Valdez (*val-DEEZ*)

People and Place

Location

Valdez is located on the north shore of Port Valdez, a deep water fjord in Prince William Sound. By water, Valdez is 1,239 miles northwest of Seattle, 170 miles northeast of Seward, 80 miles northeast of Whittier, and some 45 miles northwest of Cordova. Anchorage is 120 air miles northwest of Valdez, and 305 road miles. Valdez is the southern terminus of the Trans-Alaska oil pipeline. It is located in the Valdez Recording District and the Valdez-Cordova Census Area. The City encompasses 222 square miles of land and 55.1 square miles of water. [1,2]

Demographic Profile [3]

In 2010, there were 3,976 residents in Valdez, making it the 29th largest of 352 Alaskan communities with populations recorded that year. From 1990 to 2010, the population decreased by 2.3%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population fell by 13.9% with an average annual growth rate of -1.65%, indicative of a steady rate of decline in those years.

In 2010, a majority of Valdez residents identified themselves as White (81.5%), 8.2% identified as American Indian or Alaska Native, 1.9% as Asian, 0.8% as Native Hawaiian or Other Pacific Islander, 0.6% as Black or African America, 0.7% as 'some other race', and 6.3% identified with two or more races. In addition, 4.7% of Valdez residents also identified themselves as Hispanic in 2010. The percentage of the population made up of each of these racial and ethnic groups remained relatively stable between 2000 and 2010. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Valdez decreased over time, from 2.9 persons per household in 1990 to 2.66 per household in 2000, and 2.43 in 2010. During the same period, the number of households increased, from 1,277 occupied households in 1990 and 1,494 in 2000, to 1,573 occupied housing units in 2010. Of the 1,763 total housing units surveyed for the 2010 Decennial Census, 61.3% were owner-occupied, 28% were rented, and 10.8% were vacant or used only seasonally. In 1990, 281 Valdez residents lived in group quarters. This number decreased to 56 in 2000, then rose again to 149 by 2010.

[1] 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.
[2] City of Valdez. 2007. *Valdez Comprehensive Development Plan*. Retrieved April 30, 2012 from http://www.commerce.state.ak.us/dca/plans/Valdez-CP-2007.pdf.
[3] 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.

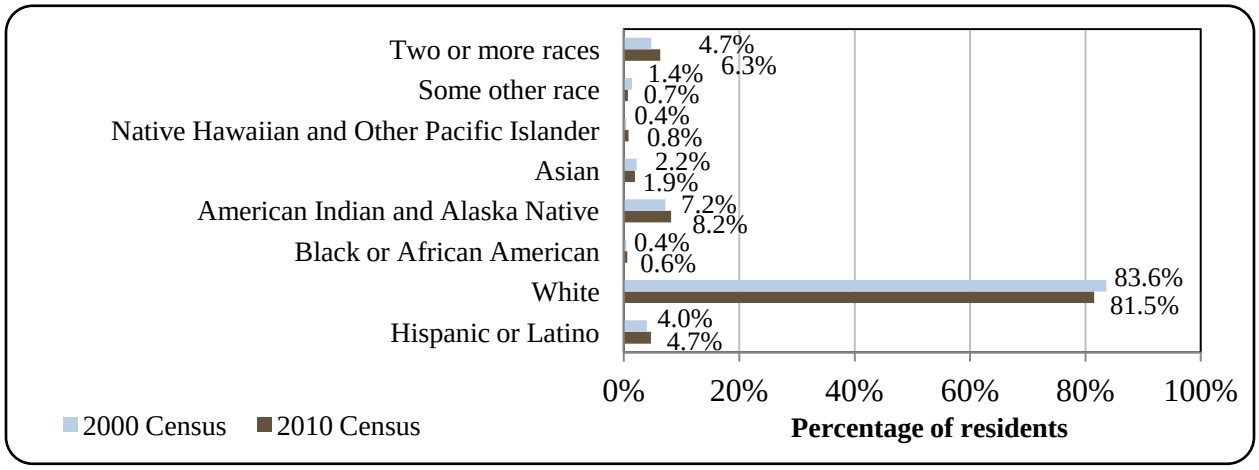
Table 1. Population in Valdez from 1990 to 2010 by Source.

Year	U.S. Decennial Census[1]	Alaska Dept. of Labor Estimate of Permanent Residents[2]
1990	4,068	-
2000	4,036	-
2001	-	3,825
2002	-	3,952
2003	-	3,897
2004	-	3,719
2005	-	3,754
2006	-	3,675
2007	-	3,580
2008	-	3,628
2009	-	3,475
2010	3,976	-

[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.

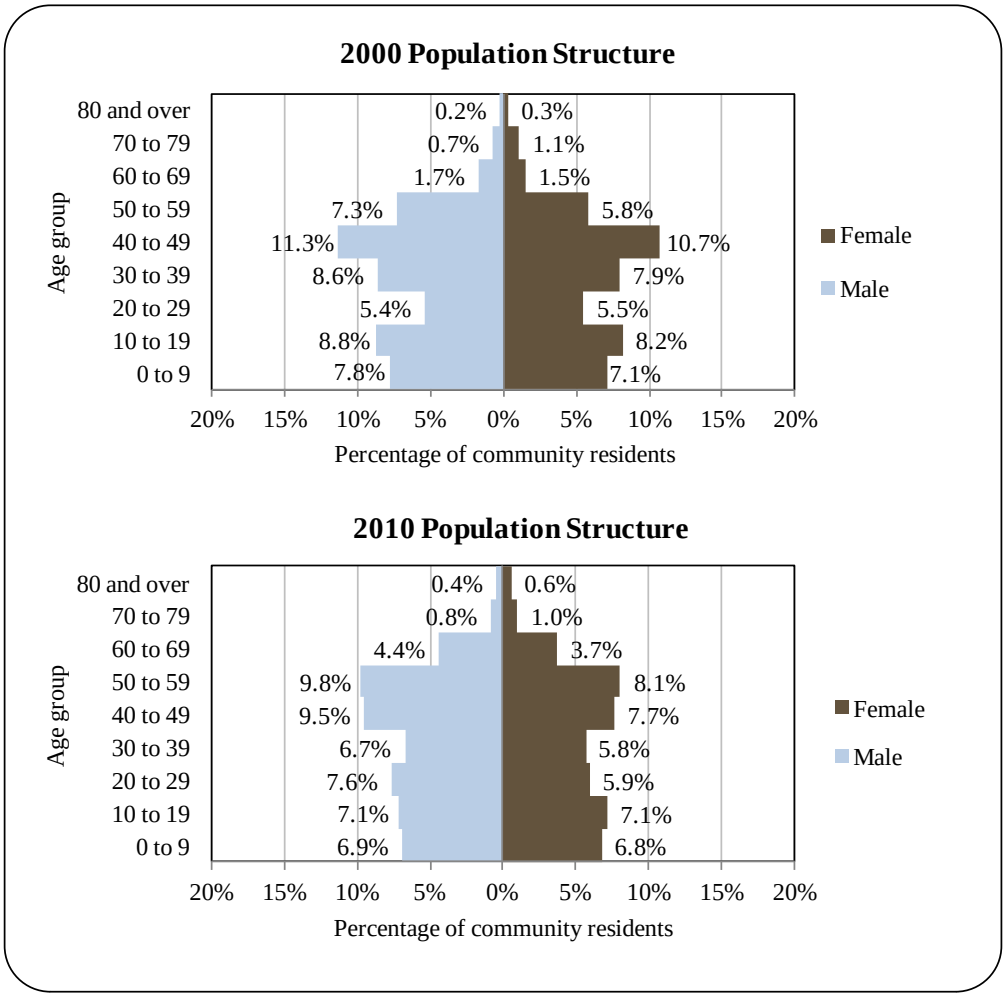
Figure 1. Racial and Ethnic Composition, Valdez: 2000-2010 (U.S. Census).



The gender distribution in 2010 (53.3% male and 46.7% female) was slightly more skewed toward males than the statewide distribution (52% male, 48% female). The median age of Valdez residents that year was 36.7 years, close to the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 10.9% of Valdez's population was age 60 or older. The overall population structure of Valdez in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),[4] 96.1% of Valdez residents over the age of 16 were estimated to hold 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 0% had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 3.9% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 40.6% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; an estimated 13.2% held an Associate's degree, compared to an estimated 8% of Alaskan residents overall; an estimated 15.1% held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 5.9% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

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



[4] 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.

