

## **Wrangell (RANG-gull)**



### **People and Place**

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

The City and Borough of Wrangell is located on the northwest tip of Wrangell Island, 155 miles south of Juneau and 89 miles northwest of Ketchikan. It is near the mouth of the Stikine River, a historic trade route to the Canadian Interior. The area encompasses 2,582 square miles of land and 883 square miles of water. The city was first incorporated in 1903 and is now a unified home rule city within its own borough.

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

In 2010, there were 2,369 residents ranking Wrangell 39<sup>th</sup> of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population declined by 4.4%. Between 2000 and 2009, the population declined by 18.0% with an average annual growth rate of -1.49%. However, a significant difference between the 2009 Alaska Department of Labor and Workforce Development (DOLWD) population estimate and the 2010 U.S. Census indicates possible discrepancies between U.S. Census and DOLWD figures. Further information regarding population trends can be found in Table 1.

In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there were an estimated 200 seasonal or transient workers living in Wrangell in 2010. On average, seasonal workers live in Wrangell from May through September. The population peaks from June through August and is mostly driven by employment in fisheries sectors.

The racial and ethnic composition of Wrangell is predominately White and Tlingit Native. In 2010, 72.6% of residents identified themselves as White, compared to 73.5% in 2000; 16.2% identified themselves as American Indian or Alaska Native, compared to 15.5% in 2000; 9.4% identified themselves as two or more races, compared to 9.7% in 2000; and 1.4% identified themselves as Asian, compared to 0.6% in 2000. Residents who identified themselves as Black or African American or some other race each made up less than one-percent of the population in 2010. Hispanic or Latino residents made up 1.6% of the population that year, compared to 1.0% in 2000. Further information regarding Wrangell's racial and ethnic composition can be found in Figure 1.

In 2010, the average household size was 1.60, compared to 2.60 in 1990 and 2.09 in 2000. In that year, there were 1,428 total housing units, compared to 1,054 in 1990 and 1,092 in 2000. Of the households surveyed in 2010, 49% were owner-occupied, compared to 56% 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; 25% were renter-occupied, compared to 27% in 2000; 9% were vacant, compared to 16% in 2000; and 17% were occupied seasonally, compared to 1% in 2000. Nineteen residents were living in group quarters in 2010.

The gender distribution in 2010 was slightly skewed at 52.4% male and 47.6% female. This was similar to the statewide distribution (52.0% male, 48.0% female) and distribution in 2000 (51.5% male, 48.5% female). In that year, the median age was 46.7 years, which was significantly older than the statewide median of 33.8 years and 2000 median of 39.1 years.

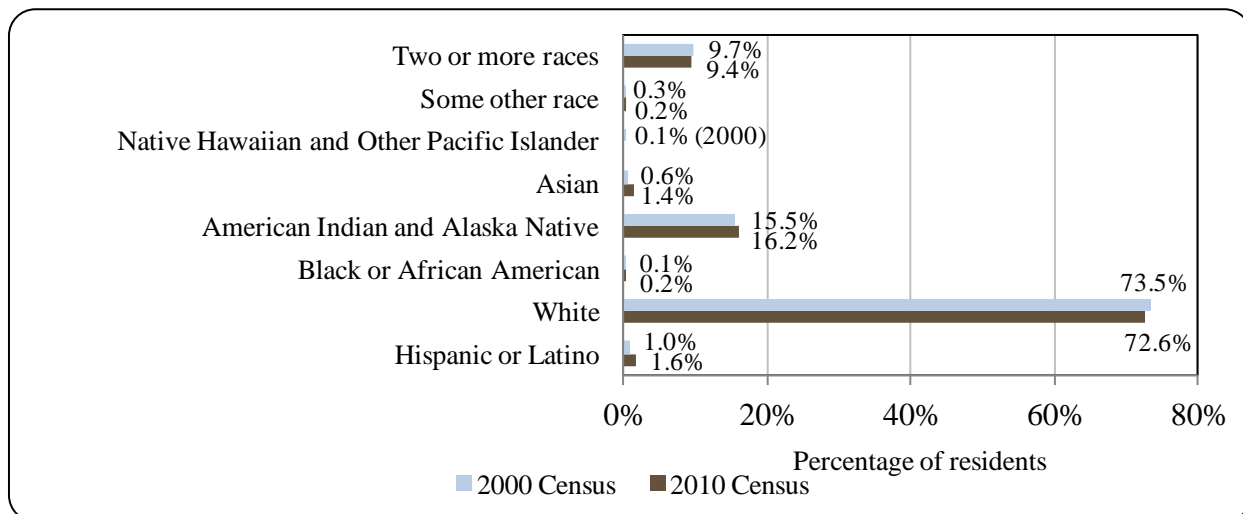
Table 1. Population in Wrangell from 1990 to 2010 by Source.

Year	U.S. Decennial Census <sup>1</sup>	Alaska Dept. of Labor Estimate of Permanent Residents <sup>2</sup>
1990	2,479	-
2000	2,308	-
2001	-	2,223
2002	-	2,180
2003	-	2,122
2004	-	2,022
2005	-	1,976
2006	-	1,909
2007	-	1,940
2008	-	1,939
2009	-	1,892
2010	2,369	-

<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>.

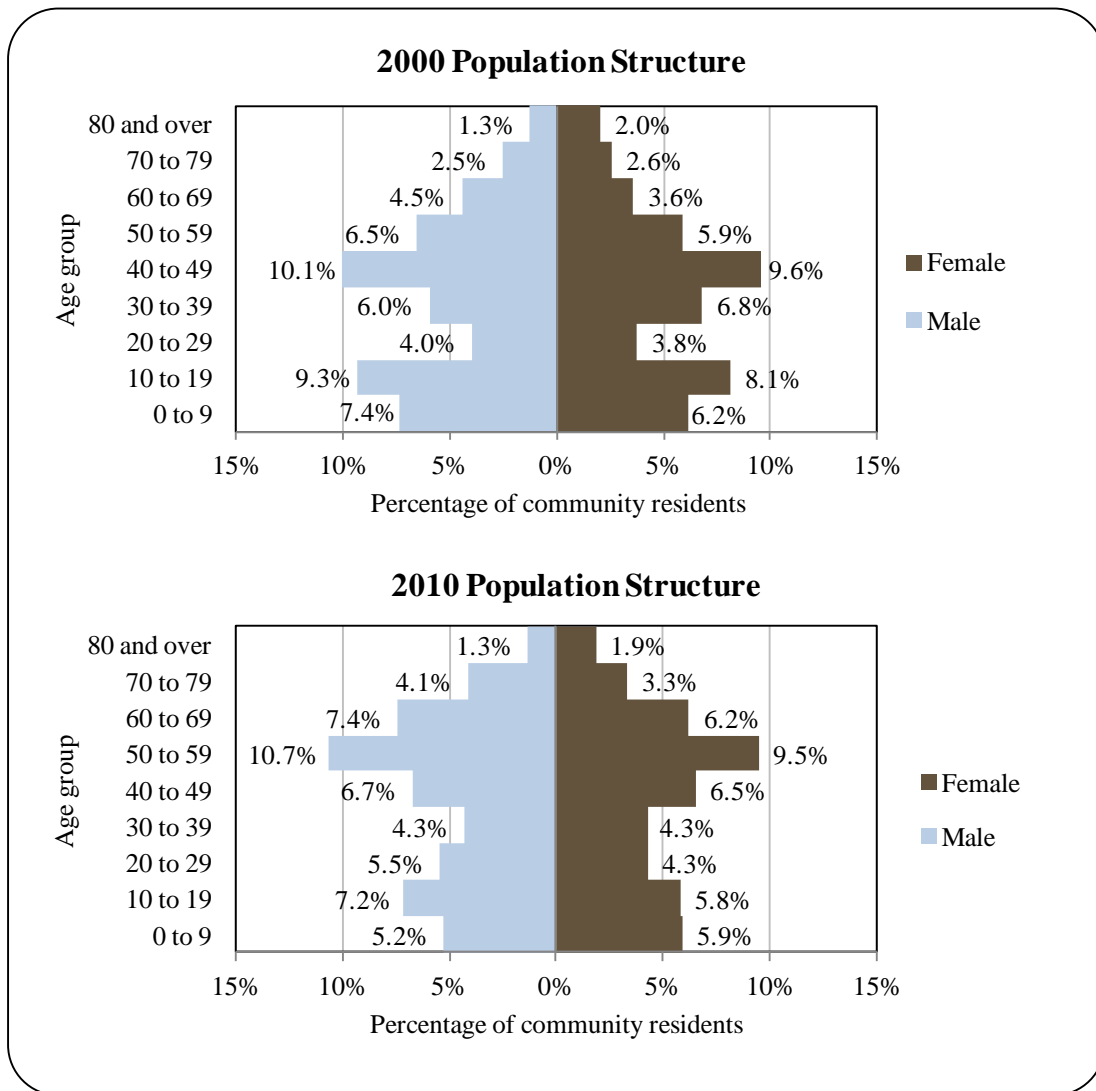
Figure 1. Racial and Ethnic Composition, Wrangell: 2000-2010 (U.S. Census).



