



March 1998

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## Subsistence Uses and Harvests in Unalaska, Aleutian Islands, Alaska

In January 1995, researchers from the Division of Subsistence of the Alaska Department of Fish and Game interviewed households in the Aleutian Islands community of Unalaska (including Dutch Harbor) about their subsistence uses and harvests of fish, mammal, bird, and plant resources. We also collected demographic (population) and economic information. This was the first comprehensive resource harvest survey ever conducted in Unalaska, although in 1982 the division published a technical paper by Doug and Mary Veltre (Technical Paper Number 58) that describes historic and contemporary subsistence uses in the community. For the present study, division researchers included Lisa Scarbrough, Ron Stanek, Vicki Vanek, and Bill Simeone. They were assisted by local residents Brenda Tellman and Shawn Dickson. Before the interviewing began, research plans were reviewed with and approved by the Qawalangin Tribe of Unalaska. The goal was to interview at least 50 randomly selected Alaska Native households and at least 50 other households. In total, 106 interviews were completed, about 15 percent of the year-round households in the community. Of these, 53 were Alaska Native households, for a sample of 54 percent of the estimated 98 Alaska Native households in Unalaska. The following is a brief overview of some of the study findings, which pertain to the 1994 calendar year.

### Demographic (Population) Characteristics

The 1990 US Census reported a population of 3,089 people in Unalaska (including Dutch Harbor, which is within the city limits), but 1,614 of these (52 percent) lived in "group quarters" such as fish processing facilities. This leaves an estimate of 1,475 "year-round" residents for 1990. The following are the results from our survey for 1994, which do not include residents of group quarters.

Estimated Population	1,825
Percentage of Population, Alaska Native	14.3%
Percentage of Households Headed by an Alaska Native	13.5%
Average Length of Residency in Community, Household Heads	9.1 years

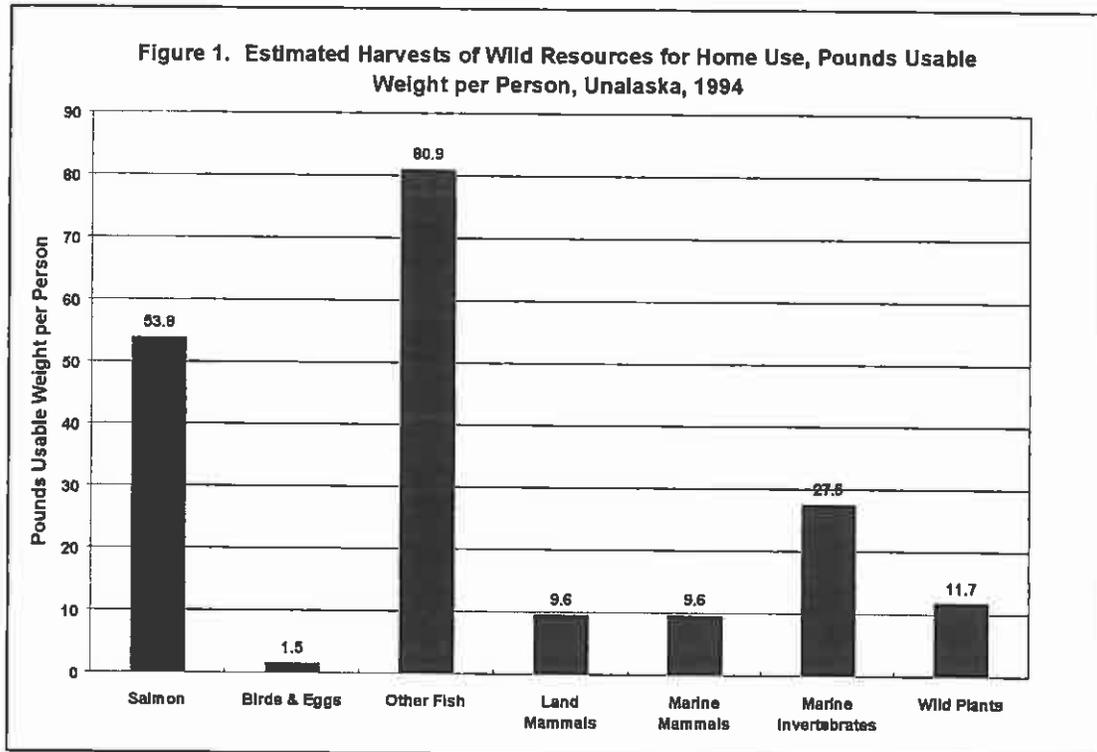
### Subsistence Uses of Wild Resources

- The study found that subsistence uses of wild resources continue to be very important in Unalaska. As the following table (Table 1) shows, almost every household used and harvested wild foods and a large majority shared wild resources.

