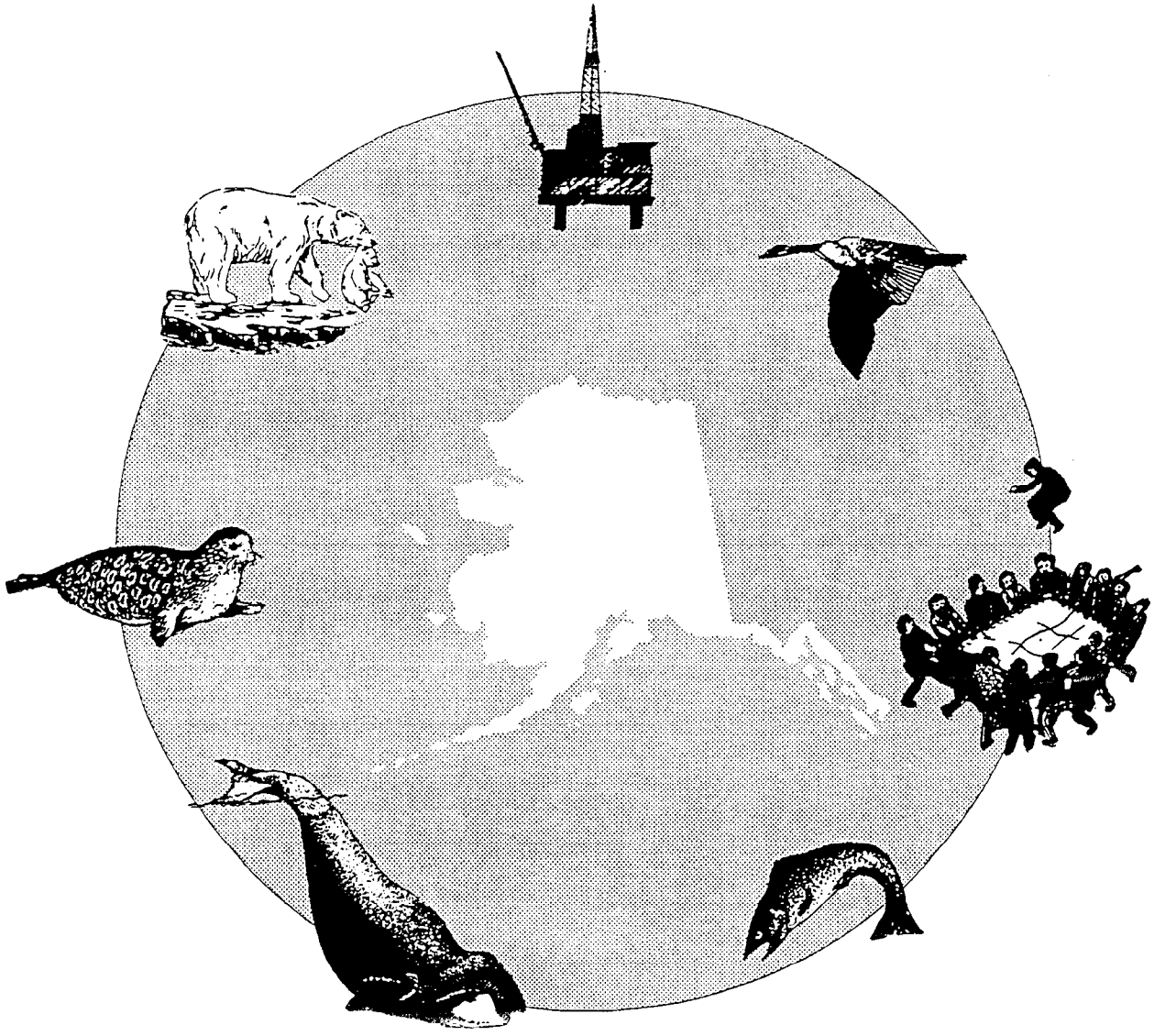
OCS Study
MMS 95-011

An Investigation of the Sociocultural Consequences of Outer Continental Shelf Development in Alaska

II. Prince William Sound



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An Investigation of the Sociocultural Consequences of Outer Continental Shelf Development in Alaska

II. Prince William Sound

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Alaska OCS Environmental Studies Program

An Investigation of the Sociocultural Consequences of Outer Continental Shelf Development in Alaska

I. Introduction

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March 1995

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EXECUTIVE SUMMARY

This report provides selected findings from a three-year study entitled "An Investigation of the Sociocultural Consequences of Outer Continental Shelf Development in Alaska." The findings are primarily organized by study community, and the report consists of 24 chapters in six volumes. The project was conducted by the Division of Subsistence of the Alaska Department of Fish and Game (the division) under a cooperative agreement (No. 14-35-0001-30622) with the U.S. Department of the Interior, Minerals Management Service (MMS). The primary purpose of the research was to investigate the long-term social and cultural consequences of the development of the resources of Alaska's Outer Continental Shelf (OCS), especially as these affect the subsistence uses of fish and wildlife. Investigation of the consequences of the *Exxon Valdez* oil spill of March 1989 was a major focus of the research.

Most data were collected through voluntary face-to-face interviews using two instruments. The first, the "harvest survey questionnaire," modeled after the division's standard survey instrument, collected data on household demography, involvement in the cash economy, resource harvests and uses, and assessments of changes in subsistence harvest and use patterns. The second instrument, the "Social Effects Questionnaire" was based in part on questionnaires and interview protocols used in prior Social Indicators research funded by MMS. It addressed changes in social and community organization which could be affected by OCS development.

Three rounds of fieldwork took place, in 1992, 1993, and 1994. Study communities in the area affected by the *Exxon Valdez* oil spill included Chenega Bay, Cordova, Tatitlek, and Valdez in the Prince William Sound area; Kenai, Nanwalek, Port Graham, and Seldovia in the Cook Inlet area; Akhiok, Karluk, Kodiak, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions in the Kodiak Island Borough; and Chignik Bay and Chignik Lake in the Lake and Peninsula Borough (Alaska Peninsula). Additionally, the study added control or reference communities in the Arctic region which will strengthen the application of the findings to broad questions of sociocultural change which are related to development of the resources of the Outer Continental Shelf. These were Kotzebue, Kaktovik, Kivalina, and Nuiqsut.

Earlier research by the division found that the *Exxon Valdez* oil spill caused major impacts on subsistence uses and the sociocultural systems which they support. There was a definite geographic pattern to these spill effects which reflects the relative degree of oiling and the persistence of oil in the environment. Impacts were greatest on communities closest to the spill -- particularly Tatitlek and Chenega Bay -- and lessened with distance from Prince William Sound.

Over the three years of this study, further evidence of this geographic pattern developed, with communities closer to the spill in Prince William Sound and lower Cook Inlet, as well as Ouzinkie, reporting higher levels of spill impacts than more distant communities. A relatively high percentage of respondents in Chenega Bay, Nanwalek, and Tatitlek in all three study years said there was less sharing of wild foods

since the spill. Similarly, of all study communities, the largest percentages in Ouzinkie, Port Graham, Chenega Bay, Nanwalek, and Tatitlek said that the spill had a negative effect on children's participation in subsistence activities. Households in Prince William Sound communities, and especially Cordova and Chenega Bay, were most likely to say that they liked living in their community less during the study years than before the spill.

Subsistence harvest levels in all the communities of the oil spill area appear to be rebounding from the low levels of the first and second post-spill years. Pre-spill levels of harvests have been approached or matched in most affected communities, such as Nanwalek, Port Graham, Port Lions, Larsen Bay, Old Harbor, and Akhiok. However, in the severely impacted communities of Tatitlek, Chenega Bay, and Ouzinkie, harvest levels remain below pre-spill averages. In Tatitlek and Chenega Bay, harvests appear to have declined in the third year of this project from estimated levels for the first and second years. There also continues to be an important shift in the composition of subsistence harvests in Chenega Bay and Tatitlek, with much lower takes of marine mammals than before the spill and a larger portion of the harvests composed of fish.

In many study communities, a significant proportion of households reported that subsistence uses have not recovered to earlier levels. This position is expressed strongly in the Prince William Sound villages, in Nanwalek, and in Ouzinkie. In all four villages, a larger percentage of households reported lowered levels of resource harvests compared to before the spill in 1993 than did so in 1991. Thus the perception appears to be not only one of lowered subsistence uses, but that uses continue to decline.

There has been an important shift in the explanations people offer concerning why the spill's impacts reduced their resource uses. In 1989, a majority of households with spill-caused reductions in resource uses cited fear of oil contamination as the reason for the decline. By 1993, the vast majority of households who still said that the spill's effects were impacting their subsistence uses cited reduced resource populations as the cause of the decline. This viewpoint was especially strong in Prince William Sound. A large majority of respondents in Chenega Bay in all three years said that populations of deer, harbor seals, sea lions, sea ducks, and clams were down since the spill. In the second and third years an increasing majority said that salmon stocks were down as well. At Tatitlek, a majority of respondents said there were less deer, seals, sea lions, sea ducks, salmon, halibut, clams, bidarkies, and octopus.

Contamination concerns about specific resources, while substantially reduced from the levels expressed in the first few years after the spill, persist among many households, especially in Chenega Bay, Tatitlek, Port Graham, and Nanwalek. Substantial percentages of households reported that they had not received adequate information about the safety of subsistence foods. This illustrates an important finding that many households in the spill area returned to using subsistence foods despite lingering contamination fears. The economic and cultural necessities of using subsistence foods have compelled Alaska Natives of the spill area to resume subsistence harvests even at increased costs of time, money, and health concerns.

In Tatitlek and Chenega Bay, subsistence harvesters' observations of reduced wildlife populations and diseased animals (such as a viral infection in Prince William Sound herring), created substantial doubts about the overall health of the natural environment. In 1989, the spill's immediate effects caused subsistence users to distrust the safety of subsistence foods. Direct observations of dead and injured wildlife, interpreted through traditional systems of knowledge, strongly suggested to subsistence users that resources might be unsafe for humans. The spill also created conditions very unfamiliar to subsistence users which experience and training were ill-equipped to explain. Under these circumstances, many households acted with caution. By 1993, traditional knowledge about food safety and edibility continued to inform people's decisions about subsistence uses. In addition, public health advisories had been disseminated in villages through the work of the Oil Spill Health Task Force. But doubts persisted that traditional and scientific knowledge were not enough to answer questions about what the spill had done. In the view of many of the people interviewed as part of this project, and especially in Prince William Sound and among Alaska Native people, the spill had caused fundamental changes to natural resource populations and the natural environment overall that have yet to be adequately explained. This uncertainty has had profound effects on the outlook for the future that people expressed in several communities, such as Tatitlek, Chenega Bay, and Cordova. This remains an important long-term impact of the spill.

Finally, one additional social effect of the *Exxon Valdez* oil spill has been the prolonged litigation over damage claims. Rulings in federal court which ruled ineligible claims by the Alaska Native Class concerning injuries to their way of life were especially disheartening to the people whose subsistence uses had suffered following the spill. In some cases, these rulings discouraged people from participating in this research. They concluded that additional studies were pointless. The settlement with Exxon regarding the replacement value of lost subsistence harvests was viewed by subsistence users as, at best, only a partial compensation of the Native Class claims. A view persisted that the cultural importance of subsistence to the Alaska Native communities of the spill area and the injury that this culture suffered had not yet been acknowledged by the judicial process. Appeals of these rulings were in preparation as this report was being completed. This continuing litigation remains another long-term impact of the spill, and should be considered in impact assessments for future Outer Continental Shelf development.

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CHAPTER II: CORDOVA

by

Jody Seitz and James A. Fall

COMMUNITY BACKGROUND

Cordova is located on Orca Inlet on the eastern side of Prince William Sound in Southcentral Alaska. The city lies between two distinctly different ecological and topographic environments: Prince William Sound and the Copper River Delta. Prince William Sound to the west includes a marine environment bounded by an intricate shoreline of bays, lagoons, fjords, islands, and tidewater glaciers. A series of small barrier islands protects the sound from the often stormy and rough waters of the Gulf of Alaska. In contrast, the Copper River Delta, east of Cordova, is a flat tidal marshland with occasional patches of forest. Many channels of the Copper and Martin rivers, as well as myriad smaller rivers, run through the delta, draining into the Gulf of Alaska. The entire Prince William Sound/Copper River Delta region is bordered on three sides by mountains, including the Kenai Mountains to the west, the Chugach Mountain Range to the north, and the St. Elias Mountains to the east beyond the Copper River Delta (Stratton 1989:11).

In the Prince William Sound region, heavy precipitation and moderate temperatures are the rule throughout the year. From sea level to 2,000 feet one finds western hemlock-Sitka spruce. Above the tree line there is alpine tundra and in low-lying areas, wet tundra (Stratton 1989:11,12). Five species of salmon as well as herring are present in commercially harvestable quantities. Black cod, halibut, and gray cod are also commercially harvested. Other finfish such as flounder, lingcod, rockfish, sole and sturgeon are also found in the region. Shellfish present include Tanner crab, Dungeness crab, several varieties of king crab, and numerous species of shrimp and clams.

The extensive wetlands of the Copper River Delta support a variety of migratory waterfowl. Black bear, brown bear, and mountain goat are the most common indigenous large land mammals. Sitka black-tailed deer and moose are transplants to the area. Limited numbers of indigenous moose are found in western Prince William Sound.

The Chugach Eskimo were in residence throughout Prince William Sound when Captain James Cook first recorded contact in 1778. The Cordova-Copper River Delta area was inhabited by Eyak Indians as well (Birket-Smith 1953; Birket-Smith and de Laguna 1938; de Laguna 1956). Eyak villages existed near Mile 6 on the Copper River Railway, at Alaganik, on the Copper River Delta; at "Fort" below Eyak; and at "beach" or "whelk," where Cordova is now. The earliest European contact with the Eyak was in 1793, through the Russian trading post of Nuchek, established on Hinchinbrook Island. One hundred years later, the Native Village of Eyak became the staging ground for a fledgling commercial salmon fishing industry on the Copper River. A combination of alcohol, disease, and destruction of resources decimated the Eyak culture and population so that by 1900, there was only one village left, in

Old Town, between Odiak Slough and Eyak Lake, composed of survivors of the four previously mentioned villages.

The extraction and commercialization of primary resources have been the main source of change in the local population and economy of Cordova. The first major impact on local Chugach Eskimo and Eyak Indians was the commercial harvest of sea otters by the Russians. This was followed by the rise of commercial salmon fishing in the Eyak Lake and River. Cannery buildings and docks were constructed in the area of the remaining settlement of the original inhabitants and the industry later expanded east and west. By 1893 commercial fisheries had expanded from the Copper River to include Prince William Sound. Between 1889 and 1917 canneries were opened in a variety of locations, including Canoe Pass, Shepard Point, Eyak village, Valdez, Port Nellie Juan, and Drier Bay. The community of Cordova itself was established in 1906.

The discovery of oil in 1894 at Katalla, and coal near there in 1896 brought both more people to the area. In 1900 the "world's richest" copper lodes were discovered at Kennecott in the Copper River basin. Coal was needed to run the trains as well as smelt the copper. After storms destroyed several trestles in Katalla, Cordova was eventually chosen as a safer terminus for the Copper River and Northwestern Railroad.

World War I stimulated rapid development of Prince William Sound fisheries, which then subsided after the war. During the early part of the twentieth century, Chinese workers formed the majority of cannery employees. Alaska Natives sold fish to the canneries and also operated salting stations. By 1924, only seven canneries were operating, two in the immediate Cordova area.

Herring exploitation began in 1913. Commercial razor clam operations began in 1916 and declined dramatically after the 1964 earthquake. Halibut was fished commercially for the first time in the Gulf of Alaska in 1923. Dungeness crab fishing started in 1950, followed by king crab in 1959 and Tanner crab in 1968. Shrimp fishing started in 1960 and commercial longlining of rockfish, sablefish, and lingcod has occurred intermittently since 1979 in western Prince William Sound.

On March 24, 1989, the T/V *Exxon Valdez* ran aground on Bligh Reef. Cordova's commercial fishing fleet responded to the spill by working with the Alaska Department of Environmental Conservation, the Prince William Sound Aquaculture Corporation, and the community of Chenega Bay to boom off salmon hatcheries on the west side of the sound, especially Armin F. Koernig Hatchery at Sawmill Bay, Evans Island, and the town of Chenega Bay.[1]

Today, the commercial fishing industry remains Cordova's leading employer, followed in importance by local, state, and federal government jobs; retail trade; service sector businesses; transportation, communications and utilities sector jobs; construction; finance and insurance; forest products; and tourism. During the study period, employment and services provided in the Cordova area by federal, state, and local government included the harbor, the hospital, a mental health clinic, alcohol

[1] For a detailed chronology of the spill, see Piper (1993). For discussions of the role of Cordova residents in the spill response and cleanup, see Keeble (1991 and Davidson (1990).

and social services, water, sewer, police, and fire departments. The Cordova School District included an elementary and a high school. The hospital, police and fire departments, community swimming pool, city library, museum, and harbor were under the purview of city services. Cooperatives owned and operated the telephone and electric utilities, while solid waste disposal was privately operated. The State of Alaska had offices of the departments of Transportation, Fish and Game, Environmental Conservation, and Public Safety in Cordova. The federal agencies in Cordova included: the Federal Aviation Administration, Coast Guard, Chugach National Forest station, and the post office. Several service organizations which had chapters in Cordova included the Elks, Moose, and Pioneers of Alaska.

In 1991, local businesses reflected the community's reliance on commercial fishing. There were processors, marine suppliers, as well as electronics and net repair businesses. Cordova also had banks, bars, restaurants, motels, a weekly newspaper, hardware and sporting goods stores, a drug store, florist, bakery, and three grocery stores. The state marine highway connected Cordova to Valdez. There were also two commercial airlines with daily flights between Anchorage and Cordova and points south. Two airstrips and several air taxis serviced communities in the sound.

The Division of Subsistence had conducted two previous research projects in Cordova on patterns of wild resource uses in the community. The first pertains to 1985 (Stratton 1989) and the second to 1988 (Stratton 1992). Data from both studies appear in the division's Community Profile Database (Scott et al. 1993).

METHODOLOGY

The 1991 Study Year

The goal of the research in Cordova in the spring of 1992 was to interview 100 randomly selected households about their resource uses for the period January 1, 1991, through December 31, 1991. A total of 101 households were interviewed, 12.9 percent of the estimated number of year-round households in the community (Table II-1). The interviews took place between March 9 and March 31, 1992. On average, the harvest surveys took 0.94 hours (56 minutes) to complete (Table I-7), and the social effects interviews required an additional 0.81 hours (49 minutes) (Table I-8). Researchers included Jody Seitz, Karen Gibson, Vera Kinzer, Susan McNeil, Jeniffer Sepez, and Barbara Winkley. In all three years, Jody Seitz was responsible for organizing the research and reporting information back to the community.

The Native Village of Eyak was informed of the study prior to our arrival in the community. At the monthly meeting of the Cordova City Council, March 4, 1992, the city was notified and endorsed the project. During the second week in Cordova contact was made in person with the Native Village of Eyak. During the first week public announcements were arranged while we were getting sample information and doing other logistical work. Radio announcements were broadcast over KCHU radio in Valdez, and KLAM radio in Cordova. A written message was broadcast over the scanner, a televised bulletin board.

The survey population consisted of a combination of a longitudinal panel which had been interviewed in previous years by the Minerals Management Service (MMS)-sponsored Social Indicators project, and additional households selected at random using a municipal housing stock survey. The City of Cordova Planning Department conducted a municipal housing unit survey in 1990, from which the random sample was drawn. After participation by members of the panel had been solicited, the remainder of the 100 households in the sample was selected at random from the 880 dwelling units determined by the Cordova Planning Department to be within the corporate limits of Cordova. At least three attempts took place to contact each identified housing unit, varying the time of day and day of the week. After the third attempt, and barring any other information, the household was dropped from the list of households to contact. One of the research objectives was that the total Cordova sample should not have greater than 50 percent of its participants from the panel. Of the total of 101 surveys, we interviewed 36 of the panel households and 65 randomly selected households. Forty households refused to participate in the study, including 12 of the panel members and 28 of the randomly selected households.

The 1992 Study Year

The goal of the research in spring of 1993 was to interview the 62 households which remained after the Social Indicators panel households were removed from our list of respondents. A total of 41 households were interviewed, 5.2 percent of the estimated 784 year-round households in the community (Table II-1). The interviews took place January 21 through January 31, and March 19 through 27, 1993. Thirty-four harvest surveys and social effects questionnaires were completed during the January fieldwork. During the period March 19 through 27, seven additional interviews were completed. Local residents confirmed that seven households from our sample had moved out of town, leaving a total of 55 resident households. Of those 55 households, nine households declined to be interviewed, a refusal rate of 18 percent. Interviews were declined for a variety of reasons including lack of time, poor health, and previous experience with the same interview. In asking for interviews, clarifying the purpose of our study was important. Some households complained of the number of interviews requested of them over the last three years. Although this was not the case for most households, some were suspicious that we might be working for Exxon. For at lest four households, these suspicions were heightened because they had members who had been deposed by Exxon attorneys for ongoing litigation. We failed to contact five of the households who were not interviewed. At least three of these households were out of town during February and March. The harvest interviews lasted an average of .45 of an hour (Table I-7) and the social effects surveys required an additional 48 minutes (Table I-8). The researchers were Jody Seitz, Rita Miraglia, and Lisa Tomrdle.

The 1993 Study Year

In 1994 the goal was to interview 100 Cordova households. Of these, up to 41 were to be from the panel interviewed in both 1992 and 1993, and the remainder were to be selected randomly from the survey of the housing stock prepared by the city in 1990. The final result was a total of 104 household interviews, including 33 panel households and 71 newly selected households. More than 100 households were interviewed because three panel households were unavailable until March, and, to avoid difficulty completing the sample should they not be able to participate, three additional households from the random sample were interviewed in February. In comparison with the first year of this project, there were fewer refusals, fewer households which were not contacted, and fewer vacancies encountered in the random sample. Eighty-one percent of the randomly selected households contacted were interviewed, compared to 70 percent in the first year. Nineteen percent of the households contacted declined in the third year, compared to 30 percent in the first year. Interviews took place between February 2 and 25, and March 18 and 19. Interviewers for the project were Amy Paige, Lisa Hutchinson-Scarbrough, Ron Stanek, Jody Seitz, Leah Merritt, and Roger Dunbar. Harvest survey interviews lasted, on average, 0.82 hours (49 minutes) (Table I-7). Social effects interviews required an average of 0.76 hours (44 minutes) (Table I-8).

In late January, Jody Seitz met with the city planner to update the housing list. The city had annexed several areas previously outside the city limits, raising the population by 469 people, and adding 150 dwellings to the housing stock, which then totaled 1,035 housing units in the city. In cooperation with the city clerk, a new master list of the housing stock was developed.

A letter was sent to all of the panel households from the previous year, and all those still eligible to participate from the first year of the study, notifying them of our interest in interviewing them and asking them to return the letter with updated address and phone information. The Cordova post office returned the letters of those who had moved outside the community. Eight of the letters were returned, and three participants called to let us know their availability. The effort saved the group some time trying to locate households. The letters also aided the research by giving adequate notice of the project to the community. Once the study team arrived, the panel households were contacted to set up appointments.

During the first week of the project, the eligibility criteria was changed from six months residency in the community to one month. This did not change the status of any of the households contacted in 1994 prior to the change. After the change there was only one household which was ineligible to participate.

DEMOGRAPHY

The 1991 Study Year

Cordova's estimated population as of April 1992 was 2,290 persons in 784 households, an 8.5 percent increase from the 1990 U.S.. Census estimate of 2,110 in 773 households. The sample

population had an average age of 30.8 years (Table II-2). This compares to an average of 28.4 years in 1988, the year of the last division survey (Stratton 1992:11). In 1991, the mean household size was 2.9 persons, compared to 2.8 in 1988. Heads of the sampled households in 1991 had lived in Cordova an average of about 18 years, a slight increase from the average of 16.3 years in 1988. Males represented 50.8 percent and females 49.2 percent of the community in 1991 (Table II-3, Figure II-1). The 1988 sample was 53.8 percent male and 46.2 percent was female (Stratton 1992).

In 1991, 20.8 percent of all households in Cordova had at least one head who was Alaska Native, and 17.6 percent of the sample population described their ethnicity as Alaska Native (Table II-2). This was quite a difference from the 1988 sample, where 9.8 percent of the households had at least one head whose self-designation was Alaska Native and 10.0 percent of the total population was Alaska Native (Stratton 1992:11). It is also much higher than the U.S. Census estimate for 1990, in which 8.7 percent of the population of Cordova was reported to be Alaska Native, of either Eskimo or Aleut descent (U.S. Bureau of the Census 1992b). However, the 1980 census reported 15 percent of Cordova's population to be of Alaska Native ancestry, and in 1985, of the 206 households in a Division of Subsistence study, 18 percent were Alaska Native (Stratton 1989:33).

The 1992 Study Year

The panel of 41 households in Cordova (a sample of 5.2 percent) produced a higher population estimate for 1992 of 2,677 people than that of 1992 sample, at 2,290. The panel was composed of younger, larger households who had lived in the community less time than all those interviewed in 1992. The average household size for 1992 was 3.4 persons, compared to 2.9 the year before. The estimated average age of Cordova's population in 1992 was 29.2 years, down from 30.8 in 1991. The 1992 estimated population had a sex ratio was more heavily weighted toward men (54.3 percent), and had a lower percentage of Alaska Native households (14.6 percent) than the previous year (Tables II-19, II-2). The estimated population in 1992 was 13.6 percent Alaska Native, a decline from the 17.6 percent recorded for 1991. Length of residency in Cordova in 1992 was slightly lower for household heads, 16.8 years, compared to 18.0 years in 1991 (Table II-2).

Most Cordova residents in the sample were immigrants to the community, moving to Cordova sometime between 1955 and 1991. The sample for 1992 had a total population of 140 individuals, 29.3 percent of whom had no previous residence and 70.7 of whom were immigrants to the community. As shown in Table II-5, 29.3 percent had moved to Cordova from other places in Alaska, 36.4 percent were from other states, and 5.0 percent were from foreign countries.

Approximately 41.4 percent of the panel population moved to Cordova from some place outside of Alaska between 1955 and 1991 (Table II-6), including a large contingent of immigrants to the community in 1990. Among a total of 140 individuals, 22.1 percent moved to Cordova in 1990. Another 5.7 percent of the sample population moved to the community in 1991. Thus, a total of 29.8 percent of the respondent population moved to the community in the previous two years. In the sample population,

1990 and 1991 were the years most frequently mentioned when respondents were asked the year they moved to the community.

The 1993 Study Year

The sample for the 1993 study year covered 11 percent of the estimated 946 households in the community. The average household size was about midway between the previous two years (3.1 persons). The estimated community population rose by 10.8 percent to 2,965, which in part reflects the annexation of areas outside the city limits (see Methodology section, above). The average age of the 1993 sample, 31.0 years, was just slightly higher than that of the previous two years. The length of residency of the population and of household heads was also about the same all three years. In the last year of the study, the sex ratio was almost exactly 50/50 (Fig. II-4, Table II-7), whereas earlier samples had slightly more males than females. The percentage of Alaska Native households in the 1993 population estimate was 16.4 percent, slightly higher than in 1992 (14.6 percent) but lower than 1991 (20.8 percent). In 1993, the estimated percentage of Alaska Natives in the population declined to 12.0 percent, from 17.6 percent in the 1991 and 13.6 in 1992 (Table II-2).

CASH ECONOMY

The 1991 Study Year

In 1991, 89.9 percent of adults (people 16 years of age or older) in Cordova were employed for at least a portion of year and held an average of 1.6 jobs (Table II-8). Employment was seasonal, lasting an average of 9.3 months, with just under half (44.6 percent) of employed adults employed on a year-round basis. Ninety-seven percent of households had at least one employed adult, and on average there were at least 3.0 jobs held per household. Households contained an average of 1.9 employed adults. For all household heads, the average number of months employed was 9.3.

As shown in Table II-9, the average per capita income in Cordova from all sources in 1991 was $20,535. Of this, $17,985 was earned from jobs (87.6 percent) and the rest ($2,551; 12.4 percent) was from other sources (Table II-10). In 1989, the per capita income was $23,408, notably higher than the state's average of $17,610 per person (Bureau of the Census 1992a:53-54). For 1988, interviews conducted by the division provided an estimated income of $22,022 per person (Stratton 1992:23).

In 1991, the largest contributor of cash income in Cordova was commercial fishing ($5,421 per capita; 26.4 percent of all income), followed distantly by services, local government; transportation, communications and utilities; and state government (Table II-9). Of the estimated 2,313 jobs held by Cordova adults in 1991, the largest portion were in commercial fishing (27 percent), followed by services (14 percent), and retail trades (13 percent) (Figure II-5).

Thus, commercial fisheries continued to dominate Cordova's economy in 1991. This is consistent with findings reported by Fried (1994:1) that almost half of the work force in Cordova is

directly employed in fish harvesting or processing. Fish processors annually employ more than 240 people (not all of whom are year-round Cordova residents, however). The importance of commercial fishing to the community is also reflected in the number of commercial fisheries permits held by Cordova residents. In 1991, this totaled 1,145 permits, including 428 for salmon, 208 for halibut, 176 for herring spawn on kelp, and 98 for miscellaneous finfish (Table II-12).

However, study findings reflected the declines in commercial fishing in Prince William Sound compared to other recent years. While the 1991 commercial salmon harvest of 39.9 million fish was second only to 1990's record catch of 46.6 million salmon, the ex-vessel value of this harvest dropped to $30 million compared to $68 million the year before (Donaldson et al. 1992:1-2). One of Cordova's five processors closed and another went bankrupt (Fried 1994). In 1988, commercial fisheries income in Cordova was estimated at $11,976 per capita, representing 54.4 percent of all income. In that year, commercial fishing jobs presented 31.6 percent of all jobs in Cordova (Stratton 1992; Table II-13). The 1991 average earnings for the 519 active drift gillnet permit holders, based on the ex-vessel value of the catch, was estimated at $33,696, while the average purse seine earnings for the 253 active permit holders was $33,280. The latter compares to $119,670 for 266 purse seine permit holders in 1990, a year of record runs and good prices (Brady et al. 1991:1-2).

Consistent with this decline in commercial fisheries, the largest percentage of sampled Cordova households (41.6 percent) reported that their financial situation was worse during the study year than before the *Exxon Valdez* oil spill (March 1989) and 35.6 percent said it had remained about the same. On the other hand, 16.8 percent of the households said their financial situation had improved since the spill (Table I-103).

The mean monthly expense for food estimated by sampled Cordova households in 1991 was $505. The median food expense per month was $450, 8.9 percent of the total average household income in the community (Table I-101).

On average, sampled Cordova households owned equipment worth $57,886 that was at least partially used for subsistence activities. Households also spent on average $373 on fuel and $2,965 on maintenance and supplies for this equipment. Households estimated that about 13 percent of the value of the equipment, fuel and supplies were used for subsistence activities (Table II-11).

The 1992 Study Year

In 1992, the estimated number of jobs in Cordova rose from 2,305 the year before to 2,696. The largest increases were seen in the number of jobs in manufacturing (which included the timber and logging industry), which rose from 2 percent of all jobs in 1991 to 4 percent of all jobs in 1992 (Figure II-6). Increases were also observed in finance, insurance, and real estate (6 percent); services (14 percent); and wholesale trade (1 percent). Declines were noted in the number of jobs in commercial fishing; agriculture, forestry, and fishing (which included fisheries enhancement and mariculture jobs); transportation, communications, and utilities; retail trade; and construction. The largest declines were in

commercial fishing and retail trade, which suffered declines of 5 percent and 4 percent, respectively, in the number of jobs.

In 1992, 81.8 percent of Cordova's adults held some form of cash employment for at least a portion of the year, down from 89.9 percent the year before. The average number of months employed went up slightly, from 9.3 months in 1991 to 9.5 in 1992, and just under half the employed adults (48.2 percent) worked year-round, compared to 44.6 percent the year before. The average number of jobs held per household rose in 1992, from 3.0 to 3.6. The number of employed adults in each household increased slightly in 1992, from 1.9 to 2.1 (Table II-8).

As in all previous years, commercial fishing was Cordova's primary employer, providing 22 percent of all jobs (down from 27 percent in 1991), followed closely by federal, state, and local government (22 percent), services (14 percent), and manufacturing (including fish processors) (11 percent) (Figure II-6).

Per capita income of Cordova residents from all sources fell, from an average of $20,535 in 1991 to $15,621 in 1992. Of the total average per capita income, $13,641 was from employment; $1,981 (12.7 percent) came from other sources (Table II-14, Table II-15). The largest decreases in income occurred in commercial fishing, construction, retail trade, and the transportation, communications, and utilities sector. At $2,639 per person, commercial fisheries income dropped by 51.3 percent compared to the year before, and represented just 16.9 percent of all cash income in the community, compared to 26.4 percent in 1991 and 54.4 percent in 1988 (Table II-13).

The Prince William Sound Area commercial salmon harvest for 1992 of 11.4 million fish was the smallest since 1978. Those hardest hit by the low return were the purse seiners, who fish primarily within Prince William Sound itself for pink salmon. In 1992, pink salmon returns to all hatcheries were well below forecasts, as were hatchery coho and chum salmon returns. Also, the price for pinks was the lowest since prior to 1983, at $0.18 per pound. On average, drift gillnet permit holders fared better than seiners. Drift gillnet fishermen fish for chinook and sockeyes at the Copper River Flats. The price for these salmon was $2.50 per pound in 1992 (Donaldson et al. 1993:1-2,31).

The value of the combined commercial salmon harvest in 1992 was $36.5 million, including hatchery sales. The average earnings for drift gillnet permit holders was $50,782, while the average earnings for purse seiners was estimated at $17,729, a notable drop again from the year before (Donaldson et al. 1993:2).

The decrease in income from commercial fishing in 1992 was reflected in a decline in commercial fishing permits held by Cordova residents from 1,145 in 1991 to 1,121 in 1992. Declines in the number of permits owned by Cordova residents were observed in 11 out of 16 kinds of commercial fishing permits in 1992 from 1991 (Table II-12).

The 1993 Study Year

Study findings revealed that about 87.2 percent of Cordova's adults had some form of cash employment for at least part of 1993. This was very similar to the estimate of 89.9 percent in 1991, and slightly higher than the 81.8 percent estimated for 1992. About 49.8 percent of employed adults worked on a year round basis in 1993, very similar to 1992 (48.2 percent) and slightly higher than 1991 (44.6 percent). On average, Cordovans worked 9.7 months in 1993, just slightly higher than either previous year of this study (Table II-8).

In 1993, the estimated number of jobs in the community rose to the highest point of the three year study, at 3,129. The largest net changes over the three year period were in commercial fishing, which declined by 9 percent; services (increased by four percent); cannery jobs (increased by three percent); and retail trade and local government (declined by three percent each) (Fig. II-7).

Declines in Prince William Sound commercial fisheries dominated the economic situation in Cordova again in 1993. The herring run was about one-half the forecast, with a lower than expected percentage of five-year fish, low annual growth for all age classes, a tight market, and low quality herring. The total linear miles of shoreline spawn was 20.4, the lowest ever recorded and the total mile-days of spawn was 40.8, the third lowest on record. Seventy percent of the peak aerial biomass estimate was sighted at Montague Island (Donaldson et al. 1994:20-21).

In April, during sampling at Montague Island, fishermen reported abnormal behavior and surface hemorrhages on herring. Results from samples taken from herring at Montague Island and the Northeast area were obtained in May. They indicated an infection called "viral hemorrhagic septicemia." Due to low roe content and small fish size, the sac roe purse seine fishery did not occur. The sac roe gill net, wild spawn on kelp, and pound spawn-on-kelp fisheries did take place, harvesting just 16 percent of the allowable harvest. It was not known if the virus caused the poor quality in the herring in 1993 (Donaldson et al. 1994:20-21). (For a discussion of the effects of this viral infection on subsistence uses, see Chapter IV: Tatitlek.)

The 1993 Prince William Sound commercial salmon harvest was the smallest on record since 1978, and was 63.7 percent below the 10-year average. Commercial harvests of chinook, coho, and pink salmon were all below the ten-year average. Purse seiners were particularly affected, as the pink salmon harvest was only 5.8 million fish, compared to a 10-year average commercial harvest of about 22.6 million pinks. The ex-vessel value of the fishery declined again, to $24.7 million, and the average earnings for purse seine permit holders fell also, to $11,667. Only about half of the management area's seine permits were active in 1993 (Donaldson et al. 1994:2).

Ownership of commercial fishing permits by Cordova residents declined for the second year in a row in 1993, by 207 permits compared to 1992. With the exception of Dungeness crab permits, which increased by one in 1993, all commercial fishing permits declined in number or stayed the same (Table II-12).

The effects of the 1993 run failures of both pink salmon and herring were evident in the data on income in Cordova. At the category level, agriculture, forestry, and fishing contributed the least income in 1993 of the three study years, due primarily to a 64.0 percent decrease in income from commercial fishing and a three-year, 62.2 percent decline in construction. This was reflected in an overall decline in 1993 in per capita income to $17,596, a 14 percent drop from 1991. This was also notably less than the $22,022 per capita income for Cordova estimated for 1988. At $14,235, per capita income from jobs in 1993 was 20.9 percent lower than in 1991. In contrast, income from other sources rose to $3,311, 29.8 percent higher than 1991. "Other income" contributed 18.9 percent of the total cash income in Cordova in 1993, markedly higher than the 12.4 percent estimated for 1991 and the 7.2 percent recorded for 1988 (Table II-13, Table II-16, Table II-17). Within this continued depressed economy in Cordova, there were reports of foreclosures on commercial fishing boats, forfeitures on loans, and long-term residents leaving town (Bernton 1993).

Cordova residents estimated that they spent, on average $532 each month on food expenses in 1993. The median estimated expenditure for food was $450, about 9.8 percent of their total household income (Table I-102).

WILD RESOURCE HARVESTS AND USES: 1991

Participation in Hunting, Fishing, and Gathering Activities

In 1991, as in 1985 and 1988 (Stratton 1989, Stratton 1992), most of the sampled Cordova households used, tried to harvest, harvested, and exchanged at least one wild resource (Table II-18). Most households attempted to harvest fish, particularly salmon (87 percent). Cohos and sockeyes were the most popular, and 58.4 percent of households attempted to harvest halibut. Eighty-five percent went berry picking. Just over half of all households (55.4 percent) hunted deer, and just under one-third (31.7 percent) hunted moose. Duck hunting and plant gathering (other than berries) were both done by about a quarter of all households (24.8 percent and 25.7 percent, respectively) and 38.6 percent of households went clam digging (Table II-23).

At the individual level, as shown in Table II-19, 34.6 percent of Cordova's population hunted in 1991, 71.2 percent fished, 3.7 percent trapped, and 77.6 percent gathered wild plants. Overall, 87.8 percent engaged in at least one resource harvest activity. Also, 82.7 percent of the population processed wild resources in 1991.

Seven sampled households in Cordova (6.9 percent) discarded resources during 1991 because of perceived abnormalities (Table I-107). Most often, salmon were discarded (five households; 5.0 percent). Explanations offered for these abnormalities varied, and included oil contamination (one household), normal variation (one household), disease (one household), and improper handling (one household). Several households could not provide explanations of the abnormalities.

Harvest Quantities and Composition

The entire community harvested an estimated 433,177 pounds of wild resources during the 1991 study year, and used 78 distinct kinds of resources. The average household in Cordova used 12.5 kinds of wild resources during the 1991 study year (Table II-18). In addition, the average household attempted to harvest 9.4 kinds, harvested 8.5 kinds, received 5.5 kinds, and gave away 4.1 kinds of wild fish, game, and plants.

The largest percentage of sampled households in Cordova (31.7 percent) estimated that between 1 percent to 25 percent of their annual use of meat, fish, and poultry derived from wild foods in 1991. As shown in Table I-104, 13.9 percent estimated the contribution of wild foods at 26 to 50 percent; 18.8 percent of the households estimated 51 to 75 percent; and 27.7 percent estimated 76 to 99 percent. Also, three households (3 percent) said all their meat, fish, and poultry was from wild resources, while only four households (4.0 percent) used no wild meat or fish.

In 1991, the estimated harvest of wild resources for home use in Cordova was 189.2 pounds per capita (Table II-18). The overall harvest composition by weight was 46 percent salmon; 26 percent land mammals; 21 percent fish other than salmon; 3 percent marine invertebrates; 3 percent plants; and 1 percent birds and eggs (Fig. II-10). By weight, the biggest contributors to the harvest were coho and chinook salmon, halibut, moose, and deer.

Cordova residents harvested 126.4 pounds of fish per capita in 1991 (Table II-23). Salmon (chum, coho, chinook, pink, and sockeye) constituted 46 percent of the overall community harvest at 86.2 pounds per capita. Of the salmon, cohos were harvested the most, at 44.1 pounds per capita. Other fish made up about 21 percent of the overall harvest at 40.2 pounds per capita. Of this category, halibut was the biggest part of the harvest, at 22.2 pounds per capita.

The salmon harvest by gear type reflected the two primary means Cordova residents have to catch salmon for home use. Commercial fishermen bring home fish from their catches, while those without commercial permits use rod and reel.[2] By weight, just under half of the overall harvest of fish was taken from the commercial catch (47.8 percent) (Table II-24). By gear type, over one-half (51.8 percent) of the salmon was taken from the commercial catch (Table II-25, Table II-26), including most chum, chinook, pink, and sockeye salmon. Cohos, however, were more often taken with rod and reel, reflecting the availability of these fish due to runs to Eyak Lake and the introduced run to Fleming Spit. As shown in Table II-27, 35.6 percent of the sampled Cordova households removed salmon from their commercial catches, 11.9 percent harvested salmon with subsistence gear, and 71.3 percent caught salmon for home use with rod and reel.

Table I-106 shows seven methods used by Cordova households to preserve their salmon harvests. On average, households used 2.6 methods. These methods included freezing (used by 83.2

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[2] See Stratton (1989:81-95) for a discussion of salmon harvesting methods used by Cordova residents, including the history of restrictive subsistence fishing regulations.

percent of the households), smoking (50.5 percent), canning (48.5 percent), pickling (32.7 percent), salting (22.8 percent), kippering (21.8 percent), and drying (5.0 percent).

Large percentages of fish other than salmon, such as black cod, steelhead, halibut, and red rockfish, were also taken from commercial catches (Table II-24, Table II-28, Table II-29). All of the herring spawn on kelp was harvested during commercial fishing periods, as was all of the Tanner crab, 98.2 percent of king crab, and 85.7 percent of the octopus. As shown in Table II-30, 30.7 percent of Cordova's households removed fish other than salmon from their commercial catches, 23.8 percent harvested these fish with subsistence methods, 5.0 percent fished with hook and line through the ice, and 54.5 percent caught these fish with rod and reel gear in open water.

Figure II-10 illustrates that land mammals made up 26 percent of the overall community harvest (50.0 pounds per person). Of this category, moose contributed the most to the harvest in pounds per capita (29.3), followed by deer (16.1 pounds per capita). An estimated 1,273 furbearers were taken in 1991, or about 1.6 per household.

Cordova residents harvested 5.5 pounds per capita of marine invertebrates in 1991, three percent of the overall harvest. Clams, primarily razor clams, crab, mainly king crab, and shrimp contributed the most to the harvest in this resource category (Table II-23).

Marine mammals contributed less than one pound per capita to the overall community harvest. However, whale, sea otter, and harbor seal were received by a few Cordova households and so were used by the community on a limited basis (Table II-23).

Birds and eggs contributed 1.8 pounds per capita to the community harvest, or about 1 percent. The largest contributor by weight was mallard ducks, although the bird harvest consisted of a variety of ducks, grouse, ptarmigan, lesser and dusky Canada geese, sandhill cranes, and unknown varieties of seabirds (Table II-23).

Cordova residents harvested 5.2 pounds per person of plants and berries, of which berries contributed 4.7 pounds per capita. This category also constituted three percent of the community harvest. Seven households (6.9 percent) used plants for medicinal purposes (Table I-109). Seven types were used, with several households using devil's club as a treatment for sore throats and as a general pain killer.

Of the 101 interviewed households, just over half (50.5 percent) estimated that their overall levels of resource uses in 1991 were very similar to those of 1990. On the other hand, more than a third (35.4 percent) said they believed their uses were lower and 14.1 percent said their uses had gone up in 1991 in comparison with 1990. A similar pattern pertained to comparisons with the year before the *Exxon Valdez* oil spill of March 1989. The largest number of households, 44 (49.4 percent) said they believed that their overall resource use patterns in 1991 were similar to the year before the spill, while 33 households (37.1 percent) said they believed their uses were lower than before the spill and 12 households (13.5 percent) said they believed they were higher. Nine households were not in the community before the spill so were unable to make a comparison (Table I-57, Table I-58, Fig II-11).

For some categories, a substantial minority said they believed their use levels had declined compared to the previous year, while the smallest number of respondents reported a perception of increased levels of use. For example, when asked to compare their use of salmon in 1991 to the previous year, 50.5 percent of the households said their uses were about the same as 1990, 34.3 percent said their salmon uses had decreased, and 15.2 percent said they had increased (Table I-9). Similar patterns occurred for non-salmon fish (54.1 percent the same, 33.7 percent lower, 12.2 percent higher) (Table I-15), large game (52 percent the same, 31 percent lower, and 17 percent higher) (Table I-21, birds (67 percent the same, 20.6 percent lower, and 12.4 percent higher) (Table I-39), marine invertebrates (60.6 percent the same, 30.3 percent lower, and 9.1 percent higher) (Table I-45), and plants (60.8 percent the same, 22.7 percent lower, and 16.5 percent higher) (Table I-51). The vast majority of households reported constant levels of use of small game (79.6 percent) (Table I-27) and marine mammals (98.0 percent) (Table I-33).

Exchange Patterns

Chinook and sockeye salmon, black cod, gray cod and lingcod, halibut, red rockfish, deer, moose, razor clams, Dungeness crab, king crab and shrimp were all used by much higher percentages of households than harvested them (Table II-23). These differences point to a pattern of sharing between Cordova households.

Deer, moose, Dungeness crab, and shrimp were received by much higher percentages of households than given away, indicating a pattern of giving resources to more than one household. In no instance was the percentage of households giving away resources higher than the percentage harvesting them. This suggests a pattern where resources were received primarily from the households which harvested them and in which the recipients did not usually give portions of what they received to another household.

Most sharing of resources took place with the community of Cordova itself. Ninety percent of Cordova households in the study reported receiving a resource from another Cordova household, while 77.2 percent of households reported giving a resource to another Cordova household. In addition, Cordova households gave resources to people who live in other states as well as at least 28 other communities in Alaska (Table II-20). The largest percentage of households (55.5 percent) gave resources to people living in other states, while 11.9 percent gave resources to people living in Anchorage. The largest percentage (6.9 percent) of households received resources from people living in the general Prince William Sound area and other states.

Participation in Hunting, Fishing, and Gathering Activities

In all the previous harvest studies, the vast majority of households in Cordova in 1992 used wild resources, harvested or attempted to harvest at least one wild resource and gave away or received wild foods. In 1992 all households used at least one wild resource during the study year, and 97.6 percent of all households attempted to harvest, harvested, and shared wild foods (Table II-18).

At the population level, participation in harvesting in 1992 closely resembled that of the 1991 study year, although there were slight declines in the percentage of the population engaged in most activities, except fishing and processing fish (Table II-19). Overall, 86.4 percent of Cordova residents attempted to harvest a resource, compared to 87.8 percent in 1991.

Harvest Quantities and Composition

The community harvested an estimated 437,598.5 pounds of wild resources during the 1992 study year, one percent (4,421.5 pounds) more than in 1991. The average household harvest in 1992 closely approximated that of 1991: 558.2 pounds compared to 552.5 pounds of wild resources in 1991. Because of the larger household size in the 1992 sample, the per capita harvest declined from 189.1 pounds in 1991 to 163.5 pounds in 1992. The 1992 harvest was composed of 83 distinct kinds of resources. The average number of resources used, attempted to harvest, harvested, received, and given away quite closely resembled the averages for 1991 (Table II-18).

Resources retained from commercial catches made up less of the overall harvest in 1992 than in 1991, 27.5 percent of the total harvest, compared to 32.7 percent the year before. By weight, fish removed from commercial catches provided 39.9 percent of the total harvest of fish compared to 47.8 percent the year before (Table II-24, Table II-32). Thirty-nine percent of the sampled households brought home salmon from their commercial catches, and 24.4 percent brought home fish other than salmon from their commercial catches (Table II-35, Table II-38).

The 1992 harvest composition nearly replicated that of 1991 by category: 43 percent salmon, 26 percent game, 25 percent non-salmon fish, 3 percent marine invertebrates, 2 percent plants, 1 percent birds and eggs, and no marine mammals (Figure II-12). Silver salmon, halibut, moose, deer, chinook salmon, and sockeye salmon made up the bulk of the harvest by weight.

For the first two study years, fish made up over two-thirds of the estimated pounds of resources harvested, 67 percent in 1991 and 68 percent in 1992. In 1992, Cordova residents harvested an estimated 71.3 pounds of salmon per capita, slightly less than the 86.2 pounds per capita recorded in 1991. By weight, the harvest of coho salmon in 1992 made up 50 percent of the salmon harvest, and chinook about one quarter, followed by sockeye salmon (23 percent) and pink salmon (2 percent) (Table II-23, Table II-31).

There was virtually no change in the percentage of the total salmon harvest by weight taken by any particular gear type from 1991 to 1992 (Table II-33, Table II-34). In both years, a little more than half of all salmon, by weight, was brought home from commercial fishing activities. Rod and reel was the method used to take 43.1 percent of all salmon in 1992, and 5.7 percent of the community's salmon harvest by weight was taken with subsistence methods.

Higher percentages of the sampled households went fishing and were successful in harvesting fish resources other than salmon in 1992 and thus the total estimated pounds harvested for the community rose from 92,042.6 in 1991 to 109,092.4 pounds in 1992 (Table II-23, Table II-31). The higher estimated harvest was reflected in a slightly higher proportion (25 compared to 21 percent) of the community harvest being composed of fish other than salmon.

Reflecting the decline in participation in several commercial fisheries, in 1992 the proportion by weight of the non-salmon fish harvest taken out of commercial catches declined, while the proportion of the harvest taken with rod and reel increased. Twenty percent of all non-salmon fish taken in 1992 were removed from commercial catches, compared to 39.2 percent in 1991. Correspondingly, the portion of nonsalmon fish taken with rod and reel gear increased from just over half in 1991 to more than three quarters in 1992 (Table II-36, Table II-37).

Although the percentage of Cordova households attempting to harvest big game was smaller in 1992 than in 1991, a greater percentage of those who attempted to harvest big game were successful. In 1992, 42.4 pounds per capita of big game contributed 26 percent to the community harvest, the same proportion as in 1991, though less in pounds per capita (50.0 pounds per capita). Deer (18.8 pounds per capita) and moose (23.1 pounds per capita) were the only big game species harvested by the 1992 Cordova sample (Table II-31).

In 1992 some hunters felt that the regulatory seasons allowed overharvest of deer.

> Close the deer season December 15. They're wiping out the deer. Instead of opening the doe season on November 1, leave it the way it was, the 15th of September. Everyone has the week after Christmas off to go hunting. You should see the impact.

In 1992, the percentage of households attempting to harvest small game or furbearers declined, and the percentage who successfully harvested resources also declined. An estimated 1,223.8 individual furbearers were harvested in 1992 (Table II-31).

In 1992, the same percentage of households attempted to harvest marine mammals as in 1991, but there was no successful harvest among the households interviewed. In 1992, a few Cordova households received whale, sea otter, and harbor seal (Table II-31). Another project conducted by the division, however, estimated a take of 113 harbor seals for 1992, including a harvest of 104 seals and 9 struck and lost. There was no documented harvest of sea lions. The number of harbor seals is an expanded total, based on 80 percent sample (12 of 15 households) of Native households which were active harvesters and a 18.1 percent random sample of the rest of the Native households in the community (Wolfe and Mishler 1993:C-78).

The percentage of Cordova households which attempted to harvest and successfully harvested birds was about the same in 1991 and 1992. Birds contributed slightly less in pounds per capita to the harvest in 1992, at 1.3 pounds per person compared to the 1991 harvest of 1.8 pounds per person. Pre-spill harvests were 1.7 pounds per capita in 1985 and 4.7 pounds per person in 1988 (Table II-21). Birds represented 0.8 percent of the total community harvest in pounds per capita in 1992, compared to 1.0 percent the year before. The largest contributors to the harvest, in both pounds and numbers, were upland game birds and certain ducks, such as mallards, teals, wigeons, and pintails.

In 1992, marine invertebrates contributed 2.8 percent to the overall community harvest with a per capita harvest of 4.6 pounds, compared to the 5.5 pounds per capita (2.8 percent of all resources) harvested in 1991. The marine invertebrate harvests in Cordova in 1991 and 1992 were substantially lower than harvests documented before the oil spill, 21.8 pounds per person in 1988, and 12.5 pounds per person in 1985 (Table II-21). In 1991, over half of the households who reported a decline in their use of shellfish in 1991 (30) attributed the decrease to a decline in resource abundance (Table I-49). In 1992, several households commented that they used to get more crab and shrimp, but that lately they had had to buy all their crab and shrimp. Some respondents blamed the local decline on a growing population of sea otters. Another respondent blamed the decline of marine invertebrates on management of the resources. His comments reflected his opinion that hatchery production of salmon competes with marine invertebrates for the same food source, and also preys on some species of marine invertebrates. One long-term resident saw the decline as a result of overfishing, while another associated the decline of shellfish at Fairmont Island with the oil spill. Households contributed the following remarks which illustrate some of the local sentiment about shellfish populations near Cordova and in Prince William Sound:

> We're getting too many sea otters. They're very thick here. They're going to eat themselves out of house and home. Lots of sea otters, but very few crab anymore.

> We used to can lots of clams. There's no clams! We used to can five to eight cases of pints every year [depending on how often her husband went clam digging.] 1988 was the last year we put up that much. [In 1992 , this middle-aged couple did not harvest clams, but received them from others].

> [Regarding overfishing the local shellfish:] They used to put out 2000 pots in a month. [This was in the sixties and seventies.] Now there's no Dungeness. And they blame the poor little sea otter.

In 1992 the proportion of marine invertebrates obtained from the commercial fisheries also declined, to 6.0 percent, from 25.6 percent the year before. In 1992, half (48.1 percent) of all crab were taken out of the commercial fishery, compared to 85.2 percent the year before. All the king crab, clams, and shrimp, and most of the Dungeness crab were taken under subsistence or personal use regulations in 1992 (Table II-24 and Table II-32).

The estimated community harvest of plants and berries declined in 1992, from 11,807.8 pounds to 8,328 pounds. This was a decrease from 2.7 percent of the total harvest to two percent.

Exchange Patterns

The 1992 survey again documented the prevalence of sharing resources in Cordova. In 1992 the percentage of households giving away a resource rose to 97.6 percent from 86.1 percent the year before. Ninety-eight percent of households reported receiving a resource, more than the year before. For all categories of resources in the 1992 study year, higher percentages of use than harvest were recorded. Chinook and sockeye salmon, halibut, yelloweye rockfish, smelt, deer, moose, Dungeness and king crab, and shrimp were all used by much higher percentages of households than harvested them. As in 1991, this points to a pattern of exchange between households in Cordova (Table II-31).

In 1992, various kinds of red rockfish, as well as yelloweye rockfish in particular, deer, moose, ducks (particularly mallards), butter clams, steamer clams, scallops, Dungeness and king crab, and berries were all received by more households than gave them away, indicating that households shared their harvests of wild food with more than one household, or received wild food and shared some of what was received with others. In the case of tomcod, smelt, sheefish, whitefish, lake trout, moose, caribou, reindeer, whale, seal, sea otter, cockles, scallops, octopus, and shrimp, the percentage of households giving away the resource was higher than that which harvested the resource, which indicates that households shared with others even when they had not harvested the resource themselves.

For several kinds of resources received by households in the 1992 sample there was no documented harvest. It is possible that some of them were harvested by Cordova households and were not included in the 1992 sample. Other resources such as sheefish, reindeer, caribou, and Dall sheep were likely taken outside the Prince William Sound area, and shared with Cordova residents.

WILD RESOURCE HARVESTS AND USES: 1993

Participation in Hunting, Fishing, and Gathering Activities

Participation by households in resource use and harvest was about the same in 1993 in Cordova as in 1992, with the exception of giving away resources. Perhaps as a result of the lower total harvest in the community, the percentage who reported giving away resources declined from 97.6 percent to 84.6 percent in 1993. However, the overall pattern of participation was quite similar all three years, with the vast majority of households involved in the use, harvest, and exchange of wild resources (Table II-18).

Individual participation in resource harvesting was similar all three years. From 1991 through 1993, 29.3 to 34.6 percent of the population engaged in hunting; 40.2 to 47.5 percent processed game. During the three years, between 70.5 and 74.3 percent went fishing, and between 71.2 and 77.8 percent processed fish. Berry picking and plant harvesting was the most popular activity, with 80 percent of the population in 1993, compared to 71.4 percent in 1992. About 70 percent processed berries and plants in

1993 and 1991, compared to 51 percent in 1992. Overall, between 86.4 percent of Cordova residents (in 1992) and 90.2 percent (in 1993) attempted to harvest a resource over the course of the three years (Table II-19).

In 1993, the largest percentage of Cordova households, 42.3 percent, estimated that between one and 25 percent of the meat, fish, and poultry their household consumed came from wild resources. Fourteen percent of households estimated that between 26 and 50 percent of the same was from wild resources. Twenty-two percent figured that 50-75 percent of their meat, fish, and poultry was wild food; seventeen percent said between 76 and 99 percent, and about 4 percent said all the meat, fish, and poultry they consumed was from wild resources (Table I-105).

In 1993, the community used a total of 88 distinct kinds of resources. Households used between 12.5 and 14.4 distinct resources, on average, from 1991 to 1993. Cordova households tried to harvest about nine different resources on average all three years, and harvested an average of between 8 and 9 different resources during the three year study. On average, households received five to eight kinds of resources during the three year study, and gave away four to five different resources (Table II-18).

In 1993, the largest percentage (42.0 percent) of respondents felt their level of use of wild resources had not changed compared to the previous year. However, 46.6 percent of the households reported that they felt their harvests were below what they had been prior to the oil spill, an increase from the 33.3 percent that had provided such as assessment in 1991 (Table I-95, Fig. II-11).

Harvest Composition

Even though it was less than prior years, the total community harvest of 378,963 pounds was composed of about the same proportion of salmon, fish other than salmon, and birds as in the previous two years. The portion of the harvest composed of fish continued its gradual trend upward, from about 60.5 percent of the harvest in 1985 to 69.0 percent of the harvest in 1993. However, the land mammal portion of the harvest declined to 19.5 percent of the total harvest, compared to a range of 26.8 percent to 21.5 percent of the total harvest in all prior years. The marine invertebrate category made up 4.3 percent of the harvest, slightly more than either of the previous two years, which were about three percent, and continued to be less than the amounts and proportions of the two pre-spill years. Though the portion of the harvest composed of marine mammals increased over 1991 and 1992, the increase was very slight, and the total per person harvest was about the same as in 1985 and 1988 (1.0 and 0.8 percent, respectively). The bird harvest contributed about the same proportion and amount as the previous year (0.8 percent). At 5.8 percent of the harvest, wild plants and berries comprised somewhat more of the harvest than any previously documented year (Table II-22, Fig. II-9).

Harvests and Uses by Resource Category

The 1993 per capita harvest of 127.8 pounds represented a 22 percent decline from the previous year, and the lowest harvest recorded for Cordova to date (Fig. II-8). The mean household harvest of 400.6 pounds was the lowest of the three years. There were substantial declines in harvests of salmon, fish other than salmon, and land mammals (Table II-21, Fig. II-9).

The percentage of households participating in the 1993 salmon harvest reached a three-year low of 77.9 percent. Rod and reel fishing for cohos was the most popular activity all three years. However, the percentage of households which fished for salmon using rod and reel declined from about 71 percent in both previous years to 60.6 percent in 1993. The percentage of households participating in the subsistence harvest was the lowest of the three years (from 12.2 percent down to 7.7 percent in 1993); the percentage which took salmon for home use from their commercial catches declined to the lowest percentage of the three years, to 28.9 percent, from a high of 39.0 percent (Table II-44).

The total estimated salmon harvest declined from 197,464.7 pounds in 1991, to 172,797.3 pounds in 1993. The bulk of the change was due to declines in the harvest of coho and chinook salmon. In the first two years of the study, coho salmon made up about half the salmon harvest (51.1 percent as measured in pounds in 1991; 51.0 percent in 1992), but this dropped to 39.5 percent in 1993. In all three years, most of the coho catch (between 67 and 80 percent) was obtained through rod and reel fishing, although the estimated harvest dropped from 1991 through 1993. Also, the amount of salmon removed from commercial catches was 43 percent less than 1992 and half of the 1991 take (Table II-42, Table II-43).

Sockeye salmon, at 31.7 percent of the harvest, an increase of nine percent from 1992, was the next largest part of the salmon harvest. Between 71.6 and 76.8 percent of sockeye salmon was taken from commercial catches from 1991 through 1993. In 1993 the amount removed from commercial catches increased by 34 percent and the rod and reel harvest increased by 72.2 percent pounds from 1992.

Chinook salmon were third in importance in 1993, at 26.4 percent of the harvest, about the same as the previous two years. There was a decline each year in the production of chinooks for home use, particularly in the amount taken from the commercial catch in 1993. Chum and pink salmon contributed less than one percent each to the total salmon harvest 1993, not remarkably different from either of the previous two years.

The percentage of households which attempted to harvest fish other than salmon declined to the 1991 level, 75.0 percent. Fewer were successful, and the 1993 harvest was the lowest of the three-year study, at 29.9 pounds per capita. In all three years, halibut contributed the most to the total resource category harvest. In 1993, lower percentages of households attempted to harvest or were successful in harvesting halibut than in 1991 and 1992. This resulted in a halibut harvest that was 43 percent less per capita than the previous year, and 31 percent less per capita than 1991. The harvest of black cod declined to 82 percent of the 1991 harvest and 59 percent of the 1992 harvest (Table II-40).

In 1993, most fish other than salmon was taken with rod and reel, increasing from 52.2 percent in 1991 to 81.0 percent in 1993. The proportion by weight of non-salmon finfish which was taken out of commercial catches continued to decline, from 39.2 percent in 1991, to 7.9 percent in 1993 (Table II-46, Table II-47).

In 1993, the average household harvest of big game was 24.9 pounds per capita, compared to 50 pounds per capita in 1991 and 42.4 pounds in 1992 (Table II-21). There were dramatic declines in the moose and deer harvests in 1993. The 1993 deer harvest (10.2 pounds per capita) was 46 percent less than the highest harvest to date, 18.8 pounds per capita, in 1992. The main reason for the lower harvest appeared to be the lack of success in hunting, as 48.1 percent went deer hunting, but only 23.1 percent were successful in 1993. In the previous two years, 37.6 percent and 43.9 percent of households were successful hunting deer. In 1993, only 7.7 percent households were successful in getting a moose. The harvest declined 55 percent from a high point in 1991 of 29.3 pounds per capita, to the 1993 harvest of 13.3 pounds per person.

In 1993, 40.4 percent of those interviewed said their land mammal harvests were lower than in 1992. They attributed this primarily to a decrease in the abundance of large game, and also to increased difficulty in gaining access to the game populations (Table I-71, Table I-73). The perception of less abundance is corroborated by ADF&G. The deer density in Unit 6 is believed to have peaked between 1986 and 1987. The number of deer killed by hunters increased through 1987 and declined thereafter. ADF&G reported that deer numbers in GMU 6 declined in 1988/89 for several reasons, including postnatal fawn mortality in 1988 caused by lengthy periods of rain between May and July of 1988, winter mortality due to persistent above-average snow depths, and human and aircraft disturbance following the *Exxon Valdez* oil spill. Severe winters further reduced the population between 1989-90 and 1990-91. In response to the population decline, the Alaska Board of Game reduced the bag limit for fall of 1991 from five deer to four, and delayed opening the antlerless deer season from September 15 to November 1 (ADF&G 1986 - 1993).

In all three years, participation and harvests of small game and furbearers were quite similar. In 1992, fewer households tried to harvest small game. Harvests ranged from 1,868.8 total pounds (0.8 pounds per capita) usable weight and 1,273.0 animals taken for fur, with a household mean of 1.6 individual furbearers in 1991, to 1,223.8 pounds (0.5 pounds per capita) usable weight and 1,147.3 animals, or 1.5 furbearers per household in 1992. The 1993 harvest resembled the 1991 harvest in both amount and participation rates (Table II-23, Table II-31 and Table II-40).

Marine mammals were used by very small percentages of the community in all three years. The percentage of households which used marine mammal products ranged from 4.9 percent in 1992 to 8.7 percent in 1993. The only marine mammal harvested during the three-year study in Cordova was harbor seal. Estimated harvests were 0.4 pounds per capita in 1991 (estimated harvest of 23 seals) and to 0.8 pounds per capita in 1993 (64 seals). No marine mammal harvesters were in the 1992 sample. The separate division study which specifically targeted marine mammal hunters for interviews for the 1992

and 1993 study years resulted in harvest estimates of 104 seals and 147 seals, respectively (Wolfe and Mishler 1994:C-74).

In 1993, though approximately the same percentage of households went bird hunting as in previous years, hunters were less successful. During the three-year study there was a downward trend in the harvest, with 1993 being the lowest per capita harvest ever documented (1.1 pounds per capita) (Table II-21, Table II-40).

Between 41.6 and 51.2 percent of households harvested marine invertebrates all three years. Thirty-nine percent to 43.9 percent went clam digging. Each year between 10.6 percent and 14.6 percent of households harvested crab. The marine invertebrate harvests were quite similar by weight all three years, ranging from 5.5 pounds per capita in 1991 to 4.6 pounds per capita in 1992, less than half of harvests documented in 1985 and 1988 (Table II-21).

In 1993, 85.6 percent of Cordova households picked a total of 22,112.8 pounds of plants and berries, almost twice that of 1991, and higher than any previously documented harvest, at 7.5 pounds usable weight per capita. The plant and berry harvest occupied the largest portion of the harvest to date, 5.8 percent (Table II-22).

Exchange Patterns

As was documented in all previous years, the practice of sharing wild resources was prevalent in Cordova in 1993. All households in Cordova reported using a wild resource, and 96.2 percent reported receiving a wild resource. The percent giving away a resource dropped back to 84.6 percent, similar to 1991. As in previous years, for all categories of resources, more households used them than harvested them. Some resources were harvested by few households, but were very widely distributed, as illustrated by the high percentage of households which used them or received them compared to the percent which harvested them. One such example is sablefish, which was harvested by 1.9 percent of households in 1993, but used by 24.0 percent and received by 23.1 percent of households. Lingcod, halibut, red rockfish, deer, moose, harbor seal, razor clams, king crab, Dungeness and Tanner crab, shrimp, and octopus were other highly desired and widely shared foods. Some resources, such as birds, were used by more households than harvested them, but, as shown by the percent which received them, were less widely distributed. Birds, furbearers, and some fish other than salmon were not widely distributed. Most resources in 1993 were not given away by more households than harvested them, which may be explained in part by the size of the harvest. Only crab in 1993 was given away by more households than harvested it (Table II-40).

DISCUSSION: CORDOVA AND THE *EXXON VALDEZ* OIL SPILL

Introduction

The purpose of this section is to summarize the study findings for evidence of the possible continuing effects of the *Exxon Valdez* oil spill on Cordova. Substantial research has taken place on this topic. For example, the report from the Oiled Mayor's Study (Impact Assessment Inc. 1990c:245-283) noted that while Cordova itself was not directly oiled, it suffered direct effects of the spill due to commercial fishing closures, participation in clean-up activities, community disruptions from an influx of new people seeking employment, and uncertainty about the potential consequences of the spill on natural resources. Early in the spill, many Cordova residents voluntarily contributed strong leadership and organizational skills, plus their detailed knowledge of Prince William Sound, to efforts to contain and cleanup the spill. These efforts were thwarted when Exxon and Veco "took over" the cleanup effort, and began paying $16.69/hour for cleanup work. Boat contracts were also quite lucrative. Divisions in the community developed as some Cordova residents felt compelled to earn money working on the spill cleanup, while others prided themselves on never accepting money from Exxon for their work.[3] Other impacts documented for the first post-spill year in Cordova by the Oiled Mayors study included effects on local government (increased workloads and stress), and economic effects related to increased costs of living and loss of income. Research conducted as part of the Social Indicators Study had similar findings (Reynolds 1993). Other studies conducted in 1989, 1990, and 1991 found strong evidence of increased social psychological stress among Cordova residents that could be linked to the spill and subsequent cleanup (Picou and Gill 1993, forthcoming).

Economic Patterns

As discussed above, in the three years of this study, per capita cash incomes in Cordova decreased markedly. Declines in commercial fishing income accounted for much of this decline, which was accompanied by declines in the percentage of jobs in Cordova provided by commercial fishing and the percentage of the community's total income provided by commercial fishing activities (Table II-13). As noted by Fried (1994:3):

> Vagaries in the fishing industry are nothing new for Cordovans. But three bad years in a row and little prospect that salmon prices will bounce back any time soon have created an economic environment of concern.

Among the proposed explanations for the poor pink salmon and herring runs in Prince William Sound, the oil spill figures highly among Cordova residents (e.g., O'Harra 1994). Although, so far, scientists have been unable to directly link the near collapse of these fisheries to the oil spill, they have

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[3] A lawsuit which erupted in May 1990 between members of the Cordova City Council over alleged violations of the Alaska Open Meetings Act also reflected divisions within the community about interactions with Exxon during the oil spill response (Reynolds 1993:393-412). The litigation resulted in a $1 million penalty against the city for violations of the act.

also been unable to eliminate the spill as a cause of the reduced returns (*Exxon Valdez* Oil Spill Trustee Council 1994:48-50).[4]

Changes in Harvests for Home Use

The study confirmed earlier findings which demonstrated the importance of harvests of wild resources for home use in Cordova. The vast majority of Cordova households used wild resources in the three years of the project. Most also participated in harvest activities and in sharing of resources.

Results from the social effects survey also supported these findings. About half or more of the respondents had used a wild food that day before the interview: 49.0 percent in 1991, 56.1 percent in 1992, and 52.4 percent in 1993 (Table II-48). This was generally in the mid-range among study communities, but notably higher than the other communities with a majority non-Native population (Fig. I-3).

Per capita harvest quantities declined over the three years of the study, from 189.2 pounds per person in 1991, to 163.5 pounds in 1992 and 127.8 pounds in 1993. The latter is by far the lowest of the five available harvest estimates for the community (Fig. II-8), and is also substantially below the average of the two prespill estimates of about 199.8 pounds per person. For salmon, other fish, land mammals, and birds, the 1993 harvest was lower than previously estimated levels (Fig. II-9). Compared to pre-spill estimates, especially notable were the relatively low marine invertebrate harvests in all three study years, and the notable drop in land mammal harvests (primarily deer) in 1993.

As noted in Chapter I, subsistence harvests dropped substantially in 1989, the year of the *Exxon Valdez* Oil Spill, compared to pre-spill norms, in most Alaska Native communities of Prince William Sound, lower Cook Inlet, and Kodiak Island. Comprehensive harvest data for Cordova for the spill year are not available to compare with the two pre-spill estimates. However, 40.8 percent of Cordova respondents to the Oiled Mayors survey said that the oil spill had affected their household's subsistence uses (IAI 1990c:297). This compares to 27.7 percent of respondents in Valdez, 30.0 percent in Seward, 35.5 percent in Chignik Bay, 43.7 percent in Kodiak, 65.9 percent in Akhiok, Karluk and Larsen Bay (combined), 84.0 percent in Chenega Bay and Tatitlek (combined), and 100 percent in Nanwalek (IAI 1990c:293-309). Reynolds' (1993:213-226) Eyak key respondents from the Social Indicators study in Cordova stressed reduced subsistence uses in 1989 due to fears of resource contamination and disruption of sharing networks. Reynolds (1993:418) conducted that:

> Because other areas of the Sound were oiled, Cordova Natives were not able to get the subsistence foods that they needed. Subsistence practices, including sharing, are integral to a way of life that connects Natives with their past and with each other, both in a spiritual sense and in terms of extending kin ties. Respondents describe their cultural identity as inclusive of the earth, wildlife, cultural practices, and people. The oil spill reportedly continues to threaten Native "life."

[4] It should be noted that in 1994, after the three years of fieldwork for this study had ended, the commercial harvest in the Prince William Sound Management Area was 40.3 million fish, the second highest on record. The commercial harvest of pink salmon totaled about 36.7 million fish, higher than the most recent 10-year average, but below the record runs of 1990 and 1991 (Donaldson 1994).

Although the overall level of resource harvests in Cordova in 1989 is unknown, by 1991, the estimated harvest of 189.4 pounds exceeded one pre-spill year's estimate (163.8 pounds per person in 1985) and was just slightly below the pre-spill average of 199.8 pounds per person. In 1991, about a third of Cordova respondents (37.1 percent) said that overall, their wild resource uses were lower than before the oil spill; this was a much lower percentage than Chenega Bay (100 percent), Tatitlek (85.7 percent), Nanwalek (57.7 percent), and Port Graham (50.0 percent), but very similar to Valdez (33.7 percent) and Kenai (37.5 percent) (Table I-58).

However, in 1993, subsistence harvests in Cordova dropped in 127.8 pounds per person, lower than either pre-spill estimate. Correspondingly, an increase occurred in the percentage of households which said their uses were lower than before the spill, 46.6 percent compared to 33.3 percent in 1991 (Fig. I-16). Of these, more than half (55.9 percent; 18.3 percent of all respondents) cited reasons related to the oil spill as the cause of their resource use declines (Table I-98). While this is a lower portion of the total population than in Chenega Bay, Tatitlek, Nanwalek, or Port Graham, this finding demonstrates that in 1993, the spill figured in many Cordovans' assessments of their resource uses more so than two years before. The largest proportion of these Cordova respondents cited spill-caused reductions in resource abundance as the cause of their lower uses. Others said that because of the spill, they no longer engage in commercial fishing, and have thereby lost their access to resources.

As discussed above, poor pink salmon and herring returns in 1992 and 1993, and declining prices in all three years, severely affected commercial fisheries in Cordova. These factors have influenced Cordova households' harvests of resources and their perceptions that the spill has reduced subsistence uses in the community. As shown in Table II-39, the percentage of the total harvest for home use in Cordova that was removed from commercial catches declined from 32.7 percent in 1991 to 22.9 percent in 1993. There was a corresponding decline in the amount of wild resources removed per capita, from 61.8 pounds in 1991 to 29.3 pound in 1993, and the percentage of households removing salmon (35.6 percent in 1991, 28.9 percent in 1993) and other fish (30.7 percent in 1991, 20.2 percent in 1993) from commercial catches. One explanation is that with declining commercial catches and prices, commercial fishermen have had to sell a larger portion of their shrinking harvests and reduce the amount retained for themselves and for sharing. Indeed, several households interviewed for 1993 offered this explanation for why their uses of fish had dropped compared to earlier years.