History, Traditional Knowledge, and Culture

Archaeological evidence suggests that Chugach Eskimos (Chugachmiut) were present in the Valdez region starting in the early Holocene period. Port Valdez was likely used for foraging and hunting activities, but probably did not contain permanent settlements, as the Chugachmiut preferred to reside along protected shorelines with unobstructed views of all approaches, and avoided closed bays. Of eight sub-groups of Chugachmiut, the Tatitlek group was the nearest to Valdez.[5]

The Port of Valdez was named in 1790 by Don Salvador Fidalgo for the celebrated Spanish naval officer Antonio Valdes y Basan. Due to its excellent ice-free port, a town developed in 1898 as a debarkation point for men seeking a route to the Eagle Mining District and the Klondike gold fields. Valdez soon became the supply center of its own gold-mining region and incorporated as a City in 1901. Fort Liscum was established in 1900, and a sled and wagon road was constructed to Fort Egbert in Eagle by the U.S. Army. The Alaska Road Commission further developed the road for automobile travel to Fairbanks.[6] By 1920, the Richardson Highway was completed, and was Alaska's first road connecting Fairbanks in the interior with the coast. Today, the Highway (Alaska Route 4) is a paved, two-lane highway open year-round to traffic.[7]

Valdez prospered for a time as a commercial center, especially after gold and copper were discovered nearby.[8] However, the community's population declined by half between 1910 and 1920 as mining activity decreased and Fort Liscum was closed. In addition, completion of the Alaska Railroad from Seward to Fairbanks in 1923 led to a decline in the importance of Valdez as a transportation center.[9] As mining declined in importance to the local economy, commercial fishing began to grow in importance in the region. The first salmon cannery was built in Valdez in 1917. Between 1917 and 1955, several additional canneries opened and closed. Fur farming was briefly an important industry in the 1920s, and mining retained a small presence in the local economy through the early 1940s.[10]

The Great Alaska Earthquake of 1964 caused significant damage in Valdez. Shock waves from the 9.2 magnitude quake ripped streets apart, damaged homes and destroyed buildings in town. An underwater landslide followed the earthquake that caused a tsunami, further destroying the waterfront and much of the community. Two docks in town were completely destroyed. Several residents were killed. In total, $15 million dollars in damage was reported. Following this disaster, community leaders moved the City four miles west to a safer location.[11] The economy of Valdez rebounded after the City was selected as the terminus of the Trans-Alaska Pipeline, and construction of a terminal and other cargo transportation facilities brought rapid growth.[12] The Exxon Valdez oil spill disaster of March, 1989 also led to a population boom, as

[5] City of Valdez. 2007. *Valdez Comprehensive Development Plan*. Retrieved April 30, 2012 from http://www.commerce.state.ak.us/dca/plans/Valdez-CP-2007.pdf.
[6] 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.
[7] See footnote 5.
[8] City of Valdez. 2004. *Local Hazards Mitigation Plan*. Retrieved April 30, 2012 from http://www.commerce.state.ak.us/dcra/planning/nfip/Hazard_Mitigation_Plans/Valdez_LHMP.pdf.
[9] See footnote 5.
[10] Ibid.
[11] See footnotes 6 and 8.
[12] See footnotes 5 and 6.

thousands of workers came to Valdez to work in clean-up efforts.[13] The oil spread outward and did not reach the shores of the community, but commercial, recreational, and subsistence fisheries in Valdez continue to be affected by the impacts of the spill.[14]

Natural Resources and Environment

Valdez has a maritime climate which is characterized by cool summers and mild winters. January temperatures range from 21 to 30 °F, and July temperatures are from 46 to 61 °F. Annual precipitation averages 62 inches. The average snowfall is 325 inches (27 feet) annually.[15] The Prince William Sound area is characterized by complex coastlines, peninsulas and small islands, and glacial carved valleys and fjords.[16] Valdez is surrounded by the Chugach mountains, with close peaks as high as 4,000 feet, and Mt. Marcus Baker, located 55 miles northwest, rising to 13,250 feet. High mountain ridges to the north of the community provide a barrier to the flow of cold air from the interior, but the mountains also channel local winds, bringing cold air down from snowfields and the Valdez glacier. The City of Valdez is built on an alluvial fan of Mineral Creek.[17] Uplands host coniferous forest and muskegs.[18]

The City of Valdez is located just north and east of the boundary of the Chugach National Forest, the western and northern-most National Forest in the U.S., comprising 5.5 million acres. The area of the National Forest adjacent to Prince William Sound makes up 48% of its total acreage. Within this region of the National Forest there are 3,500 miles of shoreline, and 20 active tidewater glaciers.[19] Marine protected areas near Valdez include Shoup Bay, Jack Bay, and Sawmill Bay State Marine Parks (SMPs) and the Copper River Delta Critical Habitat Area.[20] SMPs are intended to protect natural habitat, and do not restrict fishing activity.[21] All three of these SMPs are important recreational areas for residents of Valdez. Additional recreational areas include Mineral Creek Flats and Canyon, the Valdez Glacier, Valdez Lake and Stream, Robe Lake, Keystone Canyon and associated trail system, Solomon Gulch, the Old Valdez townsite, and Valdez Duck Flats.[22]

Valdez hosts the terminus of the Alaska Pipeline, which carries crude oil south from oil fields in Alaska's North Slope. Living marine resources in the Valdez area were negatively impacted and continue to show affects of the March 1989 Exxon Valdez Oil Spill, when 11 million gallons of crude oil spilled into Prince William Sound. The spill affected the food chain

[13] See footnote 8.
[14] Chugachmiut. 2009. *Chugach Region Comprehensive Economic Development Strategy*. Retrieved April 30, 2012 from http://www.chugachmiut.org/services/enterprise/Chugach%20Region%20CEDS%20draft%20v5.pdf.
[15] See footnote 6.
[16] U.S. Forest Service. 2008. *East Prince William Sound Landscape Assessment.* Retrieved May 3, 2012 from http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5151500.pdf
[17] See footnote 5.
[18] See footnote 16.
[19] National Park Service (n.d.). *Chugach National Forest: Forest Facts*. Retrieved December 14, 2011 from http://www.fs.usda.gov/chugach/.
[20] Alaska Dept. of Natural Resources. 2010. *State Marine Parks near Valdez*. Retrieved May 3, 2012 from http://dnr.alaska.gov/parks/units/pwssmp/smpvald.htm.
[21] Alaska Dept. of Fish and Game Marine Protected Area Task Force. 2002. *Marine Protected Areas in Alaska: Recommendations for a Public Process*. Regional Information Report 5J02-08. Retrieved April 13, 2012 from http://www.adfg.alaska.gov/static/lands/protectedareas/pdfs/5j02-08.pdf.
[22] City of Valdez. 2006. *Coastal Management Plan, 2006 Plan Amendment*. Retrieved May 3, 2012 from http://www.alaskacoast.state.ak.us/District/FinalFinalPlans/Valdez/Valdez2006PlanAmendment_081306.pdf.

that supports the Prince William Sound commercial fishery, and impacted shore birds, waterfowl, sea otters, harbor porpoises, harbor seals, Steller sea lions, and several species of whale, among other species.[23] Harvest of shellfish declined dramatically due to petrochemical contamination. Sea otter mortality was as high as 40% immediately following the spill. The 50% decline in the Prince William Sound orca population in the decades following the spill has been attributed to direct oil exposure and consumption of oiled marine mammals. Many other fish, marine mammal, and bird populations declined following the spill, including harbor seals, Steller sea lions, marbled murrelets, and black oyster catchers. Impacts on habitat and forage fishes created continued difficulties for recovery of many species.[24] In particular, the 1993 collapse of the Prince William Sound herring fishery has made recovery for many species difficult, as it is a primary food source for harbor seal, Steller sea lion, and marbled murrelet, among other species. The relationship between the herring collapse and the oil spill remains unclear.[25,26]

No offshore oil and gas lease sales were scheduled in the Gulf of Alaska for the 2012-2017 leasing program.[27] A 2000 assessment of conventionally recoverable oil and gas estimated the presence of between 360 million to 3.27 billion barrels of oil and gas in the Gulf of Alaska region. This was slightly higher than estimates in Cook Inlet. The Pacific Margin Subregion (including Cook Inlet, Gulf of Alaska and Shumagin-Kodiak) was estimated to hold only 6.3% of all conventionally recoverable oil and gas in Alaska's offshore regions, while the Arctic Subregion was estimated to hold 84.6% and the Bering Shelf subregion was estimated to hold 9.1%.[28] On state lands, acreage is available in the Valdez area for oil and gas exploration, but no current leases were active as of 2011, and no exploration licenses were proposed in the area for the 2012-2017 lease period.[29]

Valdez played a role in the history of mining in Alaska both as a launching point for gold prospectors bound for the Klondike or Copper River Basin in the late 1800s and early years of the 1900s, and later miners prospected for gold, copper and silver locally on the islands and shores of Prince William Sound. The most profitable mines in the vicinity of Valdez were the Cliff Gold Mine and the Midas Mine. The Cliff Mine resulted in about 51,740 ounces of gold and 8,153 ounces of silver. The Midas Mine, in nearby Solomon Gulch on the south shore of the Port, was the fourth largest producer of copper in the Prince William Sound area. Ellamar Mine, located near Tatitlek, was a large copper producer, and almost as much gold was produced as a by-product of copper mining as was produced at the Cliff Mine.[30] Today, the Midas and Ellamar

[23] U.S. Environmental Protection Agency (n.d.). *Exxon Valdez*. Retrieved December 2, 2011 from http://www.epa.gov/emergencies/content/learning/exxon.htm.
[24] See footnote 14.
[25] Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska.* Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf.
[26] Alaska Dept. of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main.
[27] Minerals Management Service. November, 2011. *Proposed Outer Continental Shelf Oil and Gas Leasing Program 2012-2017*. Retrieved February 2, 2012 from http://www.boem.gov/uploadedFiles/Proposed_OCS_Oil_Gas_Lease_Program_2012-2017.pdf.
[28] Bureau of Ocean Energy Management. 2000. *Undiscovered Oil and Gas Resources, Alaska Federal Offshore, December 2000 Update*. Retrieved May 3, 2012 from http://alaska.boemre.gov/re/uogr/uogr.pdf.
[29] State of Alaska. January 2011. *Five-Year Program of Proposed Oil and Gas Lease Sales*. Retrieved May 3, 2012 from http://dog.dnr.alaska.gov/Leasing/Documents/5YearReports/2011/5Year_Leasing_Program_01012011.pdf.
[30] Valdez, AK website. (n.d.). *Short History of Valdez*. Retrieved May 3, 2012 from http://www.valdezalaska.org/discover-valdez-history/short-history-of-valdez.