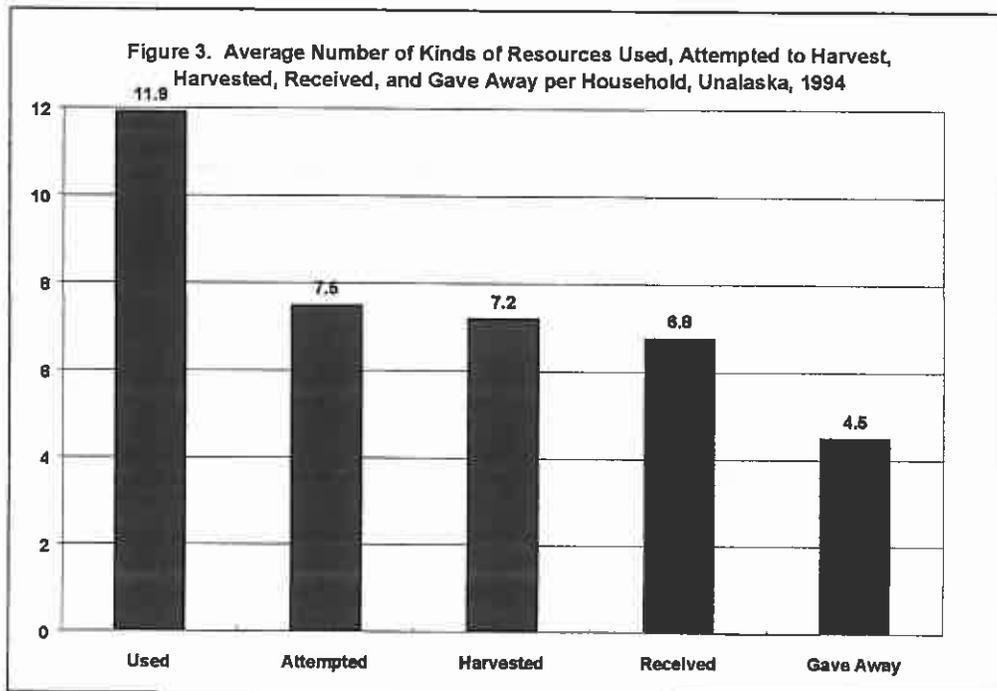
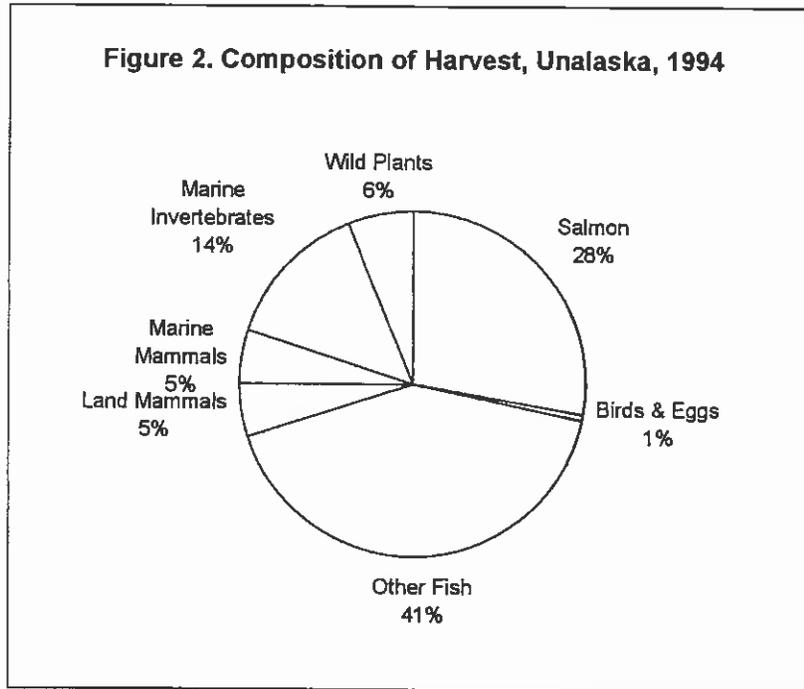
Table 1. Participation in Wild Resource Uses, Unalaska, 1994

Using Wild Resources	96.8% of households
Attempting to Harvest	93.5% of households
Harvesting Wild Resources	93.5% of households
Receiving Wild Resources	94.6% of households
Giving Away Wild Resources	84.3% of households