> It's harder to get fish from people these days. If you get fish you are lucky. People are getting money for their fish. Reds (from the Copper River) were not affected by the oil spill, and neither were silvers, but people need all the money they can get.
>
> We used to be offered a lot of fish, but now we only get a few steaks. There's less availability and less income.
>
> All of a sudden there's no fish. The seine fishery was so short and non-productive for the last three years after the spill. Because we weren't out there fishing as much, we didn't get fish for home.

> Since the spill, we have received less because people who give it haven't got enough to give from their commercial catch.
>
> It's (fish) not as easily attained. People used to just drop fish by. Fishermen do not stay out as long therefore they bring in less fish. They all need money.

There has also been less involvement in commercial fisheries, thereby reducing some households' access to resources. In 1993, one respondent commented that its uses of fish other than salmon had declined, because

> I am not working in the fishing industry any longer. I don't own a boat, which you need to go get bottom fish. Everyone's lifestyle changed because of the spill.

A third aspect is that commercial fishers have had to fish longer to meet their financial needs, thus reducing the time they have to harvest resources for home use. One household in 1993 reported that:

> We used more fish before the spill. Fish prices were so low in 1993 that we did not have the time to take away from our commercial fishing to go personal use fishing.

Since many commercial fishers in Cordova blame the spill for declines in pink salmon and herring fisheries, the spill is also cited as a reason for reduced subsistence uses. The decline of the commercial fisheries as a source of fish and marine invertebrates for home use and reduced deer and moose harvests account for most of the difference between the 1993 harvest and those of previous years.

It should be noted that a few respondents reported that because of the severe decline in Cordova's economy, they were using more subsistence foods than in the past. In 1993, one respondent said that he was "forced to use subsistence more because of the bad economy." Another said that, "I didn't make as much money fishing so we're eating more subsistence foods." A third reported that his resource uses had increased because he was not working as much and he had more time to hunt and fish.

Social Effects Questionnaire Findings

As discussed in Chapter I, oil contamination of subsistence foods was a major concern within communities of the oil spill region that, while diminished, has persisted. According to Reynolds' (1993:211-212) key respondent interviews for the Social Indicators study, Alaska Natives in Cordova expressed deep concerns about the safety of subsistence foods from Prince William Sound in 1989, and these concerns persisted at least into 1991.

In this study, the large majority of Cordova respondents to the Social Effects questionnaire (SEQ) did not express concerns about the safety of subsistence foods. Most respondents reported that

they used clams (92.7 percent in 1992; 79.6 percent in 1993; this question was not asked in 1991 and most of these felt that clams from their harvest areas were safe for children to eat: 78.1 percent in 1991, 76.3 percent in 1992, and 69.5 percent in 1993 (Table II-49). In 1993, six respondents said they believed clams were unsafe because of oil pollution, an increase from two in 1991 and one in 1992, but still just 7.3 percent of those respondents who used clams. This level of concern was moderate to low compared to other study communities; much higher levels of concern about the safety of clams were expressed at Chenega Bay, for example (Fig. I-4).

Few Cordova SEQ respondents reported that they used seal meat or oil. Of those who did, most felt they were safe to eat. However, two households in 1992 (50 percent of those who used seals) and one in 1993 (8.3 percent) said they believed oil contamination had rendered seals unsafe for human consumption (Table II-49).

Substantially less than half of the SEQ respondents in Cordova in all three study years said that they had been adequately informed about the safety of using subsistence foods, 40.8 percent in 1991, 33.3 percent in 1992, and 33.3 percent in 1993 (Table II-56). A number of reasons were given concerning why they felt inadequately informed, including receiving no information (range from 28.6 percent in 1991 to 40.0 percent in 1993), receiving incomplete information (from 15.0 percent in 1993 to 30.4 percent in 1992), and not trusting the information that was received (from 15.0 percent in 1993 to 21.7 percent in 1992). Overall, Cordova respondents' assessments of the adequacy of the information they received about food safety resembled more closely those of Chenega Bay, where only 19.0 percent to 28.6 percent said they were adequately informed, than Valdez, where from 53.3 percent to 75.0 percent of respondents said they had received adequate information (Fig. I-9).

For several key resources, the majority of Cordova respondents who offered an opinion stated that they believed that resource populations had declined since 1988, the year before the oil spill. Perhaps most striking were the findings regarding salmon (Table II-50). In the first study year, the largest percentage said that salmon numbers were about the same (32.6 percent), although 25.8 percent said salmon were down and 22.5 percent said numbers had increased. As noted above, in 1992 and 1993, pink salmon returns to Prince William Sound were far below forecasted levels. Correspondingly, 83.3 percent of the SEQ respondents in 1992 and 83.6 percent in 1993 reported that salmon numbers had decreased in comparison to 1988. Only 16.7 percent in 1992 and 12.3 percent in 1993 said numbers were above the same. Majorities of respondents who offered opinions also reported declines in all three study years for harbor seals, sea ducks, common murres, clams, and sea urchins. In contrast, in all study years, most respondents reported stability in numbers of moose, bears, and Dolly Varden.

Most Cordova households in all three study years reported that the oil spill had not affected children's participation in subsistence activities. The percentage of respondents who said "yes" to this question declined each year: 18.9 percent of the respondents in 1991, 14.3 percent in 1992, and 10.6 percent in 1993 (Table II-51). Much higher levels of impacts on children's participation in subsistence

uses were reported by respondents in Tatitlek, Chenega Bay, Nanwalek, Port Graham, and Ouzinkie (Fig. I-6).

According to Reynolds (1993:212-222), Alaska Natives in Cordova were especially impacted in the year after the spill because concerns about oil contamination disrupted resource sharing networks. Not only were primary harvesters in Cordova reluctant to harvest resources that might be poisoned, but the subsistence harvests of relatives and friends from other Prince William Sound communities, especially Chenega Bay and Tatitlek, who send foods to Cordova had been severely reduced or curtailed.

The percentage of Cordova residents who reported less sharing of wild resources since the year before the oil spill increased in each study year, from 29.2 percent in 1991, to 33.3 percent in 1992, to 35.4 percent in 1993 (Table II-52). This might reflect the reduced harvests documented in 1993 as well as reduced commercial harvests. Cordova's responses to this question were generally in the mid-range among study communities, less than responses for Chenega Bay, Nanwalek, or Tatitlek, but higher than Valdez or Kenai (Fig. I-7).

Only about 15 percent or fewer of the Cordova respondents had been born or raised in the community (15.2 percent in 1991, 14.6 percent in 1992, 13.6 percent in 1993). By far, most respondents said they had moved to Cordova for job opportunities (39.4 percent in 1991, 26.8 percent in 1992, 46.6 percent in 1993) (Table II-54). However, a very large portion of the SEQ respondents cited quality of life reasons, hunting and fishing opportunities, or the environmental qualities of the area as reasons why they continued to live in Cordova. In two out of the three study years, the beauty of the area was cited most often (96.0 percent in 1991, 90.2 percent in 1992, 95.1 percent in 1993), with the favorable size of the community generally cited second-most frequently (86.0 percent in 1991, 92.7 percent in 1992, 87.4 percent in 1993). Other reasons cited by about three quarters or more of the SEQ respondents in any study year included hunting and fishing opportunities (81.0 percent, 80.5 percent, 75.7 percent), job opportunities (75.0 percent, 68.3 percent, 64.1 percent), less crime (77.0 percent, 82.9 percent, 83.5 percent), necessary personal freedoms (84.0 percent, 78.0 percent, 81.6 percent), and recreational opportunities (81.0 percent, 70.7 percent, 72.8 percent). There also appeared to be a strong consensus that cost of living, the availability of services, educational opportunities, and the availability of stores were not reasons why people remained in Cordova (Table II-54). When asked to specify the primary reason they remained in Cordova, the most respondents cited either their jobs (17.0 percent in 1991, 24.4 percent in 1992, 20.4 percent in 1993) or the environmental qualities of the area (17.0 percent in 1991, 22.0 percent in 1992, 19.4 percent in 1993) (Table II-54).

Evidence of the value Cordova residents place on natural resources and their concerns about the future of these resources is provided in responses to the question concerning whether they were confident that they would be able to continue to use the places they now use for hunting and fishing in the future. In each year, a clear majority said "no": 59.8 percent in 1991, 53.7 percent in 1992, and 56.3 percent in 1993. The reasons most often given for their uncertainty included: increased regulatory

restrictions (25.4 percent in 1991, 43.5 percent in 1992, 34.5 percent in 1993); the impacts of timber harvesting (20.3 percent, 39.1 percent, 22.4 percent); building of a road to Cordova (18.6 percent, 34.8 percent, 13.8 percent); general vulnerability of the environment to damage (15.3 percent, 26.1 percent, 17.2 percent); human population growth (8.5 percent, 34.8 percent, 31.0 percent; and increased development (8.5 percent, 17.4 percent, 20.7 percent). In two of the three study years, the majority of respondents stated that they would not continue to live in Cordova if wild foods were unavailable (54.0 percent in 1991 and 58.5 percent in 1992; 47.1 percent gave this response in 1993) (Table II-54).

Perhaps most striking of all the results of the social effects questionnaire for Cordova were responses to the question concerning whether the respondent's satisfaction with living in the community had changed since the spill. In all three years, a large percentage of respondents said they liked living in Cordova less since the spill, including 45.2 percent in 1991 (the most common response), 45.2 percent in 1992, and 52.6 percent in 1993 (again the most common response) (Table II-54). In two of the three years, 1992 and 1993, Cordova had the largest percentage of respondents of any study community reporting increased dissatisfaction with their community since the spill. However, it is also notable that despite the increased level of dissatisfaction with living in Cordova since the spill, a large and increasing majority in all three study years said that they would not rather live in another community (59.0 percent in 1991, 68.3 percent in 1992, and 72.8 percent in 1993) (Table II-54). Further evidence of the strong level of commitment to the community is that the largest percentage of respondents in each study year said that they expected to live in Cordova when they were old (47.0 percent in 1991, 56.1 percent in 1992, and 53.4 percent in 1993).

The community most resembling Cordova in their assessment of dissatisfaction with life in their community was Chenega Bay (Fig. I-8), although by the third study year, a much higher percentage of Cordova respondents expressed dissatisfaction (52.6 percent, the highest of any community in any year) than even in Chenega Bay (30.8 percent), a community whose subsistence harvests areas lay directly in the path of the spill.

The reasons Cordova respondents gave for their dissatisfaction with life in their community are consistent with findings reported by Picou and Gill (1993; cf. Gill 1994, Picou and Gill forthcoming) regarding the continued social and psychological effects of the oil spill on Cordova residents. For example, the most commonly offered reasons in increased dissatisfaction were "more stress," a worsening financial situation, and increased dissension, conflicts, and violence in the community (Table II-54).

Given these findings, it is not surprising that Cordova respondents reported concerns about future outer continental shelf (OCS) development. Development is a major issue in Cordova, both because of the need for jobs, and because of the concern about its impacts on the environment and the quality of life in the community. The majority of Cordovans (58.3 percent) in the third year of the study were against the search for oil and the largest percentage of respondents were against it in 1992 (46.3 percent). (This question was not asked in 1991.) An even larger percentage of respondents in both

study years expressed opposition to the development and production of oil and gas resources: 51.2 percent in 1992 and 62.1 percent in 1993 (Table II-57). Among the reasons most frequently given for supporting OCS development were its benefits to the economy, and the need for energy. Over half of the Cordova respondents each year felt that OCS development would create more local jobs: 52.0 percent in 1991, 56.1 percent in 1992, and 51.5 percent in 1993. This was generally in the mid-range of community responses, but much less than Valdez or Kenai (Fig. I-15).

The main reasons Cordova respondents gave for being against OCS development included pollution concerns and impacts; adverse impacts on subsistence and commercial fishing; the need to explore alternative energy sources; potential damage to renewable resources; non-specific reasons that OCS development would lead to disasters; and the opinion that the technology needs improvement. In all three years, a large majority of Cordova respondents said that a large oil spill could not be contained and cleaned up (68.0 percent in 1991, 78.0 percent in 1992, 81.6 percent in 1993), while most of the rest said "maybe" and a very few said "yes" (9.0 percent in 1991, none in 1992 or 1993). There was less agreement about a small spill being contained and cleaned, although the most respondents in 1992 (39.0 percent) and 1993 (54.4 percent) said "no;" most of the other respondents said "maybe" or "don't know" (Table II-57).

The majority of Cordova respondents each year felt that OCS development would lead to decreases in populations of marine resources such as fish (54.0 percent in 1991, 61.0 percent in 1992, 63.1 percent in 1993), shellfish (61.0 percent in 1991, 53.7 percent in 1992, 64.1 percent in 1993) marine mammals (56.0 percent in 1991, 48.8 percent in 1992, 61.2 percent in 1993) and birds (52.0 percent, 48.8 percent in 1992, 54.4 percent in 1993). Respondents were less sure of the impacts to land mammals, responding about equally that they would decrease or not change (Table II-57).

CONCLUSIONS

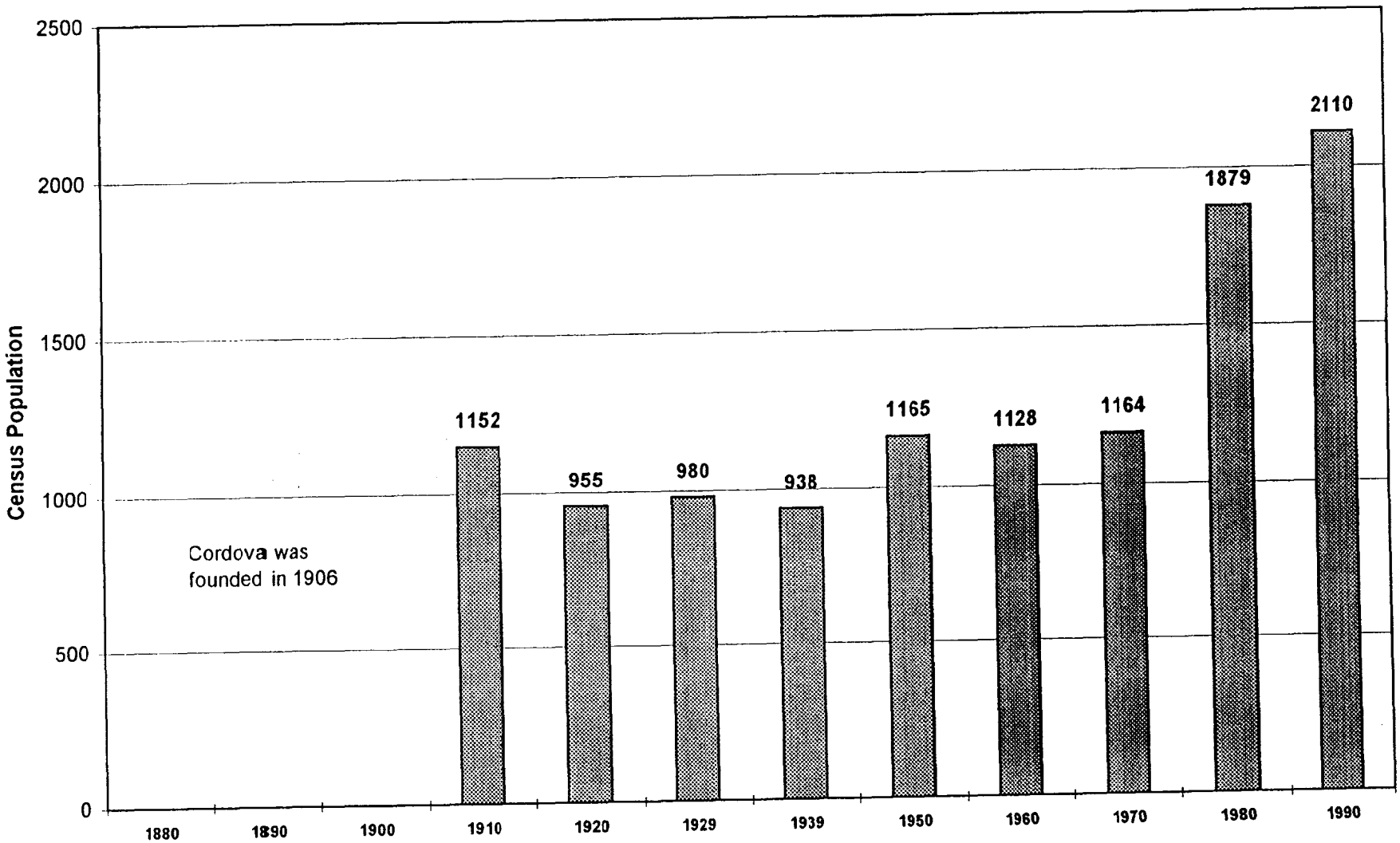
This study's findings were consistent with earlier research by the Division of Subsistence which demonstrated the importance of commercial and noncommercial harvests of natural resources in supporting Cordova's economy and way of life. Over the three years of the research, however, commercial fishing incomes, involvement in commercial fishing, and the contribution of commercial fisheries to home uses of wild resources in Cordova all declined. Harvests of wild resources for home use also dropped over the three years of the research. This harvest in 1993 was the lowest of the five years for which data are available. In 1993, about a fifth of Cordova's households blamed the *Exxon Valdez* oil spill for reduced subsistence uses. The largest proportion of households linked this decline to depressed commercial fisheries, the primary cause of which they believe is the spill. There have been less fisheries resources available to remove for home use, and most that are harvested need to be sold to make up for lowered prices and catches. Some households no longer fish commercially, thereby losing access to resources.

Cordova residents were not as likely as residents of the Alaska Native communities of Prince William Sound or lower Cook Inlet to point to the spill as the cause of reduced subsistence harvests, reduced sharing, or disruptions in the participation of children in subsistence activities.[5] However, the majority of Cordova residents interviewed in this study believed that since the spill, populations of many marine resources have declined. There is opposition within the community to future development of the oil and gas resources of the outer continental shelf, even though a majority of Cordova residents said that they thought such development will bring jobs. Most Cordova respondents also believed that such development will lead to further deterioration of the natural resources upon which Cordova's economy and way of life now depend.

In all three study years, the majority of interviewed Cordova residents said they like living in their community less now than before the spill. Many pointed to financial troubles, increased stress, and increased uncertainty about the future as reasons for their dissatisfaction. Most residents moved to Cordova both for jobs and because of the quality of the natural and social environment of the community. Consequently, it is not surprising that with the depressed commercial fisheries and suspicions about the continuing effects of the oil spill, the majority expressed opposition to further OCS development as well as uncertainty about their opportunities to hunt and fish in the future.

[5] The data analysis for this study did not investigate differences between Alaska Native and non-Native residents of Cordova in responses to these social effects questions. Given the findings from other research about the particular effects the spill had on Cordova's Alaska Native community (e.g. Reynolds 1993), additional analysis of the data from this study should be undertaken to discern any differences between subpopulations in Cordova.

Figure II-1. Cordova Census Population, 1880 - 1990



Sources: Rollins 1978; Alaska Department of Labor 1991

Table II-1. Sample Participation: Cordova 1991, 1992, and 1993

VARIABLE	1991 Social Indicators Panel	1991 Social Indicators Non-Panel*	1991 TOTAL HOUSEHOLD	1992 Social Effects Panel	1992 TOTAL HOUSEHOLDS	1993 Social Effects Panel	1993 Social Effects Non-Panel*	1993 TOTAL HOUSEHOLDS
Estimated Household Structures	55	825	880	784	784	44	991	1035
Non-Residential Structures	NA	7	7	NA	0	NA	6	6
Estimated Households	55	818	873	784	784	40	985	1025
Panel	71	NA	NA	62	NA	44	NA	NA
Interview Goal:	50	50	100	62	112	44	56	100
Households Interviewed	36	65	101	41	41	33	71	104
Failed to Contact/Unavailable	7	47	54	5	5	1	27	28
Refused	12	28	40	9	9	6	17	23
Vacant Residential Structures	NA	12	12	NA	0	NA	9	9
Seasonal Households**	0	0	0	0	0	0	0	0
Non-Resident Household ***	0	5	5	0	0	0	1	1
Invalid Households and Vacancies	0	17	17	0	0	0	10	10
Failed to Contact: HH Interviewed	0	NA	NA	0	NA	0	NA	NA
Panel Household Merged	2	NA	NA	0	NA	0	NA	NA
Panel Household Moved	11	NA	NA	7	NA	3	NA	NA
Panel Respondent Deceased	3	NA	NA	0	NA	1	NA	NA
Panel Disposition	71	NA	NA	62	NA	44	NA	NA
Total Households Attempted:	55	157	212	55	55	40	125	165
Refusal Rate:	25.00%	30.11%	28.37%	18.00%	18.00%	15.38%	19.32%	18.11%
Non-Perm. HH Rate ("Vacancy Rate"):	0.0%	10.8%	8.0%	0.0%	0.0%	0.0%	8.0%	6.1%
Interview Goal (Percentage)	72.0%	130.0%	101.0%	66.1%	36.6%	75.0%	126.8%	104.0%
Social Effects Surveys Completed	36	64	100	41	41	33	70	103
Total Permanent Households	55	729	784	784	784	40	906	946
Percentage Interviewed	65.45%	8.92%	12.88%	5.23%	5.23%	82.50%	7.84%	10.99%
Percentage of Total Households	7.02%	92.98%	100.00%	100.00%	100.00%	4.23%	95.77%	100.00%
Interview Weighting Factor	1.528	11.215	7.762	19.122	19.122	1.212	12.761	9.096

NOTES:

* Includes panel members who were not attempted to contact.

** Seasonal households are households which maintain a permanent domicile elsewhere where they spend the majority of their time.

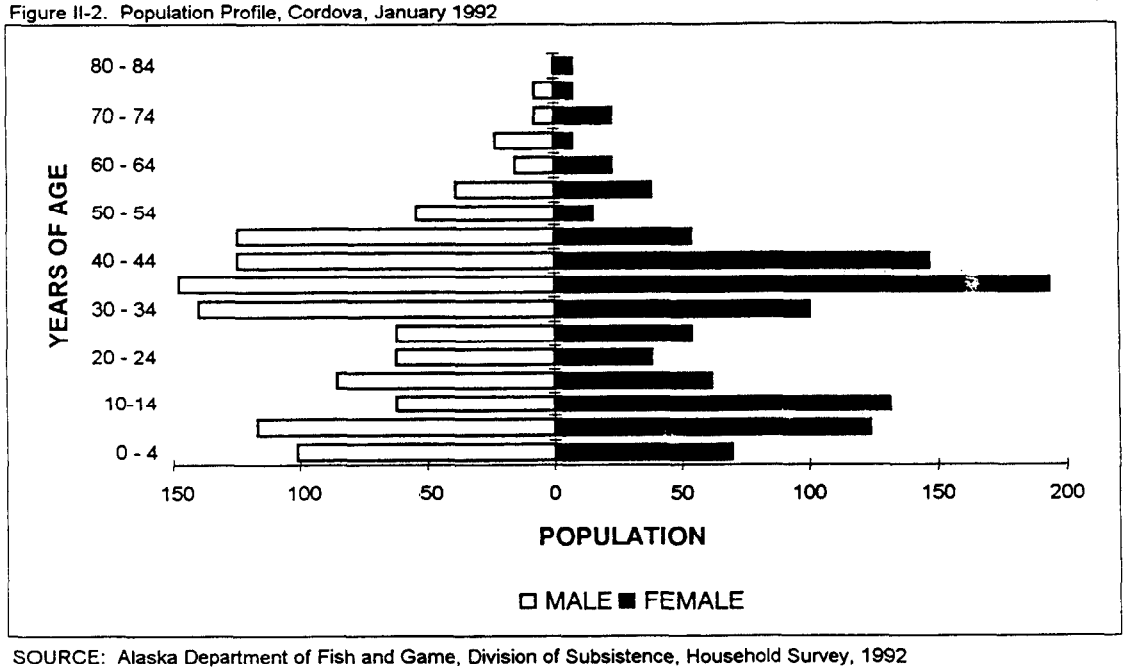
*** Non-resident households are households which were not present during the study year or which were resident less than the required number of months.

Table II-2 . Demographic Characteristics of Households, Cordova, January 1992, January 1993, and January 1994

Characteristics	1991	1992	1993
Sampled Households	101	41	104
Number of Households in the Community	784	784	946
Percentage of Households Sampled	12.88	5.23	10.99
Household Size			
Mean	2.92	3.41	3.13
Minimum	1	1	1
Maximum	7	11	8
Sample Population	295	140	326
Estimated Community Population	2,289.90	2,677.07	2,965.35
Age			
Mean	30.84	29.17	30.99
Minimum	0.32	0.53	0.05
Maximum	84.22	70.93	87.40
Median	33.862	30.99	34.79
Length of Residency - Population			
Mean	14.01	13.18	13.33
Minimum	0.32	0.53	0.05
Maximum	64.26	65.26	66.26
Length of Residency - Household Heads			
Mean	17.98	16.83	16.92
Minimum	0.5	2	0.5
Maximum	64.26	65.26	66.26
Sex			
Males			
Number	1,179.88	1,453.27	1,473.58
Percentage	51.53	54.29	49.69
Females			
Number	1,110.02	1,223.80	1,491.77
Percentage	48.47	45.71	50.31
Alaska Native			
Households (Either Head)			
Number	163.01	114.73	154.63
Percentage	20.79	14.63	16.35
Estimated Population			
Number	403.64	363.32	354.75
Percentage	17.63	13.57	11.96

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992, 1993, and 1994.

Figure II-2. Population Profile, Cordova, January 1992



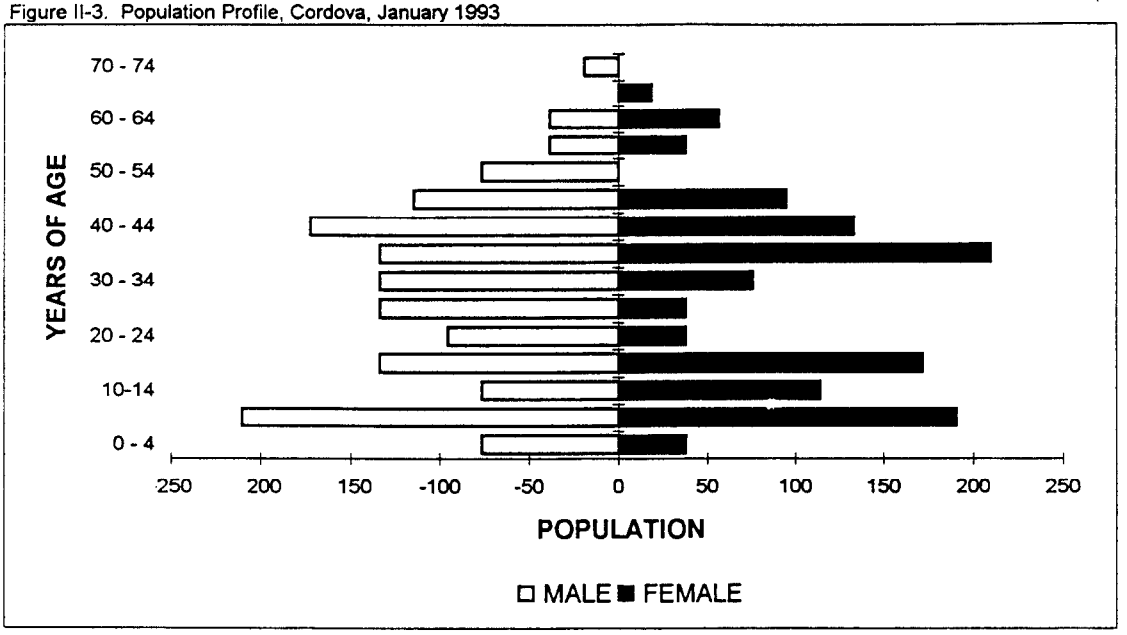
SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table II-3. Population Profile, Cordova, January 1992

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	100.91	8.55%	8.55%	69.86	6.29%	6.29%	170.77	7.46%	7.46%
5-9	116.44	9.87%	18.42%	124.20	11.19%	17.48%	240.63	10.51%	17.97%
10-14	62.10	5.26%	23.68%	131.96	11.89%	29.37%	194.06	8.47%	26.44%
15 - 19	85.39	7.24%	30.92%	62.10	5.59%	34.97%	147.49	6.44%	32.88%
20 - 24	62.10	5.26%	36.18%	38.81	3.50%	38.46%	100.91	4.41%	37.29%
25 - 29	62.10	5.26%	41.45%	54.34	4.90%	43.36%	116.44	5.08%	42.37%
30 - 34	139.72	11.84%	53.29%	100.91	9.09%	52.45%	240.63	10.51%	52.88%
35 - 39	147.49	12.50%	65.79%	194.06	17.48%	69.93%	341.54	14.92%	67.80%
40 - 44	124.20	10.53%	76.32%	147.49	13.29%	83.22%	271.68	11.86%	79.66%
45 - 49	124.20	10.53%	86.84%	54.34	4.90%	88.11%	178.53	7.80%	87.46%
50 - 54	54.34	4.61%	91.45%	15.52	1.40%	89.51%	69.86	3.05%	90.51%
55 - 59	38.81	3.29%	94.74%	38.81	3.50%	93.01%	77.62	3.39%	93.90%
60 - 64	15.52	1.32%	96.05%	23.29	2.10%	95.10%	38.81	1.69%	95.59%
65 - 69	23.29	1.97%	98.03%	7.76	0.70%	95.80%	31.05	1.36%	96.95%
70 - 74	7.76	0.66%	98.68%	23.29	2.10%	97.90%	31.05	1.36%	98.31%
75 - 79	7.76	0.66%	99.34%	7.76	0.70%	98.60%	15.52	0.68%	98.98%
80 - 84	0.00	0.00%	99.34%	7.76	0.70%	99.30%	7.76	0.34%	99.32%
85 - 89	0.00	0.00%	99.34%	0.00	0.00%	99.30%	0.00	0.00%	99.32%
90 - 94	0.00	0.00%	99.34%	0.00	0.00%	99.30%	0.00	0.00%	99.32%
95 - 99	0.00	0.00%	99.34%	0.00	0.00%	99.30%	0.00	0.00%	99.32%
100 - 104	0.00	0.00%	99.34%	0.00	0.00%	99.30%	0.00	0.00%	99.32%
Missing	7.76	0.66%	100.00%	7.76	0.70%	100.00%	15.52	0.68%	100.00%
TOTAL	1,179.88	51.53%		1,110.02	48.47%		2,289.90	100.00%	

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Figure II-3. Population Profile, Cordova, January 1993



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table II-4. Population Profile, Cordova, January 1993

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	76.49	5.26%	5.26%	38.24	3.13%	3.13%	114.73	4.29%	4.29%
5-9	210.34	14.47%	19.74%	191.22	15.63%	18.75%	401.56	15.00%	19.29%
10-14	76.49	5.26%	25.00%	114.73	9.38%	28.13%	191.22	7.14%	26.43%
15 - 19	133.85	9.21%	34.21%	172.10	14.06%	42.19%	305.95	11.43%	37.86%
20 - 24	95.61	6.58%	40.79%	38.24	3.13%	45.31%	133.85	5.00%	42.86%
25 - 29	133.85	9.21%	50.00%	38.24	3.13%	48.44%	172.10	6.43%	49.29%
30 - 34	133.85	9.21%	59.21%	76.49	6.25%	54.69%	210.34	7.86%	57.14%
35 - 39	133.85	9.21%	68.42%	210.34	17.19%	71.88%	344.20	12.86%	70.00%
40 - 44	172.10	11.84%	80.26%	133.85	10.94%	82.81%	305.95	11.43%	81.43%
45 - 49	114.73	7.89%	88.16%	95.61	7.81%	90.63%	210.34	7.86%	89.29%
50 - 54	76.49	5.26%	93.42%	0.00	0.00%	90.63%	76.49	2.86%	92.14%
55 - 59	38.24	2.63%	96.05%	38.24	3.13%	93.75%	76.49	2.86%	95.00%
60 - 64	38.24	2.63%	98.68%	57.37	4.69%	98.44%	95.61	3.57%	98.57%
65 - 69	0.00	0.00%	98.68%	19.12	1.56%	100.00%	19.12	0.71%	99.29%
70 - 74	19.12	1.32%	100.00%	0.00	0.00%	100.00%	19.12	0.71%	100.00%
75 - 79	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
80 - 84	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
85 - 89	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
90 - 94	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
95 - 99	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
100 - 104	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
Missing	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
TOTAL	1,453.27	54.29%		1,223.80	45.71%		2,677.07	100.00%	

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table II-5. Previous Residence of Cordova Residents, 1992

Place	Percent
No Previous Residence	29.3
Anchorage	6.4
Fairbanks	0.7
Healy	2.1
Juneau	3.6
Kodiak City	1.4
Nome	0.7
Palmer	5.0
Sheep Mountain	2.9
Old Chenega	0.7
Nelchina	2.9
Other U.S.	36.4
Foreign	5.0

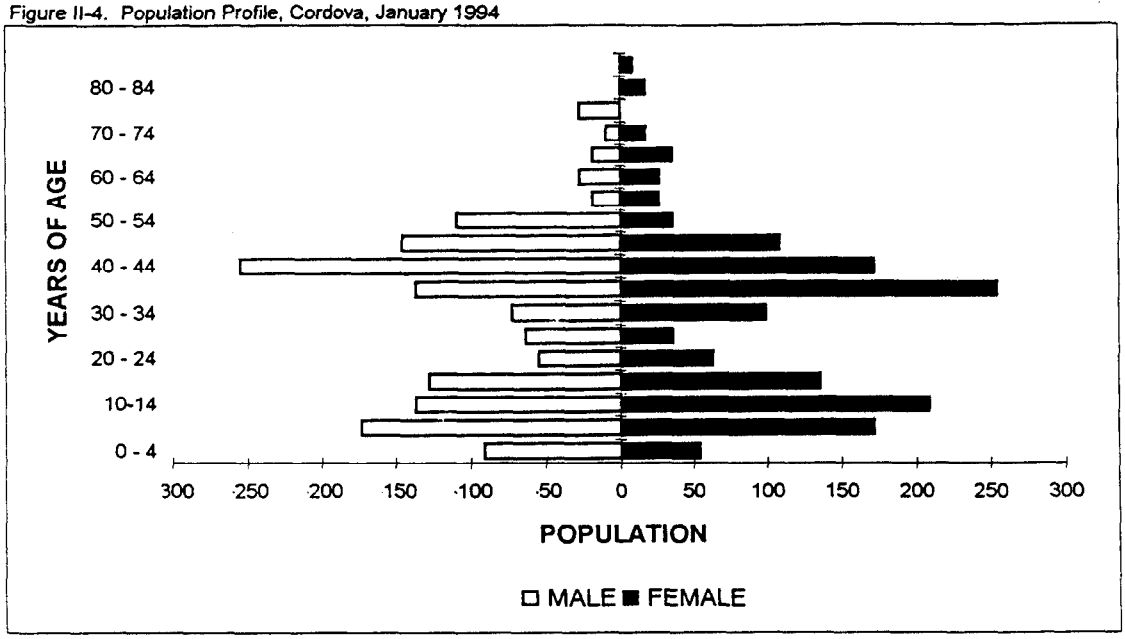
Source: Alaska Department of Fish and Game, Division Subsistence, Household Survey, 1992

Table II-6. Year Person Moved to Cordova

Year	Number	Percent	Cumulative Percent
1947	1	0.7	1.0
1958	1	0.7	2.0
1960	1	0.7	3.1
1963	2	1.4	5.1
1964	1	0.7	6.1
1966	2	1.4	8.2
1968	5	3.6	13.3
1969	1	0.7	14.3
1971	1	0.7	15.3
1973	2	1.4	17.3
1974	3	2.1	20.4
1975	4	2.9	24.5
1976	1	0.7	25.5
1977	4	2.9	29.6
1978	6	4.3	35.7
1979	4	2.9	39.8
1980	3	2.1	42.9
1982	1	0.7	43.9
1983	2	1.4	45.9
1985	1	0.7	46.9
1986	1	0.7	48.0
1987	2	1.4	50.0
1988	7	5.0	57.1
1989	3	2.1	60.2
1990	31	22.1	91.8
1991	8	5.7	100.0
No Previous Residence	41	29.3	

Source: Alaska Department of Fish and Game,
Division of Subsistence household Survey, 1993

Figure II-4. Population Profile, Cordova, January 1994



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table II-7. Population Profile, Cordova, January 1994

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	90.96	6.17%	6.17%	54.58	3.66%	3.66%	145.54	4.91%	4.91%
5-9	172.83	11.73%	17.90%	172.83	11.59%	15.24%	345.65	11.66%	16.56%
10-14	136.44	9.26%	27.16%	209.21	14.02%	29.27%	345.65	11.66%	28.22%
15 - 19	127.35	8.64%	35.80%	136.44	9.15%	38.41%	263.79	8.90%	37.12%
20 - 24	54.58	3.70%	39.51%	63.67	4.27%	42.68%	118.25	3.99%	41.10%
25 - 29	63.67	4.32%	43.83%	36.38	2.44%	45.12%	100.06	3.37%	44.48%
30 - 34	72.77	4.94%	48.77%	100.06	6.71%	51.83%	172.83	5.83%	50.31%
35 - 39	136.44	9.26%	58.02%	254.69	17.07%	68.90%	391.13	13.19%	63.50%
40 - 44	254.69	17.28%	75.31%	172.83	11.59%	80.49%	427.52	14.42%	77.91%
45 - 49	145.54	9.88%	85.19%	109.15	7.32%	87.80%	254.69	8.59%	86.50%
50 - 54	109.15	7.41%	92.59%	36.38	2.44%	90.24%	145.54	4.91%	91.41%
55 - 59	18.19	1.23%	93.83%	27.29	1.83%	92.07%	45.48	1.53%	92.94%
60 - 64	27.29	1.85%	95.68%	27.29	1.83%	93.90%	54.58	1.84%	94.79%
65 - 69	18.19	1.23%	96.91%	36.38	2.44%	96.34%	54.58	1.84%	96.63%
70 - 74	9.10	0.62%	97.53%	18.19	1.22%	97.56%	27.29	0.92%	97.55%
75 - 79	27.29	1.85%	99.38%	0.00	0.00%	97.56%	27.29	0.92%	98.47%
80 - 84	0.00	0.00%	99.38%	18.19	1.22%	98.78%	18.19	0.61%	99.08%
85 - 89	0.00	0.00%	99.38%	9.10	0.61%	99.39%	9.10	0.31%	99.39%
90 - 94	0.00	0.00%	99.38%	0.00	0.00%	99.39%	0.00	0.00%	99.39%
95 - 99	0.00	0.00%	99.38%	0.00	0.00%	99.39%	0.00	0.00%	99.39%
100 - 104	0.00	0.00%	99.38%	0.00	0.00%	99.39%	0.00	0.00%	99.39%
Missing	9.10	0.62%	100.00%	9.10	0.61%	100.00%	18.19	0.61%	100.00%
TOTAL	1,473.58	49.69%		1,491.77	50.31%		2,965.35	100.00%	

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table II-8. Employment Characteristics, Cordova, 1991, 1992, and 1993

Characteristics		1991	1992	1993
ADULTS				
Total		1,606.81	1,893.07	2,055.73
Employed				
	Number	1,443.80	1,548.88	1,791.94
	Percentage	89.86	81.82	87.17
Jobs				
	Number	2,305.43	2,696.20	3,129.08
	Mean	1.60	1.74	1.75
	Minimum	1	1	1
	Maximum	5	5	8
Months Employed				
	Mean	9.59	9.52	9.72
	Minimum	1	2	1
	Maximum	12	12	12
	Year-Round	44.62	48.15	49.75
HOUSEHOLDS				
Total		784.00	784.00	946.00
Employed				
	Number	760.71	745.76	909.62
	Percentage	97.03	95.12	96.15
Jobs per Employed Household				
	Mean	3.03	3.62	3.44
	Minimum	1	1	1
	Maximum	8	9	10
Employed Adults				
	Mean	1.90	2.08	1.97
	Minimum	1	1	1
	Maximum	4	7	5

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992, 1993, and 1994.

Table II-9. Community, Household, and Per Capita Income, All Sources and by Employer Type, Cordova, 1991

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$47,024,146.13	$59,979.78	$20,535.45
Earned Income	$41,183,130.09	$52,529.50	$17,984.68
Agriculture, Forestry, and Fishing	12,910,621.21	16,467.63	5,638.07
Agriculture	23,287.13	29.70	10.17
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	12,887,334.08	16,437.93	5,627.90
Hatchery/Enhancement	465,742.57	594.06	203.39
Commercial Fishing	12,413,829.13	15,833.97	5,421.12
Hunting/Trapping	7,762.38	9.90	3.39
Mining	0.00	0.00	0.00
Construction	2,754,673.27	3,513.61	1,202.97
Manufacturing	3,090,974.34	3,942.57	1,349.83
Cannery	2,088,075.33	2,663.36	911.86
Other Manufacturing	94,700.99	120.79	41.36
Logging/Timber	908,198.02	1,158.42	396.61
Transportation, Communications, and Utilities	4,552,459.01	5,806.71	1,988.06
Trade	2,963,650.90	3,780.17	1,294.23
Wholesale	AMT UNK	AMT UNK	AMT UNK
Retail	2,963,650.90	3,780.17	1,294.23
Finance, Insurance, and Real Estate	670,669.31	855.45	292.88
Services	3,737,436.67	4,767.14	1,632.14
Government	10,502,645.38	13,396.23	4,586.51
Federal	1,159,699.01	1,479.21	506.44
State	4,036,527.76	5,148.63	1,762.75
Local	5,306,418.61	6,768.39	2,317.31
Local Government	3,201,650.30	4,083.74	1,398.16
Local Education	2,104,768.32	2,684.65	919.15
Unknown	0.00	0.00	0.00
Other Income	$5,841,016.04	$7,450.28	$2,550.77

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table II-10. Community, Household, and Per Capita Other Income by Source, Cordova, 1991

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$5,841,016.04	$7,450.28	$2,550.77
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	0.99	76,474.93	97.54	33.40
Adult Public Assistance	1.98	59,801.35	76.28	26.12
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	9.90	1,006,995.82	1,284.43	439.76
Longevity Bonus	7.92	197,940.59	252.48	86.44
Social Security	8.91	410,984.55	524.21	179.48
Workman's Comp./Insurance	3.96	155,363.96	198.17	67.85
Energy Assistance	18.81	52,754.30	67.29	23.04
Supplemental Security Income	1.98	52,256.32	66.65	22.82
Food Stamps	3.96	17,936.26	22.88	7.83
Unemployment	4.95	47,020.59	59.98	20.53
Native Corporation Dividend	14.85	113,372.49	144.61	49.51
Dividend/Interest	30.69	1,029,740.20	1,313.44	449.69
Child Support	0.00	0.00	0.00	0.00
Rental Income	0.00	0.00	0.00	0.00
Veteran Disability	0.00	0.00	0.00	0.00
Equipment Leasing	0.00	0.00	0.00	0.00
Rental Assistance	0.00	0.00	0.00	0.00
Fishing Permit Leasing	0.00	0.00	0.00	0.00
Per Diem	0.00	0.00	0.00	0.00
Disability	0.00	0.00	0.00	0.00
Alaska Permanent Fund Dividend	89.11	1,884,673.90	2,403.92	823.04
Weatherization	0.00	0.00	0.00	0.00
Veteran's Assistance	0.00	0.00	0.00	0.00
Investments/Stocks/Bonds	0.00	0.00	0.00	0.00
Bureau of Indian Affairs Grants	0.00	0.00	0.00	0.00
Housing Allowances/Off-Base Allowances	0.00	0.00	0.00	0.00
Women, Infants, and Children Program	0.00	0.00	0.00	0.00
General Assistance Grant	0.00	0.00	0.00	0.00
Foster Care	0.00	0.00	0.00	0.00
Inheritance	0.00	0.00	0.00	0.00
Contest Winnings	0.00	0.00	0.00	0.00
Capital Gains	0.00	0.00	0.00	0.00
ASRC Elder Trust	0.00	0.00	0.00	0.00
Other	9.90	735,700.77	938.39	321.28

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table II-11. Subsistence Equipment Expenses and Use, Cordova, 1991

Sampled Households = 101
Community Households = 784

Equipment Type	Equipment Count		Equipment Cost			Use of Equipment for Subsistence			HH Sharing of Equipment	
	Total.	HH Mean	Replacement HH Mean	Annual Fuel HH Mean	Annual Cost HH Mean	% of Cost	Cost Total	Cost HH Mean	% Borrowing	% Lending
All Equipment			$57,886.57	$372.95	$2,965.17	13.74	$6,597,523.64	$8,415.21	74.26	79.21
Skiff with outboard	318.26	0.41	$1,125.47		$63.80	56.62	$537,321.14	$685.36	32.67	17.82
Outboard Motor	923.72	1.18	$334.65	$13.26	$16.63	65.92	$188,402.42	$240.31	14.85	3.96
Boats with inboard	341.54	0.44	$38,276.10	$195.86	$2,009.76	10.23	$3,247,640.65	$4,142.40	35.64	11.88
Airboat	7.76	0.01	$148.51	$3.96	$0.00	100.00	$119,540.59	$152.48	0.00	0.99
ATV/Motorcycle	93.15	0.12	$178.22	$2.51	$2.39	57.69	$82,829.21	$105.65	2.97	3.96
Snowmachine/snowmobile	31.05	0.04	$113.86	$2.67	$3.17	62.08	$58,256.63	$74.31	1.98	1.98
Airplane	38.81	0.05	$1,782.18	$17.95	$69.31	23.41	$343,145.93	$437.69	16.83	0.99
Highway vehicle	13,910.18	17.74	$9,124.75	$113.40	$405.52	12.42	$938,816.42	$1,197.47	28.71	20.79
Tackle			$574.59		$45.34	89.62	$435,585.64	$555.59	18.81	45.54
Pots	954.77	1.22	$58.92		$1.16	75.26	$35,451.90	$45.22	12.87	4.95
Fishing Nets	434.69	0.55	$1,377.31		$174.44	12.57	$152,941.80	$195.08	7.92	8.91
Guns	2,592.63	3.31	$1,711.52				$1,341,835.18	$1,711.52	11.88	22.77
Traps	3,314.53	4.23	$42.57				$33,378.22	$42.57	4.95	5.94
Ammunition					$79.58		$63,706.52	$81.26	4.95	6.93
Cabins	54.34	0.07	$1,108.91		$0.00	34.02	$295,746.53	$377.23	12.87	0.99
Miscellaneous Camping Equipment			$1,073.11				$842,869.86	$1,075.09	12.87	16.83
Fishing/Hunting Camps	232.87	0.30	$122.90			76.27	$73,489.52	$93.74	6.93	13.86
Freezer	776.24	0.99	$532.56				$417,530.46	$532.56	24.75	31.68
Miscellaneous freezing supplies					$42.46		$33,989.94	$43.35	7.92	5.94
Canner	263.92	0.34	$53.67				$42,077.43	$53.67	23.76	14.85
Miscellaneous canning supplies					$18.29		$14,458.20	$18.44	10.89	3.96
Vacuum sealer/Sealer	225.11	0.29	$77.52				$60,779.41	$77.52	18.81	14.85
Miscellaneous sealer supplies					$18.77		$14,870.01	$18.97	11.88	6.93
Smoke house/dry rack	240.63	0.31	$55.40				$43,434.38	$55.40	23.76	17.82
Miscellaneous smoker supplies					$12.47		$9,776.25	$12.47	10.89	11.88
Miscellaneous processing equipment	54.34	0.07	$13.00				$10,265.74	$13.09	1.98	0.99

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992.

Figure II-5. Employment by Industry, Cordova, 1991

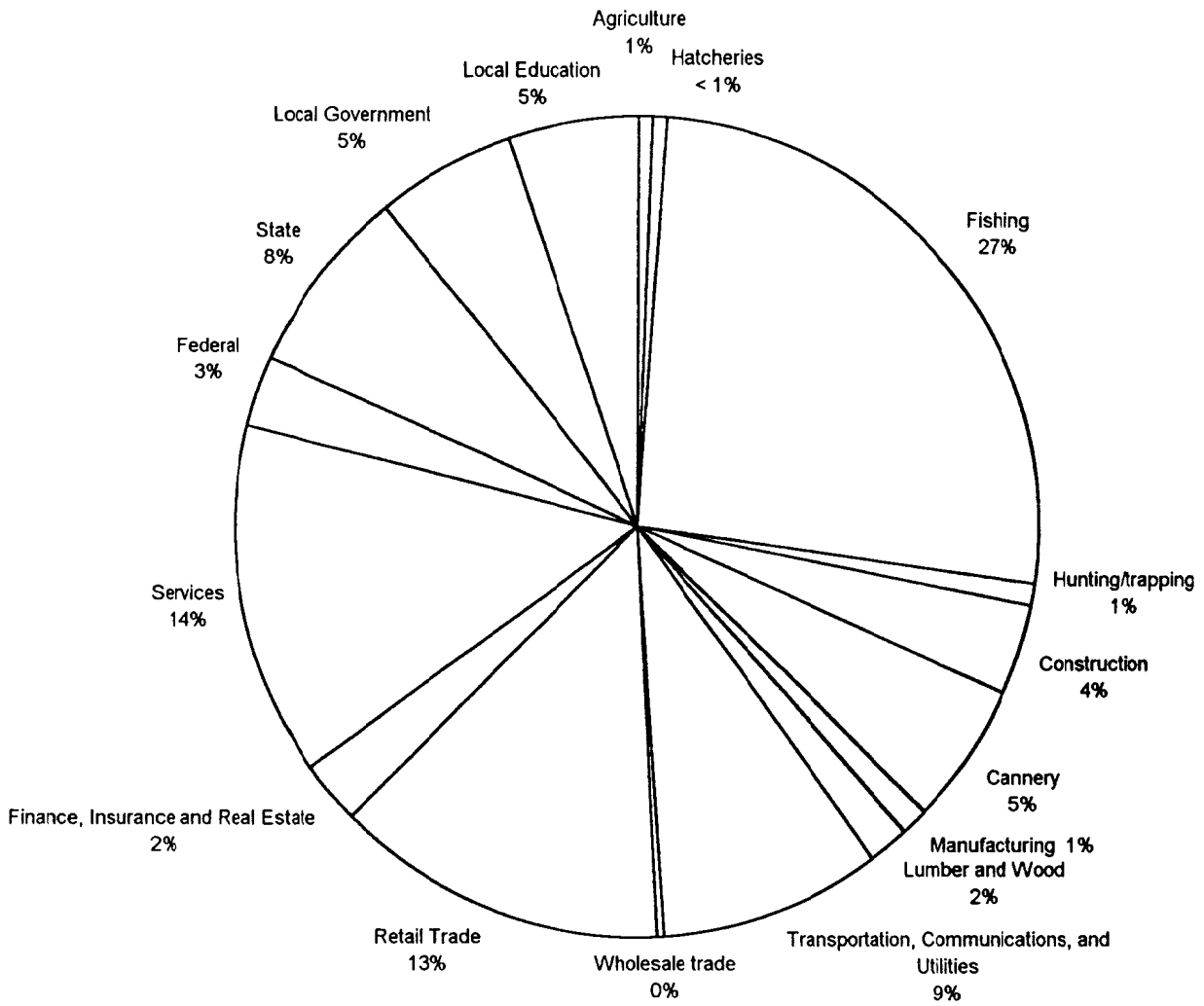


Table II-12. Number of Commercial Fisheries Permits Owned by Cordova Residents, 1991, 1992, and 1993

Type of Permit	Number of Permits		
	1991	1992	1993
Abalone	8	4	2
Halibut	208	166	122
Sablefish	60	48	39
Dungeness	15	7	8
Herring Roe	82	83	76
Herring Food/Bait	8	9	8
King Crab	12	7	5
Herring Spawn on Kelp	176	235	178
Miscellaneous Finfish	98	103	61
Octopus/Squid	2	6	3
Shrimp Pot	15	6	6
Clam Shovel	9	3	3
Salmon	428	426	426
Tanner Crab	10	9	7
Rockfish	6	1	0
Sea Cucumber	8	8	7
Total Permits	1145	1121	951

Source: Alaska Commerical Fisheries Entry Commision Special Reports, 8/14/93 and 11/21/94

Table II-13. Changes in Cash Incomes and Commercial Fishing Employment, Cordova, 1985, 1988, 1991, 1992, and 1993

	1985	1988	1991	1992	1993
Commercial Fishing					
Percentage of Total Jobs	29.0%	31.6%	27.0%	22.0%	18.0%
Percentage of Total Income	NA	54.4%	26.4%	16.9%	11.1%
Fishing Income per Household	NA	$35,453	$15,834	$9,010	$6,114
Fishing Income per Person	NA	$11,976	$5,421	$2,639	$1,950
Total Income					
Per Capita Income, All Sources	NA	$22,022	$20,535	$15,621	$17,546
Mean Household Income, All Sources	NA	$65,193	$59,980	$53,340	$55,001
Mean Earned Household Income	NA	$60,512	$52,530	$46,577	$44,620
Percentage of Income from Sources Other Than Jobs	NA	7.2%	12.4%	12.7%	18.9%

Sources: Stratton 1989; Stratton 1992; Household Surveys, ADF&G Division of Subsistence 1992, 1993, and 1994

Table II-14. Community, Household, and Per Capita Income, All Sources and by Employer Type, Cordova, 1992

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$41,818,604.62	$53,340.06	$15,621.02
Earned Income	$36,516,651.64	$46,577.36	$13,640.51
Agriculture, Forestry, and Fishing	7,063,489.43	9,009.55	2,638.51
Agriculture	0.00	0.00	0.00
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	7,063,489.43	9,009.55	2,638.51
Hatchery/Enhancement	0.00	0.00	0.00
Commercial Fishing	7,063,489.43	9,009.55	2,638.51
Hunting/Trapping	0.00	0.00	0.00
Mining	0.00	0.00	0.00
Construction	147,239.02	187.80	55.00
Manufacturing	5,940,090.73	7,576.65	2,218.88
Cannery	3,430,334.63	4,375.43	1,281.38
Other Manufacturing	129,073.17	164.63	48.21
Logging/Timber	2,380,682.93	3,036.59	889.29
Transportation, Communications, and Utilities	3,748,106.41	4,780.75	1,400.08
Trade	936,975.61	1,195.12	350.00
Wholesale	76,487.80	97.56	28.57
Retail	860,487.80	1,097.56	321.43
Finance, Insurance, and Real Estate	2,141,658.54	2,731.71	800.00
Services	4,783,356.10	6,101.22	1,786.79
Government	11,755,735.80	14,994.56	4,391.26
Federal	2,642,653.66	3,370.73	987.14
State	4,366,535.80	5,569.56	1,631.09
Local	4,746,546.34	6,054.27	1,773.04
Local Government	2,604,887.80	3,322.56	973.04
Local Education	2,141,658.54	2,731.71	800.00
Unknown	0.00	0.00	0.00
Other Income	$5,301,952.98	$6,762.70	$1,980.50

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table II-15. Community, Household, and Per Capita Other Income by Source, Cordova, 1992

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$5,301,952.98	$6,762.70	$1,980.50
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	2.44	211,565.27	269.85	79.03
Adult Public Assistance	2.44	85,819.32	109.46	32.06
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	9.76	1,279,488.00	1,632.00	477.94
Longevity Bonus	0.00	0.00	0.00	0.00
Social Security	7.32	368,212.29	469.66	137.54
Workman's Comp./Insurance	0.00	0.00	0.00	0.00
Energy Assistance	9.76	86,565.07	110.41	32.34
Supplemental Security Income	2.44	99,587.12	127.02	37.20
Food Stamps	2.44	4,971.71	6.34	1.86
Unemployment	7.32	83,180.49	106.10	31.07
Native Corporation Dividend	12.20	55,405.85	70.67	20.70
Dividend/Interest	14.63	229,463.41	292.68	85.71
Child Support	2.44	68,839.02	87.80	25.71
Rental Income	12.20	749,580.49	956.10	280.00
Veteran Disability	0.00	0.00	0.00	0.00
Equipment Leasing	0.00	0.00	0.00	0.00
Rental Assistance	0.00	0.00	0.00	0.00
Fishing Permit Leasing	0.00	0.00	0.00	0.00
Per Diem	0.00	0.00	0.00	0.00
Disability	0.00	0.00	0.00	0.00
Alaska Permanent Fund Dividend	85.37	1,979,274.93	2,524.59	739.34
Weatherization	0.00	0.00	0.00	0.00
Veteran's Assistance	0.00	0.00	0.00	0.00
Investments/Stocks/Bonds	0.00	0.00	0.00	0.00
Bureau of Indian Affairs Grants	0.00	0.00	0.00	0.00
Housing Allowances/Off-Base Allowances	0.00	0.00	0.00	0.00
Women, Infants, and Children Program	0.00	0.00	0.00	0.00
General Assistance Grant	0.00	0.00	0.00	0.00
Foster Care	0.00	0.00	0.00	0.00
Inheritance	0.00	0.00	0.00	0.00
Contest Winnings	0.00	0.00	0.00	0.00
Capital Gains	0.00	0.00	0.00	0.00
ASRC Elder Trust	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Figure II-6. Employment by Industry, Cordova, 1992

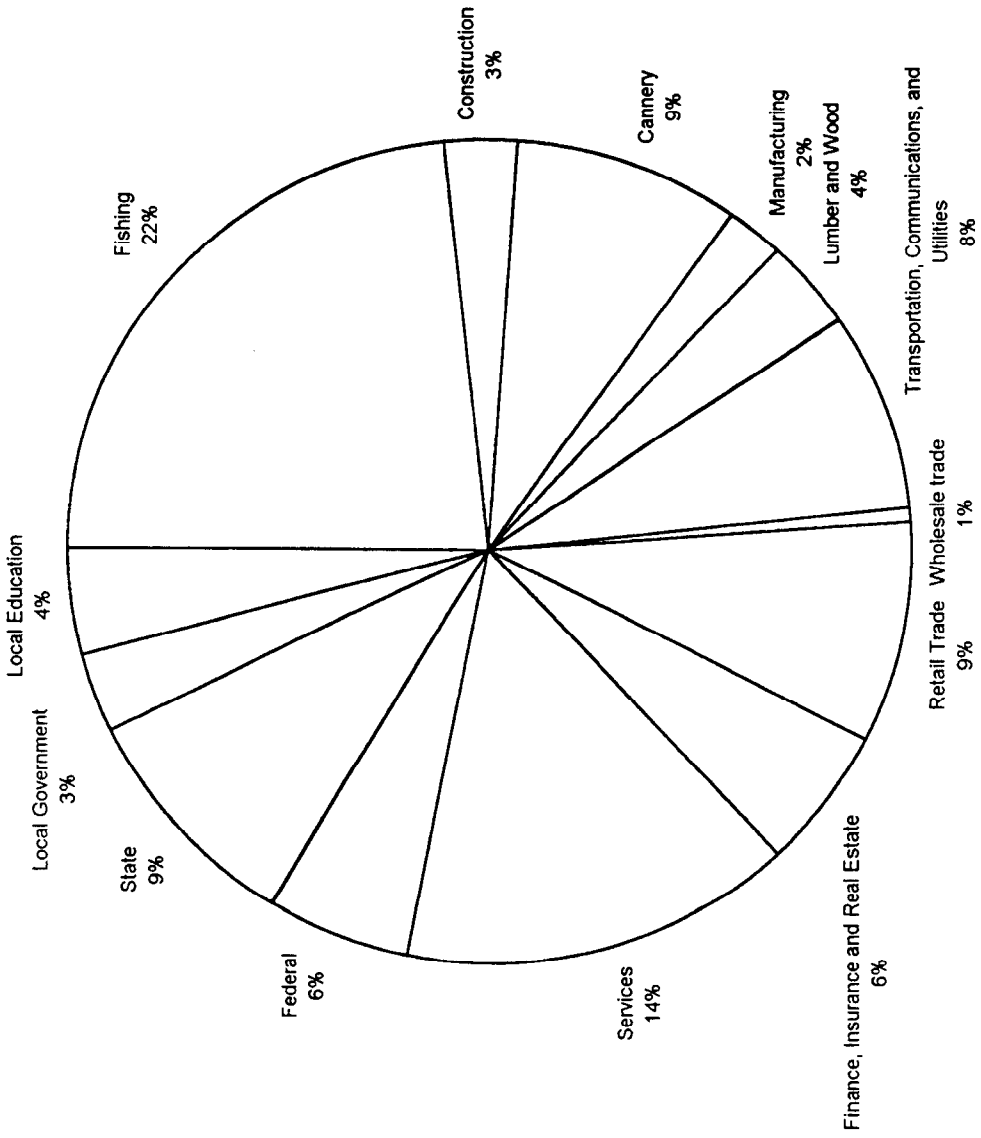


Table II-16. Community, Household, and Per Capita Income, All Sources and by Employer Type, Cordova, 1993

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$52,030,491.25	$55,000.52	$17,546.18
Earned Income	$42,210,956.84	$44,620.46	$14,234.75
Agriculture, Forestry, and Fishing	6,535,481.79	6,908.54	2,203.95
Agriculture	0.00	0.00	0.00
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	6,535,481.79	6,908.54	2,203.95
Hatchery/Enhancement	736,060.77	778.08	248.22
Commercial Fishing	5,783,502.76	6,113.64	1,950.36
Hunting/Trapping	15,918.27	16.83	5.37
Mining	0.00	0.00	0.00
Construction	1,349,778.27	1,426.83	455.18
Manufacturing	5,056,888.48	5,345.55	1,705.33
Cannery	2,766,476.94	2,924.39	932.94
Other Manufacturing	311,088.46	328.85	104.91
Logging/Timber	1,979,323.08	2,092.31	667.48
Transportation, Communications, and Utilities	6,193,038.38	6,546.55	2,088.47
Trade	3,064,990.96	3,239.95	1,033.60
Wholesale	60,944.23	64.42	20.55
Retail	3,004,046.73	3,175.53	1,013.05
Finance, Insurance, and Real Estate	820,473.08	867.31	276.69
Services	5,637,240.81	5,959.03	1,901.04
Government	13,553,065.07	14,326.71	4,570.48
Federal	1,361,694.23	1,439.42	459.20
State	4,716,715.57	4,985.96	1,590.61
Local	7,474,655.27	7,901.33	2,520.67
Local Government	4,992,969.81	5,277.98	1,683.77
Local Education	2,481,685.46	2,623.35	836.90
Unknown	0.00	0.00	0.00
Other Income	$9,819,534.40	$10,380.06	$3,311.43

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table II-17. Community, Household, and Per Capita Other Income by Source, Cordova, 1993

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$9,819,534.40	$10,380.06	$3,311.43
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	2.88	227,149.15	240.12	76.60
Adult Public Assistance	3.85	151,651.08	160.31	51.14
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	10.58	1,421,386.22	1,502.52	479.33
Longevity Bonus	12.50	354,750.00	375.00	119.63
Social Security	14.42	1,063,187.70	1,123.88	358.54
Workman's Comp./Insurance	1.92	2,001.15	2.12	0.67
Energy Assistance	6.73	22,858.63	24.16	7.71
Supplemental Security Income	3.85	267,426.92	282.69	90.18
Food Stamps	3.85	37,840.00	40.00	12.76
Unemployment	15.38	396,291.53	418.91	133.64
Native Corporation Dividend	10.58	930,676.62	983.80	313.85
Dividend/Interest	44.23	862,097.99	911.31	290.72
Child Support	2.88	64,218.85	67.88	21.66
Rental Income	4.81	853,219.23	901.92	287.73
Veteran Disability	0.00	0.00	0.00	0.00
Equipment Leasing	0.00	0.00	0.00	0.00
Rental Assistance	0.00	0.00	0.00	0.00
Fishing Permit Leasing	0.00	0.00	0.00	0.00
Per Diem	0.00	0.00	0.00	0.00
Disability	0.00	0.00	0.00	0.00
Alaska Permanent Fund Dividend	85.58	2,366,137.02	2,501.20	797.93
Weatherization	0.00	0.00	0.00	0.00
Veteran's Assistance	0.00	0.00	0.00	0.00
Investments/Stocks/Bonds	0.00	0.00	0.00	0.00
Bureau of Indian Affairs Grants	0.00	0.00	0.00	0.00
General Assistance Grant	0.00	0.00	0.00	0.00
Foster Care	0.00	0.00	0.00	0.00
Inheritance	0.00	0.00	0.00	0.00
Contest Winnings	0.00	0.00	0.00	0.00
Capital Gains	3.85	705,861.54	746.15	238.04
ASRC Elder Trust	0.00	0.00	0.00	0.00
Supplemental Union Benefits	0.00	0.00	0.00	0.00
Gifts	0.96	90,961.54	96.15	30.67
Medicare/Medicaid	0.96	1,819.23	1.92	0.61
Other	0.96	AMT UNK	AMT UNK	AMT UNK

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Figure II-7. Employment by Industry, Cordova, 1993

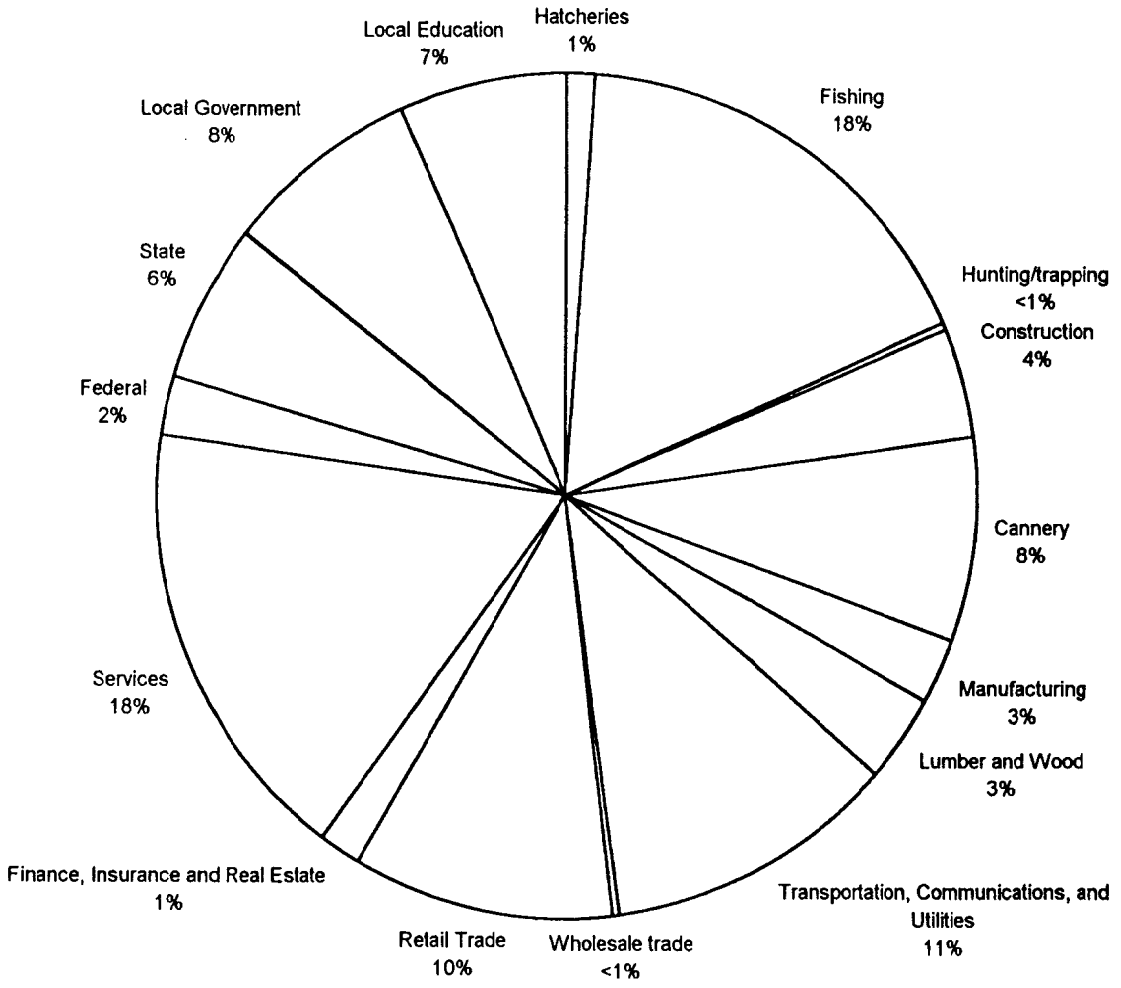


Table II-18. Characteristics of Resource Harvest and Use, Cordova, 1991, 1992, and 1993

Study Year	1991	1992	1993
Mean Number Of Resources Used Per Household	12.46	13.78	14.37
Minimum	0	5	2
Maximum	29	34	36
95 % Confidence Limit (+/-)	9.45	15.40	9.35
Median	11	12	13
Mean Number Of Resources Attempted To Harvest Per Household	9.35	9.66	9.24
Minimum	0	0	0
Maximum	26	23	33
95 % Confidence Limit (+/-)	11.93	18.27	13.15
Median	8	9	8
Mean Number Of Resources Harvested Per Household	8.50	8.80	7.68
Minimum	0	0	0
Maximum	23	22	32
95 % Confidence Limit (+/-)	12.72	18.97	14.33
Median	7	8	6.5
Mean Number Of Resources Received Per Household	5.49	7.29	8.88
Minimum	0	0	0
Maximum	24	22	25
95 % Confidence Limit (+/-)	14.35	22.06	12.70
Median	5	6	8
Mean Number Of Resources Given Away Per Household	4.05	5.29	4.93
Minimum	0	0	0
Maximum	15	20	26
95 % Confidence Limit (+/-)	14.15	26.99	18.75
Median	3	4	4
Mean Household Harvest, Pounds	552.52	558.16	400.59
Minimum	0.00	0.00	0.00
Maximum	2,879.98	2,625.06	1,911.77
Total Pounds Harvested	433,177.03	437,598.48	378,962.56
Community Per Capita Harvest, Pounds	189.17	163.46	127.80
Percent Using Any Resource	98.02	100.00	100.00
Percent Attempting To Harvest Any Resource	95.05	97.56	96.15
Percent Harvesting Any Resource	95.05	97.56	96.15
Percent Receiving Any Resource	94.06	97.56	96.15
Percent Giving Away Any Resource	86.14	97.56	84.62
Number Of Households In Sample	101	41	104
Number of Resources Available	130	132	144

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992, 1993, and 1994

Table II-19. Participation in the Harvest and Processing of Wild Resources, Cordova, 1991, 1992, and 1993

Study Year			1991	1992	1993
Total Number of People			2,289.90	2,677.07	2,965.35
GAME	Hunt	Number	791.76	784.00	918.71
		Percentage	34.58	29.29	30.98
		Missing	23.29	0.00	0.00
		Missing %	1.02	0.00	0.00
	Process	Number	1,086.73	1,166.44	1,191.60
		Percentage	47.46	43.57	40.18
		Missing	15.52	0.00	0.00
		Missing %	0.68	0.00	0.00
FISH	Fish	Number	1,630.10	1,988.68	2,092.12
		Percentage	71.19	74.29	70.55
		Missing	15.52	0.00	0.00
		Missing %	0.68	0.00	0.00
	Process	Number	1,676.67	2,084.29	2,110.31
		Percentage	73.22	77.86	71.17
		Missing	15.52	0.00	0.00
		Missing %	0.68	0.00	0.00
FURBEARERS	Hunt or Trap	Number	85.39	19.12	281.98
		Percentage	3.73	0.71	9.51
		Missing	15.52	0.00	0.00
		Missing %	0.68	0.00	0.00
	Process	Number	116.44	19.12	263.79
		Percentage	5.08	0.71	8.90
		Missing	15.52	0.00	0.00
		Missing %	0.68	0.00	0.00
PLANTS	Gather	Number	1,777.58	1,912.20	2,383.19
		Percentage	77.63	71.43	80.37
		Missing	15.52	0.00	0.00
		Missing %	0.68	0.00	0.00
	Process	Number	1,614.57	1,376.78	2,119.40
		Percentage	70.51	51.43	71.47
		Missing	15.52	0.00	0.00
		Missing %	0.68	0.00	0.00
ANY RESOURCE					
	Attempt	Number	2,010.46	2,313.76	2,674.27
		Percent	87.80	86.43	90.18
	Process	Number	1,894.02	2,313.76	2,583.31
		Percent	82.71	86.43	87.12

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992, 1993, and 1994.

Table II-20. Percentage of Households Sharing Resources by Community, Cordova, 1991

Community	Salmon		Non-salmon Fish		Marine Invertebrates		Game		Marine Mammals		Birds and Eggs		Plants and Berries*		Any Resource	
	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave
All Communities	61.39	70.30	70.30	58.42	47.52	27.72	60.40	37.62	4.95	1.98	15.84	8.91	35.64	39.60	94.06	86.14
Anchor Point	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00
Anchorage	0.99	7.92	0.00	5.94	0.99	0.00	0.00	1.98	0.00	0.00	0.00	0.99	1.98	3.96	3.96	11.88
Prince William Sound Area	1.98	0.00	0.00	0.00	3.96	0.00	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00	6.93	0.99
Bethel	0.00	0.00	0.00	0.99	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
Chenega Bay	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.99	0.00
Cordova	56.44	51.49	67.33	41.58	43.56	24.75	60.40	33.66	2.97	1.98	14.85	7.92	32.67	34.65	90.10	77.23
Delta Junction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
Diomede	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00
Dutch Harbor	0.00	0.99	0.99	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98	0.99
Fairbanks	0.00	1.98	0.00	1.98	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.97
Homer	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00
Hoonah	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.99
King Cove	0.00	0.99	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.99
Kodiak City	0.00	0.00	0.99	0.00	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98	0.00
Kotzebue	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.99	0.00
Moose Pass	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.99
Naknek	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00
Nome	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.99	0.00
Palmer	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.99	0.00	0.00	0.00	1.98	0.99
Seward	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00
Soldotna	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00
Talkeetna	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.99
Tatitlek	0.00	0.00	0.99	0.00	0.00	0.99	0.00	0.99	0.99	0.00	0.00	0.00	0.00	0.00	1.98	0.99
Valdez	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
Wasilla	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.99	0.00	1.98
Wrangell	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00
Yakutat	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00
Kanakanak	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00
Cook Inlet	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00
Nelchina	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
Arctic Valley	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00
Other U.S.	3.96	46.53	1.98	23.76	1.98	2.97	0.99	4.95	0.00	0.00	0.00	0.00	1.98	9.90	6.93	55.45
Foreign	0.00	1.98	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98
Southeast	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.99
Community Unknown	1.98	0.00	2.97	4.95	0.99	0.00	0.00	1.98	0.00	0.00	0.00	0.00	1.98	1.98	7.92	8.91

* Plants and Berries includes sharing of wood and kelp for fertilizer.