Mines are still considered to be some of the most significant copper deposits in Alaska, along with some gold, zinc, lead, and silver.[31]

Natural hazards identified in Valdez include high risk of flooding, avalanche, landslides, erosion, and severe weather, and medium risk of earthquake, tsunami and seiche, and wildfire. The risk of volcanic activity and drought was unknown.[32] Avalanche areas in Valdez include steep slopes north of the Valdez airport and along Mineral Creek. Flood hazards are posed by tsunamis, storm surges, heavy rainfall, snow and glacial melt, and potential for release of glacier-dammed lakes.[33] Earthquake hazards are high in this region of Alaska. There are 11 major active fault systems within 150 miles that are capable of producing earthquakes that can be felt in the Valdez.[34] According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Valdez as of July 2012.[35]

Current Economy[36]

In a survey conducted by the AFSC in 2011, community leaders reported that Valdez's economy is dependent on commercial and recreational fishing, sport hunting, and oil and natural gas exploration and drilling. Valdez is the southern terminus and off-loading point of oil extracted from Prudhoe Bay on Alaska's North Slope, and as a result has one of the highest municipal tax bases in the state. Valdez is a major seaport, with a $48 million cargo and container facility. City, state, and federal agencies provide significant employment. In addition, in 2010, 62 residents held state commercial fishing permits. Several fish processing plants operate in Valdez. The Valdez Fisheries Development Association operates the Valdez Fish Hatchery as well as a seasonal processing plant during harvest season. Several cruise ships dock in Valdez each year. Valdez is a foreign free trade zone. In addition, 98 uniformed U.S. Coast Guard personnel were stationed in Valdez in 2011.[37] As of 2010, top local employers included pipeline services (design, construction, maintenance, and operation), schools, the City of Valdez, health services, oil spill cleanup and prevention services, the State of Alaska, University of Alaska, and police/security services.[38]

Based on household surveys conducted for the 2006-2010 ACS,[39] in 2010, the per capita income in Valdez was estimated to be $34,822 and the median household income was estimated

[31] Szumigala, D.J., L.A. Harbo, and J.N. Adleman. *Alaska's Mineral Industry 2010.* Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.
[32] City of Valdez. 2004. *Local Hazards Mitigation Plan*. Retrieved April 30, 2012 from http://www.commerce.state.ak.us/dcra/planning/nfip/Hazard_Mitigation_Plans/Valdez_LHMP.pdf.
[33] City of Valdez. 2006. *Coastal Management Plan, 2006 Plan Amendment*. Retrieved May 3, 2012 from http://www.alaskacoast.state.ak.us/District/FinalFinalPlans/Valdez/Valdez2006PlanAmendment_081306.pdf.
[34] See footnote 32.
[35] Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from http://dec.alaska.gov/spar/csp/list.htm.
[36] Unless otherwise noted, all monetary data are reported in nominal values.
[37] 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.
[38] 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/.
[39] 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.

to be $69,536. This represents an increase from the per capita and median household incomes reported in the year 2000 ($27,341 and $66,532, respectively). However, if inflation is taken into account by converting the 2000 values to 2010 dollars,[40] per capita income is shown to have decreased very slightly, from a real per capita income of $35,953 in 2000, while household income is shown to have decreased more substantially, from a real median household income of $87,489 in 2000. In 2010, Valdez ranked 30th of 305 Alaskan communities with per capita income data, and 48th in median household income, out of 299 Alaskan communities with household income data that year.

Although Valdez's small population size may have prevented the ACS from accurately portraying economic conditions,[41] additional evidence for a decrease in per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Valdez in 2010 is $24,105.[42] This is lower than the 2006-2010 ACS estimate, thus providing additional evidence that per capita may have declined between 2000 and 2010. Despite this, Valdez did not meet the Denali Commission's 2011 criteria as a "distressed" community.[43] It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the potential value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a slightly higher percentage of Valdez residents were estimated to be in the civilian labor force (74%) than in the civilian labor force statewide (68.8%). In the same year, 4.7% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 3.6%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 9.7%, compared to a statewide unemployment rate estimate of 11.5%.[44]

Also based on the 2006-2010 ACS, a majority of the Valdez workforce (71.6%) was estimated to be employed in the public sector, along with 22.1% in the public sector, and 6.3% estimated to be self-employed. Of the 547 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number was estimated to be working in educational services, health care, and social assistance (25.1%) and transportation, warehousing, and utilities (12.5%). Between 2006 and 2010, only 5.9% of the Valdez civilian labor force was estimated to be employed in agriculture, forestry, fishing, hunting, and mining (Figures 3 and 4). However, given the known information on Valdez residents' contribution to state fisheries, the number of individuals employed in farming, fishing, and forestry occupations and industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly.

[40] Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, http://labor.alaska.gov/research/cpi/inflationcalc.htm).
[41] 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.
[42] See footnotes 38 and 39.
[43] Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.
[44] See footnote 38.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 1,960 employed residents in Valdez in 2010, of which 26.3% were employed in trade, transportation, and utilities, 15.9% in local government, 12.8% in leisure and hospitality, 11.8% in education and health services, 8% in professional and business services, 6% in state government, 5.5% in natural resources and mining, 4.1% in manufacturing, 3.5% in construction, 2.7% in information, 1.5% in financial activities, 0.1% in unknown industries, and 1.9% in other industries.[45] As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

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

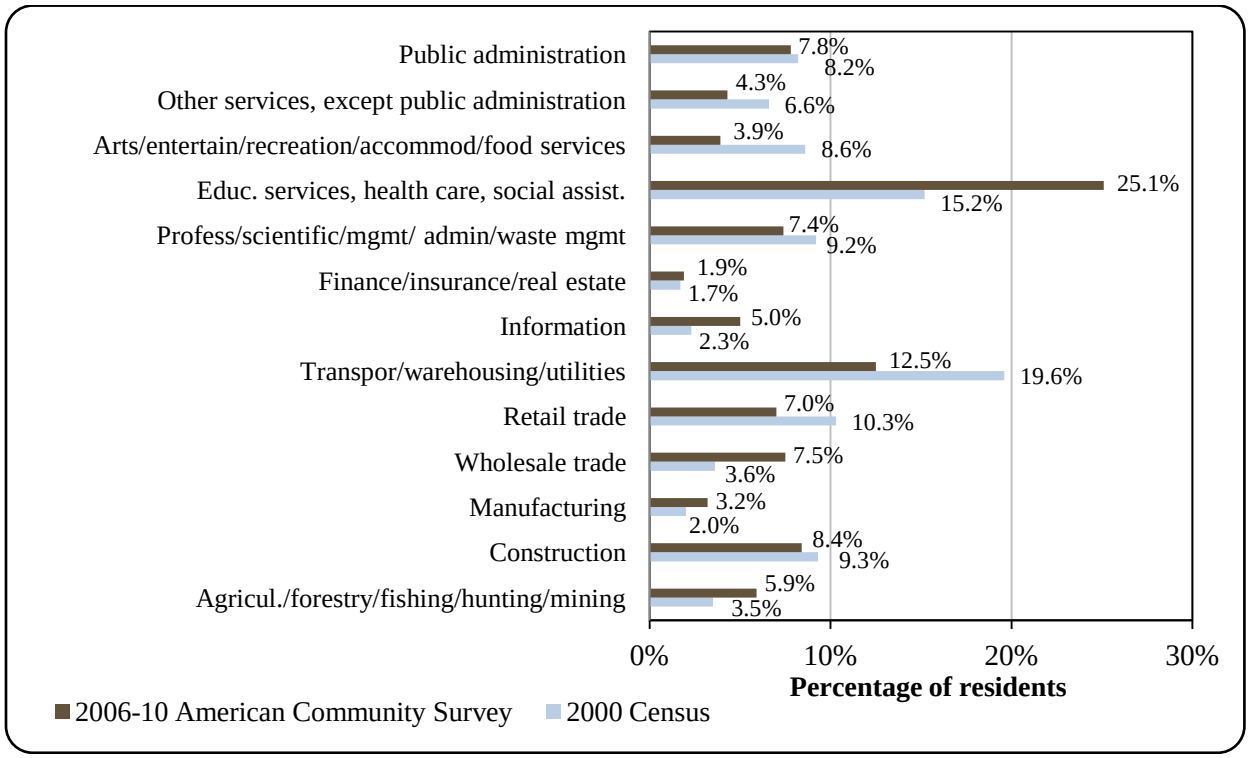
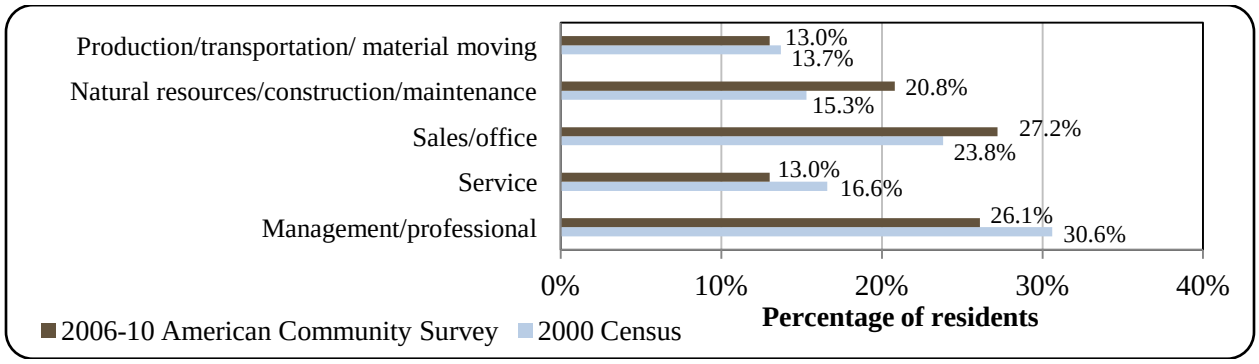


Figure 4. Local Employment by Occupation in 2000-2010, Valdez (U.S. Census).