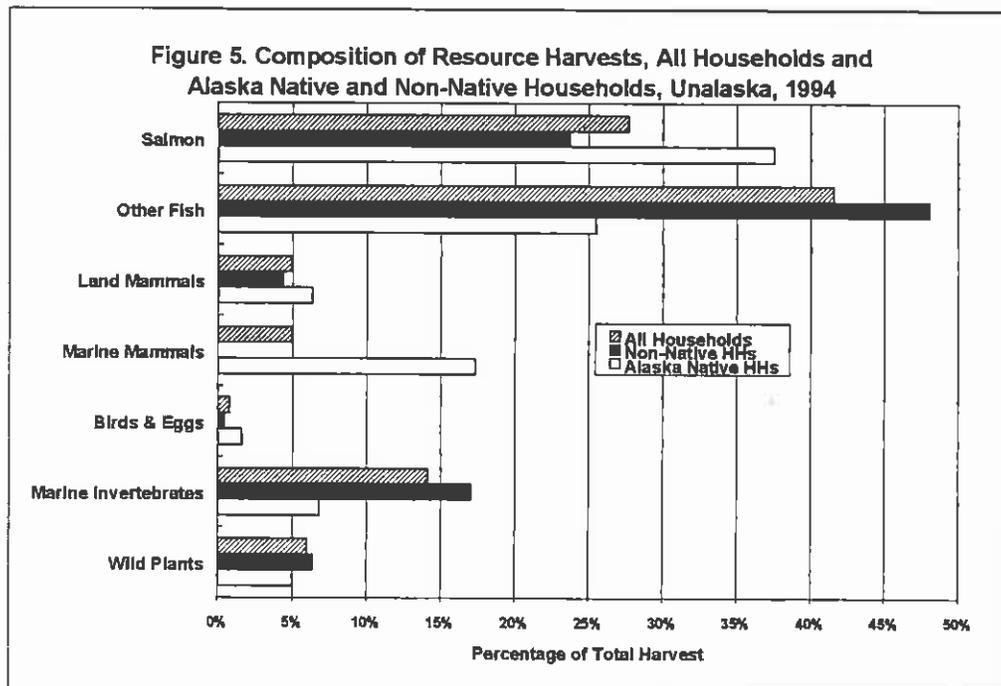
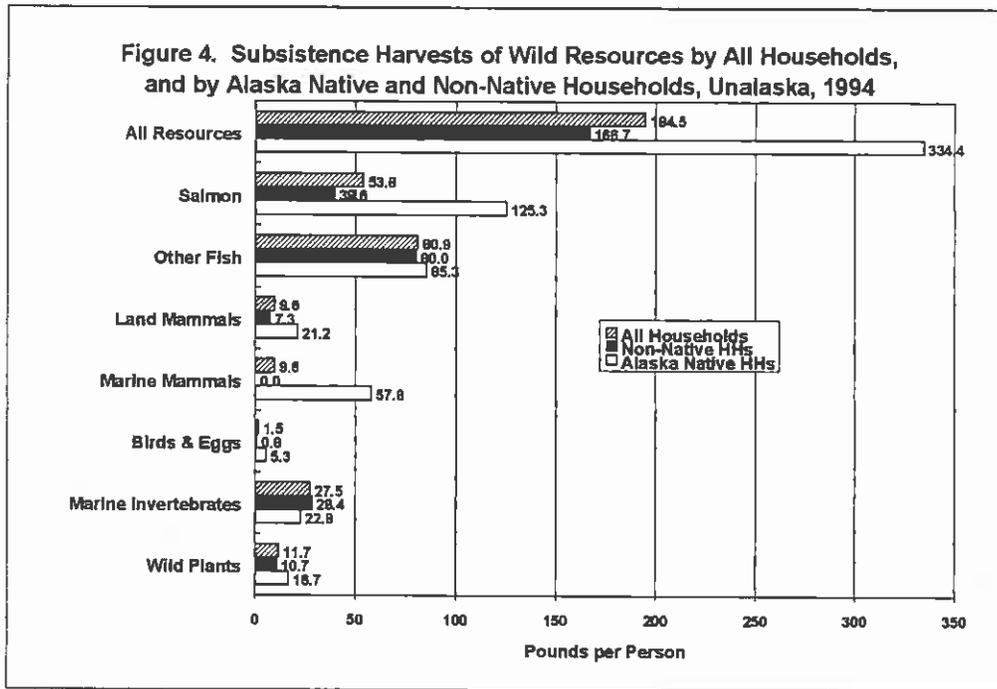
- Households provided estimates of their harvests of wild resources in 1994 in numbers of animals and fish and in other appropriate units (such as gallons). These numbers were converted into pounds usable weight using standard factors. In Unalaska, the average household harvested **507.3 pounds of wild resources, which equals 194.5 pounds per person**
- As shown in Figure 1 (below), fish other than salmon (mostly halibut but also cod, rockfish, and others) contributed the most to the subsistence harvests in Unalaska in 1994, followed by salmon and marine invertebrates (crab, clams, octopus). Other categories were wild plants, marine mammals, land mammals, and birds and eggs.



