

Ekwok (ECK-wock)



People and Place

*Location*¹

Ekwok is located along the Nushagak River, 43 mi northeast of Dillingham and 285 mi southwest of Anchorage. The area encompasses 16.0 sq mi of land and 1.4 sq mi of water. The community was incorporated as a Second-class city in 1974, is located in the Dillingham Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*²

In 2010, there were 115 residents, ranking Ekwok 231st of 352 communities in terms of population size. Between 1990 and 2010 the population grew by 49.4%. Between 2000 and 2009 the population fell by 16.2% with an average annual growth rate of -2.3%, which was much lower than the statewide average of 0.75% and indicative of an overall decline in population during those years. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that there were 108 permanent residents and 6 non-permanent school teachers living in Ekwok in 2010. The community's population reaches its annual peak in September and is driven by subsistence, recreational, and charter fishing. Information regarding population trends can be found in Table 1.

The racial composition of Ekwok is predominately Yup'ik Eskimo. In 2010, 90.4% of residents identified themselves as American Indian or Alaska Native, compared to 91.5% in 2000. Also in that year, 5.2% of residents identified themselves as White, compared to 6.2% in 2000; and 4.3% identified themselves as two or more races, compared to 2.3% in 2000. Hispanics and Latinos made up 2.6% of the population that year (Figure 1).

In 2010, the average household size was 3.11, compared to 2.50 in 1990 and 3.10 in 2000. In that year, there were 51 total housing units, compared to 39 in 1990 and 56 in 2000. Of the households surveyed in 2010, 55% were owner-occupied, compared to 63% in 2000; 18% were renter-occupied, compared to 13% in 2000; 10% were vacant, compared to 16% in 2000; and 18% were occupied seasonally, compared to 9% in 2000. There were no reports of residents living in group quarters between 1990 and 2010.

Gender distribution was slightly skewed in 2010 at 53.0% male and 47.0% female, and similar to both the statewide distribution that year (52.0% male, 48.0% female) and distribution in 2000 (53.1% male, 46.9% female). The median age that year was 27.3 years, which was younger than the statewide median of 33.8 years and 2000 median of 31.5 years.

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

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>.

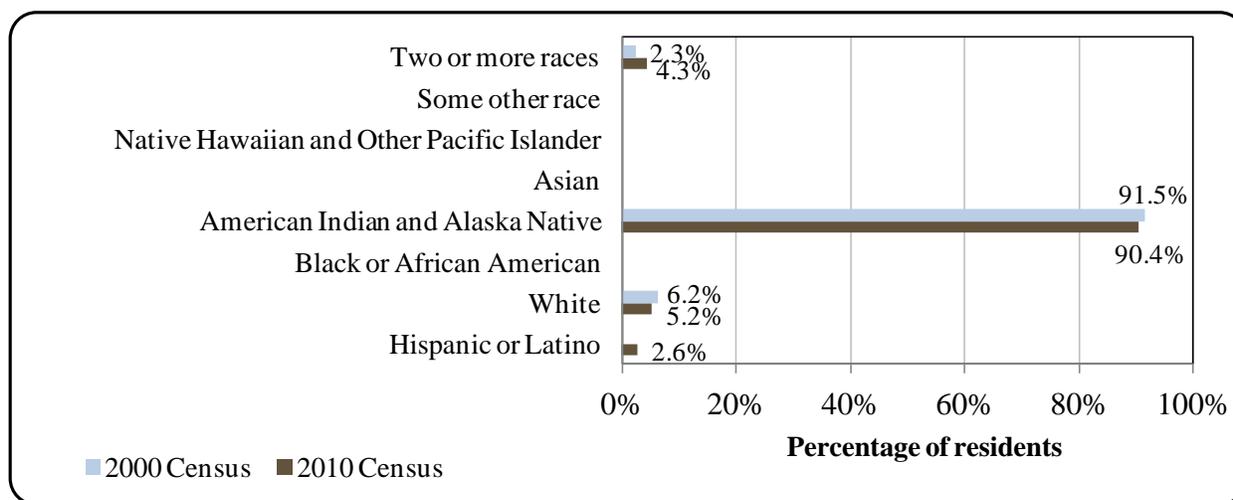
Table 1. Population in Ekwok from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	77	-
2000	130	-
2001	-	119
2002	-	116
2003	-	128
2004	-	127
2005	-	118
2006	-	116
2007	-	108
2008	-	121
2009	-	109
2010	115	-

¹ (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>.