[45] Ibid.

Governance

Valdez is a Home Rule City, and is not located in an organized borough. The City was incorporated in 1901 and has a Strong Mayor form of government, including a seven-person city council including the Mayor, a seven-person advisory school board, a seven-person planning and zoning commission, and a number of municipal employees. The City administers a 20.0 mills property tax and a 6% Bed Tax. No sales tax is administered in the City of Valdez.[46] Municipal revenue in Valdez more than doubled between 2000 and 2010, from just over $20,000,000 in 2000 to over $50,000,000 in 2009 and 2010. This increase can be attributed in part to an increase in tax revenues over the period.

Shared revenues from state and federal sources provided another important revenue source for the City during this period. Valdez received contributions from the State Revenue Sharing program from 2000 to 2003 (approximately $100,000 per year), from the Community Revenue Sharing program in 2009 and 2010 (just over $320,000 per year), as well as shared funds from state fish tax refunds (see the *Fisheries-Related Revenue* section for more information).

Grants also accounted for a sizeable portion of municipal revenues, including multiple fisheries-related grants. Federal funding came from the U.S. Economic Development Administration, including $3,000,000 toward harbor improvements or the cruise ship dock in 2004, and $558,000 for a smoker and cold storage in 2006. In addition, Valdez received federal disaster assistance totaling $2,825,267 between 2000 and 2006, and a federal 'marine first responder' grant of $7,756 in 2008. State funding included $12,174,427 from the Alaska Department of Commerce, Community, and Economic Development's (DCCED) Division of Community and Regional Affairs (DCRA) between 2000 and 2010. DCRA-funded projects included design of a dried fish processing plant, City Dock repair, revitalization, and fendering, improvements to the small boat harbor including installation of a ramp, development of a new harbor, cruise ship dock renovation, and uplands repair, other dock and harbor improvements and maintenance, and funding for chum salmon fisheries development granted to the Prince William Sound Aquaculture Corporation. Alaska DEC – Municipal Grants and Loans contributed $56,700 toward the small boat harbor in 2002. The Alaska Department of Transportation and Public Facilities provided $762,998 in 2001 for replacement of the ferry terminal building, and $424,623 in 2002 for staging of the Valdez Ferry Terminal. In addition, the State of Alaska provided $310,473 between 2000 and 2004 for repairs the old City Dock including addition of fenders, and $140,117 from 2000 to 2003 for construction of a new cruise ship dock. Information about selected aspects of Valdez's municipal revenue is presented in Table 2.

Valdez was not included under the Alaska Native Claims Settlement Act (ANCSA), and is not federally recognized as a Native village.[47] The Native population of Valdez is represented by the Valdez Native Tribe, a non-profit organization that formed in 1974. The Tribe's mission is to "promote the unity, self-determination, and empowerment of the Alaska Native and American Indian beneficiaries residing in the Valdez area, by providing services that will strengthen, increase opportunities, and enhance the mental, physical and spiritual well being of

[46] 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.
[47] Ibid.

our people, in harmony with our land and traditional values."[48] The organization provides health, social, educational, and cultural services.[49]

The closest office of the Alaska Department of Fish and Game (ADF&G) is located in Cordova, though ADF&G's Anchorage office may be more accessible to residents of Valdez because Cordova is not connected to the road system. Anchorage also hosts the nearest offices of the Alaska Department of Natural Resources, the National Marine Fisheries Service (NMFS), the DCCED, and the U.S. Bureau of Citizenship and Immigration Services.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Valdez 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	$21,679,852	n/a	$114,675	$868,727
2001	$23,193,808	n/a	$102,453	$1,877,490
2002	$23,759,150	n/a	$92,373	$3,109,197
2003	$23,727,809	n/a	$95,657	$3,194,194
2004	$31,483,980	n/a	n/a	$4,053,772
2005	$23,793,604	n/a	n/a	$352,700
2006	$30,417,694	n/a	n/a	$1,084,600
2007	$32,583,668	n/a	n/a	$3,565,000
2008	$48,560,552	n/a	n/a	$7,756
2009	$50,839,699	n/a	$325,462	$4,175,000
2010	$54,036,827	n/a	$321,582	$3,325,000

[1] Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.
[2] 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.
[3] Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011from 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 Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

The Richardson Highway connects Valdez to Alaska's road system. Valdez is 305 road miles southeast of Anchorage. The Port of Valdez is ice-free throughout the year, and is navigated by hundreds of ocean-going oil cargo vessels each year. Valdez has the largest floating concrete dock in the world, with a 1,200-foot front and water depth exceeding 80 feet. Numerous cargo and container facilities are present in Valdez, as well as boat harbors. Both barges and

[48] Chugachmiut. 2009. *Chugach Region Comprehensive Economic Development Strategy*. Retrieved April 30, 2012 from http://www.chugachmiut.org/services/enterprise/Chugach%20Region%20CEDS%20draft%20v5.pdf.
[49] Chugachmiut. 2012. *Valdez Native Tribe*. Retrieved April 27, 2012 from http://www.chugachmiut.org/tribes/valdez.html.

trucking services deliver cargo to the City.[50] The Alaska Marine Highway Ferry System provides transport to Cordova, Tatitlek, Whittier, and Chenega Bay in Prince William Sound, to Kodiak, Ouzinke, Port Lions, and Old Harbor on Kodiak Island, and to Seward, Seldovia, and Homer on the Kenai Peninsula.[51] The Valdez airport is operated by the State, with a 6,500 feet long by 150 feet wide paved runway.[52] As of early June 2012, roundtrip airfare between Valdez and Anchorage was $298.[53] In addition, a seaplane base is located at Robe Lake, approximately 8 road miles southeast of town.[54]

Facilities

Water in Valdez is derived from four primary wells and is stored in five 750,000-gallon reservoirs. The City operates a piped water distribution system, and also operates the sewage system. The sewage treatment plant is capable of processing 1.25 million gallons a day. Sewage is deposited in a secondary treatment lagoon. Over 95% of homes are fully plumbed, and many homes use individual wells and septic tanks. The City operates a landfill and provides refuse collection services in Valdez. An oil and hazardous waste recycling center is also available. Electricity is provided by the Copper Valley Electric Association which purchases hydroelectric power from the Four Dam Pool Power Agency and diesel electricity from the Petro Star Refinery. The electric utility also owns a backup diesel plant. Police services are provided by the City Police Department and a local state troopers post. Fire and rescue services are provided by the City Fire Department and Emergency Medical Service (EMS), as well as the Robe River Fire Hall, Alyeska Marine Terminal Fire Response, and Civil Air Patrol. A State District Court and State Jail are both located in Valdez.[55]

Additional community facilities and services include Valdez Senior Citizens housing, a convention and civic center which houses a movie theater, a teen center, two museums and a historical archive, one academic/public library and three school libraries, a high school pool and gymnasium, and bingo offered by the Valdez Native Tribe.[56] According to a survey conducted by the AFSC in 2011, Valdez also has a food bank. Internet, cable, and telephone service are all available in Valdez.[57]

With regard to fisheries-related facilities, a small harbor is present in Valdez that accommodates 546 commercial fishing boats and recreational vessels. Boat launches and haul-out services are available.[58] According to the 2011 AFSC, community leaders indicated that dry dock storage is also available, along with sales of ice, boat fuel, bait, and tackle. They also noted that fish processing plants are present in Valdez (see *Processing Plants* section).

[50] 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.
[51] Route information retrieved April 27, 2012 from http://www.dot.state.ak.us/amhs/routes.shtml.
[52] See footnote 50.
[53] Airfare was obtained on the travel website http://www.travelocity.com for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on November 16, 2011.
[54] See footnote 50.
[55] Ibid.
[56] Ibid.
[57] Ibid.
[58] Ibid.

Medical Services

Local health care is provided by the Valdez Community Hospital and the Valdez Native Tribe Clinic. The hospital is owned by the City, and the clinic is owned and operated by the Valdez Native Tribe. The hospital is a qualified Acute Care facility. Emergency Services have helicopter, marine, and airport access. Emergency service is provided by 911 Telephone Service and paid EMS. Alternative health care is provided by the Valdez Fire Department. Long-term care is also available in Valdez at Sourdough Place.[59]

Educational Opportunities

Three schools are present in Valdez, including Hermon Hutchens Elementary School (preschool through 6th grade), George H. Gilson Junior High School (7th and 8th grade), and Valdez High School (9th through 12th grade). As of 2011, 354 students were enrolled at the elementary school, 112 at the junior high school, and 222 at the high school. That year, there were 26 elementary school teachers, 13 junior high school teachers, and 19 high school teachers. A correspondence school is also in operation in Valdez – the Chugach Extension Correspondence School – which offered preschool through 12th grade. As of 2011, 203 students were enrolled in the correspondence program, and there were 6 teachers.[60]

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The original inhabitants of the Valdez area, the Chugachmiut, were marine hunters and fishers. In summer, they moved from permanent winter settlements to temporary fish camps. Salmon were a dietary staple, and large quantities were dried for winter use. The Chugachmiut also caught other fish, gathered intertidal resources, and hunted sea mammals, such as whales, seals, sea lions, and sea otters. Hunting was done with harpoons and clubs, and fish were speared, gaffed, harpooned, or hooked. Salmon were often caught in weirs built across rivers.[61]