Note: Percentages are based upon number of valid responses.

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992.

Table II-21. Subsistence Harvests in Pounds Usable Weight per Person by Resource Category, Cordova, 1985, 1988, 1991, 1992, and 1993

	Pounds Usable Weight per Person				
	1985	1988	1991	1992	1993
Salmon	62.3	59.3	86.2	71.3	58.3
Other Fish	36.8	91.4	40.1	40.8	29.9
Marine Invertebrates	12.5	21.8	5.5	4.6	5.4
Land Mammals	44.0	50.2	50.0	42.4	24.9
Marine Mammals	1.0	0.8	0.4	0.0	0.8
Birds and Eggs	1.7	4.7	1.8	1.3	1.1
Wild Plants	5.5	5.6	5.2	3.1	7.5
All Resources	163.8	233.8	189.2	163.5	127.8

Sources: Stratton, 1989, 1992 and Alaska Dept. of Fish and Game, Div. of Subsistence Household Surveys, 1992, 1993, 1994

Table II-22. Composition of Resource Harvests by Resource Category, Cordova, 1985, 1988, 1991, 1992, and 1993

	Percentage of Total Harvest				
	1985	1988	1991	1992	1993
Salmon	38.0%	25.4%	45.6%	43.6%	45.6%
Other Fish	22.5%	39.1%	21.2%	25.0%	23.4%
Marine Invertebrates	7.7%	9.3%	2.9%	2.8%	4.3%
Land Mammals	26.8%	21.5%	26.4%	25.9%	19.5%
Marine Mammals	0.6%	0.3%	0.2%	0.0%	0.6%
Birds and Eggs	1.1%	2.0%	1.0%	0.8%	0.8%
Wild Plants	3.3%	2.4%	2.7%	1.9%	5.8%

Sources: Stratton, 1989, 1992 and Alaska Dept. of Fish and Game, Div. of Subsistence Household Surveys, 1992, 1993, 1994

Figure II-8. Harvests of Wild Resources for Home Use, Pounds Usable Weight per Capita, Cordova, 1985, 1988, 1991, 1992, and 1993

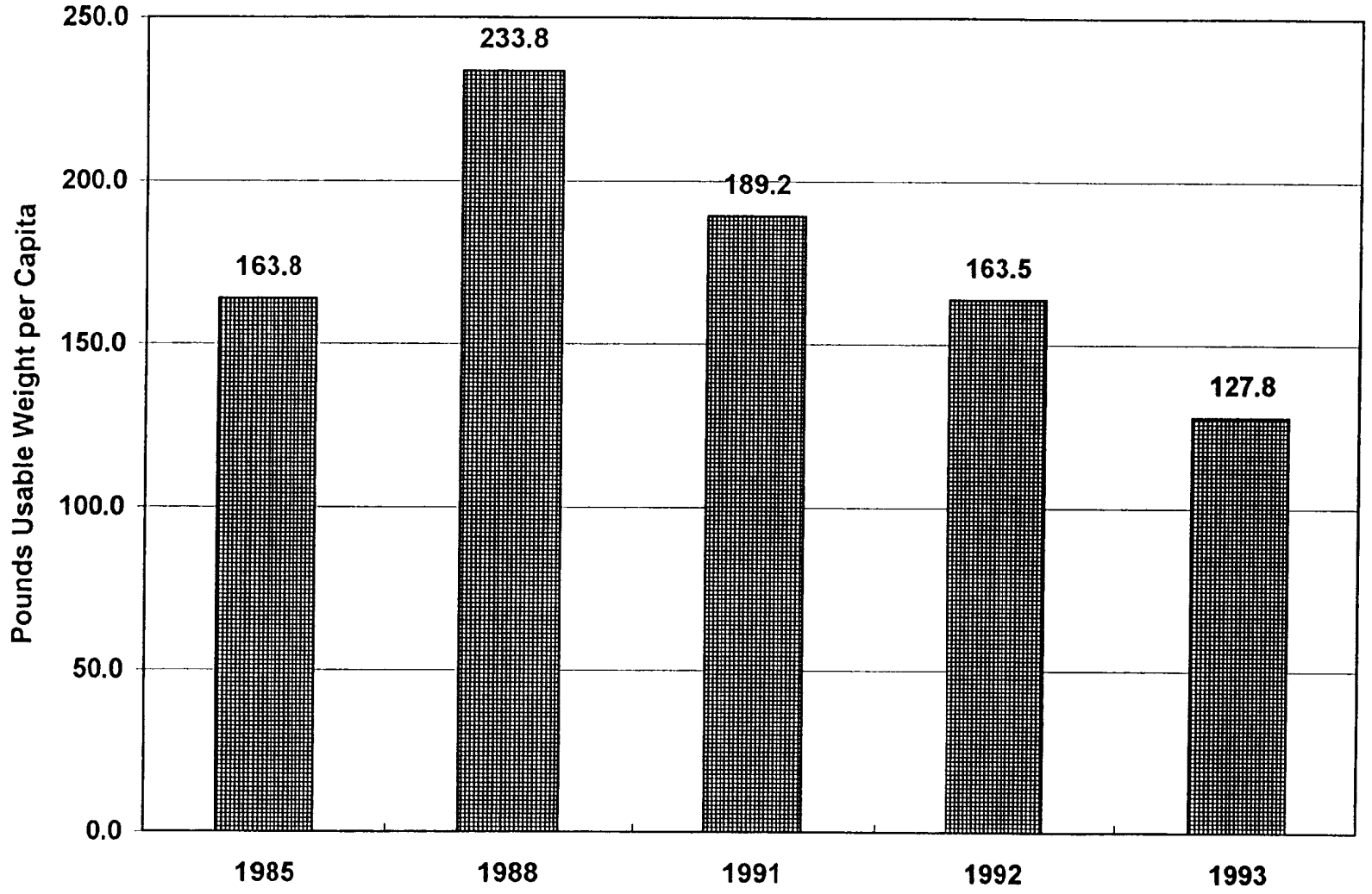


Figure II-9. Per Capita Harvests of Wild Resources by Resource Category, Cordova, 1985, 1988, 1991, 1992, and 1993

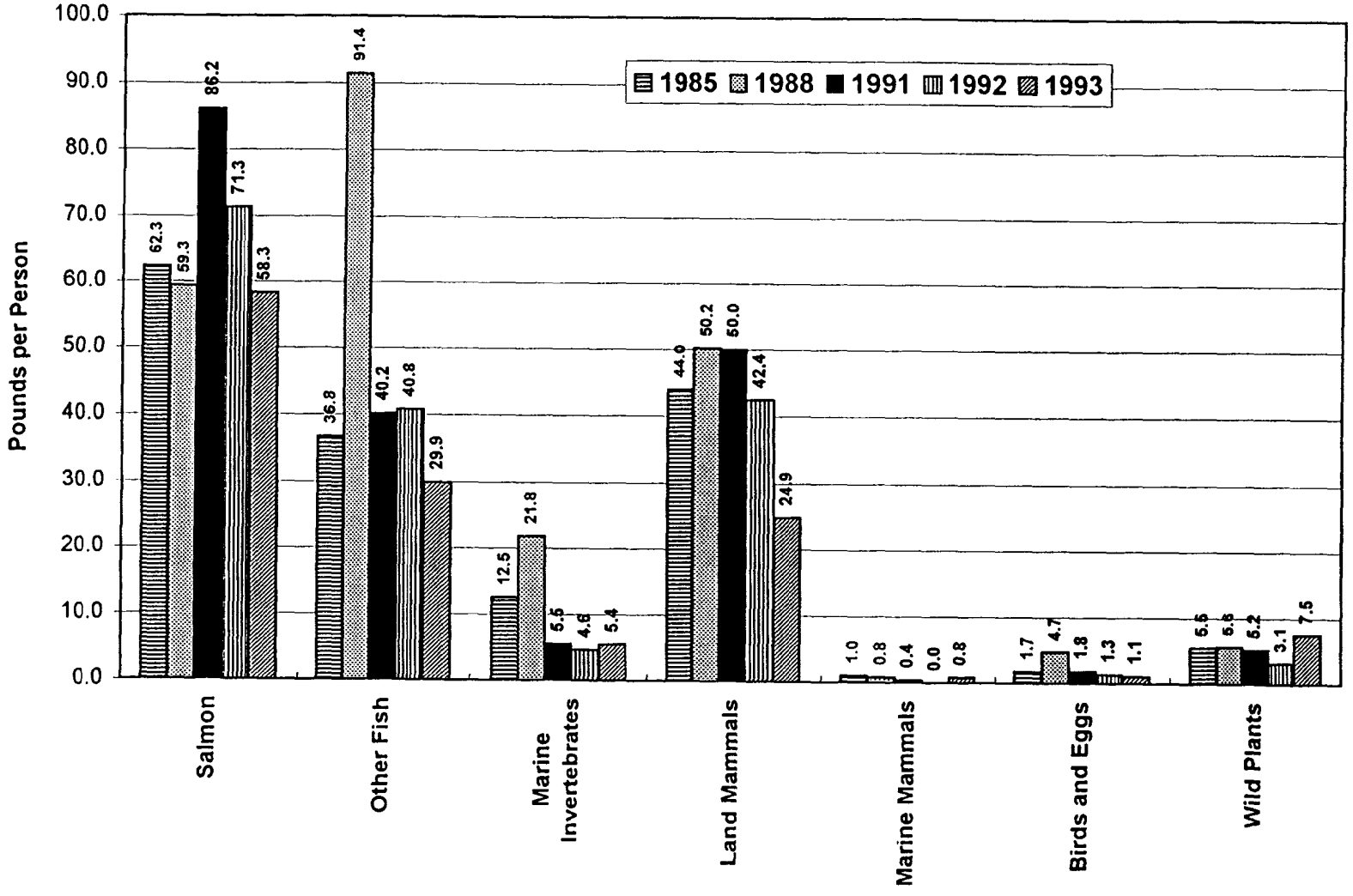


Figure II-10. Composition of Wild Resource Harvests by Resource Category, Cordova, 1991

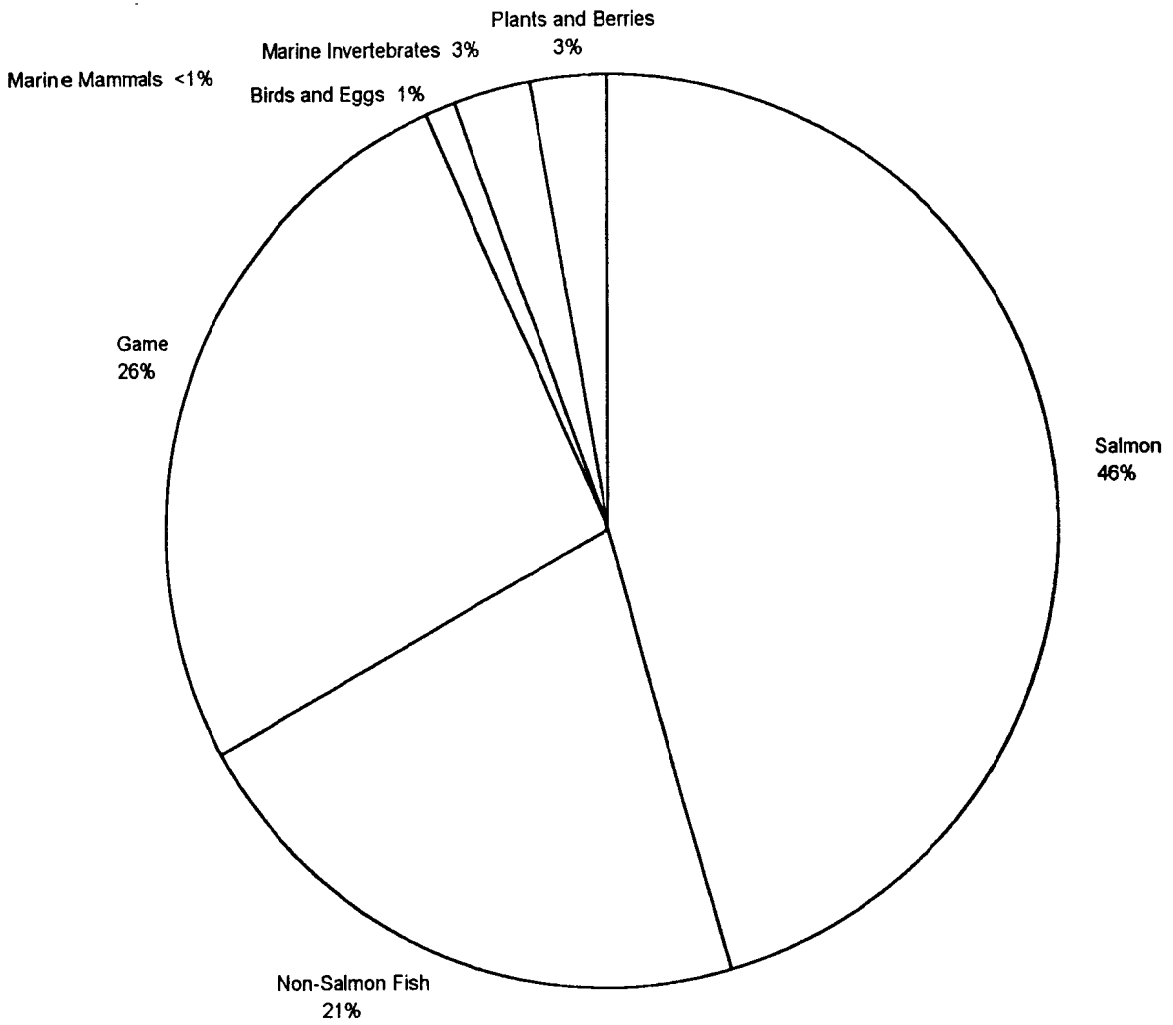


Figure II-11. Percentage of Cordova Households Reporting Lower Levels of Uses of Wild Resources Compared to 1988, the Year Before the Exxon Valdez Oil Spill, 1991 and 1993

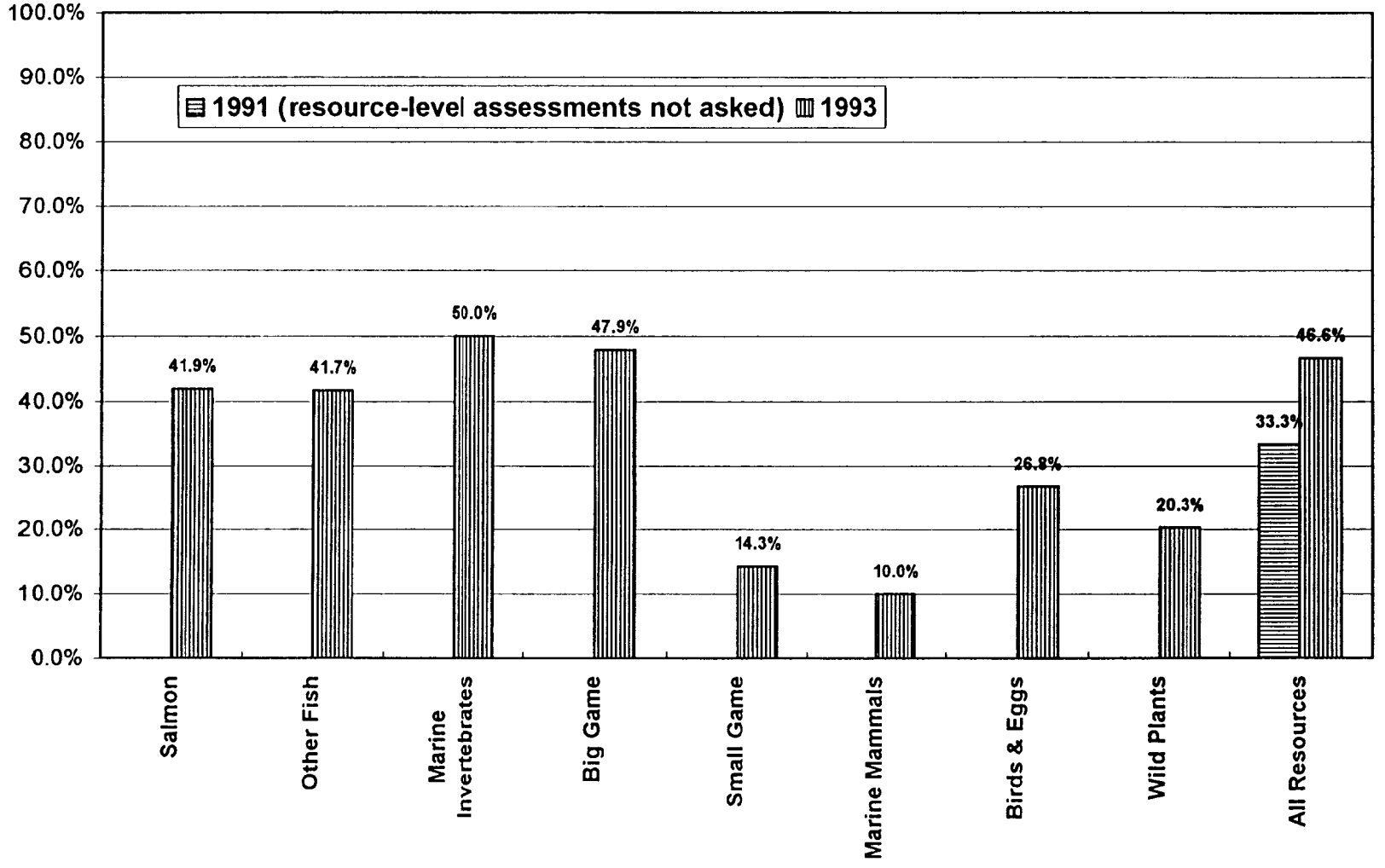


Table II-23. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Cordova, 1991

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
All Resources	98.0	95.0	95.0	94.1	86.1	433,177.03	552.52	189.17			18.66%	19.74%
Fish	98.0	89.1	88.1	86.1	78.2	289,507.26	369.27	126.43			21.20%	21.84%
Salmon	96.0	87.1	86.1	58.4	70.3	197,464.66	251.87	86.23	29,207.03	37.25	21.26%	23.16%
Chum Salmon	9.9	9.9	8.9	3.0	4.0	3,810.77	4.86	1.66	615.63	0.79	87.57%	88.98%
Coho Salmon	84.2	80.2	79.2	24.8	58.4	100,952.50	128.77	44.09	15,090.06	19.25	26.68%	26.96%
Chinook Salmon	57.4	38.6	35.6	30.7	26.7	49,146.09	62.69	21.46	3,004.04	3.83	48.52%	47.58%
Pink Salmon	15.8	14.9	14.9	4.0	5.0	2,967.01	3.78	1.30	1,595.17	2.03	96.13%	96.46%
Sockeye Salmon	78.2	54.5	49.5	45.5	40.6	39,277.70	50.10	17.15	8,670.57	11.06	31.84%	32.57%
Landlocked Salmon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Salmon	5.9	3.0	3.0	4.0	0.0	1,310.58	1.67	0.57	231.55	0.30	113.36%	112.06%
Non-Salmon Fish	96.0	75.2	72.3	70.3	58.4	92,042.60	117.40	40.20			27.57%	29.14%
Pike	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sturgeon	2.0	2.0	2.0	0.0	1.0	527.84	0.67	0.23	15.52	0.02	130.29%	129.70%
Cod	22.8	8.9	8.9	14.9	5.0	3,092.78	3.94	1.35	966.49	1.23	98.38%	99.60%
Pacific Cod (Gray)	21.8	8.9	8.9	13.9	5.0	3,092.78	3.94	1.35	966.49	1.23	98.38%	99.60%
Burbot	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Cod	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sablefish (Black Cod)	15.8	4.0	4.0	11.9	2.0	937.51	1.20	0.41	302.42	0.39	98.86%	100.27%
Greenling	24.8	11.9	11.9	13.9	3.0	2,258.85	2.88	0.99	826.69	1.05	88.58%	73.55%
Kelp Greenling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Lingcod	23.8	11.9	11.9	12.9	3.0	1,909.54	2.44	0.83	477.39	0.61	72.23%	72.37%
Unknown Greenling	3.0	2.0	2.0	1.0	0.0	349.31	0.45	0.15	349.31	0.45	149.40%	149.24%
Flounder	3.0	3.0	3.0	0.0	0.0	419.17	0.53	0.18	139.72	0.18	131.10%	131.12%
Unknown Flounder	3.0	3.0	3.0	0.0	0.0	419.17	0.53	0.18	139.72	0.18	131.10%	131.12%
Sole	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sole, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Halibut	87.1	58.4	52.5	52.5	46.5	50,715.54	64.69	22.15	3,387.81	4.32	34.36%	35.58%
Herring	11.9	10.9	10.9	3.0	2.0	3,261.60	4.16	1.42	543.60 gal	0.69	100.20%	100.90%
Herring Roe	1.0	1.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Spawn on Kelp	11.9	6.9	6.9	5.0	4.0	2,917.88	3.72	1.27	416.84 gal	0.53	106.63%	105.79%
Sac Roe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Rockfish	49.5	28.7	28.7	24.8	18.8	12,632.25	16.11	5.52	4,037.13	5.15	54.42%	50.65%
Black Rockfish (black bass)	9.9	8.9	8.9	1.0	2.0	1,944.48	2.48	0.85	1,296.32	1.65	116.55%	116.61%
Red Rockfish	27.7	14.9	14.9	14.9	12.9	4,129.58	5.27	1.80	1,032.40	1.32	56.01%	58.12%
Yellow Eye Rockfish	16.8	10.9	10.9	6.9	5.0	4,672.95	5.96	2.04	1,168.24	1.49	77.54%	78.33%
Unknown Rockfish	9.9	5.9	5.9	4.0	1.0	1,885.24	2.40	0.82	540.18	0.69	98.85%	98.89%

Table II-23. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Cordova, 1991

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Sea Bass	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sculpin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Sculpin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Smelt	24.8	16.8	16.8	13.9	7.9	4,233.72	5.40	1.85	1,302.68 gal	1.66	58.31%	58.79%
Eulachon (Hooligan, Candlefish)	22.8	16.8	16.8	8.9	7.9	3,865.39	4.93	1.69	1,189.35 gal	1.52	57.96%	58.12%
Unknown Smelt	7.9	5.0	5.0	5.9	2.0	368.32	0.47	0.16	113.33 gal	0.14	132.47%	134.15%
Walleye Pollock (Whiting)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Skates	2.0	2.0	2.0	0.0	2.0	77.62	0.10	0.03	15.52	0.02	130.29%	130.60%
Grayling	3.0	3.0	3.0	0.0	1.0	336.89	0.43	0.15	481.27	0.61	112.55%	112.04%
Sheefish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whitefish	1.0	1.0	1.0	0.0	0.0	13.58	0.02	0.01	7.76	0.01	185.18%	185.40%
Unknown Whitefish	1.0	1.0	1.0	0.0	0.0	13.58	0.02	0.01	7.76	0.01	185.18%	185.40%
Trout and Char	43.6	37.6	36.6	13.9	12.9	10,617.38	13.54	4.64	7,583.84	9.67	43.43%	44.66%
Char	21.8	19.8	19.8	3.0	7.9	2,879.84	3.67	1.26	2,057.03	2.62	58.17%	58.63%
Arctic Char	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Dolly Varden	20.8	18.8	18.8	3.0	6.9	2,412.55	3.08	1.05	1,723.25	2.20	58.20%	58.48%
Lake Trout	3.0	3.0	3.0	0.0	2.0	467.30	0.60	0.20	333.78	0.43	136.22%	136.81%
Trout	40.6	35.6	34.7	11.9	8.9	7,737.54	9.87	3.38	5,526.81	7.05	47.10%	48.45%
Cutthroat Trout	31.7	29.7	27.7	7.9	6.9	6,835.55	8.72	2.99	4,882.53	6.23	50.23%	51.66%
Rainbow Trout	8.9	6.9	6.9	2.0	2.0	815.05	1.04	0.36	582.18	0.74	87.85%	87.94%
Steelhead	5.9	4.0	4.0	2.0	1.0	65.20	0.08	0.03	46.57	0.06	105.84%	105.12%
Unknown Trout	1.0	1.0	1.0	0.0	0.0	21.73	0.03	0.01	15.52	0.02	185.18%	184.77%
Unknown Non-Salmon Fish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Game	84.2	67.3	47.5	60.4	37.6	114,423.25	145.95	49.97	2,313.19	2.95	38.02%	36.29%
Big Game	83.2	64.4	41.6	59.4	32.7	112,554.46	143.56	49.15	1,040.16	1.33	28.67%	36.68%
Bison	1.0	1.0	1.0	0.0	1.0	3,493.07	4.46	1.53	7.76	0.01	185.18%	185.40%
Black Bear	3.0	3.0	2.0	1.0	2.0	450.22	0.57	0.20	15.52	0.02	130.29%	185.40%
Brown Bear	1.0	5.0	1.0	0.0	0.0	0.00	0.00	0.00	7.76	0.01	185.18%	0.00%
Caribou	5.9	2.0	2.0	4.0	1.0	4,657.43	5.94	2.03	31.05	0.04	145.96%	145.84%
Deer	68.3	55.4	37.6	37.6	22.8	36,886.81	47.05	16.11	853.86	1.09	31.48%	31.81%
Goat	2.0	0.0	0.0	2.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Moose	62.4	31.7	13.9	48.5	14.9	67,066.93	85.54	29.29	124.20	0.16	51.32%	52.12%
Sheep, Dall	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Small Game/Furbearer	22.8	24.8	18.8	5.0	5.9	1,868.79	2.38	0.82	1,273.03	1.62	60.00%	78.57%
Fox	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Beaver	4.0	2.0	2.0	3.0	1.0	67.92	0.09	0.03	31.05	0.04	145.96%	184.77%

Table II-23. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Cordova, 1991

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Coyote	0.0	2.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Hare	12.9	15.8	11.9	1.0	4.0	1,738.77	2.22	0.76	869.39	1.11	77.19%	78.57%
Snowshoe Hare	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Hare	12.9	15.8	11.9	1.0	4.0	1,738.77	2.22	0.76	869.39	1.11	77.19%	78.57%
Land Otter	4.0	3.0	3.0	1.0	0.0	0.00	0.00	0.00	23.29	0.03	105.84%	0.00%
Lynx	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marten	4.0	3.0	3.0	1.0	0.0	0.00	0.00	0.00	131.96	0.17	137.67%	0.00%
Mink	5.9	6.9	5.0	1.0	1.0	0.00	0.00	0.00	170.77	0.22	113.87%	0.00%
Muskrat	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Porcupine	1.0	1.0	1.0	0.0	0.0	62.10	0.08	0.03	7.76	0.01	185.18%	186.67%
Weasel	2.0	2.0	2.0	0.0	0.0	0.00	0.00	0.00	38.81	0.05	152.34%	0.00%
Wolf	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wolverine	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Mammals	5.9	2.0	2.0	5.0	2.0	880.25	1.12	0.38	23.29	0.03	137.47%	138.06%
Whale	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whale	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	5.0	2.0	2.0	4.0	2.0	880.25	1.12	0.38	23.29	0.03	137.47%	138.06%
Harbor Seal	5.0	2.0	2.0	4.0	2.0	880.25	1.12	0.38	23.29	0.03	137.47%	138.06%
Porpoise/Dolphin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steller Sea Lion	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sea Otter	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Birds and Eggs	41.6	36.6	31.7	15.8	8.9	4,025.02	5.13	1.76	4,199.45	5.36	44.94%	49.22%
Birds	41.6	36.6	31.7	15.8	8.9	3,969.14	5.06	1.73	4,013.15	5.12	42.60%	48.43%
Upland Game Birds	19.8	21.8	17.8	4.0	1.0	565.10	0.72	0.25	807.29	1.03	53.35%	54.81%
Grouse	14.9	14.9	14.9	0.0	1.0	336.89	0.43	0.15	481.27	0.61	57.26%	58.15%
Ptarmigan	9.9	12.9	7.9	4.0	0.0	228.21	0.29	0.10	326.02	0.42	68.15%	69.88%
Migratory Birds	34.7	25.7	24.8	14.9	7.9	3,404.03	4.34	1.49	3,205.86	4.09	48.15%	52.86%
Waterfowl	34.7	25.7	24.8	13.9	7.9	3,292.26	4.20	1.44	3,151.52	4.02	48.65%	52.68%
Ducks	30.7	24.8	23.8	8.9	7.9	2,205.52	2.81	0.96	2,833.27	3.61	48.84%	49.84%
Scoter	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Harlequin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goldeneye	1.0	1.0	1.0	0.0	0.0	93.15	0.12	0.04	116.44	0.15	185.18%	184.13%
Bufflehead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Merganser	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scaup	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table II-23. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Cordova, 1991

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Mallard	23.8	20.8	20.8	5.0	5.0	1,428.28	1.82	0.62	1,428.28	1.82	52.13%	53.75%
Pintail	6.9	6.9	5.9	1.0	1.0	124.20	0.16	0.05	155.25	0.20	91.19%	91.13%
Wigeon	4.0	4.0	4.0	0.0	0.0	173.88	0.22	0.08	248.40	0.32	97.98%	97.88%
Teal	9.9	7.9	7.9	2.0	2.0	183.97	0.23	0.08	613.23	0.78	83.66%	84.82%
Gadwall	1.0	1.0	1.0	0.0	0.0	6.21	0.01	0.00	7.76	0.01	185.18%	186.04%
Shoveler	5.9	5.0	5.0	1.0	1.0	60.55	0.08	0.03	100.91	0.13	100.54%	100.87%
Canvasback	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Ducks, Unknown	5.0	4.0	3.0	3.0	2.0	135.30	0.17	0.06	163.01	0.21	115.08%	113.83%
Geese	16.8	13.9	11.9	5.9	4.0	1,086.73	1.39	0.47	318.26	0.41	69.49%	72.24%
Brant	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snow Geese	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
White-fronted Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese	13.9	11.9	10.9	4.0	4.0	1,033.95	1.32	0.45	302.73	0.39	72.67%	75.69%
Canada Geese, Lesser	3.0	1.0	1.0	2.0	1.0	27.94	0.04	0.01	23.29	0.03	185.18%	184.13%
Canada Geese, Dusky	10.9	10.9	9.9	2.0	3.0	1,006.00	1.28	0.44	279.45	0.36	77.57%	77.81%
Geese, Unknown	2.0	2.0	1.0	1.0	0.0	52.78	0.07	0.02	15.52	0.02	185.18%	184.13%
Crane	2.0	3.0	1.0	1.0	0.0	65.20	0.08	0.03	7.76	0.01	185.18%	186.67%
Sandhill Crane	2.0	3.0	1.0	1.0	0.0	65.20	0.08	0.03	7.76	0.01	185.18%	186.67%
Shorebirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Common Snipe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seabirds	1.0	1.0	1.0	0.0	0.0	46.57	0.06	0.02	46.57	0.06	185.18%	184.13%
Cormorants	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Seabirds	1.0	1.0	1.0	0.0	0.0	46.57	0.06	0.02	46.57	0.06	185.18%	184.13%
Eggs	2.0	1.0	1.0	1.0	0.0	55.89	0.07	0.02	186.30	0.24	185.18%	184.13%
Seabird Eggs	1.0	1.0	1.0	0.0	0.0	55.89	0.07	0.02	186.30	0.24	185.18%	184.13%
Gull Eggs	1.0	1.0	1.0	0.0	0.0	55.89	0.07	0.02	186.30	0.24	185.18%	184.13%
Tern Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Waterfowl Eggs	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese Eggs	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Invertebrates	63.4	43.6	41.6	46.5	27.7	12,533.43	15.99	5.47			43.10%	44.24%
Abalone	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Clams	52.5	38.6	36.6	26.7	16.8	6,593.05	8.41	2.88	2,197.68 gal	2.80	35.41%	35.68%
Butter Clams	21.8	16.8	14.9	11.9	3.0	1,644.77	2.10	0.72	548.26 gal	0.70	67.45%	68.75%
Razor Clams	44.6	30.7	28.7	20.8	13.9	4,847.45	6.18	2.12	1,615.82 gal	2.06	39.78%	39.25%

Table II-23. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Cordova, 1991

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Pacific Littleneck Clams (Steamers)	1.0	1.0	1.0	0.0	0.0	46.57	0.06	0.02	15.52 gal	0.02	185.18%	186.67%
Horse Clams (Gaper)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Unknown Clams	2.0	2.0	2.0	0.0	1.0	54.26	0.07	0.02	18.09 gal	0.02	131.61%	132.56%
Cockles	2.0	2.0	2.0	0.0	0.0	139.72	0.18	0.06	46.57 gal	0.06	157.07%	157.83%
Geoducks	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Scallops	4.0	0.0	0.0	4.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mussels	2.0	2.0	2.0	0.0	0.0	14.55	0.02	0.01	9.70 gal	0.01	152.34%	153.54%
Crabs	37.6	12.9	10.9	30.7	7.9	2,808.14	3.58	1.23	1,635.84	2.09	107.36%	131.52%
Dungeness Crab	29.7	9.9	7.9	23.8	5.0	319.45	0.41	0.14	456.35	0.58	75.86%	76.90%
King Crab	15.8	3.0	3.0	12.9	2.0	1,976.38	2.52	0.86	859.30	1.10	149.59%	150.62%
Tanner Crab	8.9	3.0	3.0	5.9	1.0	512.32	0.65	0.22	320.20	0.41	143.93%	144.81%
Tanner Crab, Opilio	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tanner Crab, Unknown	1.0	1.0	1.0	0.0	0.0	388.12	0.50	0.17	242.57	0.31	185.18%	186.04%
Unknown Crabs	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Chitons (bidarkis)	1.0	1.0	1.0	0.0	0.0	15.52	0.02	0.01	3.88 gal	0.00	185.18%	185.40%
Chitons (small)	1.0	1.0	1.0	0.0	0.0	15.52	0.02	0.01	3.88 gal	0.00	185.18%	185.40%
Octopus	12.9	5.9	5.9	6.9	3.0	869.39	1.11	0.38	217.35	0.28	100.41%	101.16%
Sea Cucumber	2.0	1.0	1.0	1.0	0.0	3.10	0.00	0.00	1.55 gal	0.00	185.18%	186.67%
Sea Urchin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Shrimp	28.7	13.9	13.9	18.8	5.9	2,089.94	2.67	0.91	1,044.97 gal	1.33	64.49%	65.05%
Whelk	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Limpets	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Oyster	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Plants and Berries	86.1	85.1	84.2	32.7	35.6	11,807.82	15.06	5.16			30.19%	32.18%
Berries	85.1	84.2	83.2	31.7	35.6	10,853.98	13.84	4.74	2,713.49 gal	3.46	32.23%	34.15%
Plants/Greens/Mushrooms	25.7	25.7	25.7	2.0	4.0	651.11	0.83	0.28			47.37%	49.29%
Unknown Greens, from land	25.7	25.7	25.7	2.0	4.0	612.30	0.78	0.27	153.07 gal	0.20	48.29%	50.24%
Unknown Greens, from sea	2.0	2.0	2.0	0.0	0.0	38.81	0.05	0.02			132.92%	133.23%
Seaweed/Kelp (Food)	5.9	4.0	4.0	2.0	1.0	302.73	0.39	0.13	75.68 gal	0.10	121.65%	121.10%
Wood	53.5	52.5	52.5	4.0	11.9	0.00	0.00	0.00	1,951.69 crd	2.49	33.52%	0.00%

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table II-24. Estimated Amount of Resources Removed From Commercial Harvest, Cordova, 1991

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		141,514.88	46.85	32.67
Fish		138,300.79	47.77	31.93
Salmon	14,827.23	102,238.08	51.78	23.60
Chum Salmon	514.72	3,186.14	83.61	0.74
Coho Salmon	4,083.01	27,315.34	27.06	6.31
Chinook Salmon	2,390.81	39,113.68	79.59	9.03
Pink Salmon	1,110.02	2,064.64	69.59	0.48
Sockeye Salmon	6,660.12	30,170.34	76.81	6.96
Unknown Salmon	68.54	387.95	29.60	0.09
Non-Salmon Fish		36,062.72	39.18	8.33
Cod	273.70	875.84	28.32	0.20
Pacific Cod (Gray)	273.70	875.84	28.32	0.20
Sablefish (Black Cod)	271.37	841.26	89.73	0.19
Greenling	232.87	931.49	41.24	0.22
Lingcod	232.87	931.49	48.78	0.22
Flounder	15.52	46.57	11.11	0.01
Unknown Flounder	15.52	46.57	11.11	0.01
Halibut	1,677.14	25,106.77	49.51	5.80
Herring	175.97 gal	1,055.84	32.37	0.24
Spawn on Kelp	416.84 gal	2,917.88	100.00	0.67
Rockfish	1,084.09	4,172.19	33.03	0.96
Black Rockfish (black bass)	54.34	81.50	4.19	0.02
Red Rockfish	489.03	1,956.12	47.37	0.45
Yellow Eye Rockfish	485.15	1,940.59	41.53	0.45
Unknown Rockfish	55.58	193.97	10.29	0.04
Smelt	18.63 gal	60.55	1.43	0.01
Eulachon (Hooligan, Candlefish)	18.63 gal	60.55	1.57	0.01
Trout and Char	38.81	54.34	0.51	0.01
Trout	38.81	54.34	0.70	0.01
Steelhead	38.81	54.34	83.33	0.01
Marine Invertebrates		3,214.09	25.64	0.74
Crabs	1,175.61	2,391.28	85.16	0.55
Dungeness Crab	89.27	62.49	19.56	0.01
King Crab	843.77	1,940.67	98.19	0.45
Tanner Crab	242.57	388.12	75.76	0.09
Tanner Crab, Unknown	242.57	388.12	100.00	0.09
Octopus	186.30	745.19	85.71	0.17
Shrimp	38.81 gal	77.62	3.71	0.02

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table II-25. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Cordova, 1991

		Subsistence Methods										Removed from Commercial Catch		Rod and Reel		Any Method	
		Net		Seine		Dip Net		Other		Subsistence Gear Any Method							
Resource	Percent Base	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.
Salmon	total	2.42	2.35	0.03	0.01	1.62	1.17	2.41	2.27	6.47	5.80	50.77	51.78	42.76	42.42		
Chum Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.47	3.12	0.81	0.75		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83.61	83.61	16.39	16.39		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76	1.61	0.35	0.32	2.11	1.93
Coho Salmon	gear type	28.57	29.06	0.00	0.00	16.39	22.45	85.64	89.80	46.61	51.46	27.54	26.72	81.08	80.87		
	resource	1.34	1.34	0.00	0.00	0.51	0.51	3.99	3.99	5.84	5.84	27.06	27.06	67.10	67.10		
	total	0.69	0.68	0.00	0.00	0.27	0.26	2.06	2.04	3.02	2.98	13.98	13.83	34.67	34.31	51.67	51.12
Chinook Salmon	gear type	12.09	30.07	0.00	0.00	0.00	0.00	0.00	0.00	4.52	12.20	16.12	38.26	4.23	10.31		
	resource	2.84	2.84	0.00	0.00	0.00	0.00	0.00	0.00	2.84	2.84	79.59	79.59	17.57	17.57		
	total	0.29	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.71	8.19	19.81	1.81	4.37	10.29	24.89
Pink Salmon	gear type	0.00	0.00	100.00	100.00	0.00	0.00	0.00	0.00	0.41	0.13	7.49	2.02	3.82	1.06		
	resource	0.00	0.00	0.49	0.49	0.00	0.00	0.00	0.00	0.49	0.49	69.59	69.59	29.93	29.93		
	total	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.03	0.01	3.80	1.05	1.63	0.45	5.46	1.50
Sockeye Salmon	gear type	59.34	40.87	0.00	0.00	83.61	77.55	14.36	10.20	48.46	36.22	44.92	29.51	8.76	5.92		
	resource	4.83	4.83	0.00	0.00	4.57	4.57	1.16	1.16	10.56	10.56	76.81	76.81	12.62	12.62		
	total	1.44	0.96	0.00	0.00	1.36	0.91	0.35	0.23	3.14	2.10	22.80	15.28	3.75	2.51	29.69	19.89
Landlocked Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.38	1.31	1.10		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.60	29.60	70.40	70.40		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.20	0.56	0.47	0.79	0.66

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table II-26. Estimated Salmon Harvest by Gear Type and Species, Cordova, 1991

		Subsistence Methods										Removed from Commercial Catch		Rod and Reel		Any Method	
		Net		Seine		Dip Net		Other		Subsistence Gear Any Method							
	Harvest Units	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Salmon	numbers	706.38	0.90	7.76	0.01	473.50	0.60	702.50	0.90	1,890.14	2.41	14,827.23	18.91	12,489.66	15.93	29,207.03	37.25
	pounds	4,645.94	5.93	14.44	0.02	2,312.64	2.95	4,481.72	5.72	11,454.74	14.61	102,238.08	130.41	83,771.84	106.85	197,464.66	251.87
Chum	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	514.72	0.66	100.91	0.13	615.63	0.79
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,186.14	4.06	624.64	0.80	3,810.77	4.86
Coho	numbers	201.82	0.26	0.00	0.00	77.62	0.10	601.58	0.77	881.03	1.12	4,083.01	5.21	10,126.02	12.92	15,090.06	19.25
	pounds	1,350.19	1.72	0.00	0.00	519.30	0.66	4,024.60	5.13	5,894.09	7.52	27,315.34	34.84	67,743.07	86.41	100,952.50	128.77
Chinook	numbers	85.39	0.11	0.00	0.00	0.00	0.00	0.00	0.00	85.39	0.11	2,390.81	3.05	527.84	0.67	3,004.04	3.83
	pounds	1,396.92	1.78	0.00	0.00	0.00	0.00	0.00	0.00	1,396.92	1.78	39,113.68	49.89	8,635.49	11.01	49,146.09	62.69
Pink	numbers	0.00	0.00	7.76	0.01	0.00	0.00	0.00	0.00	7.76	0.01	1,110.02	1.42	477.39	0.61	1,595.17	2.03
	pounds	0.00	0.00	14.44	0.02	0.00	0.00	0.00	0.00	14.44	0.02	2,064.64	2.63	887.94	1.13	2,967.01	3.78
Sockeye	numbers	419.17	0.53	0.00	0.00	395.88	0.50	100.91	0.13	915.96	1.17	6,660.12	8.50	1,094.50	1.40	8,670.57	11.06
	pounds	1,898.83	2.42	0.00	0.00	1,793.34	2.29	457.13	0.58	4,149.30	5.29	30,170.34	38.48	4,958.06	6.32	39,277.70	50.10
Landlocked	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unknown	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.54	0.09	163.01	0.21	231.55	0.30
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	387.95	0.49	922.64	1.18	1,310.58	1.67

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table II-27. Percentage of Households Harvesting Salmon by Gear Type and Species, Cordova, 1991

Resource	Subsistence Methods					Removed from Commercial Catch	Rod and Reel	Any Method
	Net	Seine	Dip Net	Other	Any Subsistence Gear			
Salmon	5.94	0.99	2.97	1.98	11.88	35.64	71.29	86.14
Chum Salmon	0.00	0.00	0.00	0.00	0.00	6.93	1.98	8.91
Coho Salmon	1.98	0.00	0.99	1.98	4.95	23.76	67.33	79.21
Chinook Salmon	2.97	0.00	0.00	0.00	2.97	27.72	10.89	35.64
Pink Salmon	0.00	0.99	0.00	0.00	0.99	6.93	6.93	14.85
Sockeye Salmon	3.96	0.00	1.98	0.99	6.93	30.69	17.82	49.50
Landlocked Salmon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	0.00	0.00	0.00	0.00	0.00	0.99	1.98	2.97

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table II-28. Estimated Harvest of Fish Other than Salmon by Gear Type, Cordova, 1991

	Harvest Units	Subsistence Gear		Removed From Commercial Catch		Rod and Reel		Ice Fishing		Any Method	
		Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Non-Salmon Fish	pounds	5,717.81	7.29	36,062.72	46.00	48,520.58	61.89	1,741.49	2.22	92,042.60	117.40
Grayling	pounds	0.00	0.00	0.00	0.00	336.89	0.43	0.00	0.00	336.89	0.43
Unknown Whitefish	pounds	0.00	0.00	0.00	0.00	0.00	0.00	13.58	0.02	13.58	0.02
Sturgeon	pounds	263.92	0.34	0.00	0.00	263.92	0.34	0.00	0.00	527.84	0.67
Lingcod	pounds	201.82	0.26	931.49	1.19	776.24	0.99	0.00	0.00	1,909.54	2.44
Pacific Cod (Gray)	pounds	24.84	0.03	875.84	1.12	2,192.10	2.80	0.00	0.00	3,092.78	3.94
Sablefish (Black Cod)	pounds	96.25	0.12	841.26	1.07	0.00	0.00	0.00	0.00	937.51	1.20
Unknown Flounder	pounds	0.00	0.00	46.57	0.06	372.59	0.48	0.00	0.00	419.17	0.53
Halibut	pounds	116.20	0.15	25,106.77	32.02	25,492.56	32.52	0.00	0.00	50,715.54	64.69
Herring	pounds	103.86	0.13	1,055.84	1.35	2,101.90	2.68	0.00	0.00	3,261.60	4.16
Spawn on Kelp	pounds	0.00	0.00	2,917.88	3.72	0.00	0.00	0.00	0.00	2,917.88	3.72
Black Rockfish (black bass)	pounds	163.01	0.21	81.50	0.10	1,699.96	2.17	0.00	0.00	1,944.48	2.48
Red Rockfish	pounds	31.05	0.04	1,956.12	2.50	2,142.42	2.73	0.00	0.00	4,129.58	5.27
Yellow Eye Rockfish	pounds	527.84	0.67	1,940.59	2.48	2,204.51	2.81	0.00	0.00	4,672.95	5.96
Unknown Rockfish	pounds	38.74	0.05	193.97	0.25	1,652.53	2.11	0.00	0.00	1,885.24	2.40
Eulachon (Hooligan, Candlefish)	pounds	3,348.73	4.27	60.55	0.08	456.12	0.58	0.00	0.00	3,865.39	4.93
Unknown Smelt	pounds	345.12	0.44	0.00	0.00	23.21	0.03	0.00	0.00	368.32	0.47
Unknown Greenling	pounds	0.00	0.00	0.00	0.00	349.31	0.45	0.00	0.00	349.31	0.45
Skates	pounds	0.00	0.00	0.00	0.00	77.62	0.10	0.00	0.00	77.62	0.10
Dolly Varden	pounds	130.41	0.17	0.00	0.00	1,901.78	2.43	380.36	0.49	2,412.55	3.08
Cutthroat Trout	pounds	326.02	0.42	0.00	0.00	5,488.00	7.00	1,021.53	1.30	6,835.55	8.72
Lake Trout	pounds	0.00	0.00	0.00	0.00	467.30	0.60	0.00	0.00	467.30	0.60
Rainbow Trout	pounds	0.00	0.00	0.00	0.00	489.03	0.62	326.02	0.42	815.05	1.04
Steelhead	pounds	0.00	0.00	54.34	0.07	10.87	0.01	0.00	0.00	65.20	0.08
Unknown Trout	pounds	0.00	0.00	0.00	0.00	21.73	0.03	0.00	0.00	21.73	0.03

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table II-29. Percentage of Fish Other Than Salmon Harvested by Gear Type, Cordova, 1991

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	6.21	39.18	52.72	1.89
Grayling	resource	0.00	0.00	100.00	0.00
Unknown Whitefish	resource	0.00	0.00	0.00	100.00
Sturgeon	resource	50.00	0.00	50.00	0.00
Lingcod	resource	10.57	48.78	40.65	0.00
Pacific Cod (Gray)	resource	0.80	28.32	70.88	0.00
Sablefish (Black Cod)	resource	10.27	89.73	0.00	0.00
Unknown Flounder	resource	0.00	11.11	88.89	0.00
Halibut	resource	0.23	49.51	50.27	0.00
Herring	resource	3.18	32.37	64.44	0.00
Spawn on Kelp	resource	0.00	100.00	0.00	0.00
Black Rockfish (black bass)	resource	8.38	4.19	87.43	0.00
Red Rockfish	resource	0.75	47.37	51.88	0.00
Yellow Eye Rockfish	resource	11.30	41.53	47.18	0.00
Unknown Rockfish	resource	2.05	10.29	87.66	0.00
Eulachon (Hooligan, Candlefish)	resource	86.63	1.57	11.80	0.00
Unknown Smelt	resource	93.70	0.00	6.30	0.00
Unknown Greenling	resource	0.00	0.00	100.00	0.00
Skates	resource	0.00	0.00	100.00	0.00
Dolly Varden	resource	5.41	0.00	78.83	15.77
Cutthroat Trout	resource	4.77	0.00	80.29	14.94
Lake Trout	resource	0.00	0.00	100.00	0.00
Rainbow Trout	resource	0.00	0.00	60.00	40.00
Steelhead	resource	0.00	83.33	16.67	0.00
Unknown Trout	resource	0.00	0.00	100.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table II-30. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Cordova, 1991

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	23.76	30.69	54.46	4.95	72.28
Grayling	0.00	0.00	2.97	0.00	2.97
Unknown Whitefish	0.00	0.00	0.00	0.99	0.99
Sturgeon	0.99	0.00	0.99	0.00	1.98
Lingcod	2.97	6.93	1.98	0.00	11.88
Pacific Cod (Gray)	0.99	2.97	4.95	0.00	8.91
Sablefish (Black Cod)	0.99	2.97	0.00	0.00	3.96
Unknown Flounder	0.00	0.99	1.98	0.00	2.97
Halibut	0.99	24.75	34.65	0.00	52.48
Herring	2.97	2.97	4.95	0.00	10.89
Spawn on Kelp	0.00	6.93	0.00	0.00	6.93
Black Rockfish (black bass)	1.98	1.98	5.94	0.00	8.91
Red Rockfish	0.99	6.93	7.92	.00	14.85
Yellow Eye Rockfish	0.99	5.94	4.95	0.00	10.89
Unknown Rockfish	0.99	0.99	3.96	0.00	5.94
Eulachon (Hooligan, Candlefish)	13.86	1.98	1.98	0.00	16.83
Unknown Smelt	3.96	0.00	0.99	0.00	4.95
Unknown Greenling	0.00	0.00	1.98	0.00	1.98
Skates	0.00	0.00	1.98	0.00	1.98
Dolly Varden	0.99	0.00	16.83	1.98	18.81
Cutthroat Trout	0.99	0.00	25.74	2.97	27.72
Lake Trout	0.00	0.00	2.97	0.00	2.97
Rainbow Trout	0.00	0.00	5.94	0.99	6.93
Steelhead	0.00	2.97	0.99	0.00	3.96
Unknown Trout	0.00	0.00	0.99	0.00	0.99

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Figure II-12. Composition of Wild Resource Harvests by Resource Category, Cordova, 1992

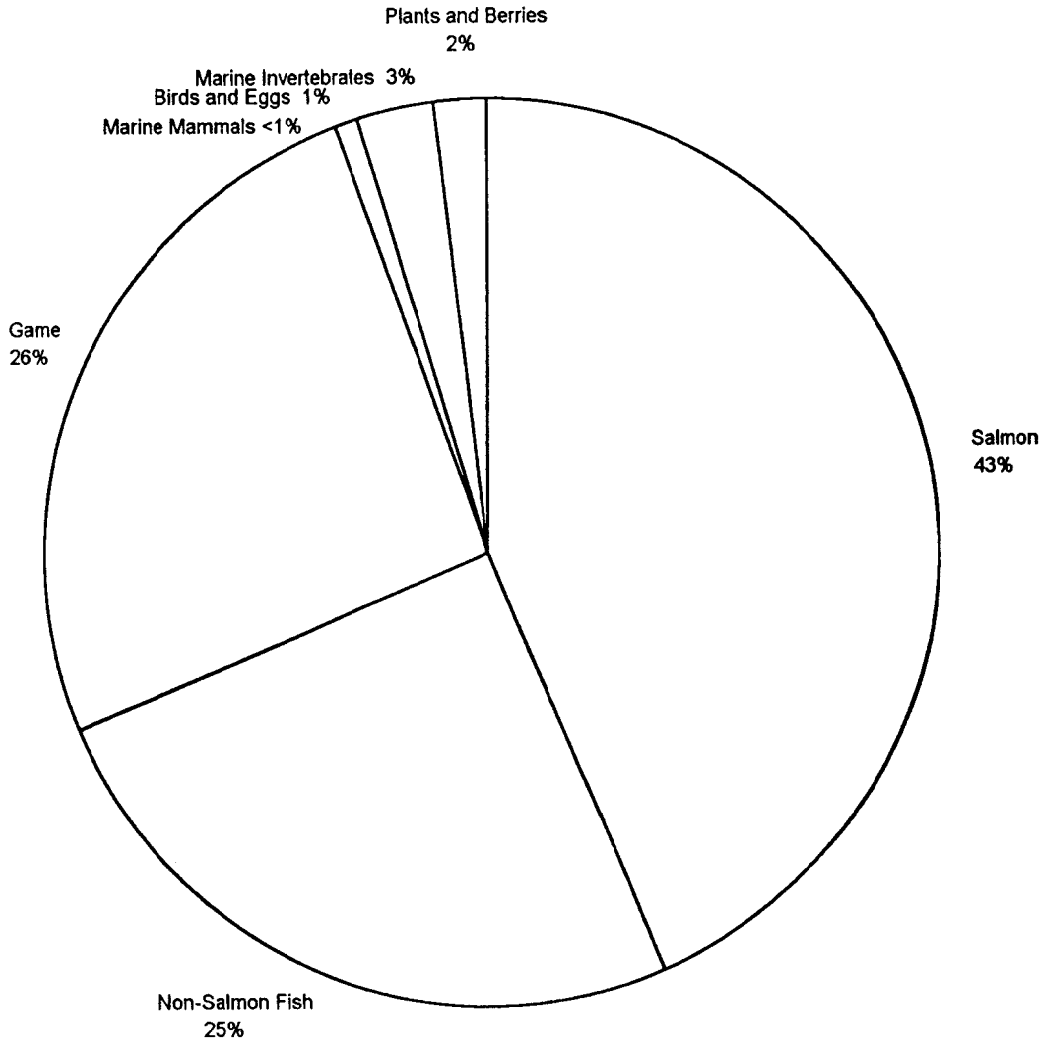


Table II-31. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Cordova, 1992

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
All Resources	100.0	97.6	97.6	97.6	97.6	437,598.48	558.16	163.46			28.93%	31.31%
Fish	100.0	95.1	95.1	90.2	87.8	299,901.67	382.53	112.03			34.77%	37.67%
Salmon	100.0	95.1	90.2	75.6	73.2	190,809.25	243.38	71.28	28,137.57	35.89	35.52%	48.27%
Chum Salmon	2.4	0.0	0.0	2.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Coho Salmon	90.2	85.4	80.5	34.1	65.9	97,333.50	124.15	36.36	14,398.45	18.37	34.96%	37.38%
Chinook Salmon	70.7	41.5	36.6	46.3	36.6	46,914.56	59.84	17.52	2,600.59	3.32	130.36%	129.30%
Pink Salmon	22.0	19.5	19.5	2.4	9.8	3,104.64	3.96	1.16	1,262.05	1.61	123.11%	121.77%
Sockeye Salmon	90.2	68.3	63.4	53.7	51.2	43,456.55	55.43	16.23	9,876.49	12.60	48.73%	48.20%
Landlocked Salmon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Non-Salmon Fish	100.0	92.7	90.2	73.2	73.2	109,092.42	139.15	40.75			40.33%	46.87%
Pike	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sturgeon	2.4	0.0	0.0	2.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cod	17.1	12.2	12.2	4.9	9.8	2,226.10	2.84	0.83	695.66	0.89	93.68%	96.56%
Pacific Tomcod	2.4	0.0	0.0	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Pacific Cod (Gray)	14.6	12.2	12.2	2.4	7.3	2,226.10	2.84	0.83	695.66	0.89	93.68%	96.56%
Burbot	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sablefish (Black Cod)	9.8	2.4	2.4	7.3	2.4	414.95	0.53	0.16	133.85	0.17	196.75%	196.78%
Greenling	24.4	14.6	14.6	14.6	14.6	5,143.80	6.56	1.92	1,787.90	2.28	101.59%	113.36%
Kelp Greenling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Lingcod	24.4	14.6	14.6	14.6	12.2	4,474.54	5.71	1.67	1,118.63	1.43	119.36%	123.27%
Unknown Greenling	4.9	4.9	4.9	0.0	2.4	669.27	0.85	0.25	669.27	0.85	150.05%	152.49%
Flounder	4.9	4.9	4.9	0.0	0.0	860.49	1.10	0.32	286.83	0.37	145.18%	148.42%
Unknown Flounder	4.9	4.9	4.9	0.0	0.0	860.49	1.10	0.32	286.83	0.37	145.18%	148.42%
Sole	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sole, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Halibut	90.2	65.9	63.4	51.2	56.1	71,994.85	91.83	26.89	4,364.20	5.57	50.50%	52.40%
Herring	9.8	7.3	7.3	4.9	2.4	468.11	0.60	0.17	78.02 gal	0.10	151.28%	151.69%
Herring Roe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Spawn on Kelp	17.1	9.8	9.8	9.8	9.8	5,870.82	7.49	2.19	838.69 gal	1.07	140.88%	141.79%
Sac Roe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.0 gal	0.00	0.00%	0.00%
Rockfish	56.1	31.7	29.3	34.1	14.6	13,240.52	16.89	4.95	4,516.99	5.76	69.01%	72.93%
Black Rockfish (black bass)	19.5	19.5	19.5	2.4	9.8	2,667.51	3.40	1.00	1,778.34	2.27	91.83%	97.29%
Red Rockfish	22.0	12.2	9.8	12.2	2.4	4,053.85	5.17	1.51	1,013.46	1.29	113.03%	114.20%
Yellow Eye Rockfish	34.1	17.1	17.1	19.5	4.9	5,545.37	7.07	2.07	1,386.34	1.77	79.49%	86.33%
Idiotfish	2.4	0.0	0.0	2.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Silvergray Rockfish	2.4	2.4	2.4	0.0	0.0	57.37	0.07	0.02	38.24	0.05	196.75%	199.64%

Table II-31. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Cordova, 1992

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Quillback Rockfish	2.4	2.4	2.4	0.0	0.0	152.98	0.20	0.06	38.24	0.05	196.75%	199.64%
Unknown Rockfish	7.3	4.9	4.9	2.4	0.0	763.45	0.97	0.29	262.35	0.33	173.24%	174.68%
Sculpin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Sculpin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Smelt	36.6	17.1	17.1	24.4	22.0	2,029.08	2.59	0.76	624.33 gal	0.80	79.56%	74.71%
Eulachon (Hooligan, Candlefish)	19.5	9.8	9.8	12.2	12.2	1,242.93	1.59	0.46	382.44 gal	0.49	112.57%	106.13%
Unknown Smelt	24.4	9.8	9.8	19.5	14.6	786.15	1.00	0.29	241.89 gal	0.31	113.74%	115.02%
Wolf Eel (Wolffish)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shark	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Salmon Shark	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Walleye Pollock (Whiting)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Skates	2.4	2.4	2.4	0.0	0.0	95.61	0.12	0.04	19.12	0.02	196.75%	199.64%
Grayling	4.9	4.9	4.9	0.0	0.0	93.70	0.12	0.04	133.85	0.17	150.05%	153.81%
Sheefish	2.4	0.0	0.0	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whitefish	2.4	0.0	0.0	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whitefish, Large	2.4	0.0	0.0	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whitefish, Humpback	2.4	0.0	0.0	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whitefish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Trout and Char	48.8	43.9	43.9	9.8	14.6	6,654.40	8.49	2.49	4,753.14	6.06	59.76%	66.32%
Char	24.4	22.0	22.0	2.4	7.3	2,235.36	2.85	0.84	1,596.68	2.04	80.70%	82.45%
Arctic Char	2.4	2.4	2.4	0.0	0.0	187.40	0.24	0.07	133.85	0.17	196.75%	201.05%
Dolly Varden	22.0	19.5	19.5	2.4	4.9	2,047.96	2.61	0.77	1,462.83	1.87	87.24%	88.13%
Lake Trout	2.4	0.0	0.0	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Trout	34.1	31.7	31.7	7.3	7.3	4,419.04	5.64	1.65	3,156.46	4.03	72.71%	79.92%
Cutthroat Trout	24.4	24.4	24.4	2.4	2.4	3,990.71	5.09	1.49	2,850.51	3.64	77.56%	84.65%
Rainbow Trout	7.3	9.8	7.3	0.0	2.4	348.02	0.44	0.13	248.59	0.32	127.17%	129.75%
Steelhead	12.2	4.9	4.9	7.3	2.4	80.31	0.10	0.03	57.37	0.07	145.18%	147.15%
Game	90.2	58.5	51.2	78.0	41.5	113,569.09	144.86	42.42	2,428.49	3.10	57.32%	47.85%
Big Game	90.2	58.5	48.8	78.0	39.0	112,345.29	143.30	41.97	1,281.17	1.63	40.28%	48.14%
Bison	2.4	0.0	0.0	2.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black Bear	4.9	0.0	0.0	4.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Brown Bear	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Caribou	7.3	0.0	0.0	7.3	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Deer	82.9	51.2	43.9	58.5	29.3	50,390.17	64.27	18.82	1,166.44	1.49	42.10%	46.50%
Goat	2.4	2.4	0.0	2.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Moose	63.4	36.6	14.6	53.7	22.0	61,955.12	79.02	23.14	114.73	0.15	75.14%	71.98%

Table II-31. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Cordova, 1992

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Sheep, Dall	2.4	0.0	0.0	2.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Small Game/Furbearer	14.6	17.1	12.2	2.4	4.9	1,223.80	1.56	0.46	1,147.32	1.46	105.42%	108.32%
Beaver	2.4	2.4	2.4	0.0	0.0	0.00	0.00	0.00	38.24	0.05	196.75%	0.00%
Coyote	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Hare	9.8	14.6	9.8	0.0	2.4	1,223.80	1.56	0.46	611.90	0.78	105.46%	108.32%
Snowshoe Hare	7.3	7.3	7.3	0.0	0.0	764.88	0.98	0.29	382.44	0.49	125.29%	127.79%
Unknown Hare	2.4	7.3	2.4	0.0	2.4	458.93	0.59	0.17	229.46	0.29	196.75%	198.21%
Land Otter	2.4	2.4	2.4	0.0	2.4	0.00	0.00	0.00	19.12	0.02	196.75%	0.00%
Lynx	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marten	2.4	2.4	2.4	0.0	0.0	0.00	0.00	0.00	114.73	0.15	196.75%	0.00%
Mink	4.9	2.4	2.4	2.4	0.0	0.00	0.00	0.00	305.95	0.39	196.75%	0.00%
Muskrat	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Porcupine	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Weasel	2.4	2.4	2.4	0.0	0.0	0.00	0.00	0.00	38.24	0.05	196.75%	0.00%
Wolf	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wolverine	2.4	2.4	2.4	0.0	0.0	0.00	0.00	0.00	19.12	0.02	196.75%	0.00%
Feral Animals	2.4	0.0	0.0	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Reindeer - Feral	2.4	0.0	0.0	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Rabbit - Feral	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Mammals	4.9	2.4	0.0	2.4	4.9	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whale	2.4	0.0	0.0	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Bowhead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whale	2.4	0.0	0.0	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	4.9	2.4	0.0	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Harbor Seal	4.9	2.4	0.0	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Porpoise/Dolphin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steller Sea Lion	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sea Otter	2.4	2.4	0.0	0.0	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Birds and Eggs	48.8	36.6	31.7	24.4	7.3	3,562.61	4.54	1.33	5,029.07	6.41	87.39%	88.93%
Birds	46.3	36.6	31.7	22.0	7.3	3,562.61	4.54	1.33	5,029.07	6.41	87.39%	88.93%
Upland Game Birds	14.6	12.2	9.8	4.9	0.0	481.87	0.61	0.18	688.39	0.88	126.47%	131.92%
Grouse	9.8	9.8	9.8	0.0	0.0	200.78	0.26	0.08	286.83	0.37	136.41%	140.80%
Ptarmigan	12.2	9.8	7.3	4.9	0.0	281.09	0.36	0.11	401.56	0.51	147.03%	152.20%
Migratory Birds	43.9	31.7	29.3	19.5	7.3	3,080.74	3.93	1.15	4,340.68	5.54	88.08%	88.32%
Waterfowl	43.9	31.7	29.3	19.5	7.3	3,080.74	3.93	1.15	4,340.68	5.54	88.08%	88.32%
Ducks	43.9	31.7	29.3	19.5	7.3	2,874.22	3.67	1.07	4,264.20	5.44	88.24%	86.32%

Table II-31. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Cordova, 1992

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Scoter	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Harlequin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goldeneye	2.4	2.4	2.4	0.0	0.0	15.30	0.02	0.01	19.12	0.02	196.75%	199.64%
Bufflehead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Merganser	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scaup	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mallard	36.6	26.8	24.4	12.2	4.9	1,587.12	2.02	0.59	1,587.12	2.02	82.82%	86.11%
Pintail	9.8	9.8	9.8	0.0	2.4	244.76	0.31	0.09	305.95	0.39	113.94%	115.98%
Wigeon	12.2	12.2	12.2	0.0	4.9	481.87	0.61	0.18	688.39	0.88	102.39%	105.75%
Teal	17.1	12.2	12.2	4.9	2.4	458.93	0.59	0.17	1,529.76	1.95	114.59%	116.86%
Gadwall	2.4	2.4	2.4	2.4	0.0	15.30	0.02	0.01	19.12	0.02	196.75%	199.64%
Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shoveler	7.3	4.9	4.9	2.4	2.4	57.37	0.07	0.02	95.61	0.12	140.23%	146.20%
Canvasback	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Ducks, Unknown	4.9	4.9	2.4	2.4	0.0	13.58	0.02	0.01	19.12	0.02	196.75%	196.78%
Geese	14.6	17.1	7.3	4.9	0.0	206.52	0.26	0.08	76.49	0.10	117.95%	144.31%
Brant	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snow Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
White-fronted Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese	14.6	12.2	7.3	4.9	0.0	206.52	0.26	0.08	76.49	0.10	117.95%	144.31%
Canada Geese, Lesser	7.3	4.9	2.4	2.4	0.0	22.95	0.03	0.01	19.12	0.02	196.75%	201.05%
Canada Geese, Dusky	9.8	4.9	2.4	4.9	0.0	137.68	0.18	0.05	38.24	0.05	196.75%	201.05%
Canada Geese, Unknown	2.4	4.9	2.4	0.0	0.0	45.89	0.06	0.02	19.12	0.02	196.75%	201.05%
Geese, Unknown	0.0	4.9	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Crane	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sandhill Crane	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shorebirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Common Snipe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seabirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cormorants	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Loons	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Seabirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eggs	2.4	0.0	0.0	2.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seabird Eggs	2.4	0.0	0.0	2.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Gull Eggs	2.4	0.0	0.0	2.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table II-31. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Cordova, 1992

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Tern Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Waterfowl Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Invertebrates	70.7	51.2	51.2	53.7	41.5	12,237.11	15.61	4.57			51.23%	53.67%
Abalone	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Clams	53.7	43.9	43.9	29.3	31.7	9,083.88	11.59	3.39	3,027.96 gal	3.86	64.42%	66.29%
Butter Clams	22.0	14.6	14.6	12.2	4.9	1,032.59	1.32	0.39	344.20 gal	0.44	85.79%	89.43%
Razor Clams	43.9	36.6	36.6	22.0	29.3	7,113.37	9.07	2.66	2,371.12 gal	3.02	72.22%	73.09%
Pacific Littleneck Clams (Steamers)	19.5	12.2	12.2	14.6	4.9	846.15	1.08	0.32	282.05 gal	0.36	137.06%	139.46%
Pinkneck Clams	2.4	2.4	2.4	0.0	0.0	91.79	0.12	0.03	30.60 gal	0.04	196.75%	199.64%
Horse Clams (Gaper)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Cockles	2.4	0.0	0.0	2.4	2.4	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Scallops	9.8	0.0	0.0	9.8	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mussels	2.4	0.0	0.0	2.4	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Crabs	39.0	14.6	14.6	29.3	12.2	1,527.86	1.95	0.57	1,645.64	2.10	88.52%	96.57%
Dungeness Crab	31.7	12.2	12.2	24.4	9.8	877.68	1.12	0.33	1,253.83	1.60	100.04%	101.71%
King Crab	22.0	2.4	2.4	19.5	2.4	76.53	0.10	0.03	33.27	0.04	196.75%	196.78%
King Crab, Unknown	22.0	2.4	2.4	19.5	2.4	76.53	0.10	0.03	33.27	0.04	196.75%	196.78%
Tanner Crab	4.9	2.4	2.4	2.4	0.0	573.66	0.73	0.21	358.54	0.46	196.75%	195.33%
Tanner Crab, Unknown	4.9	2.4	2.4	2.4	0.0	573.66	0.73	0.21	358.54	0.46	196.75%	195.33%
Unknown Crabs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Chitons (bidarkis)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Chitons (large)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Chitons (small)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Octopus	7.3	0.0	0.0	7.3	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sea Cucumber	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Sea Urchin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Shrimp	29.3	12.2	9.8	24.4	17.1	1,625.37	2.07	0.61	812.68 gal	1.04	106.08%	108.75%
Oyster	9.8	0.0	0.0	9.8	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Plants and Berries	87.8	80.5	80.5	68.3	36.6	8,327.99	10.62	3.11	2,082.00 gal	2.66	40.09%	43.21%
Berries	87.8	80.5	80.5	65.9	36.6	7,840.00	10.00	2.93	1,960.00 gal	2.50	42.58%	46.54%
Plants/Greens/Mushrooms	12.2	12.2	12.2	0.0	0.0	277.65	0.35	0.10	69.41 gal	0.09	94.18%	97.08%
Seaweed/Kelp (Food)	4.9	4.9	4.9	2.4	0.0	210.34	0.27	0.08	52.59 gal	0.07	179.31%	168.98%
Wood	51.2	51.2	51.2	4.9	9.8	0.00	0.00	0.00	1,505.85 crd	1.92	55.91%	0.00%

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table II-32. Estimated Amount of Resources Removed From Commercial Harvest, Cordova, 1992

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		120,478.41	38.60	27.53
Fish		119,744.13	39.93	27.36
Salmon	13,557.46	97,874.56	51.29	22.37
Coho Salmon	3,499.32	23,655.38	24.30	5.41
Chinook Salmon	2,294.63	41,395.20	88.24	9.46
Pink Salmon	688.39	1,693.44	54.55	0.39
Sockeye Salmon	7,075.12	31,130.54	71.64	7.11
Non-Salmon Fish		21,869.57	20.05	5.00
Sablefish (Black Cod)	133.85	414.95	100.00	0.09
Greenling	631.02	2,524.10	49.07	0.58
Lingcod	631.02	2,524.10	56.41	0.58
Halibut	315.32	11,383.09	15.81	2.60
Spawn on Kelp	764.88 gal	5,354.15	91.20	1.22
Rockfish	898.73	2,112.98	15.96	0.48
Black Rockfish (black bass)	592.78	889.17	33.33	0.20
Red Rockfish	267.71	1,070.83	26.42	0.24
Yellow Eye Rockfish	38.24	152.98	2.76	0.03
Trout and Char	57.37	80.31	1.21	0.02
Trout	57.37	80.31	1.82	0.02
Steelhead	57.37	80.31	100.00	0.02
Marine Invertebrates		734.28	6.00	0.17
Crabs	588.00	734.28	48.06	0.17
Dungeness Crab	229.46	160.62	18.30	0.04
Tanner Crab	358.54	573.66	100.00	0.13
Tanner Crab, Unknown	358.54	573.66	100.00	0.13

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table II-33. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Cordova, 1992

Resource	Percent Base	Subsistence Methods: Setnet No.	Setnet Lbs.	Floating Net No.	Floating Net Lbs.	Beach Seine No.	Beach Seine Lbs.	Subsistence Gear Any Method No.	Subsistence Gear Any Method Lbs.	Removed from Commercial Catch No.	Removed from Commercial Catch Lbs.	Rod and Reel No.	Rod and Reel Lbs.	Any Method No.	Any Method Lbs.
Salmon	total	2.72	1.76	2.11	2.19	3.23	1.71	8.05	5.66	48.18	51.29	43.76	43.05		
Chum Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Coho Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.81	24.17	88.51	89.70	51.17	51.01
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.30	24.30	75.70	75.70		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.44	12.40	38.74	38.61		
Chinook Salmon	gear type	0.00	0.00	19.35	49.60	0.00	0.00	5.06	19.18	16.93	42.29	1.55	4.20	9.24	24.59
	resource	0.00	0.00	4.41	4.41	0.00	0.00	4.41	4.41	88.24	88.24	7.35	7.35		
	total	0.00	0.00	0.41	1.08	0.00	0.00	0.41	1.08	8.16	21.69	0.68	1.81		
Pink Salmon	gear type	0.00	0.00	0.00	0.00	42.11	28.91	16.88	8.72	5.08	1.73	1.55	0.57	4.49	1.63
	resource	0.00	0.00	0.00	0.00	30.30	30.30	30.30	30.30	54.55	54.55	15.15	15.15		
	total	0.00	0.00	0.00	0.00	1.36	0.49	1.36	0.49	2.45	0.89	0.68	0.25		
Sockeye Salmon	gear type	100.00	100.00	80.65	50.40	57.89	71.09	78.06	72.11	52.19	31.81	8.39	5.53	35.10	22.77
	resource	7.74	7.74	4.84	4.84	5.32	5.32	17.91	17.91	71.64	71.64	10.45	10.45		
	total	2.72	1.76	1.70	1.10	1.87	1.21	6.29	4.08	25.14	16.32	3.67	2.38		
Landlocked Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table II-34. Estimated Salmon Harvest by Gear Type and Species, Cordova, 1992

		Subsistence Methods								Removed from Commercial Catch		Rod and Reel		Any Method	
		Setnet		Floating Net		Beach Seine		Subsistence Gear Any Method							
	Harvest Units	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Salmon	numbers	764.88	0.98	592.78	0.76	908.29	1.16	2,265.95	2.89	13,557.46	17.29	12,314.15	15.71	28,137.57	35.89
	pounds	3,365.46	4.29	4,173.17	5.32	3,254.56	4.15	10,793.19	13.77	97,874.56	124.84	82,141.49	104.77	190,809.25	243.38
Chum Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coho Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,499.32	4.46	10,899.13	13.90	14,398.45	18.37
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23,655.38	30.17	73,678.12	93.98	97,333.50	124.15
Chinook Salmon	numbers	0.00	0.00	114.73	0.15	0.00	0.00	114.73	0.15	2,294.63	2.93	191.22	0.24	2,600.59	3.32
	pounds	0.00	0.00	2,069.76	2.64	0.00	0.00	2,069.76	2.64	41,395.20	52.80	3,449.60	4.40	46,914.56	59.84
Pink Salmon	numbers	0.00	0.00	0.00	0.00	382.44	0.49	382.44	0.49	688.39	0.88	191.22	0.24	1,262.05	1.61
	pounds	0.00	0.00	0.00	0.00	940.80	1.20	940.80	1.20	1,693.44	2.16	470.40	0.60	3,104.64	3.96
Sockeye Salmon	numbers	764.88	0.98	478.05	0.61	525.85	0.67	1,768.78	2.26	7,075.12	9.02	1,032.59	1.32	9,876.49	12.60
	pounds	3,365.46	4.29	2,103.41	2.68	2,313.76	2.95	7,782.63	9.93	31,130.54	39.71	4,543.38	5.80	43,456.55	55.43
Landlocked Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table II-35. Percentage of Households Harvesting Salmon by Gear Type and Species, Cordova, 1992