When compared with 2000, the population structure in 2010 was somewhat less expansive. In addition, cohorts showed age transitions consistent with a stable population, meaning that as cohorts aged while their overall structure. In 2010, 24.1% of residents were under the age of 20, compared to 31% in 2000; 24.2% were over the age of 59, compared to 16.5% in 2000; 42.0% were between the ages of 30 and 59, compared to 44.9% in 2000; and 9.8% were between the ages 20 and 29, compared to 7.8% in 2000.

Gender distribution by age cohort was slightly less even in 2010 than in 2000, with slight male biases along most age ranges. In that year, the greatest absolute gender difference occurred in the 10 to 19 range (7.2% male, 5.8% female), followed by the 50 to 59 (10.7% male, 9.5% female) and 20 to 29 (5.5% male, 4.3% female) ranges. Of those three, the greatest relative gender difference occurred in the 20 to 29 range. Further information regarding trends in population structure can be found in Figure 2.

Figure 2. Population Age Structure in Wrangell 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 89.6% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 1.9% of residents had less than a 9<sup>th</sup> grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 8.5% had a 9<sup>th</sup> to 12<sup>th</sup> grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 28.9% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; an estimated 7.3% held an Associate's degree, compared to an estimated 8.0% of Alaskan residents overall; an estimated 15.0% held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 1.2% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

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

According to clan history, Tlingit people originally migrated into the area from the Stikine River during a time when the river still flowed underneath glaciers. Petroglyphs throughout the borough and shell midden sites located on Etolin Island are evidence of prolonged settlement in the area. The community has always been home to the Tlingit *Kiks.ádi* and *Naanyaa.aayí* clans, as well as the only home of the *Kayaashkiditaan*, *S'iknax.ádi*, *Xook'eidí*, *Kaasx'agweidí*, and *Taalkweidí* clans.

The Stikine River was a trade route to interior Canada used by the Tlingit since arriving in the area. Tlingits were trading furs with Russians in the area as early as 1811. In 1834, the Russians built a fort near Chief Shakes Tribal House on Shakes Island in the Wrangell Inner Harbor. The fort was later leased to the Hudson's Bay Company and renamed Fort Stikine. By 1849, sea otter and beaver stocks were depleted and Fort Stikine was abandoned. A U.S. military post was established at the site following the Alaska Purchase in 1867. The gold rushes of 1861, 1874-1877, and 1897 brought many prospectors to the area as the community grew around the fort.

In 1877, a Presbyterian church was founded in Wrangell. Reverend S. Hall Young was stationed in Wrangell and worked among both miners and the Tlingit, establishing the Fort Wrangell Tlingit Industrial School. Trades such as printing, boatbuilding and construction were taught there. This institution was later developed into the Wrangell Institute, a boarding school for Alaska Natives through the mid twentieth century.

By the beginning of the twentieth century, Wrangell had a population of 850 and the City was incorporated in 1903. Fishing and forestry were principal industries, and four canneries and a cold storage plant were constructed by the end of the 1920s. In the 1930s, cold packing of crab and shrimp was occurring. Abundant spruce and hemlock resources helped expand the lumber and wood products industry and Wrangell became a trading center for central southeast Alaska.

Historic Wrangell was built on boards and pilings over the water. Unfortunately, two major fires in 1906 and 1952 destroyed many of the historic buildings. Residential areas were

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<sup>3</sup> While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

<sup>4</sup> Sheinberg Associates (2010). *City and Borough of Wrangell Comprehensive Plan, June 2010*. Retrieved April 30, 2012 from: [http://www.wrangell.com/sites/default/files/fileattachments/wrangell\\_comp\\_plan\\_2010\\_lq.pdf](http://www.wrangell.com/sites/default/files/fileattachments/wrangell_comp_plan_2010_lq.pdf).

established on the hill surrounding the harbor. In 1994, the Alaska Pulp Corporation sawmill was closed. It had been the community's largest employer. In 1998, Silver Bay Logging reopened the sawmill on a smaller scale, but finally ceased mill operations in the late 2000s. Today, commercial fishing remains an important industry in Wrangell.

In 2008, it was decided by local election that the City of Wrangell should dissolve and incorporate as the unified City and Borough of Wrangell. The communities of Meyers Chuck, Union Bay, Thoms Place, Olive Cove, and Farm Island were included in the unification. Historic properties registered on the National Register of Historic Places include Chief Shakes Historic Site, Etolin Canoe, the vessel Judith Ann, Saint Philip's Episcopal Church, and Wrangell Public School.<sup>5</sup>

## Natural Resources and Environment

Wrangell is in the maritime climatic zone and experiences cool summers, mild winters, and year-round rainfall. Summer temperatures typically range from 42 to 64 °F (6 to 18 °C); winter temperatures range from 21 to 44 °F (-6 to 7 °C). Average annual precipitation is 82 inches, with 64 inches of snowfall. Fog is common from September through December.

The City lies within the Tongass National Forest, which covers 16.8 million acres of rainforest in southeast Alaska. Like all of southeast Alaska, Wrangell Island's topography was sculpted by immense glaciation during the last ice age. Thousands of years of post-glacial ecological succession created one of the most biologically productive rainforests in the world. Vegetation is dominated by mixed spruce-hemlock stands with areas of red alder and cedar.<sup>6</sup> Muskegs are found in depressions and shallow slopes where drainage is poor. The rainforests of southeast Alaska are habitat to a wide range of wildlife. Terrestrial mammals include Sitka blacktail deer, brown bear, black bear, otter, beaver, mink, porcupine, weasel, and other rodents. Marine mammals include seals, sea lion, whale, porpoise, and sea otter. Freshwater and anadromous fish include Dolly Varden, trout, and all five species of Pacific salmon.<sup>7</sup> Marine fish include halibut, sablefish, rockfish, pollock, Atka mackerel, Pacific lamprey, crab, shrimp, and herring.<sup>8</sup>

Wrangell has a history of involvement in mining and mineral exploration activities. Gold was discovered around the Stikine River in 1862 and the community is famous for garnets. In 1907, Wrangell's Garnet Ledge mine was owned by the first all-women mining corporation in the United States. As of 2010, the mine was owned by the Presbyterian Church. Three areas within the Borough received detailed exploration efforts as of 2010: Union Bay, Groundhog Basin-Berg Basin, and Zarembo Island. Other regional prospects and developments include Woewodski Island prospects and former mines, and Castle Island Barite. Galore Creek in British Columbia, Canada, is the largest development-stage project in the region. If completed, the mine will operate on one of the world's largest and highest-grade copper-silver-gold deposits.<sup>9</sup>

Timber resources were historically a pivotal part of Wrangell's economy before the

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<sup>5</sup> National Park Service (n.d.). *National Register of Historic Places*. Retrieved April 30, 2012 from: <http://nrhp.focus.nps.gov/natreghome.do?searchtype=natreghome>.

<sup>6</sup> U.S. Forest Service (n.d.). *Tongass National Forest*. Retrieved February 13, 2012 from: [http://www.fs.fed.us/r10/tongass/districts/pow/projects\\_plans/watershed/ws\\_explore.shtml](http://www.fs.fed.us/r10/tongass/districts/pow/projects_plans/watershed/ws_explore.shtml)

<sup>7</sup> Ibid.

<sup>8</sup> Alaska Department of Fish and Game (n.d.). *Salmon shark species profile*. Retrieved April 9, 2012 from: <http://www.adfg.alaska.gov/index.cfm?ADFG=salmonshark.main>.

<sup>9</sup> See footnote 4.

Alaska Pulp Corporation ceased operations. Between 1999 and 2008, timber harvests within the Borough averaged 61 million board feet.<sup>10</sup> There is potential to create a small wood manufacturing industry and as of 2012, the Borough was working with the U.S. Forest Service (USFS) on a long term harvesting plan.<sup>11</sup>

Environmental services and recreational resources are an important part of Wrangell's quality of life and tourism economy. There are a variety of outdoor recreation areas within the City and Borough, the most notable being the Stikine River. Natural spaces provide opportunities for hunting, fishing, hiking, biking, camping, sea kayaking, wildlife viewing, and ATV and snowmobile use. In addition, the USFS maintains 15 trails, several campgrounds, 22 cabins, and a variety of picnic areas and waysides. The Stikine River is the fastest free flowing navigable river in North America. The portion in the United States lies within the Stikine-LeConte Wilderness Area. Chief Shakes Hot Springs is a popular destination on the Stikine.<sup>12</sup>

Environmental hazards which may impact Wrangell include severe storm events, flooding, earthquakes, avalanches, tsunamis, and ground failures. In 1978, a disaster declaration was made for the Wrangell/Craig area during an intense storm which brought high winds, heavy rains, and large sea waves. The storm caused considerable damage to infrastructure in Wrangell.<sup>13</sup>

There are several notable environmental cleanup sites documented by the Alaska Department of Environmental Conservation (DEC) located in Wrangell. Contamination of the Wrangell Institute is the result of leaks and spills along the heating fuel transfer and fueling systems. As of 2007, there were approximately 6,000-8,000 cubic yards of petroleum contaminated soil remaining at the site, south of downtown Wrangell. Groundwater in the area is also contaminated with diesel-range organics and hydrocarbons. The update regarding cleanup efforts was posted in 2007, and cleanup was still underway as of 2010. The Wrangell Junkyard operated from the early 1960s to the mid-1990s and accepted a range of hazardous materials for disposal. The site contains significant numbers of broken and burned batteries and high concentrations of lead in the soil. Lead has migrated off-site to nearby intertidal sediments. Last update regarding cleanup efforts was posted in 2003, and cleanup was still underway as of 2010.<sup>14</sup>

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

Wrangell's economy is based on commercial fishing, tourism, and timber from the Tongass National Forest. Fishing and fish processing are an important segment of the economy.<sup>16</sup> In a survey conducted by the AFSC in 2011, community leaders reported that

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<sup>10</sup> Ibid.