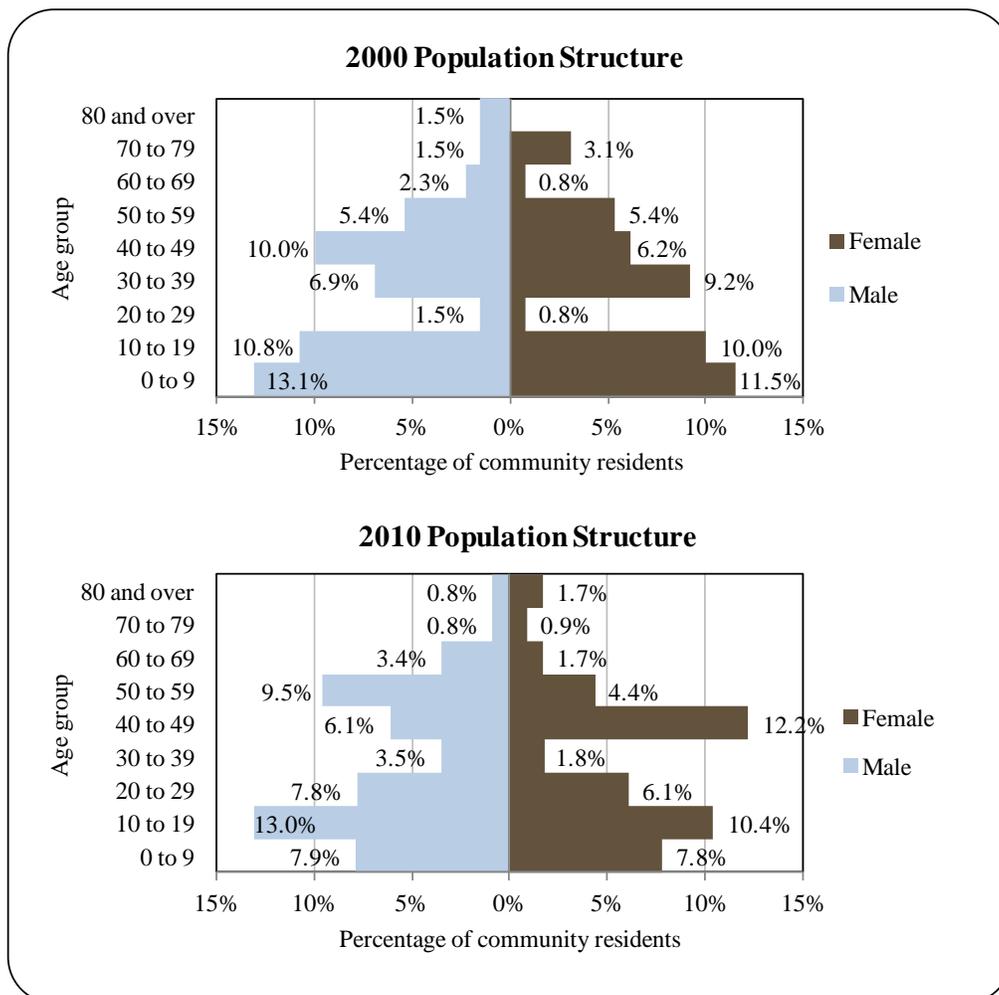
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

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



Compared with 2000, Ekwok’s population structure was less expansive in 2010. In that year, 39.1% of residents were under the age of 20, compared to 45.4% in 2000; 9.3% of residents were over the age of 59, compared to 9.2% in 2000; 34.5% were between the ages of 30 and 59, compared to 43.1% in 2000; and 13.9% were between the ages of 20 and 29, compared to 2.3% in 2000.

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



Gender distribution by age cohort was significantly more skewed in 2010 than it was in 2000. In that year, the greatest absolute gender difference occurred in the 40 to 49 range (12.2% female, 6.1% male), followed by the 50 to 59 (9.5% male, 4.4% female) and 10 to 19 (13% male, 10.4% female) ranges. Of those three, the greatest relative gender difference occurred in the 50 to 59 range. Information regarding Ekwok’s population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census’ 2006 to 2010 American Community Survey (ACS)³ estimated that 72.7% of residents aged 25 and older held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 21.2% of residents had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 6.1% had a ninth to twelfth grade education but

³ 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.

no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 23.2% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 7.1% held an Associate's degree, compared to an estimated 8% of Alaska residents overall; an estimated 11.1% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 5.1% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

In 1818, the Russian-America Company established the region's first trading post at the mouth of the Nushagak River.⁴ Ekwok means "end of the bluff" and is the oldest continuously-occupied Yup'ik Eskimo village on the Ekwok River. During the 1800s, the settlement was used by residents as a fish camp in the spring and summer, and as base for berry picking in the fall. By 1923, it was the largest settlement along the river. In 1930, a U.S. Bureau of Indian Affairs (BIA) school was constructed. Mail was delivered by dog sled from Dillingham until a post office opened in 1941. Many of the earliest homes in Ekwok were located on a low flat area near the riverbank. After a severe flood in the early 1960s, villagers relocated to the current location on higher ground.⁵

Natural Resources and Environment⁶

Ekwok is located in a climatic transition zone. The primary influence is maritime, although continental influences impact weather as well. Average summer temperatures range from 30 to 66 °F (-1 to 19 °C) and winter temperatures average from 4 to 30 °F (-16 to -1 °C). Precipitation averages 20 to 35 inches each year. Extremely strong winds are common during winter months. Fog is prevalent during summer months. The Nushagak River is ice-free from June through mid-November and flooding is common in the spring.⁷

The Nushagak River Lowlands province is largely glaciofluvial with outwash deposits consisting of poorly sorted gravel, sand, and silt. According to local sources, Ekwok has an abundance of gravel. The deposits originated as debris eroded by glacial action and were reworked, partially sorted, and distributed by streams into the Nushagak Valley. In many places, moss or other vegetation cover the terrain. The topography around Ekwok is relatively flat with lowlands on the Nushagak River and rolling terrain to the north.⁸

Vegetation around Ekwok consists of mixed woodland forest comprised of black spruce, paper birch, and quaking aspen. Typical understory vegetation includes low shrubs such as bog blueberry and dwarf arctic birch. Herbaceous plants include crowberry and lowbush cranberry.⁹

Avian populations from the North American Pacific Flyway and several Asiatic routes funnel through Bristol Bay semiannually on their way to and from northern nesting grounds.