The community of Valdez was originally founded as a debarkation point for miners in the late 1800s. Commercial fishing began to gain importance as mining activity declined in the early 1900s. The first salmon cannery was built in Valdez in 1917.[62] Prior to construction of the Valdez cannery, one salmon cannery was in operation in the Prince William Sound (PWS) region, and fishing took place primarily along the Copper River delta. Salmon fishing continued to expand to other regions of PWS as additional canneries were constructed.[63] Salmon and herring were two of the earliest commercial fisheries in Alaska, during the period when the

[59] Ibid.
[60] Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from http://eed.alaska.gov/stats/.
[61] Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from http://ankn.uaf.edu.
[62] City of Valdez. 2007. *Valdez Comprehensive Development Plan*. Retrieved April 30, 2012 from http://www.commerce.state.ak.us/dca/plans/Valdez-CP-2007.pdf.
[63] Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf.

product was salted for storing and shipment.[64] By the 1920s, commercial fisheries for Pacific halibut and groundfish expanded north to the Gulf of Alaska (GOA) and west as far as Unimak Pass.[65]

Today, ADF&G manages the PWS salmon fishery. The PWS salmon management area is divided into 11 commercial fishing districts, covering the coastal area from Cape Suckling (northwest of Yakutat) to Cape Fairfield (east of Seward), and the inland waters of PWS. Valdez is located in the Eastern district. Purse seine gear is the most common gear type, and is allowed in eight of the nine inland fishing districts. Drift gillnet gear is allowed in three districts, and set gillnet gear is only allowed in the Eshamy District. It is important to note that a salmon hatchery program was initiated in Prince William Sound in the early 1970s, and hatchery returns have consistently contributed to harvests since the 1980s.[66]

Groundfish and crab fisheries that occur within 3 nautical miles (nmi) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nmi in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. PWS is located in Federal Statistical and Reporting Area 649 and Pacific Halibut Fishery Regulatory Area 3A. The outlet of PWS is at the boundary between the Central GOA and Eastern GOA federal Sablefish Regulatory Areas.

In addition to federal groundfish fisheries that take place in the Central and Eastern GOA, state groundfish fisheries take place in the inland waters of PWS for rockfish, lingcod, pollock, sablefish, and Pacific cod. The PWS Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal cod fishery. The Total Allowable Catch (TAC) set by NMFS applies to both fisheries. Beginning in 1997, an additional 'state-waters fishery' for Pacific cod began in PWS. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition, a pelagic trawl fishery for pollock began in PWS in 1995, managed under a guideline harvest limit (GHL) determined by ADF&G, and is not conducted as a parallel fishery. The PWS limited entry sablefish fishery is also managed separately under a GHL.[67]

A majority of lingcod are found in nearshore rocky reef habitat from 10-100 meters in depth. ADF&G manages all lingcod fisheries in state and EEZ waters off Alaska. Lingcod in PWS are primarily harvested as incidental catch in longline fisheries, although lingcod fisheries have increased in importance in recent decades. The state manages rockfish harvest in PWS, and since 1998 also has jurisdiction of blue and black shelf rockfish in the western GOA, and all rockfish in the eastern GOA.[68]

PWS historically had a productive herring fishery. However, in 1993, four years after the Exxon Valdez oil spill, the stock collapsed in conjunction with an outbreak of hemorrhagic septicemia virus. Since 1998, the PWS herring fishery has been closed. The relationships between the oil spill, the virus, and the stock collapse remain unclear, and the population has shown little sign of recovery.[69,70] PWS was also a historical center for Dungeness crab fisheries,

[64] Woodby, D., D. Carlile, S. Siddeek, F. Funk, J.H. Clark, and L. Hulbert. 2005. *Commercial Fisheries of Alaska.* Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf.
[65] International Pacific Halibut Commission. 1978. *The Pacific Halibut: Biology, Fishery, and Management*. Technical Report No. 16 (Revision of No. 6).
[66] See footnote 63.
[67] See footnote 64.
[68] Ibid.
[69] Ibid.

but this stock has also collapsed. Possible causes for the Dungeness collapse include overfishing, sea otter predation, and adverse climatic changes. Red king crab and Tanner crab fisheries in PWS are also closed due to low stock abundance.[71] In contrast to the closures of herring and crab fisheries, spot shrimp (*Pandalus platyceros*) pot fisheries reopened in PWS in 2010 after almost two decades of closure due to low abundance.[72]

Valdez is not eligible to participate in the Community Quota Entity program or the Community Development Quota program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, three shore-side processing plants are in operation in Valdez. Information about and history of these facilities is presented below.

Peter Pan Seafoods owns and operates the only fresh/frozen/cannery facility in Valdez. The facility operates between April and September, processing salmon – including Copper River salmon – as well as sablefish and halibut.[73] According to a survey of plant managers conducted by the AFSC in 2011, the Valdez plant began operations in 1988, and in 2010 employed up to 352 workers in the months of July and August.

Silver Bay Seafoods LLC processes salmon at its "Northern Reach Seafoods" facility in Valdez, which it acquired in early 2010. During the first winter, the company made large-scale investments in the old plant, including expanding freezer capacities by four times and purchasing new equipment for cutting salmon and preserving salmon roe. The daily processing capacity of the facility was increased from 250,000 round pounds of salmon to one million round pounds. The plant was operational during the 2010 summer season. In 2011, the Valdez facility employed 197 workers during the summer season.[74]

The Solomon Falls Seafoods facility in Valdez processes pink and coho salmon. Solomon Falls Seafoods is a subsidiary of the Valdez Fisheries Development Association, which was started in 1978 and is one of the biggest producers of pink salmon in Alaska.[75] According to the 2011 survey of plant managers conducted by the AFSC, in 2010, the Solomon Falls plant employed up to 20 workers from June through September.

Fisheries-Related Revenue

In 2010, the City of Valdez received $1,868,658 from fisheries-related taxes and fees. These revenue sources include the Shared Fisheries Business Tax and fees for harbor and port/dock usage. Table 3 presents details of selected aspects of community finances between 2000 and 2010.[76]

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[70] Alaska Dept. of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main.
[71] See footnote 64.
[72] Alaska Dept. of Fish and Game. 2012. *Spot Shrimp Species Profile: Status, Trends and Threats*. Retrieved April 30, 2012 from http://www.adfg.alaska.gov/index.cfm?ADFG=spotshrimp.main.
[73] Peter Pan Seafoods. 2011. *Facilities*. Retrieved July 6, 2012 from http://www.ppsf.com/facilities/index.aspx.
[74] Silver Bay Seafoods. 2011. *Facilities*. Retrieved July 6, 2012 from http://silverbayseafoods.com/.
[75] Solomon Fall. 2012. *About*. Retrieved July 6, 2012 from http://www.solomonfalls.com/about/.
[76] 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

Between 2000 and 2010, Valdez residents were active in commercial fisheries as permit and quota share account holders, crew license holders, and vessel owners. They were most involved in fisheries for salmon, halibut, and sablefish. Inactive permits were held in a number of other fisheries throughout the period, and a number of shrimp permits were acquired in 2010 (Table 4). In addition to fisheries participation, the community of Valdez is one of the leading processing communities in Alaska, ranking 9th in landings and 14th in ex-vessel revenue, out of 67 Alaskan ports that received landings in 2010. That year, 20 fish buyers were present locally, and 3 shore-side processing facilities were in operation. In total, 72,812,837 net pounds were landed in Valdez in 2010, generating a total of $31,530,772 in ex-vessel revenue (Table 5).

Between 2000 and 2010, the number of Valdez residents holding commercial crew licenses varied between a low of 56 in 2009 and a high of 93 in 2003. In 2010, 78 crew licenses were held. During the same period, the number of residents that were the primary owner of a fishing vessel varied between a low of 46 in 2006 and a high of 88 in 2000 and 2004, with 69 fishing vessels primarily owned by Valdez residents in 2010. Also in 2010, 80 vessels were listed as homeported in Valdez, and 275 vessels delivered landings locally. Further information about the commercial fishing sector in Valdez is presented in Table 5.

In 2010, 62 Valdez residents held a total of 97 state Commercial Fisheries Entry Commission (CFEC) permits. Of these, 44 were held for salmon fisheries, 25 were held for 'other shellfish' (shrimp), 13 were held for halibut, 6 were held for herring, 5 for sablefish, and 4 for groundfish. Additional information about CFEC permits is presented in Table 4, and further details regarding these permits are included below.

Of 44 salmon CFEC permits, 28 were held in the PWS purse seine fishery, 10 in the Prince William Sound drift gillnet fishery, 2 for Upper Yukon River fishwheel, 1 in the Cook Inlet drift gillnet fishery, 1 for Bristol Bay drift gillnet, and 1 was a statewide hand troll permit. In addition, one PWS 'special harvest area' (hatchery) permit was held in 2010. Overall, 57% of salmon permits held in Valdez were actively fished in 2010. Of the purse seine permits, 61% were actively fished that year, and 80% of PWS drift gillnet permits were actively fished. No statewide troll or Upper Yukon River fishwheel permits were actively fished by Valdez residents during the 2000-2010 period. The number of salmon permit holders and the total salmon permits held increased slightly between 2000 and 2010, and the percentage of permits actively fished also increased slightly over the period.