<sup>11</sup> Wrangell Sentinel (2012). *Economic Development Committee Discusses Wrangell Island Timber Sale*. Retrieved May 1, 2012 from: <http://www.wrangellsentinel.com/story/2012/04/12/news/economic-development-committee-discusses-wrangell-island-timber-sale/146.html>.

<sup>12</sup> See footnote 4.

<sup>13</sup> Division of Homeland Security and Emergency Management (2010). *State of Alaska Hazard Mitigation Plan*. Retrieved May 1, 2012 from: <http://www.ready.alaska.gov/plans/documents/>.

<sup>14</sup> Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved May 1, 2012 from: [http://dec.alaska.gov/spar/csp/sites/wrang\\_junkyard.htm](http://dec.alaska.gov/spar/csp/sites/wrang_junkyard.htm).

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

<sup>16</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).

Wrangell's economy is reliant on logging, fishing, ecotourism, sportfishing, and hunting. The City's economy was significantly impacted by the closures of both the Alaska Pulp Corporation mill and Silver Bay Logging mill. In 2010, very little timber related employment existed. Construction employment is largely related to capital improvement projects and Downtown's Front Street revitalization. Seafood processing employment made gains in 2009 with the purchase of the former Wrangell Seafoods plant by Trident Seafoods. Other industries providing local employment include mining, the arts, entertainment, recreation, and tourism. In addition, an array of improvements and expansions to local health care services is predicted to improve employment in those sectors. Tourism provides a significant source of income and employment for Wrangell. In 2009, the city attracted 23,000 independent travelers, 4,400 small cruise ship passengers, and 470 pleasure vessel calls.<sup>17</sup> In addition, the City is capable of handling periodic visits by larger cruise vessels. Cruise ship calls peaked from 2003 to 2005, when passenger traffic averaged 46,140 visits per year. By contrast, 3,332 cruise ship passengers visited Wrangell in 2010.<sup>18</sup> Top employers<sup>19</sup> in 2010 included: the City of Wrangell, Alaska Island Community Services, Wrangell Public Schools, Wrangell Medical Center, State of Alaska, City Market Inc., Sea Level Seafoods LLC, Benjamin's Store Inc., Southeast Properties LLC, and Ottesens Inc.

According to the 2006-2010 ACS,<sup>20</sup> the estimated per capita income was \$28,731 and the estimated median household income was \$50,389, compared to \$21,851 and \$43,250 in 2000, respectively.<sup>21</sup> However, after adjusting for inflation by converting 2000 values into 2010 dollars,<sup>22</sup> the real per capita income (\$28,734) and real median household income (\$56,873) indicate an overall decline in both individual and household earnings. In that year, Wrangell ranked 71<sup>st</sup> of 305 communities from which per capita income was estimated, and 131<sup>st</sup> of 299 communities from which median household income was estimated.

It should be noted that Wrangell's small population size may have prevented the American Community Survey from accurately portraying economic conditions.<sup>23</sup> A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to ALARI, wages collected by Wrangell residents in 2010 totaled \$25.0 million.<sup>24</sup> When compared with the total

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<sup>17</sup> Sheinberg Associates (2010). *City and Borough of Wrangell Comprehensive Plan, June 2010*. Retrieved April 30, 2012 from: [http://www.wrangell.com/sites/default/files/fileattachments/wrangell\\_comp\\_plan\\_2010\\_lq.pdf](http://www.wrangell.com/sites/default/files/fileattachments/wrangell_comp_plan_2010_lq.pdf).

<sup>18</sup> Cruise Line Agencies of Alaska (n.d.) Retrieved May 1, 2012 from: [http://www.claalaska.com/pdf/2011/WRG\\_2011.pdf](http://www.claalaska.com/pdf/2011/WRG_2011.pdf).

<sup>19</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>20</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>21</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>22</sup> Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

<sup>23</sup> See footnote 21.

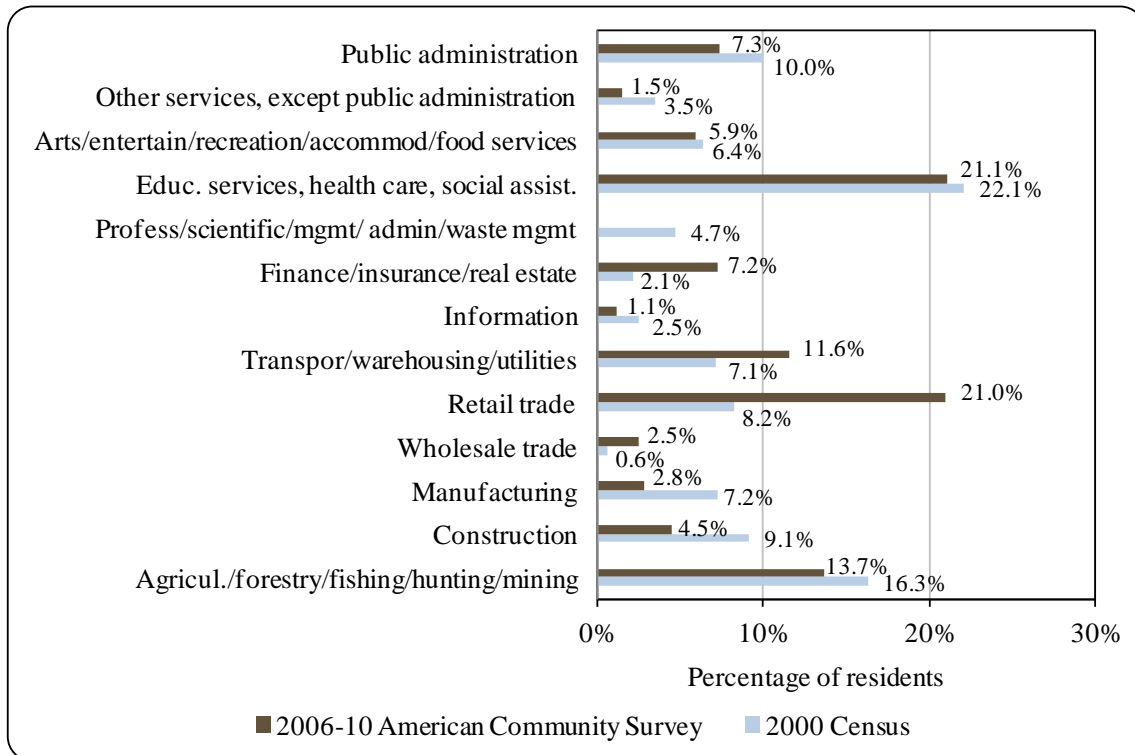
<sup>24</sup> ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

population reported in the 2010 Census, the per capita was an estimated \$10,552, which indicates a significant decrease in per capita income compared to the real per capita income values reported by the U.S. Census in 2000.<sup>25</sup> However, differences between the 2010 Census and DOLWD population estimates may have impacted this estimate.

According to 2006-2010 ACS estimates, 64.2% of residents aged 16 and over were part of the civilian labor force. Between 2006 and 2010, unemployment was estimated at 4.1%, compared to an estimated 5.9% statewide; and an estimated 8.3% of residents lived below the poverty line, compared to an estimated 9.5% of Alaskan residents overall. Of those employed in 2010, an estimated 41.2% worked in the private sector, an estimated 47.4% worked in the public sector, and an estimated 11.4% were self-employed.

Wrangell City and Borough supports a diverse economy, which is represented through many different industry sectors and occupation types. By industry, most (21.1%) employed residents were estimated to work in education service, health care, and social assistance sectors; followed by retail trade sectors (21.0%) and agriculture, forestry, fishing, hunting, and mining sectors (13.7%). By occupation type, most (30.0%) employed residents were estimated to hold sales or office positions in that year; followed by management or professional positions (29.0%); service positions (14.2%); production, transportation, or material moving positions (13.7%); and natural resource, construction, or maintenance positions (13.1%).

