

## **Kwethluk (KWEETH-luk)**



### **People and Place**

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

Kwethluk is a Yup'ik community located 12 air miles east of Bethel on the Kwethluk River at the junction with the Kuskokuok Slough of the Kuskokwim River. It is the second largest community along the Lower Kuskokwim River. The area encompasses 10.0 square miles of land and 1.7 square miles of water. Kwethluk was incorporated in 1975, is located in the Bethel Census area, and is not under the jurisdiction of a borough.

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

In 2010, there were 721 residents in Kwethluk, ranking it the 85<sup>th</sup> largest of 352 Alaskan communities in terms of population size. Overall between 1990 and 2010, the population increased by 29.2%. While the community has continued to grow since 1990, the growth rate has slowed in recent years with the community adding only eight residents between 2000 and 2010. Between 2000 and 2009, the population grew by 1.4% with an average annual growth rate of -0.1%, which was less than the statewide average of 0.75% and indicates very little population change. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that on average, there are seasonal or temporary residents living in Kwethluk from June through late September. Peaks in the seasonal population are attributed to local construction projects, and is not driven by employment in fisheries sectors. Furthermore, community leaders report the annual peak in population for Kwethluk coincides with the July 4<sup>th</sup> activities and Slavic Christmas week in July and January, respectively. Community leaders estimated the seasonal workforce and transient population to be roughly 10 to 15 people. Further information regarding population trends can be found in Table 1.

Kwethluk is predominately a Yup'ik community. In 2010, 94.2% of residents identified themselves as American Indian or Alaska Native, compared to 92.8% in 2000; 2.2% identified themselves as White, compared to 4.8% in 2000; 0.1% identified themselves as Asian, compared to 0.3% in 2000; and 3.5% identified themselves as two or more races, compared to 2.0% in 2000. Further information regarding racial and ethnic trends can be found in Figure 1.

In 2010, the average household size was 4.19, compared to 4.30 in 1990 and 4.66 in 2000. In that year, there were a total of 231 housing units, compared to 138 in 1990 and 199 in 2000. Of the households surveyed in 2010, 54% were owner-occupied, compared to 54% in 2000; 20% were renter-occupied, compared to 13% in 2000; 4% were vacant, compared to 7% in

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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>.

2000; and 21% were occupied seasonally, compared to 17% in 2000. No residents lived in group quarters between 1990 and 2010.

In 2010, the gender distribution of Kwethluk was 52.1% male and 47.9% female. This was in line with the gender distribution statewide (52.0% male, 48.0% female), and slightly more even than the gender distribution in 2000 (53.9% male, 46.1% female). The median age that year was 23.4 years, which was lower than the statewide median of 33.8 years and older than the 2000 median of 19.6 years.

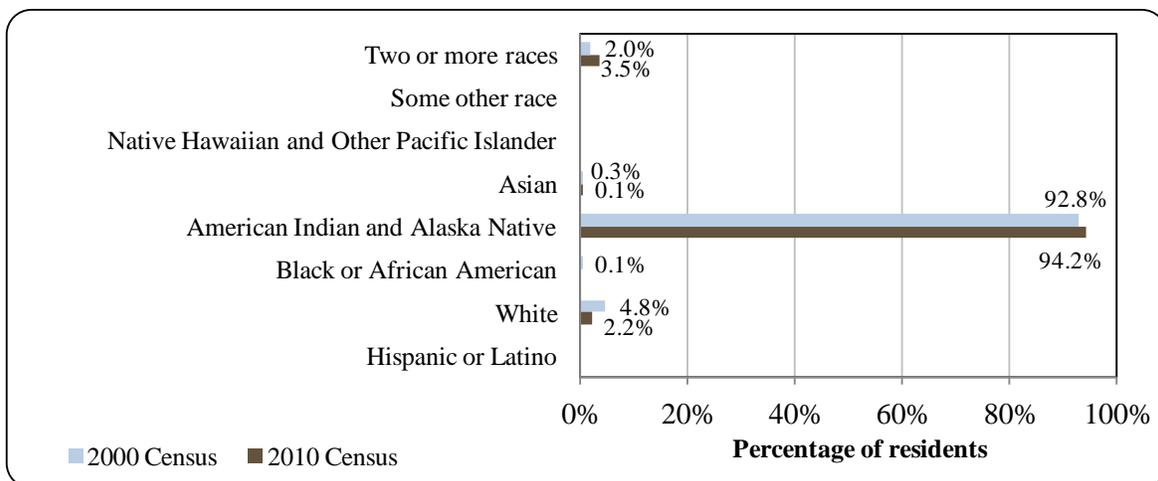
Table 1. Population in Kwethluk from 1990 to 2010 by Source.

Year	U.S. Decennial Census <sup>1</sup>	Alaska Dept. of Labor Estimate of Permanent Residents <sup>2</sup>
1990	558	-
2000	713	-
2001	-	691
2002	-	695
2003	-	709
2004	-	698
2005	-	696
2006	-	696
2007	-	719
2008	-	738
2009	-	723
2010	721	-

<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>.