⁴ Schichnes, J. and Chythlook, M. (1991). *Contemporary Use of Fish and Wildlife In Ekwok, Koliganek, and New Stuyahok, Alaska*. Retrieved July 2, 2012 from: <http://www.arlis.org/docs/vol1/A/25794521.pdf>.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶ Ibid.

⁷ Ekwok Village Council; Ekwok Natives Ltd.; and City of Ekwok. (2005). *Ekwok Community Comprehensive Plan*. Retrieved March 26, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Ekwok-CP-2005.pdf>.

⁸ Ibid.

⁹ Ibid.

Ekwok area wetlands support significant populations of these migratory waterfowl, swans, shorebirds, and cranes. Resident bird species include yellow warblers, Wilson’s warblers, common redpolls, fox sparrows, spruce grouse, black-bill magpies, common ravens, tree swallows, and American robins.¹⁰ Terrestrial wildlife includes moose, caribou, brown and black bears, wolves coyotes, red and arctic fox, wolverines, lynx, otters, mink and weasels, marten, marmot, beavers, muskrat, ground and red squirrels, hares, porcupine, shrews, voles, mice, and lemmings. Fish on the Nushagak River and tributaries include all five species of Pacific salmon, rainbow trout, Dolly Varden, Arctic char, Arctic grayling, and northern pike.¹¹

Beyond subsistence fisheries, there are no active natural resource exploits in the immediate vicinity of Ekwok. However, the proposed Pebble Mine would impact the community if constructed.¹² On a regional level, it is possible that Pebble Mine could have impacts on subsistence activity, perception of local landscapes, population dynamics, resource availability, and overall community character.¹³ The probability and magnitude of these impacts were still under review as of April 2012.

Riverine flooding and erosion are the most prevalent environmental hazards facing Ekwok. The Nushagak River experiences seasonal flooding resulting from ice break-up during the spring and flooding can impact drinking water, waste disposal sites, and local infrastructure.¹⁴

According to the Alaska Department of Environmental Conservation (DEC), there were no significant environmental remediation projects active within Ekwok as of 2010.¹⁵

Current Economy¹⁶

In a survey conducted by the AFSC in 2011, community leaders reported that Ekwok’s economy is reliant on fishing.

The entire population depends on subsistence activities for various food sources. Salmon, pike, moose, caribou, duck, and berries are harvested. A few residents trap, and summer gardens are also popular since families typically do not leave the village to fish for subsistence purposes. Most residents are not interested in participating in a cash economy. The village corporation owns a fishing lodge 2 mi downriver. Gravel is mined near the community.¹⁷ Top employers in 2010¹⁸ included Ekwok Village Council, Southwest Region Schools, City of Ekwok, Bristol Bay Area Health Corp., Ekwok Natives Ltd., Ekwok Village Council Public Health Facilities, Bristol Bay Native Association, and Peninsula Airways Inc.

¹⁰ Ibid.

¹¹ U.S. Fish and Wildlife Service. (n.d.). *Togiak National Wildlife Refuge*. Retrieved March 13, 2012 from: <http://togiak.fws.gov>.

¹² Bristol Bay Native Association. (n.d.). *Homepage*. Retrieved March 26, 2012 from: <http://www.bbna.com/landres/>.

¹³ Langdon, S.; Colt, S.; King, M.; and Sharp, S. (2006). *BBNA Pebble Mine Technical Assistance Project*. Final Report. Retrieved March 26, 2012 from: <http://www.arlis.org/docs/vol1/C/719684256/719684256.pdf>.

¹⁴ See footnote 7.

¹⁵ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved April 16, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm#Bristol.>

¹⁶ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁷ See footnote 5.

¹⁸ 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/>.

In 2010,¹⁹ the estimated per capita income in Ekwok was \$23,636 and the estimated median household income was \$71,875, compared to \$11,512 and \$16,250 in 2000, respectively. After accounting for inflation by converting 2000 values into 2010 dollars,²⁰ the real per capita income (\$14,569) and real median household income (\$21,369) indicate that there were substantial increases in both individual and household earnings between 2000 and 2010. In 2010, Ekwok ranked 122nd of 305 communities from which per capita income was estimated and 44th of 299 communities from which median household income was estimated.

Ekwok's small population size may have prevented the ACS from accurately portraying economic conditions.²¹ 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 \$877,612 in total wages in 2010.²² When matched with the population in 2010, the per capita income equals \$7,631, which is significantly lower than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Census figures.²³ In addition, 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 2010.²⁴ 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.

According to 2006-2010 ACS estimates,²⁵ 59.2% of residents aged 16 and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 4.8%, compared to an estimated 5.9% statewide; and an estimated 17.2% of residents lived below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Again, ACS estimates may have misrepresented economic conditions in Ekwok. According to 2010 ALARI estimates, unemployment was 29.3% (based on unemployment insurance claimants).

Of those employed, an estimated 13.2% worked in the private sector, an estimated 75.0% worked in the public sector, and an estimated 11.8% were self-employed. If accurate, the high proportion of self-employed residents estimated by the 2010 ACS may have impacted the accuracy of ALARI estimates, which do not account for self-employed workers.