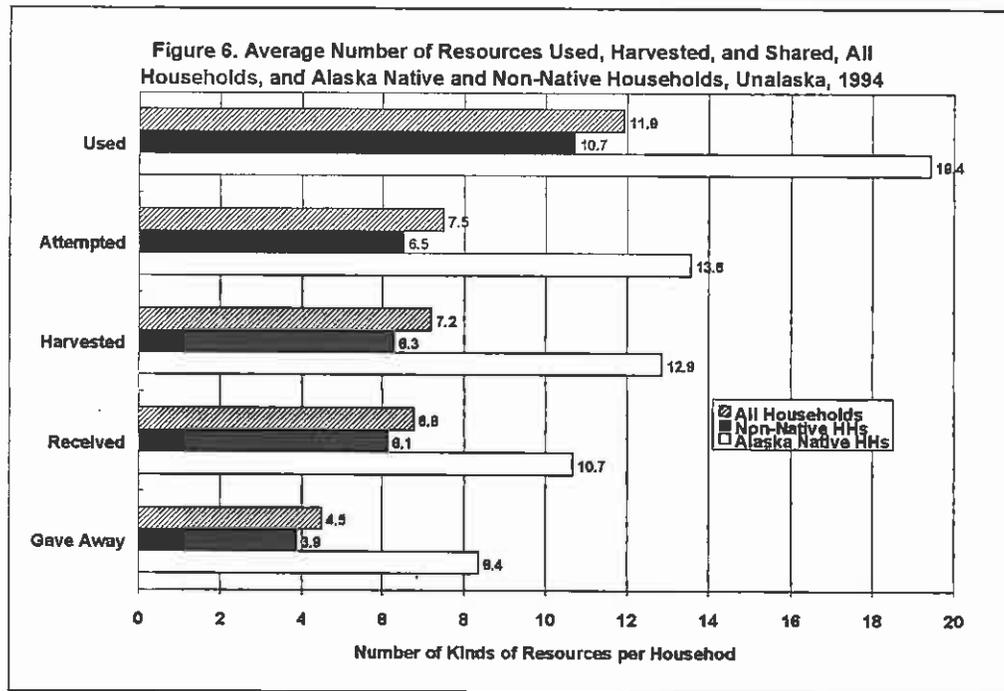
- The pie chart on the next page (Figure 2) shows the percentage of the total subsistence harvests in Unalaska (as estimated in pounds usable weight) that each resource category contributed to the total harvest. The largest slice of the pie is fish other than salmon (41 percent) followed by salmon (28 percent), marine invertebrates (14 percent), wild plants (6 percent), marine mammals (5 percent), land mammals (5 percent), and birds and eggs (1 percent).
- The other figure on the next page (Figure 3) shows the average number of kinds of resources used, harvested, and shared in Unalaska in 1994. On average, Unalaska households used about 12 kinds of wild resources, harvested about 7 kinds, received about 7 kinds, and gave away about 5 kinds.
- Sharing of subsistence resources was commonplace in Unalaska. Almost every household (95 percent) received gifts of wild foods in 1994; 84 percent gave away resources. The most commonly shared resources were king crab, halibut, sockeye salmon, and Tanner crab.
- Overall, 85 percent of the people in Unalaska participated in subsistence harvesting activities in 1994; 16 percent hunted, 66 percent fished, and 69 percent gathered wild plants. Also, 79 percent of the people helped process wild foods.



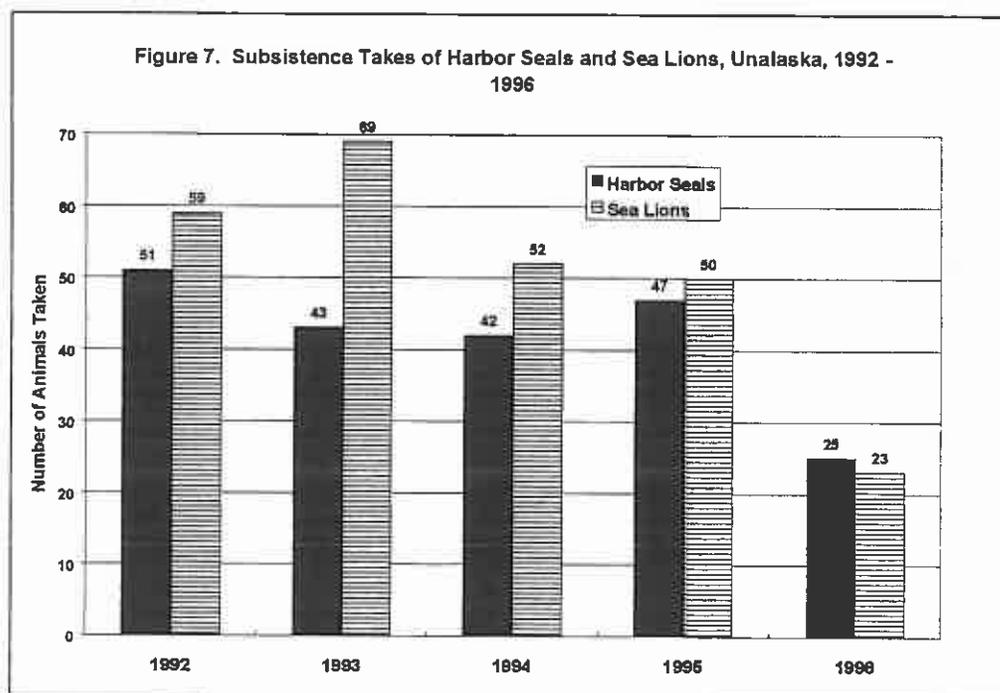
- Alaska Natives are a distinctive subpopulation within the community of Unalaska (98 of the estimated 700 households) with patterns of subsistence uses that are different from the overall population. As shown in Figure 4, Alaska Native households harvested on average 334.4 pounds per person of wild foods in 1994, compared to 166.7 pounds per person for non-Alaska Native households and 194.5 for the community overall. Alaska Native households had larger harvests of salmon, land mammals, marine mammals (which non-Natives may not hunt under the terms of the federal Marine Mammal Protection Act), birds and eggs, and wild plants. The composition of Alaska Native households' harvests also differed from that of the community in general, with salmon and marine mammals playing a more prominent role in the diets of the Alaska Native households.