Resource	Setnet	Floating Net	Beach Seine	Any Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Any Method
Salmon	2.44	7.32	4.88	12.20	39.02	70.73	90.24
Chum Salmon	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coho Salmon	0.00	0.00	0.00	0.00	29.27	68.29	80.49
Chinook Salmon	0.00	7.32	0.00	7.32	21.95	9.76	36.59
Pink Salmon	0.00	0.00	2.44	2.44	9.76	9.76	19.51
Sockeye Salmon	2.44	4.88	2.44	9.76	34.15	21.95	63.41
Landlocked Salmon	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table II-36. Estimated Harvest of Fish Other than Salmon by Gear Type, Cordova, 1992

	Harvest Units	Subsistence Gear		Removed From Commercial Catch		Rod and Reel		Ice Fishing		Any Method	
		Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Non-Salmon Fish	pounds	3,574.92	4.56	21,869.57	27.89	83,647.94	106.69	0.00	0.00	109,092.42	139.15
Grayling	pounds	0.00	0.00	0.00	0.00	93.70	0.12	0.00	0.00	93.70	0.12
Lingcod	pounds	191.22	0.24	2,524.10	3.22	1,759.22	2.24	0.00	0.00	4,474.54	5.71
Pacific Cod (Gray)	pounds	573.96	0.73	0.00	0.00	1,652.14	2.11	0.00	0.00	2,226.10	2.84
Sablefish (Black Cod)	pounds	0.00	0.00	414.95	0.53	0.00	0.00	0.00	0.00	414.95	0.53
Unknown Flounder	pounds	0.00	0.00	0.00	0.00	860.49	1.10	0.00	0.00	860.49	1.10
Halibut	pounds	0.00	0.00	11,383.09	14.52	60,611.76	77.31	0.00	0.00	71,994.85	91.83
Herring	pounds	114.73	0.15	0.00	0.00	353.37	0.45	0.00	0.00	468.11	0.60
Spawn on Kelp	pounds	516.68	0.66	5,354.15	6.83	0.00	0.00	0.00	0.00	5,870.82	7.49
Black Rockfish (black bass)	pounds	0.00	0.00	889.17	1.13	1,778.34	2.27	0.00	0.00	2,667.51	3.40
Red Rockfish	pounds	0.00	0.00	1,070.83	1.37	2,983.02	3.80	0.00	0.00	4,053.85	5.17
Yellow Eye Rockfish	pounds	0.00	0.00	152.98	0.20	5,392.39	6.88	0.00	0.00	5,545.37	7.07
Silvergray Rockfish	pounds	0.00	0.00	0.00	0.00	57.37	0.07	0.00	0.00	57.37	0.07
Unknown Rockfish	pounds	95.71	0.12	0.00	0.00	667.74	0.85	0.00	0.00	763.45	0.97
Eulachon (Hooligan, Candlefish)	pounds	1,242.93	1.59	0.00	0.00	0.00	0.00	0.00	0.00	1,242.93	1.59
Unknown Smelt	pounds	786.15	1.00	0.00	0.00	0.00	0.00	0.00	0.00	786.15	1.00
Unknown Greenling	pounds	0.00	0.00	0.00	0.00	669.27	0.85	0.00	0.00	669.27	0.85
Skates	pounds	0.00	0.00	0.00	0.00	95.61	0.12	0.00	0.00	95.61	0.12
Quillback Rockfish	pounds	0.00	0.00	0.00	0.00	152.98	0.20	0.00	0.00	152.98	0.20
Arctic Char	pounds	0.00	0.00	0.00	0.00	187.40	0.24	0.00	0.00	187.40	0.24
Dolly Varden	pounds	53.54	0.07	0.00	0.00	1,994.42	2.54	0.00	0.00	2,047.96	2.61
Cutthroat Trout	pounds	0.00	0.00	0.00	0.00	3,990.71	5.09	0.00	0.00	3,990.71	5.09
Rainbow Trout	pounds	0.00	0.00	0.00	0.00	348.02	0.44	0.00	0.00	348.02	0.44
Steelhead	pounds	0.00	0.00	80.31	0.10	0.00	0.00	0.00	0.00	80.31	0.10

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table II-37. Percentage of Fish Other Than Salmon Harvested by Gear Type, Cordova, 1992

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	3.28	20.05	76.68	0.00
Grayling	resource	0.00	0.00	100.00	0.00
Lingcod	resource	4.27	56.41	39.32	0.00
Pacific Cod (Gray)	resource	25.78	0.00	74.22	0.00
Sablefish (Black Cod)	resource	0.00	100.00	0.00	0.00
Unknown Flounder	resource	0.00	0.00	100.00	0.00
Halibut	resource	0.00	15.81	84.19	0.00
Herring	resource	24.51	0.00	75.49	0.00
Spawn on Kelp	resource	8.80	91.20	0.00	0.00
Black Rockfish (black bass)	resource	0.00	33.33	66.67	0.00
Red Rockfish	resource	0.00	26.42	73.58	0.00
Yellow Eye Rockfish	resource	0.00	2.76	97.24	0.00
Silvergray Rockfish	resource	0.00	0.00	100.00	0.00
Unknown Rockfish	resource	12.54	0.00	87.46	0.00
Eulachon (Hooligan, Candlefish)	resource	100.00	0.00	0.00	0.00
Unknown Smelt	resource	100.00	0.00	0.00	0.00
Unknown Greenling	resource	0.00	0.00	100.00	0.00
Skates	resource	0.00	0.00	100.00	0.00
Quillback Rockfish	resource	0.00	0.00	100.00	0.00
Arctic Char	resource	0.00	0.00	100.00	0.00
Dolly Varden	resource	2.61	0.00	97.39	0.00
Cutthroat Trout	resource	0.00	0.00	100.00	0.00
Rainbow Trout	resource	0.00	0.00	100.00	0.00
Steelhead	resource	0.00	100.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table II-38. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Cordova, 1992

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	26.83	24.39	70.73	0.00	90.24
Grayling	0.00	0.00	4.88	0.00	4.88
Lingcod	2.44	4.88	9.76	0.00	14.63
Pacific Cod (Gray)	2.44	0.00	9.76	0.00	12.20
Sablefish (Black Cod)	0.00	2.44	0.00	0.00	2.44
Unknown Flounder	0.00	0.00	4.88	0.00	4.88
Halibut	0.00	17.07	51.22	0.00	63.41
Herring	2.44	0.00	4.88	0.00	7.32
Spawn on Kelp	4.88	4.88	0.00	0.00	9.76
Black Rockfish (black bass)	0.00	4.88	14.63	0.00	19.51
Red Rockfish	0.00	4.88	7.32	0.00	9.76
Yellow Eye Rockfish	0.00	2.44	14.63	0.00	17.07
Silvergray Rockfish	0.00	0.00	2.44	0.00	2.44
Unknown Rockfish	2.44	0.00	2.44	0.00	4.88
Eulachon (Hooligan, Candlefish)	9.76	0.00	0.00	0.00	9.76
Unknown Smelt	9.76	0.00	0.00	0.00	9.76
Unknown Greenling	0.00	0.00	4.88	0.00	4.88
Skates	0.00	0.00	2.44	0.00	2.44
Quillback Rockfish	0.00	0.00	2.44	0.00	2.44
Arctic Char	0.00	0.00	2.44	0.00	2.44
Dolly Varden	2.44	0.00	17.07	0.00	19.51
Cutthroat Trout	0.00	0.00	24.39	0.00	24.39
Rainbow Trout	0.00	0.00	7.32	0.00	7.32
Steelhead	0.00	4.88	0.00	0.00	4.88

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Figure II-13. Composition of Wild Resource Harvests by Resource Category, Cordova, 1993

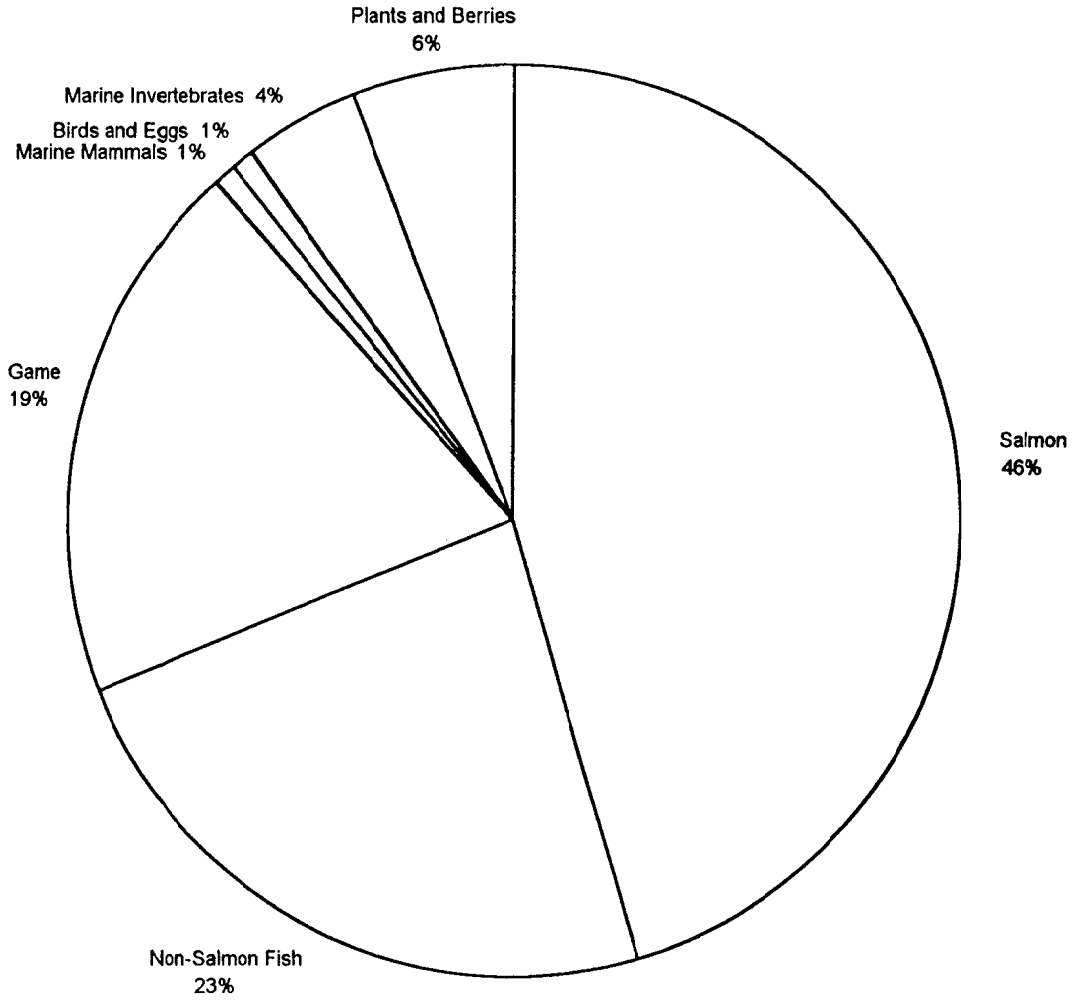


Figure II-14. Composition of Wild Resource Harvests by Resource Category, Cordova, 1985, 1988, 1991, 1992, and 1993

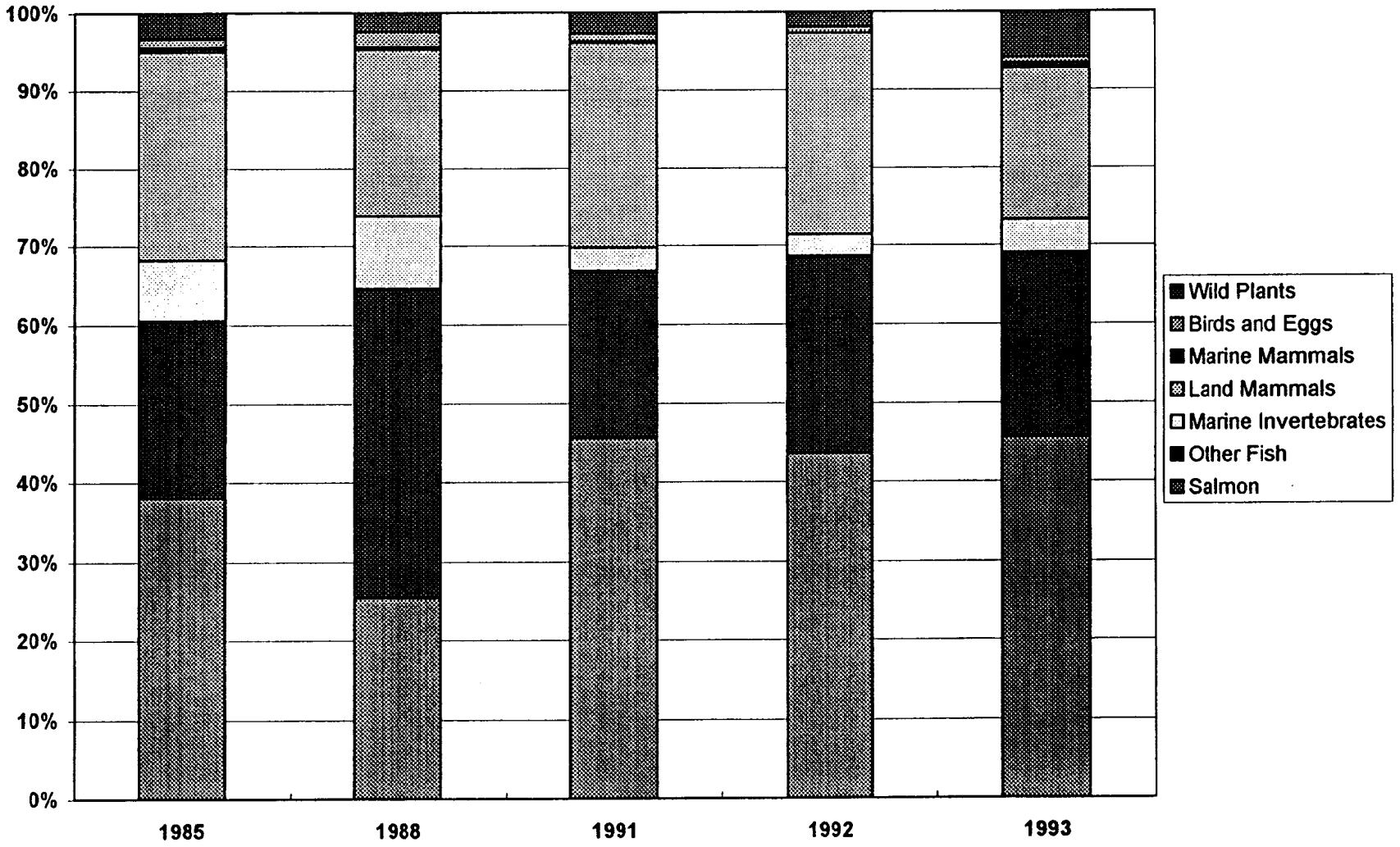


Table II-39. Commercial Fisheries as Sources of Resources for Home Use, Cordova, 1985, 1988, 1991, 1992, and 1993

	1985	1988	1991	1992	1993
Total per capita harvest, pounds	163.8	233.8	189.2	163.5	127.8
Per capita pounds removed from commercial harvests	38.9	54.3	61.8	45.0	29.3
Percentage removed from commercial harvests	23.8%	23.2%	32.7%	27.5%	22.9%
Percentage of households removing salmon from commercial harvests	36.4%	43.3%	35.6%	39.0%	28.9%
Percentage of households removing other fish from commercial harvests	10.2%	24.9%	30.7%	24.4%	20.2%

Table II-40. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Cordova, 1993

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
All Resources	100.0	96.2	96.2	96.2	84.6	378,962.56	400.59	127.80			19.80%	19.68%
Fish	100.0	86.5	79.8	91.3	72.1	261,343.42	276.26	88.13			22.02%	21.56%
Salmon	100.0	84.6	77.9	76.0	64.4	172,797.27	182.66	58.27	28,616.50	30.25	24.13%	22.09%
Chum Salmon	13.5	10.6	6.7	7.7	3.8	1,544.07	1.63	0.52	318.37	0.34	85.82%	84.41%
Coho Salmon	85.6	74.0	67.3	40.4	47.1	68,264.82	72.16	23.02	11,570.31	12.23	27.34%	26.99%
Chinook Salmon	77.9	50.0	40.4	54.8	38.5	45,680.88	48.29	15.40	2,947.15	3.12	41.06%	38.66%
Pink Salmon	19.2	12.5	9.6	11.5	6.7	1,600.47	1.69	0.54	773.17	0.82	73.15%	72.79%
Sockeye Salmon	81.7	54.8	50.0	52.9	37.5	54,737.74	57.86	18.46	12,789.19	13.52	40.79%	40.52%
Landlocked Salmon	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Salmon	2.9	2.9	1.9	1.9	1.0	969.29	1.02	0.33	218.31	0.23	158.72%	159.79%
Non-Salmon Fish	97.1	75.0	69.2	81.7	53.8	88,546.15	93.60	29.86			31.73%	32.81%
Pike	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sturgeon	3.8	0.0	0.0	3.8	2.9	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cod	24.0	15.4	14.4	11.5	1.9	2,887.12	3.05	0.97	1,009.67	1.07	55.16%	59.75%
Pacific Tomcod	1.9	1.9	1.9	0.0	0.0	63.67	0.07	0.02	127.35	0.13	133.03%	133.96%
Pacific Cod (Gray)	21.2	13.5	12.5	10.6	1.9	2,823.45	2.98	0.95	882.33	0.93	60.94%	61.10%
Burbot	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Cod	2.9	0.0	0.0	2.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sablefish (Black Cod)	24.0	1.9	1.9	23.1	3.8	169.19	0.18	0.06	54.58	0.06	138.92%	138.86%
Greenling	26.0	10.6	9.6	19.2	5.8	2,847.10	3.01	0.96	1,237.08	1.31	73.44%	73.49%
Kelp Greenling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Lingcod	23.1	8.7	7.7	18.3	4.8	2,146.69	2.27	0.72	536.67	0.57	84.16%	83.84%
Unknown Greenling	7.7	5.8	5.8	1.9	1.0	700.40	0.74	0.24	700.40	0.74	95.26%	95.15%
Flounder	4.8	2.9	2.9	1.9	2.9	300.17	0.32	0.10	100.06	0.11	107.88%	108.01%
Unknown Flounder	4.8	2.9	2.9	1.9	2.9	300.17	0.32	0.10	100.06	0.11	107.88%	108.01%
Sole	6.7	3.8	3.8	2.9	1.0	281.98	0.30	0.10	281.98	0.30	96.23%	95.98%
Sole, Unknown	6.7	3.8	3.8	2.9	1.0	281.98	0.30	0.10	281.98	0.30	96.23%	95.98%
Halibut	94.2	57.7	49.0	68.3	41.3	45,377.98	47.97	15.30	3,031.26	3.20	33.51%	34.97%
Herring	32.7	18.3	18.3	22.1	11.5	6,085.33	6.43	2.05	1,014.22 gal	1.07	52.67%	53.48%
Herring Roe	2.9	1.0	1.0	2.9	1.0	63.67	0.07	0.02	9.10 gal	0.01	187.11%	188.60%
Spawn on Kelp	15.4	7.7	7.7	7.7	5.8	1,632.76	1.73	0.55	233.25 gal	0.25	128.51%	129.82%
Sac Roe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Rockfish	56.7	30.8	27.9	39.4	19.2	16,943.95	17.91	5.71	5,366.73	5.67	55.26%	54.33%
Black Rockfish (black bass)	19.2	12.5	12.5	9.6	5.8	2,114.86	2.24	0.71	1,409.90	1.49	65.10%	66.06%
Red Rockfish	52.9	25.0	22.1	36.5	16.3	11,533.92	12.19	3.89	2,883.48	3.05	49.24%	49.76%
Unknown Rockfish	10.6	6.7	6.7	5.8	5.8	3,295.17	3.48	1.11	1,073.35	1.13	98.27%	99.39%
Sculpin	1.9	1.9	1.9	0.0	0.0	54.58	0.06	0.02	109.15	0.12	131.66%	132.14%

Table II-40. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Cordova, 1993

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Irish Lord	1.9	1.9	1.9	0.0	0.0	54.58	0.06	0.02	109.15	0.12	131.66%	132.14%
Unknown Sculpin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Smelt	25.0	13.5	12.5	19.2	12.5	1,803.31	1.91	0.61	554.87 gal	0.59	66.62%	66.37%
Eulachon (Hooligan, Candlefish)	12.5	6.7	5.8	8.7	5.8	502.56	0.53	0.17	154.63 gal	0.16	87.24%	87.96%
Unknown Smelt	21.2	8.7	8.7	15.4	7.7	1,300.75	1.38	0.44	400.23 gal	0.42	85.82%	85.27%
Wolf Eel (Wolffish)	1.9	1.0	1.0	1.0	1.0	4.55	0.00	0.00	9.10	0.01	187.11%	188.60%
Shark	1.0	1.0	1.0	0.0	0.0	81.87	0.09	0.03	9.10	0.01	187.11%	186.87%
Salmon Shark	1.0	1.0	1.0	0.0	0.0	81.87	0.09	0.03	9.10	0.01	187.11%	186.87%
Walleye Pollock (Whiting)	1.9	0.0	0.0	1.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Skates	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tuna/Mackerel	1.9	0.0	0.0	1.9	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mackerel	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Tuna/Mackerel	1.0	0.0	0.0	1.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Grayling	4.8	4.8	3.8	1.0	1.0	101.88	0.11	0.03	145.54	0.15	112.43%	112.45%
Sheefish	1.0	1.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whitefish	1.9	1.9	1.0	1.0	0.0	15.92	0.02	0.01	9.10	0.01	187.11%	187.45%
Whitefish, Large	0.0	1.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whitefish, Humpback	0.0	1.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whitefish	1.9	1.0	1.0	1.0	0.0	15.92	0.02	0.01	9.10	0.01	187.11%	187.45%
Trout and Char	50.0	44.2	38.5	18.3	16.3	9,894.80	10.46	3.34	7,067.71	7.47	45.67%	44.64%
Char	31.7	26.9	24.0	10.6	7.7	4,654.50	4.92	1.57	3,324.64	3.51	62.86%	61.67%
Dolly Varden	30.8	26.0	23.1	9.6	6.7	4,476.22	4.73	1.51	3,197.30	3.38	65.21%	64.21%
Lake Trout	4.8	2.9	1.9	2.9	1.9	178.28	0.19	0.06	127.35	0.13	143.46%	141.41%
Trout	34.6	30.8	25.0	13.5	10.6	5,240.29	5.54	1.77	3,743.07	3.96	45.64%	45.17%
Cutthroat Trout	18.3	21.2	17.3	1.9	2.9	3,470.18	3.67	1.17	2,478.70	2.62	50.48%	50.74%
Rainbow Trout	9.6	7.7	5.8	3.8	1.0	674.93	0.71	0.23	482.10	0.51	84.55%	84.57%
Steelhead	14.4	5.8	5.8	8.7	5.8	229.22	0.24	0.08	163.73	0.17	110.98%	110.90%
Unknown Trout	3.8	3.8	2.9	1.0	1.9	865.95	0.92	0.29	618.54	0.65	141.95%	140.66%
Unknown Non-Salmon Fish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Game	82.7	56.7	35.6	68.3	36.5	73,828.02	78.04	24.90	2,301.33	2.43	42.14%	39.29%
Big Game	80.8	55.8	28.8	66.3	33.7	71,553.98	75.64	24.13	800.46	0.85	33.21%	40.47%
Black Bear	3.8	3.8	1.9	1.9	1.9	1,055.15	1.12	0.36	18.19	0.02	131.66%	131.73%
Brown Bear	0.0	1.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Caribou	8.7	0.0	0.0	7.7	1.9	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Deer	66.3	48.1	23.1	52.9	24.0	30,257.45	31.98	10.20	700.40	0.74	35.72%	36.65%
Elk	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goat	1.0	1.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table II-40. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Cordova, 1993

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Moose	67.3	20.2	7.7	58.7	16.3	39,295.38	41.54	13.25	72.77	0.08	63.87%	63.58%
Sheep, Dall	1.9	1.0	1.0	1.0	1.0	946.00	1.00	0.32	9.10	0.01	187.11%	186.87%
Small Game/Furbearer	22.1	24.0	17.3	7.7	6.7	1,655.50	1.75	0.56	1,191.60	1.26	67.26%	55.75%
Fox	0.0	1.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Beaver	1.9	1.9	1.0	1.0	0.0	0.00	0.00	0.00	72.77	0.08	187.11%	0.00%
Coyote	1.9	2.9	1.0	0.0	0.0	0.00	0.00	0.00	9.10	0.01	187.11%	0.00%
Hare	19.2	22.1	15.4	6.7	5.8	1,655.50	1.75	0.56	827.75	0.88	56.94%	55.75%
Snowshoe Hare	19.2	22.1	15.4	6.7	5.8	1,655.50	1.75	0.56	827.75	0.88	56.94%	55.75%
Land Otter	1.0	1.9	1.0	0.0	0.0	0.00	0.00	0.00	9.10	0.01	187.11%	0.00%
Lynx	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marten	1.0	1.9	1.0	0.0	0.0	0.00	0.00	0.00	45.48	0.05	187.11%	0.00%
Mink	1.0	1.9	1.0	0.0	1.0	0.00	0.00	0.00	181.92	0.19	187.11%	0.00%
Muskrat	0.0	1.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Porcupine	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Weasel	1.0	1.0	1.0	0.0	0.0	0.00	0.00	0.00	27.29	0.03	187.11%	0.00%
Wolf	0.0	1.9	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wolverine	1.0	1.9	1.0	0.0	1.0	0.00	0.00	0.00	18.19	0.02	187.11%	0.00%
Squirrel	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Feral Animals	1.9	1.9	1.9	1.0	1.0	618.54	0.65	0.21	309.27	0.33	142.59%	143.12%
Rabbit - Feral	1.9	1.9	1.9	1.0	1.0	618.54	0.65	0.21	309.27	0.33	142.59%	143.12%
Marine Mammals	8.7	1.9	1.9	6.7	2.9	2,406.84	2.54	0.81	63.67	0.07	162.34%	161.39%
Whale	1.9	0.0	0.0	1.9	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Bowhead	1.0	0.0	0.0	1.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whale	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	8.7	1.9	1.9	6.7	1.9	2,406.84	2.54	0.81	63.67	0.07	162.34%	161.39%
Harbor Seal	8.7	1.9	1.9	6.7	1.9	2,406.84	2.54	0.81	63.67	0.07	162.34%	161.39%
Porpoise/Dolphin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steller Sea Lion	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sea Otter	1.0	0.0	0.0	1.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Birds and Eggs	46.2	35.6	27.9	24.0	5.8	3,142.36	3.32	1.06	3,456.54	3.65	56.53%	58.54%
Birds	45.2	35.6	27.9	23.1	5.8	3,142.36	3.32	1.06	3,456.54	3.65	56.53%	58.54%
Upland Game Birds	17.3	17.3	13.5	5.8	2.9	789.55	0.83	0.27	1,127.92	1.19	59.93%	60.24%
Grouse	9.6	10.6	8.7	1.9	2.9	401.14	0.42	0.14	573.06	0.61	83.29%	83.26%
Ptarmigan	11.5	10.6	7.7	4.8	0.0	388.41	0.41	0.13	554.87	0.59	74.18%	74.72%
Migratory Birds	36.5	27.9	20.2	21.2	2.9	2,352.81	2.49	0.79	2,328.62	2.46	64.18%	65.39%
Waterfowl	35.6	27.9	20.2	20.2	2.9	2,200.00	2.33	0.74	2,310.42	2.44	63.49%	59.81%
Ducks	33.7	27.9	19.2	19.2	2.9	1,712.44	1.81	0.58	2,155.79	2.28	63.01%	58.92%

Table II-40. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Cordova, 1993

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Eider	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eider, Small	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steller Eiders	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Spectacled Eiders	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eider, Large	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
King Eiders	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Common Eiders	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eider, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, White-winged	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, Black	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, Surf	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Harlequin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goldeneye	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Bufflehead	0.0	1.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Merganser	1.0	1.0	1.0	0.0	1.0	24.56	0.03	0.01	27.29	0.03	187.11%	186.87%
Scaup	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mallard	23.1	24.0	16.3	8.7	1.9	1,082.44	1.14	0.37	1,082.44	1.14	54.66%	53.47%
Pintail	4.8	4.8	3.8	1.0	1.0	138.26	0.15	0.05	172.83	0.18	149.27%	148.23%
Wigeon	5.8	6.7	5.8	1.0	1.0	286.53	0.30	0.10	409.33	0.43	88.59%	86.00%
Teal	12.5	9.6	6.7	7.7	1.0	114.61	0.12	0.04	382.04	0.40	83.63%	83.28%
Gadwall	1.9	1.9	1.9	0.0	1.0	50.94	0.05	0.02	63.67	0.07	143.46%	143.04%
Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shoveler	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canvasback	0.0	1.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Ducks, Unknown	6.7	4.8	1.0	5.8	0.0	15.10	0.02	0.01	18.19	0.02	187.11%	188.03%
Geese	12.5	14.4	6.7	5.8	1.0	487.55	0.52	0.16	154.63	0.16	87.24%	81.83%
Brant	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snow Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
White-fronted Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese	8.7	10.6	4.8	3.8	1.0	425.70	0.45	0.14	136.44	0.14	97.77%	92.45%
Canada Geese, Lesser	1.9	4.8	1.0	1.0	0.0	32.75	0.03	0.01	27.29	0.03	187.11%	186.29%
Canada Geese, Dusky	7.7	6.7	4.8	2.9	1.0	392.95	0.42	0.13	109.15	0.12	92.18%	91.69%
Geese, Unknown	3.8	3.8	1.9	1.9	0.0	61.85	0.07	0.02	18.19	0.02	131.66%	131.32%
Crane	1.9	1.9	1.0	1.0	0.0	152.82	0.16	0.05	18.19	0.02	187.11%	186.29%
Sandhill Crane	1.9	1.9	1.0	1.0	0.0	152.82	0.16	0.05	18.19	0.02	187.11%	186.29%

Table II-40. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Cordova, 1993

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Shorebirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Common Snipe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seabirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cormorants	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Loons	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eggs	1.9	0.0	0.0	1.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seabird Eggs	1.9	0.0	0.0	1.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Gull Eggs	1.9	0.0	0.0	1.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tern Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shorebird Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snipe Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black Snipe Eggs (Oystercatcher)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Waterfowl Eggs	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs, Unknown	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese Eggs	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Invertebrates	73.1	45.2	44.2	64.4	38.5	16,129.17	17.05	5.44			60.51%	61.88%
Clams	61.5	40.4	37.5	49.0	26.9	8,877.39	9.38	2.99	2,959.13 gal	3.13	43.46%	45.08%
Butter Clams	19.2	11.5	11.5	10.6	9.6	1,777.84	1.88	0.60	592.61 gal	0.63	74.46%	75.36%
Razor Clams	58.7	34.6	31.7	45.2	21.2	5,680.55	6.00	1.92	1,893.52 gal	2.00	47.92%	49.42%
Pacific Littleneck Clams (Steamers)	11.5	7.7	7.7	6.7	5.8	1,282.56	1.36	0.43	427.52 gal	0.45	78.98%	79.83%
Pinkneck Clams	1.0	1.0	1.0	0.0	0.0	109.15	0.12	0.04	36.38 gal	0.04	187.11%	188.03%
Horse Clams (Gaper)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Unknown Clams	2.9	1.9	1.0	1.9	0.0	27.29	0.03	0.01	9.10 gal	0.01	187.11%	186.87%
Cockles	3.8	4.8	2.9	1.9	1.0	40.02	0.04	0.01	13.34 gal	0.01	133.86%	133.60%
Scallops	10.6	0.0	0.0	10.6	2.9	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Mussels	4.8	3.8	3.8	3.8	2.9	177.38	0.19	0.06	59.13 gal	0.06	122.19%	123.11%
Crabs	50.0	11.5	10.6	45.2	14.4	4,733.64	5.00	1.60	3,802.19	4.02	115.30%	130.63%
Dungeness Crab	39.4	7.7	7.7	34.6	10.6	1,069.71	1.13	0.36	1,528.15	1.62	85.72%	86.39%
King Crab	15.4	1.0	1.0	14.4	2.9	83.68	0.09	0.03	36.38	0.04	187.11%	188.60%
King Crab, Unknown	15.4	1.0	1.0	14.4	2.9	83.68	0.09	0.03	36.38	0.04	187.11%	188.60%
Tanner Crab	28.8	5.8	4.8	25.0	7.7	3,580.25	3.78	1.21	2,237.65	2.37	153.47%	154.55%
Tanner Crab, Unknown	28.8	5.8	4.8	25.0	7.7	3,580.25	3.78	1.21	2,237.65	2.37	153.47%	154.55%
Unknown Crabs	1.9	0.0	0.0	1.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Chitons (bidarkis)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Chitons (large)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Chitons (small)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%

Table II-40. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Cordova, 1993

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Chitons (unknown)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Octopus	15.4	3.8	2.9	11.5	6.7	291.08	0.31	0.10	72.77	0.08	127.40%	128.42%
Sea Cucumber	1.0	1.0	1.0	0.0	0.0	2.73	0.00	0.00	1.36 gal	0.00	187.11%	188.60%
Sea Urchin	2.9	2.9	2.9	1.0	0.0	10.99	0.01	0.00	21.98 gal	0.02	162.33%	164.00%
Shrimp	24.0	7.7	7.7	16.3	8.7	1,882.90	1.99	0.63	941.45 gal	1.00	98.74%	98.68%
Limpets	1.9	1.9	1.9	0.0	0.0	3.89	0.00	0.00	2.59 gal	0.00	132.67%	133.96%
Squid	1.0	1.0	1.0	0.0	0.0	109.15	0.12	0.04	54.58	0.06	187.11%	186.29%
Oyster	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Rock Oyster	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Plants and Berries	91.3	85.6	85.6	52.9	46.2	22,112.75	23.38	7.46	5,528.19 gal	5.84	24.81%	26.11%
Berries	91.3	85.6	85.6	51.0	45.2	20,834.74	22.02	7.03	5,208.69 gal	5.51	25.37%	26.80%
Plants/Greens/Mushrooms	16.3	14.4	13.5	4.8	7.7	1,150.66	1.22	0.39	287.67 gal	0.30	60.53%	59.67%
Seaweed/Kelp (Food)	6.7	3.8	3.8	4.8	1.9	127.35	0.13	0.04	31.84 gal	0.03	115.62%	116.03%
Bull Kelp	6.7	3.8	3.8	4.8	1.9	127.35	0.13	0.04	31.84 gal	0.03	115.62%	116.03%
Wood	52.9	44.2	44.2	9.6	13.5	0.00	0.00	0.00	2,191.54 crd	2.32	29.48%	0.00%

Source: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table II-41. Estimated Amount of Resources Removed From Commercial Harvest, Cordova, 1993

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		86,801.88	31.28	22.91
Fish		85,695.41	32.79	22.61
Salmon	13,917.12	78,661.81	45.52	20.76
Chum Salmon	291.08	1,411.72	91.43	0.37
Coho Salmon	2,292.23	13,524.16	19.81	3.57
Chinook Salmon	1,382.62	21,430.54	46.91	5.66
Pink Salmon	136.44	282.44	17.65	0.07
Sockeye Salmon	9,778.37	41,851.40	76.46	11.04
Unknown Salmon	36.38	161.55	16.67	0.04
Non-Salmon Fish		7,033.60	7.94	1.86
Cod	18.19	58.22	2.02	0.02
Pacific Cod (Gray)	18.19	58.22	2.06	0.02
Sablefish (Black Cod)	18.19	56.40	33.33	0.01
Greenling	54.58	218.31	7.67	0.06
Lingcod	54.58	218.31	10.17	0.06
Halibut	251.31	3,762.17	8.29	0.99
Herring	72.77 gal	436.62	7.17	0.12
Spawn on Kelp	230.98 gal	1,616.84	99.03	0.43
Rockfish	209.21	586.70	3.46	0.15
Black Rockfish (black bass)	100.06	150.09	7.10	0.04
Red Rockfish	109.15	436.62	3.79	0.12
Shark	9.10	81.87	100.00	0.02
Salmon Shark	9.10	81.87	100.00	0.02
Trout and Char	154.63	216.49	2.19	0.06
Trout	154.63	216.49	4.13	0.06
Steelhead	154.63	216.49	94.44	0.06
Marine Invertebrates		1,106.47	6.86	0.29
Crabs	1,264.37	1,094.27	23.12	0.29
Dungeness Crab	1,046.06	732.24	68.45	0.19
King Crab	18.19	41.84	50.00	0.01
King Crab, Unknown	18.19	41.84	50.00	0.01
Tanner Crab	200.12	320.18	8.94	0.08
Tanner Crab, Unknown	200.12	320.18	8.94	0.08
Sea Cucumber	1.36 gal	2.73	100.00	0.00
Sea Urchin (Neet)	18.95 gal	9.48	86.21	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table II-42. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Cordova, 1993

Resource	Percent Base	Subsistence Methods: Setnet No.	Setnet Lbs.	Floating Net No.	Floating Net Lbs.	Subsistence Gear Any Method No.	Subsistence Gear Any Method Lbs.	Removed from Commercial Catch No.	Removed from Commercial Catch Lbs.	Rod and Reel No.	Rod and Reel Lbs.	Any Method No.	Any Method Lbs.
Salmon	total	1.91	1.35	2.77	2.96	4.67	4.32	48.63	45.52	46.69	50.16		
Chum Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	2.09	1.79	0.20	0.15		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	91.43	91.43	8.57	8.57		
	total	0.00	0.00	0.00	0.00	0.00	0.00	1.02	0.82	0.10	0.08	1.11	0.89
Coho Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	16.47	17.19	69.43	63.15		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	19.81	19.81	80.19	80.19		
	total	0.00	0.00	0.00	0.00	0.00	0.00	8.01	7.83	32.42	31.68	40.43	39.51
Chinook Salmon	gear type	0.00	0.00	19.54	46.79	11.56	32.14	9.93	27.24	10.55	25.21		
	resource	0.00	0.00	5.25	5.25	5.25	5.25	46.91	46.91	47.84	47.84		
	total	0.00	0.00	0.54	1.39	0.54	1.39	4.83	12.40	4.93	12.65	10.30	26.44
Pink Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.36	4.77	1.52		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	17.65	17.65	82.35	82.35		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.16	2.23	0.76	2.70	0.93
Sockeye Salmon	gear type	100.00	100.00	80.46	53.21	88.44	67.86	70.26	53.20	13.68	9.03		
	resource	4.27	4.27	4.98	4.98	9.25	9.25	76.46	76.46	14.30	14.30		
	total	1.91	1.35	2.23	1.58	4.13	2.93	34.17	24.22	6.39	4.53	44.69	31.68
Landlocked Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.21	1.36	0.93		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	16.67	16.67	83.33	83.33		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.09	0.64	0.47	0.76	0.56

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table II-43. Estimated Salmon Harvest by Gear Type and Species, Cordova, 1993

		Subsistence Methods						Removed from Commercial Catch		Rod and Reel		Any Method	
		Setnet		Floating Net		Subsistence Gear Any Method							
	Harvest Units	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Salmon	numbers	545.77	0.58	791.37	0.84	1,337.13	1.41	13,917.12	14.71	13,362.25	14.13	28,616.50	30.25
	pounds	2,335.89	2.47	5,122.04	5.41	7,457.94	7.88	78,661.81	83.15	86,677.52	91.63	172,797.27	182.66
Chum Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	291.08	0.31	27.29	0.03	318.37	0.34
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	1,411.72	1.49	132.35	0.14	1,544.07	1.63
Coho Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	2,292.23	2.42	9,278.08	9.81	11,570.31	12.23
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	13,524.16	14.30	54,740.65	57.87	68,264.82	72.16
Chinook Salmon	numbers	0.00	0.00	154.63	0.16	154.63	0.16	1,382.62	1.46	1,409.90	1.49	2,947.15	3.12
	pounds	0.00	0.00	2,396.84	2.53	2,396.84	2.53	21,430.54	22.65	21,853.51	23.10	45,680.88	48.29
Pink Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	136.44	0.14	636.73	0.67	773.17	0.82
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	282.44	0.30	1,318.03	1.39	1,600.47	1.69
Sockeye Salmon	numbers	545.77	0.58	636.73	0.67	1,182.50	1.25	9,778.37	10.34	1,828.33	1.93	12,789.19	13.52
	pounds	2,335.89	2.47	2,725.21	2.88	5,061.10	5.35	41,851.40	44.24	7,825.24	8.27	54,737.74	57.86
Landlocked Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	36.38	0.04	181.92	0.19	218.31	0.23
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	161.55	0.17	807.74	0.85	969.29	1.02

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table II-44. Percentage of Households Harvesting Salmon by Gear Type and Species, Cordova, 1993

Resource	Subsistence Methods			Removed from Commercial Catch	Rod and Reel	Any Method
	Setnet	Floating Net	Any Subsistence Gear			
Salmon	0.96	6.73	7.69	28.85	60.58	77.88
Chum Salmon	0.00	0.00	0.00	4.81	1.92	6.73
Coho Salmon	0.00	0.00	0.00	20.19	52.88	67.31
Chinook Salmon	0.00	5.77	5.77	21.15	18.27	40.38
Pink Salmon	0.00	0.00	0.00	2.88	7.69	9.62
Sockeye Salmon	0.96	5.77	6.73	27.88	18.27	50.00
Landlocked Salmon	0.00	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	0.00	0.00	0.00	0.96	0.96	1.92

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table II-45. Estimated Harvest of Fish Other than Salmon by Gear Type, Cordova, 1993

	Harvest Units	Subsistence Gear		Removed From Commercial Catch		Rod and Reel		Ice Fishing		Any Method	
		Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Non-Salmon Fish	pounds	9,514.58	10.06	7,033.60	7.44	71,743.28	75.84	254.69	0.27	88,546.15	93.60
Grayling	pounds	0.00	0.00	0.00	0.00	101.88	0.11	0.00	0.00	101.88	0.11
Unknown Whitefish	pounds	0.00	0.00	0.00	0.00	15.92	0.02	0.00	0.00	15.92	0.02
Lingcod	pounds	0.00	0.00	218.31	0.23	1,928.38	2.04	0.00	0.00	2,146.69	2.27
Pacific Tom Cod	pounds	27.29	0.03	0.00	0.00	36.38	0.04	0.00	0.00	63.67	0.07
Pacific Cod (Gray)	pounds	0.00	0.00	58.22	0.06	2,765.23	2.92	0.00	0.00	2,823.45	2.98
Sablefish (Black Cod)	pounds	0.00	0.00	56.40	0.06	112.79	0.12	0.00	0.00	169.19	0.18
Unknown Flounder	pounds	0.00	0.00	0.00	0.00	300.17	0.32	0.00	0.00	300.17	0.32
Sole, Unknown	pounds	90.96	0.10	0.00	0.00	191.02	0.20	0.00	0.00	281.98	0.30
Halibut	pounds	2,055.73	2.17	3,762.17	3.98	39,560.08	41.82	0.00	0.00	45,377.98	47.97
Herring	pounds	4,666.33	4.93	436.62	0.46	982.38	1.04	0.00	0.00	6,085.33	6.43
Herring Roe	pounds	0.00	0.00	0.00	0.00	63.67	0.07	0.00	0.00	63.67	0.07
Spawn on Kelp	pounds	15.92	0.02	1,616.84	1.71	0.00	0.00	0.00	0.00	1,632.76	1.73
Black Rockfish (black bass)	pounds	0.00	0.00	150.09	0.16	1,964.77	2.08	0.00	0.00	2,114.86	2.24
Red Rockfish	pounds	727.69	0.77	436.62	0.46	10,369.62	10.96	0.00	0.00	11,533.92	12.19
Unknown Rockfish	pounds	0.00	0.00	0.00	0.00	3,295.17	3.48	0.00	0.00	3,295.17	3.48
Irish Lord	pounds	0.00	0.00	0.00	0.00	54.58	0.06	0.00	0.00	54.58	0.06
Eulachon (Hooligan, Candlefish)	pounds	502.56	0.53	0.00	0.00	0.00	0.00	0.00	0.00	502.56	0.53
Unknown Smelt	pounds	1,300.75	1.38	0.00	0.00	0.00	0.00	0.00	0.00	1,300.75	1.38
Unknown Greenling	pounds	0.00	0.00	0.00	0.00	700.40	0.74	0.00	0.00	700.40	0.74
Wolf Eel (Wolffish)	pounds	0.00	0.00	0.00	0.00	4.55	0.00	0.00	0.00	4.55	0.00
Salmon Shark	pounds	0.00	0.00	81.87	0.09	0.00	0.00	0.00	0.00	81.87	0.09
Dolly Varden	pounds	127.35	0.13	0.00	0.00	4,348.87	4.60	0.00	0.00	4,476.22	4.73
Cutthroat Trout	pounds	0.00	0.00	0.00	0.00	3,215.49	3.40	254.69	0.27	3,470.18	3.67
Lake Trout	pounds	0.00	0.00	0.00	0.00	178.28	0.19	0.00	0.00	178.28	0.19
Rainbow Trout	pounds	0.00	0.00	0.00	0.00	674.93	0.71	0.00	0.00	674.93	0.71
Steelhead	pounds	0.00	0.00	216.49	0.23	12.73	0.01	0.00	0.00	229.22	0.24
Unknown Trout	pounds	0.00	0.00	0.00	0.00	865.95	0.92	0.00	0.00	865.95	0.92

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table II-46. Percentage of Fish Other Than Salmon Harvested by Gear Type, Cordova, 1993

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	10.75	7.94	81.02	0.29
Grayling	resource	0.00	0.00	100.00	0.00
Unknown Whitefish	resource	0.00	0.00	100.00	0.00
Lingcod	resource	0.00	10.17	89.83	0.00
Pacific Tom Cod	resource	42.86	0.00	57.14	0.00
Pacific Cod (Gray)	resource	0.00	2.06	97.94	0.00
Sablefish (Black Cod)	resource	0.00	33.33	66.67	0.00
Unknown Flounder	resource	0.00	0.00	100.00	0.00
Sole, Unknown	resource	32.26	0.00	67.74	0.00
Halibut	resource	4.53	8.29	87.18	0.00
Herring	resource	76.68	7.17	16.14	0.00
Herring Roe	resource	0.00	0.00	100.00	0.00
Spawn on Kelp	resource	0.97	99.03	0.00	0.00
Black Rockfish (black bass)	resource	0.00	7.10	92.90	0.00
Red Rockfish	resource	6.31	3.79	89.91	0.00
Unknown Rockfish	resource	0.00	0.00	100.00	0.00
Irish Lord	resource	0.00	0.00	100.00	0.00
Eulachon (Hooligan, Candlefish)	resource	100.00	0.00	0.00	0.00
Unknown Smelt	resource	100.00	0.00	0.00	0.00
Unknown Greenling	resource	0.00	0.00	100.00	0.00
Wolf Eel (Wolffish)	resource	0.00	0.00	100.00	0.00
Salmon Shark	resource	0.00	100.00	0.00	0.00
Dolly Varden	resource	2.84	0.00	97.16	0.00
Cutthroat Trout	resource	0.00	0.00	92.66	7.34
Lake Trout	resource	0.00	0.00	100.00	0.00
Rainbow Trout	resource	0.00	0.00	100.00	0.00
Steelhead	resource	0.00	94.44	5.56	0.00
Unknown Trout	resource	0.00	0.00	100.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table II-47. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Cordova, 1993

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	21.15	20.19	55.77	0.96	69.23
Grayling	0.00	0.00	3.85	0.00	3.85
Unknown Whitefish	0.00	0.00	0.96	0.00	0.96
Lingcod	0.00	2.88	5.77	0.00	7.69
Pacific Tom Cod	0.96	0.00	0.96	0.00	1.92
Pacific Cod (Gray)	0.00	0.96	11.54	0.00	12.50
Sablefish (Black Cod)	0.00	0.96	0.96	0.00	1.92
Unknown Flounder	0.00	0.00	2.88	0.00	2.88
Sole, Unknown	0.96	0.00	2.88	0.00	3.85
Halibut	1.92	8.65	40.38	0.00	49.04
Herring	12.50	1.92	4.81	0.00	18.27
Herring Roe	0.00	0.00	0.96	0.00	0.96
Spawn on Kelp	0.96	6.73	0.00	0.00	7.69
Black Rockfish (black bass)	0.00	2.88	10.58	0.00	12.50
Red Rockfish	0.96	1.92	20.19	0.00	22.12
Unknown Rockfish	0.00	0.00	6.73	0.00	6.73
Irish Lord	0.00	0.00	1.92	0.00	1.92
Eulachon (Hooligan, Candlefish)	5.77	0.00	0.00	0.00	5.77
Unknown Smelt	8.65	0.00	0.00	0.00	8.65
Unknown Greenling	0.00	0.00	5.77	0.00	5.77
Wolf Eel (Wolffish)	0.00	0.00	0.96	0.00	0.96
Salmon Shark	0.00	0.96	0.00	0.00	0.96
Dolly Varden	0.96	0.00	23.08	0.00	23.08
Cutthroat Trout	0.00	0.00	16.35	0.96	17.31
Lake Trout	0.00	0.00	1.92	0.00	1.92
Rainbow Trout	0.00	0.00	5.77	0.00	5.77
Steelhead	0.00	4.81	0.96	0.00	5.77
Unknown Trout	0.00	0.00	2.88	0.00	2.88

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table II-48. Uses of Wild Foods, Cordova

	STUDY YEAR		
	1991	1992	1993
ANY WILD FOODS EATEN YESTERDAY?			
No			
Count	51	18	49
Col %	51.0%	43.9%	47.6%
Yes			
Count	49	23	54
Col %	49.0%	56.1%	52.4%
WILD FOODS AS MAIN PART OF A MEAL			
No			
Count	52	23	55
Col %	52.0%	56.1%	53.4%
Yes			
Count	48	18	48
Col %	48.0%	43.9%	46.6%
HARVEST OF WILD FOODS BY RESPONDENT			
No			
Count	77	30	85
Col %	77.0%	73.2%	82.5%
Yes			
Count	23	11	18
Col %	23.0%	26.8%	17.5%
WF HARVESTED BY RELATIVE IN HH			
No			
Count	85	34	89
Col %	85.0%	82.9%	86.4%
Yes			
Count	15	7	14
Col %	15.0%	17.1%	13.6%
WF HARVESTED BY RELATIVE IN ANOTHER HH			
No			
Count	97	38	96
Col %	97.0%	92.7%	93.2%
Yes			
Count	3	3	7
Col %	3.0%	7.3%	6.8%
WF HARVESTED BY RELATIVE IN ANOTHER COMM.			

(continued)

Table II-48. Uses of Wild Foods, Cordova

	STUDY YEAR		
	1991	1992	1993
No			
Count	100	41	101
Col %	100.0%	100.0%	98.1%
Yes			
Count			2
Col %			1.9%
WF HARVESTED BY FRIEND IN HH			
No			
Count	98	40	103
Col %	98.0%	97.6%	100.0%
Yes			
Count	2	1	
Col %	2.0%	2.4%	
WF HARVESTED BY FRIEND IN COMMUNITY			
No			
Count	89	35	79
Col %	89.0%	85.4%	76.7%
Yes			
Count	11	6	24
Col %	11.0%	14.6%	23.3%
WF HARVESTED BY FRIEND IN ANOTHER COMM.			
No			
Count	98	41	101
Col %	98.0%	100.0%	98.1%
Yes			
Count	2		2
Col %	2.0%		1.9%

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Table II-49. Safety of Using Subsistence Foods, Cordova

	STUDY YEAR		
	1991	1992	1993
DO YOU EAT BIDARKIES?			
No			
Count		38	100
Col %		92.7%	97.1%
Yes			
Count		3	3
Col %		7.3%	2.9%
IS EATING BIDARKIES IMPORTANT TO YOU?			
No			
Count	96		
Col %	96.0%		
Yes			
Count	4		
Col %	4.0%		
BIDARKIE HARVEST AREAS SAFE?			
Do Not Know			
Count	2	1	
Col %	66.7%	33.3%	
Not Safe			
Count	1		1
Col %	33.3%		33.3%
Safe			
Count		2	2
Col %		66.7%	66.7%
WHY BIDARKIES NOT SAFE TO EAT			
Oil pollution or fear of contamination			
Count	1		1
Col %	100.0%		100.0%
DO YOU EAT CLAMS?			
No			
Count		3	21
Col %		7.3%	20.4%
Yes			
Count		38	82
Col %		92.7%	79.6%
ARE CLAMS SAFE FOR CHILDREN TO EAT?			

(continued)

Table II-49. Safety of Using Subsistence Foods, Cordova

	STUDY YEAR		
	1991	1992	1993
Do Not Know			
Count	14	4	8
Col %	14.6%	10.5%	9.8%
Not Safe			
Count	7	5	17
Col %	7.3%	13.2%	20.7%
Safe			
Count	75	29	57
Col %	78.1%	76.3%	69.5%
WHY CLAMS NOT SAFE TO EAT			
No Response			
Count		1	5
Col %		20.0%	22.7%
Do Not Know			
Count			1
Col %			4.5%
Fearful of PSP poisoning			
Count			1
Col %			4.5%
Oil pollution or fear of contamination			
Count	2	1	6
Col %	40.0%	20.0%	27.3%
Pollution from non-oil spill source			
Count	1	2	
Col %	20.0%	40.0%	
Resource has been destroyed or depleted			
Count		1	
Col %		20.0%	
Unsure about safety			
Count	1		1
Col %	20.0%		4.5%
Safe to eat if you know which ones to take			
Count	1		
Col %	20.0%		

(continued)

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Table II-49. Safety of Using Subsistence Foods, Cordova

	STUDY YEAR		
	1991	1992	1993
Both PSP and pollution			
Count			2
Col %			9.1%
Clams are smaller and fewer			
Count			1
Col %			4.5%
Nonspecific concern			
Count			3
Col %			13.6%
Smells different			
Count			1
Col %			4.5%
Not sure how monitoring was conducted			
Count			1
Col %			4.5%
DO YOU EAT SEAL OIL OR SEAL MEAT?			
No			
Count		37	91
Col %		90.2%	88.3%
Yes			
Count		4	12
Col %		9.8%	11.7%
IS EATING SEAL MEAT OR OIL IMPORTANT?			
No			
Count	95		
Col %	95.0%		
Yes			
Count	5		
Col %	5.0%		
ARE SEALS FROM HARVEST AREAS SAFE TO EAT?			
Do Not Know			
Count	1		
Col %	20.0%		
Not Safe			
Count	1	2	3
Col %	20.0%	50.0%	25.0%

(continued)

Table II-49. Safety of Using Subsistence Foods, Cordova

	STUDY YEAR		
	1991	1992	1993
Safe			
Count	3	2	9
Col %	60.0%	50.0%	75.0%
WHY SEAL NOT SAFE TO EAT			
No Response			
Count	1		
Col %	100.0%		
Oil pollution or fear of contamination			
Count		2	1
Col %		100.0%	33.3%
Do not trust food safety information			
Count			1
Col %			33.3%
Not sure how monitoring was conducted			
Count			1
Col %			33.3%

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Table II-50. Resource Population Statuses, Cordova

	STUDY YEAR		
	1991	1992	1993
COMPARED TO 1988: DEER			
No Response			
Count		1	
Col %		3.3%	
Do Not Know			
Count	17	1	17
Col %	19.1%	3.3%	23.3%
Less			
Count	40	14	24
Col %	44.9%	46.7%	32.9%
Same			
Count	31	13	31
Col %	34.8%	43.3%	42.5%
More			
Count	1	1	1
Col %	1.1%	3.3%	1.4%
COMPARED TO 1988: MOOSE			
No Response			
Count		1	
Col %		3.3%	
Do Not Know			
Count		4	16
Col %		13.3%	21.9%
Less			
Count		5	10
Col %		16.7%	13.7%
Same			
Count		20	43
Col %		66.7%	58.9%
More			
Count			4
Col %			5.5%
COMPARED TO 1988: BEAR			
Do Not Know			
Count	36	8	24
Col %	40.4%	26.7%	32.9%

(continued)

Table II-50. Resource Population Statuses, Cordova

	STUDY YEAR		
	1991	1992	1993
Less			
Count	7	4	13
Col %	7.9%	13.3%	17.8%
Same			
Count	34	13	28
Col %	38.2%	43.3%	38.4%
More			
Count	12	5	8
Col %	13.5%	16.7%	11.0%
COMPARED TO 1988: HARBOR SEAL			
Do Not Know			
Count	40	9	35
Col %	45.5%	30.0%	47.9%
Less			
Count	26	11	27
Col %	29.5%	36.7%	37.0%
Same			
Count	18	8	9
Col %	20.5%	26.7%	12.3%
More			
Count	4	2	2
Col %	4.5%	6.7%	2.7%
COMPARED TO 1988: SEA LIONS			
Do Not Know			
Count	37	9	32
Col %	41.6%	30.0%	43.8%
Less			
Count	30	9	21
Col %	33.7%	30.0%	28.8%
Same			
Count	17	9	11
Col %	19.1%	30.0%	15.1%
More			
Count	5	3	9
Col %	5.6%	10.0%	12.3%

(continued)

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Table II-50. Resource Population Statuses, Cordova

	STUDY YEAR		
	1991	1992	1993
COMPARED TO 1988: SEA DUCKS			
Do Not Know			
Count	30	8	30
Col %	33.7%	26.7%	41.1%
Less			
Count	35	16	32
Col %	39.3%	53.3%	43.8%
Same			
Count	20	6	11
Col %	22.5%	20.0%	15.1%
More			
Count	4		
Col %	4.5%		
COMPARED TO 1988: COMMON MURRE			
Do Not Know			
Count	48	11	32
Col %	53.9%	36.7%	43.8%
Less			
Count	27	15	30
Col %	30.3%	50.0%	41.1%
Same			
Count	13	3	9
Col %	14.6%	10.0%	12.3%
More			
Count	1	1	2
Col %	1.1%	3.3%	2.7%
COMPARED TO 1988: SALMON			
No Response			
Count	1		
Col %	1.1%		
Do Not Know			
Count	16		2
Col %	18.0%		2.7%
Less			
Count	23	25	61
Col %	25.8%	83.3%	83.6%

(continued)

Table II-50. Resource Population Statuses, Cordova

	STUDY YEAR		
	1991	1992	1993
Same			
Count	29	5	9
Col %	32.6%	16.7%	12.3%
More			
Count	20		1
Col %	22.5%		1.4%
COMPARED TO 1988: HALIBUT			
Do Not Know			
Count	23	3	18
Col %	25.8%	10.0%	24.7%
Less			
Count	26	14	25
Col %	29.2%	46.7%	34.2%
Same			
Count	37	12	25
Col %	41.6%	40.0%	34.2%
More			
Count	3	1	5
Col %	3.4%	3.3%	6.8%
COMPARED TO 1988: ROCKFISH			
Do Not Know			
Count	40	10	30
Col %	44.9%	33.3%	41.1%
Less			
Count	23	13	27
Col %	25.8%	43.3%	37.0%
Same			
Count	25	7	15
Col %	28.1%	23.3%	20.5%
More			
Count	1		1
Col %	1.1%		1.4%
COMPARED TO 1988: DOLLY VARDEN			
No Response			
Count			1
Col %			1.4%

(continued)

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Table II-50. Resource Population Statuses, Cordova

	STUDY YEAR		
	1991	1992	1993
Do Not Know			
Count	43	11	29
Col %	48.3%	36.7%	39.7%
Less			
Count	5	6	16
Col %	5.6%	20.0%	21.9%
Same			
Count	40	13	26
Col %	44.9%	43.3%	35.6%
More			
Count	1		1
Col %	1.1%		1.4%
COMPARED TO 1988: CLAMS			
No Response			
Count		1	
Col %		3.3%	
Do Not Know			
Count	23	1	22
Col %	25.8%	3.3%	30.1%
Less			
Count	44	19	41
Col %	49.4%	63.3%	56.2%
Same			
Count	22	9	9
Col %	24.7%	30.0%	12.3%
More			
Count			1
Col %			1.4%
COMPARED TO 1988: BIDARKIES			
No Response			
Count		1	
Col %		3.3%	
Do Not Know			
Count	72	17	61
Col %	80.9%	56.7%	83.6%

(continued)

Table II-50. Resource Population Statuses, Cordova

	STUDY YEAR		
	1991	1992	1993
Less			
Count	15	6	8
Col %	16.9%	20.0%	11.0%
Same			
Count	2	6	4
Col %	2.2%	20.0%	5.5%
COMPARED TO 1988: SEA URCHINS			
Do Not Know			
Count	59	18	54
Col %	66.3%	60.0%	74.0%
Less			
Count	17	8	12
Col %	19.1%	26.7%	16.4%
Same			
Count	12	4	5
Col %	13.5%	13.3%	6.8%
More			
Count	1		2
Col %	1.1%		2.7%
COMPARED TO 1988: OCTOPUS			
Do Not Know			
Count	59	17	53
Col %	66.3%	56.7%	72.6%
Less			
Count	8	7	11
Col %	9.0%	23.3%	15.1%
Same			
Count	19	6	9
Col %	21.3%	20.0%	12.3%
More			
Count	3		
Col %	3.4%		

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Table II-51. Children's Participation in Subsistence, Cordova

	STUDY YEAR		
	1991	1992	1993
DOES YOUR HOUSEHOLD PROCESS WILD FOODS?			
No			
Count		1	6
Col %		2.4%	5.8%
Yes			
Count		40	97
Col %		97.6%	94.2%
DO CHILDREN HELP YOUR HH PROCESS WILD FOODS?			
No Response			
Count	1		
Col %	1.0%		
No			
Count	71	30	79
Col %	71.7%	73.2%	76.7%
Yes			
Count	27	11	24
Col %	27.3%	26.8%	23.3%
DID EVOS AFFECT PARTICIPATION WITH CHILDREN?			
No			
Count	77	30	76
Col %	81.1%	85.7%	89.4%
Yes			
Count	18	5	9
Col %	18.9%	14.3%	10.6%
WHY EVOS AFFECTED PARTICIPATION WITH CHILDREN			
No Response			
Count	3		
Col %	16.7%		
Were too busy with other affairs			
Count	5	5	7
Col %	27.8%	100.0%	77.8%
Did not trust foods			
Count	1		
Col %	5.6%		

(continued)

Table II-51. Children's Participation in Subsistence, Cordova

	STUDY YEAR		
	1991	1992	1993
Afraid to take kids to the beach			
Count	1		
Col %	5.6%		
Were not allowed to commercial fish			
Count	2		
Col %	11.1%		
Less harvesting activity			
Count	1		
Col %	5.6%		
Areas were no longer available for harvesting			
Count	1		
Col %	5.6%		
Children more concerned about fish and game resources			
Count	1		
Col %	5.6%		
Oil pollution threatened everything			
Count	1		
Col %	5.6%		
Decreased effort because of the spill			
Count	2		1
Col %	11.1%		11.1%
Stress and attitude changes			
Count			1
Col %			11.1%

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Table II-52. Sharing, Cordova

	STUDY YEAR		
	1991	1992	1993
DID HOUSEHOLD SHARE?			
No			
Count		2	8
Col %		4.9%	7.8%
Yes			
Count	84	39	95
Col %	100.0%	95.1%	92.2%
PREV. YEAR: SHARING OF WILD RES.			
Do Not Know			
Count	1		
Col %	1.0%		
Less			
Count	15	7	18
Col %	15.3%	17.1%	17.6%
Same			
Count	67	22	59
Col %	68.4%	53.7%	57.8%
More			
Count	15	12	25
Col %	15.3%	29.3%	24.5%
PREV. YEAR: SHARING OF HUNT/FISH GEAR			
Do Not Know			
Count	1		1
Col %	1.0%		1.1%
Less			
Count	14	2	11
Col %	14.6%	5.6%	12.0%
Same			
Count	71	26	72
Col %	74.0%	72.2%	78.3%
More			
Count	10	8	8
Col %	10.4%	22.2%	8.7%
PREV. YEAR: SHARING OF MONEY			
Do Not Know			
Count	2		1

(continued)

Table II-52. Sharing, Cordova

	STUDY YEAR		
	1991	1992	1993
Col %	2.1%		1.0%
Less			
Count	23	6	22
Col %	24.0%	20.0%	22.7%
Same			
Count	52	19	58
Col %	54.2%	63.3%	59.8%
More			
Count	19	5	16
Col %	19.8%	16.7%	16.5%
PREV. YEAR: SHARING OF LABOR			
No Response			
Count		1	
Col %		2.6%	
Do Not Know			
Count	3		1
Col %	3.1%		1.0%
Less			
Count	15	4	10
Col %	15.3%	10.5%	9.9%
Same			
Count	60	21	66
Col %	61.2%	55.3%	65.3%
More			
Count	20	12	24
Col %	20.4%	31.6%	23.8%
PRE-OS: SHARING OF WILD RESOURCES			
Do Not Know			
Count	4	2	
Col %	4.5%	6.7%	
Less			
Count	26	10	28
Col %	29.2%	33.3%	35.4%
Same			
Count	46	14	32

(continued)

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Table II-52. Sharing, Cordova

	STUDY YEAR		
	1991	1992	1993
Col %	51.7%	46.7%	40.5%
More			
Count	13	4	19
Col %	14.6%	13.3%	24.1%
PRE-OS: SHARING OF HUNT/FISH GEAR			
Do Not Know			
Count		1	
Col %		4.0%	
Less			
Count	22	7	17
Col %	25.3%	28.0%	23.9%
Same			
Count	54	14	44
Col %	62.1%	56.0%	62.0%
More			
Count	11	3	10
Col %	12.6%	12.0%	14.1%
PRE-OS: SHARING OF MONEY			
Do Not Know			
Count	1	2	2
Col %	1.1%	8.7%	2.6%
Less			
Count	22	5	23
Col %	25.0%	21.7%	29.9%
Same			
Count	51	12	40
Col %	58.0%	52.2%	51.9%
More			
Count	14	4	12
Col %	15.9%	17.4%	15.6%
PRE-OS: SHARING OF LABOR			
No Response			
Count	1		
Col %	1.1%		
Do Not Know			

(continued)

Table II-52. Sharing, Cordova

	STUDY YEAR		
	1991	1992	1993
Count	2	1	
Col %	2.2%	3.4%	
Less			
Count	18	6	17
Col %	20.2%	20.7%	21.5%
Same			
Count	53	17	41
Col %	59.6%	58.6%	51.9%
More			
Count	15	5	21
Col %	16.9%	17.2%	26.6%

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Table II-53. Political Activities, Cordova

	STUDY YEAR		
	1991	1992	1993
LAST 3 YRS.: ELDERS INFLUENCE			
No Response			
Count	3		
Col %	3.1%		
Do Not Know			
Count	14		
Col %	14.6%		
Decreased			
Count	41		
Col %	42.7%		
Same			
Count	24		
Col %	25.0%		
Increased			
Count	14		
Col %	14.6%		
LAST 4 YRS.: ELDERS INFLUENCE			
Do Not Know			
Count		6	
Col %		15.8%	
Decreased			
Count		18	
Col %		47.4%	
Same			
Count		8	
Col %		21.1%	
Increased			
Count		6	
Col %		15.8%	
LAST 5 YRS.: ELDERS INFLUENCE			
Do Not Know			
Count			4
Col %			5.1%
Decreased			
Count			34
Col %			43.0%

(continued)

Table II-53. Political Activities, Cordova

	STUDY YEAR		
	1991	1992	1993
Same			
Count			22
Col %			27.8%
Increased			
Count			19
Col %			24.1%
LAST 5 YRS.: ELDERS INFLUENCE: WHY			
No Response			
Count			1
Col %			1.9%
Do Not Know			
Count			2
Col %			3.8%
Because of the crisis in the community since the oil spill			
Count			3
Col %			5.7%
Fewer elders, traditional people passed away			
Count			6
Col %			11.3%
Elders not as active			
Count			3
Col %			5.7%
Younger individuals playing more of a role			
Count			6
Col %			11.3%
Elders dissatisfied, frustrated, bitter			
Count			4
Col %			7.5%
Younger individuals usurping authority			
Count			2
Col %			3.8%
Dissatisfaction with traditional ways			
Count			1

(continued)

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Table II-53. Political Activities, Cordova

	STUDY YEAR		
	1991	1992	1993
Col %			1.9%
Trying to maintain culture			
Count			1
Col %			1.9%
Elders more aware of the power they hold			
Count			6
Col %			11.3%
More voters, more involved			
Count			2
Col %			3.8%
Elders knowledge is not appreciated or recognized			
Count			5
Col %			9.4%
Elders knowledge is more appreciated or recognized			
Count			3
Col %			5.7%
Elders are not listened to			
Count			2
Col %			3.8%
Non-specific response			
Count			1
Col %			1.9%
Elders unable to keep pace with rapid changes			
Count			1
Col %			1.9%
Individuals taking more of a role			
Count			1
Col %			1.9%
Lack of fiscal responsibility			
Count			1
Col %			1.9%
Need for elders to be more active			

(continued)

Table II-53. Political Activities, Cordova

	STUDY YEAR		
	1991	1992	1993
Count			2
Col %			3.8%
PRE-EVOS: ATTEND PUBLIC MEETINGS			
Never			
Count	26		
Col %	27.7%		
Sometimes			
Count	62		
Col %	66.0%		
Almost Always			
Count	6		
Col %	6.4%		
PRE-EVOS: ATTEND PUBLIC MEETINGS			
Do Not Know			
Count		1	
Col %		3.2%	
Less			
Count		12	37
Col %		38.7%	48.1%
Same			
Count		12	24
Col %		38.7%	31.2%
More			
Count		6	16
Col %		19.4%	20.8%
LAST YEAR: ATTEND PUBLIC MEETINGS			
Never			
Count	17		
Col %	17.0%		
Sometimes			
Count	57		
Col %	57.0%		
Almost Always			
Count	26		
Col %	26.0%		

(continued)

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Table II-53. Political Activities, Cordova

	STUDY YEAR		
	1991	1992	1993
LAST YEAR: ATTEND PUBLIC MEETINGS			
Never			
Count		8	20
Col %		19.5%	19.4%
1.00			
Count		1	8
Col %		2.4%	7.8%
2.00			
Count		6	9
Col %		14.6%	8.7%
3.00			
Count		1	6
Col %		2.4%	5.8%
4.00			
Count		3	7
Col %		7.3%	6.8%
5.00			
Count		1	4
Col %		2.4%	3.9%
6.00			
Count		4	14
Col %		9.8%	13.6%
8.00			
Count		1	1
Col %		2.4%	1.0%
9.00			
Count		1	
Col %		2.4%	
10.00			
Count		2	8
Col %		4.9%	7.8%
12.00			
Count		1	5
Col %		2.4%	4.9%
13.00			

(continued)

Table II-53. Political Activities, Cordova

	STUDY YEAR		
	1991	1992	1993
Count		1	
Col %		2.4%	
14.00			
Count		1	1
Col %		2.4%	1.0%
15.00			
Count		2	2
Col %		4.9%	1.9%
16.00			
Count			1
Col %			1.0%
20.00			
Count		3	4
Col %		7.3%	3.9%
24.00			
Count		3	1
Col %		7.3%	1.0%
25.00			
Count			1
Col %			1.0%
30.00			
Count		1	1
Col %		2.4%	1.0%
36.00			
Count			1
Col %			1.0%
40.00			
Count		1	3
Col %		2.4%	2.9%
50.00			
Count			2
Col %			1.9%
54.00			
Count			1
Col %			1.0%

(continued)

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Table II-53. Political Activities, Cordova

	STUDY YEAR		
	1991	1992	1993
65.00			
Count			1
Col %			1.0%
99.00			
Count			2
Col %			1.9%
VOTE IN LAST CITY COUNCIL ELECTION?			
No			
Count	22		
Col %	22.0%		
Yes			
Count	78		
Col %	78.0%		
VOTE IN LAST STATE-WIDE ELECTION?			
Do Not Know			
Count	1		
Col %	1.0%		
No			
Count	25	5	17
Col %	25.0%	12.2%	16.7%
Yes			
Count	74	36	85
Col %	74.0%	87.8%	83.3%
BELONG TO NATIVE CORPORATION?			
No			
Count	88	38	96
Col %	88.0%	92.7%	93.2%
Yes			
Count	12	3	7
Col %	12.0%	7.3%	6.8%
REGIONAL NATIVE CORPORATION			
None			
Count			1
Col %			14.3%
Aleut Corp.			
Count	1		

(continued)

Table II-53. Political Activities, Cordova

	STUDY YEAR		
	1991	1992	1993
Col %	8.3%		
Chugach Alaska Corp.			
Count	9	2	2
Col %	75.0%	66.7%	28.6%
Cook Inlet Region, Inc.			
Count			1
Col %			14.3%
Doyon, Ltd.			
Count	1	1	1
Col %	8.3%	33.3%	14.3%
Sealaska Corp.			
Count	1		2
Col %	8.3%		28.6%
VOTE IN LAST REG. CORP. ELECTION?			
No Response			
Count			1
Col %			14.3%
No			
Count	1		1
Col %	8.3%		14.3%
Yes			
Count	11	3	5
Col %	91.7%	100.0%	71.4%
VILLAGE NATIVE CORPORATION			
No Response			
Count	1		
Col %	8.3%		
Do Not Know			
Count			1
Col %			14.3%
None, At Large			
Count	1		2
Col %	8.3%		28.6%
Native Village of Belkofsky			
Count	1		

(continued)

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Table II-53. Political Activities, Cordova

	STUDY YEAR		
	1991	1992	1993
Col %	8.3%		
Chenega Corporation			
Count	1	1	
Col %	8.3%	33.3%	
Eyak Corporation (Cordova)			
Count	6	1	2
Col %	50.0%	33.3%	28.6%
Gana-A Yoo, Limited (Galena)			
Count	1	1	1
Col %	8.3%	33.3%	14.3%
Sealaska Corp.			
Count	1		
Col %	8.3%		
Gold Belt (Juneau)			
Count			1
Col %			14.3%
VOTE IN LAST NATIVE VILLAGE CORP. ELECTION?			
No			
Count	2		2
Col %	18.2%		28.6%
Yes			
Count	9	3	5
Col %	81.8%	100.0%	71.4%
HAS VIEW OF LEADER CHANGED SINCE EVOS?			
No Response			
Count			2
Col %			2.5%
Do Not Know			
Count	2	2	2
Col %	2.0%	5.3%	2.5%
No			
Count	73	29	61
Col %	73.0%	76.3%	76.3%
Yes			