By industry, most (33.8%) employed residents were estimated to work in public administration sectors; followed by education services, health care and social assistance (26.5%); transportation, warehousing, and utilities (11.8%); arts, entertainment, recreation, accommodations, and food service (11.8%); and agriculture, forestry, fishing, hunting, and mining (7.4%) sectors (7.4%). By occupation type, most employed residents were estimated to

¹⁹ 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>.

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

²¹ 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.

²² ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

²³ See footnote 18.

²⁴ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

²⁵ See footnote 21.

hold management or professional positions (32.4%); followed by service (27.9%); sales or office (20.6%); production, transportation, or material moving (11.8%); and natural resources, construction, or maintenance (7.4%) positions (Figure 4). Between 2000 and 2010, employment shifted significantly among several sectors. Most notably, there were declines in service (non-public), education services, health care, and social assistance sectors; and growth in agriculture, forestry, fishing, hunting, mining, professional, scientific, management, administrative, and waste management sectors. Most occupation types experienced modest declines during that period although there was an increase in natural resources, construction, and maintenance positions. Again, it should be noted that Ekwok’s relatively small population size may have affected 2006-2010 ACS results for local employment resulting in figures not entirely reflective of local conditions. According to 2010 ALARI estimates, most (63.6%) employed residents worked in local government sectors; followed by education and health service (12.7%); and “other” unclassified (10.9%) sectors.

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

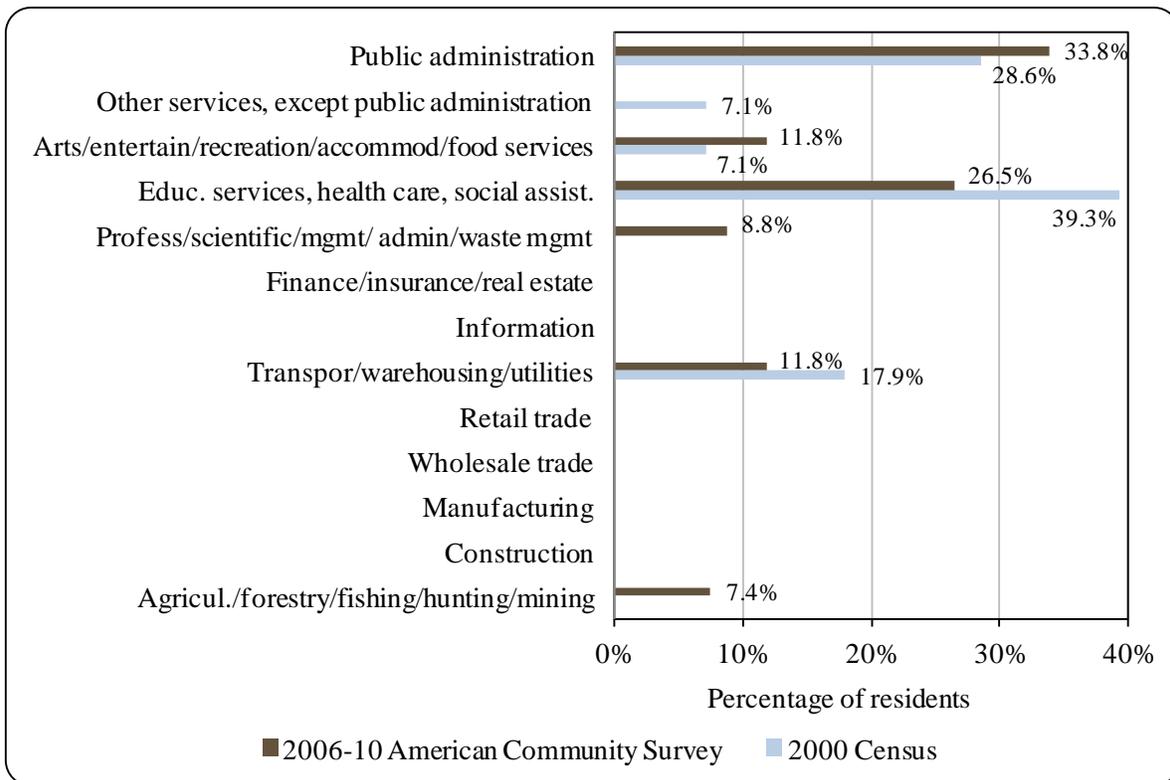
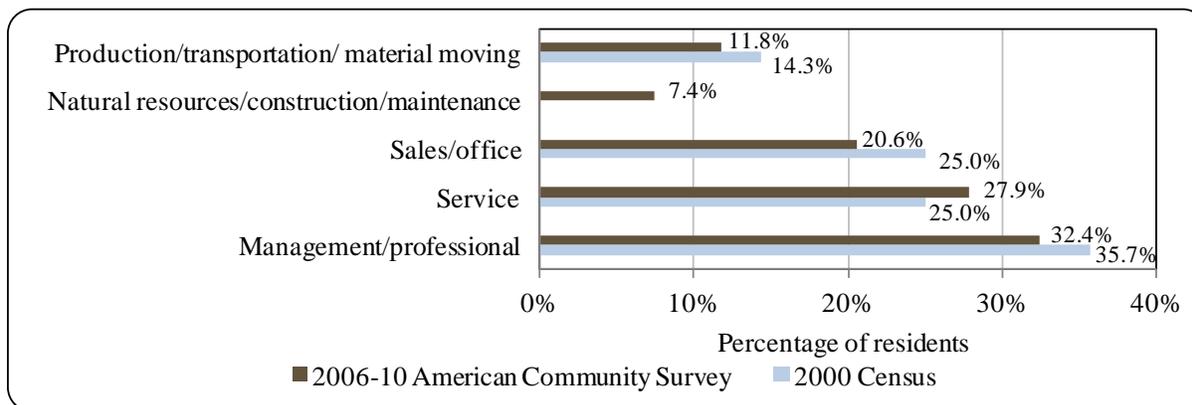