- Additionally, Alaska Native households in Unalaska used a wider variety of wild resources than did other households in the community in the 1994 study year. They also harvested more species and shared more varieties (Figure 6)

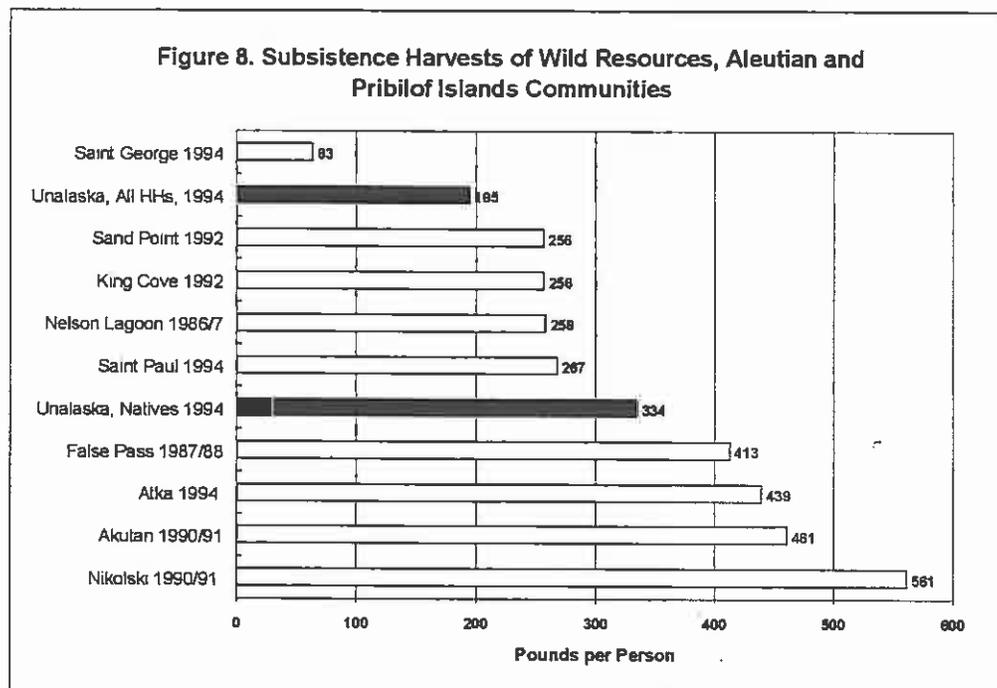


- Since 1992, local research assistants in Unalaska have interviewed households about their annual takes of harbor (hair) seals and sea lions. "Take" includes animals harvested and those that were shot but not recovered. Figure 7 shows the results of this continuing project through 1996.