(continued)

Table II-53. Political Activities, Cordova

	STUDY YEAR		
	1991	1992	1993
Count	25	7	15
Col %	25.0%	18.4%	18.8%
WHY POST EVOS VIEW OF LEADERS			
No Response			
Count		1	1
Col %		12.5%	6.7%
Do Not Know			
Count	4		
Col %	14.8%		
Trust			
Count	15	5	8
Col %	55.6%	62.5%	53.3%
Awareness/involvement			
Count	4	1	3
Col %	14.8%	12.5%	20.0%
Education			
Count			1
Col %			6.7%
Level headed/reasonable			
Count	2	2	
Col %	7.4%	25.0%	
Represents concerns			
Count	1	1	
Col %	3.7%	12.5%	
Concern			
Count	2		
Col %	7.4%		
Decisive			
Count	1	1	
Col %	3.7%	12.5%	
Sobriety/maturity			
Count	1		1
Col %	3.7%		6.7%
Lifestyle			
Count	1		

(continued)

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Table II-53. Political Activities, Cordova

	STUDY YEAR		
	1991	1992	1993
Col %	3.7%		
New leadership			
Count			1
Col %			6.7%
Non-traditional alternatives			
Count			1
Col %			6.7%
Ineffectual			
Count			1
Col %			6.7%
Personal experiences			
Count			1
Col %			6.7%

ISR 4PRINT

Table II-54. Significance of Place, Cordova

	STUDY YEAR		
	1991	1992	1993
MAIN REASON MOVED TO COMMUNITY			
No Response			
Count		1	1
Col %		2.4%	1.0%
Born or reared here			
Count	15	6	14
Col %	15.2%	14.6%	13.6%
Relatives (family)			
Count	8	3	7
Col %	8.1%	7.3%	6.8%
Married a person born or reared here			
Count	3	1	4
Col %	3.0%	2.4%	3.9%
Family has always lived here			
Count	1	2	
Col %	1.0%	4.9%	
Friends			
Count	2	1	2
Col %	2.0%	2.4%	1.9%
Subsistence opportunities			
Count	2	2	1
Col %	2.0%	4.9%	1.0%
Employment reasons			
Count	39	11	48
Col %	39.4%	26.8%	46.6%
Environmental qualities			
Count	7	2	6
Col %	7.1%	4.9%	5.8%
Size of the community			
Count			3
Col %			2.9%
Crime levels			
Count	1		
Col %	1.0%		
Personal freedoms (politics)			

(continued)

Table II-54. Significance of Place, Cordova

	STUDY YEAR		
	1991	1992	1993
Count	2		2
Col %	2.0%		1.9%
Recreational opportunities			
Count	2	2	4
Col %	2.0%	4.9%	3.9%
Pace of Life			
Count	7	1	3
Col %	7.1%	2.4%	2.9%
Quality of Life			
Count	6	1	
Col %	6.1%	2.4%	
Location			
Count	2	4	4
Col %	2.0%	9.8%	3.9%
Natural disasters forced movement			
Count	1	1	
Col %	1.0%	2.4%	
Climate			
Count	1		
Col %	1.0%		
Transferred by military, employer, or social service agency			
Count		3	4
Col %		7.3%	3.9%
LIVE HERE: WHERE PERSON IS FROM			
No			
Count	81	34	93
Col %	81.0%	82.9%	90.3%
Yes			
Count	19	7	10
Col %	19.0%	17.1%	9.7%
LIVE HERE: RELATIVES LIVE HERE			
No			
Count	59	28	73
Col %	59.0%	68.3%	70.9%

(continued)

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Table II-54. Significance of Place, Cordova

	STUDY YEAR		
	1991	1992	1993
Yes			
Count	41	13	30
Col %	41.0%	31.7%	29.1%
LIVE HERE: MARRIED PERSON FROM HERE			
No			
Count	73	31	89
Col %	73.0%	75.6%	86.4%
Yes			
Count	27	10	14
Col %	27.0%	24.4%	13.6%
LIVE HERE: ALWAYS LIVED HERE			
No Response			
Count			1
Col %			1.0%
No			
Count	77	34	87
Col %	77.0%	82.9%	84.5%
Yes			
Count	23	7	15
Col %	23.0%	17.1%	14.6%
LIVE HERE: FRIENDS LIVE HERE			
No Response			
Count			1
Col %			1.0%
No			
Count	32	16	44
Col %	32.0%	39.0%	42.7%
Yes			
Count	68	25	58
Col %	68.0%	61.0%	56.3%
LIVE HERE: HUNTING & FISHING HERE			
No			
Count	19	8	25
Col %	19.0%	19.5%	24.3%
Yes			
Count	81	33	78

(continued)

Table II-54. Significance of Place, Cordova

	STUDY YEAR		
	1991	1992	1993
Col %	81.0%	80.5%	75.7%
LIVE HERE: JOB OPPORTUNITIES HERE			
No			
Count	25	13	37
Col %	25.0%	31.7%	35.9%
Yes			
Count	75	28	66
Col %	75.0%	68.3%	64.1%
LIVE HERE: EDUCATIONAL OPPORTUNITIES			
No Response			
Count		1	
Col %		2.4%	
No			
Count	61	21	51
Col %	61.0%	51.2%	49.5%
Yes			
Count	39	19	52
Col %	39.0%	46.3%	50.5%
LIVE HERE: COST OF LIVING			
No			
Count	94	41	97
Col %	94.9%	100.0%	94.2%
Yes			
Count	5		6
Col %	5.1%		5.8%
LIVE HERE: HOUSING AVAILABLE			
No			
Count	71	31	85
Col %	71.7%	75.6%	82.5%
Yes			
Count	28	10	18
Col %	28.3%	24.4%	17.5%
LIVE HERE: STORES			
No			
Count	79	38	95
Col %	79.0%	92.7%	92.2%

(continued)

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Table II-54. Significance of Place, Cordova

	STUDY YEAR		
	1991	1992	1993
Yes			
Count	21	3	8
Col %	21.0%	7.3%	7.8%
LIVE HERE: MEDICAL SERVICES			
No			
Count	61	31	83
Col %	61.0%	75.6%	80.6%
Yes			
Count	39	10	20
Col %	39.0%	24.4%	19.4%
LIVE HERE: OTHER SERVICES			
No			
Count	66	31	78
Col %	66.0%	75.6%	75.7%
Yes			
Count	34	10	25
Col %	34.0%	24.4%	24.3%
LIVE HERE: BEAUTY OF AREA			
No			
Count	4	4	5
Col %	4.0%	9.8%	4.9%
Yes			
Count	96	37	98
Col %	96.0%	90.2%	95.1%
LIVE HERE: SIZE OF COMMUNITY			
No			
Count	14	3	13
Col %	14.0%	7.3%	12.6%
Yes			
Count	86	38	90
Col %	86.0%	92.7%	87.4%
LIVE HERE: LESS CRIME			
No Response			
Count	1		
Col %	1.0%		
No			

(continued)

Table II-54. Significance of Place, Cordova

	STUDY YEAR		
	1991	1992	1993
Count	22	7	17
Col %	22.0%	17.1%	16.5%
Yes			
Count	77	34	86
Col %	77.0%	82.9%	83.5%
LIVE HERE: LESS DRINKING/DRUGS			
No			
Count	83	35	89
Col %	83.0%	85.4%	86.4%
Yes			
Count	17	6	14
Col %	17.0%	14.6%	13.6%
LIVE HERE: NECESSARY PERSONAL FREEDOMS			
No			
Count	16	9	19
Col %	16.0%	22.0%	18.4%
Yes			
Count	84	32	84
Col %	84.0%	78.0%	81.6%
LIVE HERE: RECREATIONAL OPPORTUNITIES			
No			
Count	19	12	28
Col %	19.0%	29.3%	27.2%
Yes			
Count	81	29	75
Col %	81.0%	70.7%	72.8%
OTHER REASONS FOR LIVING IN COMMUNITY			
Pace of Life			
Count	5	2	8
Col %	17.2%	16.7%	21.6%
Quality of Life			
Count	15	6	17
Col %	51.7%	50.0%	45.9%
Cultural Reasons			
Count	3	1	3
Col %	10.3%	8.3%	8.1%

(continued)

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Table II-54. Significance of Place, Cordova

	STUDY YEAR		
	1991	1992	1993
Religious Reasons			
Count			2
Col %			5.4%
Location			
Count	8	4	10
Col %	27.6%	33.3%	27.0%
Not here by choice			
Count	2	1	2
Col %	6.9%	8.3%	5.4%
Natural disasters forced movement			
Count		1	
Col %		8.3%	
Opportunity to be involved and make a difference			
Count			1
Col %			2.7%
This is where they established their home			
Count			2
Col %			5.4%
Transferred by military, employer, or social service agency			
Count			1
Col %			2.7%
Safety (non-criminal)			
Count			2
Col %			5.4%
MAIN REASON REMAINING IN COMMUNITY			
No Response			
Count		1	2
Col %		2.4%	1.9%
Do Not Know			
Count	1		
Col %	1.0%		
Born or reared here			
Count		1	
Col %		2.4%	

(continued)

Table II-54. Significance of Place, Cordova

	STUDY YEAR		
	1991	1992	1993
Relatives (family)			
Count	8	1	7
Col %	8.0%	2.4%	6.8%
Married a person born or reared here			
Count	4	1	3
Col %	4.0%	2.4%	2.9%
Friends			
Count	6		3
Col %	6.0%		2.9%
Subsistence opportunities			
Count	4	2	6
Col %	4.0%	4.9%	5.8%
Employment reasons			
Count	17	10	21
Col %	17.0%	24.4%	20.4%
Educational opportunities			
Count	3	2	3
Col %	3.0%	4.9%	2.9%
Economic reasons			
Count	6		
Col %	6.0%		
Housing/property			
Count	2		1
Col %	2.0%		1.0%
Medical Services			
Count		1	
Col %		2.4%	
Environmental qualities			
Count	17	9	20
Col %	17.0%	22.0%	19.4%
Size of the community			
Count	2	4	7
Col %	2.0%	9.8%	6.8%
Crime levels			
Count			3

(continued)

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Table II-54. Significance of Place, Cordova

	STUDY YEAR		
	1991	1992	1993
Col %			2.9%
Personal freedoms (politics)			
Count	4		8
Col %	4.0%		7.8%
Recreational opportunities			
Count	3	2	7
Col %	3.0%	4.9%	6.8%
Pace of Life			
Count	3	2	2
Col %	3.0%	4.9%	1.9%
Quality of Life			
Count	15	3	3
Col %	15.0%	7.3%	2.9%
Cultural Reasons			
Count	1		2
Col %	1.0%		1.9%
Religious Reasons			
Count			2
Col %			1.9%
Location			
Count	2	1	1
Col %	2.0%	2.4%	1.0%
Not here by choice			
Count	1		1
Col %	1.0%		1.0%
Natural disasters forced movement			
Count	1		
Col %	1.0%		
Transferred by military, employer, or social service agency			
Count		1	
Col %		2.4%	
Safety (non-criminal)			
Count			1
Col %			1.0%

(continued)

Table II-54. Significance of Place, Cordova

	STUDY YEAR		
	1991	1992	1993
POST-EVOS: CHANGE IN LIKING COMMUNITY			
No Response			
Count	1		1
Col %	1.1%		1.3%
Do Not Know			
Count	2		
Col %	2.2%		
Less			
Count	42	14	40
Col %	45.2%	45.2%	52.6%
Same			
Count	40	17	29
Col %	43.0%	54.8%	38.2%
More			
Count	8		6
Col %	8.6%		7.9%
POST-EVOS: WHY CHANGE IN LIKING COMMUNITY			
No Response			
Count		1	1
Col %		7.1%	2.1%
Do Not Know			
Count		1	
Col %		7.1%	
Non-specific			
Count	5		1
Col %	9.4%		2.1%
Oil contamination/fear of oil contamination			
Count			2
Col %			4.3%
Increased dissension/conflict/violence			
Count	12	2	
Col %	22.6%	14.3%	
Animals harvest to find/hunt/fish			
Count	1		2

(continued)

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Table II-54. Significance of Place, Cordova

	STUDY YEAR		
	1991	1992	1993
Col %	1.9%		4.3%
Increased government bureaucracy			
Count	3		1
Col %	5.7%		2.1%
More stressful			
Count	11	4	20
Col %	20.8%	28.6%	42.6%
Financial situation worse			
Count	6	4	7
Col %	11.3%	28.6%	14.9%
Future of environment uncertain			
Count	1		
Col %	1.9%		
Too many people			
Count	2		2
Col %	3.8%		4.3%
Too much media attention			
Count	1		4
Col %	1.9%		8.5%
Other reasons			
Count	6		1
Col %	11.3%		2.1%
Improved financial situation			
Count	1		2
Col %	1.9%		4.3%
Increased appreciation of surroundings			
Count	2		1
Col %	3.8%		2.1%
Improved community cohesiveness			
Count	2		1
Col %	3.8%		2.1%
Increased crime			
Count		1	
Col %		7.1%	

(continued)

Table II-54. Significance of Place, Cordova

	STUDY YEAR		
	1991	1992	1993
Increased development			
Count		1	1
Col %		7.1%	2.1%
Less crime			
Count			1
Col %			2.1%
RATHER LIVE IN ANOTHER COMMUNITY			
Do Not Know			
Count	9	2	5
Col %	9.0%	4.9%	4.9%
No			
Count	59	28	75
Col %	59.0%	68.3%	72.8%
Yes			
Count	32	11	23
Col %	32.0%	26.8%	22.3%
EXPECT TO LIVE IN REGION WHEN OLD			
Do Not Know			
Count	18	3	12
Col %	18.0%	7.3%	11.7%
No			
Count	35	15	36
Col %	35.0%	36.6%	35.0%
Yes			
Count	47	23	55
Col %	47.0%	56.1%	53.4%
CONFIDENT ABOUT HUNT/FISH/GATHERING			
Do Not Know			
Count	2	3	4
Col %	2.1%	7.3%	3.9%
No			
Count	58	22	58
Col %	59.8%	53.7%	56.3%
Yes			
Count	37	16	41
Col %	38.1%	39.0%	39.8%

(continued)

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Table II-54. Significance of Place, Cordova

	STUDY YEAR		
	1991	1992	1993
WHY UNCONFIDENT ABOUT HUNTING/FISHING/GATHERING			
No Response			
Count	1	1	
Col %	1.7%	4.3%	
Increased restrictions			
Count	15	10	20
Col %	25.4%	43.5%	34.5%
Uncertainty about the future			
Count	11	1	4
Col %	18.6%	4.3%	6.9%
Increased development			
Count	5	4	12
Col %	8.5%	17.4%	20.7%
Timber and logging			
Count	12	9	13
Col %	20.3%	39.1%	22.4%
Road development			
Count	11	8	8
Col %	18.6%	34.8%	13.8%
Uncertainty about food safety			
Count	4	2	3
Col %	6.8%	8.7%	5.2%
Environmental, animal rights, anti-gun interests			
Count			2
Col %			3.4%
Native ownership of lands			
Count	6	2	6
Col %	10.2%	8.7%	10.3%
Population pressure			
Count	5	8	18
Col %	8.5%	34.8%	31.0%
Vulnerable to environmental damage			
Count	9	6	10
Col %	15.3%	26.1%	17.2%

(continued)

Table II-54. Significance of Place, Cordova

	STUDY YEAR		
	1991	1992	1993
Miscellaneous reasons			
Count			2
Col %			3.4%
Reduced resource availability			
Count		1	3
Col %		4.3%	5.2%
Poor resource management			
Count		1	1
Col %		4.3%	1.7%
Non-Native private ownership access restriction			
Count		1	2
Col %		4.3%	3.4%
Exxon Valdez Oil Spill Trustees buying land			
Count			2
Col %			3.4%
CONTINUE TO LIVE HERE IF NO WILD FOOD			
Do Not Know			
Count	6	4	4
Col %	6.0%	9.8%	3.9%
No			
Count	54	24	48
Col %	54.0%	58.5%	47.1%
Yes			
Count	40	13	50
Col %	40.0%	31.7%	49.0%

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Table II-55. Effectiveness of Oil Spill Responses, Cordova

	STUDY YEAR		
	1991	1992	1993
EFFECTIVENESS EVOS: US COAST GUARD			
Do Not Know			
Count	13	3	18
Col %	13.3%	7.7%	19.6%
Not Effective			
Count	26	16	21
Col %	26.5%	41.0%	22.8%
Somewhat			
Count	31	12	34
Col %	31.6%	30.8%	37.0%
Effective			
Count	28	8	19
Col %	28.6%	20.5%	20.7%
EFFECTIVENESS EVOS: ADEC			
No Response			
Count		2	
Col %		5.1%	
Do Not Know			
Count	19	7	21
Col %	19.4%	17.9%	22.8%
Not Effective			
Count	19	11	29
Col %	19.4%	28.2%	31.5%
Somewhat			
Count	37	10	32
Col %	37.8%	25.6%	34.8%
Effective			
Count	23	9	10
Col %	23.5%	23.1%	10.9%
EFFECTIVENESS EVOS: INSURANCE COMPANIES			
Do Not Know			
Count	59		
Col %	67.0%		
Not Effective			
Count	11		
Col %	12.5%		

(continued)

Table II-55. Effectiveness of Oil Spill Responses, Cordova

	STUDY YEAR		
	1991	1992	1993
Somewhat			
Count	11		
Col %	12.5%		
Effective			
Count	7		
Col %	8.0%		
EFFECTIVENESS EVOS: LOCAL NATIVE PROFIT			
No Response			
Count		1	
Col %		2.8%	
Do Not Know			
Count	45	11	52
Col %	47.4%	30.6%	57.8%
Not Effective			
Count	26	18	23
Col %	27.4%	50.0%	25.6%
Somewhat			
Count	12	4	8
Col %	12.6%	11.1%	8.9%
Effective			
Count	12	2	7
Col %	12.6%	5.6%	7.8%
EFFECTIVENESS EVOS: NATIVE NON-PROFITS			
No Response			
Count		1	
Col %		2.8%	
Do Not Know			
Count	56	14	47
Col %	58.3%	38.9%	52.2%
Not Effective			
Count	18	12	23
Col %	18.8%	33.3%	25.6%
Somewhat			
Count	8	6	13
Col %	8.3%	16.7%	14.4%

(continued)

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Table II-55. Effectiveness of Oil Spill Responses, Cordova

	STUDY YEAR		
	1991	1992	1993
Effective			
Count	14	3	7
Col %	14.6%	8.3%	7.8%
EFFECTIVENESS EVOS: BOROUGH GOVERNMENT			
Do Not Know			
Count	10	2	2
Col %	32.3%	40.0%	66.7%
Not Effective			
Count	8		
Col %	25.8%		
Somewhat			
Count	7	2	1
Col %	22.6%	40.0%	33.3%
Effective			
Count	6	1	
Col %	19.4%	20.0%	
EFFECTIVENESS EVOS: VILLAGE CORPORATION			
No Response			
Count		1	1
Col %		2.7%	1.1%
Do Not Know			
Count	45	12	47
Col %	47.4%	32.4%	52.2%
Not Effective			
Count	17	16	22
Col %	17.9%	43.2%	24.4%
Somewhat			
Count	15	5	14
Col %	15.8%	13.5%	15.6%
Effective			
Count	18	3	6
Col %	18.9%	8.1%	6.7%
EFFECTIVENESS EVOS: CITY COUNCIL			
Do Not Know			
Count	14	5	16
Col %	14.3%	12.8%	17.4%

(continued)

Table II-55. Effectiveness of Oil Spill Responses, Cordova

	STUDY YEAR		
	1991	1992	1993
Not Effective			
Count	36	14	28
Col %	36.7%	35.9%	30.4%
Somewhat			
Count	28	15	33
Col %	28.6%	38.5%	35.9%
Effective			
Count	20	5	15
Col %	20.4%	12.8%	16.3%
EFFECTIVENESS EVOS: IRA COUNCIL			
No Response			
Count		1	2
Col %		2.8%	2.2%
Do Not Know			
Count	56	16	50
Col %	70.0%	44.4%	56.2%
Not Effective			
Count	15	11	23
Col %	18.8%	30.6%	25.8%
Somewhat			
Count	5	7	9
Col %	6.3%	19.4%	10.1%
Effective			
Count	4	1	5
Col %	5.0%	2.8%	5.6%
EFFECTIVENESS EVOS: CHAMBER OF COMMERCE			
Do Not Know			
Count	23	11	24
Col %	23.5%	28.2%	26.4%
Not Effective			
Count	41	19	34
Col %	41.8%	48.7%	37.4%
Somewhat			
Count	23	7	25
Col %	23.5%	17.9%	27.5%

(continued)

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Table II-55. Effectiveness of Oil Spill Responses, Cordova

	STUDY YEAR		
	1991	1992	1993
Effective			
Count	11	2	8
Col %	11.2%	5.1%	8.8%
EFFECTIVENESS EVOS: COMMERCIAL BUSINESSES			
No Response			
Count	1	1	
Col %	1.0%	2.6%	
Do Not Know			
Count	14	6	20
Col %	14.4%	15.4%	22.5%
Not Effective			
Count	21	15	24
Col %	21.6%	38.5%	27.0%
Somewhat			
Count	36	10	30
Col %	37.1%	25.6%	33.7%
Effective			
Count	25	7	15
Col %	25.8%	17.9%	16.9%
EFFECTIVENESS EVOS: COMMERCIAL FISHING GROUPS			
Do Not Know			
Count	5	2	5
Col %	5.1%	5.1%	5.4%
Not Effective			
Count	6	4	9
Col %	6.1%	10.3%	9.8%
Somewhat			
Count	24	7	22
Col %	24.5%	17.9%	23.9%
Effective			
Count	63	26	56
Col %	64.3%	66.7%	60.9%
EFFECTIVENESS EVOS: OTHER BUSINESS GROUPS			

(continued)

Table II-55. Effectiveness of Oil Spill Responses, Cordova

	STUDY YEAR		
	1991	1992	1993
Do Not Know			
Count	29		
Col %	31.2%		
Not Effective			
Count	19		
Col %	20.4%		
Somewhat			
Count	26		
Col %	28.0%		
Effective			
Count	19		
Col %	20.4%		
EFFECTIVENESS EVOS: SCHOOLS			
Do Not Know			
Count	32		
Col %	33.3%		
Not Effective			
Count	15		
Col %	15.6%		
Somewhat			
Count	20		
Col %	20.8%		
Effective			
Count	29		
Col %	30.2%		
EFFECTIVENESS EVOS: CHURCHES			
Do Not Know			
Count	36		
Col %	37.9%		
Not Effective			
Count	12		
Col %	12.6%		
Somewhat			
Count	17		
Col %	17.9%		

(continued)

ICF 4PRINT

Table II-55. Effectiveness of Oil Spill Responses, Cordova

	STUDY YEAR		
	1991	1992	1993
Effective			
Count	30		
Col %	31.6%		
EFFECTIVENESS EVOS: HEALTH SERVICES			
No Response			
Count		1	
Col %		2.7%	
Do Not Know			
Count		11	28
Col %		29.7%	30.8%
Not Effective			
Count		6	9
Col %		16.2%	9.9%
Somewhat			
Count		9	29
Col %		24.3%	31.9%
Effective			
Count		10	25
Col %		27.0%	27.5%
EFFECTIVENESS EVOS: MEDICAL PROFESSION			
Do Not Know			
Count	25		
Col %	25.5%		
Not Effective			
Count	7		
Col %	7.1%		
Somewhat			
Count	12		
Col %	12.2%		
Effective			
Count	54		
Col %	55.1%		
EFFECTIVENESS EVOS: HEALTH AIDES			
Do Not Know			
Count	29		
Col %	39.2%		

(continued)

Table II-55. Effectiveness of Oil Spill Responses, Cordova

	STUDY YEAR		
	1991	1992	1993
Not Effective			
Count	7		
Col %	9.5%		
Somewhat			
Count	6		
Col %	8.1%		
Effective			
Count	32		
Col %	43.2%		
EFFECTIVENESS EVOS: SOCIAL WORKERS			
No Response			
Count		1	
Col %		2.7%	
Do Not Know			
Count	43	13	33
Col %	45.3%	35.1%	36.3%
Not Effective			
Count	8	7	11
Col %	8.4%	18.9%	12.1%
Somewhat			
Count	20	10	29
Col %	21.1%	27.0%	31.9%
Effective			
Count	24	6	18
Col %	25.3%	16.2%	19.8%
EFFECTIVENESS EVOS: LOCAL LAW ENFORCEMENT			
No Response			
Count	1	1	
Col %	1.1%	2.9%	
Do Not Know			
Count	24	11	28
Col %	25.5%	31.4%	30.4%
Not Effective			
Count	11	9	14
Col %	11.7%	25.7%	15.2%

(continued)

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Table II-55. Effectiveness of Oil Spill Responses, Cordova

	STUDY YEAR		
	1991	1992	1993
Somewhat			
Count	20	7	29
Col %	21.3%	20.0%	31.5%
Effective			
Count	38	7	21
Col %	40.4%	20.0%	22.8%
EFFECTIVENESS EVOS: STATE LAW ENFORCEMENT			
No Response			
Count		1	
Col %		2.9%	
Do Not Know			
Count	30	11	38
Col %	32.3%	31.4%	41.8%
Not Effective			
Count	13	7	14
Col %	14.0%	20.0%	15.4%
Somewhat			
Count	20	8	21
Col %	21.5%	22.9%	23.1%
Effective			
Count	30	8	18
Col %	32.3%	22.9%	19.8%
EFFECTIVENESS EVOS: EXXON			
Do Not Know			
Count	5	3	9
Col %	5.1%	7.7%	9.8%
Not Effective			
Count	45	24	54
Col %	45.9%	61.5%	58.7%
Somewhat			
Count	27	9	26
Col %	27.6%	23.1%	28.3%
Effective			
Count	21	3	3
Col %	21.4%	7.7%	3.3%

(continued)

Table II-55. Effectiveness of Oil Spill Responses, Cordova

	STUDY YEAR		
	1991	1992	1993
EFFECTIVENESS EVOS: VECO			
No Response			
Count		1	
Col %		2.6%	
Do Not Know			
Count	10	5	13
Col %	10.2%	12.8%	14.1%
Not Effective			
Count	25	15	34
Col %	25.5%	38.5%	37.0%
Somewhat			
Count	36	14	39
Col %	36.7%	35.9%	42.4%
Effective			
Count	27	4	6
Col %	27.6%	10.3%	6.5%
EFFECTIVENESS EVOS: ALYESKA PIPELINE			
Do Not Know			
Count	25	6	21
Col %	25.5%	15.8%	22.8%
Not Effective			
Count	39	24	40
Col %	39.8%	63.2%	43.5%
Somewhat			
Count	22	6	28
Col %	22.4%	15.8%	30.4%
Effective			
Count	12	2	3
Col %	12.2%	5.3%	3.3%
EFFECTIVENESS EVOS: VOLUNTEER CLEAN-UP GROUPS			
Somewhat			
Count			1
Col %			50.0%
Effective			
Count			1

(continued)

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Table II-55. Effectiveness of Oil Spill Responses, Cordova

	STUDY YEAR		
	1991	1992	1993
Col %			50.0%
EFFECTIVENESS EVOS: FAMILY SUPPORT GROUPS			
Somewhat			
Count	1		
Col %	33.3%		
Effective			
Count	2		1
Col %	66.7%		100.0%
EFFECTIVENESS EVOS: ANIMAL RESCUE GROUPS			
Somewhat			
Count	1	1	
Col %	25.0%	100.0%	
Effective			
Count	3		4
Col %	75.0%		100.0%
EFFECTIVENESS EVOS: GENERAL ENVIRONMENTAL GROUPS			
Not Effective			
Count	1		1
Col %	100.0%		100.0%
EFFECTIVENESS EVOS: MEDIA INFORMATION GROUPS			
Do Not Know			
Count	1		
Col %	33.3%		
Effective			
Count	2		
Col %	66.7%		
EFFECTIVENESS EVOS: COOK INLET REGIONAL CITIZENS ADVISORY COUNCIL			
.			
EFFECTIVENESS EVOS: PWS REGIONAL CITIZENS ADVISORY COUNCIL			
Do Not Know			
Count	1	1	1
Col %	7.1%	9.1%	6.7%

(continued)

Table II-55. Effectiveness of Oil Spill Responses, Cordova

	STUDY YEAR		
	1991	1992	1993
Not Effective			
Count	1	2	2
Col %	7.1%	18.2%	13.3%
Somewhat			
Count	4	5	5
Col %	28.6%	45.5%	33.3%
Effective			
Count	8	3	7
Col %	57.1%	27.3%	46.7%
EFFECTIVENESS EVOS: FEDERALLY MANDATED SPILL RESPONSE GROUPS			
Do Not Know			
Count	1		
Col %	20.0%		
Not Effective			
Count			1
Col %			50.0%
Somewhat			
Count	1		
Col %	20.0%		
Effective			
Count	3	2	1
Col %	60.0%	100.0%	50.0%
EFFECTIVENESS EVOS: SHIP ESCORT RESPONSE SYSTEM (SERVS)			
Do Not Know			
Count			2
Col %			33.3%
Somewhat			
Count			2
Col %			33.3%
Effective			
Count	1		2
Col %	100.0%		33.3%
EFFECTIVENESS EVOS: OTHER MULTI-AGENCY RESPONSE GROUPS FOR EVOS			

(continued)

ICF14PRINT

Table II-55. Effectiveness of Oil Spill Responses, Cordova

	STUDY YEAR		
	1991	1992	1993
Do Not Know			
Count	1	1	
Col %	14.3%	100.0%	
Somewhat			
Count	1		1
Col %	14.3%		100.0%
Effective			
Count	5		
Col %	71.4%		
EFFECTIVENESS EVOS: PWS CONSERVATION ALLIANCE			
Effective			
Count	1		
Col %	100.0%		
EFFECTIVENESS EVOS: PWS OIL REFORM ALLIANCE			
Not Effective			
Count	1		
Col %	25.0%		
Somewhat			
Count	2	2	
Col %	50.0%	100.0%	
Effective			
Count	1		1
Col %	25.0%		100.0%
EFFECTIVENESS EVOS: OTHER UNIDENTIFIED GROUPS			
Not Effective			
Count		1	
Col %		100.0%	
Somewhat			
Count	2		
Col %	50.0%		
Effective			
Count	2		3
Col %	50.0%		100.0%

(continued)

Table II-55. Effectiveness of Oil Spill Responses, Cordova

	STUDY YEAR		
	1991	1992	1993
EFFECTIVENESS EVOS: NATIVE ORGANIZATION ENVIRONMENTAL GROUPS			
.			
EFFECTIVENESS EVOS: RESEARCH GROUPS			
Somewhat			
Count			2
Col %			50.0%
Effective			
Count			2
Col %			50.0%
EFFECTIVENESS EVOS: BUSINESS ASSOCIATIONS			
Not Effective			
Count			1
Col %			100.0%
EFFECTIVENESS EVOS: OILED MAYORS			
Do Not Know			
Count		12	27
Col %		30.8%	29.7%
Not Effective			
Count		15	21
Col %		38.5%	23.1%
Somewhat			
Count		7	30
Col %		17.9%	33.0%
Effective			
Count		5	13
Col %		12.8%	14.3%

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Table II-56. Subsistence Food Safety Information, Cordova

	STUDY YEAR		
	1991	1992	1993
ADEQUATELY INFORMED ABOUT FOOD SAFETY?			
Do Not Know			
Count	5	3	8
Col %	5.1%	7.7%	8.9%
No			
Count	44	17	46
Col %	44.9%	43.6%	51.1%
Somewhat			
Count	9	6	6
Col %	9.2%	15.4%	6.7%
Yes			
Count	40	13	30
Col %	40.8%	33.3%	33.3%
WHY NOT ADEQUATELY INFORMED			
No Response			
Count	10	3	1
Col %	17.9%	13.0%	1.7%
Do Not Know			
Count	3		
Col %	5.4%		
Lack of clear or definitive advice			
Count	15	2	7
Col %	26.8%	8.7%	11.7%
Received incomplete information			
Count	10	7	9
Col %	17.9%	30.4%	15.0%
Received no information			
Count	16	9	24
Col %	28.6%	39.1%	40.0%
Did not trust or believe advice			
Count	9	5	9
Col %	16.1%	21.7%	15.0%
Untimely			
Count	5	1	1
Col %	8.9%	4.3%	1.7%

(continued)

Table II-56. Subsistence Food Safety Information, Cordova

	STUDY YEAR		
	1991	1992	1993
Did not trust results because of Exxon involvement			
Count	1		4
Col %	1.8%		6.7%
Personal observations contradicted advice or findings			
Count	3		3
Col %	5.4%		5.0%
Heard about damaged resources which contradicted advice			
Count	1		
Col %	1.8%		
Believe information was deliberately withheld			
Count	3	2	4
Col %	5.4%	8.7%	6.7%
There were not enough tests			
Count	1	4	4
Col %	1.8%	17.4%	6.7%
Information was too difficult to understand			
Count	1		
Col %	1.8%		
Personal responsibility to keep informed			
Count		1	5
Col %		4.3%	8.3%
Areal concern, as receiver do not know where harvested			
Count			1
Col %			1.7%
Differential dissemination of information			
Count			1
Col %			1.7%
Decided themselves not to eat resource out of fear			
Count			2
Col %			3.3%

(continued)

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Table II-56. Subsistence Food Safety Information, Cordova

	STUDY YEAR		
	1991	1992	1993
Dispersants used could be dangerous			
Count	1		
Col %	1.8%		
Inadequate time given to evaluate contamination			
Count			2
Col %			3.3%

ICF4PRINT

Table II-57. OCS Development Effects, Cordova

	STUDY YEAR		
	1991	1992	1993
OCS EFFECT: FISH			
No Response			
Count			3
Col %			2.9%
Do Not Know			
Count	17	5	6
Col %	17.0%	12.2%	5.8%
Decrease			
Count	54	25	65
Col %	54.0%	61.0%	63.1%
No Change			
Count	27	11	26
Col %	27.0%	26.8%	25.2%
Increase			
Count	2		3
Col %	2.0%		2.9%
OCS EFFECT: SHELLFISH			
No Response			
Count			3
Col %			2.9%
Do Not Know			
Count	20	5	8
Col %	20.0%	12.2%	7.8%
Decrease			
Count	61	22	66
Col %	61.0%	53.7%	64.1%
No Change			
Count	18	14	24
Col %	18.0%	34.1%	23.3%
Increase			
Count	1		2
Col %	1.0%		1.9%
OCS EFFECT: MARINE MAMMALS			
No Response			
Count			3
Col %			2.9%

(continued)

Table II-57. OCS Development Effects, Cordova

	STUDY YEAR		
	1991	1992	1993
Do Not Know			
Count	20	4	10
Col %	20.0%	9.8%	9.7%
Decrease			
Count	56	20	63
Col %	56.0%	48.8%	61.2%
No Change			
Count	24	17	27
Col %	24.0%	41.5%	26.2%
OCS EFFECT: LAND MAMMALS			
No Response			
Count			3
Col %			2.9%
Do Not Know			
Count	20	4	8
Col %	20.0%	9.8%	7.8%
Decrease			
Count	36	18	44
Col %	36.0%	43.9%	42.7%
No Change			
Count	44	19	48
Col %	44.0%	46.3%	46.6%
OCS EFFECT: BIRDS			
No Response			
Count			3
Col %			2.9%
Do Not Know			
Count	19	4	9
Col %	19.0%	9.8%	8.7%
Decrease			
Count	52	20	56
Col %	52.0%	48.8%	54.4%
No Change			
Count	29	16	35
Col %	29.0%	39.0%	34.0%

(continued)

ICF 4PRINT

Table II 57. OCS Development Effects, Cordova

	STUDY YEAR		
	1991	1992	1993
Increase			
Count		1	
Col %		2.4%	
OCS DEVELOPMENT = MORE JOBS?			
Do Not Know			
Count	5	4	6
Col %	5.0%	9.8%	5.8%
No			
Count	43	14	44
Col %	43.0%	34.1%	42.7%
Yes			
Count	52	23	53
Col %	52.0%	56.1%	51.5%
CONTAIN AND CLEANUP SMALL OIL SPILL			
No Response			
Count			2
Col %			1.9%
Do Not Know			
Count	2	11	10
Col %	2.0%	26.8%	9.7%
No			
Count	23	16	56
Col %	23.0%	39.0%	54.4%
Maybe			
Count	34	14	35
Col %	34.0%	34.1%	34.0%
Yes			
Count	41		
Col %	41.0%		
CONTAIN AND CLEANUP LARGE OIL SPILL			
No Response			
Count			1
Col %			1.0%
Do Not Know			
Count	2	6	10
Col %	2.0%	14.6%	9.7%

(continued)

Table II-57. OCS Development Effects, Cordova

	STUDY YEAR		
	1991	1992	1993
No			
Count	68	32	84
Col %	68.0%	78.0%	81.6%
Maybe			
Count	21	3	8
Col %	21.0%	7.3%	7.8%
Yes			
Count	9		
Col %	9.0%		
ARE YOU IN FAVOR OF THE SEARCH FOR OIL?			
No Response			
Count		1	
Col %		2.4%	
Do Not Know			
Count		3	4
Col %		7.3%	3.9%
No			
Count		19	60
Col %		46.3%	58.3%
Yes			
Count		18	39
Col %		43.9%	37.9%
OPINION ON SEARCH FOR OIL			
No Response			
Count		3	
Col %		7.3%	
Do Not Know			
Count		3	2
Col %		7.3%	1.9%
Reduce dependency on foreign oil/enhance national security			
Count			7
Col %			6.8%
Create more jobs in the community			
Count		6	12
Col %		14.6%	11.7%

(continued)

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Table II-57. OCS Development Effects, Cordova

	STUDY YEAR		
	1991	1992	1993
We can live in balance with the environment			
Count		5	2
Col %		12.2%	1.9%
Increase state revenues			
Count			2
Col %			1.9%
Energy needed			
Count		8	9
Col %		19.5%	8.7%
Conditional: in favor of search/development but not locally			
Count			1
Col %			1.0%
Need to know extent of resource availability and reserves			
Count		2	5
Col %		4.9%	4.9%
Conditions: in favor when necessary			
Count		1	1
Col %		2.4%	1.0%
Generalized: good for everyone			
Count		1	2
Col %		2.4%	1.9%
Beneficial to the economy			
Count		11	14
Col %		26.8%	13.6%
Because it is there			
Count			1
Col %			1.0%
Conditional: depends on time of year			
Count			1
Col %			1.0%
Conditional upon technological advancement			
Count		1	2

(continued)

Table II-57. OCS Development Effects, Cordova

	STUDY YEAR		
	1991	1992	1993
Col %		2.4%	1.9%
Enough technology to do it right			
Count			2
Col %			1.9%
Not making sufficient use of current resources			
Count		1	5
Col %		2.4%	4.9%
Environmental conditions (non-pollution/non-biological)			
Count			7
Col %			6.8%
Adverse experiences with other development			
Count		1	5
Col %		2.4%	4.9%
Pollution concerns and impacts			
Count		15	10
Col %		36.6%	9.7%
Aesthetic reasons			
Count		1	1
Col %		2.4%	1.0%
In favor of on-shore development instead of off-shore			
Count			1
Col %			1.0%
Status quo - leave it the way it is			
Count			3
Col %			2.9%
Should explore alternative energy sources, conservation			
Count		2	10
Col %		4.9%	9.7%
Adverse impact on subsistence and commercial fishing			
Count		4	14

(continued)

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Table II-57. OCS Development Effects, Cordova

	STUDY YEAR		
	1991	1992	1993
Col %		9.8%	13.6%
Biological (non-pollution) - migration patterns			
Count			2
Col %			1.9%
Distrust of the oil industry			
Count		1	2
Col %		2.4%	1.9%
Potential damage to renewable resources			
Count		5	5
Col %		12.2%	4.9%
Against any development			
Count		2	4
Col %		4.9%	3.9%
No benefit to local economy			
Count			4
Col %			3.9%
Disastrous - multi-faceted			
Count		2	10
Col %		4.9%	9.7%
Uncertainties with development			
Count		1	1
Col %		2.4%	1.0%
Fatalistic - no choice in matter			
Count		1	4
Col %		2.4%	3.9%
Adverse impact on Native traditions			
Count			1
Col %			1.0%
Not economically feasible to search/develop off-shore			
Count			1
Col %			1.0%
Technology needs improvement			
Count		4	8

(continued)

Table II-57. OCS Development Effects, Cordova

	STUDY YEAR		
	1991	1992	1993
Col %		9.8%	7.8%
Against population increases			
Count		2	
Col %		4.9%	
Environmental protections being lobbied against			
Count			1
Col %			1.0%
Unspecified ecological impacts			
Count			7
Col %			6.8%
Conditional: in favor if done carefully			
Count			5
Col %			4.9%
Responsibility of area to develop resources			
Count			1
Col %			1.0%
Non-specific reason against			
Count			2
Col %			1.9%
State should explore alternative revenue sources			
Count			1
Col %			1.0%
ARE YOU IN FAVOR OF THE DEVELOPMENT AND PRODUCTION OF OIL?			
No Response			
Count			1
Col %			1.0%
Do Not Know			
Count		4	4
Col %		9.8%	3.9%
No			
Count		21	64
Col %		51.2%	62.1%

(continued)

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Table II-57. OCS Development Effects, Cordova

	STUDY YEAR		
	1991	1992	1993
Yes			
Count		16	34
Col %		39.0%	33.0%
OPINION ON DEVELOPMENT AND PRODUCTION			
Do Not Know			
Count		4	1
Col %		9.8%	1.0%
Reduce dependency on foreign oil/enhance national security			
Count		1	5
Col %		2.4%	4.9%
Create more jobs in the community			
Count		6	10
Col %		14.6%	9.7%
We can live in balance with the environment			
Count		3	3
Col %		7.3%	2.9%
Increase state revenues			
Count		2	5
Col %		4.9%	4.9%
Energy needed			
Count		9	4
Col %		22.0%	3.9%
Need to know extent of resource availability and reserves			
Count			1
Col %			1.0%
Conditions: in favor when necessary			
Count		1	
Col %		2.4%	
Generalized: good for everyone			
Count		1	4
Col %		2.4%	3.9%
Beneficial to the economy			
Count		11	13

(continued)

Table II-57. OCS Development Effects, Cordova

	STUDY YEAR		
	1991	1992	1993
Col %		26.8%	12.6%
Enough technology to do it right			
Count			1
Col %			1.0%
Not making sufficient use of current resources			
Count		1	7
Col %		2.4%	6.8%
Environmental conditions (non-pollution/non-biological)			
Count		2	8
Col %		4.9%	7.8%
Adverse experiences with other development			
Count			3
Col %			2.9%
Pollution concerns and impacts			
Count		16	21
Col %		39.0%	20.4%
Aesthetic reasons			
Count		1	
Col %		2.4%	
In favor of on-shore development instead of off-shore			
Count			2
Col %			1.9%
Status quo - leave it the way it is			
Count			3
Col %			2.9%
Should explore alternative energy sources, conservation			
Count		5	12
Col %		12.2%	11.7%
Adverse impact on subsistence and commercial fishing			
Count		5	16

(continued)

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Table II-57. OCS Development Effects, Cordova

	STUDY YEAR		
	1991	1992	1993
Col %		12.2%	15.5%
Distrust of the oil industry			
Count		1	5
Col %		2.4%	4.9%
Potential damage to renewable resources			
Count		3	10
Col %		7.3%	9.7%
More difficult to regulate off-shore development			
Count		1	
Col %		2.4%	
Against any development			
Count		3	1
Col %		7.3%	1.0%
No benefit to local economy			
Count			5
Col %			4.9%
Disastrous - multi-faceted			
Count		2	8
Col %		4.9%	7.8%
Uncertainties with development			
Count		2	1
Col %		4.9%	1.0%
Fatalistic - no choice in matter			
Count		1	2
Col %		2.4%	1.9%
Adverse impact on Native traditions			
Count			1
Col %			1.0%
Not economically feasible to search/develop off-shore			
Count			1
Col %			1.0%
Technology needs improvement			
Count		4	8

(continued)

Table II-57. OCS Development Effects, Cordova

	STUDY YEAR		
	1991	1992	1993
Col %		9.8%	7.8%
Against population increases			
Count		1	3
Col %		2.4%	2.9%
Environmental protections being lobbied against			
Count			1
Col %			1.0%
Unspecified ecological impacts			
Count			9
Col %			8.7%
Conditional: in favor if done carefully			
Count			6
Col %			5.8%
Non-specific reason against			
Count			2
Col %			1.9%
State should explore alternative revenue sources			
Count			1
Col %			1.0%
Health concerns (e.g., cancer)			
Count			1
Col %			1.0%

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CHAPTER III: VALDEZ

by

Rita A. Miraglia and Lisa Tomrdle

COMMUNITY BACKGROUND

Valdez is located at the head of Port Valdez, Prince William Sound at the Richardson Highway terminus (Fig. I-1). Valdez is an incorporated home rule city. The city limits extend to Sheep Creek, Milepost 18.7 on the Richardson Highway, with an incorporated area of 274 square miles. Valdez is about 125 miles by air from Anchorage, and 304 miles by road. Valdez is known for its long winters and heavy snowfall, which averages almost 300 inches annually. Summers are short and mild. Temperatures average 18^{O} Fahrenheit in January and 53^{O} Fahrenheit in July. Rainfall averages 60 inches per year.

While Valdez was not the site of an Alaska Native village, British explorer Alexander Walker reportedly visited a Native village nearby, at the mouth of the Lowe River, at the head of what is now Port Valdez, in 1785. According to Walker, the village was occupied, but had been hastily evacuated by its residents upon his approach. This may be the same village that Abercrombie was told was a focus for trading with Indians from the Ahtna region until it was wiped out by a smallpox epidemic in 1868 (Braund and Associates 1992:2).

The town of Valdez was founded in 1898 as a debarkation point for Klondike gold seekers. A wagon road from Valdez to Fairbanks, the forerunner of the Richardson Highway, was completed in 1910. Because of its ice-free harbor, the northernmost in North America, Valdez became a transportation center. Fish processing also played a role in the town's growth. The town was virtually destroyed in the 1964 earthquake. Valdez was subsequently rebuilt on its present site, five miles west of the pre-earthquake townsite. It took nearly five years to complete the rebuilding. In the early 1970s, Valdez was chosen as the terminus of the trans-Alaska oil pipeline. Consequently, the population of the community tripled during the 1970s (Fig. III-1). The city is now oriented around oil transportation, tourism, the Prince William Sound commercial fisheries, and services.

The *Exxon Valdez* oil spill, which occurred in 1989, resulted in an economic boom for Valdez. Valdez was the base of operations for clean-up activities in the summer of 1989. The town was not directly impacted by the spilled oil.

RESEARCH METHODS

Fieldwork occurred in Valdez in all three study years. In Valdez, the "study year" corresponded with the calendar year of 1991, 1992, and 1993. Each year, interviews were conducted in the late winter or early spring, and respondents were asked about activities relating to the previous calendar year.

The first year's fieldwork began in Valdez on March 3, 1992, and the last interview was completed on March 27. One hundred interviews were conducted, for a sample of 8.1 percent of all year-round households in the community (Table I-4, Table III-1). Of these, 42 were conducted with individuals who comprised a panel of participants in the earlier Social Indicators research (Social Indicators Panel) (see Chapter I). The other 58 were conducted in newly randomly selected households (Social Effects Panel). The Social Indicators Panel respondents were retired after the first study year and were not recontacted. On average, the harvest surveys for 1991 took about 0.66 hours (40 minutes) to complete (Table I-7), and the social effects questionnaire required an additional 0.70 hours (42 minutes) (Table I-8). The study team consisted of Subsistence Resource Specialists Rita Miraglia and Lisa Tomrdle, Fish and Wildlife Technicians Jeniffer Sepez and Brad Palach, and Laura Chase who was hired as a local assistant.[1]

For the second study year, fieldwork began on February 16, 1993; the last survey was completed on March 18. The goal was to re-interview as many of the 58 members of the Social Effects Panel as possible, and to randomly select additional households to interview for a total of 100 households. This goal was achieved for a sampling fraction of 7.9 percent of the estimated number of year-round households (Table III-1). Forty-one members of the Social Effects Panel were re-interviewed, along with 59 new randomly selected households. If members of the Social Indicators Panel turned up in the new random sample, they were dropped and the next household selected from the random numbers table. There were 31 refusals and researchers failed to contact 34 households. The second year study team included Subsistence Resource Specialists Rita Miraglia, Lisa Tomrdle, Sverre Pedersen, and Jody Seitz, Clerk Typist Yvonne Howard, and local assistant Bradley Osborne. Interviews required 0.34 hours (20 minutes) for the harvest survey (Table I-7) and 0.61 hours (37 minutes) for the social effects questionnaire (Table I-8).

The third and final round of interviews took place between February 2 and February 14, 1994. The goal was to re-contact as many of the members of Social Effects Panel as possible, without replacement. No new random sample was selected. Researchers successfully re-interviewed 35 members of the Social Effects Panel, providing a sample of 2.8 percent of the estimated number of total households in the community. Three households declined to participate, seven of the original panel members were found to have moved away from Valdez, and one respondent was too busy to schedule an interview during the interview period, and was classed as unavailable (Table III-1). Subsistence Resource Specialists Rita Miraglia and Dave Andersen comprised the study team. The average length of the interviews was 0.35 hours (21 minutes) for the harvest survey (Table I-7) and 0.56 hours (34 minutes) for the social effects questionnaire (Table I-8).

In general, while sampling was random, we tended to select for year-round residents, because we did all our interviewing in the winter. Most seasonal residents of Valdez only live there in the summer. The

[1] In the first study year, a contract with the US Forest Service. Chugach National Forest, supported additional interviewing in Valdez. These included key respondent interviews and harvest area mapping sessions with a sub-sample of households. A more detailed report was prepared and submitted to the Forest Service as part of that contract (Tomrdle and Miraglia 1993). This report will be updated and revised for inclusion in the division's technical paper series.

membership of Social Effects Panel became biased towards the more stable, established residents over time. This is because we attempted to reinterview Social Effects Panel members three years in a row. If we were unable to find any of these panel members to conduct succeeding rounds of interviews, they dropped out of the panel.

Robbins (1993) reported that most of the Alyeska employees approached by his Social Indicators study team, refused to be interviewed as part of his study. This was not our experience. Alyeska employees not only participated in our study, but we know from comments made to us that they talked to one another about us and our survey.

A few non-Native respondents in Valdez commented that they felt the questions on the Social Effects survey were written for residents of small, Alaska Native communities, and did not feel people in Valdez should be asked these questions. We received this comment the most in reference to questions on sharing, specifically question number 20, which asked respondents to imagine not sharing subsistence foods with others. A similar concern was also voiced in regard to question number 21, which asked respondents whether they had participated in specific activities in the past twelve months, such as: attending a feast or ceremony, working on a meal for a large gathering of people, sew skins, doing beadwork or weave, or engaging in traditional carving.

DEMOGRAPHY

The 1991 Study Year

According to data from the US census, Valdez was a community of 4,068 people in 1990 (Fig III-1). Valdez has a relatively new economic base, founded on oil. This has drawn people to live at Valdez from outside the region for employment, resulting in a predominantly non-Native population. Alaska Natives, mostly identifying themselves as Aleut, made up nearly six percent of the population (Alaska Department of Labor 1991). There is also a small Asian/Pacific Islander population, which represents a little more than three percent of the whole. The division's researchers identified 1,231 residential units in Valdez in early 1992. Based on the sample of 100 households, it is estimated that in 7.0 percent of the households in the community, one or both of the household heads was Alaska Native. Overall, 9.1 percent of the population was Alaska Native (Table III-2).

Based on our sample, the total estimated population for Valdez in 1991 was 4,062, very similar to the census estimate for the year before. According to 1990 census data, the median age of residents of Valdez was 31.4 years. The median age of the sample population was 31.1, with a slightly younger mean age of 29.2 years (Table III-2). The mean length of residency for household heads in the sample population was 12.3 years, with a range of one to sixty-three years. As shown in Table III-3 and Figure III-2, 53.0 percent of the estimated total population was male and 46.9 percent was female.

The 1992 Study Year

The demographic characteristics of Valdez changed little from the first study year. There was a slight increase in the estimated number of households, but a decrease in average household size, resulting in an overall decrease in the estimated community population from 4,062 to 3,733 (Table III-2). There was also a decrease in the percentage of the population that was Alaska Native, down to 5.7 percent from 9.0 percent the year before. The population profile in terms of age and sex for 1992 closely resembled that of the previous year (Table III-4, Fig. III-3).

The 1993 Study Year

Based on our sample, there were some small changes in the demographic makeup of Valdez in the third study year, as compared with the previous two years (Table III-2, Table III-5, Fig. III-4). No new residential structures were built in Valdez in 1993, so our estimate of the number of households in the community remained the same as the estimate for 1992. Likewise, the overall population estimate changed very little between the two study years because the mean household size stayed almost the same. However, the mean length of residency in our sample increased from nine and one-half years in 1992 to a little over 12 in 1993, with the mean length of residency for household heads going from 9.5 years in 1992 to 12.1 years in 1993. This change can be attributed to the fact, mentioned above, that the 1993 sample consisted exclusively of members of the social effects panel. These respondents were interviewed every year for three years. Respondents who could not be located in subsequent years were dropped from the panel, and no new respondents were added. Through this process, we selected for more stable, long-term residents. Therefore, the mean length of residency reported for 1993 is probably not representative of the community as a whole. The ratio of males to females in the population changed somewhat between study year two and study year three, and the estimated number of households with at least one Alaska Native household head increased from 75.4 in 1992 to 107.7 in 1993. Both these changes are probably a random artifact of our small sample size, rather than a reflection of actual demographic changes in the community.

CASH ECONOMY[2]

The 1991 Study Year

The economy of Valdez is a clear case of an industrial-capital economy (Wolfe and Walker 1987), in this case based on oil. The most important contributor to the economy of Valdez, in terms of jobs, as well as tax revenue, is the Trans-Alaska Pipeline Terminal, operated by Alyeska Pipeline Service Company. Alyeska provides nearly 400 full-time, year-round jobs in Valdez, and roughly 90 percent of the tax revenue (Fried & Stinson 1992:1-9). Tourism provides a smaller, yet still significant boost to the local economy. The fact that Valdez is accessible by road from both Anchorage and Fairbanks, and by state ferry from

[2] For a more detailed description and analysis of the cash economy of Valdez, see Robbins (1993).

other communities in Prince William Sound, makes it a favorite destination for both Alaskan vacationers and visitors from outside the state. There is a relatively small commercial fishing and processing industry in Valdez. Fishing is a much less important part of the economy in Valdez than it is in Cordova, for instance.

Retail businesses in Valdez depend to a large degree on visitors to the city, resulting in a seasonal demand for services. Quite a few of these businesses are owned by Outside interests, and only about 20 percent of the revenues generated by this industry remains in Valdez (Darbyshire and Associates 1991:137).

Construction typically makes up a very small part of the economy in Valdez. However, the *Exxon Valdez* oil spill, and the subsequent influx of cash, which resulted from Valdez's status as the base of operations for Exxon and the state and federal agencies involved in the oil spill clean-up and response, resulted in quite a bit of new construction locally.

Educational facilities in Valdez include elementary, junior high and high schools, as well as the main campus of Prince William Sound Community College. There is a community hospital, with attached medical clinic, and a staff of three resident doctors. Valdez is also the home of Harborview Development Center, a state medical facility for the disabled. In addition to the medical resources listed above, Valdez also has a mental health clinic, two dentists, a public health nurse, and a chiropractor (Smith 1992).

In the sample, 86.8 percent of all adults were employed in 1991 (Table III-6). The mean number of jobs for each employed adult was 1.3, with the mean length of employment 9.6 months during the study year. Of all employed adults, 59.6 percent were employed year-round. Based on the sample, it is estimated that about 1,181 of the 1,231 households (96.0 percent) in the community had some employment in 1991. The mean number of jobs for each household 2.6, and the mean number of employed adults was 2.1. As shown in Figure III-5, the largest percentage of the jobs were in the "transportation, communications, and utilities" category (23 percent), which includes work with the pipeline service company. Services and retail trade each had 16.0 percent of the jobs, and state government provided 13.0 percent of jobs.

Mean cash incomes in Valdez have consistently been among the highest in comparison to other communities in the state of Alaska. According to a summary of the 1990 census long-form data, the median household income in 1989 was $66,760 and the per capita income was $26,968. Of all households, 69 percent had incomes over $50,000 in that same year, while five percent of the population was determined to be living below the poverty level (U.S. Bureau of the Census 1992a:Table 3).

Study findings were consistent with the census results. As shown in Table III-7, the per capita income from all sources in Valdez in 1991 was $23,374; of this, $21,261 was earned from jobs and the rest was other income (Table III-8).

On average, the sampled Valdez households spent $562 per month on food during the 1991 study year. The median monthly expense for food was $500. This represents 8.0 percent of the total average income of Valdez households (Table I-101).

Half of the surveyed households in Valdez (50.0 percent) reported that their financial situation during the study year was similar to that before the *Exxon Valdez* oil spill (March 1989). About a third (32.0 percent) said that their financial situation was better than before the spill and 17.0 percent said that it was worse (Table I-103).

On average, the sampled Valdez households owned equipment worth $31,321 that was, at least in part, used for wild resource harvesting. They purchased fuel and supplies for this equipment that averaged, respectively, $307 and $1,013 per household. Households estimated that 34.9 percent of the overall value of the equipment, fuel and supplies was used for non-commercial hunting and fishing activities (Table III-9).

The 1992 Study Year

There was a slight increase during the second study year in average length of employment for employed adults (from 9.6 months to 10.0 months) and a corresponding increase in the percentage of employed adults who worked year-round (67.2 percent in 1992 compared to 59.6 percent in 1991) (Table III-6). The distribution of jobs by industry was very similar in the two study years (Fig. III-6). There was a slight rise in per capita income to $23,584, up from $23,374 (Table III-10). Income from sources other than jobs, at $2,137 per person, remained about the same as in 1991 (Table III-11).

The 1993 Study Year

The 1993 data show a slight increase in the number of employed adults over 1992, but since the estimated number of adults in the community in 1993 was higher still, there was a small drop in the percentage of adults employed (Table III-6). Again, because of the small sample size in 1993 (only 35 households of an estimated 1,257 were interviewed), one must be careful not to read too much into the community-wide estimates extrapolated from this sample. The mean number of months employed per year increased from 10.0 months in 1992 to 10.6 months in 1993, which may simply reflect the more stable nature of the households represented in the panel. The number of jobs per household is fairly consistent over the three study years, dropping slightly in 1992, as compared with 1991, but increasing to a level between the 1991 and 1992 estimates in 1993. The mean number of employed adults increased in 1993 as compared to 1992, the 1993 estimate is closer to the 1991 mean.

The average household and per capita incomes jumped significantly in 1993 as compared with the 1991 and 1992 estimates (Table III-12, Table III-13). There was also a substantial increase in other income, a category which includes income from investments. This may partly be explained by the fact that thirty-two percent of respondents in the 1993 sample were employed in the transportation, communication and utilities industry (T.C.U.), as compared to twenty-three percent and twenty-six percent in 1991 and 1992, respectively (Fig. III-7). This category includes most employment with Alyeska; which are among the highest paying jobs in the community. Some of this increase may represent an actual increase in income,

but once again, with the small sample size and the bias in the sample towards more stable, long term (and potentially more affluent) households, caution must be used in interpreting income data from the third study year.

Interviewed households were again asked to provide an estimate of their monthly food expenses in 1993 (Table I-102). These averaged $478.57 per month in Valdez; the median monthly expense was $400, representing 5.8 percent of the total household income in the community, a lower percentage than in any other study community. This reflects both the lower cost of living in Valdez than the more remote communities in the study, as well as the high average cash incomes in the community.

RESOURCE HARVESTS AND USES: 1991

Participation in Hunting, Fishing and Gathering Activities

Valdez residents used 80 different species of wild resources in 1991, not including plants which were not identified by species (Table III-19). On the average, each household used 7.9 different resources, attempted to harvest 6.2 kinds of resources, and successfully harvested 5.2 resources. The average household reportedly gave away 2.3 types of wild resources, and received 3.8 types (Table III-14).

As shown in Table III-14, 98.0 percent of the sampled households in Valdez used at least one type of wild resource during the study year, 91.0 percent attempted a harvest, 90.0 were successful harvesters, 89.0 percent received resources from other households, and 65.0 percent gave wild resources away. In total, Valdez households were involved in wild resource exchanges with at least 31 other Alaska communities (Table III-16). Valdez most frequently received wild foods from households living in Anchorage (12.0 percent), Cordova (7.0 percent), and Glennallen (6.0 percent). They gave away resources most frequently to households living in Anchorage (9.0 percent) and Fairbanks (6.0 percent).

Individual participation in wild resource harvesting was substantial; 81.5 percent of the people in the sample reportedly attempted to harvest at least one resource (Table III-15). Also, 77.0 percent processed some wild resource. To break this down further, 21.2 percent hunted game, 19.1 percent processed game, 72.1 percent fished (this figure includes those who harvested shellfish), and 70.0 percent processed fish. Only 1.8 percent trapped or hunted furbearers, and 2.7 percent processed them. Also, 54.2 percent gathered plants and berries, and 47.9 percent processed plants, including berries.

Resource Harvest Quantities

The following represent estimates of the use and harvest of wild resources by the residents of Valdez in 1991, based on figures reported by the 100 households interviewed. The mean per person harvest of all wild resources by Valdez residents in 1991 was 87.9 pounds usable weight, and the mean household harvest was 290.0 pounds (Table III-14, Table III-17, Fig. III-8). Since the 1991 household harvest survey was the first ever conducted with a randomly selected sample of Valdez residents, it was not

possible to compare the study findings with earlier results. However, households provided assessments of their 1991 resource uses compared to the previous year, and, for overall harvests only, compared to the year before the *Exxon Valdez* oil spill of March 1989. The majority of interviewed households (55.0 percent) said that they believed that, overall, their uses of wild resources in 1991 were very similar to the year before. However, more than a third (36.0 percent) said they thought their wild resource uses had declined and 9.0 percent thought they had increased (Table I-57). A similar pattern was found when respondents compared resource uses in 1991 to those of before the *Exxon Valdez* oil spill. More than half the households (58.7 percent) said their use levels were about the same, 33.7 percent said they were lower than before the spill, and 7.6 percent said their uses were higher (Table I-58, Fig. III-11).

The majority of sampled Valdez households, 70.0 percent, estimated that in 1991 between one percent and 25 percent of their use of meat, fish, and poultry derived from wild resources. Also, 9.0 percent of the households placed this estimate at 26 to 50 percent, 6 percent at 51 to 75 percent, and 6 percent at 76 to 99 percent. Also, six percent used no wild fish or meat, and two percent said that all their meat, fish, and poultry came from wild resources (Table I-104).

The largest portion of the wild resource harvest in Valdez during the study year was comprised of fish (Table III-18, Fig. III-9, Fig. III-10), with 57.0 pounds per person harvested. Of this, 35.1 pounds was salmon, predominantly coho. Of all salmon numbers, 11.0 percent was removed from commercial catches for home use, 7.7 percent were caught in non-commercial nets, and 5.5 percent with other non-commercial gear. Fully 75.8 percent of all the salmon harvested for family use in Valdez were taken by rod and reel (Table III-20, Table III-21, Table III-22). As reported in Table III-23, just two percent of the sampled households removed salmon from commercial catches for home use, 11 percent harvested salmon with non-commercial nets (mostly dip nets in the Chitina personal use fishery), and 68 percent fished with rod and reel for salmon.

The greatest number of households (47; 48.5 percent) estimated that their salmon uses in 1991 were similar to those of the year before. On the other hand, 10 households (10.3 percent) believed their uses were higher in 1991 and 40 (41.2 percent) believed they had declined over the previous year. Three households declined to give an assessment (Table I-9).

On average, Valdez households used 1.5 methods to preserve salmon harvests in 1991. The majority of households in our sample (63.0 percent) froze portions of their catch. Other methods used included smoking (50.0 percent), canning (24.0 percent), salting (4.0 percent), pickling (4.0 percent), kippering (3.0 percent), and drying (2.0 percent) (Table I-106).

Other finfish also represented a significant portion of the wild resource harvest at 21.9 pounds per person. This was mostly halibut, at 13.7 pounds per person (Table III-19). Red rockfish, rainbow trout, grayling, Dolly Varden, yellow eye rockfish, black cod, and gray cod were also taken in significant numbers. Small harvests of burbot, pike, sheefish, sturgeon, lingcod, flounder, herring, black rockfish, Arctic char, cutthroat trout, lake trout, and steelhead were also reported.

The majority of Valdez households (55; 56.7 percent) said their uses of nonsalmon finfish in 1991 were similar to the year before. Nine households (9.3 percent) said they believed their uses had increased in 1991 over the previous year, and 33 households (34.0 percent) said they had gone down from 1990 levels (Table I-15).

Overall, 22.0 percent of the nonsalmon fish harvest for home use in Valdez was removed from commercial catches; most of the rest was taken with rod and reel (76.0 percent) (Table III-24, Table III-25). As shown in Table III-26, six percent of the sampled households removed these fish from commercial catches, four percent used non-commercial nets, two percent fished through the ice with hook and line, and 57 percent used rod and reel gear.

The average land mammal harvest was 20.9 pounds per person; 14.7 pounds of this was moose, and 2.7 pounds was caribou. Deer, black bear, sheep, and goat were also harvested. Only 0.7 pounds per person of small game were taken for food, all of it hare. A number of small land mammals were taken for their fur only, these include mink, beaver, marten, weasel, coyote, lynx, land otter, wolverine, fox, and wolf (Table III-19).

Almost two-thirds of the interviewed Valdez households (64; 65.3 percent) said that their uses of large game were about the same in 1991 as in 1990 (Table I-21). An even larger percentage of the respondents (88.5 percent) said their uses of small game had remained about the same (Table I-27). On the other hand, 10.2 percent of the households said their uses of large game had gone up in 1991 and 24.5 percent said they had declined, while for small game, there was a perceived increase in use over 1990 levels for 3.1 percent of households and a perceived decline for 8.3 percent of households.

The marine mammal harvest by the sampled households was small, with only 0.6 pounds per person taken for food, all of it harbor seal. There was a small harvest of sea otters for fur only (Table III-19). The vast majority of households, 96.9 percent, said their 1991 uses of marine mammals were similar to other years (Table I-33).

Wild birds and eggs made up a small part of the wild harvest at 1.2 pounds per person. These were mostly ptarmigan, ducks (including scaup, mallard, pintail, and teal), and grouse. There was also a small harvest of dusky Canada geese. Very few wild eggs were harvested (0.03 pounds per person); only gull eggs were reportedly harvested (Table III-19). Most households (82; 84.5 percent) said their uses of birds in 1991 were similar to the year before, although 13 households (13.4 percent) said these uses had declined and two (2.1 percent) said they had gone up (Table I-39).

Marine invertebrates contributed to the harvest at 5.4 pounds per person. The largest part of this was Tanner crab at 3.2 pounds per person. Small numbers of king crab and Dungeness crab were also harvested. There were 1.1 pounds per person of shrimp harvested. Clams made up 0.3 pounds of the total, including geoducks, butter clams, razor clams, and littleneck clams. Small amounts of cockles, mussels, and octopus were also harvested (Table III-19). As with most other resource categories, the large majority of interviewed Valdez households (80.8 percent) said their uses of marine invertebrates in 1991

were similar to the year before (Table I-45). Fifteen households (15.2 percent) noted declines in their uses of shellfish and four (4.0 percent) said their uses had gone up.

Plant and berry harvests averaged 2.8 pounds per person. This was predominantly berries at 2.4 pounds, with other plants only making up 0.3 pounds of the total. On the average, 1.3 cords of wood were harvested per household (Table III-19). Most households (74.5 percent) said these use levels were typical of the year before as well, while 18.4 percent said their use had declined and 7.1 percent said they had gone up over 1990 levels (Table I-51). Six sampled households (6.0 percent) used plants for medicinal purposes. These included birch (use unspecified), chamomile (as a relaxant), Labrador tea (for kidney ailments), stinkweed (use unspecified), and yarrow (use unspecified) (Table I-109).

RESOURCE HARVESTS AND USES: 1992

Participation in Hunting, Fishing and Gathering Activities

Household participation rates in Valdez remained about the same in 1992 as in 1991 (Table III-14). Overall, 97 percent of the sampled households used wild resources in 1992 compared to 98 percent the year before. There was a slight drop in the percentage of households harvesting resources to 83 percent compared to 90 percent in 1991. Overall, there was a slight drop in the total population which participated in harvest activities, down to 75.4 percent compared to 81.5 percent in 1991. While the percentage of the population which fished dropped eight percentage points to 64.0 percent, those engaging in hunting were 25.2 percent of the population of Valdez in 1992, up from 21.2 percent in 1991 (Table III-15).

Resource Harvest Quantities[3]

Household resource harvests for home use in 1992 in Valdez averaged 307.1 pounds usable weight, very similar to the year before. Because of the drop in average household size, the per capita harvest rose to 103.4 pounds from 87.9 the year before (Table III-14, Table III-17, Fig. III-8). The composition of the harvest was broadly similar across the two study years. There was an increase in 1992 in the relative contribution of salmon (43.0 percent of the harvest as measured in usable pounds in 1992, 39.9 percent in 1991) and nonsalmon fish (31.2 percent in 1992, 24.9 percent in 1991), with a corresponding decrease in land mammals (18.4 percent in 1992, 23.8 percent in 1991) and marine invertebrates (3.1 percent in 1992, 6.1 percent in 1991) (Table III-18, Fig. III-12, Fig. III-14). Harvest data at the category and resource levels for Valdez in 1992 are reported in Table III-27.

As shown in Table III-14, the average number of resources used by Valdez households in 1992 was 8.5, similar to the 7.9 kinds on average used the year before. The average number of resources each

[3] Note that resource use assessments and estimates of the percentage of meat, fish and poultry derived from wild foods were not obtained for the second study year.

household attempted to harvest, harvested, received, and gave away per household in 1992 were also very much like the 1991 estimates.

Tables III-29 and III-30 report the study findings for salmon harvests by gear type for 1992. Rod and reel harvests predominated, as they had the year before. Most households (65 percent) participated in rod and reel salmon fisheries in 1992, as they had the year before. As in 1991, far fewer used non-commercial nets to harvest salmon (13 percent) or removed them from commercial catches (2 percent) (Table III-31). As shown in Tables III-32 and III-33, the percentage of the total take of non-salmon fish harvested with rod and reel increased in 1992 over that of 1991. As in 1991, in 1992 most households (51 percent) used rod and reel to harvest fish other than salmon while a much lower percentage used non-commercial nets (6 percent) or removed fish from commercial harvests (6 percent) (Table III-34). The contribution of removal of resources from commercial catches for home use to the overall resource harvest in Valdez dropped to 3.8 percent of all resources in 1992, compared to 11.0 percent the year before (Table III-28).

RESOURCE HARVESTS AND USES: 1993

Participation in Hunting, Fishing and Gathering Activities

Household participation rates in wild resource harvest and use were markedly lower for the sampled households in 1993 than in either of the two previous study years. This decrease was reflected in nearly every index of participation and use with the exception of the percentage of households using any resource, which was comparable with the 1992 figure, and the percentage of households receiving any resource, which increased slightly over the previous study year (Table III-14).

The percentage of people who were reported on the harvest survey to have participated in hunting and trapping was fairly consistent over the three study years. However, the number of people who participated in fishing and in plant gathering declined over the same three-year period (Table III-15).

Resource Harvest Quantities

Household resource harvests for home use in Valdez in 1993 averaged 236.1 pounds usable weight. This is a substantial drop from the previous years' mean household harvests of 290.0 pounds in 1991 and 307.1 pounds in 1992. The per capita harvest in 1993 was 79.5 pounds, which was also lower than either of the two previous study years (Table III-14, Fig. III-8). Most of the decline in the per capita harvest in 1993 results from decreased salmon harvests. The 1993 salmon harvest was barely more than half the 1992 salmon harvest in pounds usable weight (Table III-17, Fig. III-9).

For 1993, most Valdez households (74.3 percent) estimated that between 1 to 25 percent of their annual use of meat, fish, and poultry derived from wild foods, very similar to the 70.0 percent which reported this level of use in 1991 (Table I-105). Also as in the first study year, in 1993 a relatively small

percentage of the households in Valdez (8.6 percent) said that more than 50 percent of their meat, fish, and poultry was from wild foods.

The percentage of households which said their wild resource uses were lower in the study year than in 1988 (the year before the *Exxon Valdez* oil spill) dropped in 1993 to 26.9 percent, compared to 33.7 percent for 1991 (Fig. III-11). Only three households (42.9 percent of all households reporting a decline) blamed the spill for this decline (Table I-98). At the category level, just a small portion of the households which said their uses were down compared to 1988 cited the spill as the cause. For example, while 50.0 percent of the households said their uses of salmon were down in 1993 compared to 1988, just three (of the 17 that said their uses had declined) attributed it to the spill. All of these said they suspected that the spill had reduced the amount of salmon available for harvest. (Table I-66).

Overall, 6.4 percent of the total resource harvest for home use in Valdez in 1993 was removed from commercial catches (Table III-36). For salmon, most (58.7 percent) were taken with rod and reel, with the remainder from commercial removal (22.5 percent) or non-commercial nets (18.8 percent) (Table III-37, Table III-38). About half the households (48.6 percent) used rod and reel to harvest salmon; 11.4 percent used non-commercial nets and 2.9 percent removed salmon from commercial harvests (Table III-39). All of the nonsalmon fish harvest was taken with rod and reel; 51.4 percent of the households used rod and reel to harvest fish other than salmon (Table III-40, Table III-41, Table III-42).