Figure 4. Local Employment by Occupation in 2000-2010, Ekwok (U.S. Census).



Governance

Ekwok is a Second-class city with a mayoral form of government. There is a federally recognized Tribal government and Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporation (Ekwok Natives Limited). The regional ANCSA corporation is the Bristol Bay Native Corporation (BBNC). The regional non-profit Native organization is the Bristol Bay Native Association (BBNA). The closest Alaska Department of Fish and Game (ADF&G) office is located in Dillingham, 43 mi southwest. The closest National Marine Fisheries Service (NMFS) office is located in Bethel, 180 mi northwest. The closest U.S. Bureau of Citizenship and Immigration Services (BCIS) office is located in Anchorage, 285 mi northeast.

When adjusted for inflation,²⁶ total municipal revenues increased by 7.0% between 2000 and 2010 from \$333,859 to \$462,018. Inflation adjusted revenues peaked in 2006 at \$537,971 (\$592,114 after adjusting for inflation.) In 2010, most locally generated revenues were collected from utility rents and fuel sales. Most outside are collected from Community Revenue Sharing and payments in lieu of taxes. In that year, Ekwok received \$101,467 in state allocated Community Revenue Sharing, which accounted for 22.0% of total municipal revenues that year. This represented an increase from 2000, when \$25,605 of State Revenue Sharing accounted for 7.7% of total revenues. Information regarding community finances can be found in Table 2.

²⁶ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

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

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$333,859	n/a	\$25,605	n/a
2001	\$385,146	n/a	\$24,618	n/a
2002	\$438,743	n/a	\$26,131	n/a
2003	\$429,061	n/a	\$25,909	n/a
2004	\$468,161	n/a	-	n/a
2005	\$517,489	n/a	-	n/a
2006	\$537,971	n/a	-	n/a
2007	\$499,050	n/a	-	n/a
2008	\$478,650	n/a	-	n/a
2009	\$488,410	n/a	\$102,173	n/a
2010	\$462,018	n/a	\$101,467	n/a

¹ Alaska Department of Community 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.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

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

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

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*²⁷

Air transport is most frequently used to reach Ekwok. Regular and charter flights are available from Dillingham. The state-owned 3,300-ft long by 75-ft wide gravel runway was rebuilt and lengthened in 2005. Roundtrip airfare between Anchorage and Dillingham in June 2012 was \$452.²⁸ Air charters to Ekwok are available by appointment and float planes land on the Nushagak River. Cargo is brought in during ice-free months from Dillingham by Coastal Marine Transport barge service. There are no docking facilities, but a barge off-loading area exists. Skiffs, All Terrain Vehicles (ATVs), and snowmachines are used for local transportation to other villages.

²⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁸ Airfare was calculated using lowest fare from www.travelocity.com. (Retrieved November 22, 2011).

Facilities

Individual wells provide water for the majority of the community. Twenty Housing and Urban Development (HUD) homes have individual wells and a piped septic system. The City operates a piped sewage system with a sewage lift station, which connects to 16 additional residences. The remaining homes use septic systems or a flush/haul system; a sewage pumper is available. Thirty-six of 42 homes have complete plumbing. Refuse collection services are provided. Visitor accommodations include Ekwok Lodge and Maalug's Lodge. Public safety services are provided by a local Village Public Safety Officer (VPSO) and state troopers based in Dillingham. Fire and rescue services are provided by Ekwok Fire and Emergency Medical Services. Additional public facilities include a community center, city hall, Village Council building, school gym, and city jail. Communications services include local and long distance phone, local television and radio, and internet.²⁹

In a survey conducted by the AFSC in 2011, community leaders reported that there is no public dock space available for transient or permanent vessel moorage. Fisheries-related businesses and services located in the community include fish lodges and boat fuel sales. For services not available in Ekwok, residents travel to Dillingham, Anchorage, and Seattle.

*Medical Services*³⁰

The Ekwok Clinic is a Community Health Aid Program (CHAP) site which provides basic health care. Acute, long term and specialized care is provided in Dillingham.

*Educational Opportunities*³¹

William "Sonny" Nelson School provides kindergarten through 8th grade instruction. In 2011, there were 10 students enrolled and 1 instructor employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Ekwok's involvement in North Pacific Fisheries is closely tied to participation in subsistence harvesting. Semi-nomadic Yup'ik Eskimos (known as *Kiatagmiut*) originally settled around Nushagak and Mulchatna rivers revolving around spring trapping trips to the mountainous interior regions; followed by a transition to fish camps to prepare for salmon fishing. Many families traveled to the coasts in the summer to trade for ivory and seal oil. Once the fur trade was established, these products were exchanged for processed foods and gunpowder. By early September, many returned to winter villages. However, interior hunting and trapping continued until the first snowfall in October. During the winter, whitefish were taken with traps under the ice and grayling with hooks through holes in the ice.