In 2010, 25 'other shellfish' permits were held in Valdez. All 25 of these permits were held for shrimp fisheries using pot gear, and 11 of the permits were actively fished that year (44%). This represents a sudden increase in the number of 'other shellfish' permits held in Valdez, from one inactive permit held in 2000 and 2001 and no permits held between 2002 and 2009. The sudden increase reflects the reopening of the spot shrimp fishery in PWS in 2010. The fishery had previously been closed since the early 1990s due to low stock abundance.[77]

All 13 halibut CFEC permits held in 2010 were for the statewide longline fishery on vessels under 60 feet in length. That year, 11 (85%) of halibut permits were actively fished. Between 2000 and 2010, the number of halibut permit holders and the total number of permits held decreased slightly, while the percentage of permits actively fished increased.

[77] Alaska Dept. of Fish and Game. 2012. *Spot Shrimp Species Profile: Status, Trends and Threats*. Retrieved April 30, 2012 from http://www.adfg.alaska.gov/index.cfm?ADFG=spotshrimp.main.

Sablefish CFEC permits were actively fished at the highest rate of any fishery in Valdez between 2000 and 2010, with 100% of permits fished in 8 years during the period. The number of sablefish permits held by Valdez residents rose from a low of two held in 2001 to a peak of eight held in 2004. From 2007 to 2010, five Valdez residents held five sablefish CFEC permits.

The number of groundfish CFEC permits held by Valdez residents also peaked in 2004, with 12 permits held by 9 permit holders. That year was also the only year during the 2000-2010 period in which a groundfish permit was actively fished. Between 2004 and 2010, the number of permit holders declined to three, and the number of permits held declined to four.

Although the PWS herring fishery has been closed since 1998, several Valdez residents held inactive herring permits in PWS herring fisheries between 2000 and 2010. The number of permit holders and permits held during this period varied from four to six per year. In 2010, six residents held a total of six herring permits. Three of these were held in the PWS herring purse seine fishery, one was held in the PWS roe herring gillnet fishery, and two were held in the PWS closed-pound herring spawn on kelp fishery. A "closed-pound" is a single, floating, rectangular frame structure with suspended webbing that is used to enclose herring long enough for them to spawn on kelp included in the enclosure.[78]

Local PWS fisheries for Dungeness, red king, and Tanner crab are currently closed due to low stock abundance of these species.[79] However, from 2001 to 2004, one permit was held by one Valdez resident in the Southeast Alaska Tanner crab pot gear fishery. The only years during the 2000-2010 that the permit was actively fished were 2002 and 2003.

In addition to CFEC permits, Valdez residents also held Federal Fisheries Permits (FFP) and federal License Limitation Program (LLP) permits between 2000 and 2010. The number of FFPs held increased from five to nine from 2000 to 2006, and then declined to seven by 2010. The first year that an FFP was actively fished during the 2000-2010 period was 2003, and the number of active permits varied from two to four between 2003 and 2010. The number of Valdez residents holding groundfish LLPs declined from nine in 2000 to seven in 2010, and the number actively fished varied from zero to two during this period. No LLP permits were held for federal crab fisheries between 2000 and 2010. Federal permit information is presented in Table 4.

Between 2000 and 2010, Valdez residents held quota share accounts and quota shares in federal catch share fisheries for halibut, sablefish, and crab, with the highest level of participation in the halibut fishery. The number of halibut quota share account holders in Valdez was 26 in the year 2000, declining to 16 by 2010. It is interesting to note that the number of quota shares held did not decrease at the same rate as the number of quota share accounts. On average, the number of quota shares held in each quota share account increased from 24,464 in 2000 to 44,320 in 2008, then declined slightly to 37,107 by 2010. The annual halibut individual fishing quota (IFQ) allotment increased to 41% higher than 2000 levels by 2007, before decreasing to 8% above 2000 levels in by 2010. Information about federal halibut catch share participation is presented in Table 6.

The number of sablefish quota share account holders varied from two to four between 2000 and 2010. The maximum amount of quota shares were held in 2005 (711,077), declining to

[78] Alaska Dept. of Fish and Game. 2011. *2011 Southeast Alaska Herring Spawn-On-Kelp Pound Fishery Management Plan*. Regional Information Report No. 1J11-01. Retrieved April 2, 2012 from http://www.sf.ADFG.state.ak.us/FedAidpdfs/RIR.1J.2011.01.PDF.

[79] Woodby, D., D. Carlile, S. Siddeek, F. Funk, J.H. Clark, and L. Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf.

389,073 in 2010. Annual sablefish IFQ allotment followed a similar pattern as the halibut IFQs described above. The value increased to 28% above 2000 levels in 2005, before decreasing to approximately 22% below 2000 levels in 2010. Information about federal sablefish catch share participation is presented in Table 7.

Between 2005 and 2010, one crab quota share account was held each year by a Valdez resident. The number of quota shares held decreased from 65,056 in 2005 to a stable 8,951 from 2006 to 2010. From 2006 to 2008, no IFQ allotment was associated with these quota shares. From 2009 to 2010, the annual crab IFQ allotment increased by 37%. This information is about crab catch share participation is presented in Table 8.

Of the landings reported between 2000 and 2010, the species landed in the greatest volume in Valdez were salmon and halibut. On average between 2000 and 2010, 38,318,995 net pounds of salmon were landed in Valdez, valued on average at $11,070,777 in ex-vessel revenue. Salmon landings can be reported for all years except 2006 and 2008, for which the information is considered confidential due to the small number of participants. For the 4 years in which halibut landings and revenue were reported, landings averaged 119,942 net pounds, valued at $281,186 in ex-vessel revenue on average. Landings and revenue information for halibut is considered confidential in years other than 2000-2003 due to low participant numbers. In addition, 'other groundfish' landings were reported from 2000 to 2002, averaging 4,096 net pounds landed per year, and an average ex-vessel revenue of $1,021, while 'other groundfish' landings are considered confidential from 2003 to 2010. In the 2000-2010 period, landings and revenue were reported in 2010 only for 'other shellfish'. All of the 4,668 net pounds were landings from the PWS shrimp pot gear fishery, valued at $29,132. Landings and revenue in 'other shellfish' fisheries are considered confidential in 2000 and 2001, and no permits were held from 2002 to 2009. Information about landings and ex-vessel revenue in Valdez is presented in Table 9.

In addition to the landings delivered in Valdez by fishermen from many communities, landings and ex-vessel revenue earned by Valdez vessel owners, irrespective of port of landing, is of note. Valdez vessel owners made deliveries in many locations around Alaska between 2000 and 2010. Information can be reported in all years during this period for salmon and halibut, and for all years except 2006 for 'other groundfish' landings, when the information is considered confidential due to the small number of participants. On average between 2000 and 2010, Valdez vessel owners landed 10,144,922 net pounds of salmon, valued at $2,323,243 in ex-vessel revenue on average over the period. The next greatest volume of deliveries was in the halibut fishery, with an average of 50,243 net pounds landed per year, and average ex-vessel revenue of $158,722. For those years in which data can be reported, Valdez residents landed an average of 3,609 net pounds of 'other groundfish' during the 2000-2010 period, with an average ex-vessel revenue of $1,472. In addition, 'other shellfish' landings in 2010 totaled 2,531 net pounds for a total ex-vessel revenue of $14,471 that year. Data for other fisheries, with the exception of crab, are considered confidential between 2000 and 2010 due to low participant numbers. Information about landings by Valdez vessel owners is presented in Table 10.

Of the species landed between 2000 and 2010, shrimp ('other shellfish') landings were the most valuable per pound, and halibut were the second most valuable species per pound.

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

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax[1]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax[1]	$233,241	$283,114	$278,716	$269,826	$150,203	$254,135	$191,693	$272,340	$223,389	$360,592	$413,239
Fisheries Resource Landing Tax[1]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	$78	$61	$46	n/a
Fuel transfer tax[2]	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[2]	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[1]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls[2]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage[2]	$561,000	$587,500	$649,550	$646,680	$621,571	$642,250	$755,305	$733,386	$751,267	$1,003,422	$1,089,460
Port/dock usage[2]	$443,217	$259,851	$289,906	$292,444	$294,182	$379,991	$441,204	$320,524	$295,946	$324,034	$365,959
Fishing gear storage on public land[3]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax[3]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue[4]	*$1,237,458*	*$1,130,465*	*$1,218,172*	*$1,208,950*	*$1,065,956*	*$1,276,376*	*$1,388,202*	*$1,326,329*	*$1,270,663*	*$1,688,094*	*$1,868,658*
Total municipal revenue[5]	*$21,679,852*	*$23,193,808*	*$23,759,150*	*$23,727,809*	*$31,483,980*	*$23,793,604*	*$30,417,694*	*$32,583,668*	*$48,560,552*	*$50,839,699*	*$54,036,827*

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

[1] 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.

[2] 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.

[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 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.