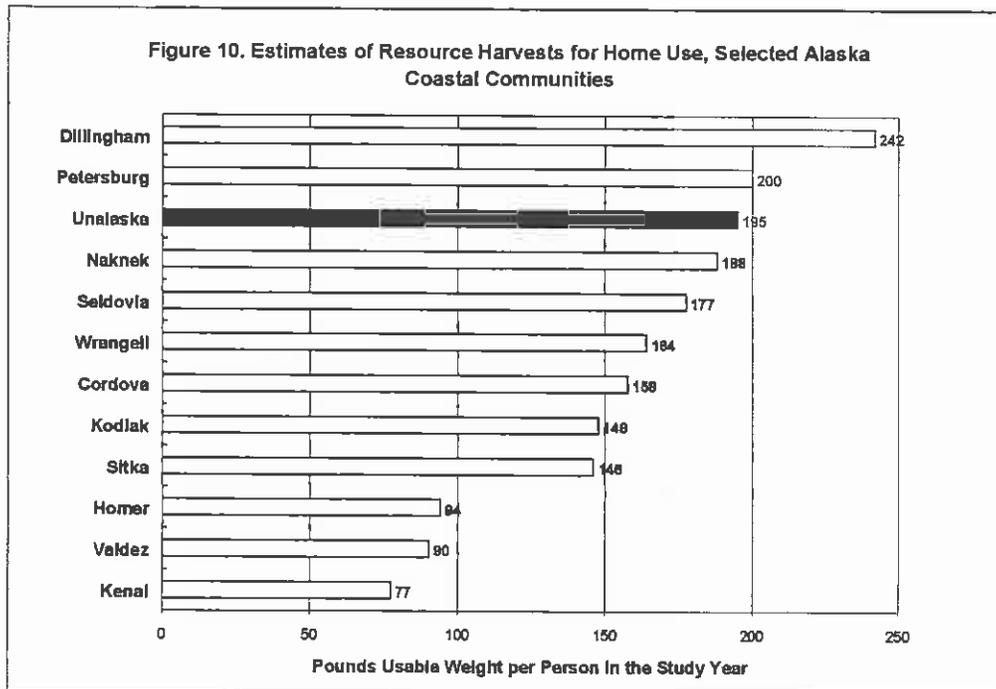
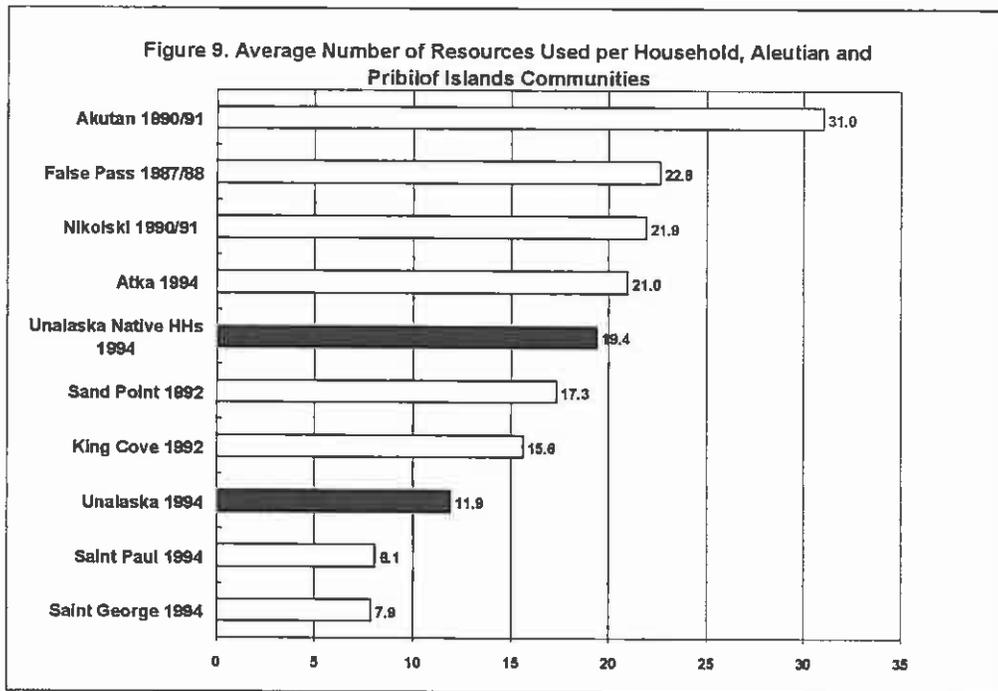