The portion of the harvest made up of marine mammals increased in 1993 over the two previous years (Table III-18, Fig. III-13, Fig. III-14). This is partly because one of the panel members began actively harvesting marine mammals in that year. The harvest of seals by Valdez residents has increased in the last few years, in large part, due to the efforts of the Valdez Native Association to encourage the traditional use of wild foods in the community, and to facilitate the distribution of seal meat to local elders. However, the expanded harvest of 215.5 seals estimated for the 1993 household sample is an overestimate (Table III-35) due to the presence of a very active marine mammal harvester in such a small sample. A better estimate of the number of seals harvested by Valdez residents comes from a seal and sea lion harvest survey conducted as part of a cooperative effort between the Division of Subsistence and the National Marine Fisheries Service, beginning with the 1992 study year. As part of the seal and seal lion survey, an attempt was made to interview every marine mammal hunter in the community, not just a sample. The estimated number of seals taken by the six known sea mammal hunters in Valdez was 21 in 1993 (Wolfe and Mishler 1994:C-98). Likewise, the estimated community harvest of 1,077.4 sea otters expanded from the 1993 household sample, is certainly much higher than the actual harvest, for the same reason. For comparison, the U.S. Fish and Wildlife Service has a marking and tagging program, which requires sea otter hunters to bring the skin of any harvested sea otter to an agent to be registered and tagged. Only 73 sea otters were tagged in Valdez in 1992 as part of this program (Stephensen et al. 1994:24).

The overall declines in wild resource harvest levels documented above are most likely due to the smaller household sample size in 1993, as compared with 1991 and 1992. As noted in the previous section

of this report, respondents in the social effects panel represent a segment of the community that is somewhat more affluent than the average household in Valdez. This group also has more employment in the oil transportation industry than the community-wide average. That data would seem to suggest that in Valdez this smaller sample participated less in the harvest and use of wild resources than the larger sample of Valdez households do on average.

DISCUSSION

Patterns of Wild Resource Use

The findings for the first two study years provide a consistent picture of the role of the noncommercial uses of wild resources in Valdez. The use of fish and wildlife in Valdez was widespread in both 1991 and 1992. The 1993 data showed a decline in participation in the harvest and use of wild resources, as well as in harvest levels. However, this is more likely a result of bias in the small sample, than an actual change in community harvests.

When asked, as part of the 1991 social effects survey, if they had eaten any wild foods as a main part of a meal the previous day, 87 percent of Valdez respondents said "no", only 13 percent said "yes" (Table III-43).[4] This contrasts strongly with Chenega Bay, where 68.8 percent of respondents reported that they had eaten wild foods in a main meal the previous day, and Cordova where 49.0 percent reported that they had done so (Fig. I-3). Findings were similar in the second and third study years, with 18.0 percent of Valdez respondents in 1992 and 17.1 percent in 1993 using wild foods in a main meal the day before the interview, among the lowest percentages of the study communities (Table III-43). Quite a few people in Valdez reported that they would harvest more if they could, but their jobs do not leave them with enough spare time.

As measured in pounds usable weight, harvests are relatively low in Valdez in comparison to those of the other Prince William Sound study communities of Cordova, Tatitlek, or Chenega Bay. Compared to these communities, Valdez has more employment available, more year-round employment, and higher cash incomes. In these characteristics, Valdez resembles some of the larger communities along the road system in Southcentral Alaska such as Kenai and Homer (see Chapter XXIII).

The predominant cultural group in Valdez is non-Native with cultural food preferences influenced by that historic heritage. Fishing and hunting occur in the community at moderate levels, but primarily in the pattern typically found associated with industrial-capital economies, as periodic pursuits, typically engaged in for recreation, or for some households as supplementary healthful foods (Wolfe and Walker 1987). Most fish is gotten through rod-and-reel fishing, technically a "sport activity", and in this case, for many, if not most, households, an avocational pursuit in Valdez. Valdez was classified by the Boards of

[4] The social effects question asking if any wild foods had been used the previous day was not administered in Valdez in the first study year, but was added in subsequent years.

Fish and Game as a "non-rural" area (after 1986) and a "non-subsistence" area (in 1992) because it is a clear case of an economy where subsistence is a not principal characteristic.

The *Exxon Valdez* Oil Spill and Valdez

The main effect of the oil spill on Valdez in 1989 resulted from the fact that Valdez was used as the base of operations for spill clean-up efforts. The community was inundated by employees of Exxon, Veco (the company responsible for the actual cleanup of the oil), government agencies, and the press, as well as people seeking work on the cleanup (see especially Robbins 1993). This is very different in nature from the effects of the spill on other communities in Prince William Sound. In talking about the oil spill, Valdez residents tend to compare it with the construction of the Alyeska oil pipeline and terminal. This is in contrast to other communities in Prince William Sound where the comparison is more between the 1964 earthquake and the spill. It would seem that in Valdez, the oil spill's effect on the community is generally perceived as a social disruption, while in the rest of the sound it is generally viewed as a disaster. This is probably partly because Valdez residents are not as dependent on the natural marine resources of the sound, and also because oil from the *Exxon Valdez* did not contaminate the waters or shores of the Port of Valdez.

In contrast to the majority view described above, some of the respondents in Valdez reported concern over contamination of natural resources by oil. In the first study year, 23.9 percent of Valdez respondents reported that they thought clams from their harvest areas were not safe for children to eat, and a further 29.5 percent reported that they did not know if they were safe to eat. Of those who thought clams were not safe for children to eat, one-half cited "oil pollution or fear of contamination," the most common answer given. Some of these people were specifically referring to the *Exxon Valdez* oil spill. However, a number of respondents, especially the longer-term residents, talked about chronic oil pollution from operations at the Alyeska pipeline terminal. Findings were slightly different for the other two study years, with a higher percentage of respondents in 1992 and 1993 saying that they thought clams were safe to eat, 62.7 percent and 63.6 percent, respectively (Table III-44.) In all three years, the majority of Valdez respondents said they felt adequately informed about the safety of using wild foods, although from 25.0 percent (in 1993) to 42.4 percent (in 1992) either said "no" or were not sure (Table III-51).

Key respondents, interviewed as in the collection of information for resource use area maps in 1992 and 1993 (Tomrdle and Miraglia 1993), reported that residents of Valdez used to make greater use of the Port of Valdez for subsistence harvests, including shellfish harvesting, fishing, and bird hunting. According to these respondents, as well as some of the respondents to the harvest and social effects surveys, chronic oil pollution from the Alyeska terminal has caused this to change. People use the area much less, reportedly because of the reduced presence of resources in the area, as well as because of fear of effects to human health from consuming resources they perceive to be contaminated. Many of the people we interviewed no longer consider the resources in the Port of Valdez to be wholesome. This

concern over the use of resources from the Port of Valdez appears to have existed before the *Exxon Valdez* oil spill, and makes it difficult to assess any effect the oil spill may have had on perceptions of the safety of wild foods in the Port of Valdez.

Eight respondents from the sampled households reported catching or receiving resources with abnormalities in 1991 (Table I-107). All of the abnormalities reported were in marine resources. These included pink salmon with deformed fins, a king salmon with black spots in the flesh, halibut and cod with ulcers, sores and discolorations, yellow-eye rockfish with "big black globs" on them, a tanner crab with a black shell, and shrimp of an unusually dark color. Three of these respondents attributed the observed abnormalities to the *Exxon Valdez* oil spill . Other explanations offered included natural variation, parasites, and the fact that the resource was caught "close to the dock". One respondent attributed a deformity to "oil on the bottom", but did not specifically refer to the *Exxon Valdez* oil spill, so this may be a reference to chronic oil pollution in the Port of Valdez from the Alyeska pipeline terminal operations. These questions were not asked on the 1992 and 1993 surveys.

Four respondents blamed decreases in the availability of resources in 1991 as compared with 1988 for their decreased level of use of major resource categories on the harvest survey. However, only one of the Valdez respondents attributed a decline in resource availability to the oil spill. This was a commercial fisherman who said that in general, the populations of fish in the area had declined:

> Before the oil spill, I used to lay one thousand hooks down and catch something on every hook, now I only catch something on every tenth hook.

Other reasons cited for decreased use levels and resource availability included increased fishing competition (red and silver salmon), predation by sea otters and coyotes (clams and crabs, and birds, respectively), commercial over-harvest (crabs), and poor management of the resource (shrimp). One respondent attributed a decline in hooligan to operations at the Alyeska pipeline terminal: "I used to go hooligan fishing, [but] I can't find them anymore since Alyeska moved in." A number of other respondents also noted a decline of resources (salmon, halibut), but were not able to provide a reason for the decline.

However, although these respondents reported declines in some resource populations, the majority of interviewed households did not report declines in resource populations. Results from the social effects questionnaire show that for no resource did the majority of respondents in Valdez report lowered populations levels in any year of the study in comparison to 1988, the year before the oil spill (Table III-45). This is in stark contrast to the other Prince William Sound communities in this study, where majorities of respondents reported lowered levels of many resources, such as harbor seals, clams, and deer. Also in contrast to these other communities, a large percentage of respondents in Valdez said they did not have any knowledge about the status of certain resources, such as octopus, clams, seals, and sea lions (Table III-45).

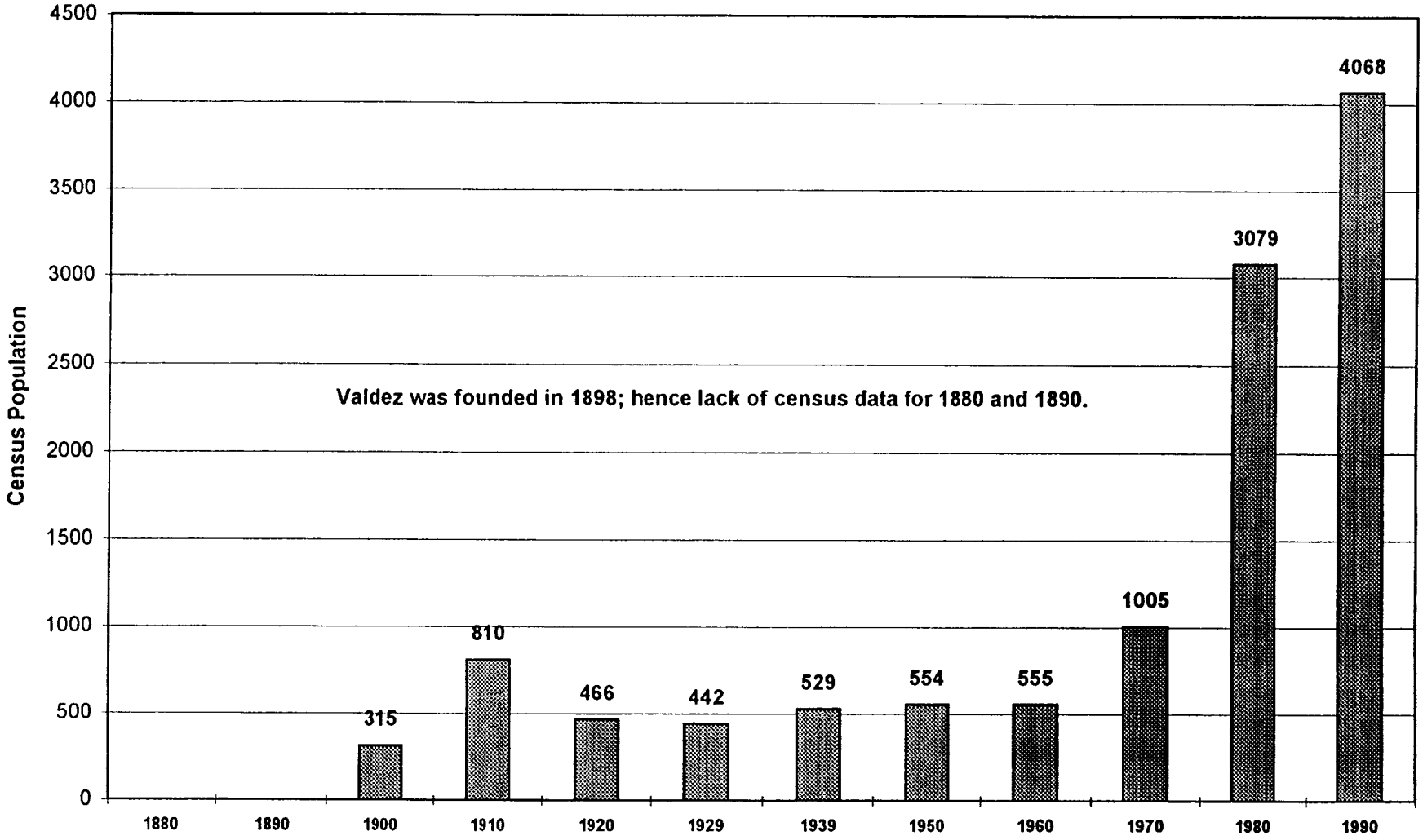
Valdez respondents as a group also showed different expectations in regard to outer continental shelf development in comparison with other Prince William Sound communities. In no case did more than 35 percent of respondents in Valdez predict lowered populations of fish, marine mammals, land mammals, birds, or marine invertebrates as a consequence of outer continental shelf development. This was in contrast to most other communities surveyed (except for Kenai, which more closely resembled Valdez), where majorities predicted lowered populations for most of these resources (Table III-52; Fig. I-10 to Fig. I-14). Some Valdez respondents predicted an increase in wildlife as a result of increased offshore oil/gas development, because they said the platforms provide increased habitat for marine resources and the animals that feed on them benefit indirectly. Valdez is the only Prince William Sound community where such an opinion was expressed by surveyed households. Valdez and Kenai were the only study communities in which the largest percentage of respondents (from 72.0 percent to 84.0 percent in Valdez) predicted more jobs if outer continental shelf development occurred (Fig. I-15).

This latter response may be in part because the response to the *Exxon Valdez* oil spill resulted in a minor economic expansion for Valdez. Much of this expansion was temporary, such as that resulting from the sharp increase in population during the initial response to the spill, in the summer of 1989. However, other changes have been longer-lasting. As part of new precautions, Alyeska added escort vessels to accompany each oil tanker as it enters or leaves Valdez Narrows (this is the Ship Escort and Response Vessel System or SERVS). This added roughly 75 new, high paying jobs to the economy. Initially, most of these positions were filled by people hired from the Lower 48. More recently, the contract to do this work has been awarded to Chugach Alaska Corporation, the regional for-profit Native corporation. Many of the people now working for SERVS are residents of the small predominantly Alaska Native communities of Prince William Sound and the Lower Kenai Peninsula.

Among Prince William Sound study communities, respondents in Valdez were least likely to identify spill effects on wild resource harvests, sharing, and quality of life in their answers to the social effects questionnaire. For example, a relatively small minority of Valdez respondents in all three study years said that the spill had affected children's participation in the harvesting and processing of wild resources: just 14.7 percent in 1991, 10.3 percent in 1992, and 18.2 percent in 1993 (Table III-46). In contrast, between 28.6 percent and 50.0 percent of Chenega Bay respondents and 54.5 percent and 56.3 percent at Tatitlek said that children's activities had been negatively impacted (Fig. I-6). Between 17.6 percent and 22.9 percent of Valdez respondents said that sharing of wild resources was less in the study year than before the spill (Table III-47), a percentage lower in each year than in Cordova, Chenega Bay, or Tatitlek (as well as the lower Cook Inlet villages of Nanwalek and Port Graham) (Fig. I-7). Finally, between 17.2 percent and 25.3 percent of Valdez respondents said they liked living in their community less than before the spill (Table III-49). For the study overall, these were moderate levels of dissatisfaction, but were still well below the findings for Chenega Bay (between 30.8 percent and 50.0 percent) and Cordova (45.2 percent to 52.6 percent) (Fig. I-8).

In summary, little evidence of major affects of the oil spill on wild resource uses in Valdez was found in this study. Very few sampled households cited the spill as a cause of continued reductions in wild food uses. Oil contamination is an issue for a number of households, however, contamination in immediate area is linked to chronic pollution near the pipeline terminal rather than to the oil spill which occurred outside the Port of Valdez. Unlike many other communities in the spill area, the majority of residents in Valdez reported a perception of stable fish and wildlife populations or reported they had no knowledge of these populations. Most Valdez households supported future outer continental shelf development with the view that adverse environmental affects would not occur and more jobs would result.

Figure III-1. Valdez Census Population, 1880 - 1990



Sources: Rollins 1978; Alaska Department of Labor 1991

Table III-1. Sample Participation: Valdez, 1992, 1993, 1994

VARIABLE	1991 Study Year			1992 Study Year			1993 Study Year	
	Social Indicators		TOTAL	Social Effects		TOTAL	Social Effects	TOTAL
	Panel	Non-Panel*	HOUSEHOLDS	Panel	Non-Panel*	HOUSEHOLDS	Panel	HOUSEHOLDS
Estimated Household Structures	84	1298	1382	58	1330	1388	1257	1257
Non-Residential Structures	NA	0	0	NA	0	0	NA	NA
Estimated Households	84	1298	1382	58	1330	1388	1257	1257
Total Panel	92	NA	NA	58	NA	NA	46	NA
Interview Goal:	50	50	100	50	50	100	46	46
Households Interviewed	42	58	100	41	59	100	35	35
Failed to Contact/Unavailable	36	17	53	5	29	34	1	1
Refused	6	16	22	9	22	31	3	3
Vacant Residential Structures	NA	7	7	NA	7	7	NA	0
Seasonal Households**	0	0	0	0	0	0	0	0
Non-Resident Household ***	0	5	5	0	5	5	0	0
Invalid Households and Vacancies	0	12	12	0	12	12	0	0
Failed to Contact: HH Interviewed	0	NA	NA	0	NA	NA	0	NA
Refused: HH Interviewed	0	NA	NA	0	NA	NA	0	NA
Panel Household Moved	7	NA	NA	3	NA	NA	7	NA
Panel Respondent Deceased	1	NA	NA	0	NA	NA	0	NA
Panel Disposition	92	NA	NA	58	NA	NA	46	NA
Total Households Attempted:	84	103	187	55	122	177	39	39
Refusal Rate:	12.50%	21.62%	18.03%	18.00%	27.16%	23.66%	7.89%	7.89%
Non-Perm. HH Rate ("Vacancy Rate"):	0.0%	11.7%	6.4%	0.0%	9.8%	6.8%	0.0%	0.0%
Interview Goal (Percentage)	84.0%	116.0%	100.0%	82.0%	118.0%	100.0%	76.1%	76.1%
Social Effects Surveys Completed	42	58	100	41	59	100	35	35
Total Permanent Households	84	1147	1231	58	1199	1257	1257	1257
Percentage Interviewed	50.00%	5.06%	8.12%	70.69%	0.00%	7.96%	2.78%	2.78%
Percentage of Total Households	6.82%	93.18%	100.00%	4.61%	95.39%	100.00%	100.00%	100.00%
Interview Weighting Factor	2.000	19.776	12.310	1.415	0.000	12.570	35.914	35.914

NOTES:

Shaded areas are computed fields.

* Includes panel members who were not attempted to contact.

* Seasonal households are households which maintain a permanent domicile elsewhere where they spend the majority of their time.

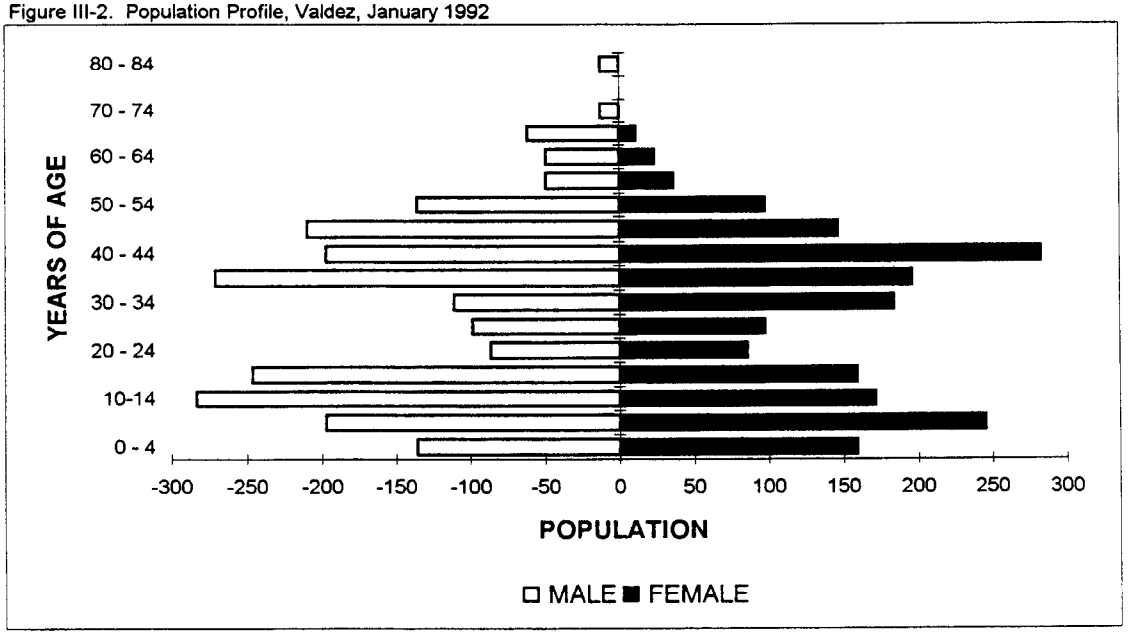
** Non-resident households are households which were not present during the study year or which were resident less than the required number of months.

Table III-2 . Demographic Characteristics of Households, Valdez, January 1992, January 1993, and January 1994

Characteristics	1991	1992	1993
Sampled Households	100	100	35
Number of Households in the Community	1,231	1,257	1,257
Percentage of Households Sampled	8.12	7.96	2.78
Household Size			
Mean	3.30	2.97	2.97
Minimum	1	1	1
Maximum	10	7	9
Sample Population	330	297	104
Estimated Community Population	4,062.30	3,733.29	3,735.09
Age			
Mean	29.24	30.01	32.71
Minimum	0.23	0.50	0.68
Maximum	80.34	73.91	74.91
Median	31.086	31.41	34.06
Length of Residency - Population			
Mean	10.66	9.51	12.19
Minimum	0.23	0.5	0.5
Maximum	63.00	42.00	42.00
Length of Residency - Household Heads			
Mean	12.31	11.14	14.34
Minimum	0.5	0.5	0.5
Maximum	63	42	42.00
Sex			
Males			
Number	2,154.25	1,998.63	1,939.37
Percentage	53.03	53.54	51.92
Females			
Number	1,908.05	1,734.66	1,795.71
Percentage	46.97	46.46	48.08
Alaska Native			
Households (Either Head)			
Number	86.17	75.42	107.74
Percentage	7.00	6.00	8.57
Estimated Population			
Number	369.30	213.69	287.31
Percentage	9.09	5.72	7.69

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992, 1993, and 1994.

Figure III-2. Population Profile, Valdez, January 1992



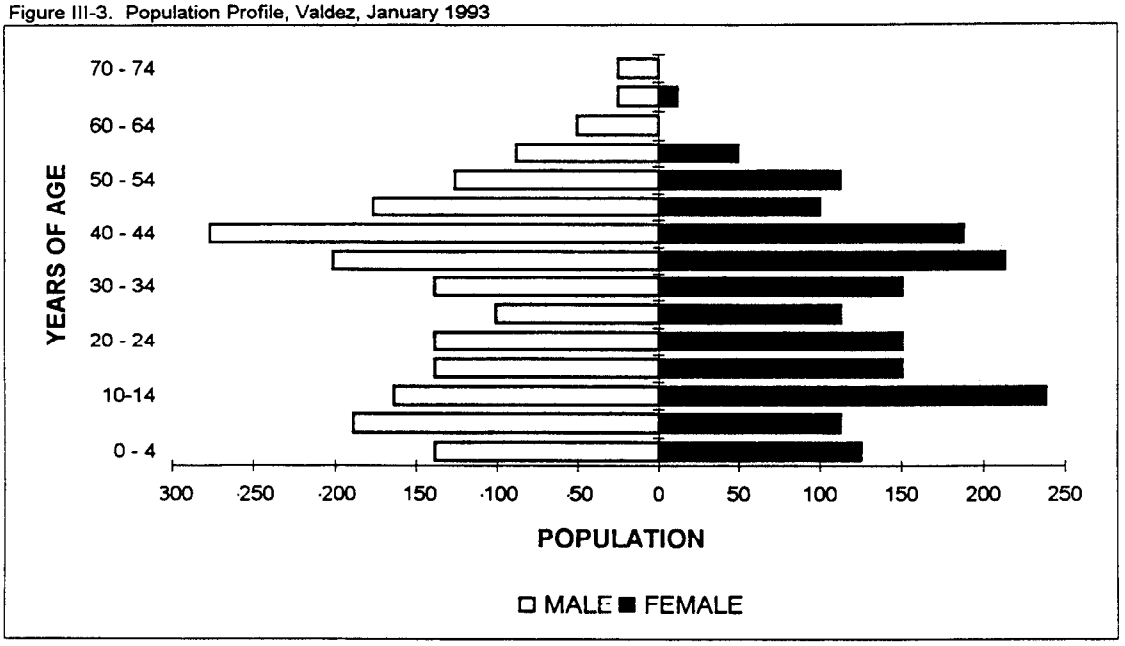
SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table III-3. Population Profile, Valdez, January 1992

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	135.41	6.29%	6.29%	160.03	8.39%	8.39%	295.44	7.27%	7.27%
5-9	196.96	9.14%	15.43%	246.20	12.90%	21.29%	443.16	10.91%	18.18%
10-14	283.13	13.14%	28.57%	172.34	9.03%	30.32%	455.47	11.21%	29.39%
15 - 19	246.20	11.43%	40.00%	160.03	8.39%	38.71%	406.23	10.00%	39.39%
20 - 24	86.17	4.00%	44.00%	86.17	4.52%	43.23%	172.34	4.24%	43.64%
25 - 29	98.48	4.57%	48.57%	98.48	5.16%	48.39%	196.96	4.85%	48.48%
30 - 34	110.79	5.14%	53.71%	184.65	9.68%	58.06%	295.44	7.27%	55.76%
35 - 39	270.82	12.57%	66.29%	196.96	10.32%	68.39%	467.78	11.52%	67.27%
40 - 44	196.96	9.14%	75.43%	283.13	14.84%	83.23%	480.09	11.82%	79.09%
45 - 49	209.27	9.71%	85.14%	147.72	7.74%	90.97%	356.99	8.79%	87.88%
50 - 54	135.41	6.29%	91.43%	98.48	5.16%	96.13%	233.89	5.76%	93.64%
55 - 59	49.24	2.29%	93.71%	36.93	1.94%	98.06%	86.17	2.12%	95.76%
60 - 64	49.24	2.29%	96.00%	24.62	1.29%	99.35%	73.86	1.82%	97.58%
65 - 69	61.55	2.86%	98.86%	12.31	0.65%	100.00%	73.86	1.82%	99.39%
70 - 74	12.31	0.57%	99.43%	0.00	0.00%	100.00%	12.31	0.30%	99.70%
75 - 79	0.00	0.00%	99.43%	0.00	0.00%	100.00%	0.00	0.00%	99.70%
80 - 84	12.31	0.57%	100.00%	0.00	0.00%	100.00%	12.31	0.30%	100.00%
85 - 89	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
90 - 94	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
95 - 99	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
100 - 104	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
Missing	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
TOTAL	2,154.25	53.03%		1,908.05	46.97%		4,062.30	100.00%	

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Figure III-3. Population Profile, Valdez, January 1993



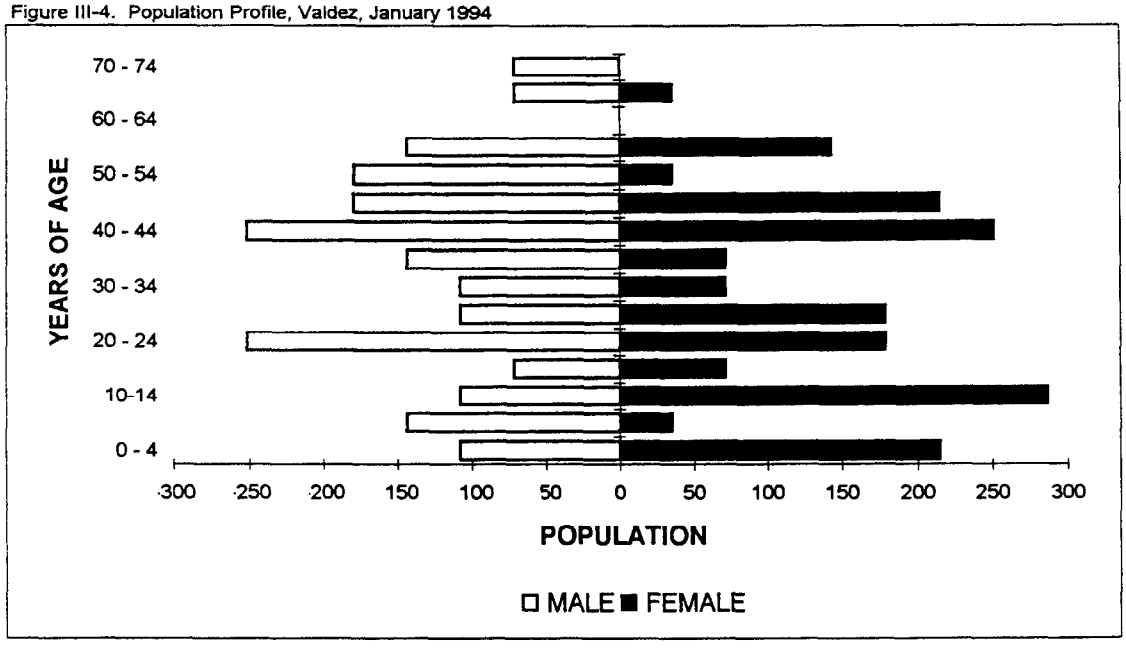
SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table III-4. Population Profile, Valdez, January 1993

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	138.27	6.92%	6.92%	125.70	7.25%	7.25%	263.97	7.07%	7.07%
5-9	188.55	9.43%	16.35%	113.13	6.52%	13.77%	301.68	8.08%	15.15%
10-14	163.41	8.18%	24.53%	238.83	13.77%	27.54%	402.24	10.77%	25.93%
15 - 19	138.27	6.92%	31.45%	150.84	8.70%	36.23%	289.11	7.74%	33.67%
20 - 24	138.27	6.92%	38.36%	150.84	8.70%	44.93%	289.11	7.74%	41.41%
25 - 29	100.56	5.03%	43.40%	113.13	6.52%	51.45%	213.69	5.72%	47.14%
30 - 34	138.27	6.92%	50.31%	150.84	8.70%	60.14%	289.11	7.74%	54.88%
35 - 39	201.12	10.06%	60.38%	213.69	12.32%	72.46%	414.81	11.11%	65.99%
40 - 44	276.54	13.84%	74.21%	188.55	10.87%	83.33%	465.09	12.46%	78.45%
45 - 49	175.98	8.81%	83.02%	100.56	5.80%	89.13%	276.54	7.41%	85.86%
50 - 54	125.70	6.29%	89.31%	113.13	6.52%	95.65%	238.83	6.40%	92.26%
55 - 59	87.99	4.40%	93.71%	50.28	2.90%	98.55%	138.27	3.70%	95.96%
60 - 64	50.28	2.52%	96.23%	0.00	0.00%	98.55%	50.28	1.35%	97.31%
65 - 69	25.14	1.26%	97.48%	12.57	0.72%	99.28%	37.71	1.01%	98.32%
70 - 74	25.14	1.26%	98.74%	0.00	0.00%	99.28%	25.14	0.67%	98.99%
75 - 79	0.00	0.00%	98.74%	0.00	0.00%	99.28%	0.00	0.00%	98.99%
80 - 84	0.00	0.00%	98.74%	0.00	0.00%	99.28%	0.00	0.00%	98.99%
85 - 89	0.00	0.00%	98.74%	0.00	0.00%	99.28%	0.00	0.00%	98.99%
90 - 94	0.00	0.00%	98.74%	0.00	0.00%	99.28%	0.00	0.00%	98.99%
95 - 99	0.00	0.00%	98.74%	0.00	0.00%	99.28%	0.00	0.00%	98.99%
100 - 104	0.00	0.00%	98.74%	0.00	0.00%	99.28%	0.00	0.00%	98.99%
Missing	25.14	1.26%	100.00%	12.57	0.72%	100.00%	37.71	1.01%	100.00%
TOTAL	1,998.63	53.54%		1,734.66	46.46%		3,733.29	100.00%	

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Figure III-4. Population Profile, Valdez, January 1994



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table III-5. Population Profile, Valdez, January 1994

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	107.74	5.56%	5.56%	215.49	12.00%	12.00%	323.23	8.65%	8.65%
5-9	143.66	7.41%	12.96%	35.91	2.00%	14.00%	179.57	4.81%	13.46%
10-14	107.74	5.56%	18.52%	287.31	16.00%	30.00%	395.06	10.58%	24.04%
15 - 19	71.83	3.70%	22.22%	71.83	4.00%	34.00%	143.66	3.85%	27.88%
20 - 24	251.40	12.96%	35.19%	179.57	10.00%	44.00%	430.97	11.54%	39.42%
25 - 29	107.74	5.56%	40.74%	179.57	10.00%	54.00%	287.31	7.69%	47.12%
30 - 34	107.74	5.56%	46.30%	71.83	4.00%	58.00%	179.57	4.81%	51.92%
35 - 39	143.66	7.41%	53.70%	71.83	4.00%	62.00%	215.49	5.77%	57.69%
40 - 44	251.40	12.96%	66.67%	251.40	14.00%	76.00%	502.80	13.46%	71.15%
45 - 49	179.57	9.26%	75.93%	215.49	12.00%	88.00%	395.06	10.58%	81.73%
50 - 54	179.57	9.26%	85.19%	35.91	2.00%	90.00%	215.49	5.77%	87.50%
55 - 59	143.66	7.41%	92.59%	143.66	8.00%	98.00%	287.31	7.69%	95.19%
60 - 64	0.00	0.00%	92.59%	0.00	0.00%	98.00%	0.00	0.00%	95.19%
65 - 69	71.83	3.70%	96.30%	35.91	2.00%	100.00%	107.74	2.88%	98.08%
70 - 74	71.83	3.70%	100.00%	0.00	0.00%	100.00%	71.83	1.92%	100.00%
75 - 79	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
80 - 84	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
85 - 89	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
90 - 94	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
95 - 99	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
100 - 104	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
Missing	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
TOTAL	1,939.37	51.92%		1,795.71	48.08%		3,735.09	100.00%	

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table III-6. Employment Characteristics, Valdez, 1991, 1992, and 1993

Characteristics		1991	1992	1993
ADULTS				
Total		2,806.68	2,664.84	2,801.31
Employed				
	Number	2,437.38	2,187.18	2,262.60
	Percentage	86.84	82.08	80.77
Jobs				
	Number	3,102.12	2,865.96	2,729.49
	Mean	1.27	1.31	1.21
	Minimum	1	1	1
	Maximum	4	4	3
Months Employed				
	Mean	9.58	10.04	10.59
	Minimum	1	1	2
	Maximum	12	12	12
	Year-Round	59.60	67.24	74.60
HOUSEHOLDS				
Total		1,231.00	1,257.00	1,257.00
Employed				
	Number	1,181.76	1,169.01	1,077.43
	Percentage	96.00	93.00	85.71
Jobs per Employed Household				
	Mean	2.63	2.45	2.53
	Minimum	1	1	1
	Maximum	7	5	5
Employed Adults				
	Mean	2.06	1.87	2.10
	Minimum	1	1	1
	Maximum	4	4	4

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992, 1993, and 1994.

Figure III-5. Employment by Industry, Valdez, 1991

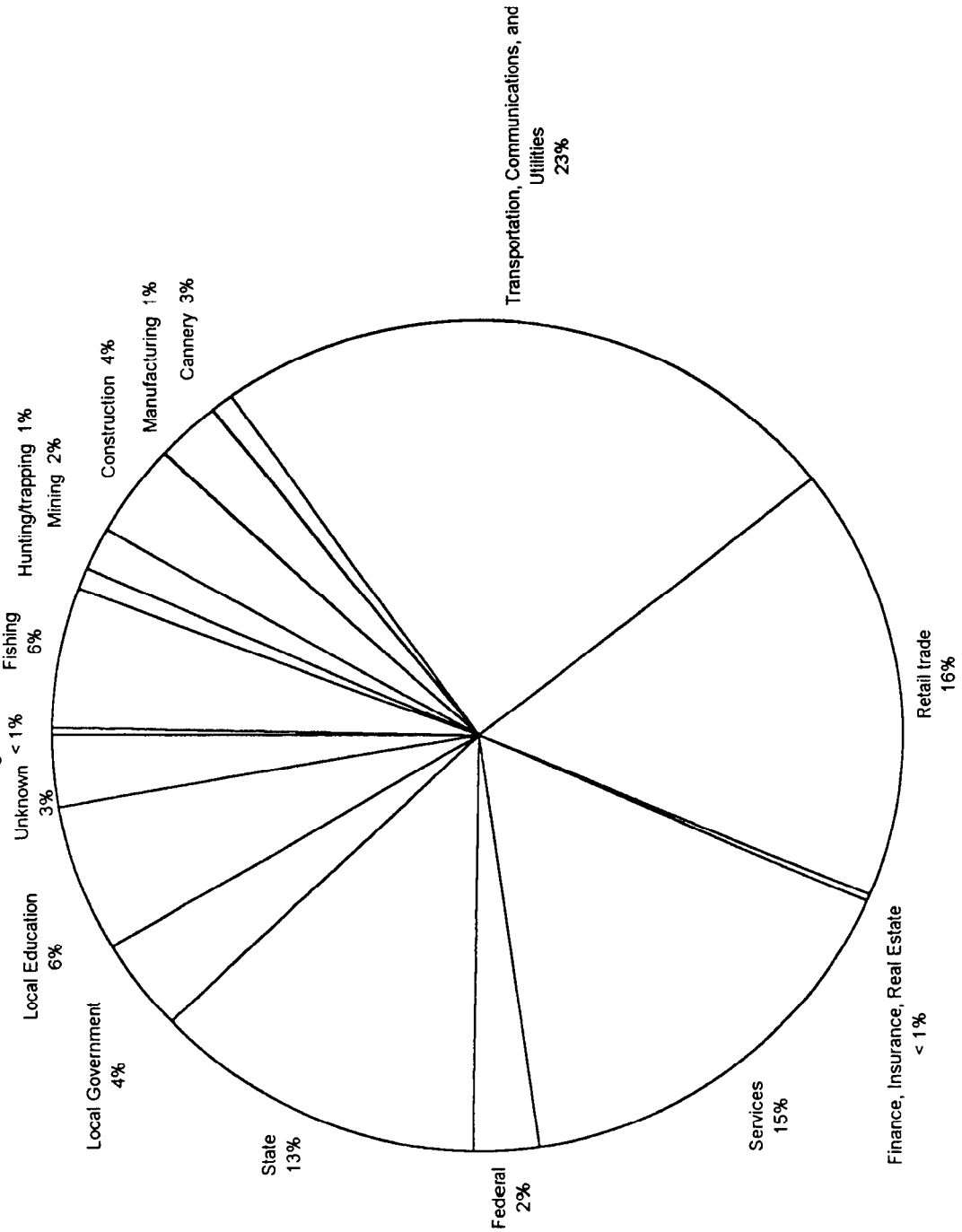


Table III-7. Community, Household, and Per Capita Incomes, All Sources and by Employer Type, Valdez, 1991

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$94,955,832.91	$77,137.15	$23,374.89
Earned Income	$86,369,612.07	$70,162.15	$21,261.26
Agriculture, Forestry, and Fishing	2,594,068.71	2,107.29	638.57
Agriculture	27,082.00	22.00	6.67
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	2,566,986.71	2,085.29	631.90
Hatchery/Enhancement	0.00	0.00	0.00
Commercial Fishing	2,566,986.71	2,085.29	631.90
Hunting/Trapping	0.00	0.00	0.00
Mining	1,846,500.00	1,500.00	454.55
Construction	4,256,868.34	3,458.06	1,047.90
Manufacturing	1,215,932.56	987.76	299.32
Cannery	895,872.56	727.76	220.53
Other Manufacturing	320,060.00	260.00	78.79
Logging/Timber	0.00	0.00	0.00
Transportation, Communications, and Utilities	42,274,192.16	34,341.34	10,406.47
Trade	3,586,872.41	2,913.79	882.97
Wholesale	0.00	0.00	0.00
Retail	3,586,872.41	2,913.79	882.97
Finance, Insurance, and Real Estate	430,850.00	350.00	106.06
Services	5,103,269.41	4,145.63	1,256.25
Government	22,106,658.47	17,958.29	5,441.91
Federal	2,308,125.00	1,875.00	568.18
State	10,683,046.17	8,678.35	2,629.80
Local	9,115,487.30	7,404.95	2,243.92
Local Government	4,324,964.63	3,513.38	1,064.66
Local Education	4,790,522.67	3,891.57	1,179.26
Unknown	2,954,400.00	2,400.00	727.27
Other Income	$8,586,220.84	$6,975.00	$2,113.64

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table III-8. Community, Household, and Per Capita Other Income by Source, Valdez, 1991

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$8,586,220.84	$6,975.00	$2,113.64
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	1.00	116,994.24	95.04	28.80
Adult Public Assistance	0.00	0.00	0.00	0.00
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	9.00	1,529,511.35	1,242.50	376.51
Longevity Bonus	6.00	265,896.00	216.00	65.45
Social Security	8.00	740,119.41	601.23	182.19
Workman's Comp./Insurance	1.00	25,112.40	20.40	6.18
Energy Assistance	1.00	6,155.00	5.00	1.52
Supplemental Security Income	1.00	88,632.00	72.00	21.82
Food Stamps	0.00	0.00	0.00	0.00
Unemployment	8.00	252,207.28	204.88	62.08
Native Corporation Dividend	4.00	90,224.09	73.29	22.21
Dividend/Interest	11.00	357,536.56	290.44	88.01
Child Support	0.00	0.00	0.00	0.00
Rental Income	0.00	0.00	0.00	0.00
Veteran Disability	0.00	0.00	0.00	0.00
Equipment Leasing	0.00	0.00	0.00	0.00
Rental Assistance	0.00	0.00	0.00	0.00
Fishing Permit Leasing	0.00	0.00	0.00	0.00
Per Diem	0.00	0.00	0.00	0.00
Disability	0.00	0.00	0.00	0.00
Alaska Permanent Fund Dividend	96.00	3,507,131.31	2,849.01	863.34
Weatherization	0.00	0.00	0.00	0.00
Veteran's Assistance	0.00	0.00	0.00	0.00
Investments/Stocks/Bonds	0.00	0.00	0.00	0.00
Bureau of Indian Affairs Grants	0.00	0.00	0.00	0.00
Housing Allowances/Off-Base Allowances	0.00	0.00	0.00	0.00
Women, Infants, and Children Program	0.00	0.00	0.00	0.00
General Assistance Grant	0.00	0.00	0.00	0.00
Foster Care	0.00	0.00	0.00	0.00
Inheritance	0.00	0.00	0.00	0.00
Contest Winnings	0.00	0.00	0.00	0.00
Capital Gains	0.00	0.00	0.00	0.00
ASRC Elder Trust	0.00	0.00	0.00	0.00
Other	8.00	1,606,701.20	1,305.20	395.52

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table III-9. Subsistence Equipment Expenses and Use, Valdez, 1991

Sampled Households = 100
Community Households = 1231

Equipment Type	Equipment Count		Equipment Cost			Use of Equipment for Subsistence			HH Sharing of Equipment	
			Replacement	Annual Fuel	Annual Cost		Cost			
	Total.	HH Mean	HH Mean	HH Mean	HH Mean	% of Cost	Total	HH Mean	% Borrowing	% Lending
All Equipment			$31,321.04	$307.99	$1,013.89	34.93	$14,037,879.47	$11,403.64	68.00	67.00
Skiff with outboard	369.30	0.30	$1,919.00		$46.70	56.61	$1,369,826.03	$1,112.78	15.00	14.00
Outboard Motor	147.72	0.12	$185.25	$0.05	$7.54	79.26	$188,146.04	$152.84	8.00	1.00
Boats with inboard	233.89	0.19	$10,885.00	$114.25	$408.00	57.01	$8,004,894.48	$6,502.76	27.00	6.00
Skiff, manually-propelled	24.62	0.02	$16.50		$0.35	92.80	$19,249.76	$15.64	1.00	1.00
ATV/Motorcycle	221.58	0.18	$595.00	$11.28	$16.00	65.87	$504,571.51	$409.89	4.00	4.00
Snowmachine/snowmobile	283.13	0.23	$631.00	$20.65	$37.50	27.64	$234,493.19	$190.49	5.00	5.00
Airplane	0.00	0.00	$0.00	$0.00	$0.00	0.00	$0.00	$0.00	3.00	0.00
Highway vehicle	886.32	0.72	$10,603.00	$156.51	$312.70	13.78	$1,878,488.14	$1,525.99	19.00	10.00
Tackle			$808.46		$32.76	68.25	$708,631.31	$575.66	36.00	39.00
Pots	935.56	0.76	$25.65		$0.23	100.00	$31,852.13	$25.88	8.00	4.00
Fishing Nets	578.57	0.47	$192.60		$10.00	33.37	$83,215.60	$67.60	8.00	12.00
Guns	4,505.46	3.66	$1,609.95				$1,981,848.45	$1,609.95	10.00	13.00
Traps	10,845.11	8.81	$107.55				$132,394.05	$107.55	0.00	3.00
Ammunition					$42.13		$75,974.13	$61.72	7.00	6.00
Cabins	36.93	0.03	$1,933.33		$20.00	32.85	$789,891.67	$641.67	9.00	1.00
Miscellaneous Camping Equipment			$941.20				$1,158,617.20	$941.20	18.00	20.00
Fishing/Hunting Camps	701.67	0.57	$231.10			76.91	$221,542.12	$179.97	17.00	14.00
Freezer	910.94	0.74	$433.60				$533,761.60	$433.60	16.00	21.00
Miscellaneous freezing supplies					$40.46		$60,706.60	$49.31	3.00	2.00
Canner	492.40	0.40	$43.61				$54,919.58	$44.61	7.00	11.00
Miscellaneous canning supplies					$9.64		$24,673.34	$20.04	4.00	3.00
Vacuum sealer/Sealer	356.99	0.29	$69.19				$85,172.89	$69.19	9.00	8.00
Miscellaneous sealer supplies					$10.48		$20,229.43	$16.43	4.00	2.00
Smoke house/dry rack	750.91	0.61	$41.81				$51,960.51	$42.21	19.00	17.00
Miscellaneous smoker supplies					$16.50		$26,528.05	$21.55	6.00	3.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992.

Figure III-6. Employment by Industry, Valdez, 1992

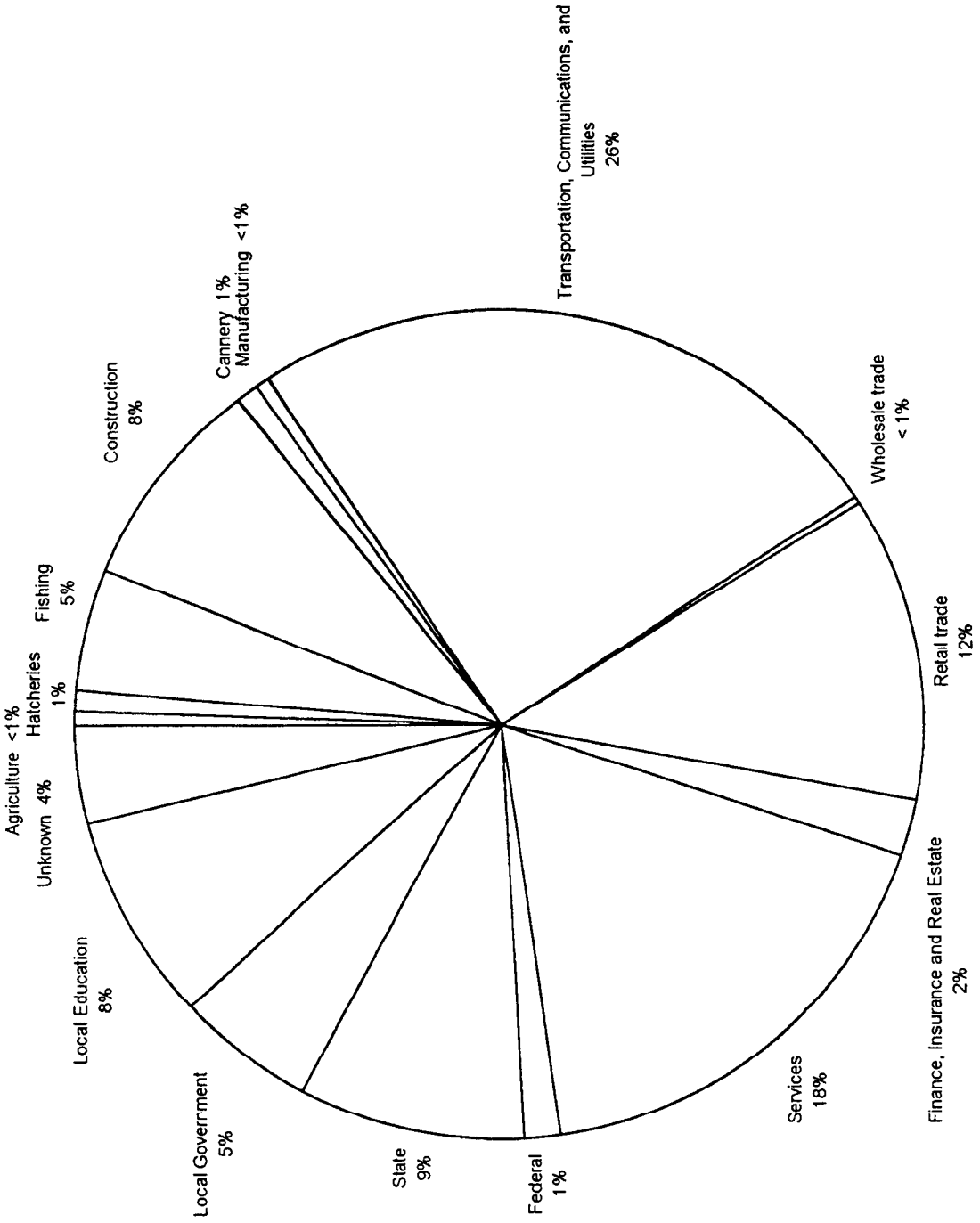


Table III-10. Community, Household, and Per Capita Incomes, All Sources and by Employer Type, Valdez, 1992

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$88,046,298.92	$70,044.79	$23,584.10
Earned Income	$80,065,726.57	$63,695.88	$21,446.43
Agriculture, Forestry, and Fishing	2,331,923.55	1,855.15	624.63
Agriculture	25,140.00	20.00	6.73
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	2,306,783.55	1,835.15	617.90
Hatchery/Enhancement	1,118,730.00	890.00	299.66
Commercial Fishing	1,188,053.55	945.15	318.23
Hunting/Trapping	0.00	0.00	0.00
Mining	0.00	0.00	0.00
Construction	7,317,190.38	5,821.15	1,959.98
Manufacturing	1,106,160.00	880.00	296.30
Cannery	854,760.00	680.00	228.96
Other Manufacturing	251,400.00	200.00	67.34
Logging/Timber	0.00	0.00	0.00
Transportation, Communications, and Utilities	43,357,302.44	34,492.68	11,613.70
Trade	3,395,584.38	2,701.34	909.54
Wholesale	502.80	0.40	0.13
Retail	3,395,081.58	2,700.94	909.41
Finance, Insurance, and Real Estate	791,910.00	630.00	212.12
Services	8,669,419.54	6,896.91	2,322.19
Government	13,096,236.28	10,418.64	3,507.96
Federal	793,167.00	631.00	212.46
State	5,967,557.22	4,747.46	1,598.47
Local	6,335,512.06	5,040.18	1,697.03
Local Government	2,404,389.60	1,912.80	644.04
Local Education	3,931,122.46	3,127.38	1,052.99
Unknown	AMT UNK	AMT UNK	AMT UNK
Other Income	$7,980,572.35	$6,348.90	$2,137.68

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table III-11. Community, Household, and Per Capita Other Income by Source, Valdez, 1992

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$7,980,572.35	$6,348.90	$2,137.68
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	0.00	0.00	0.00	0.00
Adult Public Assistance	0.00	0.00	0.00	0.00
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	10.00	2,541,709.87	2,022.04	680.82
Longevity Bonus	1.00	12,570.00	10.00	3.37
Social Security	6.00	466,940.30	371.47	125.07
Workman's Comp./Insurance	2.00	98,046.00	78.00	26.26
Energy Assistance	2.00	31,676.40	25.20	8.48
Supplemental Security Income	1.00	48,771.60	38.80	13.06
Food Stamps	1.00	3,771.00	3.00	1.01
Unemployment	11.00	256,753.56	204.26	68.77
Native Corporation Dividend	5.00	57,570.60	45.80	15.42
Dividend/Interest	11.00	730,855.71	581.43	195.77
Child Support	1.00	5,028.00	4.00	1.35
Rental Income	5.00	461,633.25	367.25	123.65
Veteran Disability	0.00	0.00	0.00	0.00
Equipment Leasing	0.00	0.00	0.00	0.00
Rental Assistance	0.00	0.00	0.00	0.00
Fishing Permit Leasing	0.00	0.00	0.00	0.00
Per Diem	0.00	0.00	0.00	0.00
Disability	0.00	0.00	0.00	0.00
Alaska Permanent Fund Dividend	88.00	2,832,838.05	2,253.65	758.80
Weatherization	0.00	0.00	0.00	0.00
Veteran's Assistance	0.00	0.00	0.00	0.00
Investments/Stocks/Bonds	1.00	33,939.00	27.00	9.09
Bureau of Indian Affairs Grants	0.00	0.00	0.00	0.00
Housing Allowances/Off-Base Allowances	0.00	0.00	0.00	0.00
Women, Infants, and Children Program	0.00	0.00	0.00	0.00
General Assistance Grant	0.00	0.00	0.00	0.00
Foster Care	0.00	0.00	0.00	0.00
Inheritance	2.00	178,494.00	142.00	47.81
Contest Winnings	1.00	31,425.00	25.00	8.42
Capital Gains	1.00	188,550.00	150.00	50.51
ASRC Elder Trust	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Figure III-7. Employment by Industry, Valdez, 1993

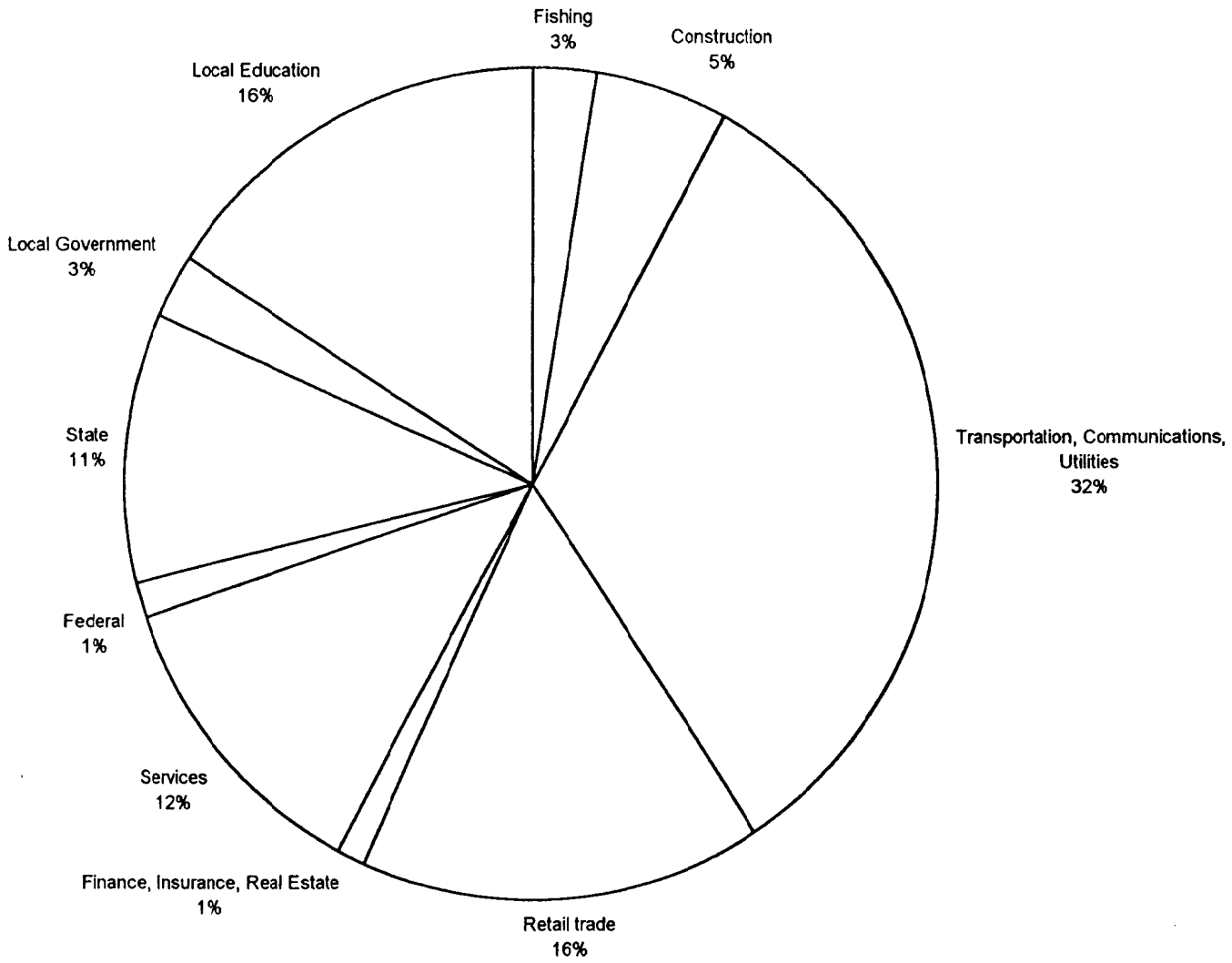


Table III-12. Community, Household, and Per Capita Incomes, All Sources and by Employer Type, Valdez, 1993

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$103,441,314.75	$82,292.22	$27,694.50
Earned Income	$92,066,730.90	$73,243.22	$24,649.16
Agriculture, Forestry, and Fishing	1,472,485.71	1,171.43	394.23
Agriculture	0.00	0.00	0.00
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	1,472,485.71	1,171.43	394.23
Hatchery/Enhancement	0.00	0.00	0.00
Commercial Fishing	1,472,485.71	1,171.43	394.23
Hunting/Trapping	0.00	0.00	0.00
Mining	0.00	0.00	0.00
Construction	5,590,130.40	4,447.20	1,496.65
Manufacturing	0.00	0.00	0.00
Cannery	0.00	0.00	0.00
Other Manufacturing	0.00	0.00	0.00
Logging/Timber	0.00	0.00	0.00
Transportation, Communications, and Utilities	56,928,731.90	45,289.37	15,241.61
Trade	5,798,720.57	4,613.14	1,552.50
Wholesale	0.00	0.00	0.00
Retail	5,798,720.57	4,613.14	1,552.50
Finance, Insurance, and Real Estate	0.00	0.00	0.00
Services	4,529,817.55	3,603.67	1,212.77
Government	17,746,844.76	14,118.41	4,751.39
Federal	1,975,285.71	1,571.43	528.85
State	7,883,185.71	6,271.43	2,110.58
Local	7,888,373.33	6,275.56	2,111.97
Local Government	1,479,668.57	1,177.14	396.15
Local Education	6,408,704.76	5,098.41	1,715.81
Unknown	0.00	0.00	0.00
Other Income	$11,374,583.85	$9,048.99	$3,045.33

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table III-13. Community, Household, and Per Capita Other Income by Source, Valdez, 1993

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$11,374,583.85	$9,048.99	$3,045.33
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	0.00	0.00	0.00	0.00
Adult Public Assistance	0.00	0.00	0.00	0.00
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	20.00	3,862,174.40	3,072.53	1,034.03
Longevity Bonus	11.43	538,714.29	428.57	144.23
Social Security	14.29	1,507,921.14	1,199.62	403.72
Workman's Comp./Insurance	0.00	0.00	0.00	0.00
Energy Assistance	0.00	0.00	0.00	0.00
Supplemental Security Income	0.00	0.00	0.00	0.00
Food Stamps	0.00	0.00	0.00	0.00
Unemployment	0.00	0.00	0.00	0.00
Native Corporation Dividend	5.71	1,084,360.03	862.66	290.32
Dividend/Interest	11.43	57,462.86	45.71	15.38
Child Support	0.00	0.00	0.00	0.00
Rental Income	2.86	359,142.86	285.71	96.15
Veteran Disability	0.00	0.00	0.00	0.00
Equipment Leasing	0.00	0.00	0.00	0.00
Rental Assistance	0.00	0.00	0.00	0.00
Fishing Permit Leasing	2.86	430,971.43	342.86	115.38
Per Diem	0.00	0.00	0.00	0.00
Disability	0.00	0.00	0.00	0.00
Alaska Permanent Fund Dividend	100.00	3,510,061.59	2,792.41	939.75
Weatherization	0.00	0.00	0.00	0.00
Veteran's Assistance	0.00	0.00	0.00	0.00
Investments/Stocks/Bonds	0.00	0.00	0.00	0.00
Bureau of Indian Affairs Grants	0.00	0.00	0.00	0.00
General Assistance Grant	0.00	0.00	0.00	0.00
Foster Care	0.00	0.00	0.00	0.00
Inheritance	0.00	0.00	0.00	0.00
Contest Winnings	0.00	0.00	0.00	0.00
Capital Gains	0.00	0.00	0.00	0.00
ASRC Elder Trust	0.00	0.00	0.00	0.00
Supplemental Union Benefits	2.86	23,775.26	18.91	6.37
Gifts	0.00	0.00	0.00	0.00
Medicare/Medicaid	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table III-14. Characteristics of Resource Harvest and Use, Valdez, 1991, 1992, and 1993

Study Community	1991	1992	1993
Mean Number Of Resources Used Per Household	7.91	8.47	6.49
Minimum	0	0	0
Maximum	35	28	23
95 % Confidence Limit (+/-)	14.48	13.87	27.12
Median	7	8	6
Mean Number Of Resources Attempted To Harvest Per Household	6.24	6.56	5.77
Minimum	0	0	0
Maximum	32	27	23
95 % Confidence Limit (+/-)	16.33	16.11	31.57
Median	5	6	5
Mean Number Of Resources Harvested Per Household	5.15	5.44	4.54
Minimum	0	0	0
Maximum	32	24	22
95 % Confidence Limit (+/-)	17.86	16.85	36.72
Median	4	5	3
Mean Number Of Resources Received Per Household	3.78	4.04	2.71
Minimum	0	0	0
Maximum	31	18	12
95 % Confidence Limit (+/-)	20.75	19.25	35.11
Median	3	3	2
Mean Number Of Resources Given Away Per Household	2.31	2.58	2.17
Minimum	0	0	0
Maximum	20	14	21
95 % Confidence Limit (+/-)	26.98	23.27	58.05
Median	1	1.5	1
Mean Household Harvest, Pounds	290.00	307.14	236.13
Minimum	0.00	0.00	0.00
Maximum	2,555.51	2,135.03	2,727.48
Total Pounds Harvested	356,991.79	386,077.79	296,820.08
Community Per Capita Harvest, Pounds	87.88	103.41	79.47
Percent Using Any Resource	98.00	97.00	97.14
Percent Attempting To Harvest Any Resource	91.00	89.00	88.57
Percent Harvesting Any Resource	90.00	83.00	82.86
Percent Receiving Any Resource	89.00	86.00	88.57
Percent Giving Away Any Resource	65.00	68.00	65.71
Number Of Households In Sample	100	100	35
Number of Resources Available	130	126	144

Source: Alaska Department of Fish and Game, Division of Subsistence, Household Surveys, 1992, 1993 and 1994

Table III-15. Participation in the Harvest and Processing of Wild Resources, Valdez, 1991, 1992, and 1993

Study Year			1991	1992	1993
Total Number of People			4,062.30	3,733.29	3,735.09
GAME	Hunt	Number	861.70	942.75	969.69
		Percentage	21.21	25.25	25.96
		Missing	0.00	0.00	35.91
		Missing %	0.00	0.00	0.96
	Process	Number	775.53	1,169.01	754.20
		Percentage	19.09	31.31	20.19
		Missing	0.00	0.00	35.91
		Missing %	0.00	0.00	0.96
FISH	Fish	Number	2,929.78	2,388.30	1,939.37
		Percentage	72.12	63.97	51.92
		Missing	0.00	0.00	35.91
		Missing %	0.00	0.00	0.96
	Process	Number	2,843.61	2,388.30	1,903.46
		Percentage	70.00	63.97	50.96
		Missing	0.00	0.00	35.91
		Missing %	0.00	0.00	0.96
FURBEARERS	Hunt or Trap	Number	73.86	62.85	71.83
		Percentage	1.82	1.68	1.92
		Missing	0.00	0.00	35.91
		Missing %	0.00	0.00	0.96
	Process	Number	110.79	75.42	107.74
		Percentage	2.73	2.02	2.88
		Missing	0.00	0.00	35.91
		Missing %	0.00	0.00	0.96
PLANTS	Gather	Number	2,203.49	1,898.07	1,544.31
		Percentage	54.24	50.84	41.35
		Missing	0.00	0.00	35.91
		Missing %	0.00	0.00	0.96
	Process	Number	1,944.98	1,596.39	1,292.91
		Percentage	47.88	42.76	34.62
		Missing	0.00	0.00	35.91
		Missing %	0.00	0.00	0.96
ANY RESOURCE					
	Attempt	Number	3,311.39	2,815.68	2,478.09
		Percent	81.52	75.42	66.35
	Process	Number	3,126.74	2,677.41	2,298.51
		Percent	76.97	71.72	61.54

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992, 1993, and 1994.

Table III-16. Percentage of Households Sharing Resources by Community, Valdez, 1991

Community	Salmon		Finfish		Shellfish		Game		Marine Mammals		Birds and Eggs		Plants and Berries		Any Resource	
	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave
All Communities	59.0	48.0	56.0	26.0	40.0	7.0	46.0	13.0	3.0	1.0	7.0	6.0	24.0	27.0	89.0	64.0
Anchorage	4.0	6.0	2.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	1.0	1.0	3.0	1.0	12.0	9.0
Chicken	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
Copper Center	3.0	0.0	0.0	1.0	1.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	1.0
Cordova	1.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	7.0	0.0
Delta Junction	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Denali Highway	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
Dutch Harbor	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Eagle River	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Eshamy Bay	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Fairbanks	2.0	5.0	2.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	4.0	6.0
Glennallen	1.0	0.0	0.0	1.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	6.0	1.0
Homer	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Juneau	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0
Kenai	2.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0
Kenny Lake	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Kodiak City	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Mendeltna	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Moose Pass	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
Naknek	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Nenana	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
Petersburg	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Petersville	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0
Salcha	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0
Sheep Mountain	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
Sitka	0.0	1.0	2.0	0.0	1.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	4.0	1.0
Tiekel	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Tatitlek	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	0.0	0.0	0.0	0.0	4.0	1.0
Tok	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
Tonsina	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Valdez	41.0	28.0	41.0	13.0	29.0	6.0	33.0	7.0	0.0	0.0	5.0	4.0	11.0	13.0	72.0	44.0
Willow	0.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
Wrangell	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0
Other U.S.	1.0	23.0	3.0	6.0	0.0	0.0	1.0	2.0	0.0	0.0	1.0	0.0	2.0	8.0	8.0	28.0
Foreign	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
Community Unknown	10.0	4.0	15.0	5.0	5.0	1.0	2.0	3.0	1.0	0.0	1.0	0.0	3.0	5.0	27.0	14.0

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992.