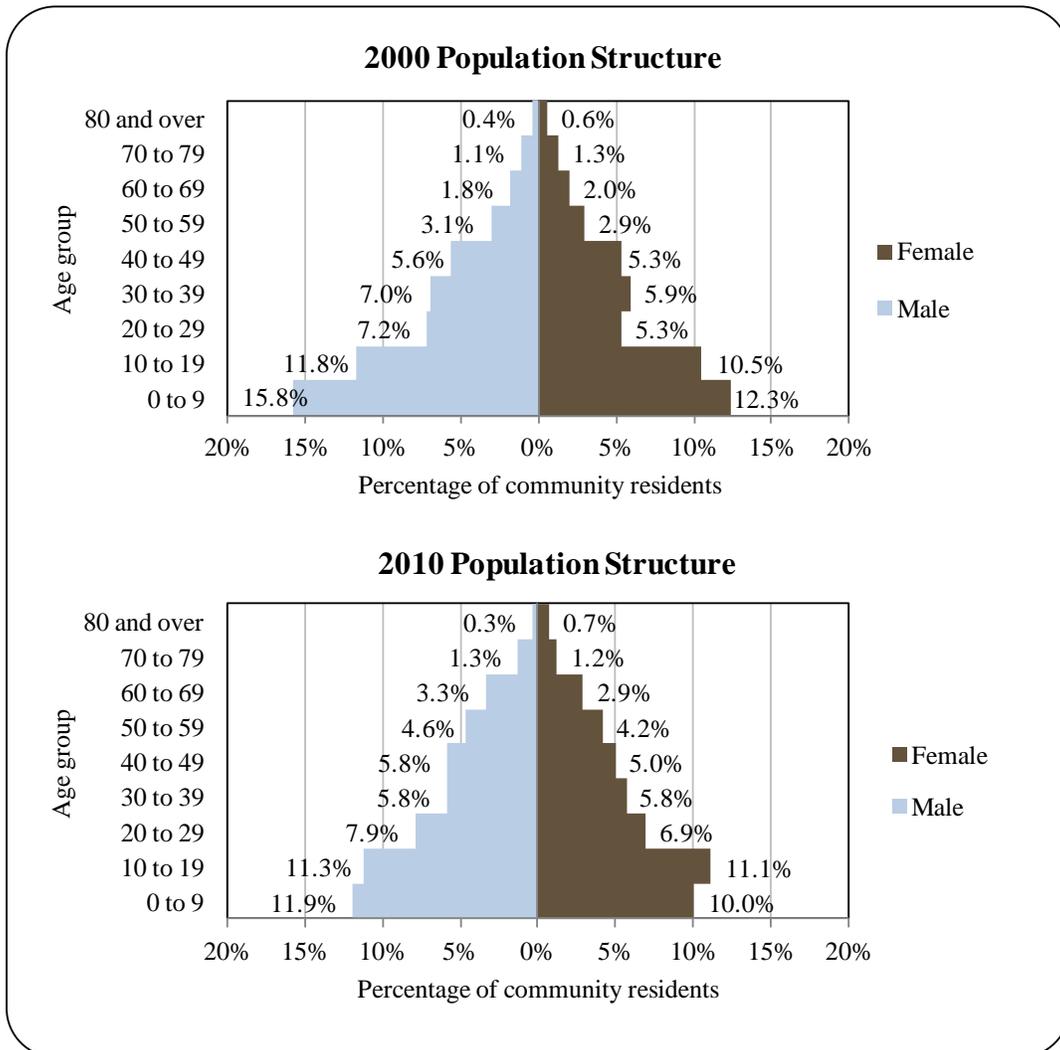
Figure 1. Racial and Ethnic Composition, Kwethluk: 2000-2010 (U.S. Census).



Compared with 2000, the population structure in 2010 was relatively less expansive. However, the overall structure remained similar between those years. In 2010, 44.3% of residents were under the age of 20, compared to 50.4% in 2000; 9.7% were over the age of 59, compared to 7.2% in 2000; 31.2% were between the ages of 30 and 59, compared to 29.8% in 2000; and 14.8% were between the ages of 20 and 29, compared to 12.5% in 2000.

Gender distribution by age cohort was slightly more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 0 to 9 age range (11.9% male, 10.0% female), followed by the 20 to 29 (7.9% male, 6.9% female) and 40 to 49 (5.8% male, 5.0% female) ranges. Of those three, the greatest relative gender difference occurred within the 0 to 9 age range. The 30 to 39 age range was evenly split with 5.8% identifying as female and 5.8% identifying as male. Other age brackets, such as 10 to 19 (11.3% male, 11.1% female) and 70 to 79 (1.3% male, 1.2% female), presented only slight variations. Further information regarding trends in Kwethluk’s population structure can be found in Figure 2.

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



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)<sup>3</sup> estimated that 75.4% of residents aged 25 and over held a high school diploma or higher degree in 2010, which is significantly less than the estimated 90.7% of Alaska residents overall. Also in that year, an estimated 14.7% of residents had less than a 9<sup>th</sup> grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 9.9% 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 19.3% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; 9.6% of resident held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 1.7% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

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

Human occupation of the Kuskokwim area dates back as far as 11,000 years as the first nomadic inhabitants migrated from Asia. Approximately 4,000 years ago, the northern Arctic Small Tool tradition migrated from the north, into the lower Kuskokwim region. Semi-permanent occupation of the Kuskokwim Delta occurred approximately 1,600 years ago.<sup>4</sup>

The Yup'ik (*Kusquqvagmiut*) Eskimo culture of the region has been organized around terrestrial and marine resources and trading has historically been an important part of the regional economy, and an extensive trade network was established throughout the Yukon-Kuskokwim region since well before European contact. During their peak, trade routes throughout the region extended as far as Siberia, and by the time Russian fur traders set up trading posts in the area an extensive trade network throughout the Norton Sound had already been established.<sup>5</sup> The village of Pastuliarraq, next to the Pastolik River east of present day Kotlik became a trading hub for region. The salmon fishermen of the lower and middle Kuskokwim River regularly traded salmon for seal oil from coastal villages.<sup>6</sup>

Kwethluk is predominantly a Yup'ik Eskimo village that practices a subsistence lifestyle. Archaeological finds indicate that the area has been inhabited since prehistoric times. The name Kwethluk is derived from the Yup'ik word "Kuiggluk," meaning "dangerous river." In the late 1860s and early 1870s, Russian Orthodox missionaries from Russian Mission founded a small congregation. The Moravian Church built a chapel in 1896 and a Russian Orthodox church was built in 1912. Influenza devastated the region in 1900, and the populations villages further up the

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<sup>3</sup> While ACS estimates can provide a good snap shot 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> Buzzell, R. (2010). *Kwethluk River*. Alaska Department of Natural Resources. Final Interim Summary Report. Retrieved October 23, 2012 from: <http://dnr.alaska.gov/mlw/nav/naar/kwethlukriver/KwethlukRiverII-BInterimSummaryRpt6-29-2010Final.pdf>.

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

<sup>6</sup> Lower Kuskokwim Economic Development Council. (2003), *Two Year Strategic Plan for the Lower Kuskokwim Economic Development Council*. Retrieved August 15, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Bethel%20Region-EDP-2003.pdf>.

Kwethluk River (including the former village of *Cinqineq*) were decimated. Only seven families in Kwethluk survived the epidemic.<sup>7</sup>

Discovery of gold in nearby creeks in 1909 attracted prospectors until 1911, when disappointing yields were produced. One placer gold deposit on the upper Kwethluk River continued to produce until it was exhausted in the early 1940s. A Moravian orphanage, located three miles upriver, provided children services between 1930 and the early 1970s. In 1939, the villagers owned 31,000 reindeers and harvested the herd for food and skins. The tuberculosis epidemic of the late 1930s impacted the local population. The community has a post office since 1947, and a store since 1948. The City was incorporated in 1975.