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) [1]	Total permits	9	9	8	8	8	8	8	7	8	8	7
	Active permits	1	1	2	2	1	1	1	1	1	0	2
	% of permits fished	11%	11%	25%	25%	12%	12%	12%	14%	12%	0%	28%
	Total permit holders	9	9	8	8	8	8	8	7	8	8	7
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	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits[1]	Total permits	5	6	8	7	7	7	9	9	9	6	7
	Fished permits	0	0	0	4	2	3	2	4	4	2	3
	% of permits fished	0%	0%	0%	57%	29%	43%	22%	44%	44%	33%	43%
	Total permit holders	5	6	8	7	7	7	8	8	8	6	6
Crab (CFEC) [2]	Total permits	0	1	1	1	1	0	0	0	0	0	0
	Fished permits	0	0	1	1	0	0	0	0	0	0	0
	% of permits fished	-	0%	100%	100%	0%	-	-	-	-	-	-
	Total permit holders	0	1	1	1	1	0	0	0	0	0	0
Other shellfish (CFEC) [2]	Total permits	1	1	0	0	0	0	0	0	0	0	25
	Fished permits	0	0	0	0	0	0	0	0	0	0	11
	% of permits fished	0%	0%	-	-	-	-	-	-	-	-	44%
	Total permit holders	1	1	0	0	0	0	0	0	0	0	24
Halibut (CFEC) [2]	Total permits	16	16	16	16	14	13	12	14	15	14	13
	Fished permits	9	11	11	12	12	11	11	13	14	12	11
	% of permits fished	56%	69%	69%	75%	86%	85%	92%	93%	93%	86%	85%
	Total permit holders	16	15	16	16	14	13	12	14	15	14	13
Herring (CFEC) [2]	Total permits	4	4	6	4	4	4	4	4	4	5	6
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	4	4	6	4	4	4	4	4	4	5	6

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

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) [2]	Total permits	3	2	3	5	8	7	6	5	5	5	5
	Fished permits	1	2	3	5	7	7	5	5	5	5	5
	% of permits fished	33%	100%	100%	100%	88%	100%	83%	100%	100%	100%	100%
	Total permit holders	2	2	3	5	7	6	6	5	5	5	5
Groundfish (CFEC) [2]	Total permits	8	9	9	9	12	10	5	3	3	3	4
	Fished permits	0	0	0	0	1	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	8%	0%	0%	0%	0%	0%	0%
	Total permit holders	7	7	7	7	9	8	4	2	2	2	3
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	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) [2]	Total permits	41	34	42	44	42	43	39	35	37	39	44
	Fished permits	26	21	22	27	24	22	21	19	23	25	28
	% of permits fished	63%	62%	52%	61%	57%	51%	54%	54%	62%	64%	64%
	Total permit holders	38	33	40	40	40	43	39	34	36	35	38
Total CFEC Permits[2]	*Permits*	*73*	*67*	*77*	*79*	*81*	*77*	*66*	*61*	*64*	*66*	*97*
	Fished permits	*36*	*34*	*37*	*45*	*44*	*40*	*37*	*37*	*42*	*42*	*55*
	% of permits fished	*49%*	*51%*	*48%*	*57%*	*54%*	*52%*	*56%*	*61%*	*66%*	*64%*	*57%*
	Permit holders	*51*	*45*	*55*	*55*	*56*	*58*	*50*	*47*	*48*	*47*	*62*

[1] 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.]

[2] 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 Valdez: 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 Valdez[2]	Total Net Pounds Landed In Valdez[2,5]	Total Ex-Vessel Value Of Landings In Valdez[2,5]
2000	59	13	5	88	122	427	24,965,242	$6,046,269
2001	75	14	5	76	116	504	42,378,441	$10,478,676
2002	60	11	5	82	115	497	34,281,839	$9,132,464
2003	93	9	4	86	114	442	37,597,226	$12,072,309
2004	85	6	3	88	118	436	27,065,424	$9,129,339
2005	92	7	4	52	55	432	52,692,909	$13,947,640
2006	68	6	3	46	56	285	22,116,940	$9,769,723
2007	76	5	3	47	60	336	47,109,130	$18,052,449
2008	82	3	2	48	60	287	-	-
2009	56	7	3	53	63	262	11,360,811	$7,630,134
2010	78	20	3	69	80	275	72,812,837	$31,530,772

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

[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 Valdez: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	26	636,077	63,772
2001	24	640,157	76,614
2002	26	744,454	91,986
2003	27	721,470	89,139
2004	25	647,796	88,453
2005	25	647,796	89,689
2006	23	771,519	105,424
2007	23	771,519	109,440
2008	18	797,761	104,800
2009	18	638,199	75,263
2010	16	593,722	64,512

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 Valdez: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	3	3,696	334
2001	2	2,172	185
2002	4	390,004	33,441
2003	4	459,041	46,667
2004	4	459,041	52,897
2005	4	711,077	82,528
2006	3	458,156	46,063
2007	3	458,156	44,764
2008	3	389,073	33,779
2009	3	389,073	30,640
2010	3	389,073	27,693

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 Valdez: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	1	65,065	1,345
2006	1	8,951	0
2007	1	8,951	0
2008	1	8,951	0
2009	1	8,951	310
2010	1	8,951	425

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 Valdez: 2000-2010.

	Total Net Pounds[1]										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	0	0	0	0	0	0	0	0	-	0	0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	111,556	81,227	158,838	128,150	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	2,496	2,500	7,292	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	4,668
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	24,833,627	42,279,813	34,038,074	37,284,478	26,594,542	51,758,342	-	45,703,090	-	10,395,126	71,983,869
Total[2]	*24,947,679*	*42,363,540*	*34,204,204*	*37,412,628*	*26,594,542*	*51,758,342*	*22,116,940*	*45,703,090*	-	*10,395,126*	*71,988,537*
	Ex-vessel Value (nominal U.S. dollars)										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	$0	$0	$0	$0	$0	$0	$0	$0	-	$0	$0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	$254,020	$149,270	$343,785	$377,669	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	$879	$590	$1,594		-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	$29,132
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	$5,735,925	$10,276,681	$8,541,840	$11,041,647	$7,690,721	$11,114,466	-	$12,431,839	-	$4,634,736	$28,169,136
Total[2]	*$5,990,824*	*$10,426,541*	*$8,887,219*	*$11,419,316*	*$7,690,721*	*$11,114,466*	*$9,769,723*	*$12,431,839*	-	*$4,634,736*	*$28,198,268*

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 pounds 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 Valdez Residents: 2000-2010.

	Total Net Pounds[1]										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	44,264	43,491	63,929	54,137	54,814	46,395	53,920	57,877	51,646	45,095	37,105
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	1,039	1,659	3,120	1,230	2,611	1,965	-	2,521	10,211	6,347	5,390
Other Shellfish	-	-	-	-	-	-	-	-	-	-	2,531
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	10,818,753	7,439,614	3,912,503	14,311,549	6,405,203	18,980,831	5,387,279	15,086,172	11,151,013	2,242,878	15,858,346
Total[2]	*10,864,056*	*7,484,764*	*3,979,552*	*14,366,916*	*6,462,628*	*19,029,191*	*5,441,199*	*15,146,570*	*11,212,870*	*2,294,320*	*15,903,372*
	Ex-vessel Value (nominal U.S. dollars)										
	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***
Crab	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	$77,363	$79,437	$140,721	$159,555	$161,081	$139,396	$190,896	$245,177	$231,084	$144,829	$176,405
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	$396	$190	$1,106	$163	$828	$1,071	-	$1,577	$3,668	$2,718	$2,998
Other Shellfish	-	-	-	-	-	-	-	-	-	-	$14,471
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	$1,998,371	$1,157,543	$605,984	$2,628,378	$894,042	$2,739,561	$1,267,912	$3,022,695	$4,481,575	$790,792	$5,968,824
Total[2]	*$2,076,130*	*$1,237,169*	*$747,812*	*$2,788,096*	*$1,055,951*	*$2,880,028*	*$1,458,808*	*$3,269,449*	*$4,716,327*	*$938,340*	*$6,162,698*

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 pounds refers to the landed weight recorded in fish tickets.

[2] Totals only represent non-confidential data.

Recreational Fishing

In 2010, there were 19 active sport fish guide businesses and 31 licensed sport fish guides located in Valdez (Table 11). These numbers remained relatively stable over the 2000-2010 period, although there was a peak of 45 licensed guides present in 2003 and 2004. During this period, the number of sportfishing licenses sold to Valdez residents (irrespective of point of sale) varied from 1,470 to 1,813 per year, and the number of licenses sold in Valdez varied from 2,207 to 7,509 per year (Table 11). The greater number of licenses sold locally than sold to residents reflects the fact that sportfishing draws tourism to the Valdez area.

Valdez is located in North Gulf Coast/PWS Statewide Harvest Survey Area which includes all drainages from east of Cape Suckling, through PWS to Gore Point. In 2010, there were a total of 212,793 saltwater angler days fished in the region, compared to 122,459 in 2000, representing a 74% increase. Non-Alaska residents made up 30.4% of total saltwater angler days fished in 2010 in the region, compared to 32.3% in 2000. Regional saltwater angler days fished peaked at 300,205 in 2007. Total freshwater angler days fished increased 90% from 22,979 in 2010 to 12,108 in 2000. Non-Alaska residents made up 57% of freshwater angler days fished in 2010 in the region, compared to 26% in 2000. Total freshwater angler days fished in the region peaked in 2010. Information regarding these regional trends can also be found in Table 11.

Table 11. Sport Fishing Trends, Valdez: 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 Valdez[2]
2000	15	33	1,813	2,207
2001	13	29	1,745	3,689
2002	16	42	1,635	3,582
2003	18	45	1,683	3,793
2004	22	45	1,720	3,782
2005	24	33	1,812	4,793
2006	22	34	1,624	4,721
2007	20	35	1,539	5,073
2008	18	30	1,470	7,509
2009	18	31	1,498	5,782
2010	19	31	1,671	5,043

Table 11 cont'd. Sport Fishing Trends, Valdez: 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	39,551	82,908	3,168	8,940
2001	66,450	135,248	8,587	8,610
2002	67,698	133,508	5,132	8,126
2003	70,549	150,086	10,657	10,235
2004	76,173	184,492	9,199	10,349
2005	87,033	165,559	6,894	6,187
2006	79,313	157,194	8,886	5,655
2007	90,002	210,203	8,446	9,944
2008	67,410	181,381	8,056	5,489
2009	59,505	189,563	8,730	10,938
2010	64,776	148,017	13,118	9,861

[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).