Table III-17. Subsistence Harvests in Pounds Usable Weight per Person by Resource Category, Valdez, 1991, 1992, and 1993

	Pounds Usable Weight per Person		
	1991	1992	1993
Salmon	35.1	44.5	22.6
Other Fish	21.9	32.3	24.5
Marine Invertebrates	5.4	3.2	4.9
Land Mammals	20.9	19.1	20.7
Marine Mammals	0.6	0.0	2.2
Birds and Eggs	1.2	1.4	1.1
Wild Plants	2.8	3.0	3.4
All Resources	87.9	103.4	79.5

Table III-18. Composition of Resource Harvests by Resource Category, Valdez, 1991, 1992, and 1993

	Percentage of Total Harvest		
	1991	1992	1993
Salmon	39.9%	43.0%	28.5%
Other Fish	24.9%	31.2%	30.9%
Marine Invertebrates	6.1%	3.1%	6.1%
Land Mammals	23.8%	18.5%	26.1%
Marine Mammals	0.7%	0.0%	2.7%
Birds and Eggs	1.4%	1.4%	1.4%
Wild Plants	3.2%	2.9%	4.3%

Figure III-8. Harvests of Wild Resources for Home Use, Pounds Usable Weight per Capita, Valdez, 1991, 1992, and 1993

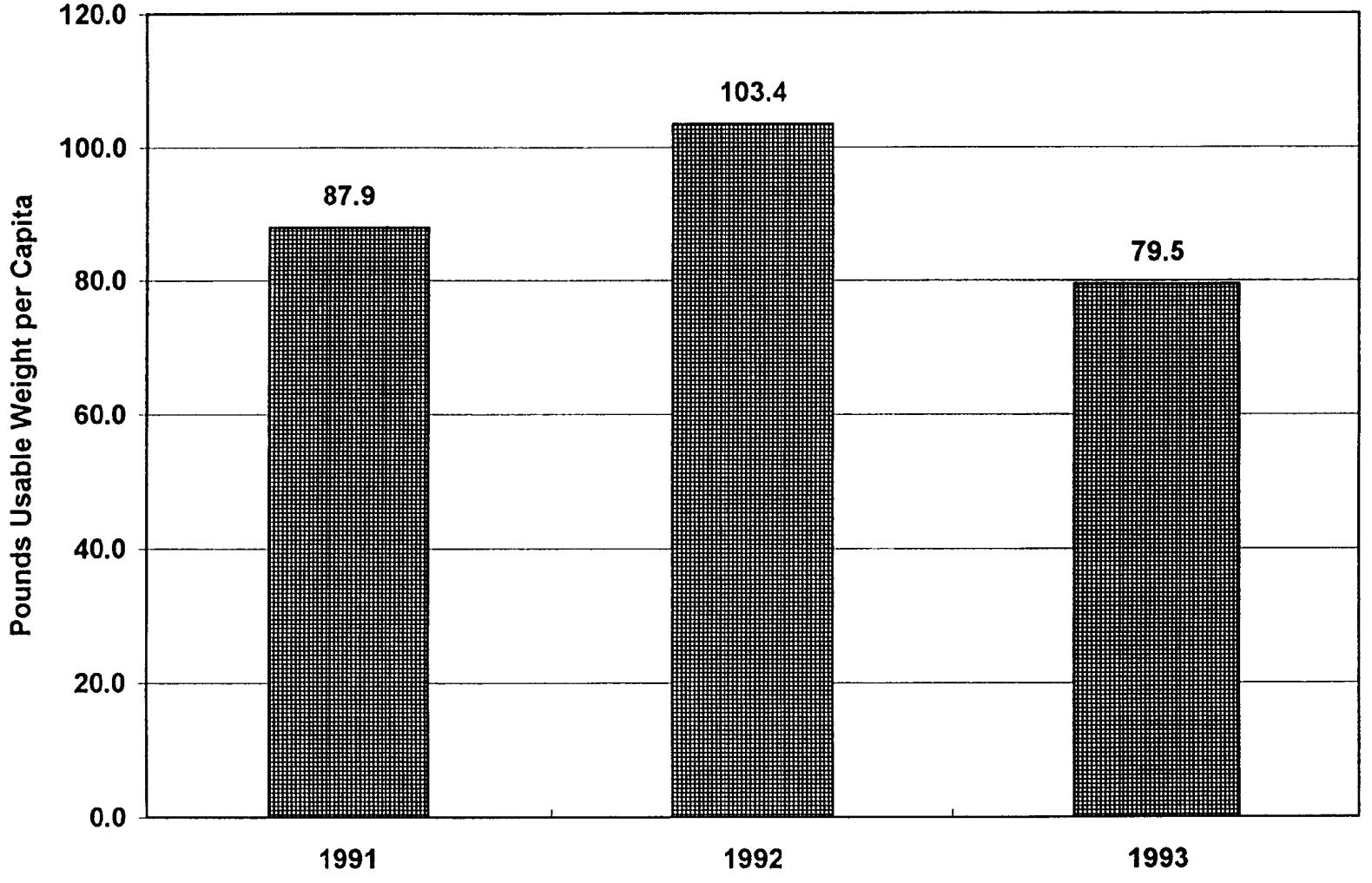


Figure III-9. Per Capita Harvests of Wild Resources by Resource Category, Valdez, 1991, 1992, and 1993

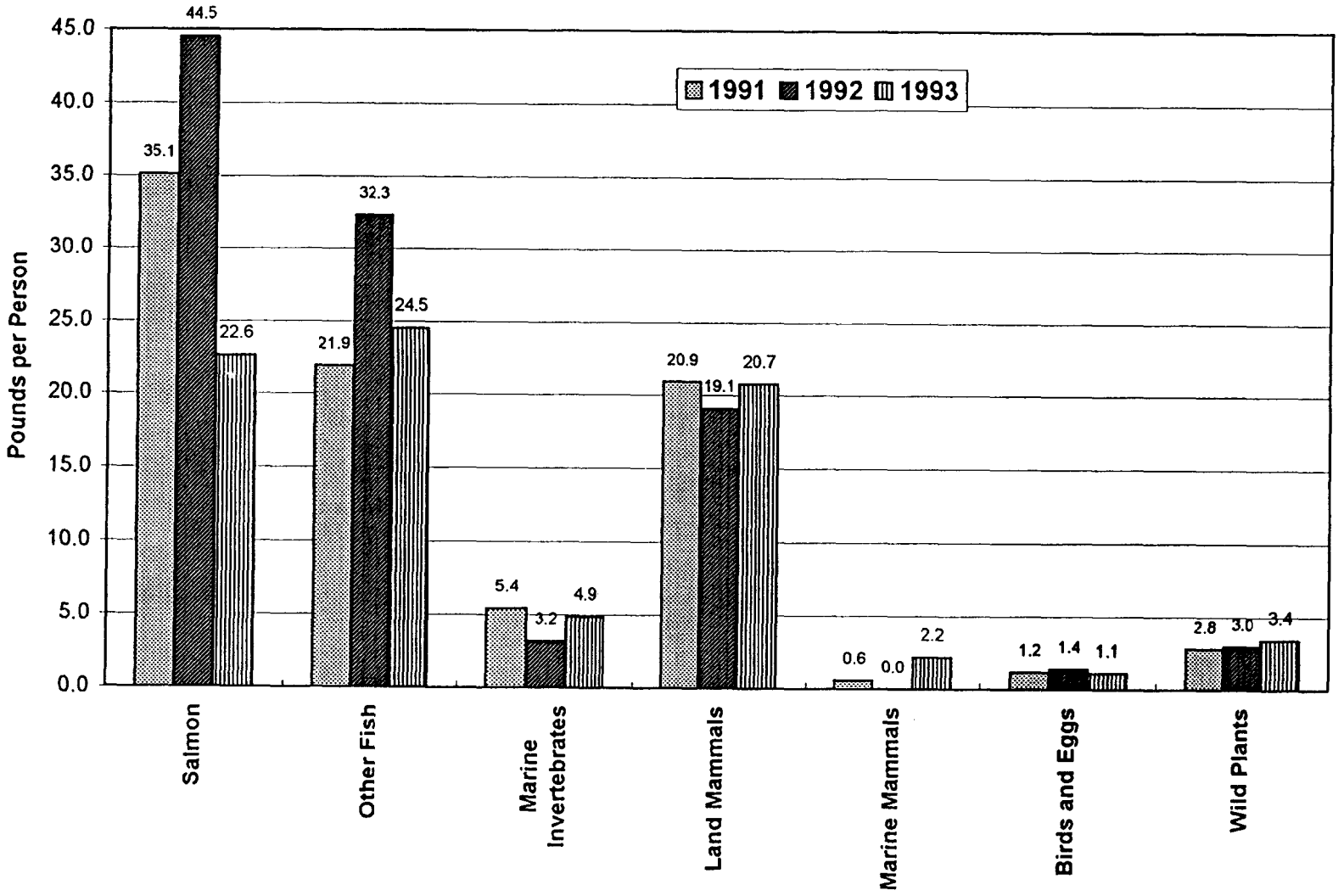


Figure III-10. Composition of Wild Resource Harvests by Resource Category, Valdez, 1991

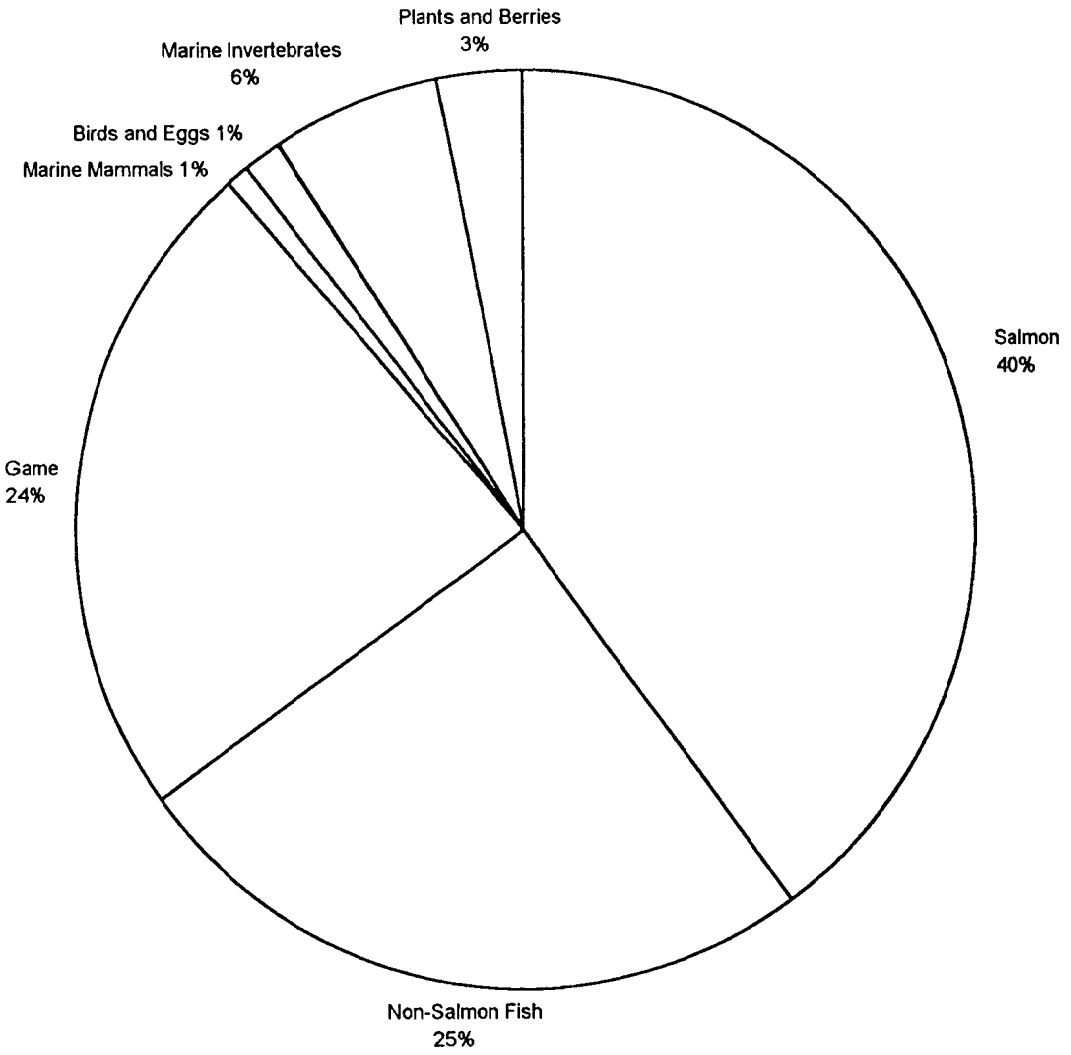


Figure III-11. Percentage of Valdez Households Reporting Lower Levels of Uses of Wild Resources Compared to 1988, the Year Before the Exxon Valdez Oil Spill, 1991 and 1993

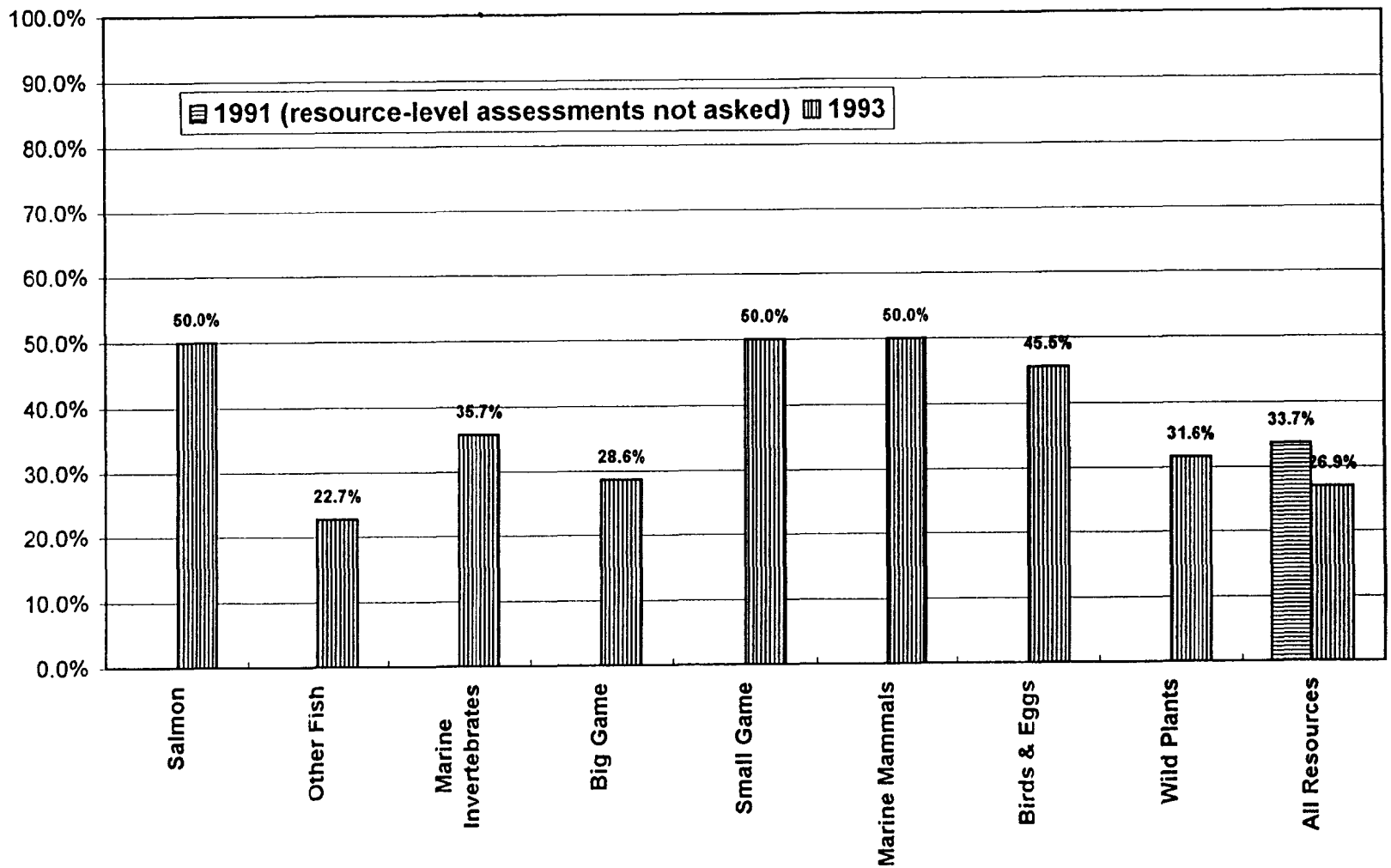


Table III-19. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Valdez, 1991

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
All Resources	98.0	91.0	90.0	89.0	65.0	356,991.79	290.00	87.88			28.39%	26.75%
Fish	97.0	88.0	83.0	77.0	53.0	231,706.63	188.23	57.04			25.43%	24.75%
Salmon	89.0	80.0	73.0	59.0	48.0	142,720.44	115.94	35.13	34,775.63	28.25	28.41%	28.53%
Chum Salmon (general)	9.0	9.0	5.0	4.0	4.0	11,277.44	9.16	2.78	1,821.88	1.48	161.28%	160.68%
Coho Salmon	68.0	71.0	57.0	26.0	38.0	71,031.01	57.70	17.49	11,568.57	9.40	38.06%	38.96%
Chinook Salmon	25.0	24.0	18.0	14.0	8.0	8,150.32	6.62	2.01	498.19	0.40	60.66%	59.28%
Pink Salmon	52.0	51.0	48.0	15.0	23.0	28,843.99	23.43	7.10	15,507.52	12.60	39.46%	35.71%
Sockeye Salmon	49.0	30.0	25.0	32.0	19.0	23,048.38	18.72	5.67	5,133.27	4.17	40.98%	40.09%
Landlocked Salmon	1.0	1.0	1.0	0.0	0.0	369.30	0.30	0.09	246.20	0.20	190.19%	190.01%
Unknown Salmon	4.0	0.0	0.0	4.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Non-Salmon Fish	81.0	66.0	60.0	55.0	26.0	88,986.19	72.29	21.91			30.73%	30.83%
Pike	2.0	2.0	2.0	0.0	0.0	480.09	0.39	0.12	160.03	0.13	176.02%	175.97%
Sturgeon	1.0	1.0	1.0	0.0	0.0	418.54	0.34	0.10	12.31	0.01	190.19%	189.43%
Cod	6.0	6.0	5.0	1.0	2.0	4,176.66	3.39	1.03	1,372.57	1.12	115.70%	119.10%
Pacific Cod (Gray)	2.0	2.0	2.0	0.0	1.0	3,052.88	2.48	0.75	954.03	0.78	157.37%	156.59%
Burbot	2.0	2.0	2.0	0.0	0.0	418.54	0.34	0.10	209.27	0.17	144.92%	143.60%
Unknown Cod	3.0	3.0	2.0	1.0	1.0	705.24	0.57	0.17	209.27	0.17	169.08%	169.03%
Sablefish (Black Cod)	5.0	4.0	4.0	2.0	3.0	3,156.30	2.56	0.78	1,018.16	0.83	94.66%	94.66%
Greenling	5.0	3.0	3.0	3.0	1.0	443.16	0.36	0.11	110.79	0.09	134.64%	134.30%
Kelp Greenling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Lingcod	5.0	3.0	3.0	3.0	1.0	443.16	0.36	0.11	110.79	0.09	134.64%	134.30%
Unknown Greenling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Flounder	2.0	2.0	1.0	1.0	1.0	553.95	0.45	0.14	184.65	0.15	190.19%	190.01%
Unknown Flounder	2.0	2.0	1.0	1.0	1.0	553.95	0.45	0.14	184.65	0.15	190.19%	190.01%
Sole	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sole, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Halibut	65.0	45.0	35.0	44.0	19.0	55,711.74	45.26	13.71	3,721.56	3.02	39.55%	39.92%
Herring	3.0	3.0	3.0	0.0	1.0	1,169.20	0.95	0.29	194.87 gal	0.16	129.40%	129.09%
Herring Roe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Spawn on Kelp	2.0	0.0	0.0	2.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Sac Roe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Rockfish	27.0	23.0	21.0	9.0	7.0	10,849.73	8.81	2.67	2,810.74	2.28	50.23%	51.86%
Black Rockfish (black bass)	3.0	3.0	3.0	1.0	1.0	190.74	0.15	0.05	127.16	0.10	115.59%	114.30%
Red Rockfish	21.0	18.0	17.0	6.0	5.0	7,509.10	6.10	1.85	1,877.28	1.53	59.85%	60.91%
Yellow Eye Rockfish	7.0	6.0	5.0	2.0	1.0	2,634.34	2.14	0.65	658.59	0.54	115.09%	114.64%

Table III-19. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Valdez, 1991

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Unknown Rockfish	1.0	1.0	1.0	0.0	0.0	515.54	0.42	0.13	147.72	0.12	190.19%	190.01%
Sea Bass	1.0	1.0	1.0	0.0	0.0	12.31	0.01	0.00	12.31	0.01	190.19%	190.01%
Sculpin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Sculpin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Smelt	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Eulachon (Hooligan, Candlefish)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Unknown Smelt	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Walleye Pollock (Whiting)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Skates	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Grayling	22.0	20.0	19.0	6.0	7.0	3,653.61	2.97	0.90	5,219.44	4.24	73.68%	74.51%
Sheefish	1.0	1.0	1.0	0.0	0.0	406.23	0.33	0.10	73.86	0.06	190.19%	191.75%
Whitefish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whitefish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Trout and Char	34.0	31.0	27.0	14.0	9.0	7,930.05	6.44	1.95	5,664.32	4.60	45.44%	43.80%
Char (general)	21.0	22.0	18.0	7.0	5.0	3,983.47	3.24	0.98	2,845.33	2.31	54.17%	52.23%
Arctic Char	1.0	1.0	1.0	0.0	0.0	430.85	0.35	0.11	307.75	0.25	190.19%	186.48%
Dolly Varden	15.0	17.0	13.0	5.0	4.0	2,791.91	2.27	0.69	1,994.22	1.62	65.58%	64.84%
Lake Trout	9.0	6.0	6.0	3.0	1.0	760.71	0.62	0.19	543.36	0.44	98.42%	98.76%
Trout	21.0	20.0	16.0	9.0	5.0	3,946.59	3.21	0.97	2,818.99	2.29	63.07%	62.38%
Cutthroat Trout	1.0	1.0	1.0	0.0	0.0	51.70	0.04	0.01	36.93	0.03	190.19%	190.01%
Rainbow Trout	21.0	20.0	16.0	9.0	5.0	3,843.18	3.12	0.95	2,745.13	2.23	64.30%	63.63%
Steelhead	1.0	1.0	1.0	0.0	0.0	51.70	0.04	0.01	36.93	0.03	190.19%	190.01%
Unknown Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Non-Salmon Fish	1.0	1.0	1.0	0.0	0.0	24.62	0.02	0.01	24.62	0.02	190.19%	190.01%
Game	56.0	39.0	21.0	46.0	12.0	84,871.30	68.95	20.89	3,619.14	2.94	109.49%	66.52%
Big Game	51.0	34.0	13.0	45.0	11.0	81,966.14	66.59	20.18	418.54	0.34	60.67%	68.22%
Bison	3.0	0.0	0.0	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black Bear	7.0	8.0	4.0	3.0	3.0	3,569.90	2.90	0.88	73.86	0.06	108.69%	124.01%
Brown Bear	1.0	2.0	1.0	0.0	1.0	0.00	0.00	0.00	12.31	0.01	190.19%	0.00%
Caribou	23.0	8.0	4.0	19.0	4.0	11,079.00	9.00	2.73	73.86	0.06	98.91%	99.69%
Deer	17.0	8.0	5.0	13.0	3.0	5,317.92	4.32	1.31	123.10	0.10	99.32%	98.76%
Goat	4.0	3.0	1.0	3.0	0.0	892.48	0.73	0.22	12.31	0.01	190.19%	190.01%
Moose	38.0	28.0	7.0	31.0	6.0	59,826.60	48.60	14.73	110.79	0.09	80.01%	78.02%
Sheep, Dall	5.0	3.0	1.0	4.0	1.0	1,280.24	1.04	0.32	12.31	0.01	190.19%	190.01%
Small Game/Furbearer	12.0	17.0	10.0	4.0	3.0	2,905.16	2.36	0.72	3,200.60	2.60	119.01%	91.83%

Table III-19. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Valdez, 1991

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Fox	1.0	1.0	1.0	0.0	0.0	0.00	0.00	0.00	49.24	0.04	190.19%	0.00%
Beaver	2.0	1.0	1.0	1.0	1.0	0.00	0.00	0.00	307.75	0.25	190.19%	0.00%
Coyote	2.0	2.0	2.0	0.0	1.0	0.00	0.00	0.00	172.34	0.14	165.00%	0.00%
Hare	11.0	16.0	9.0	3.0	2.0	2,905.16	2.36	0.72	1,452.58	1.18	90.15%	91.83%
Snowshoe Hare	1.0	1.0	1.0	0.0	0.0	147.72	0.12	0.04	73.86	0.06	190.19%	190.59%
Unknown Hare	10.0	15.0	8.0	3.0	2.0	2,757.44	2.24	0.68	1,378.72	1.12	94.63%	96.29%
Land Otter	1.0	1.0	1.0	0.0	1.0	0.00	0.00	0.00	123.10	0.10	190.19%	0.00%
Lynx	1.0	1.0	1.0	0.0	0.0	0.00	0.00	0.00	147.72	0.12	190.19%	0.00%
Marten	2.0	2.0	2.0	0.0	0.0	0.00	0.00	0.00	283.13	0.23	148.60%	0.00%
Mink	2.0	3.0	2.0	0.0	0.0	0.00	0.00	0.00	320.06	0.26	182.95%	0.00%
Muskrat	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Porcupine	1.0	1.0	1.0	0.0	1.0	0.00	0.00	0.00	12.31	0.01	190.19%	0.00%
Weasel	2.0	2.0	2.0	0.0	2.0	0.00	0.00	0.00	209.27	0.17	139.58%	0.00%
Wolf	1.0	1.0	1.0	0.0	0.0	0.00	0.00	0.00	12.31	0.01	190.19%	0.00%
Wolverine	2.0	2.0	2.0	0.0	0.0	0.00	0.00	0.00	110.79	0.09	170.16%	0.00%
Marine Mammals	4.0	1.0	1.0	3.0	1.0	2,326.59	1.89	0.57	209.27	0.17	190.19%	189.43%
Whale	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whale	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	4.0	1.0	1.0	3.0	1.0	2,326.59	1.89	0.57	61.55	0.05	190.19%	189.43%
Harbor Seal	4.0	1.0	1.0	3.0	1.0	2,326.59	1.89	0.57	61.55	0.05	190.19%	189.43%
Porpoise/Dolphin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steller Sea Lion	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sea Otter	1.0	1.0	1.0	0.0	0.0	0.00	0.00	0.00	147.72	0.12	190.19%	0.00%
Birds and Eggs	26.0	25.0	22.0	7.0	6.0	4,964.99	4.03	1.22	6,450.44	5.24	53.34%	54.29%
Birds	26.0	25.0	22.0	7.0	6.0	4,832.04	3.93	1.19	6,007.28	4.88	51.60%	52.72%
Upland Game Birds	23.0	22.0	19.0	6.0	5.0	3,196.91	2.60	0.79	4,567.01	3.71	60.03%	58.87%
Grouse	7.0	7.0	6.0	1.0	2.0	913.40	0.74	0.22	1,304.86	1.06	94.11%	92.47%
Ptarmigan	20.0	20.0	17.0	5.0	5.0	2,283.51	1.86	0.56	3,262.15	2.65	55.19%	54.54%
Migratory Birds	10.0	6.0	6.0	5.0	2.0	1,635.14	1.33	0.40	1,440.27	1.17	96.35%	106.68%
Waterfowl	10.0	6.0	6.0	5.0	2.0	1,635.14	1.33	0.40	1,440.27	1.17	96.35%	106.68%
Ducks	10.0	6.0	6.0	5.0	2.0	1,150.12	0.93	0.28	1,304.86	1.06	93.31%	91.48%
Scoter	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Harlequin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goldeneye	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table III-19. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Valdez, 1991

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Bufflehead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Merganser	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scaup	2.0	2.0	2.0	0.0	1.0	288.05	0.23	0.07	320.06	0.26	152.32%	152.82%
Mallard	7.0	6.0	6.0	2.0	2.0	738.60	0.60	0.18	738.60	0.60	101.75%	101.08%
Pintail	2.0	3.0	2.0	0.0	0.0	68.94	0.06	0.02	86.17	0.07	135.19%	135.29%
Wigeon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Teal	3.0	3.0	3.0	0.0	0.0	44.32	0.04	0.01	147.72	0.12	135.69%	135.09%
Gadwall	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shoveler	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canvasback	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Ducks, Unknown	4.0	1.0	1.0	3.0	0.0	10.22	0.01	0.00	12.31	0.01	190.19%	189.43%
Geese	2.0	1.0	1.0	1.0	0.0	485.01	0.39	0.12	135.41	0.11	190.19%	189.43%
Brant	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snow Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
White-fronted Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese (general)	1.0	1.0	1.0	0.0	0.0	443.16	0.36	0.11	123.10	0.10	190.19%	189.43%
Canada Geese, Lesser	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese, Dusky	1.0	1.0	1.0	0.0	0.0	443.16	0.36	0.11	123.10	0.10	190.19%	189.43%
Geese, Unknown	2.0	1.0	1.0	1.0	0.0	41.85	0.03	0.01	12.31	0.01	190.19%	189.43%
Crane	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sandhill Crane	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shorebirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Common Snipe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seabirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cormorants	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Seabirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eggs	1.0	1.0	1.0	0.0	0.0	132.95	0.11	0.03	443.16	0.36	190.19%	189.43%
Seabird Eggs	1.0	1.0	1.0	0.0	0.0	132.95	0.11	0.03	443.16	0.36	190.19%	189.43%
Gull Eggs	1.0	1.0	1.0	0.0	0.0	132.95	0.11	0.03	443.16	0.36	190.19%	189.43%
Tern Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Waterfowl Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Invertebrates	45.0	15.0	13.0	40.0	6.0	21,968.93	17.85	5.41			104.28%	103.09%

Table III-19. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Valdez, 1991

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Abalone	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Clams	9.0	2.0	2.0	7.0	2.0	1,004.87	0.82	0.25	334.96 gal	0.27	187.87%	187.11%
Butter Clams	3.0	1.0	1.0	2.0	1.0	738.60	0.60	0.18	246.20 gal	0.20	190.19%	189.43%
Razor Clams	6.0	0.0	0.0	6.0	1.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Pacific Littleneck Clams (Steamers)	1.0	1.0	1.0	0.0	1.0	48.75	0.04	0.01	16.25 gal	0.01	190.19%	189.43%
Horse Clams (Gaper)	1.0	1.0	1.0	0.0	1.0	205.33	0.17	0.05	68.44 gal	0.06	190.19%	189.43%
Unknown Clams	2.0	1.0	1.0	1.0	0.0	12.19	0.01	0.00	4.06 gal	0.00	190.19%	190.01%
Cockles	1.0	1.0	1.0	0.0	1.0	246.32	0.20	0.06	82.11 gal	0.07	190.19%	189.43%
Geoducks	3.0	3.0	3.0	2.0	1.0	1,652.62	1.34	0.41	550.87 gal	0.45	161.32%	161.15%
Scallops	4.0	0.0	0.0	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mussels	2.0	1.0	1.0	1.0	1.0	24.56	0.02	0.01	16.37 gal	0.01	190.19%	189.43%
Crabs	25.0	8.0	5.0	21.0	3.0	14,727.70	11.96	3.63	9,231.76	7.50	129.93%	129.11%
Dungeness Crab	10.0	4.0	2.0	9.0	1.0	324.95	0.26	0.08	464.21	0.38	180.28%	179.51%
King Crab	7.0	1.0	1.0	6.0	1.0	1,231.05	1.00	0.30	535.24	0.43	190.19%	189.43%
Tanner Crab	16.0	5.0	4.0	12.0	3.0	13,171.70	10.70	3.24	8,232.31	6.69	138.54%	137.51%
Tanner Crab, Opilio	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tanner Crab, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Crabs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Chitons (bidarkis)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Chitons (small)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Octopus	2.0	1.0	1.0	1.0	0.0	49.24	0.04	0.01	12.31	0.01	190.19%	189.43%
Sea Cucumber	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Sea Urchin	1.0	1.0	1.0	0.0	1.0	5.11	0.00	0.00	10.22 gal	0.01	190.19%	189.43%
Shrimp	29.0	8.0	7.0	25.0	3.0	4,258.52	3.46	1.05	2,129.26 gal	1.73	109.58%	108.80%
Whelk	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Limpets	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Oyster	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Plants and Berries	61.0	53.0	53.0	24.0	26.0	11,153.35	9.06	2.75			34.52%	35.29%
Berries	60.0	52.0	52.0	23.0	25.0	9,771.68	7.94	2.41	2,442.92 gal	1.98	34.82%	35.65%
Plants/Greens/Mushrooms	21.0	21.0	21.0	3.0	3.0	1,369.36	1.11	0.34			79.15%	79.32%
Unknown Greens, from land	21.0	21.0	21.0	3.0	3.0	1,369.36	1.11	0.34	342.34 gal	0.28	79.15%	79.32%
Unknown Greens, from sea	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Seaweed/Kelp (Food)	2.0	1.0	1.0	2.0	1.0	12.31	0.01	0.00	3.08 gal	0.00	190.19%	189.43%
Wood	32.0	31.0	31.0	3.0	5.0	0.00	0.00	0.00	1,566.45 crd	1.27	45.60%	0.00%

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table III-20. Estimated Amount of Resources Removed from Commercial Harvests, Valdez, 1991

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		39,280.94	15.48	11.00
Fish		38,246.90	16.51	10.71
Salmon	3,816.10	18,684.73	13.09	5.23
Chum Salmon	1,538.75	9,524.86	84.46	2.67
Coho Salmon	430.85	2,645.42	3.72	0.74
Chinook Salmon	123.10	2,013.92	24.71	0.56
Pink Salmon	1,231.00	2,289.66	7.94	0.64
Sockeye Salmon	492.40	2,210.88	9.59	0.62
Non-Salmon Fish		19,562.16	21.98	5.48
Sturgeon	12.31	418.54	100.00	0.12
Cod	769.38	2,462.00	58.95	0.69
Pacific Cod (Gray)	769.38	2,462.00	80.65	0.69
Sablefish (Black Cod)	771.96	2,393.08	75.82	0.67
Halibut	748.08	11,198.74	20.10	3.14
Herring	30.78 gal	184.65	15.79	0.05
Rockfish	726.29	2,905.16	26.78	0.81
Red Rockfish	449.32	1,797.26	23.93	0.50
Yellow Eye Rockfish	276.98	1,107.90	42.06	0.31
Marine Invertebrates		1,034.04	4.71	0.29
Octopus	12.31	49.24	100.00	0.01
Shrimp	492.40 gal	984.80	23.13	0.28

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table III-21. Percentage of Salmon Harvest by Resource, Gear Type, and Total Salmon Harvest, Valdez, 1991

		Subsistence Methods											
		Dip Net		Other		Subsistence Gear Any Method		Removed from Commercial Catch		Rod and Reel		Any Method	
Resource	Percent Base	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.
Salmon	total	7.72	9.29	5.52	4.57	13.24	13.86	10.97	13.09	75.79	73.05		
Chum Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	40.32	50.98	1.07	1.68		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	84.46	84.46	15.54	15.54		
	total	0.00	0.00	0.00	0.00	0.00	0.00	4.42	6.67	0.81	1.23	5.24	7.90
Coho Salmon	gear type	20.64	25.66	35.90	64.90	27.01	38.60	11.29	14.16	37.54	58.27		
	resource	4.79	4.79	5.96	5.96	10.75	10.75	3.72	3.72	85.53	85.53		
	total	1.59	2.38	1.98	2.97	3.58	5.35	1.24	1.85	28.45	42.57	33.27	49.77
Chinook Salmon	gear type	0.92	3.04	0.00	0.00	0.53	2.04	3.23	10.78	1.33	5.50		
	resource	4.94	4.94	0.00	0.00	4.94	4.94	24.71	24.71	70.35	70.35		
	total	0.07	0.28	0.00	0.00	0.07	0.28	0.35	1.41	1.01	4.02	1.43	5.71
Pink Salmon	gear type	0.00	0.00	64.10	35.10	26.74	11.58	32.26	12.25	49.50	23.27		
	resource	0.00	0.00	7.94	7.94	7.94	7.94	7.94	7.94	84.12	84.12		
	total	0.00	0.00	3.54	1.60	3.54	1.60	3.54	1.60	37.51	17.00	44.59	20.21
Sockeye Salmon	gear type	78.44	71.30	0.00	0.00	45.72	47.79	12.90	11.83	9.62	10.92		
	resource	41.01	41.01	0.00	0.00	41.01	41.01	9.59	9.59	49.40	49.40		
	total	6.05	6.62	0.00	0.00	6.05	6.62	1.42	1.55	7.29	7.98	14.76	16.15
Landlocked Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93	0.35		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.26	0.71	0.26
Unknown Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table III-22. Estimated Salmon Harvest by Gear Type, Valdez, 1991

		Subsistence Gear Any Method						Removed from Commercial Catch		Rod and Reel		Any Method	
		Dip Net		Other									
	Harvest Units	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Salmon	numbers	2,683.58	2.18	1,920.36	1.56	4,603.94	3.74	3,816.10	3.10	26,355.59	21.41	34,775.63	28.25
	pounds	13,255.53	10.77	6,522.33	5.30	19,777.86	16.07	18,684.73	15.18	104,257.85	84.69	142,720.44	115.94
Chum Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	1,538.75	1.25	283.13	0.23	1,821.88	1.48
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	9,524.86	7.74	1,752.57	1.42	11,277.44	9.16
Coho Salmon	numbers	553.95	0.45	689.36	0.56	1,243.31	1.01	430.85	0.35	9,894.41	8.04	11,568.57	9.40
	pounds	3,401.25	2.76	4,232.67	3.44	7,633.92	6.20	2,645.42	2.15	60,751.67	49.35	71,031.01	57.70
Chinook Salmon	numbers	24.62	0.02	0.00	0.00	24.62	0.02	123.10	0.10	350.47	0.28	498.19	0.40
	pounds	402.78	0.33	0.00	0.00	402.78	0.33	2,013.92	1.64	5,733.62	4.66	8,150.32	6.62
Pink Salmon	numbers	0.00	0.00	1,231.00	1.00	1,231.00	1.00	1,231.00	1.00	13,045.52	10.60	15,507.52	12.60
	pounds	0.00	0.00	2,289.66	1.86	2,289.66	1.86	2,289.66	1.86	24,264.67	19.71	28,843.99	23.43
Sockeye Salmon	numbers	2,105.01	1.71	0.00	0.00	2,105.01	1.71	492.40	0.40	2,535.86	2.06	5,133.27	4.17
	pounds	9,451.49	7.68	0.00	0.00	9,451.49	7.68	2,210.88	1.80	11,386.01	9.25	23,048.38	18.72
Landlocked Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	246.20	0.20	246.20	0.20
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	369.30	0.30	369.30	0.30
Unknown Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table III-23. Percentage of Households Harvesting Salmon by Gear Type and Species, Valdez, 1991

Resource	Dip Net	Other	Any Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Any Method
Salmon	9.00	2.00	11.00	2.00	68.00	73.00
Chum Salmon	0.00	0.00	0.00	1.00	4.00	5.00
Coho Salmon	2.00	2.00	4.00	1.00	52.00	57.00
Chinook Salmon	2.00	0.00	2.00	2.00	14.00	18.00
Pink Salmon	0.00	1.00	1.00	1.00	46.00	48.00
Sockeye Salmon	9.00	0.00	9.00	2.00	15.00	25.00
Landlocked Salmon	0.00	0.00	0.00	0.00	1.00	1.00
Unknown Salmon	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table III-24. Estimated Harvest of Fish Other than Salmon by Gear Type, Valdez, 1991

	Harvest Units	Subsistence Gear		Removed From Commercial Catch		Rod and Reel		Ice Fishing		Any Method	
		Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Non-Salmon Fish	pounds	1,316.92	1.07	19,562.16	15.89	67,604.85	54.92	502.25	0.41	88,986.19	72.29
Burbot	pounds	295.44	0.24	0.00	0.00	0.00	0.00	123.10	0.10	418.54	0.34
Grayling	pounds	0.00	0.00	0.00	0.00	3,653.61	2.97	0.00	0.00	3,653.61	2.97
Pike	pounds	36.93	0.03	0.00	0.00	443.16	0.36	0.00	0.00	480.09	0.39
Sheefish	pounds	0.00	0.00	0.00	0.00	406.23	0.33	0.00	0.00	406.23	0.33
Sturgeon	pounds	0.00	0.00	418.54	0.34	0.00	0.00	0.00	0.00	418.54	0.34
Lingcod	pounds	0.00	0.00	0.00	0.00	443.16	0.36	0.00	0.00	443.16	0.36
Pacific Cod (Gray)	pounds	0.00	0.00	2,462.00	2.00	590.88	0.48	0.00	0.00	3,052.88	2.48
Sablefish (Black Cod)	pounds	0.00	0.00	2,393.08	1.94	763.22	0.62	0.00	0.00	3,156.30	2.56
Unknown Cod	pounds	0.00	0.00	0.00	0.00	705.24	0.57	0.00	0.00	705.24	0.57
Unknown Flounder	pounds	0.00	0.00	0.00	0.00	553.95	0.45	0.00	0.00	553.95	0.45
Halibut	pounds	0.00	0.00	11,198.74	9.10	44,513.00	36.16	0.00	0.00	55,711.74	45.26
Herring	pounds	984.55	0.80	184.65	0.15	0.00	0.00	0.00	0.00	1,169.20	0.95
Black Rockfish (black bass)	pounds	0.00	0.00	0.00	0.00	190.74	0.15	0.00	0.00	190.74	0.15
Red Rockfish	pounds	0.00	0.00	1,797.26	1.46	5,711.84	4.64	0.00	0.00	7,509.10	6.10
Sea Bass	pounds	0.00	0.00	0.00	0.00	12.31	0.01	0.00	0.00	12.31	0.01
Yellow Eye Rockfish	pounds	0.00	0.00	1,107.90	0.90	1,526.44	1.24	0.00	0.00	2,634.34	2.14
Unknown Rockfish	pounds	0.00	0.00	0.00	0.00	515.54	0.42	0.00	0.00	515.54	0.42
Arctic Char	pounds	0.00	0.00	0.00	0.00	430.85	0.35	0.00	0.00	430.85	0.35
Dolly Varden	pounds	0.00	0.00	0.00	0.00	2,791.91	2.27	0.00	0.00	2,791.91	2.27
Cutthroat Trout	pounds	0.00	0.00	0.00	0.00	51.70	0.04	0.00	0.00	51.70	0.04
Lake Trout	pounds	0.00	0.00	0.00	0.00	381.56	0.31	379.15	0.31	760.71	0.62
Rainbow Trout	pounds	0.00	0.00	0.00	0.00	3,843.18	3.12	0.00	0.00	3,843.18	3.12
Steelhead	pounds	0.00	0.00	0.00	0.00	51.70	0.04	0.00	0.00	51.70	0.04
Unknown Non-Salmon Fish	pounds	0.00	0.00	0.00	0.00	24.62	0.02	0.00	0.00	24.62	0.02

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table III-25. Percentage of Fish Other than Salmon Harvested by Gear Type, Valdez, 1991

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	1.48	21.98	75.97	0.56
Burbot	resource	70.59	0.00	0.00	29.41
Grayling	resource	0.00	0.00	100.00	0.00
Pike	resource	7.69	0.00	92.31	0.00
Sheefish	resource	0.00	0.00	100.00	0.00
Sturgeon	resource	0.00	100.00	0.00	0.00
Lingcod	resource	0.00	0.00	100.00	0.00
Pacific Cod (Gray)	resource	0.00	80.65	19.35	0.00
Sablefish (Black Cod)	resource	0.00	75.82	24.18	0.00
Unknown Cod	resource	0.00	0.00	100.00	0.00
Unknown Flounder	resource	0.00	0.00	100.00	0.00
Halibut	resource	0.00	20.10	79.90	0.00
Herring	resource	84.21	15.79	0.00	0.00
Black Rockfish (black bass)	resource	0.00	0.00	100.00	0.00
Red Rockfish	resource	0.00	23.93	76.07	0.00
Sea Bass	resource	0.00	0.00	100.00	0.00
Yellow Eye Rockfish	resource	0.00	42.06	57.94	0.00
Unknown Rockfish	resource	0.00	0.00	100.00	0.00
Arctic Char	resource	0.00	0.00	100.00	0.00
Dolly Varden	resource	0.00	0.00	100.00	0.00
Cutthroat Trout	resource	0.00	0.00	100.00	0.00
Lake Trout	resource	0.00	0.00	50.16	49.84
Rainbow Trout	resource	0.00	0.00	100.00	0.00
Steelhead	resource	0.00	0.00	100.00	0.00
Unknown Non-Salmon Fish	resource	0.00	0.00	100.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table III-26. Percentage of Households Harvesting Fish Other than Salmon by Gear Type and Species, Valdez, 1991

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	4.00	6.00	57.00	2.00	60.00
Burbot	1.00	0.00	0.00	1.00	2.00
Grayling	0.00	0.00	19.00	0.00	19.00
Pike	1.00	0.00	1.00	0.00	2.00
Sheefish	0.00	0.00	1.00	0.00	1.00
Sturgeon	0.00	1.00	0.00	0.00	1.00
Lingcod	0.00	0.00	3.00	0.00	3.00
Pacific Cod (Gray)	0.00	1.00	1.00	0.00	2.00
Sablefish (Black Cod)	0.00	3.00	1.00	0.00	4.00
Unknown Cod	0.00	0.00	2.00	0.00	2.00
Unknown Flounder	0.00	0.00	1.00	0.00	1.00
Halibut	0.00	5.00	33.00	0.00	35.00
Herring	2.00	1.00	0.00	0.00	3.00
Black Rockfish (black bass)	0.00	0.00	3.00	0.00	3.00
Red Rockfish	0.00	2.00	15.00	0.00	17.00
Sea Bass	0.00	0.00	1.00	0.00	1.00
Yellow Eye Rockfish	0.00	2.00	5.00	0.00	5.00
Unknown Rockfish	0.00	0.00	1.00	0.00	1.00
Arctic Char	0.00	0.00	1.00	0.00	1.00
Dolly Varden	0.00	0.00	13.00	0.00	13.00
Cutthroat Trout	0.00	0.00	1.00	0.00	1.00
Lake Trout	0.00	0.00	4.00	2.00	6.00
Rainbow Trout	0.00	0.00	16.00	0.00	16.00
Steelhead	0.00	0.00	1.00	0.00	1.00
Unknown Non-Salmon Fish	0.00	0.00	1.00	0.00	1.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Figure III-12. Composition of Wild Resource Harvests by Resource Category, Valdez, 1992

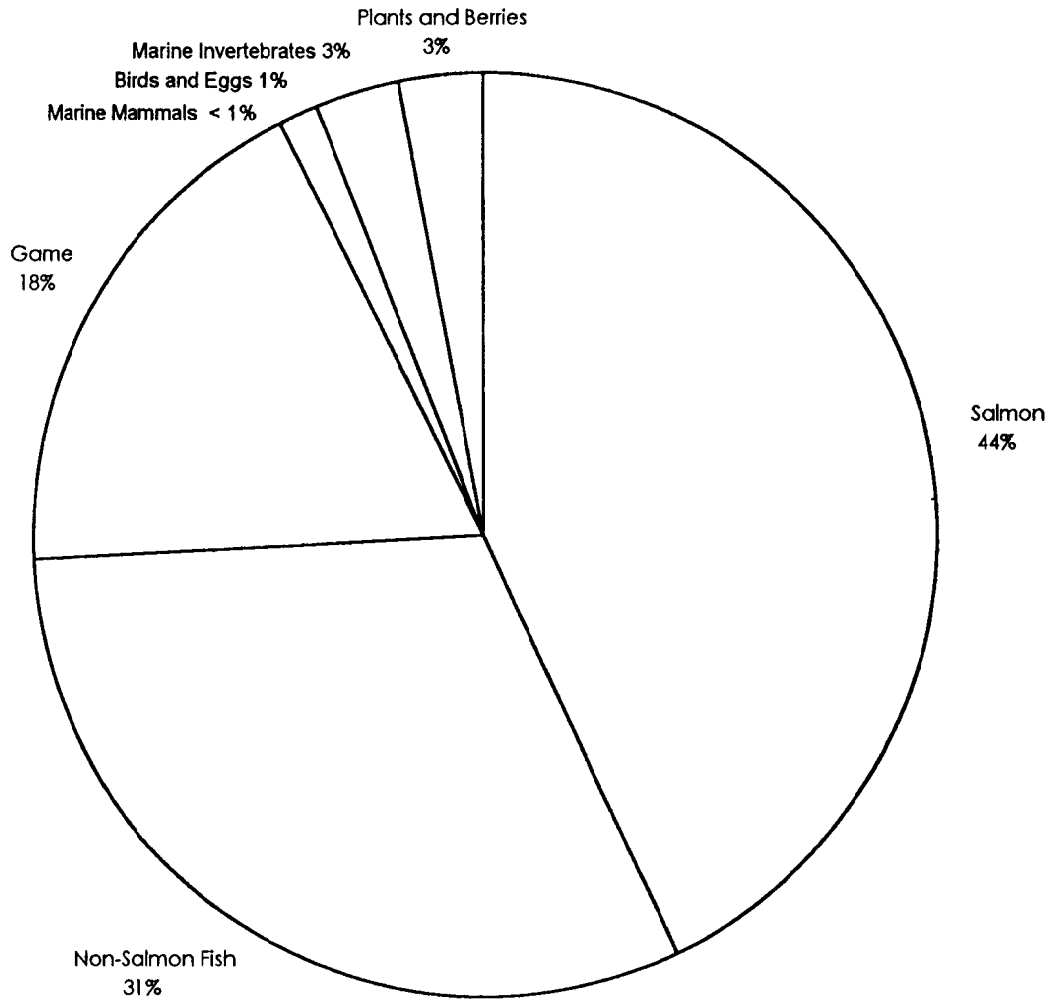


Table III-27. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Harvests, Valdez, 1992

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
All Resources	97.0	89.0	83.0	86.0	68.0	386,077.79	307.14	103.41			25.75%	25.67%
Fish	95.0	81.0	77.0	72.0	62.0	286,399.14	227.84	76.71			29.28%	30.36%
Salmon	83.0	74.0	69.0	50.0	50.0	165,928.53	132.00	44.45	35,296.56	28.08	30.08%	31.45%
Chum Salmon	15.0	14.0	10.0	6.0	6.0	8,389.72	6.67	2.25	1,357.56	1.08	70.40%	69.05%
Coho Salmon	72.0	66.0	60.0	32.0	34.0	89,492.49	71.20	23.97	13,789.29	10.97	30.29%	31.78%
Chinook Salmon	30.0	32.0	18.0	14.0	12.0	9,907.17	7.88	2.65	1,206.72	0.96	65.97%	66.84%
Pink Salmon	46.0	45.0	39.0	11.0	20.0	15,033.47	11.96	4.03	8,082.51	6.43	42.85%	41.42%
Sockeye Salmon	51.0	38.0	30.0	31.0	22.0	41,993.23	33.41	11.25	10,118.85	8.05	61.57%	61.50%
Landlocked Salmon	5.0	5.0	4.0	0.0	0.0	1,112.45	0.89	0.30	741.63	0.59	107.07%	107.79%
Unknown Salmon	1.0	0.0	0.0	1.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Non-Salmon Fish	81.0	61.0	56.0	54.0	39.0	120,470.61	95.84	32.27			38.55%	39.88%
Pike	1.0	1.0	1.0	0.0	0.0	150.84	0.12	0.04	50.28	0.04	190.36%	191.90%
Sturgeon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cod	5.0	4.0	4.0	2.0	4.0	1,508.40	1.20	0.40	471.38	0.38	98.82%	98.29%
Pacific Cod (Gray)	3.0	3.0	3.0	1.0	3.0	1,186.61	0.94	0.32	370.82	0.30	115.39%	115.86%
Burbot	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Cod	2.0	1.0	1.0	1.0	1.0	321.79	0.26	0.09	100.56	0.08	190.36%	188.00%
Sablefish (Black Cod)	6.0	3.0	3.0	3.0	1.0	155.87	0.12	0.04	50.28	0.04	115.59%	116.52%
Greenling	12.0	11.0	11.0	1.0	8.0	4,097.82	3.26	1.10	1,024.46	0.82	95.81%	94.77%
Lingcod	12.0	11.0	11.0	1.0	8.0	4,097.82	3.26	1.10	1,024.46	0.82	95.81%	94.77%
Unknown Greenling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Flounder	3.0	3.0	3.0	1.0	2.0	414.81	0.33	0.11	138.27	0.11	157.30%	157.38%
Unknown Flounder	3.0	3.0	3.0	1.0	2.0	414.81	0.33	0.11	138.27	0.11	157.30%	157.38%
Sole	1.0	1.0	1.0	0.0	1.0	62.85	0.05	0.02	62.85	0.05	190.36%	191.90%
Sole, Unknown	1.0	1.0	1.0	0.0	1.0	62.85	0.05	0.02	62.85	0.05	190.36%	191.90%
Halibut	70.0	43.0	36.0	48.0	29.0	79,166.22	62.98	21.21	5,288.32	4.21	43.04%	44.80%
Herring	16.0	10.0	9.0	6.0	3.0	4,474.67	3.56	1.20	745.78 gal	0.59	83.16%	80.49%
Herring Roe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Spawn on Kelp	2.0	0.0	0.0	2.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Sac Roe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Rockfish	32.0	27.0	27.0	7.0	12.0	17,263.26	13.73	4.62	5,549.66	4.42	71.87%	62.02%
Black Rockfish (black bass)	9.0	9.0	9.0	0.0	6.0	2,847.11	2.27	0.76	1,898.07	1.51	128.96%	129.63%
Red Rockfish	16.0	13.0	13.0	4.0	5.0	7,139.76	5.68	1.91	1,784.94	1.42	82.45%	83.57%
Yellow Eye Rockfish	18.0	16.0	16.0	3.0	6.0	6,611.82	5.26	1.77	1,652.96	1.32	68.28%	68.74%
Unknown Rockfish	2.0	2.0	2.0	0.0	2.0	664.58	0.53	0.18	213.69	0.17	179.40%	180.35%
Sea Bass	1.0	1.0	1.0	0.0	0.0	125.70	0.10	0.03	125.70	0.10	190.36%	191.25%

Table III-27. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Harvests, Valdez, 1992

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Sculpin	1.0	1.0	1.0	0.0	1.0	12.57	0.01	0.00	25.14	0.02	190.36%	191.25%
Irish Lord	1.0	1.0	1.0	0.0	1.0	12.57	0.01	0.00	25.14	0.02	190.36%	191.25%
Smelt	4.0	2.0	2.0	2.0	2.0	1,062.17	0.85	0.28	326.82 gal	0.26	183.11%	182.10%
Eulachon (Hooligan, Candlefish)	4.0	2.0	2.0	2.0	2.0	1,062.17	0.85	0.28	326.82 gal	0.26	183.11%	182.10%
Wolf Eel (Wolffish)	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shark	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Salmon Shark	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Walleye Pollock (Whiting)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Skates	1.0	0.0	0.0	1.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Grayling	14.0	14.0	14.0	1.0	4.0	2,454.92	1.95	0.66	3,507.03	2.79	77.56%	79.13%
Whitefish	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whitefish	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Trout and Char	32.0	31.0	28.0	11.0	4.0	9,520.52	7.57	2.55	6,800.37	5.41	40.53%	40.98%
Char (general)	25.0	23.0	22.0	7.0	3.0	6,203.30	4.94	1.66	4,430.93	3.53	45.30%	45.60%
Dolly Varden	23.0	21.0	20.0	7.0	3.0	5,657.76	4.50	1.52	4,041.26	3.22	47.64%	47.83%
Lake Trout	5.0	5.0	5.0	1.0	1.0	545.54	0.43	0.15	389.67	0.31	99.02%	99.64%
Trout	16.0	15.0	13.0	5.0	2.0	3,317.22	2.64	0.89	2,369.45	1.89	62.32%	62.75%
Cutthroat Trout	2.0	2.0	2.0	1.0	1.0	431.15	0.34	0.12	307.97	0.25	133.95%	132.45%
Rainbow Trout	15.0	15.0	13.0	3.0	2.0	2,868.47	2.28	0.77	2,048.91	1.63	62.12%	63.12%
Steelhead	2.0	1.0	1.0	1.0	0.0	17.60	0.01	0.00	12.57	0.01	190.36%	189.31%
Unknown Non-Salmon Fish	0.0	1.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Game	62.0	44.0	23.0	51.0	16.0	71,226.65	56.66	19.08	1,143.87	0.91	49.94%	55.29%
Big Game	59.0	34.0	14.0	51.0	15.0	70,422.17	56.02	18.86	364.53	0.29	59.96%	55.99%
Bison	3.0	0.0	0.0	3.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black Bear	5.0	9.0	1.0	4.0	1.0	0.00	0.00	0.00	12.57	0.01	190.36%	0.00%
Brown Bear	1.0	5.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Caribou	31.0	15.0	7.0	24.0	7.0	15,084.00	12.00	4.04	100.56	0.08	73.17%	71.89%
Deer	18.0	8.0	3.0	15.0	5.0	6,516.29	5.18	1.75	150.84	0.12	108.79%	108.08%
Elk	2.0	0.0	0.0	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goat	3.0	2.0	0.0	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Moose	45.0	22.0	7.0	38.0	7.0	47,514.60	37.80	12.73	87.99	0.07	69.74%	67.33%
Sheep, Dall	3.0	3.0	1.0	2.0	0.0	1,307.28	1.04	0.35	12.57	0.01	190.36%	188.00%
Unknown Big Game	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Small Game/Furbearer	12.0	12.0	9.0	3.0	2.0	603.36	0.48	0.16	678.78	0.54	76.22%	97.73%
Fox	1.0	1.0	1.0	0.0	0.0	0.00	0.00	0.00	12.57	0.01	190.36%	0.00%
Beaver	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table III-27. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Harvests, Valdez, 1992

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Coyote	2.0	2.0	2.0	0.0	0.0	0.00	0.00	0.00	50.28	0.04	150.04%	0.00%
Hare	9.0	9.0	6.0	3.0	2.0	603.36	0.48	0.16	389.67	0.31	85.38%	97.73%
Snowshoe Hare	7.0	7.0	4.0	3.0	1.0	527.94	0.42	0.14	263.97	0.21	107.25%	108.23%
Unknown Hare	2.0	2.0	2.0	0.0	1.0	75.42	0.06	0.02	125.70	0.10	144.45%	191.90%
Land Otter	2.0	3.0	2.0	0.0	0.0	0.00	0.00	0.00	25.14	0.02	133.93%	0.00%
Lynx	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marten	1.0	2.0	1.0	0.0	0.0	0.00	0.00	0.00	50.28	0.04	190.36%	0.00%
Mink	2.0	3.0	2.0	0.0	0.0	0.00	0.00	0.00	75.42	0.06	161.46%	0.00%
Muskrat	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Porcupine	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Weasel	2.0	2.0	2.0	0.0	0.0	0.00	0.00	0.00	75.42	0.06	161.46%	0.00%
Wolf	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wolverine	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Feral Animals	2.0	2.0	2.0	0.0	0.0	201.12	0.16	0.05	100.56	0.08	150.04%	150.76%
Rabbit - Feral	2.0	2.0	2.0	0.0	0.0	201.12	0.16	0.05	100.56	0.08	150.04%	150.76%
Marine Mammals	2.0	0.0	0.0	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whale	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whale	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Harbor Seal	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Porpoise/Dolphin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steller Sea Lion	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sea Otter	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Birds and Eggs	30.0	28.0	26.0	6.0	5.0	5,272.86	4.19	1.41	7,466.58	5.94	57.73%	57.79%
Birds	30.0	28.0	26.0	6.0	5.0	5,046.60	4.01	1.35	6,712.38	5.34	61.10%	59.83%
Upland Game Birds	23.0	22.0	19.0	5.0	3.0	3,387.62	2.70	0.91	4,839.45	3.85	75.46%	76.86%
Grouse	10.0	10.0	9.0	1.0	2.0	923.90	0.74	0.25	1,319.85	1.05	93.14%	93.76%
Ptarmigan	19.0	19.0	15.0	5.0	2.0	2,463.72	1.96	0.66	3,519.60	2.80	82.34%	83.84%
Migratory Birds	12.0	11.0	10.0	2.0	2.0	1,658.99	1.32	0.44	1,872.93	1.49	96.92%	89.42%
Waterfowl	12.0	11.0	10.0	2.0	2.0	1,658.99	1.32	0.44	1,872.93	1.49	96.92%	89.42%
Ducks	9.0	8.0	7.0	2.0	2.0	1,508.15	1.20	0.40	1,810.08	1.44	99.04%	96.27%
Eider	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eider, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Harlequin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table III-27. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Harvests, Valdez, 1992

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Goldeneye	1.0	1.0	1.0	0.0	0.0	100.56	0.08	0.03	125.70	0.10	190.36%	189.31%
Bufflehead	1.0	1.0	1.0	0.0	0.0	25.14	0.02	0.01	62.85	0.05	190.36%	189.31%
Merganser	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scaup	2.0	2.0	2.0	0.0	1.0	248.89	0.20	0.07	276.54	0.22	134.49%	134.00%
Mallard	6.0	6.0	6.0	0.0	1.0	754.20	0.60	0.20	754.20	0.60	105.76%	104.95%
Pintail	2.0	2.0	2.0	0.0	0.0	170.95	0.14	0.05	213.69	0.17	169.23%	168.04%
Wigeon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Teal	4.0	4.0	4.0	0.0	1.0	52.79	0.04	0.01	175.98	0.14	98.58%	97.89%
Gadwall	1.0	1.0	1.0	0.0	0.0	20.11	0.02	0.01	25.14	0.02	190.36%	191.90%
Oldsquaw	1.0	1.0	1.0	0.0	0.0	50.28	0.04	0.01	62.85	0.05	190.36%	189.31%
Shoveler	1.0	1.0	1.0	0.0	0.0	22.63	0.02	0.01	37.71	0.03	190.36%	189.31%
Ducks, Unknown	4.0	3.0	2.0	2.0	0.0	62.60	0.05	0.02	75.42	0.06	161.46%	161.37%
Geese	4.0	6.0	4.0	0.0	1.0	150.84	0.12	0.04	62.85	0.05	99.41%	94.98%
Brant	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snow Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
White-fronted Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese (general)	3.0	4.0	3.0	0.0	1.0	120.67	0.10	0.03	50.28	0.04	115.59%	110.25%
Canada Geese, Lesser	1.0	2.0	1.0	0.0	1.0	30.17	0.02	0.01	25.14	0.02	190.36%	189.96%
Canada Geese, Dusky	2.0	2.0	2.0	0.0	0.0	90.50	0.07	0.02	25.14	0.02	133.93%	133.81%
Geese, Unknown	1.0	2.0	1.0	0.0	0.0	30.17	0.02	0.01	12.57	0.01	190.36%	189.31%
Crane	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sandhill Crane	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shorebirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Common Snipe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seabirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cormorants	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Loons	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eggs	1.0	1.0	1.0	0.0	0.0	226.26	0.18	0.06	754.20	0.60	190.36%	189.96%
Seabird Eggs	1.0	1.0	1.0	0.0	0.0	226.26	0.18	0.06	754.20	0.60	190.36%	189.96%
Gull Eggs	1.0	1.0	1.0	0.0	0.0	226.26	0.18	0.06	754.20	0.60	190.36%	189.96%
Tern Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Waterfowl Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Invertebrates	49.0	21.0	20.0	41.0	14.0	11,915.42	9.48	3.19			59.26%	59.39%

Table III-27. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Harvests, Valdez, 1992

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Clams	17.0	8.0	8.0	13.0	4.0	2,058.21	1.64	0.55	686.07 gal	0.55	88.09%	86.31%
Butter Clams	9.0	5.0	5.0	5.0	1.0	530.96	0.42	0.14	176.99 gal	0.14	103.51%	103.28%
Razor Clams	12.0	6.0	6.0	9.0	3.0	1,527.26	1.22	0.41	509.09 gal	0.41	103.91%	101.97%
Pacific Littleneck Clams (Steamers)	2.0	0.0	0.0	2.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Pinkneck Clams	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Horse Clams (Gaper)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Unknown Clams	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Cockles	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Scallops	2.0	0.0	0.0	2.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Mussels	2.0	2.0	2.0	1.0	1.0	14.14	0.01	0.00	9.43 gal	0.01	141.31%	141.35%
Crabs	22.0	4.0	3.0	20.0	4.0	2,331.74	1.86	0.62	1,634.10	1.30	111.41%	112.99%
Dungeness Crab	9.0	2.0	1.0	8.0	2.0	219.98	0.18	0.06	314.25	0.25	190.36%	189.96%
King Crab	3.0	0.0	0.0	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
King Crab, Blue	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
King Crab, Unknown	2.0	0.0	0.0	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tanner Crab	15.0	3.0	3.0	13.0	2.0	2,111.76	1.68	0.57	1,319.85	1.05	114.01%	115.79%
Tanner Crab, Unknown	15.0	3.0	3.0	13.0	2.0	2,111.76	1.68	0.57	1,319.85	1.05	114.01%	115.79%
Unknown Crabs	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Chitons (bidarkis)	1.0	1.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Chitons (large)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Chitons (small)	1.0	1.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Octopus	2.0	1.0	1.0	1.0	0.0	301.68	0.24	0.08	75.42	0.06	190.36%	191.90%
Sea Cucumber	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Sea Urchin (Neet)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Shrimp	39.0	17.0	17.0	29.0	11.0	7,209.65	5.74	1.93	3,604.82 gal	2.87	61.46%	61.24%
Plants and Berries	61.0	55.0	55.0	29.0	20.0	11,263.73	8.96	3.02	2,815.93 gal	2.24	40.24%	40.07%
Berries	60.0	53.0	53.0	29.0	18.0	8,969.45	7.14	2.40	2,242.36 gal	1.78	37.28%	37.02%
Plants/Greens/Mushrooms	15.0	12.0	12.0	3.0	4.0	2,294.28	1.83	0.61	573.57 gal	0.46	98.97%	99.00%
Seaweed/Kelp (Food)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Wood	30.0	29.0	29.0	5.0	8.0	0.00	0.00	0.00	1,153.30 crd	0.92	46.19%	0.00%

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table III-28. Estimated Amount of Resources Removed from Commercial Harvests, Valdez, 1992

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		14764.27	4.95	3.82
Fish		14764.27	5.16	3.82
Salmon	1294.71	6553.12	3.95	1.70
Chum Salmon	12.57	77.68	0.93	0.02
Coho Salmon	113.13	734.21	0.82	0.19
Chinook Salmon	226.26	1857.59	18.75	0.48
Pink Salmon	12.57	23.38	0.16	0.01
Sockeye Salmon	930.18	3860.25	9.19	1.00
Non-Salmon Fish		8211.15	6.82	2.13
Sablefish (Black Cod)	25.14	77.93	50.00	0.02
Greenling	157.13	628.50	15.34	0.16
Lingcod	157.13	628.50	15.34	0.16
Halibut	362.77	5430.67	6.86	1.41
Rockfish	534.23	2074.05	12.01	0.54
Black Rockfish (black bass)	25.14	37.71	1.32	0.01
Red Rockfish	12.57	50.28	0.70	0.01
Yellow Eye Rockfish	496.52	1986.06	30.04	0.51

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table III-29. Percentage of Salmon Harvest by Resource, Gear Type, and Total Salmon Harvest, Valdez, 1992

Resource	Percent Base	Subsistence Methods: Dip Net No.	Dip Net Lbs.	Other No.	Other Lbs.	Subsistence Gear Any Method No.	Subsistence Gear Any Method Lbs.	Removed from Commercial Catch No.	Removed from Commercial Catch Lbs.	Rod and Reel No.	Rod and Reel Lbs.	Any Method No.	Any Method Lbs.
Salmon	total	9.76	9.16	9.26	8.17	19.02	17.33	3.67	3.95	77.31	78.72		
Chum Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.97	1.19	4.93	6.36		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.93	0.93	99.07	99.07		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05	3.81	5.01	3.85	5.06
Coho Salmon	gear type	3.65	5.37	0.00	0.00	1.87	2.84	8.74	11.20	49.65	67.33		
	resource	0.91	0.91	0.00	0.00	0.91	0.91	0.82	0.82	98.27	98.27		
	total	0.36	0.49	0.00	0.00	0.36	0.4[illegible]	0.32	0.44	38.39	53.00	39.07	53.93
Chinook Salmon	gear type	4.38	8.15	0.00	0.00	2.25	4.31	17.48	28.35	3.04	5.21		
	resource	12.50	12.50	0.00	0.00	12.50	12.50	18.75	18.75	68.75	68.75		
	total	0.43	0.75	0.00	0.00	0.43	0.75	0.64	1.12	2.35	4.10	3.42	5.97
Pink Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.97	0.36	29.57	11.49		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.16	99.84	99.84		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.01	22.86	9.05	22.90	9.06
Sockeye Salmon	gear type	91.97	86.49	100.00	100.00	95.88	92.86	71.84	58.91	10.09	8.75		
	resource	31.30	31.30	32.30	32.30	63.60	63.60	9.19	9.19	27.20	27.20		
	total	8.97	7.92	9.26	8.17	18.23	16.10	2.64	2.33	7.80	6.89	28.67	25.31
Landlocked Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.72	0.85		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.10	0.67	2.10	0.67
Unknown Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table III-30. Estimated Salmon Harvest by Gear Type, Valdez, 1992

	Harvest Units	Dip Net		Other		Subsistence Gear Any Method		Removed from Commercial Catch		Rod and Reel		Any Method	
		Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Salmon	numbers	3,444.18	2.74	3,268.20	2.60	6,712.38	5.34	1,294.71	1.03	27,289.47	21.71	35,296.56	28.08
	pounds	15,199.90	12.09	13,563.03	10.79	28,762.93	22.88	6,553.12	5.21	130,612.48	103.91	165,928.53	132.00
Chum Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	12.57	0.01	1,344.99	1.07	1,357.56	1.08
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	77.68	0.06	8,312.04	6.61	8,389.72	6.67
Coho Salmon	numbers	125.70	0.10	0.00	0.00	125.70	0.10	113.13	0.09	13,550.46	10.78	13,789.29	10.97
	pounds	815.79	0.65	0.00	0.00	815.79	0.65	734.21	0.58	87,942.49	69.96	89,492.49	71.20
Chinook Salmon	numbers	150.84	0.12	0.00	0.00	150.84	0.12	226.26	0.18	829.62	0.66	1,206.72	0.96
	pounds	1,238.40	0.99	0.00	0.00	1,238.40	0.99	1,857.59	1.48	6,811.18	5.42	9,907.17	7.88
Pink Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	12.57	0.01	8,069.94	6.42	8,082.51	6.43
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	23.38	0.02	15,010.09	11.94	15,033.47	11.96
Sockeye Salmon	numbers	3,167.64	2.52	3,268.20	2.60	6,435.84	5.12	930.18	0.74	2,752.83	2.19	10,118.85	8.05
	pounds	13,145.71	10.46	13,563.03	10.79	26,708.74	21.25	3,860.25	3.07	11,424.24	9.09	41,993.23	33.41
Landlocked Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	741.63	0.59	741.63	0.59
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,112.45	0.89	1,112.45	0.89
Unknown Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table III-31. Percentage of Households Harvesting Salmon by Gear Type and Species, Valdez, 1992

Resource	Dip Net	Other	Any Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Any Method
Salmon	11.00	2.00	13.00	2.00	65.00	69.00
Chum Salmon	0.00	0.00	0.00	1.00	9.00	10.00
Coho Salmon	1.00	0.00	1.00	1.00	58.00	60.00
Chinook Salmon	3.00	0.00	3.00	2.00	13.00	18.00
Pink Salmon	0.00	0.00	0.00	1.00	38.00	39.00
Sockeye Salmon	11.00	2.00	13.00	2.00	16.00	30.00
Landlocked Salmon	0.00	0.00	0.00	0.00	4.00	4.00
Unknown Salmon	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table III-32. Estimated Harvest of Fish Other than Salmon by Gear Type, Valdez, 1992

	Harvest Units	Subsistence Gear		Removed From Commercial Catch		Rod and Reel		Ice Fishing		Any Method	
		Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Non-Salmon Fish	pounds	4,279.33	3.40	8,211.15	6.53	107,592.97	85.60	387.16	0.31	120,470.61	95.84
Grayling	pounds	0.00	0.00	0.00	0.00	2,366.93	1.88	87.99	0.07	2,454.92	1.95
Pike	pounds	0.00	0.00	0.00	0.00	150.84	0.12	0.00	0.00	150.84	0.12
Lingcod	pounds	0.00	0.00	628.50	0.50	3,469.32	2.76	0.00	0.00	4,097.82	3.26
Pacific Cod (Gray)	pounds	0.00	0.00	0.00	0.00	1,186.61	0.94	0.00	0.00	1,186.61	0.94
Sablefish (Black Cod)	pounds	0.00	0.00	77.93	0.06	77.93	0.06	0.00	0.00	155.87	0.12
Unknown Cod	pounds	0.00	0.00	0.00	0.00	321.79	0.26	0.00	0.00	321.79	0.26
Unknown Flounder	pounds	0.00	0.00	0.00	0.00	414.81	0.33	0.00	0.00	414.81	0.33
Sole, Unknown	pounds	0.00	0.00	0.00	0.00	62.85	0.05	0.00	0.00	62.85	0.05
Halibut	pounds	0.00	0.00	5,430.67	4.32	73,735.55	58.66	0.00	0.00	79,166.22	62.98
Herring	pounds	2,865.21	2.28	0.00	0.00	1,609.46	1.28	0.00	0.00	4,474.67	3.56
Black Rockfish (black bass)	pounds	0.00	0.00	37.71	0.03	2,809.40	2.24	0.00	0.00	2,847.11	2.27
Red Rockfish	pounds	0.00	0.00	50.28	0.04	7,089.48	5.64	0.00	0.00	7,139.76	5.68
Sea Bass	pounds	0.00	0.00	0.00	0.00	125.70	0.10	0.00	0.00	125.70	0.10
Yellow Eye Rockfish	pounds	0.00	0.00	1,986.06	1.58	4,625.76	3.68	0.00	0.00	6,611.82	5.26
Unknown Rockfish	pounds	0.00	0.00	0.00	0.00	664.58	0.53	0.00	0.00	664.58	0.53
Irish Lord	pounds	0.00	0.00	0.00	0.00	12.57	0.01	0.00	0.00	12.57	0.01
Eulachon (Hooligan, Candlefish)	pounds	1,062.17	0.85	0.00	0.00	0.00	0.00	0.00	0.00	1,062.17	0.85
Dolly Varden	pounds	0.00	0.00	0.00	0.00	5,358.59	4.26	299.17	0.24	5,657.76	4.50
Cutthroat Trout	pounds	0.00	0.00	0.00	0.00	431.15	0.34	0.00	0.00	431.15	0.34
Lake Trout	pounds	0.00	0.00	0.00	0.00	545.54	0.43	0.00	0.00	545.54	0.43
Rainbow Trout	pounds	351.96	0.28	0.00	0.00	2,516.51	2.00	0.00	0.00	2,868.47	2.28
Steelhead	pounds	0.00	0.00	0.00	0.00	17.60	0.01	0.00	0.00	17.60	0.01

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table III-33. Percentage of Fish Other than Salmon Harvested by Gear Type, Valdez, 1992

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	3.55	6.82	89.31	0.32
Grayling	resource	0.00	0.00	96.42	3.58
Pike	resource	0.00	0.00	100.00	0.00
Lingcod	resource	0.00	15.34	84.66	0.00
Pacific Cod (Gray)	resource	0.00	0.00	100.00	0.00
Sablefish (Black Cod)	resource	0.00	50.00	50.00	0.00
Unknown Cod	resource	0.00	0.00	100.00	0.00
Unknown Flounder	resource	0.00	0.00	100.00	0.00
Sole, Unknown	resource	0.00	0.00	100.00	0.00
Halibut	resource	0.00	6.86	93.14	0.00
Herring	resource	64.03	0.00	35.97	0.00
Black Rockfish (black bass)	resource	0.00	1.32	98.68	0.00
Red Rockfish	resource	0.00	0.70	99.30	0.00
Sea Bass	resource	0.00	0.00	100.00	0.00
Yellow Eye Rockfish	resource	0.00	30.04	69.96	0.00
Unknown Rockfish	resource	0.00	0.00	100.00	0.00
Irish Lord	resource	0.00	0.00	100.00	0.00
Eulachon (Hooligan, Candlefish)	resource	100.00	0.00	0.00	0.00
Dolly Varden	resource	0.00	0.00	94.71	5.29
Cutthroat Trout	resource	0.00	0.00	100.00	0.00
Lake Trout	resource	0.00	0.00	100.00	0.00
Rainbow Trout	resource	12.27	0.00	87.73	0.00
Steelhead	resource	0.00	0.00	100.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table III-34. Percentage of Households Harvesting Fish Other than Salmon by Gear Type and Species, Valdez, 1992

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	6.00	6.00	51.00	2.00	56.00
Grayling	0.00	0.00	13.00	1.00	14.00
Pike	0.00	0.00	1.00	0.00	1.00
Lingcod	0.00	1.00	11.00	0.00	11.00
Pacific Cod (Gray)	0.00	0.00	3.00	0.00	3.00
Sablefish (Black Cod)	0.00	2.00	1.00	0.00	3.00
Unknown Cod	0.00	0.00	1.00	0.00	1.00
Unknown Flounder	0.00	0.00	3.00	0.00	3.00
Sole, Unknown	0.00	0.00	1.00	0.00	1.00
Halibut	0.00	5.00	33.00	0.00	36.00
Herring	4.00	0.00	6.00	0.00	9.00
Black Rockfish (black bass)	0.00	1.00	8.00	0.00	9.00
Red Rockfish	0.00	1.00	12.00	0.00	13.00
Sea Bass	0.00	0.00	1.00	0.00	1.00
Yellow Eye Rockfish	0.00	4.00	14.00	0.00	16.00
Unknown Rockfish	0.00	0.00	2.00	0.00	2.00
Irish Lord	0.00	0.00	1.00	0.00	1.00
Eulachon (Hooligan, Candlefish)	2.00	0.00	0.00	0.00	2.00
Dolly Varden	0.00	0.00	19.00	2.00	20.00
Cutthroat Trout	0.00	0.00	2.00	0.00	2.00
Lake Trout	0.00	0.00	5.00	0.00	5.00
Rainbow Trout	1.00	0.00	12.00	0.00	13.00
Steelhead	0.00	0.00	1.00	0.00	1.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Figure III-13. Composition of Wild Resource Harvests by Resource Category, Valdez, 1993

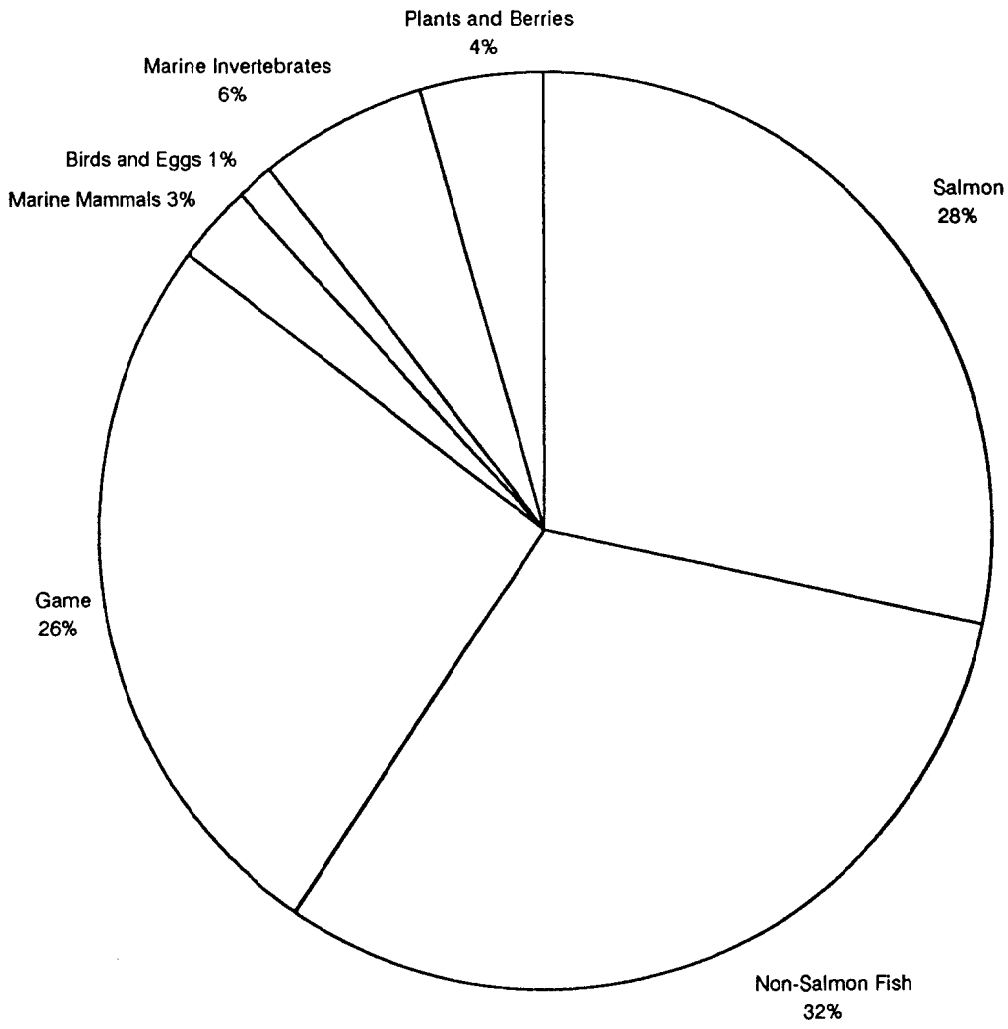


Figure III-14. Composition of Harvests by Resource Category, Valdez, 1991, 1992, and 1993