Residents of Kwethluk continue to rely on a traditional lifestyle, much like in the past. Historic caribou hunting areas and seasonal subsistence camps continue to be used. Before the widespread use of contemporary hunting and fishing technologies, Kwethluk hunters would travel to hunting camps in the spring, and construct skin boats for the return trip following the breakup of river ice. By the 1950s, wooden skiffs and outboard motors were starting to be utilized. In the 1970s, aluminum hulled boats became a common source of travel between villages and subsistence camps. Around that time, the U.S. Bureau of Land Management began collecting information pertaining to subsistence use areas in order to facilitate Native allotment applications that were flowing in following the 1971 Alaska Native Claims Settlement Act (ANCSA). Twenty-eight Kwethluk residents filled allotment applications for 29 parcels along the Kwethluk River and other portions of the Yukon Delta and Togiak national wildlife refuges.<sup>8</sup>

## Natural Resources and Environment<sup>9</sup>

Kwethluk's annual precipitation averages 16 inches, with snowfall of 50 inches. Summer temperatures average from 42 to 62 °F (6 to 17 °C); winter averages are -2 to 19 °F (-19 to -7 °C). Extremes have been recorded from -46 to 86 °F (-41 to 30 °C). The Kuskokwim is typically ice-free from June through October.

The entire Kuskokwim River system covers approximately 52,000 square miles of southwest Alaska. The River courses a broad valley, laden with tundra ponds and lakes, until finally emptying into the Bering Sea. The lower Yukon-Kuskokwim Delta encompassing Kwethluk is an area of low elevation and shallow relief. The terrain is mostly made up of flat and low rolling plains crossed with low gradient streams, tributaries, sloughs, floodplains, wetlands, and shallow lakes. Most of the lower Yukon-Kuskokwim Delta was ice-free during the last major ice age. Sediments in the area are loamy or sandy textured fluvial and alluvial deposits. Soils are poorly drained and typically overlay a layer of permafrost.<sup>10</sup> Vegetation includes tall and low shrub types dominated by willow and alder. Wet tundra, characterized by hydrophilic

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

<sup>8</sup> See footnote 4.

<sup>9</sup> See footnote 6.

<sup>10</sup> Lower Kuskokwim Economic Development Council. (2006). *Comprehensive Economic Development Strategy & Area Plan*. Retrieved February 1, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Bethel%20Region-SAP-2006.pdf>.

vegetation as well as water tolerant sedges and grasses. White spruce and balsam polar can be found in well-drained areas. Paper birch is also present.<sup>11</sup>

Kwethluk is located on Calista Corporation land encompassed by the Yukon Delta National Wildlife Refuge, which provides spawning, rearing, feeding, and wintering habitat for a range of terrestrial and aquatic wildlife.<sup>12</sup> A significant portion of at least 19 waterfowl species and 30 common shorebird species depend on the area. The first week in May brings Canada geese, whistling swans, white-fronted geese, and various other species. Species of fish include salmon, smelt, whitefish, Dolly Varden, sheefish, northern pike, blackfish, and burbot. Terrestrial mammals include black bear, moose, mink, land otter, red fox, beaver, snowshoe hare, and tundra hare. Four species of hair seal are found along the coast and upstream in the Kuskokwim River. Walrus and Steller sea lions can be found along the Kuskokwim Delta coast.<sup>13</sup>

Regional mineral resources include zinc, gold, silver, lead, antimony, tungsten, tin, copper, nickel, mercury, and platinum.<sup>14</sup> Near Kwethluk, the Calista Corporation maintains several mineral prospects near Red Devil. The Red Devil mineral district historically produced 75,000 tons of mercury, and twice as much antimony. More recent interest by Calista Corporation is aimed at development of a mercury-gold system, with secondary arsenic and stibnite potential.<sup>15</sup> Downriver, Platinum and Goodnews Bay are sites of gravel and rock quarry projects.<sup>16</sup>

There are several natural hazards affecting the Yukon-Kuskokwim Delta region. These hazards include flooding, river bank erosion and destabilization, brush fire, and soil destabilization due to permafrost melt. Spring flooding is a major factor contributing to natural hazards in the area. As melt-off and ice jamming occurs during spring break-up, flooding and erosion occur and climate change is thought to be a continuing factor in the seasonality and severity of flooding in the region. In addition, variation in the active permafrost layer caused by climate change and urban development further compound impacts from flood events.<sup>17</sup> Localized flooding and erosion is of ongoing concern to Kwethluk. The riverbank in the eastern and central portion of the village is consistently subjected to erosion, and homes are in danger from bank destabilization. Exposed sewage pits are also posing an environmental hazard as they are eroded.<sup>18</sup>

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<sup>11</sup> Zerbetz, M. (1998). *Organized Village of Kwethluk Comprehensive Community Long Range Plan 1998-2003*. The Arcturus Group. Retrieved August 15, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Kwethluk-CP-1998.pdf>.

<sup>12</sup> U.S. Fish and Wildlife Service. (n.d.). *Yukon Delta National Wildlife Refuge*. Retrieved November 22, 2011 from: <http://www.fws.gov/refuges/profiles/recEdMore.cfm?ID=74540>.

<sup>13</sup> See footnote 11.

<sup>14</sup> Alaska Department of Transportation and Public Facilities. (2002). *Yukon-Kuskokwim Delta Transportation Plan*. Retrieved November 22, 2011 from [http://www.dot.state.ak.us/stwdplng/areaplans/pub/YKDelta\\_Plan\\_final.pdf](http://www.dot.state.ak.us/stwdplng/areaplans/pub/YKDelta_Plan_final.pdf).

<sup>15</sup> Calista Corporation. (n.d.). *Red Devil Prospectus*. Retrieved August 15, 2012 from: [http://www.calistacorp.com/sites/default/files/documents/lands/reports/Red\\_Devil\\_Prospectus.pdf](http://www.calistacorp.com/sites/default/files/documents/lands/reports/Red_Devil_Prospectus.pdf)

<sup>16</sup> Calista Corporation. (n.d.). *Calista Corporation Homepage*. Retrieved November 22, 2011 from: <http://www.calistacorp.com>.

<sup>17</sup> Bethel Coastal District. (2006). *Bethel Coastal Management Plan*. Retrieved November 22, 2011 from: [http://www.alaskacoast.state.ak.us/District\\_Pages/NW\\_Region/Bethel/](http://www.alaskacoast.state.ak.us/District_Pages/NW_Region/Bethel/).

<sup>18</sup> See footnote 11.