According to a survey conducted by the AFSC in 2011, community leaders indicated that private anglers in Valdez target all five species of salmon, halibut, rockfish, sablefish, crab, and shrimp. They also noted that sportfishing activity takes place using private boats and charter boats, and through shore-based fishing. The Alaska Statewide Harvest Survey,[80] conducted by ADF&G between 2000 and 2010, also noted species harvested by Valdez sport fishermen. In freshwater, the survey indicated that Valdez recreational anglers harvest chinook, coho, and sockeye salmon, rainbow trout, cutthroat trout, Dolly Varden, burbot, whitefish, and Arctic grayling. In saltwater, the survey noted sport harvest of all five Pacific salmon species, Dolly Varden char, Pacific halibut, rockfish, lingcod, Pacific cod, and smelt. In addition, the survey noted sport harvest of Dungeness crab, hardshell and razor clams, and shrimp.

Kept/released statistics from charter logbook data reported by ADF&G[81] show that coho salmon, Pacific halibut, rockfish, and lingcod were the most important species caught by volume

[80] Alaska Dept. 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).

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

during fishing charter trips out of Valdez, with an average of 11,682 coho, 8,873 halibut, 4,632 rockfish (yelloweye, pelagic, and 'other' rockfish), and 1,692 lingcod kept between 2000 and 2010. In addition, 978 pink, 79 sockeye, 53 chinook and 45 chum salmon, 70 sharks, and 20 sablefish were kept per year, on average. It is important to note that the species with the highest numbers of releases were Pacific halibut (6,600 released per year on average), lingcod (1,190 per year), rockfish (480 released per year, including yelloweye, pelagic, and 'other' rockfish), coho salmon (343 per year), sharks (156 per year), and Chinook salmon (83 released per year, on average).

Subsistence Fishing

Residents of Valdez, including members of the Valdez Native Tribe, continue to practice a subsistence lifestyle.[82] In 1992, an ADF&G household survey of subsistence activity found that 97% of Valdez households used subsistence resources that year.[83] Health concerns after the 1989 Exxon Valdez oil spill led to a decline in subsistence activity in PWS communities. In the nearby village of Tatitlek, oil contamination led to an 89% reduction in subsistence harvest in the years following the spill.[84] According to the Exxon Valdez Oil Spill Trustee Council, subsistence resources are recovering, although harvest levels in most PWS communities are still below pre-spill levels.[85]

According to Chugachmiut, a Tribal consortium serving Native communities in the Chugach region, chum salmon have historically been important to subsistence users who dry fish for winter use; halibut are important in subsistence diets; clams remain an important component of subsistence harvests in the region, although commercial harvest of clams has been restricted following the Exxon Valdez oil spill; use of mussels has declined significantly due to high concentrations of petrochemicals still present in mussel beds following the oil spill; and Native Alaskans harvest some sea otters, harbor seals, and Steller sea lions. Populations of harbor seals and Steller sea lions are both depressed in PWS. The collapse of the PWS herring population in the 1990s, one of the primary food sources for both species, is thought to have contributed to population declines.[86]

Between 2000 and 2010, no information was reported by ADF&G regarding the percentage of households participating in subsistence harvest of various marine resources, or per capita harvest of subsistence resources by Valdez residents (Table 12). In addition, no information is available about the use of marine invertebrates or non-salmon fish (not including halibut) between 2000 and 2010 (Table 13). However, earlier information is available from an ADF&G study of 1992 subsistence harvest. The survey identified species of marine invertebrates and non-salmon fish harvested by Valdez households that year. The species of marine invertebrates harvested by the greatest percentage of Valdez households in 1992 included shrimp (17% of households reported harvest), razor clams (6%), butter clams (5%), Tanner crab (3%),

[82] Chugachmiut. 2009. *Chugach Region Comprehensive Economic Development Strategy*. Retrieved April 30, 2012 from http://www.chugachmiut.org/services/enterprise/Chugach%20Region%20CEDS%20draft%20v5.pdf.
[83] U.S. Forest Service, Cordova Ranger District, Chugach Ranger District. 2008. *East Prince William Sound Landscape Assessment.* Retrieved May 3, 2012 from http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5151500.pdf
[84] See footnote 82.
[85] Exxon Valdez Oil Spill Trustee Council. (n.d.). *Subsistence*. Retrieved May 2, 2012 from http://www.evostc.state.ak.us/recovery/status_human_subsistence.cfm.
[86] See footnote 82.

mussels (2%), Dungeness crab (1%), and octopus (1%). Additional marine invertebrate species harvested in 1992 included black chitons, red chitons, cockles, horse clams, pinkneck clams, Pacific littleneck clams, scallops, sea cucumber, sea urchin, Dungeness crab, and king crab. The species of non-salmon fish harvested by the greatest percentage of Valdez households included Dolly Varden (20% of households reported harvest), grayling (14%), rainbow trout (13%), lingcod (11%), black rockfish (9%), and herring (9%). Valdez residents also harvested lake trout, Pacific cod, sablefish, flounder, eulachon (hooligan candlefish), cutthroat trout, pike, sea bass, sole, steelhead, sturgeon, Irish lord, red rockfish, burbot, salmon shark, skates, greenling, whitefish, pollock, and wolf fish. In addition, Valdez residents harvested herring sac roe and spawn on kelp roe.[87] It is important to note than in many cases, the number of households reporting use of these subsistence resources was greater than the number involved in harvest, indicating the presence of sharing networks in Valdez.

Data are available for the 2000-2010 period regarding annual subsistence salmon and halibut harvest. The number of Valdez households that were issued subsistence salmon permits varied from 181 to 306 between 2000 and 2008. In 2008, the last year for which data were reported, 227 permits were issued and 197 were returned. Sockeye was the most heavily utilized salmon species during this period, averaging 5,919 harvested per year. An average of 193 Chinook were also harvested each year, as well as a small number of pink, coho, and chum salmon. This information about subsistence harvest of salmon is presented in Table 13.

Between 2003 and 2010, the number of Valdez residents that participated in the Subsistence Halibut Registration Certificate (SHARC) program increased from 22 to 38. The greatest subsistence harvest of halibut was reported in 2009, when 4,778 pounds of halibut were harvested on 33 SHARC cards. In 2010, only 6 SHARC cards were reported to have been active. This information about the subsistence halibut fishery is presented in Table 14.

In addition, information was reported by the various management agencies regarding marine mammal harvest by residents of Valdez between 2000 and 2010. According to data reported by the U.S. Fish and Wildlife Service, the number of sea otters harvested varied between 40 and 101 per year, while ADF&G reported harvest of harbor seal varying between 18 and 63 animals per year (for those years in which information was available). No information was reported regarding harvest of beluga whale, walrus, Steller sea lion, or spotted seal between 2000 and 2010. Information about subsistence harvest of marine mammals by Valdez residents is presented in Table 15.

Additional Information

The Good Friday earthquake of 1964, or "Great Alaska Earthquake," was the largest recorded earthquake in the U.S., with a magnitude of 9.2 on the Richter scale. It struck Prince William Sound on Good Friday, March 28th, 1964. A tsunami with a maximum wave height recorded was 67 meters at Valdez Inlet.[88] Shoup Bay near Valdez became famous for the 150-foot tidal wave that supposedly surged in and out of the bay three times during the earthquake.[89]

[87] 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).
[88] U.S. Geological Survey (n.d.). Historic Earthquakes: Prince William Sound, Alaska, 1964 March 28 03:36 UTC, Magnitude 9.2. Retrieved December 5, 2011 from http://earthquake.usgs.gov/earthquakes/states/.
[89] Alaska Dept. of Natural Resources. 2010. *State Marine Parks near Valdez*. Retrieved May 3, 2012 from http://dnr.alaska.gov/parks/units/pwssmp/smpvald.htm.

Table 12. Subsistence Participation by Household and Species, Valdez: 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, Valdez: 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	245	229	167	n/a	85	n/a	5,731	n/a	n/a
2001	306	278	254	n/a	43	n/a	7,061	n/a	n/a
2002	210	179	223	n/a	1	n/a	4,973	n/a	n/a
2003	181	155	113	n/a	29	n/a	4,319	n/a	n/a
2004	263	228	214	5	179	6	6,391	n/a	n/a
2005	278	229	147	n/a	77	n/a	6,670	n/a	n/a
2006	292	227	290	n/a	3	n/a	7,489	n/a	n/a
2007	234	197	237	n/a	8	n/a	6,801	n/a	n/a
2008	227	197	91	n/a	41	n/a	3,835	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, Valdez: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	22	16	1,611
2004	28	12	2,956
2005	26	20	3,589
2006	27	10	1,909
2007	37	17	2,990
2008	35	14	4,374
2009	37	33	4,778
2010	38	6	1,750

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, Valdez: 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	69	n/a	n/a	n/a	n/a	n/a
2001	n/a	75	n/a	n/a	n/a	18	n/a
2002	n/a	45	n/a	n/a	n/a	44	n/a
2003	n/a	100	n/a	n/a	n/a	60	n/a
2004	n/a	63	n/a	n/a	n/a	58	n/a
2005	n/a	60	n/a	n/a	n/a	63	n/a
2006	n/a	40	n/a	n/a	n/a	63	n/a
2007	n/a	50	n/a	n/a	n/a	n/a	n/a
2008	n/a	55	n/a	n/a	n/a	24	n/a
2009	n/a	81	n/a	n/a	n/a	n/a	n/a
2010	n/a	101	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.