²⁹ See footnote 27.

³⁰ Ibid.

³¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

The Bristol Bay salmon fishery is one of the most important commercial salmon fisheries in the world. Annual commercial harvests of salmon since statehood have averaged about 17 million sockeye (91.2% of all salmon), about 880,000 chum (4.7%), about 550,000 pink (3.0%), about 120,000 coho (0.6%), and about 100,000 Chinook salmon (0.5%). Commercial sockeye salmon harvests since 1959 have represented about 56% of statewide commercial harvests for that species. Sockeye salmon are the most important commercial fish in the region, and large runs occur in Egegik and Nushagak River drainages. These fish return to Bristol Bay in late June and early July with most adults entering their spawning stream by late July or early August.³²

Chinook harvests occur mostly in the Nushagak District outside of Dillingham. Coho salmon are underused because fall runs occur after most vessels have ceased fishing efforts. Because of this, coho harvests are directly tied to market conditions rather than abundance. The Togiak River continuously exceeds minimum escapement goals and had relatively few emergency orders issued between 2000 and 2005, compared to other areas within Bristol Bay.³³

The Togiak area of Bristol Bay supports the largest herring fishery in the state. Large purses seine and gillnet fleets harvest the spawning herring in a sac roe fishery, and a spawn-on-kelp harvests are also taken by local residents (usually in Togiak Bay). The Togiak sac roe fishery began in 1977, and has supported a fairly stable catch, averaging 40.6 million lb between 1998 and 2002.³⁴

Bristol Bay supports a large, stable red king crab fishery which has been increasing in abundance since the late 1990s. Fishing effort has remained high with an average of 261 active permits between 1998 and 2002. However, no Togiak residents held crab permits or quota between 2000 and 2010.³⁵

The commercial salmon fishery began in the Nushagak region in the 1880s. Local residents of the region were drawn into the seafood processing sector as a source of wage employment. After World War II, all Native cannery crews were common. By the 1960s, Natives has made up a significant portion of local commercial harvesters as well. Earnings from commercial fishing and cannery work became a major annual source of income for many Native families in Bristol Bay.³⁶ In a survey conducted by the AFSC in 2011, community leaders reported that Ekwok does not participate in the fisheries management process in Alaska. However, the community is eligible for the Community Development Quota (CDQ) program and is represented by the Bristol Bay Economic Development Corporation (BBEDC). 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.³⁷

³² LaRoche & Associates. (2011). *Lake & Peninsula Borough Coastal Management Plan*. Retrieved March 22, 2012 from: http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

³³ Clark, J. H. et al. (2006). *The Commercial Salmon Fishery in Alaska*. Retrieved July 11, 2012 from: <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

³⁴ Woodby, D. et al. (2005). *Commercial Fisheries in Alaska*. Retrieved July 11, 2012 from: <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

³⁵ Ibid.

³⁶ Schichnes, J. and Chythlook, M. (1991). *Contemporary Use of Fish and Wildlife In Ekwok, Koliganek, and New Stuyahok, Alaska*. Retrieved July 2, 2012 from: <http://www.arlis.org/docs/vol1/A/25794521.pdf>.

³⁷ 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.

Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

Processing Plants

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

Fisheries-Related Revenue

Between 2000 and 2010, Ekwok received fisheries-related revenue primarily from Shared Fisheries Business Taxes. In 2010, the community received \$5,982, compared to \$4,972 in 2000. Fisheries-related revenues peaked in 2001 at \$8,875. In a survey conducted by the AFSC in 2011, community leaders reported that Ekwok received \$100,000 from the BBEDC in 2010. Information regarding fisheries-related revenue trends can be found in Table 3.

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

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that vessels under 35 ft long use Ekwok as a base of operations during fishing seasons. There were five residents who held commercial crew licenses in 2010, compared to thirteen in 2000. In addition, residents held priority ownership of one vessel that year, compared to nineteen in 2000.

In 2010, three residents, or 2.6% of the population, held three permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, six residents, or 4.6% of the population, held seven CFEC permits. All of the permits held by residents in 2010 were for salmon, compared to 2000 when 71% were for salmon and 29% were for herring. Of the CFEC salmon permits issued in 2010, 67% were fished, compared to 80% in 2000. Bristol Bay drift gillnet salmon was the only fishery prosecuted by residents of Ekwok in 2010.³⁸ The herring fishery in Ekwok has been in decline since 1990 when residents held approximately equal numbers of both herring and salmon permits.³⁹ By 2003, no herring permits were held by residents. Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) groundfish or crab permits. In addition, no residents held halibut, sablefish, or crab quota between 2010 and when the programs began.

No commercial landings were reported in Ekwok between 2000 and 2010. While landings were made in other ports by residents of Ekwok in those years, all information pertaining to poundage and ex-vessel value of landings is considered confidential. Information regarding commercial fishing trends can be found in Tables 4 through 10.

³⁸ 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.]

³⁹ See footnote 36.

