009	10	0	0	8	6	0	0	\$0
2010	20	0	0	11	8	0	0	\$0

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

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

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

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

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

Table 6. Halibut Catch Share Program Participation in Kwigillingok: 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 Kwigillingok: 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 Kwigillingok: 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 Kwigillingok: 2000-2010.

	<i>Total Net Pounds<sup>1</sup></i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total<sup>2</sup></i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total<sup>2</sup></i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

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

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

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

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Kwigillingok 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	58,639	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	210,213	108,620	--	--	--	178,403	171,065	--	--	165,185	--
<i>Total<sup>2</sup></i>	<i>268,852</i>	<i>108,620</i>	--	--	--	<i>178,403</i>	<i>171,065</i>	--	--	<i>165,185</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	\$5,453	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$138,691	\$44,710	--	--	--	\$107,998	\$107,668	--	--	\$129,955	--
<i>Total<sup>2</sup></i>	<i>\$144,144</i>	<i>\$44,710</i>	--	--	--	<i>\$107,998</i>	<i>\$107,668</i>	--	--	<i>\$129,955</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*

Between 2000 and 2010 there were no active sport fish guide businesses or licensed sport fish guides in Kwigillingok. However, according to a survey conducted by the AFSC in 2011, community leaders indicated that residents of Kwigillingok did participate in sportfishing. Between 2000 and 2010, the number of Kwigillingok residents who purchased sportfishing licenses varied between 0 and 31 in any given year. Also, starting in 2010, sportfishing licenses were sold in the community. In that year, Kwigillingok residents purchased 18 sportfishing licenses (irrespective of point of sale) and 9 of those were sold in the community. According to the 2011 AFSC survey, community leaders noted that gear or tackle stores were also present in the community. The Alaska Statewide Harvest Survey,<sup>47</sup> conducted by ADF&G between 2000 and 2010, noted the following species as targeted by private anglers in Kwigillingok: pink salmon, chum salmon, Chinook salmon, coho salmon, sockeye salmon, halibut, shrimp, and clam.

Kwigillingok is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between zero and 28 non-resident angler days fished per year, and between 0 and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,625 – 17,582 angler days per year) than Alaska resident anglers (4,236 – 9,152 angler days per year). This information about the sportfishing sector in and near Kwigillingok is displayed in Table 11.

Table 11. Sport Fishing Trends, Kwigillingok: 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 Kwigillingok <sup>2</sup>
2000	0	0	0	0
2001	0	0	11	0
2002	0	0	7	0
2003	0	0	10	0
2004	0	0	11	0
2005	0	0	13	0
2006	0	0	7	0
2007	0	0	19	0
2008	0	0	22	0
2009	0	0	31	0
2010	0	0	18	9

<sup>47</sup> Alaska Department of Fish and Game 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Kwigillingok: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents <sup>3</sup>	Angler Days Fished – Alaska Residents <sup>3</sup>	Angler Days Fished – Non-Residents <sup>3</sup>	Angler Days Fished – Alaska Residents <sup>3</sup>
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

<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*

In a survey conducted by the AFSC in 2011, Kwigillingok community leaders indicated that salmon, halibut, clams, herring, marine mammals, and white fish are some of the most important subsistence resources utilized by local residents. No information is available from ADF&G regarding the percentage of households using different subsistence resources between 2000 and 2010, or about per capita subsistence harvest (Table 12).

However, data are available through 2008 regarding subsistence salmon permits (Table 13). Between 2000 and 2008, the number of individuals in Kwigillingok who were issued subsistence salmon permits varied between 71 and 95 individuals per year. Specific harvest amounts were only available in 2004, and in that year Chinook, chum and sockeye salmon were harvested. No information was reported regarding subsistence harvest of marine invertebrates and non-salmon fish (not including halibut.)

Between 2005 and 2010, Kwigillingok residents participated in the Subsistence Halibut Registration Certificates (SHARC) program, although in a limited capacity. During that time, between 45 and 48 residents were issued SHARC, and between 10 and 42 SHARC were fished. In 2009, 31 of 45 SHARC were fished, although no harvest information is available. In 2010, the number of SHARC issued declined significantly to three, and none were reported active that year (Table 14). In terms of marine mammal harvests, an estimated seven walrus were harvested between 2000 and 2010 (Table 15).

## Additional Information

According to legend passed down by elders, the Village was at a spot where there was no river, but over time one was formed when a man dug a trench to retrieve a necklace lost by his daughter at the edge of a lake.<sup>48</sup>

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

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

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

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

<sup>48</sup> Calista Corporation (n.d.). *Homepage*. Retrieved May 15, 2012 from <http://www.calistacorp.com/shareholders/village/kwigillingok>.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Kwigillingok: 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	95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	95	2	345	160	55	n/a	70	n/a	n/a
2005	95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	71	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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

<sup>1</sup> Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

<sup>2</sup> Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Kwigillingok: 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	45	10	1,472
2006	48	21	2,906
2007	48	31	590
2008	46	42	1,764
2009	45	31	n/a
2010	3	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, Kwigillingok: 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	3	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	1	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	1	n/a	n/a	n/a	n/a
2005	n/a	n/a	1	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	1	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.