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation projects active within Kwethluk in 2010.<sup>19</sup>

## Current Economy<sup>20</sup>

Kwethluk has a mixed cash/subsistence economy. Fishing, hunting, and gathering are popular activities along with some commercial fishing and employment opportunities through the school and government organizations. Some of the largest employers include the Lower Kuskokwim School District, Kwethluk Incorporated, the City of Kwethluk, and the Native store.<sup>21</sup> In a survey conducted by the AFSC in 2011, community leaders reported that Kwethluk's economy is dependent on fishing, sport hunting and fishing, and subsistence.

In 2010,<sup>22</sup> the estimated per capita income was \$14,522 and the estimated median household income was \$40,625, compared to \$6,503 and \$25,417 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,<sup>23</sup> the real per capita income (\$8,551) and real median household income (\$25,417) indicate significant increases in both individual and household earnings. In 2010, Kwethluk ranked 211<sup>th</sup> of 305 communities from which per capita income was estimated, and 186<sup>th</sup> of 299 communities from which median household income was estimated.

However, Kwethluk's small population size may have prevented the ACS from accurately portraying economic conditions.<sup>24</sup> Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$4.97 million in total wages in 2010.<sup>25</sup> When matched with the 2010 Decennial Census population, the per capita income equals \$6,898, which is significantly less than the 2010 ACS estimate and similar to what was reported in 2000.<sup>26</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.<sup>27</sup> 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.

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<sup>19</sup> Alaska Dept. of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved October 23, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

<sup>20</sup> Unless otherwise noted, all monetary data are reported in nominal values.

<sup>21</sup> See footnote 11.

<sup>22</sup> U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

<sup>23</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>24</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>25</sup> ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

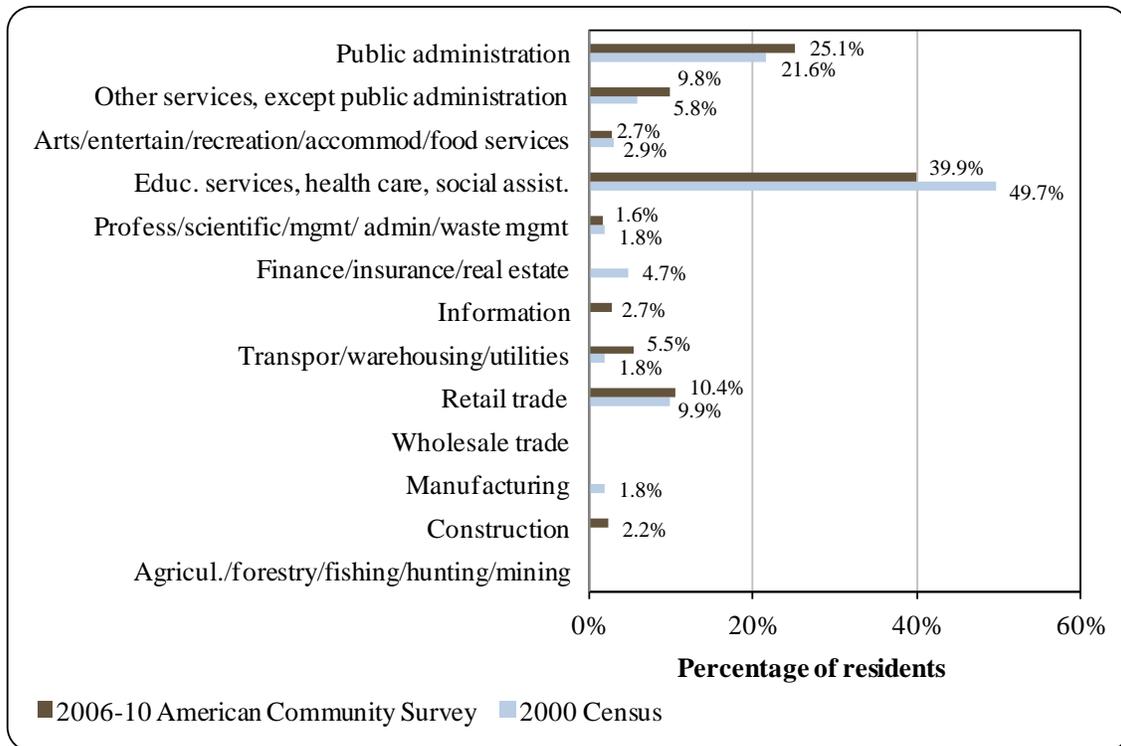
<sup>26</sup> Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

<sup>27</sup> Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: [www.denali.gov](http://www.denali.gov).

According to 2006-2010 ACS estimates, 48.8% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 8.2%, compared to 5.9% statewide; and an estimated 18.0% of residents were living below the poverty level, compared to an estimated 9.5% of Alaska residents overall. Again, Kwethluk’s small population size may have affected the ACS’s ability to accurately capture economic conditions. According to 2010 ALARI estimates, the local unemployment was 25.1% based on unemployment insurance claimants.<sup>28</sup>

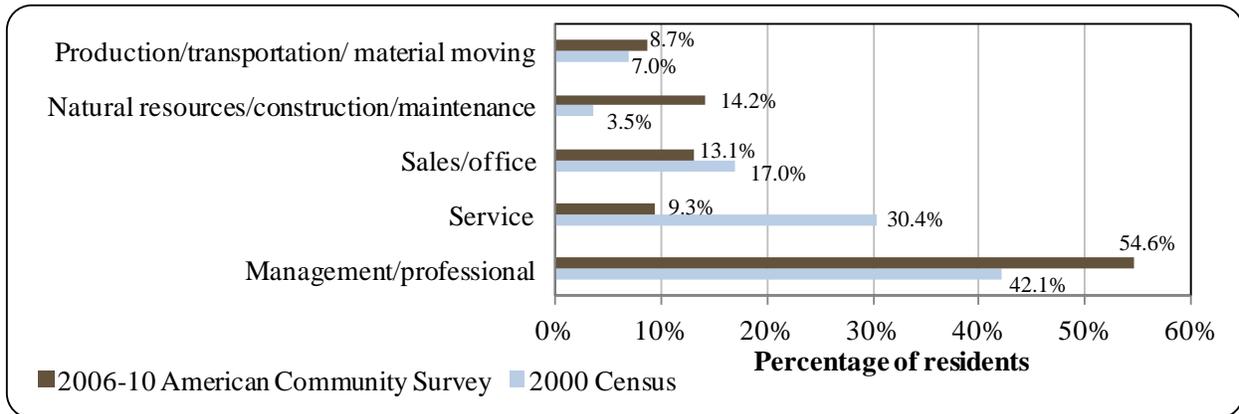
Of those employed, the 2006-2010 ACS estimated that 27.3% worked in the private sector, 69.4% worked in the public sector, and 3.3% were self-employed. By industry, most (39.9%) of employed residents were estimated to work in education, health care, and social assistance sectors; followed by public administration sectors (25.1%) and retail trade sectors (10.4%). Between 2000 and 2010 there was very little proportional variation in industry sector employment. The most significant proportional change occurred within education services, health care, and social assistance sectors (Figure 3). Another source of employment information comes from the 2010 ALARI estimates, most (71.8%) employed residents worked in local government sectors; followed by other non-specified sectors (8.2%) and trade, transportation, and utilities sectors (7.5%). No individuals characterized themselves as working in natural resource based industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

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



<sup>28</sup> See footnote 26.