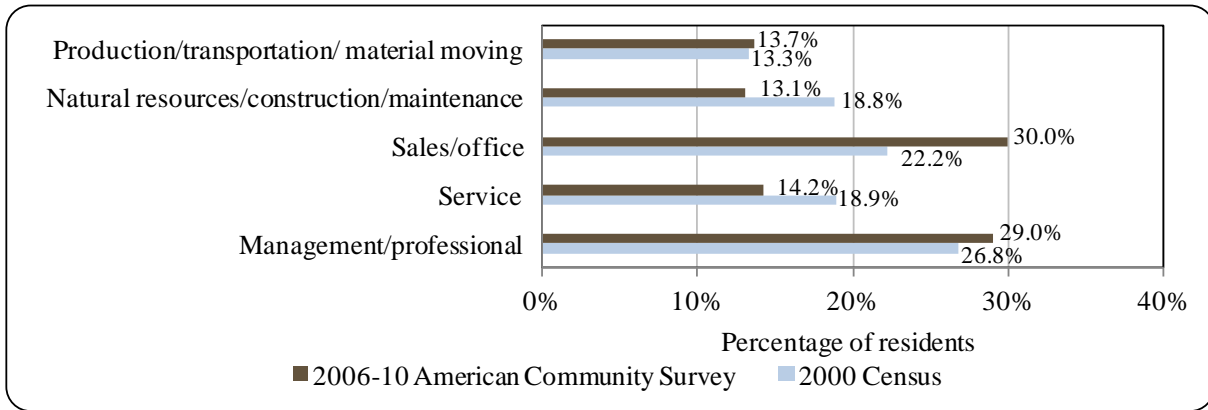
Figure 3. Local Employment by Industry in 2000-2010, Wrangell (U.S. Census).



<sup>25</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/>.



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



Employment data compiled by ALARI reported that in 2010, most (29.6%) employed residents worked in local government; followed by trade, transportation, and utilities (19.1%) and education and health services (12.9%).<sup>26</sup> According to 2010 ALARI estimates, only 2.9% of those employed worked in natural resources or mining sectors. It should be noted that ALARI data is based on information gathered from workers covered by unemployment insurance within Alaska. Because of this, federal workers and self-employed residents are not included.

Many residents working in fisheries sectors may consider themselves to be self-employed, and thus are not captured in DOLWD reports. In addition, many positions in fisheries sectors are seasonal. Because of this, many fisheries workers may have been reported in other sectors. Finally, it should be noted that 2010 ACS estimates take into account the entire Borough, which includes the communities of Meyers Chuck, Union Bay, Thoms Place, Olive Cove, and Farm Island. Residents from these communities may have been captured and extrapolated depending on survey outcomes. Information regarding employment trends can be found in Figures 3 and 4.

## Governance

In 2006, Wrangell was reorganized as a Unified Home Rule Borough, which now includes the City of Wrangell and several neighboring communities. The tribal community is recognized by the U.S. Bureau of Indian Affairs as an Alaska Native Village, and is represented by Wrangell Cooperative Association. However, the community was not included in the Alaska Native Claims Settlement Act (ANCSA) and does not possess an ANCSA chartered Native village corporation. The regional ANCSA chartered corporation is Sealaska. The closest U.S. Bureau of Citizenship and Immigration Services is located in Ketchikan, 89 miles southeast. The closest National Marine Fisheries Service (NMFS) and Alaska Department of Fish and Game (ADF&G) offices are located in Petersburg, 27 miles northwest.

In 2010, the Borough administered a 7% sales tax, 12.75 mill median property tax, and 6% Bed Tax. Total municipal and borough revenues were taken from financial audits and report total governmental revenues.<sup>27</sup> When adjusted for inflation,<sup>28</sup> total revenues declined 33.7% from

<sup>26</sup> See footnote 19.

<sup>27</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).

\$11.92 million, to \$10.22 million. In 2010, general fund revenues accounted for 34.3% of total governmental funds. In that year, most (42.7%) of general fund revenues were collected from property taxes, penalties, and interest; followed by intergovernmental funds (30.7%) and payments in lieu of taxes (11.3%). Sales tax accounted for 21.7% of total governmental funds (compared to 15.6% in 2000.) National forest receipts accounted for 16.9%, and Permanent Fund special revenues accounted for 5.5%. Finally, nonmajor funds accounted for 21.7% of total revenues. Overall, state allocated Community Revenue Sharing accounted for 5.7% of total revenues, compared to 1.0% from State Revenue Sharing in 2000.

State and federal fisheries-related grants awarded to Wrangell between 2000 and 2010 included: \$1.9 million for a haulout facility, \$6.0 million for several cold storage projects, \$238,000 for a dock rehabilitation project, \$6.0 million for vessel float construction, \$125,000 for container storage area construction, \$1.26 million for a value-added seafood center/cold storage facility, \$125,000 for salmon marketing, \$20.4 million for harbor improvement projects, \$30,400 for a boat travel life and marine repair yard feasibility study, and \$4.7 million for Wrangell Narrows maintenance dredging. Further information regarding borough finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Wrangell 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	\$11,924,078	\$1,862,377	\$117,236	\$4,661,000
2001	\$10,997,863	\$1,882,866	\$107,689	n/a
2002	\$11,765,976	\$1,829,137	\$115,567	\$3,350,000
2003	\$6,927,443	\$1,761,568	\$104,018	\$17,071,950
2004	\$13,574,165	\$1,872,949	-	\$1,380,000
2005	\$7,015,386	\$2,030,692	-	\$2,375,000
2006	\$7,118,271	\$2,104,741	-	\$1,950,000
2007	\$10,166,598	\$2,133,767	-	\$5,900,000
2008	\$10,430,979	\$2,361,803	-	\$1,000,000
2009	\$9,445,109	\$2,266,131	\$587,742	\$5,000,000
2010	\$10,223,129	\$2,205,839	\$583,212	\$238,000

<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).

<sup>28</sup> Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

## Infrastructure

### *Connectivity and Transportation*

The City is accessible by air and water. The state-owned 5,999-foot long by 150-foot wide paved lighted runway allows for jet service. A seaplane base is adjacent to the runway. Charter air taxi services are also available.<sup>29</sup> Between 1990 and 2008 the number of jets serving Wrangell has varied from a low of 674 in 1999 to a high of 704 in 2007. As of 2010, Alaska Airlines provided jet service twice daily, towards Anchorage and Seattle. Other air carriers present include Sunrise Aviation and Temsco Helicopters.<sup>30</sup> Roundtrip Airfare between Wrangell and Anchorage in June 2012 was \$449.<sup>31</sup>

Residents or visitors coming to Wrangell by water arrive by Alaska Marine Highway System ferry, by small or large cruise ship, and on private boats. In 2009, there were a total of 361 ferry port departures from Wrangell, compared to 384 in 2000. Ferry port departures peaked in 2003 at 490.<sup>32</sup>

Alaska Marine Lines and Northland/Boyer Barge Lines provide regular barge service to Wrangell. Retail goods, class C mail, construction material, vehicles, household items, and fuel are shipped in to Wrangell. Solid waste is shipped to Washington State, as are empty tanks and containers. There are two fuel barges each month. Seafood is shipped from Wrangell either by air or in a refrigerated container that is sent by barge or ferry to Seattle or Prince Rupert.<sup>33</sup>

### *Facilities*

Approximately 95% of households are fully plumbed. Two surface reservoirs south of town supply 64 million gallons of water, which is filtered, treated, and piped to households. Sewage receives secondary treatment at the Shoemaker Bay plant. About 20% of residences have individual septic tanks or marine outfalls. The City provides garbage collection service and an annual hazardous waste disposal event that recycles paper, cardboard, and aluminum. Wrangell Municipal Light & Power purchases electricity from the state-owned Tyee Lake Hydro Facility, located 40 miles southeast. The City also owns five standby diesel-fueled generators. Visitor services include cab service, car rental service, and several hotels and other accommodations. Public safety services are provided by city police and Alaska state troopers. Fire and rescue services are provided by Wrangell Volunteer Fire Department and Rescue. Additional public facilities include a state court and magistrate, jail, youth center, community hall, assisted living services, recreation facilities, theater, and several museums and libraries. Communication services include local and long distance telephone, broadband internet, local and cable television, and radio.<sup>34</sup>

The City and Borough of Wrangell operates three harbor facilities that can accommodate small vessels, transient boats, and larger commercial vessels including tugs, barges, and commercial fishing boats. The Downtown or Etolin Harbor includes Inner Harbor, Reliance

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<sup>29</sup> See footnote 27.

<sup>30</sup> Sheinberg Associates (2010). *City and Borough of Wrangell Comprehensive Plan, June 2010*. Retrieved April 30, 2012 from: [http://www.wrangell.com/sites/default/files/fileattachments/wrangell\\_comp\\_plan\\_2010\\_lq.pdf](http://www.wrangell.com/sites/default/files/fileattachments/wrangell_comp_plan_2010_lq.pdf).

<sup>31</sup> Airfare was calculated using lowest fare from [www.travelocity.com](http://www.travelocity.com) (Retrieved November 22, 2011).

<sup>32</sup> See footnote 30.

<sup>33</sup> Ibid.

<sup>34</sup> See footnote 27.