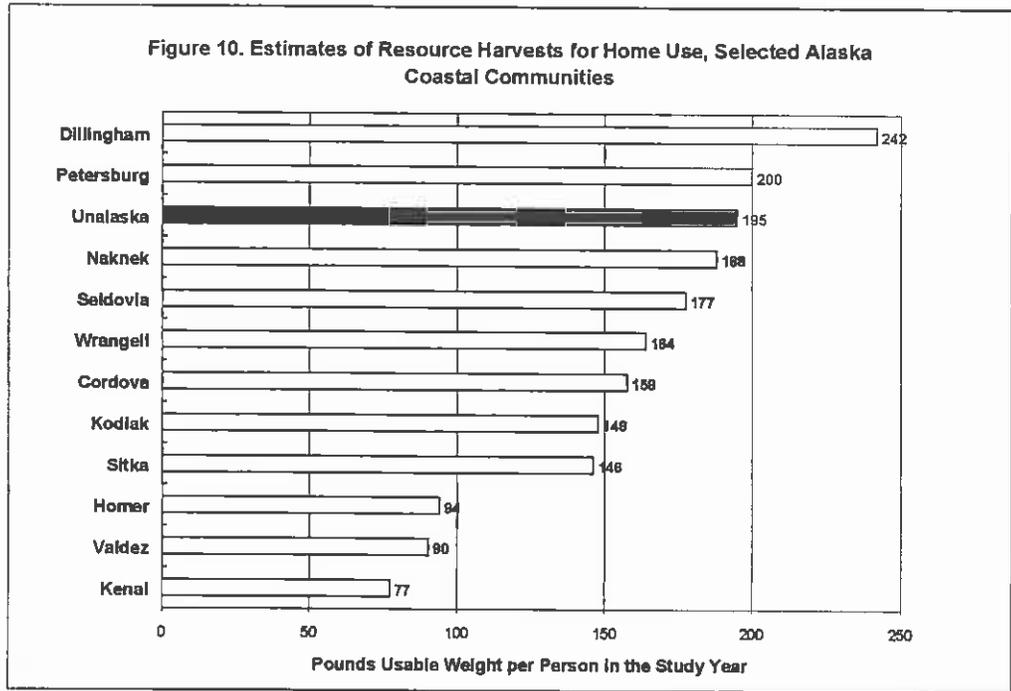
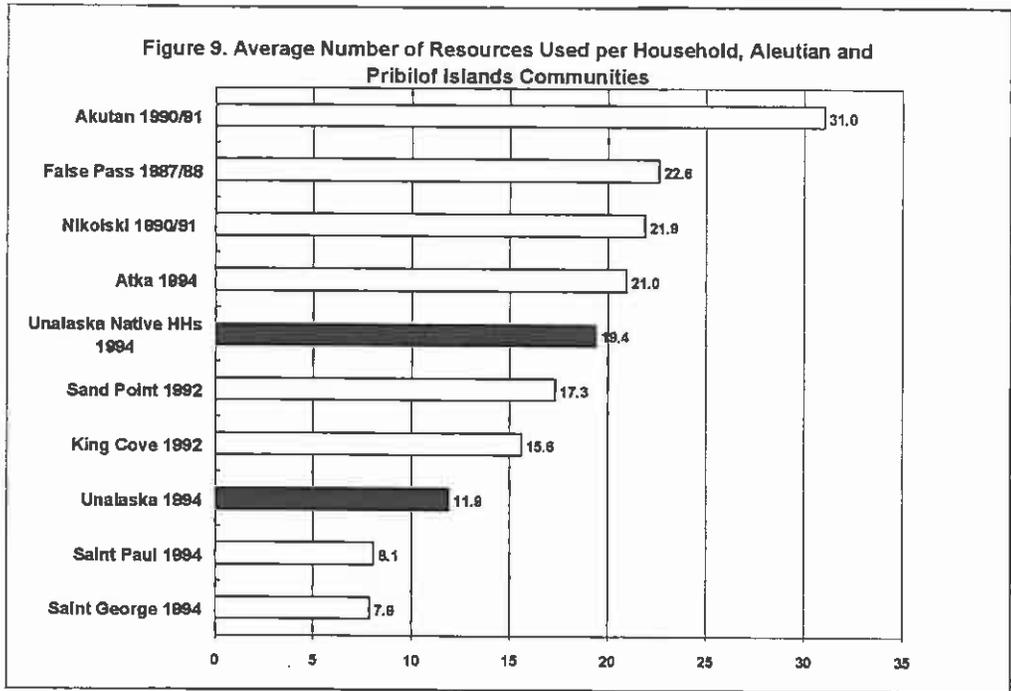
**Comparisons with Other Aleutian/Pribilof Islands Communities**

- Figure 8 (below) compares subsistence harvest levels in Unalaska with estimates for other Aleutian/Pribilof Islands communities. All the information is from Division of Subsistence household surveys. Subsistence harvests are highest in the smaller Aleutian Islands villages (False Pass, Akutan, Nikolski, and Atka), that have the highest percentage of Alaska Native households and have access to a variety of resources, including salmon, other fish, marine invertebrates, birds, and marine mammals. Alaska Native households in Unalaska harvest subsistence resources at levels that approach those of the smaller communities of the area.



- Figure 9 (on the next page) compares the diversity of resource uses (expressed as the average number of different kinds of resources used per household) in Unalaska with that of other Aleutian Islands and Pribilof Islands communities. As with harvest quantities, Unalaska harvests are diverse, but for the community overall have less variety than most of the smaller Alaska Native communities of the area. Again, Alaska Native households in Unalaska use a wider range of subsistence foods, approaching that of the villages. This reflects the variety of resources available in the Aleutian Islands and the strong cultural traditions concerning using wild foods in Unalaska.
- Figure 10 on the next page compares the wild resource harvest in pounds per person in Unalaska in 1994 with estimates for other moderately-sized coastal communities in Alaska. Unalaska's harvests are similar to those of other non-road connected communities (such as Cordova, Sitka, and Kodiak), and higher than those of communities on the road system such as Kenai, Valdez, and Homer.
- In making these comparisons, it is important to note that for most resources, only one year of data is available. Harvest levels change over time for a variety of reasons. It is also essential to remember that the importance of subsistence activities to communities is not measured by harvest quantities alone. There are vital social and cultural aspects to using and harvesting subsistence foods in Unalaska and other Aleutian/Pribilof islands communities that harvest quantities do not necessarily convey.