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



By occupation type, most (54.6%) employed residents were estimated to hold management or professional positions in 2010, followed by natural resources, construction, or maintenance positions (14.2%); sales or office positions (13.1%); service positions (9.3%); and production, transportation, or material moving positions (8.7%). Between 2000 and 2010, there were significant proportional increases to the number of natural resources, construction, maintenance, management, and professional positions; and significant proportional declines to the number of service positions (Figure 4).

## Governance

Kwethluk is a second-class city with a mayoral form of government. There is a seven-member city council, nine-member school board, and six municipal employees. In addition, there is a U.S. Bureau of Indian Affairs recognized tribal government. The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Kwethluk is the Calista Corporation, and the local ANCSA chartered non-profit is the Association of Village Council Presidents. The ANCSA chartered village corporation is Kwethluk, Inc. The sale and importation of alcohol is banned in Kwethluk. The closest National Marine Fisheries Service (NMFS), Alaska Department of Fish and Game (ADF&G), and Bureau of Citizenship and Immigration Services are all located within Bethel.

The City collected a 5% sales tax in 2010. When adjusted for inflation,<sup>29</sup> municipal revenues declined by 10.3% between 2000 and 2010, from \$541,436 to \$628,239. Annual revenues varied significantly between those years, reaching their lowest point in 2005 at \$199,781 before rebounding. In 2010, most locally generated from sales tax revenues, utility rents, and rentals. Most outside revenues were generated from state revenue sharing funds, and payments in lieu of taxes. In that year, sales tax revenues accounted for 12.9% of total revenues, compared to 16.1% in 2000. In addition, state allocated Community Revenue Sharing accounted for 21.5% of total revenues, compared to 8.5% from State Revenue Sharing in 2000.

State and federal grants awarded between 2000 and 2010 included \$21,733 for dock construction and \$28,604 for a barge landing facility. Further information regarding municipal finances can be found in Table 2.

<sup>29</sup> Inflation calculated using 2010 Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kwethluk 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	\$541,436	\$87,032	\$45,914	n/a
2001	\$327,524	\$94,064	\$27,172	n/a
2002	\$278,139	\$91,607	\$40,883	n/a
2003	\$272,186	\$106,538	\$26,328	n/a
2004	\$237,830	\$80,886	-	n/a
2005	\$199,781	\$81,667	-	n/a
2006	\$281,854	\$88,721	-	n/a
2007	\$601,473	\$81,374	-	n/a
2008	\$515,411	\$96,176	-	\$50,337
2009	\$471,910	\$95,174	\$133,156	n/a
2010	\$628,239	\$81,313	\$134,974	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*

Kwethluk is dependent on air transportation for year-round movement of freight and passengers. A state-owned 3,199-foot long by 75-foot wide gravel airstrip and a seaplane base are available. Flights are available through a variety of companies including ERA Alaska, Ryan Air Service, and Yute Air. The price of a roundtrip ticket by plane from Kwethluk to Anchorage in early June 2012 was \$574.<sup>30</sup> Barge services deliver cargo during the summer. There are no docking facilities. Snowmachines, ATVs, and skiffs are used for local travel, and the river becomes an ice road during winter. Air taxi and ice road taxi services are available. Winter trails are marked to Eek (45 miles), Three Step Mountain (55 miles), and Columbia Creek (49 miles).

### *Facilities*

Electricity in Kwethluk is provided by a diesel powerhouse owned by Kwethluk, Inc., the ANCSA-chartered village corporation. The community currently has plans to develop alternative energy sources and plans to complete this within the next 10 years. The City of Kwethluk provides water treatment, honeybucket haul, and refuse services. The City also operates a washeteria. None of the 147 homes have complete plumbing, but many residents have

<sup>30</sup> Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

steambaths. Residents haul water for household use. There are sewage container disposal bins; these are hauled to the sewage lagoon. The school and teachers' housing operate individual systems.

In a survey conducted by the AFSC in 2011, community leaders reported that Kwethluk is currently in the process of building a barge landing area, constructing new dock facilities, building roads to the dock spaces, and installing pilings. These projects are all slated to be completed within the next 10 years. Currently, there are no docking facilities in Kwethluk, and only riverfront mooring exists on Kwethluk River at this time. However, community leaders report haul out facilities and an Environmental Protection Agency (EPA)-certified boat cleaning station already exist in the community. In addition, Kwethluk has plans to build dry dock facilities within the next 10 years. Community leaders indicated no boat repair services, infrastructure, or other fisheries-related businesses are available in Kwethluk, and residents typically travel to Bethel or Anchorage, Alaska and Seattle, Washington to access fisheries-related businesses and services that are not available locally.

The nearest village public safety officer is stationed in Kwethluk,<sup>31</sup> and the nearest state trooper post is in Bethel.<sup>32</sup> The City also maintains its own police force and fire department. In a survey conducted by the AFSC in 2011, community leaders reported that Kwethluk also has a post office, telephone service is in place, and broadband internet access is currently being established.

### *Medical Services*

The Betty Guy Memorial Clinic provides residents with basic medical services and is operated by the Yukon-Kuskokwim Health Corporation. Emergency Services have river air and floatplane access. Emergency service is provided by a health aide. The nearest hospital is located in Bethel.