Harbor, the Standard Oil float, and Fish and Game float. Downtown harbor is adjacent to downtown and includes 230 slips for small and large vessel moorage plus a transient moorage float and deep draft vessel float. Tidal grids, hydraulic hoists, an airplane float, two fuel docks, a work float, and a net rack are located in this harbor. Utilities include power, water, waste oil collection, and garbage collection. Shoemaker Bay Harbor includes 250 slips for small and large commercial fishing and recreational vessels. Support facilities include tidal grids, a hydraulic hoist, a boat launch, and a work float. This harbor is part of a recreation complex which includes a park and shelter, tennis courts, playground, campground, and trails. Electricity, restrooms, water, waste oil collection, and garbage collection is available. Heritage Harbor includes 165 slips for small and large vessel moorage, and two transient moorage floats measuring 375-foot and 310-foot. Electricity is available. The City Dock is a T-shaped dock located at the north end of downtown. The dock face is 405 feet with a breasting pier head of 565 feet. An additional stern mooring dolphin 225 feet off the northeast end allows moorage for vessels up to 950 feet long. The inside face of the dock permits moorage for smaller cruise ships and yachts, and a float is available for charter vessel moorage during the summer. Water and electricity are available. The city maintains boat launches at Heritage Harbor, Shoemaker Bay, and Downtown harbor. There is a boat launch and log transfer facility owned by the USFS at Earl West Cove on the east side of Wrangell Island, as well as at Pats Creek.

In a survey conducted by the AFSC in 2011, community leaders reported that there are 22,054 feet of public dock space available for permanent moorage and 3,300 feet of public dock space is available for transient moorage. Port facilities are capable of handling regulated vessels such as rescue vessels, cruise ships, ferries, fuel barges, and vessels containing hazardous materials. Infrastructure projects completed between 2000 and 2010 included a fish cleaning station, additional dock spaces, dockside electric and water utilizes, breakwater, haul out facilities, Environmental Protection Administration (EPA) certified vessel cleaning station, broadband internet access, road improvements, water and sewer pipeline improvements, and water and sewer treatment improvements. Infrastructure projects in progress as of 2010 included: pilings, road improvements, and water and sewer pipeline improvements. Additional public facilities available include a food bank and publicly-subsidized housing. Fisheries support services available in Wrangell include: seafood processing, fishing gear sales, boat repair (electrical, welding, mechanical services, machine shop, hydraulics), tackle and bait sales, dry dock storage, fish lodges, fishing business attorney, fishing related bookkeeping, boat fuel sales, fishing gear repairs, fishing gear storage, ice sales, and water taxi.

### *Medical Services*<sup>35</sup>

Wrangell Medical Center is a critical access hospital and long term care facilities with a total of 22 beds, 8 for acute care and 14 for long term care. Emergency care, minor surgery, radiology and imaging, echocardiograms, physical therapy and community outreach are provided by the center. Visiting specialists compliment services not available locally.

The Alaska Island Community Services is a non-profit organization providing community-based behavioral health programs.

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<sup>35</sup> See footnote 30.

### *Educational Opportunities*<sup>36</sup>

The Alaska Virtual Academy offers home school Kindergarten through 8<sup>th</sup> grade instruction. In 2011, there were 32 students enrolled and one instructor. Evergreen elementary offers preschool through 5<sup>th</sup> grade instruction. In 2011, there were 132 students enrolled and 13 instructors. Stikine Middle School offers 6<sup>th</sup> through 8<sup>th</sup> grade instruction. In 2011, there were 68 students enrolled and 11 instructors. Wrangell High School offers 9<sup>th</sup> through 12<sup>th</sup> grade instruction. In 2011, there were 114 students enrolled and 13 instructors.

## **Involvement in North Pacific Fisheries**

### *History and Evolution of Fisheries*

As with many southeast communities, local Tlingits have relied on subsistence fishing since they moved into the area through the Stikine River corridor thousands of years ago. Not long after the 1867 Alaska Purchase, the commercial fishing industry got its start with the establishment of several canneries throughout southeast Alaska. The canneries were responsible for the eventual development of large fish traps, which lead to serious declines in salmon runs. By 1929 there were two salmon canneries, two shrimp canneries, and one crab cannery located in Wrangell. At their peak, these canneries employed over 150 people.<sup>37</sup> Today, salmon remains the southeast region's major fishery, followed by sablefish and halibut. Shellfish fisheries are also popular and include Dungeness, Tanner, and king crab, as well as shrimp, sea cucumbers, and geoducks. Other area fisheries include several mariculture operations in the waters off west Etolin Island. An important part of the local commercial fishing industry is the Southern Southeast Regional Aquaculture Association (SSRAA), a non-profit corporation. Wrangell-based SSRAA programs include a hatchery at Burnett Inlet and salmon releases at Anita Bay.<sup>38</sup>

In a survey conducted by the AFSC in 2011, community leaders reported that Wrangell participates in the fisheries management process in Alaska through a representative who sits on regional fisheries advisory and/or working groups run by ADF&G and a representative who participates in the Federal Subsistence Board or Federal Subsistence Regional Advisory Council process. Wrangell also relies on regional organizations to provide information on fisheries management issues. The city is located in Federal Reporting Area 659, International Pacific Halibut Commission Regulatory Area 2C, and the Eastern Gulf of Alaska (GOA) Sablefish Regulatory District. Wrangell is not eligible for participation in the Community Development Quota program.

### *Processing Plants*

According to ADF&G's 2010 Intent to Operate list, a number of shoreside processing plants are located in Wrangell. Breakwater Seafoods operates a seafood processing plant in Wrangell. This is a smaller operation run by two owner-operators and is busy from February to October. They buy and sell king crab, generally shipping it live by airfreight to west coast

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<sup>36</sup> Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

<sup>37</sup> City of Wrangell. (n.d.). *History of Wrangell*. Retrieved May 14, 2012 from: [www.wrangell.com](http://www.wrangell.com).

<sup>38</sup> See footnote 30.

markets.<sup>39</sup> G&G Alaska Smokery Inc. operates a small family-owned seafood processing plant in Wrangell. The plant began operations in 1988 and primarily provides freezing and packaging services.<sup>40</sup> Sea Level Seafoods has owned and operated a seafood processing facility in Wrangell for over 30 years. The facility's primary focus is salmon. All five species of Pacific salmon are processed at the facility, as well as salmon roe. In addition to salmon, the facility also processes halibut, sablefish, various types of groundfish and Dungeness crab.<sup>41</sup> The plant employs between 6 and 60 workers each year, with the largest workforce between June and September.<sup>42</sup> Trident Seafoods Corporation was founded in 1973, and by the year 2000 was employing 4,000 people annually throughout Alaska and the Pacific Northwest. Throughout Alaska Trident processes cod, pollock and crab in the winter and herring and salmon in the summer. The Wrangell facility began operations in 2009 and provides room and board at a nominal cost as well as free roundtrip airfare between Wrangell and Seattle.<sup>43</sup> The plant employs up to 210 workers in the months of July and August.<sup>44</sup> Greater Glacier Seafood is located on the Canadian side of the Stikine River and processes salmon.<sup>45</sup>

### *Fisheries-Related Revenue*

Wrangell received \$1.05 million in fisheries-related revenue in 2010 (Table 3). Harbor usage fees contributed the greatest amount of revenue, followed by port/dock usage fees, Shared Fisheries Business Tax, public fishing gear storage fees, and raw fish tax. This represented close to a 53% increase in fisheries-related revenue from 2000, after adjusting for inflation.<sup>46</sup> Fisheries-related revenue peaked in 2009 at \$1.17 million. 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 the commercial gillnet season typically runs from June to August, the crab season starts in June, and the shrimp season starts in May. Types of fishing gear used by residents include trawl, pots, longline, gillnet, purse seine, and troll. Between 2005 and 2010, there were increases in the number of visits by commercial fishing vessels of all sizes.

In 2010, 280 residents, or 11.8% of the population, held 481 permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 284 residents held 576 CFEC permits. Of the CFEC permits held in 2010, 46% were for salmon; compared to 37% in 2000;

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<sup>39</sup> Ibid.

<sup>40</sup> This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

<sup>41</sup> Pacific Seafoods (n.d.). *Sea Level Seafoods*. Retrieved July 17, 2012 from <http://www.pacseafood.com/Default.aspx?page=109>.

<sup>42</sup> See footnote 40.

<sup>43</sup> Trident Seafoods (n.d.). *Alaska Plants*. Retrieved September 12, 2011 from [http://www.tridentseafoods.com/company/plants\\_alaska.php](http://www.tridentseafoods.com/company/plants_alaska.php).

<sup>44</sup> See footnote 40.

<sup>45</sup> Sheinberg Associates (2010). *City and Borough of Wrangell Comprehensive Plan, June 2010*. Retrieved April 30, 2012 from: [http://www.wrangell.com/sites/default/files/fileattachments/wrangell\\_comp\\_plan\\_2010\\_lq.pdf](http://www.wrangell.com/sites/default/files/fileattachments/wrangell_comp_plan_2010_lq.pdf).