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$2,486	\$4,437	\$3,835	\$3,800	n/a						
Shared Fisheries Business Tax ¹	\$2,486	\$4,437	\$3,835	\$3,136	\$2,744	\$3,310	\$4,073	\$4,836	\$4,563	\$5,681	\$5,602
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	\$21	\$55	\$209	n/a	\$380
Fuel transfer tax ²	n/a										
Extraterritorial fish tax ²	n/a										
Bulk fuel transfers ¹	n/a										
Boat hauls ²	n/a										
Harbor usage ²	n/a										
Port/dock usage ²	n/a										
Fishing gear storage on public land ³	n/a										
Marine fuel sales tax ³	n/a										
Total fisheries-related revenue⁴	\$4,972	\$8,875	\$7,671	\$6,936	\$2,744	\$3,310	\$4,095	\$4,891	\$4,773	\$5,681	\$5,982
Total municipal revenue⁵	\$333,859	\$385,146	\$438,743	\$429,061	\$468,161	\$517,489	\$537,971	\$499,050	\$478,650	\$488,410	\$462,018

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

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	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) ¹	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 ¹	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) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a										
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a										
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a										
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	2	1	1	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	n/a							
	Total permit holders	2	1	1	0	0	0	0	0	0	0	0

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	5	4	3	3	3	3	3	3	3	3	3
	Fished permits	4	3	2	3	2	3	2	2	2	2	2
	% of permits fished	80%	75%	67%	100%	67%	100%	67%	67%	67%	67%	67%
	Total permit holders	5	4	3	4	3	3	3	3	3	3	3
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>7</i>	<i>5</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>
	<i>Fished permits</i>	<i>4</i>	<i>3</i>	<i>2</i>	<i>3</i>	<i>2</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>
	<i>% of permits fished</i>	<i>57%</i>	<i>60%</i>	<i>50%</i>	<i>100%</i>	<i>67%</i>	<i>100%</i>	<i>67%</i>	<i>67%</i>	<i>67%</i>	<i>67%</i>	<i>67%</i>
	<i>Permit holders</i>	<i>6</i>	<i>4</i>	<i>3</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>

¹National 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.]

²Alaska 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 Ekwok: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Ekwok ²	Total Net Lbs Landed In Ekwok ^{2,5}	Total Ex-Vessel Value Of Landings In Ekwok ^{2,5}
2000	13	0	0	19	16	0	0	\$0
2001	6	0	0	19	16	0	0	\$0
2002	1	0	0	17	15	0	0	\$0
2003	2	0	0	14	12	0	0	\$0
2004	6	0	0	15	13	0	0	\$0
2005	3	0	0	2	2	0	0	\$0
2006	7	0	0	2	2	0	0	\$0
2007	4	0	0	3	2	0	0	\$0
2008	2	0	0	3	3	0	0	\$0
2009	1	0	0	1	1	0	0	\$0
2010	5	0	0	1	1	0	0	\$0

¹ 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.]

² 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.]

³ 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.]

⁴ 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.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Ekwok: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lbs)
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 Ekwok: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lbs)
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 Ekwok: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lbs)
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 Ekwok: 2000-2010.

	<i>Total Net Pounds¹</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>Total²</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>Total²</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.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</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.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Sportfishing on the Nushagak River is popular with both Alaska residents and non-Alaska residents and Ekwok’s relatively close proximity to Dillingham makes it a popular destination for private anglers. In a survey conducted by the AFSC in 2011, community leaders reported that there are six recreational fishing lodges within close range of Ekwok. In 2010, there were two sport fish guide businesses, compared to three in 2000. However, no registered sport fish guide businesses were active between 2000 and 2010. Also in 2010, four sport fish guide licenses were issued, compared to five in 2000. The number of sport fish guide licenses issued in the community peaked in 2004 at seven. Finally, 33 sportfishing licenses were issued to residents and 66 sold in the community, compared to 26 and 51 in 2000, respectively. Local sales of sportfishing licenses peaked in 2004 at 102 licenses sold.

Ekwok is located within the Nushagak, Wood River and Togiak ADF&G Harvest Survey Area, which includes the Nushagak River, Mulchatna River, Wood River, and Tilchik Lake drainages, as well as water westward to Cape Newenham.⁴⁰ Overall, there was a steady decline in freshwater angler days fished in the survey area between 2000 and 2010. In 2010, total freshwater angler days fished totaled 23,385 days, compared to 43,083 in 2000. In that year, non-Alaska residents accounted for 89% of angler days fished, compared to 73% in 2000. Between 2000 and 2010, there was significantly less saltwater angler days fished than freshwater. In 2009, there was 147 total saltwater angler days fished, compared to 429 in 2000. No kept/released charter data are available for Ekwok.

In a survey conducted by the AFSC in 2011, community leaders reported that sportfishing in the area is conducted by private boats owned by both local residents and non-local residents. Private anglers target all five species of Pacific salmon, rainbow trout, northern pike, and Arctic grayling.⁴¹ Information regarding sportfishing trends can be found in Table 11.

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

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Ekwok ²
2000	0	5	26	51
2001	0	4	28	46
2002	0	4	33	41
2003	0	5	33	73
2004	0	7	30	102
2005	0	5	33	100
2006	0	4	37	68
2007	0	5	43	62
2008	0	4	39	72
2009	0	2	39	54
2010	0	4	33	66

⁴⁰ Alaska Department of Fish and Game. (n.d.). *Alaska Sport Fishing Survey*. Retrieved February 13, 2012 from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/index.cfm?ADFG=area.home>.