### *Educational Opportunities*

Ket'acik/Aapalluk Memorial School offers preschool through 12<sup>th</sup> grade instruction. As of 2011, there were 247 students enrolled and 15 teachers employed.<sup>33</sup>

## **Involvement in North Pacific Fisheries**

### *History and Evolution of Fisheries*

Fisheries participation in the Lower Kuskokwim Delta dates back thousands of years to the original Central Yup'ik occupants. 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. During early years, local salmon were cured and salted and by 1920, the

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<sup>31</sup> Alaska Department of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

<sup>32</sup> Alaska Department of Public Safety. (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

<sup>33</sup> Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

largest commercial season to date took place on the Kuskokwim River, with five operators processing approximately 35,000 Chinook salmon that year. In 1922, there were four salteries operating near the mouth of the Kuskokwim, processing Chinook and sockeye salmon. The Kuskokwim area was closed to all fishing for export from 1926 through 1929. In 1930, regulations were modified to allow commercial fishing in part of Kuskokwim Bay. A floating cannery operated for that year, and by 1932, three companies engaged in commercial fishing. 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. Information on commercial fishing during the late 1930s through the 1950s is limited. However in 1952, poor salmon runs prompted the closure of the Kuskokwim River and Bay. Management was finally shifted to the State of Alaska in 1960, and commercial fishing resumed.<sup>34</sup>

At the time of statehood in 1959, 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 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. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current 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>35</sup>

Commercial catch of herring for bait began in Alaska around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak 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>36</sup>

On the lower Kuskokwim River, subsistence sockeye, chum, and Chinook harvesting typically begins by June 1<sup>st</sup>, and is concluded by mid-July. Coho and pink salmon are harvested in August and September. Fishing effort is based from either a fish camp or from a home village. Drift gill nets, fish wheels, and rods and reels are used for harvesting. Soon after river ice breaks up in May, smelt move into the Lower Kuskokwim area. Residents use fine-meshed nets to catch smelt, and thread them through willow sticks before drying and smoking them. Whitefish, sheefish, Arctic grayling, and northern pike are harvested year-round. Blackfish and burbot are harvested during fall and winter months. Dolly Varden are typically harvested from June through December; while trout are typically harvested in the early spring and summer, and again in the

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<sup>34</sup> Pennoyer, S.; Middleton, K. R.; & Morris, M. E. (1968). *Arctic-Yukon-Kuskokwim Area Salmon Fishing History*. Retrieved April 11, 2012 from: <http://www.sf.ADFG.state.ak.us/fedaidpdfs/afrbIL.070.pdf>.

<sup>35</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>36</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>.

late summer and early fall. Spotted seal, bearded seal, ringed seal, and walrus are harvested in the late spring.<sup>37,38</sup>

Kwethluk has a long subsistence fishing tradition dating back to pre-European contact. Historically, the Yup'ik of the Yukon-Kuskokwim Delta region relied on many species of anadromous and freshwater fish. In more recent years, commercial and subsistence fishing have become an important part of the local economy and culture. While the community lacks the infrastructure needed for commercial landings, many residents possess commercial fishing licenses. Harvests by Kwethluk residents are landed in other communities within the region possessing harbor and processing facilities.

Kwethluk is located in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. The community is not eligible for the Community Quota Entity program given its distance from the Gulf of Alaska. In addition, Kwethluk is not eligible to participate in the Community Development Quota program. In a survey conducted by the AFSC in 2011, community leaders reported that Kwethluk participates in the fisheries management process in Alaska through a representative who sites on regional fisheries advisory and/or working groups run by ADF&G and a representative that participates in the Federal Subsistence Board or Federal Subsistence Regional Advisory Council process.

### *Processing Plants*

According to ADF&G's 2010 Intent to Operate list, Kwethluk does not have a registered shoreside processing plant. The closest shoreside processor is located in Bethel.

### *Fisheries-Related Revenue*

Between 2000 and 2010, known fisheries-related revenues totaled \$7,698 has come from the Shared Fisheries Business Tax, raw fish taxes, and the Fisheries Resource Landing Tax. Earnings have stayed relatively stable; however, they have not totaled more than \$1,000 in a given year since 2001. In addition, 2010 was the first year for which revenue was reported from the Fisheries Resource Landing Tax. For more information on known fisheries-related revenues for Kwethluk between 2000 and 2010, see Table 3.

### *Commercial Fishing*

Information on commercial fishing activity in Kwethluk is limited to that provided by community leaders in a survey conducted by the AFSC in 2011. Community leaders reported that the commercial salmon season typically runs from June 27<sup>th</sup> through August 20<sup>th</sup>. Drift gill nets are the gear type commonly used locally.

In 2000, 63 residents held 70 permits issued by the Commercial Fisheries Entry Commission (CFEC), which was also the year in which the number of permits held in the

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<sup>37</sup> Coffing, M. 1991. *Kwethluk Subsistence: Contemporary Land Use Patterns, Wild Resource Harvest and Use, and the Subsistence Economy of the Lower Kuskokwim River*. Retrieved July 12, 2012 from: <http://www.subsistence.ADFG.state.ak.us/TechPap/tp157.pdf>

<sup>38</sup> Andrews, E., and M. Coffing 1986. *Kuskokwim River Subsistence Chinook Fisheries: An Overview*. Retrieved July 12, 2012 from: <http://www.nativeknowledge.org/db/files/tp146.htm>.

community peaked. In 2010, 60 residents, or 8.3% of the population, held 62 CFEC permits. Of the CFEC permits held in 2010, 89% were for salmon, compared to 81% in 2000; and 11% were for herring, compared to 19% in 2000. Of the CFEC permits held in 2010, 58% were actively fished, compared to 71% in 2000. This varied by species from 65% of salmon permits, to 0% of herring permits. Permit activity peaked in 2000 at 82% of salmon permits and 23% of herring permits. Kuskokwim gillnet salmon was the only fishery prosecuted by Kwethluk residents in 2010.<sup>39</sup>

Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits. In addition, residents did not participate in federal halibut, sablefish, or crab catch share programs between 2000 and 2010.

Residents held 27 commercial crew licenses in 2010, compared to 57 in 2000; when the number of commercial crew licenses peaked locally. In addition, residents held majority ownership of 5 vessels in 2010, compared to 25 in 2000. Both the number of commercial crew licenses, and the number of vessels owned by residents significantly declined between 2000 and 2010.

There were no fish buyers registered in Kwethluk and no shoreside processors that filed fish tickets between 2000 and 2010. Given this, there were no recorded landings made in Kwethluk during this time period. In addition, any landings made by residents during this time period are considered confidential and may not be reported.