<sup>46</sup> Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

14% were for crab, compared to 17% in 2000; 18% were for other shellfish, compared to 17% in 2000; 13% were for halibut, compared to 18% in 2000; 4% were for groundfish, compared to 8% in 2000; 2% were for sablefish, compared to 1% in 2000; and 2% were for herring, compared to 2% in 2000. In addition, 19 residents held 19 License Limitation Program (LLP) groundfish permits, one resident held one LLP crab permit, and 14 residents held 14 Federal Fisheries Permits (FFP) in 2010 (Figure 4). Residents held 5.78 million shares of halibut quota on 69 accounts in 2010, which accounted for 2.8% of total halibut quota statewide. In 2000, residents held 5.69 million shares of halibut quota on 104 accounts, which accounted for 2.7% of total halibut quota statewide. Residents held 1.50 million shares of sablefish quota on nine accounts, which accounted for 1.1% of total sablefish quota statewide. In 2000, residents held 481,811 shares of sablefish quota on three accounts. This accounted for less than one-percent of total sablefish quota statewide. No residents held crab quota between 2005 and 2010 (Tables 6-8).

Residents held 220 commercial crew licenses in 2010, compared to 234 in 2000. In that year, residents held majority ownership of 207 vessels, compared to 242 in 2000 (Table 5). Of the CFEC permits issued in 2010, 55% were actively fished, compared to 56% in 2000. This varied by fishery from 100% of sablefish permits, to 89% of halibut, 64% of crab, 56% of salmon, 44% of herring, 27% of other shellfish, and 5% of groundfish. A total of 52% of groundfish and 0% of crab LLP were actively fished in 2010. Finally, 50% of FFP were fished that year (Table 4). Fisheries prosecuted by Wrangell residents in 2010 included: southeast Alaska pot Dungeness crab, southeast Alaska pot king crab, southeast Alaska pot Tanner crab, statewide longline and mechanical jig halibut, southeast Alaska purse seine herring roe, southeast Alaska gillnet herring roe and food/bait, statewide dinglebar troll lingcod, southeast beam trawl and pot shrimp, southeast Alaska dive sea cucumber, statewide longline sablefish, northern southeast Alaska longline sablefish, southern southeast Alaska longline sablefish, southeast Alaska purse seine and drift gillnet salmon, and statewide hand and power troll salmon.<sup>47</sup>

In 2010, 4.93 million pounds of fish valued at \$9.17 million were landed in Wrangell, compared to 5.21 million pounds valued at \$5.66 million in 2000 (Table 5). In that year, Wrangell ranked 28<sup>th</sup> of 67 communities in terms of total landings and 24<sup>th</sup> in terms of total ex-vessel revenue. Landings peaked in 2005 at 14.29 million pounds valued at \$10.32 million. Earnings peaked in 2008 at 4.67 million pounds valued at \$14.34 million. By fishery, 2.81 million pounds of salmon were landed in 2010 valued at \$2.71 million, compared to 2.69 million pounds valued at \$906,642 in 2000; and increase of \$0.51 per pound landed after adjusting for inflation<sup>48</sup> and without considering the species composition of landings. Other shellfish landings in 2010 totaled 156,279 pounds valued at \$342,751, compared to 453,157 pounds valued at \$839,719 in 2000. All other landings in 2010 are considered confidential.

In terms of non-confidential landings reported by residents of Wrangell, salmon was the most landed species in 2010, followed by crab and halibut. In that year, 6.39 million pounds of salmon valued at \$5.11 million, compared to 5.91 million pounds valued at \$2.22 in 2000; an increase of \$0.28 per pound landed after adjusting for inflation.<sup>49</sup> Crab landings totaled 868,987 pounds valued at \$1.76 million, compared to 539,023 pounds valued at \$967,982 in 2000; a

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<sup>47</sup> CFEC (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>48</sup> Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

<sup>49</sup> Ibid.

decrease of \$0.45 per pound after accounting for inflation<sup>50</sup> and without considering the species composition of landings. Halibut landings totaled 442,274 pounds valued at \$1.99, compared to 761,277 pounds valued at \$2.04 million in 2000; an increase of \$0.81 per pound after adjusting for inflation.<sup>51</sup> Other shellfish landings totaled 183,326 pounds valued at \$434,606, compared to 1.09 million pounds valued at \$1.32 million in 2000. Sablefish landings totaled 100,656 pounds valued at \$443,644, compared to 91,351 pounds valued at \$237,809 in 2001; an increase of \$0.69 per pound after adjusting for inflation.<sup>52</sup> Finally, other groundfish landings totaled 50,993 pounds valued at \$43,597, compared to 109,875 pounds valued at \$96,225 in 2000.

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<sup>50</sup> Ibid.

<sup>51</sup> Ibid.

<sup>52</sup> Ibid.



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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax <sup>1</sup>	\$13,468	\$18,298	\$12,125	\$11,866	\$8,835	\$13,552	\$13,413	\$12,498	\$9,374	\$9,000	\$9,000
Shared Fisheries											
Business Tax <sup>1</sup>	\$67,332	\$73,771	\$71,366	\$84,839	\$83,666	\$74,408	\$157,974	\$132,061	\$249,461	\$236,407	\$139,907
Fisheries Resource											
Landing Tax <sup>1</sup>	n/a	n/a	n/a	\$22	\$28	n/a	\$28	\$142	\$87	\$246	n/a
Fuel transfer tax <sup>2</sup>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax <sup>2</sup>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers <sup>1</sup>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls <sup>2</sup>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage <sup>2</sup>	\$277,700	\$294,400	\$310,000	\$303,000	\$296,300	\$355,300	\$362,800	\$545,934	\$490,450	\$658,600	\$536,150
Port/dock usage <sup>2</sup>	\$171,000	\$161,500	\$200,300	\$184,300	\$170,200	\$222,700	\$242,700	\$233,120	\$200,100	\$265,230	\$266,040
Fishing gear storage on public land <sup>3</sup>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$100,000*
Marine fuel sales tax <sup>3</sup>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue<sup>4</sup></i>	<i>\$529,500</i>	<i>\$547,969</i>	<i>\$593,791</i>	<i>\$584,027</i>	<i>\$559,030</i>	<i>\$665,960</i>	<i>\$776,915</i>	<i>\$923,754</i>	<i>\$949,472</i>	<i>\$1.17 M</i>	<i>\$1.05 M</i>
<i>Total municipal revenue<sup>5</sup></i>	<i>\$11.92 M</i>	<i>\$11.0 M</i>	<i>\$11.77 M</i>	<i>\$6.93 M</i>	<i>\$13.57 M</i>	<i>\$7.02 M</i>	<i>\$7.12 M</i>	<i>\$10.17 M</i>	<i>\$10.43 M</i>	<i>\$9.45 M</i>	<i>\$10.22</i>

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

\*Source: AFSC 2011 Community Surveys.

<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 brings in each year from all sources, including fisheries-related revenue streams. 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).

NOAA-TM-AFSC-259 – Volume 11  
Community Profiles for North Pacific Fisheries – Alaska: Wrangell

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) <sup>1</sup>	Total permits	14	15	15	17	17	17	17	17	18	18	19
	Active permits	8	10	9	11	10	11	10	10	9	10	10
	% of permits fished	57%	66%	60%	64%	58%	64%	58%	58%	50%	55%	52%
	Total permit holders	14	15	15	17	17	17	17	17	18	18	19
Crab (LLP) <sup>1</sup>	Total permits	0	0	0	0	0	0	0	0	0	0	1
	Active 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	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	1
Federal Fisheries Permits <sup>1</sup>	Total permits	15	16	16	15	16	16	13	15	16	14	14
	Fished permits	0	0	0	3	4	5	5	7	9	9	7
	% of permits fished	0%	0%	0%	20%	25%	31%	38%	47%	56%	64%	50%
	Total permit holders	15	16	16	15	16	16	12	14	15	14	14
Crab (CFEC) <sup>2</sup>	Total permits	96	90	89	85	88	80	76	76	72	67	69
	Fished permits	69	55	62	60	59	54	48	50	52	47	44
	% of permits fished	72%	61%	70%	71%	67%	68%	63%	66%	72%	70%	64%
	Total permit holders	74	71	77	77	75	73	74	71	70	66	64
Other shellfish (CFEC) <sup>2</sup>	Total permits	99	107	96	90	93	91	89	86	86	88	86
	Fished permits	51	46	40	43	43	41	33	29	26	27	24
	% of permits fished	51%	42%	41%	47%	46%	45%	37%	33%	30%	30%	27%
	Total permit holders	85	87	82	80	82	80	78	76	75	77	76
Halibut (CFEC) <sup>2</sup>	Total permits	103	97	91	83	82	78	72	72	68	66	61
	Fished permits	88	81	80	75	70	66	66	67	60	52	54
	% of permits fished	85%	84%	88%	90%	85%	85%	92%	93%	88%	79%	89%
	Total permit holders	102	96	88	81	80	76	70	70	66	64	59
Herring (CFEC) <sup>2</sup>	Total permits	9	9	15	14	12	11	13	12	10	10	9
	Fished permits	3	1	3	6	6	5	4	4	4	6	4
	% of permits fished	33%	11%	20%	43%	50%	45%	31%	33%	40%	60%	44%
	Total permit holders	8	8	13	12	10	9	11	10	11	10	9