**Cash Economy**

- The survey collected information about the kinds of jobs that people in Unalaska had in 1994, as well as information about cash income. The following table (Table 2) summarizes some of the study findings about cash employment, and compares Unalaska with other Aleutian/Pribilof Islands communities. Because of the development of commercial fisheries (such as crab and pollock), fish processing, and services which support these industries, there are more cash employment opportunities and higher cash incomes in Unalaska than in the smaller communities of the area.

Table 2. Employment Characteristics of Aleutian/Pribilof Island Communities

Community	Year	Percent of Adults with Employment	Percent of Employed Adults, Year-Round	Average Number of Months Employed	Per Capita Total Income	Per Capita Income from Jobs	Per Capita Other Income	Percent of Income from Jobs
Akutan	1990/91	83.0%	55.3%	9.3	\$9,980	\$8,339	\$1,641	83.6%
Afka	1994	74.6%	34.1%	7.4	\$8,139	\$6,097	\$2,042	74.9%
King Cove	1992	84.6%	31.2%	8.5	\$19,485	\$17,340	\$2,145	89.0%
Nikolski	1990/91	62.5%	33.3%	8.8	\$6,636	\$4,683	\$1,952	70.6%
Saint George	1994	82.9%	29.4%	8.2	\$14,644	\$11,496	\$3,148	78.5%
Saint Paul	1994	79.7%	46.9%	9.2	\$16,254	\$13,128	\$3,126	80.8%
Sand Point	1992	86.3%	40.9%	8.7	\$18,708	\$16,563	\$2,145	88.5%
Unalaska	1994	87.2%	55.3%	10.5	\$25,489	\$22,631	\$2,858	88.8%

- As reported by the 1990 US Census, per capita cash income in 1989 was \$20,055 in Unalaska. This was higher than the state average of \$17,610 per person.
- As shown in the Table 3 (below), in Unalaska in 1994, the largest percentage of jobs was provided by service industries, but the largest percentage of income came from jobs within the transportation and utilities sector. Other notable sectors included education, local government, commercial fishing, fish processing, other manufacturing, and retail trade.

Table 3. Percentage of Jobs and Income by Industry, Unalaska 1994

	Percentage of	
	Jobs	Income
Local Government	8.7%	12.3%
State Government	0.9%	0.0%
Federal Government	0.2%	0.3%
Local Education	4.9%	4.6%
Construction	6.4%	4.9%
Commercial Fishing	6.5%	3.4%
Fish Processing	10.5%	9.8%
Other Manufacturing	4.2%	4.8%
Retail Trade	12.9%	12.8%
Wholesale Trade	2.2%	1.7%
Transportation & Utilities	20.2%	27.0%
Finance	1.1%	2.3%
Services	21.1%	16.2%
Other	0.1%	0.0%
Unknown	0.1%	UNK

- As with resource uses and harvests, the research found differences between the Alaska Native population in Unalaska when compared to the population overall. As shown in Table 4, Alaska Native household heads have lived in the community for 22.7 years, compared to 6.1 years for other residents. On average, cash employment among the Alaska Native population was more seasonal and provided a lower annual cash income compared to that for the overall population Unalaska.

Table 4. Demographic and Economic Characteristics of Unalaska

	Entire Population	Sub-populations	
		AK Native	Non-Native
Population <sup>1</sup>	1,825	261	1,565
Percentage of Population		14.3%	85.7%
Households	700	94	606
Percentage of Households		13.5%	86.5%
Household size	2.6	3.1	2.5
Mean Age	30.3	27.9	30.9
Length of Residency, Household Heads	9.1	22.7	6.1
Percentage Male	57.4%	53.1%	58.2%
Percentage Female	42.7%	47.0%	41.8%
Percent of Adults Employed	87.2%	82.9%	88.0%
Percent of Employed Adults Employed Year-Round	55.3%	43.5%	65.9%
Mean Number of Weeks Employed, Employed Adults	45.2	41.3	45.9
Mean Number of Months Employed, Employed Adults	10.5	9.5	10.6
Per Capita Income, All Sources	\$25,489	\$19,243	\$29,024
Earned Income Per Capita (income from jobs)	\$22,631	\$16,285	\$26,749
Other Income Per Capita	\$2,858	\$2,958	\$2,276

<sup>1</sup> Excludes residents of group quarters, such as fish processing facilities.

Source: Division of Subsistence, ADF&G, Household Survey, 1995

For more information. More detailed study findings were provided to the City of Unalaska, the Qawalangin Tribe of Unalaska, and the Aleutian/Pribilof Islands Association. If you would like more detailed information, contact one of these organizations, or contact the Division of Subsistence at the address and phone numbers on page one of this summary. Also, the Division plans to prepare a technical paper with these study findings. We welcome your comments.