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<sup>39</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 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Kwethluk: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax <sup>1</sup>	\$300	\$840	\$677	\$813	\$150	\$138	\$340	\$350	\$350	\$147	\$147
Shared Fisheries Business Tax <sup>1</sup>	\$840	\$677	\$136	\$173	\$138	\$340	\$379	\$204	\$147	\$124	\$136
Fisheries Resource Landing Tax <sup>1</sup>	n/a	\$152									
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										
<b>Total fisheries-related revenue<sup>4</sup></b>	<b>\$1,140</b>	<b>\$1,517</b>	<b>\$813</b>	<b>\$986</b>	<b>\$288</b>	<b>\$478</b>	<b>\$719</b>	<b>\$554</b>	<b>\$497</b>	<b>\$271</b>	<b>\$435</b>
<b>Total municipal revenue<sup>5</sup></b>	<b>\$541,436</b>	<b>\$327,524</b>	<b>\$278,139</b>	<b>\$272,186</b>	<b>\$237,830</b>	<b>\$199,781</b>	<b>\$281,854</b>	<b>\$601,473</b>	<b>\$515,411</b>	<b>\$471,910</b>	<b>\$628,239</b>

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, Kwethluk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) <sup>1</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a										
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) <sup>1</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a										
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits <sup>1</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a										
	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	n/a										
	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	n/a										
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) <sup>2</sup>	Total permits	0	0	0	1	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	0%	n/a						
	Total permit holders	0	0	0	1	0	0	0	0	0	0	0
Herring (CFEC) <sup>2</sup>	Total permits	13	11	6	7	6	7	7	6	6	6	7
	Fished permits	3	1	0	1	0	0	0	0	0	0	0
	% of permits fished	23%	9%	0%	14%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	14	11	6	7	6	7	7	6	6	6	7

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) <sup>2</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a										
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) <sup>2</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a										
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) <sup>2</sup>	Total permits	0	0	1	1	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	0%	0%	n/a						
	Total permit holders	0	0	1	1	0	0	0	0	0	0	0
Salmon (CFEC) <sup>2</sup>	Total permits	57	55	51	48	49	51	55	53	54	54	55
	Fished permits	47	45	32	30	34	31	34	31	28	17	36
	% of permits fished	82%	82%	63%	63%	69%	61%	62%	58%	52%	31%	65%
	Total permit holders	58	57	51	48	50	51	55	54	55	56	57
<i>Total CFEC Permits<sup>2</sup></i>	<i>Permits</i>	<i>70</i>	<i>66</i>	<i>58</i>	<i>57</i>	<i>55</i>	<i>58</i>	<i>62</i>	<i>59</i>	<i>60</i>	<i>60</i>	<i>62</i>
	<i>Fished permits</i>	<i>50</i>	<i>46</i>	<i>32</i>	<i>31</i>	<i>34</i>	<i>31</i>	<i>34</i>	<i>31</i>	<i>28</i>	<i>17</i>	<i>36</i>
	<i>% of permits fished</i>	<i>71%</i>	<i>70%</i>	<i>55%</i>	<i>54%</i>	<i>62%</i>	<i>53%</i>	<i>55%</i>	<i>53%</i>	<i>47%</i>	<i>28%</i>	<i>58%</i>
	<i>Permit holders</i>	<i>63</i>	<i>59</i>	<i>53</i>	<i>52</i>	<i>52</i>	<i>53</i>	<i>57</i>	<i>56</i>	<i>57</i>	<i>58</i>	<i>60</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 Kwethluk: 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 Kwethluk <sup>2</sup>	Total Net Pounds Landed in Kwethluk <sup>2,5</sup>	Total Ex-vessel Value of Landings in Kwethluk <sup>2,5</sup>
2000	57	0	0	25	21	0	0	\$0
2001	47	0	0	19	19	0	0	\$0
2002	29	0	0	13	15	0	0	\$0
2003	26	0	0	8	11	0	0	\$0
2004	21	0	0	7	9	0	0	\$0
2005	27	0	0	6	7	0	0	\$0
2006	31	0	0	6	5	0	0	\$0
2007	20	0	0	6	3	0	0	\$0
2008	20	0	0	6	3	0	0	\$0
2009	8	0	0	5	3	0	0	\$0
2010	27	0	0	5	3	0	0	\$0

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

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

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

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

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

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

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 Kwethluk: 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

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 Kwethluk: 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

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 Kwethluk: 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>

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 Kwethluk Residents:  
 2000-2010.

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

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*

Like other communities in the Yukon-Kuskokwim Delta, Kwethluk’s proximity to Bethel attracts many private anglers to the area. Community leaders reported in 2011 that a lot more private boats owned by outfitters from Bethel were operating in the area than 5 years previously. In 2010, residents held 130 sportfishing licenses, compared to 64 in 2000. Between 2000 and 2010, no sportfishing licenses were sold in the community. In addition, there were no registered sport fish guides or charter businesses operating during those years. However, the community’s lack of accommodations and recreational fishing services limit visitations by non-Alaska resident anglers. Because of this, most sportfishing in the area by non-residents is likely based out of Bethel.

Kwethluk is located within Alaska Sport Fishing Survey Area V –Kuskokwim River and Bay. This area includes all drainages flowing into Kuskokwim Bay as well as saltwater from Cape Newenham north to Naskonat Peninsula. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. The majority of sportfishing targets freshwater fisheries and in 2010, resident and non-Alaska resident angler days fished totaled 19,455, compared to 19,990 in 2000. In that year, non-Alaska residents accounted for 72% of total angler days fished, compared to 67% in 2000. The Kuskokwim River’s popularity among non-Alaska residents and the fact that most local residents typically engage in subsistence fishing likely contributed to the high ratio of non-Alaska resident to resident anglers between 2000 and 2010. According to ADF&G’s Harvest Survey data between 2000 and 2010, local private anglers target king and coho salmon, rainbow trout, and Dolly Varden char. Trends regarding recreational fishing trends can be found in Table 11.