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) <sup>2</sup>	Total permits	6	6	7	10	12	12	12	13	12	12	12
	Fished permits	5	6	7	10	12	12	11	11	11	11	12
	% of permits fished	83%	100%	100%	100%	100%	100%	92%	85%	92%	92%	100%
	Total permit holders	4	4	5	8	9	9	9	9	9	10	10
Groundfish (CFEC) <sup>2</sup>	Total permits	48	50	48	48	44	45	27	24	29	20	21
	Fished permits	5	3	3	3	1	6	1	1	1	1	1
	% of permits fished	10%	6%	6%	6%	2%	13%	4%	4%	3%	5%	5%
	Total permit holders	34	35	31	33	28	26	15	13	13	9	11
Other Finfish (CFEC) <sup>2</sup>	Total permits	3	2	1	1	1	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	n/a	n/a	n/a	n/a	n/a
	Total permit holders	3	2	1	1	1	1	0	0	0	0	0
Salmon (CFEC) <sup>2</sup>	Total permits	212	206	205	204	215	218	218	223	224	223	223
	Fished permits	102	96	79	91	97	111	111	122	127	121	124
	% of permits fished	48%	47%	39%	45%	45%	51%	51%	55%	57%	54%	56%
	Total permit holders	194	193	187	192	201	201	200	205	205	202	199
<i>Total CFEC Permits<sup>2</sup></i>	<i>Permits</i>	<i>576</i>	<i>567</i>	<i>552</i>	<i>535</i>	<i>547</i>	<i>536</i>	<i>507</i>	<i>506</i>	<i>501</i>	<i>486</i>	<i>481</i>
	<i>Fished permits</i>	<i>323</i>	<i>288</i>	<i>274</i>	<i>288</i>	<i>288</i>	<i>295</i>	<i>274</i>	<i>284</i>	<i>281</i>	<i>265</i>	<i>263</i>
	<i>% of permits fished</i>	<i>56%</i>	<i>51%</i>	<i>50%</i>	<i>54%</i>	<i>53%</i>	<i>55%</i>	<i>54%</i>	<i>56%</i>	<i>56%</i>	<i>55%</i>	<i>55%</i>
	<i>Permit holders</i>	<i>284</i>	<i>287</i>	<i>285</i>	<i>286</i>	<i>293</i>	<i>295</i>	<i>293</i>	<i>291</i>	<i>289</i>	<i>286</i>	<i>280</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 Wrangell: 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 Wrangell <sup>2</sup>	Total Net Pounds Landed in Wrangell <sup>2,5</sup>	Total Ex-Vessel Value of Landings in Wrangell <sup>2,5</sup>
2000	234	40	3	242	250	229	5,213,844	\$5,657,680
2001	208	45	3	230	235	273	9,902,183	\$7,072,333
2002	194	48	3	238	231	246	11,008,663	\$7,780,164
2003	182	43	3	224	213	206	10,454,786	\$6,782,646
2004	195	41	3	230	221	285	10,929,078	\$9,566,562
2005	200	43	3	217	202	332	14,290,750	\$10,320,553
2006	210	53	3	204	199	353	11,349,051	\$13,632,936
2007	239	53	3	208	204	337	10,287,307	\$14,341,954
2008	232	40	3	210	201	291	4,666,567	\$10,740,906
2009	225	43	3	219	223	257	5,239,575	\$7,585,185
2010	220	37	3	207	212	267	4,931,863	\$9,170,077

<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 Wrangell: 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	104	5,694,096	786,869
2001	102	5,678,137	820,489
2002	95	5,685,766	799,597
2003	93	5,632,357	792,167
2004	87	5,230,332	900,714
2005	79	5,094,905	911,014
2006	77	5,117,377	887,582
2007	75	5,160,704	736,728
2008	71	5,121,319	549,576
2009	73	5,105,148	449,572
2010	69	5,778,992	479,945

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 Wrangell: 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	3	481,811	57,155
2001	4	655,590	73,525
2002	4	655,590	70,246
2003	8	974,076	115,610
2004	8	974,076	122,434
2005	8	974,076	115,941
2006	8	1,156,661	135,738
2007	8	1,156,661	129,955
2008	9	1,089,913	117,000
2009	9	1,139,173	104,290
2010	9	1,501,025	131,150

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 Wrangell: 2000-2010.

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

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

NOAA-TM-AFSC-259 – Volume 11  
Community Profiles for North Pacific Fisheries – Alaska: Wrangell

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Wrangell: 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	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	74,385	--	60,108	--	--	--	--	--	--	--
Other Shellfish	453,157	245,388	276,452	274,190	343,448	496,535	452,504	167,994	176,277	188,020	156,279
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	2,693,324	7,411,226	6,521,223	8,003,426	7,512,325	10,974,114	7,902,986	6,908,853	1,922,538	3,306,527	2,808,096
<i>Total<sup>2</sup></i>	<i>3,146,481</i>	<i>7,730,999</i>	<i>6,797,675</i>	<i>8,337,724</i>	<i>7,855,773</i>	<i>11,470,649</i>	<i>8,355,490</i>	<i>7,076,847</i>	<i>2,098,815</i>	<i>3,494,547</i>	<i>2,964,375</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	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	\$46,506	--	\$74,792	--	--	--	--	--	--	--
Other Shellfish	\$839,719	\$524,057	\$544,080	\$552,472	\$751,012	\$790,196	\$944,328	\$492,721	\$448,580	\$502,694	\$342,751
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$906,642	\$1,993,080	\$945,154	\$1,295,479	\$2,129,398	\$3,583,453	\$4,533,201	\$3,832,462	\$2,322,842	\$2,480,502	\$2,711,883
<i>Total<sup>2</sup></i>	<i>\$1,746,360</i>	<i>\$2,563,643</i>	<i>\$1,489,234</i>	<i>\$1,922,744</i>	<i>\$2,880,410</i>	<i>\$4,373,650</i>	<i>\$5,477,529</i>	<i>\$4,325,183</i>	<i>\$2,771,422</i>	<i>\$2,983,196</i>	<i>\$3,054,634</i>

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

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

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

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

NOAA-TM-AFSC-259 – Volume 11  
Community Profiles for North Pacific Fisheries – Alaska: Wrangell

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Wrangell 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	539,023	878,061	1,788,183	905,292	1,040,510	853,792	854,294	1,137,417	1,026,334	667,299	868,987
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	761,277	780,007	807,943	821,058	919,226	794,082	847,148	736,048	523,603	461,306	442,274
Herring	78,488	--	--	450,550	--	376,344	--	--	332,765	--	--
Other Groundfish	109,875	51,256	75,785	61,611	58,230	63,300	57,489	64,358	47,646	42,745	50,993
Other Shellfish	1,087,125	992,696	867,587	731,562	865,514	720,002	359,245	159,711	210,811	249,926	183,326
Pacific Cod	--	--	--	--	--	27,006	2,777	1,103	7,597	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	91,351	119,556	82,787	143,691	131,113	128,394	192,947	120,878	114,028	100,656
Salmon	5,907,387	8,051,154	5,420,653	7,612,454	7,055,569	9,318,810	6,816,469	7,782,980	4,103,191	6,411,658	6,386,199
<i>Total<sup>2</sup></i>	<i>8,483,175</i>	<i>10,844,525</i>	<i>9,079,707</i>	<i>10,665,314</i>	<i>10,082,740</i>	<i>12,284,449</i>	<i>9,065,816</i>	<i>10,074,564</i>	<i>6,372,825</i>	<i>7,946,962</i>	<i>8,032,435</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	\$967,982	\$1,724,116	\$2,123,653	\$1,443,278	\$1,590,144	\$1,199,606	\$1,339,188	\$2,540,793	\$2,485,128	\$1,334,444	\$1,756,688
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$2,044,744	\$1,700,483	\$1,813,310	\$2,402,038	\$2,776,537	\$2,475,786	\$3,229,447	\$3,274,993	\$2,294,949	\$1,428,689	\$1,992,209
Herring	\$25,014	--	--	\$186,290	--	\$97,384	--	--	\$130,822	--	--
Other Groundfish	\$96,255	\$32,101	\$80,662	\$67,518	\$63,106	\$77,900	\$81,037	\$83,762	\$40,728	\$36,890	\$43,597
Other Shellfish	\$1,320,850	\$788,679	\$848,317	\$854,668	\$934,473	\$916,129	\$778,381	\$468,774	\$512,998	\$641,037	\$434,606
Pacific Cod	--	--	--	--	--	\$13,027	\$835	\$509	\$3,200	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	\$237,809	\$369,414	\$261,418	\$379,045	\$386,537	\$424,003	\$512,172	\$395,063	\$384,290	\$443,644
Salmon	\$2,224,368	\$2,572,555	\$1,607,586	\$2,219,353	\$3,204,019	\$4,065,791	\$4,768,101	\$4,417,659	\$4,252,990	\$3,966,347	\$5,107,353
<i>Total<sup>2</sup></i>	<i>\$6,679,213</i>	<i>\$7,055,742</i>	<i>\$6,842,942</i>	<i>\$7,434,562</i>	<i>\$8,947,325</i>	<i>\$9,232,161</i>	<i>\$10,620,991</i>	<i>\$11,298,662</i>	<i>\$10,115,878</i>	<i>\$7,791,696</i>	<i>\$9,778,097</i>

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

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

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

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

### *Recreational Fishing*

Sportfishing is an important part of Wrangell's tourism economy as well as a source of recreation for locals. There are many guide businesses and lodges operated by residents which offer a wide range of services. Locally operated charter fishing businesses include Alaska Charters & Adventures and Summit Charters.<sup>53</sup> Wrangell sponsors an annual King Salmon Derby which runs from mid-May to mid-June.<sup>54</sup>

In a survey conducted by the AFSC in 2011, community leaders reported that recreational anglers fish using private boats owned by local residents and non-residents. In addition, shore-based fishing is done by both local residents and non-residents. Local private anglers target all five species of Pacific salmon, halibut, rockfish, crab, sablefish, shrimp, and clams.