⁴¹ River King Outfitters. (n.d.). *Homepage*. Retrieved March 27, 2012 from: <http://www.riverkingoutfitters.com/>.

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

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	246	183	31,290	11,793
2001	652	599	31,489	10,779
2002	665	31	20,011	11,911
2003	321	464	26,783	13,419
2004	767	61	25,203	19,980
2005	81	246	33,089	15,662
2006	365	196	28,840	14,858
2007	326	921	28,541	13,762
2008	113	103	27,066	7,356
2009	107	38	22,444	7,805
2010	n/a	44	15,676	7,709

¹ 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.]

² 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.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence is of central importance to the community of Ekwok for reasons both cultural and economic. In a survey conducted by the AFSC in 2011, community leaders reported that the subsistence season typically runs from the beginning of May through the end of September. The community of Ekwok is part of a larger network of subsistence communities which rely heavily on the Nushagak River system of drainages and areas north of Lake Iliamna. Subsistence activities are concentrated heavily within the Newhalen and Nondalton areas northeast of Ekwok.⁴² According to the ADF&G *Community Subsistence Information System*,⁴³ marine invertebrates used and/or harvested by Ekwok residents includes butter and razor clams; marine mammals use and/or harvested includes bearded seal, bowhead whale, harbor seal, and Steller

⁴² Stephen R. Braund & Associates and ADF&G Division of Subsistence. (2012). *Subsistence & Traditional Knowledge Studies*. Retrieved July 2, 2012 from: <http://www.arlis.org/docs/vol2/Pebble/2012%20Agency%20Meetings/29%20Subsistence%20and%20Traditional%20Resources%20-%20Steven%20Braund.pdf>.

⁴³ 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).

sea lion; and non-salmon fish used and/or harvested includes blackfish, burbot, Dolly Varden, flounder, Arctic grayling, herring (roe and food), lake trout, northern pike, rainbow trout, smelt, sucker, and whitefish. Salmon harvesting is conducted primarily by gillnet within the Bristol Bay region. Blackfish and burbot are harvested by use of traps and set hooks. Handline jigging through ice is popular in winter fishing for Arctic grayling, Arctic char, Dolly Varden, lake trout, rainbow smelt, rainbow trout, whitefish, and northern pike. Set gillnets are used for Arctic grayling, Arctic char, Dolly Varden, lake trout, longnose suckers, rainbow trout, northern pike, burbot, and whitefish. Dip nets are used for rainbow smelt.⁴⁴

Contemporary research of subsistence activities in Ekwok is very limited. In 2006, ADF&G attempted to conduct a household subsistence survey in Ekwok; however, the community declined to participate.⁴⁵ Information regarding subsistence participation by household and subsistence participation in halibut, marine invertebrate, non-salmon fish, and marine mammal harvests are unavailable. A 1991 study by ADF&G found that Ekwok residents had some of the highest subsistence harvests in the state of Alaska at 797 lb per capita. In that study, 57% of the overall harvest consisted of salmon, followed by moose and caribou.⁴⁶

Of the species listed by ADF&G in Table 13, Chinook salmon was harvested most by residents, followed by sockeye, coho, chum, and pink salmon. In 2008, residents reported harvesting 1,902 salmon, compared to 3,946 in 2000; which was the year salmon harvests peaked. In 2008, 23 residents, or 19% of the population, held subsistence salmon permits. That year represented the highest proportion of subsistence salmon permits held between 2000 and 2008. Information regarding subsistence trends can be found in Tables 12 through 15.

Table 12. Subsistence Participation by Household and Species, Ekwok: 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).

⁴⁴ Fall, J. A. et al. (2008). *Alaska Subsistence Salmon Fisheries 2008 Annual Report*. Retrieved July 2, 2012 from: <http://www.adfg.alaska.gov/techpap/TP359.pdf>.

⁴⁵ Northern Dynasty Mines Inc. (2007). *Draft Environmental Baseline Studies Proposed 2007 Study Plans*. Retrieved July 2, 2012 from: <http://dnr.alaska.gov/mlw/mining/largemine/pebble/plans/2007-plans/2007sp13.pdf>.

⁴⁶ Schichnes, J. and Chythlook, M. (1991). *Contemporary Use of Fish and Wildlife In Ekwok, Koliganek, and New Stuyahok, Alaska*. Retrieved July 2, 2012 from: <http://www.arlis.org/docs/vol1/A/25794521.pdf>.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Ekwok: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	19	19	669	780	731	165	1,601	n/a	n/a
2001	n/a	n/a	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	n/a	n/a
2003	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	19	15	960	77	77	47	730	n/a	n/a
2005	22	20	778	72	111	n/a	428	n/a	n/a
2006	15	13	616	68	249	14	552	n/a	n/a
2007	19	18	647	72	226	n/a	322	n/a	n/a
2008	23	22	781	165	247	48	661	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.

¹ 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.

² 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, Ekwok: 2003-2010.

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

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

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

Table 15. Subsistence Harvests of Marine Mammal Resources, Ekwok: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
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.

¹ 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.

² 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.

³ 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.