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

<b>Year</b>	<b>Active Sport Fish Guide Businesses<sup>1</sup></b>	<b>Sport Fish Guide Licenses<sup>1</sup></b>	<b>Sport Fishing Licenses Sold to Residents<sup>2</sup></b>	<b>Sport Fishing Licenses Sold in Kwethluk<sup>2</sup></b>
2000	0	0	64	0
2001	0	0	84	0
2002	0	0	81	0
2003	0	0	73	0
2004	0	0	72	0
2005	0	0	78	0
2006	0	0	63	0
2007	0	0	53	0
2008	0	0	74	0
2009	0	0	81	0
2010	0	0	130	0

Table 11 cont'd. Sport Fishing Trends, Kwethluk: 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*

Kuskokwim Area subsistence salmon fisheries rank as one of the largest in the State of Alaska, accounting for over 50% of the state’s Chinook salmon harvests. More than 2,000 households in the Kuskokwim Area annually harvest salmon for subsistence use. ADF&G Division of Subsistence studies indicate that wild fish account for 85% of the total subsistence-harvested fish and wildlife resource in Kuskokwim River communities; with salmon accounting for up to 53% of the total annual subsistence harvest.<sup>40</sup>

Interviews of subsistence users conducted in 2008 indicated that fishing effort was concentrated during the week ending June 15, and extends through the week ending July 6. This period typically coincides with Chinook abundance. The majority of subsistence harvesters use gillnets and to a lesser degree, rod and reel gear types.<sup>41</sup>

Subsistence activities are central to Kwethluk’s lifestyle and are practiced year round. Salmon, moose and caribou are dietary staples. Most families travel to fish camps during the summer months to cut, dry, and smoke fish for food to be used during the winter and into next

<sup>40</sup> Carroll, M. C. and E. Patton. 2010. Lower Kuskokwim River Inseason Subsistence Salmon Catch Monitoring, 2008. Fishery Management Report No. 10-09. Retrieved August 16, 2012 from: <http://alaska.fws.gov/asm/pdf/fisheries/reports/06-3062008.pdf>.

<sup>41</sup> Ibid.

year.<sup>42</sup> In 1987, household subsistence harvests averaged 3,860 pounds of edible weight. Per capita harvests averaged 800 pounds of edible weight. In addition, 70% of households were involved in harvesting or processing salmon for subsistence use. Throughout 1986, there were 52 salmon fishing camps being used for processing and preserving salmon. Salmon comprised 53% of the total community harvest of wildlife, and salmon harvests that year totaled 229,063 pounds of edible weight. Non-salmon fish contributed 32% of the total edible pounds of wildlife harvested in 1986. Species included northern pike, whitefish, sheefish, Dolly Varden, trout, blackfish, smelt, Arctic grayling, and burbot.<sup>43</sup>

An area that used to harbor one of the largest concentrations of Kwethluk salmon camps was located along the west bank of the Kuskokuak Slough; however, the area has since eroded into the Slough. From the late 1950s to early 1980s, at least 14 camps were located along the Kwethluk River. Erosion and stream migration typically plagues many fish camp sites, at times forcing relation. Popular subsistence fishing areas in 1986 included the Kuskokwim River proper, between Kwethluk and Akiachak, the mouth of the Gweek River, Kuskokuak Slough, Napaskiak Slough, and the Kwethluk and Akulikutak rivers. Historically, salmon were harvested using traps, spears, dipnets, and gillnets. Fish traps are no longer favored, and spears are typically used in swift, clear water tributary streams. Rod and reel and setnets are popular today.<sup>44</sup>

Data pertaining to household participation in subsistence activities is unavailable, as is data pertaining to marine mammal and halibut harvests. Of the species reported by ADF&G in Table 13, residents reported harvest Chinook salmon the most often, followed by chum, sockeye, coho, and pink salmon. In 2008, residents reported harvesting 26,777 salmon on 33 subsistence salmon permits, compared to 16,929 on 109 permits in 2000. In that year, reported salmon harvests peaked thanks to significant increases in both Chinook and coho salmon harvests. In addition, harvest effort was more concentrated as significantly less subsistence salmon permits were returned compared to other years.

According to ADF&G *Community Subsistence Information System* data, species Kwethluk residents historically harvested or used include: ringed seal, spotted seal, blackfish, burbot, Dolly Varden, Arctic grayling, lake trout, northern pike, rainbow trout, sheefish, smelt, and whitefish. In a survey conducted by the AFSC in 2011, community leaders reported that important subsistence resources include all five species of Pacific salmon, local non-salmon fish, moose, bear, caribou, birds, berries, roots, and other plants. Information regarding subsistence trends can be found in Table 12 through 15.

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<sup>42</sup> Zerbetz, M. 1998. Organized Village of Kwethluk Comprehensive Community Long Range Plan 1998-2003. The Arcturus Group. Retrieved August 15, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Kwethluk-CP-1998.pdf>.

<sup>43</sup> Coffing, M. W. 1991. Kwethluk Subsistence: Contemporary Land Use Patterns, Wild Resource Harvest and Use, and the Subsistence Economy of a Lower Kuskokwim River Area Community. Technical Paper No. 157. Retrieved August 16, 2012 from: <http://www.subsistence.ADFG.state.ak.us/TechPap/tp157.pdf>.

<sup>44</sup> Ibid.

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

Year	% Households using Salmon	% Households using Halibut	% Households using Marine Mammals	% Households using Marine Inverts	% Households using Non- Salmon Fish	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.

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

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Kwethluk: 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	144	109	4,925	5,048	3,271	n/a	3,685	n/a	n/a
2001	146	115	6,127	4,365	1,688	n/a	3,960	n/a	n/a
2002	156	113	6,429	7,434	2,515	n/a	1,993	n/a	n/a
2003	159	104	4,938	2,348	1,933	n/a	1,776	n/a	n/a
2004	164	113	6,119	3,597	2,907	n/a	2,741	n/a	n/a
2005	163	123	5,402	3,897	2,584	74	2,177	n/a	n/a
2006	160	92	5,581	5,337	980	114	2,134	n/a	n/a
2007	167	97	4,924	4,517	1,186	63	2,630	n/a	n/a
2008	158	33	8,906	5,775	7,016	n/a	5,080	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, Kwethluk: 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.*

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, Kwethluk: 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.

## **Additional Information**

In a survey conducted by the AFSC in 2011, community leaders expressed concerns over bycatch by Bering Sea trawl fisheries, and impacts it may have on salmon runs on the Kuskokwim River and its tributaries. Specifically, there is concern regarding reduced salmon runs and habitat damage. When asked about the effects that fisheries policies and management actions have had on Kwethluk, community leaders felt that the North Pacific Fishery Management Council (NPFMC) favors commercial fishing practices in the Bering Sea that disrupt local fishing practices. They also report that restrictions to local subsistence/commercial salmon fisheries are hurting the community.

When asked how past or current fisheries policy or management actions have affected Kwethluk, community leaders reported that past management actions have resulted in severely depleted Yukon and Kuskokwim River subsistence/commercial fisheries. They contend that Bering Sea fisheries need to be restricted until salmon numbers recover. Current runs are depleted and returning fish are small.

In closing, community leaders stated that Kwethluk has been involved with their tribal members, staff, and community resources, in trying to protect and facilitate salmon returns over the years though using inter-village cooperation and traditional knowledge