In 2010, there were 6 registered sport fish guide businesses active and 13 registered sport fish guides, compared to 8 and 21 in 2000, respectively. Also in that year, 943 sportfishing licenses were sold to residents, compared to 1,115 in 2000. Finally, 625 sportfishing licenses were sold within the community, compared to 432 in 2000.

Wrangell is located in the Kake/Petersburg/Wrangell/Stikine ADF&G Harvest Survey Area which includes all waters and drainages from Ernest Sound to Cape Fanshaw, including Wrangell, Etolin, Zarembo, Mitkof, Kupreanof, Kuiu, and Coronation islands, and Ernest Sound. In 2010, there were a total of 39,709 saltwater and 7,313 freshwater angler days fished, compared to 42,768 and 10,532 in 2000, respectively. In that year, non-Alaskan residents accounted for 53.6% of saltwater angler days fished and 45.9% freshwater angler days fished, compared to 31.2% and 41.2% in 2000, respectively. According to ADF&G Harvest Survey data, private anglers based in Wrangell target all five species of Pacific salmon, rainbow and cutthroat trout, Dolly Varden char, Pacific halibut, rockfish, lingcod, Pacific cod, shark, smelt, Dungeness and Tanner crab, shrimp, hardshell clams, and other shellfish.<sup>55</sup> According to 2010 charter logbooks reported to ADF&G, locally operated charter vessels fished for and kept 90 king salmon, 143 coho salmon, 232 halibut, 5 lingcod, 54 rockfish, 1 sablefish, and 11 unidentified salmon.<sup>56</sup> Information regarding sportfishing trends can be found in Table 11.

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<sup>53</sup> Wrangell Chamber of Commerce (n.d.). *Wrangell Chamber of Commerce*. Retrieved May 15, 2012 from: <http://www.wrangellchamber.org/>.

<sup>54</sup> Southeast Alaska Tourism Council (n.d.). *Sportfishing*. Retrieved May 15, 2012 from: <http://www.alaskainfo.org/content/sportfishing-wrangell>.

<sup>55</sup> Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

<sup>56</sup> Ibid.



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

Year	Active Sport Fish Guide Businesses <sup>1</sup>	Sport Fish Guide Licenses <sup>1</sup>	Sport Fishing Licenses Sold to Residents <sup>2</sup>	Sport Fishing Licenses Sold in Wrangell <sup>2</sup>
2000	8	21	1,115	432
2001	9	20	1,069	440
2002	6	20	1,070	456
2003	9	22	979	462
2004	7	24	981	537
2005	8	19	943	758
2006	11	17	923	702
2007	9	13	921	594
2008	10	15	912	604
2009	8	11	956	575
2010	6	13	943	625

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	13,338	29,430	4,343	6,189
2001	19,144	12,469	4,831	5,255
2002	13,737	23,403	3,468	4,628
2003	12,401	13,077	3,380	7,584
2004	21,412	15,646	4,813	5,848
2005	17,196	15,351	3,835	3,465
2006	20,822	20,572	4,578	3,548
2007	19,957	19,407	4,176	3,226
2008	23,754	16,530	3,043	5,945
2009	19,188	26,448	2,564	6,071
2010	21,290	18,419	3,358	3,955

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

<sup>2</sup> Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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

### *Subsistence Fishing*

Subsistence is an important way of life for many residents of Wrangell. In a survey conducted by the AFSC in 2011, community leaders reported that the three most important subsistence species harvested locally were salmon, halibut, and crab. Residents of Wrangell are dependent on salmon stocks in Salmon Bay on Prince of Wales Island, Crystal Creek, Thoms Creek, Warl West Cove, Mill Creek, and the Stikine River.<sup>57</sup> In 2004, the U.S. and Canada negotiated a modified Pacific salmon treaty that allowed for a U.S. subsistence sockeye salmon fishery on the Stikine River. Permitted subsistence gear includes gaffs, spears, beach seines, dip nets, drift gillnets, and cast nets.<sup>58</sup> According to the ADF&G *Community Subsistence Information System*,<sup>59</sup> residents harvested or used non-salmon/halibut species including abalone, chitons, clams, Dungeness crab, king crab, octopus, scallops, sea cucumber, sea urchin, Tanner crab, harbor seal, cod, Dolly Varden, eulachon, flounder, herring, and rockfish.

Subsistence data is limited and no information is available regarding household participation in subsistence activities (Table 12). Of the species listed by ADF&G in Table 13, sockeye salmon are harvest most often. In 2008, residents reported harvesting 594 total salmon, compared to 2,455 in 2000. This sharp drop can be attributed to a reduction in the number of reported sockeye salmon harvests in those years. Reported salmon harvests peaked in 2002 at 3,120 fish.

In 2010, 476 residents held Subsistence Halibut Registration Certificates (SHARC), compared to 466 in 2003. In that year, an estimated 35,208 pounds of halibut were harvested on 287 SHARC, compared to an estimated 33,006 pounds harvested on 223 SHARC cards in 2003. Subsistence halibut harvesting peaked in 2004 at an estimated 57,978 pound harvested on 286 SHARC cards. There was a significant declined in estimated halibut harvests in 2010, compared to 2009.

Data regarding marine mammal subsistence activity is somewhat limited. In 2010, an estimated 16 sea otters were harvested, compared to an estimated six in 2000. In 200, 33 harbor seals (2,800 pounds) were harvested, compared to an estimated 29 (2,336) in 2000. Information regarding subsistence trends can be found in Tables 12 through 15.

### **Additional Information**

In a survey conducted by the AFSC in 2011, community leaders reported that current challenges facing Wrangell's fishing economy included a lack of waterfront space to expand marine and fishing industries, issues related to permitting, Individual Fishing Quota (IFQ) reduction for halibut, and the high cost of fuel. Effects seen as a result of fisheries policies or management actions include IFQ reductions and the elimination of the King salmon gillnet fishery in front of town.

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<sup>57</sup> Fall, J.A., et al. (2001). *Alaska Subsistence Fisheries 2001 Annual Report*. Retrieved May 15, 2012 from: <http://www.arlis.org/docs/vol1/A/51457095etc/51457095-2001tp.pdf>.

<sup>58</sup> Fall, J.A. et al. (2007). *Alaska Subsistence Fisheries 2007 Annual Report*. Retrieved May 15, 2012 from: <http://www.subsistence.ADFG.state.ak.us/techpap/TP346.pdf>.

<sup>59</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 12. Subsistence Participation by Household and Species, Wrangell: 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).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Wrangell: 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	261	241	96	80	20	56	2,203	n/a	n/a
2001	222	214	166	166	6	74	1,412	n/a	n/a
2002	223	194	272	200	22	62	2,564	n/a	n/a
2003	202	186	118	149	n/a	30	1,316	n/a	n/a
2004	103	99	33	165	5	46	1,053	n/a	n/a
2005	98	95	27	106	11	319	582	n/a	n/a
2006	80	73	19	105	n/a	35	615	n/a	n/a
2007	83	65	39	80	21	85	411	n/a	n/a
2008	83	76	16	84	22	42	430	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, Wrangell: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	466	223	33,006
2004	530	286	57,978
2005	530	228	36,433
2006	504	242	41,929
2007	533	261	40,589
2008	481	259	44,417
2009	530	287	46,668
2010	476	182	35,208

*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, Wrangell: 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	6	n/a	n/a	n/a	29	n/a
2001	n/a	n/a	n/a	n/a	n/a	16	n/a
2002	n/a	n/a	n/a	n/a	n/a	20	n/a
2003	n/a	13	n/a	n/a	n/a	68	n/a
2004	n/a	n/a	n/a	n/a	n/a	33	n/a
2005	n/a	3	n/a	n/a	n/a	33	n/a
2006	n/a	7	n/a	n/a	n/a	33	n/a
2007	n/a	9	n/a	n/a	n/a	33	n/a
2008	n/a	8	n/a	n/a	n/a	33	n/a
2009	n/a	18	n/a	n/a	n/a	n/a	n/a
2010	n/a	16	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.