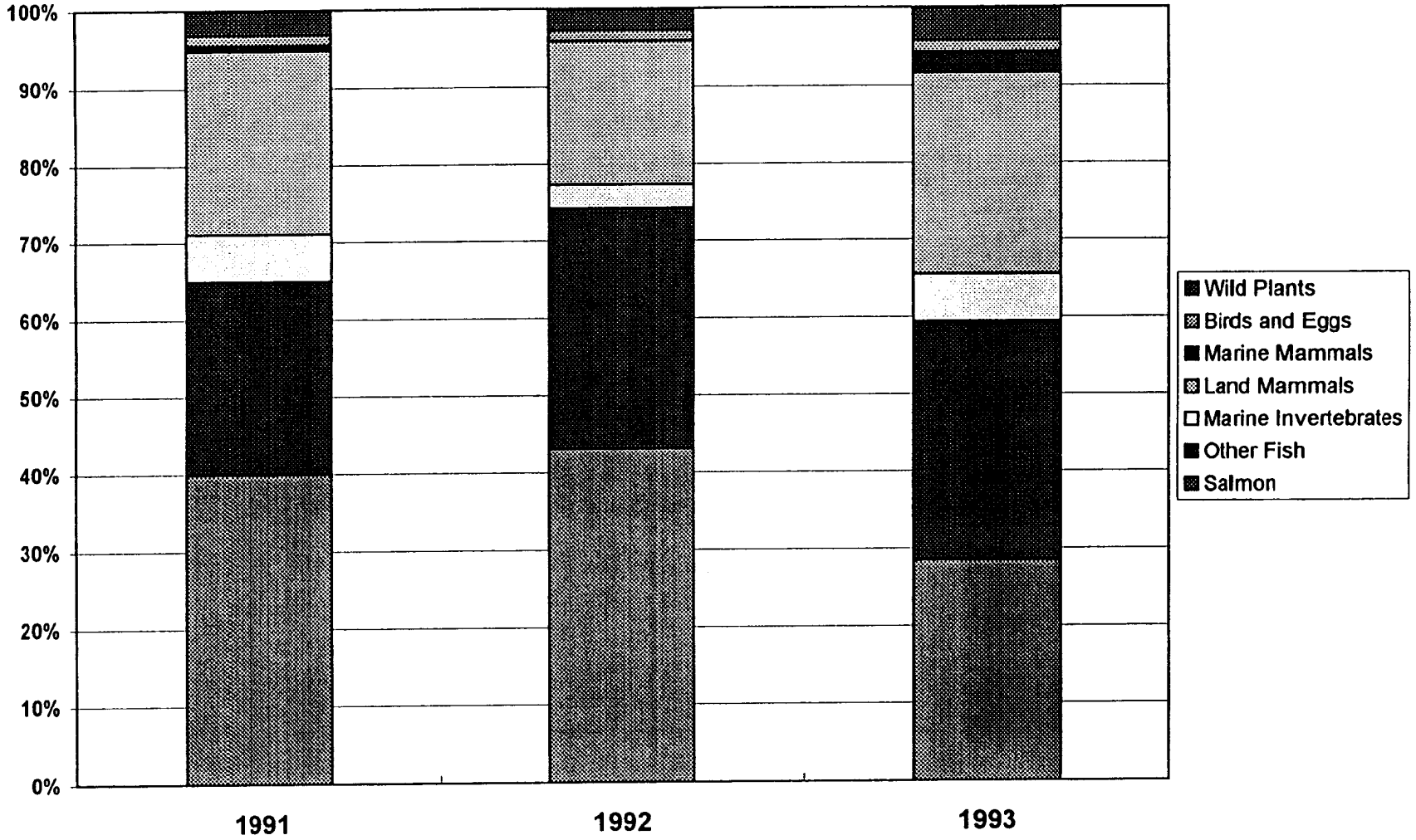


Table III-35. Estimated Harvest and Use of Fish, Mammal, Bird, and Plant Resources, Valdez, 1993

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
All Resources	97.1	88.6	82.9	88.6	65.7	296,820.08	236.13	79.47			70.38%	60.30%
Fish	85.7	68.6	65.7	62.9	57.1	176,043.93	140.05	47.13			52.38%	47.81%
Salmon	65.7	65.7	57.1	34.3	40.0	84,457.47	67.19	22.61	20,471.14	16.29	50.52%	52.73%
Chum Salmon	5.7	5.7	5.7	0.0	5.7	1,393.47	1.11	0.37	287.31	0.23	157.00%	146.26%
Coho Salmon	51.4	57.1	42.9	14.3	17.1	34,776.52	27.67	9.31	6,392.74	5.09	57.80%	57.33%
Chinook Salmon	11.4	14.3	8.6	5.7	5.7	8,016.07	6.38	2.15	574.63	0.46	152.83%	151.92%
Pink Salmon	34.3	37.1	31.4	8.6	17.1	12,340.87	9.82	3.30	5,961.77	4.74	77.83%	69.83%
Sockeye Salmon	34.3	31.4	25.7	20.0	22.9	27,930.54	22.22	7.48	7,254.69	5.77	77.67%	77.26%
Landlocked Salmon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Salmon	2.9	2.9	0.0	2.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Non-Salmon Fish	80.0	51.4	51.4	51.4	34.3	91,586.46	72.86	24.52			66.10%	61.34%
Pike	2.9	2.9	2.9	0.0	2.9	430.97	0.34	0.12	143.66	0.11	200.37%	203.13%
Sturgeon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cod	8.6	8.6	8.6	0.0	2.9	585.40	0.47	0.16	251.40	0.20	114.71%	123.46%
Pacific Tom Cod	2.9	2.9	2.9	0.0	0.0	35.91	0.03	0.01	71.83	0.06	200.37%	201.16%
Pacific Cod (Gray)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Burbot	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Cod	5.7	5.7	5.7	0.0	2.9	549.49	0.44	0.15	179.57	0.14	142.51%	132.09%
Sablefish (Black Cod)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Greenling	11.4	8.6	8.6	5.7	2.9	1,723.89	1.37	0.46	430.97	0.34	112.23%	111.28%
Kelp Greenling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Lingcod	11.4	8.6	8.6	5.7	2.9	1,723.89	1.37	0.46	430.97	0.34	112.23%	111.28%
Unknown Greenling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Flounder	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Flounder	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sole	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sole, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Halibut	71.4	37.1	37.1	48.6	31.4	54,623.47	43.46	14.62	3,648.86	2.90	85.22%	84.11%
Herring	2.9	2.9	2.9	2.9	2.9	11,851.71	9.43	3.17	1,975.29 gal	1.57	200.37%	188.94%
Herring Roe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Spawn on Kelp	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Sac Roe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Rockfish	22.9	22.9	20.0	5.7	11.4	13,780.31	10.96	3.69	3,573.47	2.84	122.82%	126.45%
Black Rockfish (black bass)	2.9	2.9	2.9	0.0	0.0	107.74	0.09	0.03	71.83	0.06	200.37%	201.16%
Red Rockfish	22.9	20.0	20.0	5.7	11.4	12,570.00	10.00	3.37	3,142.50	2.50	117.18%	121.06%
Unknown Rockfish	2.9	5.7	2.9	0.0	0.0	1,102.57	0.88	0.30	359.14	0.29	200.37%	205.07%

Table III-35. Estimated Harvest and Use of Fish, Mammal, Bird, and Plant Resources, Valdez, 1993

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Sculpin	2.9	2.9	2.9	0.0	0.0	107.74	0.09	0.03	215.49	0.17	200.37%	201.16%
Irish Lord	2.9	2.9	2.9	0.0	0.0	107.74	0.09	0.03	215.49	0.17	200.37%	201.16%
Unknown Sculpin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Smelt	2.9	2.9	2.9	2.9	2.9	1,167.21	0.93	0.31	359.14 gal	0.29	200.37%	188.94%
Eulachon (Hooligan, Candlefish)	2.9	2.9	2.9	2.9	2.9	1,167.21	0.93	0.31	359.14 gal	0.29	200.37%	188.94%
Unknown Smelt	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Wolf Eel (Wolffish)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shark	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Salmon Shark	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Walleye Pollock (Whiting)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Skates	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tuna/Mackerel	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mackerel	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Tuna/Mackerel	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Grayling	14.3	14.3	14.3	0.0	0.0	1,181.58	0.94	0.32	1,687.97	1.34	87.57%	86.38%
Sheefish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whitefish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whitefish, Large	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whitefish, Humpback	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whitefish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Trout and Char	28.6	34.3	25.7	5.7	2.9	6,134.16	4.88	1.64	4,381.54	3.49	94.74%	95.15%
Char (general)	17.1	17.1	14.3	5.7	0.0	1,860.36	1.48	0.50	1,328.83	1.06	95.78%	96.54%
Dolly Varden	11.4	11.4	8.6	5.7	0.0	1,005.60	0.80	0.27	718.29	0.57	137.35%	137.34%
Lake Trout	5.7	5.7	5.7	0.0	0.0	854.76	0.68	0.23	610.54	0.49	141.87%	142.98%
Trout	20.0	28.6	20.0	0.0	2.9	4,273.80	3.40	1.14	3,052.71	2.43	103.72%	103.94%
Cutthroat Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Rainbow Trout	14.3	17.1	14.3	0.0	0.0	3,670.44	2.92	0.98	2,621.74	2.09	119.16%	119.62%
Steelhead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Trout	5.7	11.4	5.7	0.0	2.9	603.36	0.48	0.16	430.97	0.34	169.32%	168.29%
Unknown Non-Salmon Fish	2.9	2.9	0.0	2.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Game	57.1	51.4	22.9	45.7	11.4	77,463.52	61.63	20.74	969.69	0.77	98.80%	131.36%
Big Game	54.3	48.6	17.1	42.9	11.4	76,583.62	60.93	20.50	502.80	0.40	94.55%	133.04%
Black Bear	0.0	5.7	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Brown Bear	0.0	5.7	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Caribou	22.9	8.6	8.6	14.3	5.7	26,935.71	21.43	7.21	179.57	0.14	130.40%	119.59%
Deer	22.9	11.4	8.6	14.3	5.7	10,860.48	8.64	2.91	251.40	0.20	128.58%	129.80%

Table III-35. Estimated Harvest and Use of Fish, Mammal, Bird, and Plant Resources, Valdez, 1993

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Elk	2.9	0.0	0.0	2.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goat	2.9	0.0	0.0	2.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Moose	28.6	31.4	2.9	25.7	2.9	38,787.43	30.86	10.38	71.83	0.06	200.37%	188.94%
Sheep, Dall	2.9	2.9	0.0	2.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Small Game/Furbearer	8.6	2.9	2.9	8.6	0.0	17.96	0.01	0.00	35.91	0.03	200.37%	199.18%
Fox	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Beaver	5.7	0.0	0.0	5.7	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Coyote	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Hare	0.0	2.9	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snowshoe Hare	0.0	2.9	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Land Otter	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Lynx	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marten	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mink	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Muskrat	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Porcupine	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Weasel	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wolf	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wolverine	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Squirrel	2.9	2.9	2.9	2.9	0.0	17.96	0.01	0.00	35.91	0.03	200.37%	199.18%
Feral Animals	2.9	5.7	2.9	0.0	0.0	861.94	0.69	0.23	430.97	0.34	200.37%	203.13%
Rabbit - Feral	2.9	5.7	2.9	0.0	0.0	861.94	0.69	0.23	430.97	0.34	200.37%	203.13%
Marine Mammals	5.7	2.9	2.9	5.7	2.9	8,145.36	6.48	2.18	1,292.91	1.03	200.37%	188.94%
Whale	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Bowhead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whale	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	5.7	2.9	2.9	2.9	2.9	8,145.36	6.48	2.18	215.49	0.17	200.37%	188.94%
Harbor Seal	5.7	2.9	2.9	2.9	2.9	8,145.36	6.48	2.18	215.49	0.17	200.37%	188.94%
Porpoise/Dolphin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steller Sea Lion	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sea Otter	2.9	2.9	2.9	2.9	2.9	0.00	0.00	0.00	1,077.43	0.86	200.37%	0.00%
Birds and Eggs	25.7	31.4	22.9	2.9	5.7	4,180.42	3.33	1.12	8,332.11	6.63	107.72%	78.69%
Birds	22.9	31.4	20.0	2.9	2.9	2,887.51	2.30	0.77	4,022.40	3.20	78.95%	76.63%
Upland Game Birds	22.9	28.6	20.0	2.9	2.9	2,589.42	2.06	0.69	3,699.17	2.94	84.85%	83.84%
Grouse	14.3	17.1	14.3	0.0	0.0	1,382.70	1.10	0.37	1,975.29	1.57	105.49%	105.70%
Ptarmigan	17.1	25.7	14.3	2.9	2.9	1,206.72	0.96	0.32	1,723.89	1.37	95.10%	92.91%

Table III-35. Estimated Harvest and Use of Fish, Mammal, Bird, and Plant Resources, Valdez, 1993

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Migratory Birds	2.9	5.7	2.9	0.0	0.0	298.09	0.24	0.08	323.23	0.26	200.37%	199.18%
Waterfowl	2.9	5.7	2.9	0.0	0.0	298.09	0.24	0.08	323.23	0.26	200.37%	199.18%
Ducks	2.9	5.7	2.9	0.0	0.0	298.09	0.24	0.08	323.23	0.26	200.37%	199.18%
Eider	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eider, Small	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steller Eiders	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Spectacled Eiders	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eider, Large	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
King Eiders	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Common Eiders	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eider, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, White-winged	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, Black	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, Surf	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Harlequin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goldeneye	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Bufflehead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Merganser	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scaup	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mallard	2.9	2.9	2.9	0.0	0.0	287.31	0.23	0.08	287.31	0.23	200.37%	199.18%
Pintail	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wigeon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Teal	2.9	2.9	2.9	0.0	0.0	10.77	0.01	0.00	35.91	0.03	200.37%	199.18%
Gadwall	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shoveler	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canvasback	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Ducks, Unknown	0.0	2.9	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese	0.0	2.9	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Brant	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snow Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
White-fronted Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese (general)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese, Lesser	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table III-35. Estimated Harvest and Use of Fish, Mammal, Bird, and Plant Resources, Valdez, 1993

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Canada Geese, Dusky	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese, Unknown	0.0	2.9	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Crane	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sandhill Crane	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shorebirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Common Snipe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seabirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cormorants	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Loons	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eggs	2.9	2.9	2.9	0.0	2.9	1,292.91	1.03	0.35	4,309.71	3.43	200.37%	201.16%
Seabird Eggs	2.9	2.9	2.9	0.0	2.9	1,292.91	1.03	0.35	4,309.71	3.43	200.37%	201.16%
Gull Eggs	2.9	2.9	2.9	0.0	2.9	1,292.91	1.03	0.35	4,309.71	3.43	200.37%	201.16%
Tern Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shorebird Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snipe Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black Snipe Eggs (Oystercatcher)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Waterfowl Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Invertebrates	42.9	20.0	20.0	37.1	14.3	18,201.36	14.48	4.87			98.68%	90.25%
Clams	20.0	14.3	14.3	11.4	8.6	3,717.13	2.96	1.00	1,239.04 gal	0.99	96.15%	95.04%
Butter Clams	2.9	2.9	2.9	0.0	0.0	161.61	0.13	0.04	53.87 gal	0.04	200.37%	201.16%
Razor Clams	17.1	11.4	11.4	8.6	8.6	3,447.77	2.74	0.92	1,149.26 gal	0.91	103.37%	102.13%
Pacific Littleneck Clams (Steamers)	2.9	2.9	2.9	0.0	0.0	107.74	0.09	0.03	35.91 gal	0.03	200.37%	201.16%
Pinkneck Clams	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Horse Clams (Gaper)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Unknown Clams	2.9	0.0	0.0	2.9	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Cockles	2.9	2.9	2.9	0.0	0.0	161.61	0.13	0.04	53.87 gal	0.04	200.37%	201.16%
Scallops	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Mussels	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Crabs	25.7	8.6	8.6	20.0	5.7	4,122.96	3.28	1.10	2,657.66	2.11	153.20%	158.91%
Dungeness Crab	8.6	2.9	2.9	5.7	0.0	100.56	0.08	0.03	143.66	0.11	200.37%	201.16%
King Crab	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
King Crab, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tanner Crab	14.3	5.7	5.7	8.6	5.7	4,022.40	3.20	1.08	2,514.00	2.00	161.96%	162.94%

Table III-35. Estimated Harvest and Use of Fish, Mammal, Bird, and Plant Resources, Valdez, 1993

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Tanner Crab, Unknown	14.3	5.7	5.7	8.6	5.7	4,022.40	3.20	1.08	2,514.00	2.00	161.96%	162.94%
Unknown Crabs	5.7	0.0	0.0	5.7	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Chitons (bidarkis)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Chitons (large)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Chitons (small)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Chitons (unknown)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Octopus	5.7	5.7	5.7	0.0	2.9	1,580.23	1.26	0.42	395.06	0.31	182.53%	171.17%
Sea Cucumber	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Sea Urchin (Neet)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Shrimp	28.6	14.3	14.3	17.1	5.7	8,619.43	6.86	2.31	4,309.71 gal	3.43	131.10%	120.38%
Limpets	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Squid	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Oyster	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Rock Oyster	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Plants and Berries	60.0	57.1	57.1	14.3	31.4	12,785.49	10.17	3.42	3,196.37 gal	2.54	52.78%	49.62%
Berries	57.1	57.1	57.1	11.4	28.6	9,948.26	7.91	2.66	2,487.06 gal	1.98	41.99%	38.21%
Plants/Greens/Mushrooms	11.4	8.6	8.6	2.9	5.7	2,837.23	2.26	0.76	709.31 gal	0.56	144.81%	143.43%
Seaweed/Kelp (Food)	2.9	0.0	0.0	2.9	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Bull Kelp	2.9	0.0	0.0	2.9	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Wood	17.1	17.1	17.1	0.0	5.7	0.00	0.00	0.00	520.76 crd	0.41	117.51%	0.00%

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table III-36. Estimated Amount of Resources Removed from Commercial Harvests, Valdez, 1993

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		18997.22	9.78	6.40
Fish		18997.22	10.79	6.40
Salmon	3447.77	18997.22	22.49	6.40
Coho Salmon	861.94	4688.97	13.48	1.58
Chinook Salmon	430.97	6012.05	75.00	2.03
Sockeye Salmon	2154.86	8296.20	29.70	2.80

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table III-37. Percentage of Salmon Harvest by Resource, Gear Type, and Total Salmon Harvest, Valdez, 1993

Resource	Percent Base	Subsistence Methods: Dip Net No.	Dip Net Lbs.	Subsistence Gear Any Method No.	Subsistence Gear Any Method Lbs.	Removed from Commercial Catch No.	Removed from Commercial Catch Lbs.	Rod and Reel No.	Rod and Reel Lbs.	Any Method No.	Any Method Lbs.
Salmon	total	20.18	18.83	20.18	18.83	16.84	22.49	62.98	58.68		
Chum Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	2.23	2.81		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	1.40	1.65	1.40	1.65
Coho Salmon	gear type	0.00	0.00	0.00	0.00	25.00	24.68	42.90	60.71		
	resource	0.00	0.00	0.00	0.00	13.48	13.48	86.52	86.52		
	total	0.00	0.00	0.00	0.00	4.21	5.55	27.02	35.62	31.23	41.18
Chinook Salmon	gear type	0.00	0.00	0.00	0.00	12.50	31.65	1.11	4.04		
	resource	0.00	0.00	0.00	0.00	75.00	75.00	25.00	25.00		
	total	0.00	0.00	0.00	0.00	2.11	7.12	0.70	2.37	2.81	9.49
Pink Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	46.24	24.90		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	29.12	14.61	29.12	14.61
Sockeye Salmon	gear type	100.00	100.00	100.00	100.00	62.50	43.67	7.52	7.53		
	resource	56.93	56.93	56.93	56.93	29.70	29.70	13.37	13.37		
	total	20.18	18.83	20.18	18.83	10.53	9.82	4.74	4.42	35.44	33.07
Landlocked Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table III-38. Estimated Salmon Harvest by Gear Type, Valdez, 1993

		Subsistence Gear				Removed from Commercial Catch					
		Dip Net		Any Method				Rod and Reel		Any Method	
	Harvest Units	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Salmon	numbers	4,130.14	3.29	4,130.14	3.29	3,447.77	2.74	12,893.23	10.26	20,471.14	16.29
	pounds	15,901.05	12.65	15,901.05	12.65	18,997.22	15.11	49,559.20	39.43	84,457.47	67.19
Chum Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	287.31	0.23	287.31	0.23
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	1,393.47	1.11	1,393.47	1.11
Coho Salmon	numbers	0.00	0.00	0.00	0.00	861.94	0.69	5,530.80	4.40	6,392.74	5.09
	pounds	0.00	0.00	0.00	0.00	4,688.97	3.73	30,087.55	23.94	34,776.52	27.67
Chinook Salmon	numbers	0.00	0.00	0.00	0.00	430.97	0.34	143.66	0.11	574.63	0.46
	pounds	0.00	0.00	0.00	0.00	6,012.05	4.78	2,004.02	1.59	8,016.07	6.38
Pink Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	5,961.77	4.74	5,961.77	4.74
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	12,340.87	9.82	12,340.87	9.82
Sockeye Salmon	numbers	4,130.14	3.29	4,130.14	3.29	2,154.86	1.71	969.69	0.77	7,254.69	5.77
	pounds	15,901.05	12.65	15,901.05	12.65	8,296.20	6.60	3,733.29	2.97	27,930.54	22.22
Landlocked Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table III-39. Percentage of Households Harvesting Salmon by Gear Type and Species, Valdez, 1993

Resource	Dip Net	Any Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Any Method
Salmon	11.43	11.43	2.86	48.57	57.14
Chum Salmon	0.00	0.00	0.00	5.71	5.71
Coho Salmon	0.00	0.00	2.86	40.00	42.86
Chinook Salmon	0.00	0.00	2.86	5.71	8.57
Pink Salmon	0.00	0.00	0.00	31.43	31.43
Sockeye Salmon	11.43	11.43	2.86	11.43	25.71
Landlocked Salmon	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table III-40. Estimated Harvest of Fish Other than Salmon by Gear Type, Valdez, 1993

	Harvest Units	Subsistence Gear		Removed From Commercial Catch		Rod and Reel		Ice Fishing		Any Method	
		Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Non-Salmon Fish	pounds	0.00	0.00	0.00	0.00	91,586.46	72.86	0.00	0.00	91,586.46	72.86
Grayling	pounds	0.00	0.00	0.00	0.00	1,181.58	0.94	0.00	0.00	1,181.58	0.94
Pike	pounds	0.00	0.00	0.00	0.00	430.97	0.34	0.00	0.00	430.97	0.34
Lingcod	pounds	0.00	0.00	0.00	0.00	1,723.89	1.37	0.00	0.00	1,723.89	1.37
Pacific Tom Cod	pounds	0.00	0.00	0.00	0.00	35.91	0.03	0.00	0.00	35.91	0.03
Unknown Cod	pounds	0.00	0.00	0.00	0.00	549.49	0.44	0.00	0.00	549.49	0.44
Halibut	pounds	0.00	0.00	0.00	0.00	54,623.47	43.46	0.00	0.00	54,623.47	43.46
Herring	pounds	0.00	0.00	0.00	0.00	11,851.71	9.43	0.00	0.00	11,851.71	9.43
Black Rockfish (black bass)	pounds	0.00	0.00	0.00	0.00	107.74	0.09	0.00	0.00	107.74	0.09
Red Rockfish	pounds	0.00	0.00	0.00	0.00	12,570.00	10.00	0.00	0.00	12,570.00	10.00
Unknown Rockfish	pounds	0.00	0.00	0.00	0.00	1,102.57	0.88	0.00	0.00	1,102.57	0.88
Irish Lord	pounds	0.00	0.00	0.00	0.00	107.74	0.09	0.00	0.00	107.74	0.09
Eulachon (Hooligan, Candlefish)	pounds	0.00	0.00	0.00	0.00	1,167.21	0.93	0.00	0.00	1,167.21	0.93
Dolly Varden	pounds	0.00	0.00	0.00	0.00	1,005.60	0.80	0.00	0.00	1,005.60	0.80
Lake Trout	pounds	0.00	0.00	0.00	0.00	854.76	0.68	0.00	0.00	854.76	0.68
Rainbow Trout	pounds	0.00	0.00	0.00	0.00	3,670.44	2.92	0.00	0.00	3,670.44	2.92
Unknown Trout	pounds	0.00	0.00	0.00	0.00	603.36	0.48	0.00	0.00	603.36	0.48

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table III-41. Percentage of Fish Other than Salmon Harvest by Gear Type, Valdez, 1993

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	0.00	0.00	100.00	0.00
Grayling	resource	0.00	0.00	100.00	0.00
Pike	resource	0.00	0.00	100.00	0.00
Lingcod	resource	0.00	0.00	100.00	0.00
Pacific Tom Cod	resource	0.00	0.00	100.00	0.00
Unknown Cod	resource	0.00	0.00	100.00	0.00
Halibut	resource	0.00	0.00	100.00	0.00
Herring	resource	0.00	0.00	100.00	0.00
Black Rockfish (black bass)	resource	0.00	0.00	100.00	0.00
Red Rockfish	resource	0.00	0.00	100.00	0.00
Unknown Rockfish	resource	0.00	0.00	100.00	0.00
Irish Lord	resource	0.00	0.00	100.00	0.00
Eulachon (Hooligan, Candlefish)	resource	0.00	0.00	100.00	0.00
Dolly Varden	resource	0.00	0.00	100.00	0.00
Lake Trout	resource	0.00	0.00	100.00	0.00
Rainbow Trout	resource	0.00	0.00	100.00	0.00
Unknown Trout	resource	0.00	0.00	100.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table III-42. Percentage of Households Harvesting Fish Other than Salmon by Gear Type and Species, Valdez, 1993

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	0.00	0.00	51.43	0.00	51.43
Grayling	0.00	0.00	14.29	0.00	14.29
Pike	0.00	0.00	2.86	0.00	2.86
Lingcod	0.00	0.00	8.57	0.00	8.57
Pacific Tom Cod	0.00	0.00	2.86	0.00	2.86
Unknown Cod	0.00	0.00	5.71	0.00	5.71
Halibut	0.00	0.00	37.14	0.00	37.14
Herring	0.00	0.00	2.86	0.00	2.86
Black Rockfish (black bass)	0.00	0.00	2.86	0.00	2.86
Red Rockfish	0.00	0.00	20.00	0.00	20.00
Unknown Rockfish	0.00	0.00	2.86	0.00	2.86
Irish Lord	0.00	0.00	2.86	0.00	2.86
Eulachon (Hooligan, Candlefish)	0.00	0.00	2.86	0.00	2.86
Dolly Varden	0.00	0.00	8.57	0.00	8.57
Lake Trout	0.00	0.00	5.71	0.00	5.71
Rainbow Trout	0.00	0.00	14.29	0.00	14.29
Unknown Trout	0.00	0.00	5.71	0.00	5.71

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table III-43. Uses of Wild Foods, Valdez

	STUDY YEAR		
	1991	1992	1993
ANY WILD FOODS EATEN YESTERDAY?			
No			
Count		80	28
Col %		80.0%	80.0%
Yes			
Count		20	7
Col %		20.0%	20.0%
WILD FOODS AS MAIN PART OF A MEAL			
No			
Count	87	82	29
Col %	87.0%	82.0%	82.9%
Yes			
Count	13	18	6
Col %	13.0%	18.0%	17.1%
HARVEST OF WILD FOODS BY RESPONDENT			
No			
Count	97	90	33
Col %	97.0%	90.0%	94.3%
Yes			
Count	3	10	2
Col %	3.0%	10.0%	5.7%
WF HARVESTED BY RELATIVE IN HH			
No			
Count	98	92	33
Col %	98.0%	92.0%	94.3%
Yes			
Count	2	8	2
Col %	2.0%	8.0%	5.7%
WF HARVESTED BY RELATIVE IN ANOTHER HH			
No			
Count	99	99	35
Col %	99.0%	99.0%	100.0%
Yes			
Count	1	1	
Col %	1.0%	1.0%	
WF HARVESTED BY RELATIVE IN ANOTHER COMM.			

(continued)

Table III-43. Uses of Wild Foods, Valdez

	STUDY YEAR		
	1991	1992	1993
No			
Count	98	98	35
Col %	98.0%	98.0%	100.0%
Yes			
Count	2	2	
Col %	2.0%	2.0%	
WF HARVESTED BY FRIEND IN HH			
No			
Count	99	99	35
Col %	99.0%	99.0%	100.0%
Yes			
Count	1	1	
Col %	1.0%	1.0%	
WF HARVESTED BY FRIEND IN COMMUNITY			
No			
Count	98	97	32
Col %	98.0%	97.0%	91.4%
Yes			
Count	2	3	3
Col %	2.0%	3.0%	8.6%
WF HARVESTED BY FRIEND IN ANOTHER COMM.			
No			
Count	100	97	35
Col %	100.0%	97.0%	100.0%
Yes			
Count		3	
Col %		3.0%	

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Table III-44. Safety of Using Subsistence Foods, Valdez

	STUDY YEAR		
	1991	1992	1993
DO YOU EAT BIDARKIES?			
No			
Count		95	33
Col %		95.0%	94.3%
Yes			
Count		5	2
Col %		5.0%	5.7%
IS EATING BIDARKIES IMPORTANT TO YOU?			
No			
Count	98		
Col %	98.0%		
Yes			
Count	2		
Col %	2.0%		
BIDARKIE HARVEST AREAS SAFE?			
Do Not Know			
Count	1	1	
Col %	100.0%	25.0%	
Not Safe			
Count		1	1
Col %		25.0%	50.0%
Safe			
Count		2	1
Col %		50.0%	50.0%
WHY BIDARKIES NOT SAFE TO EAT			
Oil pollution or fear of contamination			
Count		1	1
Col %		100.0%	100.0%
DO YOU EAT CLAMS?			
No			
Count		29	13
Col %		29.0%	37.1%
Yes			
Count		71	22
Col %		71.0%	62.9%
ARE CLAMS SAFE FOR CHILDREN TO EAT?			

(continued)

Table III-44. Safety of Using Subsistence Foods, Valdez

	STUDY YEAR		
	1991	1992	1993
Do Not Know			
Count	26	11	5
Col %	29.5%	16.4%	22.7%
Not Safe			
Count	21	14	3
Col %	23.9%	20.9%	13.6%
Safe			
Count	41	42	14
Col %	46.6%	62.7%	63.6%
WHY CLAMS NOT SAFE TO EAT			
No Response			
Count			1
Col %			33.3%
Do Not Know			
Count	3	1	
Col %	21.4%	6.7%	
Fearful of PSP poisoning			
Count	1		
Col %	7.1%		
Oil pollution or fear of contamination			
Count	7	8	2
Col %	50.0%	53.3%	66.7%
Do not trust food safety information			
Count	1		
Col %	7.1%		
Pollution from non-oil spill source			
Count	2	3	
Col %	14.3%	20.0%	
Resource has been destroyed or depleted			
Count		1	
Col %		6.7%	
Unsure about safety			
Count		2	
Col %		13.3%	
DO YOU EAT SEAL OIL OR SEAL MEAT?			

(continued)

ICF 4PRINT

Table III-44. Safety of Using Subsistence Foods, Valdez

	STUDY YEAR		
	1991	1992	1993
No			
Count		94	30
Col %		94.0%	85.7%
Yes			
Count		6	5
Col %		6.0%	14.3%
IS EATING SEAL MEAT OR OIL IMPORTANT?			
No			
Count	97		
Col %	97.0%		
Yes			
Count	3		
Col %	3.0%		
ARE SEALS FROM HARVEST AREAS SAFE TO EAT?			
Do Not Know			
Count	1	2	
Col %	33.3%	33.3%	
Not Safe			
Count	1		2
Col %	33.3%		50.0%
Safe			
Count	1	4	2
Col %	33.3%	66.7%	50.0%
WHY SEAL NOT SAFE TO EAT			
Do Not Know			
Count		1	
Col %		100.0%	
Oil pollution or fear of contamination			
Count	1		2
Col %	100.0%		100.0%

ICF 4PRINT

Table III-45. Resource Population Statuses, Valdez

	STUDY YEAR 1991	1992	1993
COMPARED TO 1988: DEER			
No Response			
Count		1	
Col %		1.6%	
Do Not Know			
Count	28	21	6
Col %	31.5%	33.3%	23.1%
Less			
Count	15	12	7
Col %	16.9%	19.0%	26.9%
Same			
Count	46	26	13
Col %	51.7%	41.3%	50.0%
More			
Count		3	
Col %		4.8%	
COMPARED TO 1988: MOOSE			
No Response			
Count		1	
Col %		1.7%	
Do Not Know			
Count		14	4
Col %		24.1%	17.4%
Less			
Count		9	2
Col %		15.5%	8.7%
Same			
Count		32	14
Col %		55.2%	60.9%
More			
Count		2	3
Col %		3.4%	13.0%
COMPARED TO 1988: BEAR			
No Response			
Count		1	
Col %		1.5%	

(continued)

Table III-45. Resource Population Statuses, Valdez

	STUDY YEAR 1991	1992	1993
Do Not Know			
Count	15	13	5
Col %	16.9%	19.7%	19.2%
Less			
Count	5	7	5
Col %	5.6%	10.6%	19.2%
Same			
Count	45	39	14
Col %	50.6%	59.1%	53.8%
More			
Count	24	6	2
Col %	27.0%	9.1%	7.7%
COMPARED TO 1988: HARBOR SEAL			
No Response			
Count		1	
Col %		1.5%	
Do Not Know			
Count	34	19	7
Col %	38.2%	29.2%	26.9%
Less			
Count	22	13	9
Col %	24.7%	20.0%	34.6%
Same			
Count	32	31	9
Col %	36.0%	47.7%	34.6%
More			
Count	1	1	1
Col %	1.1%	1.5%	3.8%
COMPARED TO 1988: SEA LIONS			
No Response			
Count		1	
Col %		1.6%	
Do Not Know			
Count	43	21	10
Col %	48.3%	32.8%	38.5%

(continued)

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Table III-45. Resource Population Statuses, Valdez

	STUDY YEAR		
	1991	1992	1993
Less			
Count	17	14	5
Col %	19.1%	21.9%	19.2%
Same			
Count	27	27	10
Col %	30.3%	42.2%	38.5%
More			
Count	2	1	1
Col %	2.2%	1.6%	3.8%
COMPARED TO 1988: SEA DUCKS			
No Response			
Count		1	
Col %		1.5%	
Do Not Know			
Count	33	13	9
Col %	37.1%	19.7%	34.6%
Less			
Count	21	19	7
Col %	23.6%	28.8%	26.9%
Same			
Count	33	30	10
Col %	37.1%	45.5%	38.5%
More			
Count	2	3	
Col %	2.2%	4.5%	
COMPARED TO 1988: COMMON MURRE			
No Response			
Count		1	
Col %		1.5%	
Do Not Know			
Count	49	26	9
Col %	55.1%	39.4%	34.6%
Less			
Count	17	14	7
Col %	19.1%	21.2%	26.9%

(continued)

Table III-45. Resource Population Statuses, Valdez

	STUDY YEAR		
	1991	1992	1993
Same			
Count	23	25	10
Col %	25.8%	37.9%	38.5%
COMPARED TO 1988: SALMON			
No Response			
Count		1	
Col %		1.5%	
Do Not Know			
Count	12	11	1
Col %	13.5%	16.7%	3.8%
Less			
Count	16	20	18
Col %	18.0%	30.3%	69.2%
Same			
Count	36	26	7
Col %	40.4%	39.4%	26.9%
More			
Count	25	8	
Col %	28.1%	12.1%	
COMPARED TO 1988: HALIBUT			
No Response			
Count		1	
Col %		1.5%	
Do Not Know			
Count	26	11	5
Col %	29.2%	16.7%	19.2%
Less			
Count	22	10	8
Col %	24.7%	15.2%	30.8%
Same			
Count	33	36	11
Col %	37.1%	54.5%	42.3%
More			
Count	8	8	2
Col %	9.0%	12.1%	7.7%

(continued)

1074PRINT

Table III-45. Resource Population Statuses, Valdez

	STUDY YEAR		
	1991	1992	1993
COMPARED TO 1988: WHITEFISH			
Same			
Count	1		
Col %	100.0%		
COMPARED TO 1988: ROCKFISH			
No Response			
Count		1	
Col %		1.5%	
Do Not Know			
Count	44	22	12
Col %	50.0%	33.3%	46.2%
Less			
Count	14	9	4
Col %	15.9%	13.6%	15.4%
Same			
Count	29	34	10
Col %	33.0%	51.5%	38.5%
More			
Count	1		
Col %	1.1%		
COMPARED TO 1988: ARCTIC CHAR			
Same			
Count	1		
Col %	100.0%		
COMPARED TO 1988: DOLLY VARDEN			
No Response			
Count		1	
Col %		1.5%	
Do Not Know			
Count	30	26	13
Col %	33.7%	39.4%	50.0%
Less			
Count	9	7	4
Col %	10.1%	10.6%	15.4%
Same			
Count	49	31	9

(continued)

Table III-45. Resource Population Statuses, Valdez

	STUDY YEAR		
	1991	1992	1993
Col %	55.1%	47.0%	34.6%
More			
Count	1	1	
Col %	1.1%	1.5%	
COMPARED TO 1988: CLAMS			
No Response			
Count		1	
Col %		1.6%	
Do Not Know			
Count	54	29	13
Col %	60.7%	45.3%	50.0%
Less			
Count	15	15	7
Col %	16.9%	23.4%	26.9%
Same			
Count	18	18	6
Col %	20.2%	28.1%	23.1%
More			
Count	2	1	
Col %	2.2%	1.6%	
COMPARED TO 1988: BIDARKIES			
No Response			
Count		1	
Col %		1.5%	
Do Not Know			
Count	74	52	19
Col %	83.1%	80.0%	73.1%
Less			
Count	6	2	2
Col %	6.7%	3.1%	7.7%
Same			
Count	9	10	5
Col %	10.1%	15.4%	19.2%
COMPARED TO 1988: SEA URCHINS			
No Response			

(continued)

1674PRINT

Table III-45. Resource Population Statuses, Valdez

	STUDY YEAR		
	1991	1992	1993
Count		1	
Col %		1.5%	
Do Not Know			
Count	69	48	19
Col %	77.5%	73.8%	73.1%
Less			
Count	5	2	3
Col %	5.6%	3.1%	11.5%
Same			
Count	15	13	4
Col %	16.9%	20.0%	15.4%
More			
Count		1	
Col %		1.5%	
COMPARED TO 1988: OCTOPUS			
No Response			
Count		1	
Col %		1.5%	
Do Not Know			
Count	69	42	18
Col %	77.5%	63.6%	69.2%
Less			
Count	3	2	3
Col %	3.4%	3.0%	11.5%
Same			
Count	14	20	4
Col %	15.7%	30.3%	15.4%
More			
Count	3	1	1
Col %	3.4%	1.5%	3.8%

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Table III-46. Children's Participation in Subsistence, Valdez

	STUDY YEAR		
	1991	1992	1993
DOES YOUR HOUSEHOLD PROCESS WILD FOODS?			
No			
Count		18	14
Col %		18.0%	40.0%
Yes			
Count		82	21
Col %		82.0%	60.0%
DO CHILDREN HELP YOUR HH PROCESS WILD FOODS?			
No			
Count	82	83	33
Col %	82.0%	83.0%	94.3%
Yes			
Count	18	17	2
Col %	18.0%	17.0%	5.7%
DID EVOS AFFECT PARTICIPATION WITH CHILDREN?			
No Response			
Count		1	
Col %		1.1%	
No			
Count	81	77	27
Col %	85.3%	88.5%	81.8%
Yes			
Count	14	9	6
Col %	14.7%	10.3%	18.2%
WHY EVOS AFFECTED PARTICIPATION WITH CHILDREN			
No Response			
Count	1		
Col %	7.1%		
Resources were not available			
Count	1	1	
Col %	7.1%	11.1%	
Were too busy with other affairs			
Count	7	6	4
Col %	50.0%	66.7%	66.7%

(continued)

Table III-46. Children's Participation in Subsistence, Valdez

	STUDY YEAR		
	1991	1992	1993
Did not trust foods			
Count	1	1	
Col %	7.1%	11.1%	
Less harvesting activity			
Count			1
Col %			16.7%
Areas were no longer available for harvesting			
Count	1		
Col %	7.1%		
Oil pollution threatened everything			
Count	3		
Col %	21.4%		
Decreased effort because of the spill			
Count		1	
Col %		11.1%	
Heightened awareness and involvement with children			
Count			1
Col %			16.7%

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Table III-47. Sharing, Valdez

	STUDY YEAR		
	1991	1992	1993
DID HOUSEHOLD SHARE?			
No			
Count		20	14
Col %		20.0%	40.0%
Yes			
Count	3	80	21
Col %	100.0%	80.0%	60.0%
PREV. YEAR: SHARING OF WILD RES.			
Do Not Know			
Count		1	
Col %		1.1%	
Less			
Count	22	17	6
Col %	22.9%	18.1%	17.6%
Same			
Count	58	61	25
Col %	60.4%	64.9%	73.5%
More			
Count	16	15	3
Col %	16.7%	16.0%	8.8%
PREV. YEAR: SHARING OF HUNT/FISH GEAR			
Do Not Know			
Count		1	
Col %		1.2%	
Less			
Count	15	6	4
Col %	15.5%	7.0%	12.5%
Same			
Count	72	69	27
Col %	74.2%	80.2%	84.4%
More			
Count	10	10	1
Col %	10.3%	11.6%	3.1%
PREV. YEAR: SHARING OF MONEY			
Do Not Know			
Count	1	1	1

(continued)

Table III-47. Sharing, Valdez

	STUDY YEAR		
	1991	1992	1993
Col %	1.0%	1.3%	3.1%
Less			
Count	14	10	1
Col %	14.3%	12.5%	3.1%
Same			
Count	62	52	27
Col %	63.3%	65.0%	84.4%
More			
Count	21	17	3
Col %	21.4%	21.3%	9.4%
PREV. YEAR: SHARING OF LABOR			
Do Not Know			
Count			1
Col %			3.1%
Less			
Count	11	10	2
Col %	11.5%	11.5%	6.3%
Same			
Count	64	59	26
Col %	66.7%	67.8%	81.3%
More			
Count	21	18	3
Col %	21.9%	20.7%	9.4%
PRE-OS: SHARING OF WILD RESOURCES			
Less			
Count	22	16	5
Col %	25.6%	21.6%	17.9%
Same			
Count	55	44	21
Col %	64.0%	59.5%	75.0%
More			
Count	9	14	2
Col %	10.5%	18.9%	7.1%
PRE-OS: SHARING OF HUNT/FISH GEAR			
Do Not Know			

(continued)

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Table III-47. Sharing, Valdez

	STUDY YEAR		
	1991	1992	1993
Count	1		
Col %	1.1%		
Less			
Count	14	10	3
Col %	16.1%	14.7%	11.1%
Same			
Count	65	44	23
Col %	74.7%	64.7%	85.2%
More			
Count	7	14	1
Col %	8.0%	20.6%	3.7%
PRE-OS: SHARING OF MONEY			
Do Not Know			
Count			1
Col %			3.7%
Less			
Count	12	8	2
Col %	13.3%	13.1%	7.4%
Same			
Count	64	40	22
Col %	71.1%	65.6%	81.5%
More			
Count	14	13	2
Col %	15.6%	21.3%	7.4%
PRE-OS: SHARING OF LABOR			
Do Not Know			
Count		1	1
Col %		1.4%	3.7%
Less			
Count	12	9	3
Col %	13.6%	12.7%	11.1%
Same			
Count	63	47	22
Col %	71.6%	66.2%	81.5%
More			

(continued)

Table III-47. Sharing, Valdez

	STUDY YEAR		
	1991	1992	1993
Count	13	14	1
Col %	14.8%	19.7%	3.7%

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Table III-48. Political Activities, Valdez

	STUDY YEAR		
	1991	1992	1993
LAST 3 YRS.: ELDERS INFLUENCE			
Do Not Know			
Count	15		
Col %	15.2%		
Decreased			
Count	27		
Col %	27.3%		
Same			
Count	41		
Col %	41.4%		
Increased			
Count	16		
Col %	16.2%		
LAST 4 YRS.: ELDERS INFLUENCE			
No Response			
Count		1	
Col %		1.1%	
Do Not Know			
Count		10	
Col %		11.0%	
Decreased			
Count		29	
Col %		31.9%	
Same			
Count		33	
Col %		36.3%	
Increased			
Count		18	
Col %		19.8%	
LAST 5 YRS.: ELDERS INFLUENCE			
Do Not Know			
Count			2
Col %			6.3%
Decreased			
Count			9
Col %			28.1%

(continued)

Table III-48. Political Activities, Valdez

	STUDY YEAR		
	1991	1992	1993
Same			
Count			15
Col %			46.9%
Increased			
Count			6
Col %			18.8%
LAST 5 YRS.: ELDERS INFLUENCE: WHY			
No Response			
Count			1
Col %			7.7%
Elders not as active			
Count			1
Col %			7.7%
Younger individuals usurping authority			
Count			3
Col %			23.1%
Elders more aware of the power they hold			
Count			4
Col %			30.8%
Elders knowledge is not appreciated or recognized			
Count			1
Col %			7.7%
Change in the direction of the community			
Count			1
Col %			7.7%
Non-specific response			
Count			1
Col %			7.7%
Elders less involved in broken extended families			
Count			1
Col %			7.7%
PRE-EVOS: ATTEND PUBLIC MEETINGS			
Never			
Count	29		

(continued)

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Table III-48. Political Activities, Valdez

	STUDY YEAR		
	1991	1992	1993
Col %	31.2%		
Sometimes			
Count	57		
Col %	61.3%		
Almost Always			
Count	7		
Col %	7.5%		
PRE-EVOS: ATTEND PUBLIC MEETINGS			
Do Not Know			
Count		1	
Col %		1.4%	
Less			
Count		20	8
Col %		27.8%	29.6%
Same			
Count		39	17
Col %		54.2%	63.0%
More			
Count		12	2
Col %		16.7%	7.4%
LAST YEAR: ATTEND PUBLIC MEETINGS			
Never			
Count	33		
Col %	33.0%		
Sometimes			
Count	57		
Col %	57.0%		
Almost Always			
Count	10		
Col %	10.0%		
LAST YEAR: ATTEND PUBLIC MEETINGS			
Never			
Count		34	11
Col %		34.0%	31.4%
1.00			

(continued)

Table III-48. Political Activities, Valdez

	STUDY YEAR		
	1991	1992	1993
Count		5	3
Col %		5.0%	8.6%
2.00			
Count		14	3
Col %		14.0%	8.6%
3.00			
Count		9	4
Col %		9.0%	11.4%
4.00			
Count		6	1
Col %		6.0%	2.9%
5.00			
Count		4	1
Col %		4.0%	2.9%
6.00			
Count		7	4
Col %		7.0%	11.4%
8.00			
Count		1	
Col %		1.0%	
10.00			
Count		6	1
Col %		6.0%	2.9%
12.00			
Count		2	1
Col %		2.0%	2.9%
15.00			
Count		3	1
Col %		3.0%	2.9%
16.00			
Count		1	
Col %		1.0%	
18.00			
Count		1	
Col %		1.0%	

(continued)

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Table III-48. Political Activities, Valdez

	STUDY YEAR		
	1991	1992	1993
20.00			
Count		2	3
Col %		2.0%	8.6%
24.00			
Count			2
Col %			5.7%
25.00			
Count		1	
Col %		1.0%	
30.00			
Count		2	
Col %		2.0%	
45.00			
Count		2	
Col %		2.0%	
VOTE IN LAST CITY COUNCIL ELECTION?			
No			
Count	27		
Col %	27.6%		
Yes			
Count	71		
Col %	72.4%		
VOTE IN LAST STATE-WIDE ELECTION?			
No			
Count	27	23	7
Col %	27.6%	23.0%	20.0%
Yes			
Count	71	77	28
Col %	72.4%	77.0%	80.0%
BELONG TO NATIVE CORPORATION?			
No Response			
Count	1		
Col %	1.0%		
No			
Count	95	98	34
Col %	95.0%	98.0%	97.1%

(continued)

Table III-48. Political Activities, Valdez

	STUDY YEAR		
	1991	1992	1993
Yes			
Count	4	2	1
Col %	4.0%	2.0%	2.9%
REGIONAL NATIVE CORPORATION			
Chugach Alaska Corp.			
Count	1	1	1
Col %	25.0%	50.0%	100.0%
Cook Inlet Region, Inc.			
Count	1		
Col %	25.0%		
Doyon, Ltd.			
Count	1	1	
Col %	25.0%	50.0%	
Koniag, Inc.			
Count	1		
Col %	25.0%		
VOTE IN LAST REG. CORP. ELECTION?			
Yes			
Count	4	2	1
Col %	100.0%	100.0%	100.0%
VILLAGE NATIVE CORPORATION			
No Response			
Count	1		
Col %	25.0%		
Eyak Corporation (Cordova)			
Count	1	1	1
Col %	25.0%	50.0%	100.0%
Deloycheet, Inc. (Holy Cross)			
Count	1	1	
Col %	25.0%	50.0%	
Valdez Native Association			
Count	1		
Col %	25.0%		
VOTE IN LAST NATIVE VILLAGE CORP. ELECTION?			
No			

(continued)

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Table III-48. Political Activities, Valdez

	STUDY YEAR 1991	1992	1993
Count	2		
Col %	50.0%		
Yes			
Count	2	2	1
Col %	50.0%	100.0%	100.0%
HAS VIEW OF LEADER CHANGED SINCE EVOS?			
No Response			
Count		1	
Col %		1.0%	
Do Not Know			
Count		2	1
Col %		2.1%	2.9%
No			
Count	87	77	29
Col %	87.9%	80.2%	82.9%
Yes			
Count	12	16	5
Col %	12.1%	16.7%	14.3%
WHY POST EVOS VIEW OF LEADERS			
No Response			
Count	1	1	
Col %	8.3%	6.3%	
Do Not Know			
Count		1	
Col %		6.3%	
Trust			
Count	4	6	2
Col %	33.3%	37.5%	50.0%
Awareness/involvement			
Count	2	4	1
Col %	16.7%	25.0%	25.0%
Level headed/reasonable			
Count		1	
Col %		6.3%	
Represents concerns			

(continued)

Table III-48. Political Activities, Valdez

	STUDY YEAR 1991	1992	1993
Count			1
Col %			25.0%
Concern			
Count		2	
Col %		12.5%	
Decisive			
Count	2		
Col %	16.7%		
Aware of Animosity			
Count	1		
Col %	8.3%		
Environmental awareness			
Count	1		
Col %	8.3%		
Ability to listen			
Count	2		
Col %	16.7%		
Sobriety/maturity			
Count	1		
Col %	8.3%		
New leadership			
Count		2	1
Col %		12.5%	25.0%

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Table III-49. Significance of Place, Valdez

	STUDY YEAR		
	1991	1992	1993
MAIN REASON MOVED TO COMMUNITY			
No Response			
Count		5	
Col %		5.0%	
Born or reared here			
Count	4	11	3
Col %	4.0%	11.0%	8.6%
Relatives (family)			
Count	8	5	1
Col %	8.0%	5.0%	2.9%
Married a person born or reared here			
Count	3	1	2
Col %	3.0%	1.0%	5.7%
Friends			
Count	3	2	
Col %	3.0%	2.0%	
Subsistence opportunities			
Count		2	
Col %		2.0%	
Employment reasons			
Count	64	48	23
Col %	64.0%	48.0%	65.7%
Educational opportunities			
Count	2	2	
Col %	2.0%	2.0%	
Economic reasons			
Count	2	1	
Col %	2.0%	1.0%	
Environmental qualities			
Count	1	6	
Col %	1.0%	6.0%	
Size of the community			
Count	2	2	2
Col %	2.0%	2.0%	5.7%
Crime levels			

(continued)

Table III-49. Significance of Place, Valdez

	STUDY YEAR		
	1991	1992	1993
Count	1		
Col %	1.0%		
Personal freedoms (politics)			
Count	1		
Col %	1.0%		
Recreational opportunities			
Count	1	1	
Col %	1.0%	1.0%	
Pace of Life			
Count	3	2	
Col %	3.0%	2.0%	
Quality of Life			
Count	5	2	4
Col %	5.0%	2.0%	11.4%
Location			
Count		1	
Col %		1.0%	
Not here by choice			
Count		1	
Col %		1.0%	
Opportunity to be involved and make a difference			
Count		1	
Col %		1.0%	
This is where they established their home			
Count		4	
Col %		4.0%	
Transferred by military, employer, or social service agency			
Count		3	
Col %		3.0%	
LIVE HERE: WHERE PERSON IS FROM			
No Response			
Count	1	1	
Col %	1.0%	1.0%	

(continued)

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Table III-49. Significance of Place, Valdez

	STUDY YEAR		
	1991	1992	1993
No			
Count	91	87	32
Col %	91.0%	87.0%	91.4%
Yes			
Count	8	12	3
Col %	8.0%	12.0%	8.6%
LIVE HERE: RELATIVES LIVE HERE			
No Response			
Count	1	1	
Col %	1.0%	1.0%	
No			
Count	66	77	28
Col %	66.0%	77.0%	80.0%
Yes			
Count	33	22	7
Col %	33.0%	22.0%	20.0%
LIVE HERE: MARRIED PERSON FROM HERE			
No Response			
Count	1	1	
Col %	1.0%	1.0%	
No			
Count	74	95	34
Col %	74.0%	95.0%	97.1%
Yes			
Count	25	4	1
Col %	25.0%	4.0%	2.9%
LIVE HERE: ALWAYS LIVED HERE			
No Response			
Count	1	1	
Col %	1.0%	1.0%	
No			
Count	91	92	33
Col %	91.0%	92.0%	94.3%
Yes			
Count	8	7	2
Col %	8.0%	7.0%	5.7%

(continued)

Table III-49. Significance of Place, Valdez

	STUDY YEAR		
	1991	1992	1993
LIVE HERE: FRIENDS LIVE HERE			
No Response			
Count	1	2	
Col %	1.0%	2.0%	
No			
Count	26	41	16
Col %	26.0%	41.0%	45.7%
Yes			
Count	73	57	19
Col %	73.0%	57.0%	54.3%
LIVE HERE: HUNTING & FISHING HERE			
No Response			
Count	1	1	
Col %	1.0%	1.0%	
No			
Count	34	32	13
Col %	34.0%	32.0%	37.1%
Yes			
Count	65	67	22
Col %	65.0%	67.0%	62.9%
LIVE HERE: JOB OPPORTUNITIES HERE			
No Response			
Count	1	1	
Col %	1.0%	1.0%	
No			
Count	17	21	7
Col %	17.0%	21.0%	20.0%
Yes			
Count	82	78	28
Col %	82.0%	78.0%	80.0%
LIVE HERE: EDUCATIONAL OPPORTUNITIES			
No Response			
Count	1	1	
Col %	1.0%	1.0%	
No			
Count	48	49	18

(continued)

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Table III-49. Significance of Place, Valdez

	STUDY YEAR		
	1991	1992	1993
Col %	48.0%	49.0%	51.4%
Yes			
Count	51	50	17
Col %	51.0%	50.0%	48.6%
LIVE HERE: COST OF LIVING			
No Response			
Count	1	1	
Col %	1.0%	1.0%	
No			
Count	83	91	30
Col %	83.0%	91.0%	85.7%
Yes			
Count	16	8	5
Col %	16.0%	8.0%	14.3%
LIVE HERE: HOUSING AVAILABLE			
No Response			
Count	1	1	
Col %	1.0%	1.0%	
No			
Count	58	76	24
Col %	58.0%	76.0%	68.6%
Yes			
Count	41	23	11
Col %	41.0%	23.0%	31.4%
LIVE HERE: STORES			
No Response			
Count	1	1	
Col %	1.0%	1.0%	
No			
Count	67	81	24
Col %	67.0%	81.0%	68.6%
Yes			
Count	32	18	11
Col %	32.0%	18.0%	31.4%
LIVE HERE: MEDICAL SERVICES			

(continued)

Table III-49. Significance of Place, Valdez

	STUDY YEAR		
	1991	1992	1993
No Response			
Count	1	1	
Col %	1.0%	1.0%	
No			
Count	74	79	24
Col %	74.0%	79.0%	68.6%
Yes			
Count	25	20	11
Col %	25.0%	20.0%	31.4%
LIVE HERE: OTHER SERVICES			
No Response			
Count	1	1	
Col %	1.0%	1.0%	
No			
Count	47	61	21
Col %	47.0%	61.0%	60.0%
Yes			
Count	52	38	14
Col %	52.0%	38.0%	40.0%
LIVE HERE: BEAUTY OF AREA			
No Response			
Count	1	2	
Col %	1.0%	2.0%	
No			
Count	10	7	4
Col %	10.0%	7.0%	11.4%
Yes			
Count	89	91	31
Col %	89.0%	91.0%	88.6%
LIVE HERE: SIZE OF COMMUNITY			
No Response			
Count	1	1	
Col %	1.0%	1.0%	
No			
Count	18	19	4
Col %	18.0%	19.0%	11.4%

(continued)

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Table III-49. Significance of Place, Valdez

	STUDY YEAR		
	1991	1992	1993
Yes			
Count	81	80	31
Col %	81.0%	80.0%	88.6%
LIVE HERE: LESS CRIME			
No Response			
Count	1	2	
Col %	1.0%	2.0%	
No			
Count	23	27	10
Col %	23.0%	27.0%	28.6%
Yes			
Count	76	71	25
Col %	76.0%	71.0%	71.4%
LIVE HERE: LESS DRINKING/DRUGS			
No Response			
Count	1	1	
Col %	1.0%	1.0%	
No			
Count	71	88	28
Col %	71.0%	88.0%	80.0%
Yes			
Count	28	11	7
Col %	28.0%	11.0%	20.0%
LIVE HERE: NECESSARY PERSONAL FREEDOMS			
No Response			
Count	1	2	
Col %	1.0%	2.0%	
No			
Count	17	21	7
Col %	17.0%	21.0%	20.0%
Yes			
Count	82	77	28
Col %	82.0%	77.0%	80.0%
LIVE HERE: RECREATIONAL OPPORTUNITIES			
No Response			
Count	1	1	

(continued)

Table III-49. Significance of Place, Valdez

	STUDY YEAR		
	1991	1992	1993
Col %	1.0%	1.0%	
No			
Count	20	29	13
Col %	20.0%	29.0%	37.1%
Yes			
Count	79	70	22
Col %	79.0%	70.0%	62.9%
OTHER REASONS FOR LIVING IN COMMUNITY			
Pace of Life			
Count	2	10	
Col %	13.3%	24.4%	
Quality of Life			
Count	8	17	5
Col %	53.3%	41.5%	38.5%
Religious Reasons			
Count	2	2	
Col %	13.3%	4.9%	
Location			
Count	1	4	2
Col %	6.7%	9.8%	15.4%
Not here by choice			
Count	2	2	1
Col %	13.3%	4.9%	7.7%
Climate			
Count			1
Col %			7.7%
Opportunity to be involved and make a difference			
Count		1	1
Col %		2.4%	7.7%
This is where they established their home			
Count		8	4
Col %		19.5%	30.8%
Transferred by military, employer, or social service agency			

(continued)

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Table III-49. Significance of Place, Valdez

	STUDY YEAR		
	1991	1992	1993
Count		1	1
Col %		2.4%	7.7%
MAIN REASON REMAINING IN COMMUNITY			
Born or reared here			
Count	1	2	
Col %	1.0%	2.0%	
Relatives (family)			
Count	10	4	4
Col %	10.0%	4.0%	11.4%
Friends			
Count	5	5	
Col %	5.0%	5.0%	
Subsistence opportunities			
Count	3	2	1
Col %	3.0%	2.0%	2.9%
Employment reasons			
Count	44	41	16
Col %	44.0%	41.0%	45.7%
Educational opportunities			
Count	6	2	
Col %	6.0%	2.0%	
Economic reasons			
Count	3		
Col %	3.0%		
Housing/property			
Count	2		
Col %	2.0%		
Environmental qualities			
Count	10	17	4
Col %	10.0%	17.0%	11.4%
Size of the community			
Count	5	8	5
Col %	5.0%	8.0%	14.3%
Crime levels			
Count		1	

(continued)

Table III-49. Significance of Place, Valdez

	STUDY YEAR		
	1991	1992	1993
Col %		1.0%	
Personal freedoms (politics)			
Count	1	2	
Col %	1.0%	2.0%	
Recreational opportunities			
Count	1	3	2
Col %	1.0%	3.0%	5.7%
Pace of Life			
Count	1		
Col %	1.0%		
Quality of Life			
Count	5	6	2
Col %	5.0%	6.0%	5.7%
Religious Reasons			
Count		2	
Col %		2.0%	
Not here by choice			
Count	3	1	
Col %	3.0%	1.0%	
Opportunity to be involved and make a difference			
Count		1	
Col %		1.0%	
This is where they established their home			
Count		3	
Col %		3.0%	
Transferred by military, employer, or social service agency			
Count			1
Col %			2.9%
POST-EVOS: CHANGE IN LIKING COMMUNITY			
No Response			
Count	1	1	
Col %	1.2%	1.4%	
Do Not Know			

(continued)

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Table III-49. Significance of Place, Valdez

	STUDY YEAR		
	1991	1992	1993
Count			1
Col %			3.4%
Less			
Count	21	16	5
Col %	25.3%	21.6%	17.2%
Same			
Count	53	48	16
Col %	63.9%	64.9%	55.2%
More			
Count	8	9	7
Col %	9.6%	12.2%	24.1%
POST-EVOS: WHY CHANGE IN LIKING COMMUNITY			
No Response			
Count			1
Col %			7.7%
Non-specific			
Count	1		1
Col %	4.0%		7.7%
Oil contamination/fear of oil contamination			
Count	1		
Col %	4.0%		
Increased dissension/conflict/violence			
Count	2		
Col %	8.0%		
Increased government bureaucracy			
Count		1	
Col %		4.0%	
More stressful			
Count		4	2
Col %		16.0%	15.4%
Financial situation worse			
Count	1	2	
Col %	4.0%	8.0%	

(continued)

Table III-49. Significance of Place, Valdez

	STUDY YEAR		
	1991	1992	1993
Lived here too long			
Count	1		
Col %	4.0%		
Future of environment uncertain			
Count	1		
Col %	4.0%		
Too many people			
Count	9	8	2
Col %	36.0%	32.0%	15.4%
Other reasons			
Count	5	4	
Col %	20.0%	16.0%	
Improved financial situation			
Count	2	3	2
Col %	8.0%	12.0%	15.4%
Lived here longer			
Count		1	3
Col %		4.0%	23.1%
Better quality of people			
Count	1		1
Col %	4.0%		7.7%
Increased appreciation of surroundings			
Count			1
Col %			7.7%
Improved community cohesiveness			
Count	1	1	
Col %	4.0%	4.0%	
Increased crime			
Count		1	
Col %		4.0%	
RATHER LIVE IN ANOTHER COMMUNITY			
Do Not Know			
Count	5	4	
Col %	5.0%	4.0%	
No			

(continued)

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Table III-49. Significance of Place, V[illegible]z

	STUDY YEAR		
	1991	1992	1993
Count	52	54	25
Col %	52.0%	54.0%	71.4%
Yes			
Count	43	42	10
Col %	43.0%	42.0%	28.6%
EXPECT TO LIVE IN REGION WHEN OLD			
No Response			
Count	1	1	
Col %	1.0%	1.0%	
Do Not Know			
Count	7	9	1
Col %	7.0%	9.1%	2.9%
No			
Count	60	48	15
Col %	60.0%	48.5%	42.9%
Yes			
Count	32	41	19
Col %	32.0%	41.4%	54.3%
CONFIDENT ABOUT HUNT/FISH/GATHERING			
Do Not Know			
Count	2	4	
Col %	2.0%	4.0%	
No			
Count	29	43	13
Col %	29.3%	43.0%	37.1%
Yes			
Count	68	53	22
Col %	68.7%	53.0%	62.9%
WHY UNCONFIDENT ABOUT HUNTING/FISHING/GATHERING			
Increased restrictions			
Count	12	28	12
Col %	38.7%	62.2%	92.3%
Uncertainty about the future			
Count	2	2	
Col %	6.5%	4.4%	

(continued)

Table III-49. Significance of Place, Valdez

	STUDY YEAR		
	1991	1992	1993
Increased development			
Count	2	3	
Col %	6.5%	6.7%	
Timber and logging			
Count	2		
Col %	6.5%		
Road development			
Count	1	1	
Col %	3.2%	2.2%	
Uncertainty about food safety			
Count	2	2	
Col %	6.5%	4.4%	
Environmental, animal rights, anti-gun interests			
Count	1	1	1
Col %	3.2%	2.2%	7.7%
Native ownership of lands			
Count	2	5	1
Col %	6.5%	11.1%	7.7%
Population pressure			
Count	8	7	4
Col %	25.8%	15.6%	30.8%
Vulnerable to environmental damage			
Count	3	9	1
Col %	9.7%	20.0%	7.7%
Miscellaneous reasons			
Count	2	2	1
Col %	6.5%	4.4%	7.7%
Reduced resource availability			
Count		1	
Col %		2.2%	
CONTINUE TO LIVE HERE IF NO WILD FOOD			
Do Not Know			
Count	1	3	1
Col %	1.0%	3.0%	2.9%

(continued)

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Table III-49. Significance of Place, Valdez

	STUDY YEAR		
	1991	1992	1993
No			
Count	20	22	6
Col %	20.0%	22.0%	17.1%
Yes			
Count	79	75	28
Col %	79.0%	75.0%	80.0%

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Table III-50. Effectiveness of Responses, Valdez

	STUDY YEAR		
	1991	1992	1993
EFFECTIVENESS EVOS: US COAST GUARD			
No Response			
Count		1	2
Col %		1.0%	5.9%
Do Not Know			
Count	9	10	
Col %	9.1%	10.2%	
Not Effective			
Count	23	25	11
Col %	23.2%	25.5%	32.4%
Somewhat			
Count	32	36	12
Col %	32.3%	36.7%	35.3%
Effective			
Count	35	26	9
Col %	35.4%	26.5%	26.5%
EFFECTIVENESS EVOS: ADEC			
No Response			
Count	1	1	2
Col %	1.0%	1.0%	5.9%
Do Not Know			
Count	12	16	1
Col %	12.1%	16.3%	2.9%
Not Effective			
Count	26	27	10
Col %	26.3%	27.6%	29.4%
Somewhat			
Count	27	27	13
Col %	27.3%	27.6%	38.2%
Effective			
Count	33	27	8
Col %	33.3%	27.6%	23.5%
EFFECTIVENESS EVOS: INSURANCE COMPANIES			
Do Not Know			
Count	65		
Col %	67.0%		

(continued)

Table III-50. Effectiveness of Responses, Valdez

	STUDY YEAR		
	1991	1992	1993
Not Effective			
Count	10		
Col %	10.3%		
Somewhat			
Count	9		
Col %	9.3%		
Effective			
Count	13		
Col %	13.4%		
EFFECTIVENESS EVOS: LOCAL NATIVE PROFIT			
No Response			
Count		2	2
Col %		2.0%	5.9%
Do Not Know			
Count	76	60	18
Col %	80.0%	61.2%	52.9%
Not Effective			
Count	7	16	5
Col %	7.4%	16.3%	14.7%
Somewhat			
Count	2	13	6
Col %	2.1%	13.3%	17.6%
Effective			
Count	10	7	3
Col %	10.5%	7.1%	8.8%
EFFECTIVENESS EVOS: NATIVE NON-PROFITS			
No Response			
Count		2	2
Col %		2.1%	5.9%
Do Not Know			
Count	76	67	18
Col %	80.0%	69.1%	52.9%
Not Effective			
Count	8	13	5
Col %	8.4%	13.4%	14.7%

(continued)

Table III-50. Effectiveness of Responses, Valdez

	STUDY YEAR		
	1991	1992	1993
Somewhat			
Count	2	11	6
Col %	2.1%	11.3%	17.6%
Effective			
Count	9	4	3
Col %	9.5%	4.1%	8.8%
EFFECTIVENESS EVOS: BOROUGH GOVERNMENT			
No Response			
Count		1	2
Col %		16.7%	28.6%
Do Not Know			
Count	6	5	
Col %	46.2%	83.3%	
Not Effective			
Count	2		1
Col %	15.4%		14.3%
Somewhat			
Count	1		2
Col %	7.7%		28.6%
Effective			
Count	4		2
Col %	30.8%		28.6%
EFFECTIVENESS EVOS: VILLAGE CORPORATION			
No Response			
Count		3	2
Col %		9.7%	10.0%
Do Not Know			
Count	24	26	16
Col %	70.6%	83.9%	80.0%
Not Effective			
Count		1	1
Col %		3.2%	5.0%
Somewhat			
Count	2		1
Col %	5.9%		5.0%

(continued)

Table III-50. Effectiveness of Responses, Valdez

	STUDY YEAR		
	1991	1992	1993
Effective			
Count	8	1	
Col %	23.5%	3.2%	
EFFECTIVENESS EVOS: CITY COUNCIL			
No Response			
Count		2	2
Col %		2.1%	5.9%
Do Not Know			
Count	9	21	4
Col %	9.2%	21.6%	11.8%
Not Effective			
Count	24	29	12
Col %	24.5%	29.9%	35.3%
Somewhat			
Count	42	26	12
Col %	42.9%	26.8%	35.3%
Effective			
Count	23	19	4
Col %	23.5%	19.6%	11.8%
EFFECTIVENESS EVOS: IRA COUNCIL			
No Response			
Count		4	2
Col %		14.3%	10.5%
Do Not Know			
Count	4	23	17
Col %	100.0%	82.1%	89.5%
Effective			
Count		1	
Col %		3.6%	
EFFECTIVENESS EVOS: CHAMBER OF COMMERCE			
No Response			
Count		2	2
Col %		2.1%	5.9%
Do Not Know			
Count	36	34	13
Col %	36.7%	35.1%	38.2%

(continued)

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Table III-50. Effectiveness of Responses, Valdez

	STUDY YEAR		
	1991	1992	1993
Not Effective			
Count	21	27	6
Col %	21.4%	27.8%	17.6%
Somewhat			
Count	24	23	10
Col %	24.5%	23.7%	29.4%
Effective			
Count	17	11	3
Col %	17.3%	11.3%	8.8%
EFFECTIVENESS EVOS: COMMERCIAL BUSINESSES			
No Response			
Count		1	2
Col %		1.0%	5.9%
Do Not Know			
Count	5	11	2
Col %	5.1%	11.3%	5.9%
Not Effective			
Count	8	22	4
Col %	8.2%	22.7%	11.8%
Somewhat			
Count	23	25	10
Col %	23.5%	25.8%	29.4%
Effective			
Count	62	38	16
Col %	63.3%	39.2%	47.1%
EFFECTIVENESS EVOS: COMMERCIAL FISHING GROUPS			
No Response			
Count		1	2
Col %		1.0%	5.9%
Do Not Know			
Count	18	8	3
Col %	18.4%	8.2%	8.8%
Not Effective			
Count	12	7	2

(continued)

Table III-50. Effectiveness of Responses, Valdez

	STUDY YEAR		
	1991	1992	1993
Col %	12.2%	7.1%	5.9%
Somewhat			
Count	18	23	8
Col %	18.4%	23.5%	23.5%
Effective			
Count	50	59	19
Col %	51.0%	60.2%	55.9%
EFFECTIVENESS EVOS: OTHER BUSINESS GROUPS			
No Response			
Count	1		
Col %	1.1%		
Do Not Know			
Count	43		
Col %	45.3%		
Not Effective			
Count	5		
Col %	5.3%		
Somewhat			
Count	16		
Col %	16.8%		
Effective			
Count	30		
Col %	31.6%		
EFFECTIVENESS EVOS: SCHOOLS			
No Response			
Count	1		
Col %	1.0%		
Do Not Know			
Count	23		
Col %	23.7%		
Not Effective			
Count	3		
Col %	3.1%		
Somewhat			

(continued)

1/94PRINT

Table III-50. Effectiveness of Responses, Valdez

	STUDY YEAR		
	1991	1992	1993
Count	13		
Col %	13.4%		
Effective			
Count	57		
Col %	58.8%		
EFFECTIVENESS EVOS: CHURCHES			
No Response			
Count	1		
Col %	1.0%		
Do Not Know			
Count	27		
Col %	27.8%		
Not Effective			
Count	3		
Col %	3.1%		
Somewhat			
Count	10		
Col %	10.3%		
Effective			
Count	56		
Col %	57.7%		
EFFECTIVENESS EVOS: HEALTH SERVICES			
No Response			
Count		3	2
Col %		3.1%	5.9%
Do Not Know			
Count		20	1
Col %		20.4%	2.9%
Not Effective			
Count		12	3
Col %		12.2%	8.8%
Somewhat			
Count		24	6
Col %		24.5%	17.6%
Effective			

(continued)

Table III-50. Effectiveness of Responses, Valdez

	STUDY YEAR		
	1991	1992	1993
Count		39	22
Col %		39.8%	64.7%
EFFECTIVENESS EVOS: MEDICAL PROFESSION			
No Response			
Count	1		
Col %	1.0%		
Do Not Know			
Count	11		
Col %	11.2%		
Not Effective			
Count	14		
Col %	14.3%		
Somewhat			
Count	18		
Col %	18.4%		
Effective			
Count	54		
Col %	55.1%		
EFFECTIVENESS EVOS: HEALTH AIDES			
No Response			
Count	1		
Col %	2.3%		
Do Not Know			
Count	22		
Col %	50.0%		
Not Effective			
Count	2		
Col %	4.5%		
Somewhat			
Count	3		
Col %	6.8%		
Effective			
Count	16		
Col %	36.4%		
EFFECTIVENESS EVOS: SOCIAL WORKERS			

(continued)

KA14PRINT

Table III-50. Effectiveness of Responses, Valdez

	STUDY YEAR		
	1991	1992	1993
No Response			
Count	1	2	2
Col %	1.0%	2.0%	5.9%
Do Not Know			
Count	49	38	16
Col %	50.5%	38.8%	47.1%
Not Effective			
Count	7	14	5
Col %	7.2%	14.3%	14.7%
Somewhat			
Count	17	21	6
Col %	17.5%	21.4%	17.6%
Effective			
Count	23	23	5
Col %	23.7%	23.5%	14.7%
EFFECTIVENESS EVOS: LOCAL LAW ENFORCEMENT			
No Response			
Count	1	2	2
Col %	1.0%	2.0%	5.9%
Do Not Know			
Count	2	13	3
Col %	2.0%	13.3%	8.8%
Not Effective			
Count	2	13	2
Col %	2.0%	13.3%	5.9%
Somewhat			
Count	20	18	4
Col %	20.4%	18.4%	11.8%
Effective			
Count	73	52	23
Col %	74.5%	53.1%	67.6%
EFFECTIVENESS EVOS: STATE LAW ENFORCEMENT			
No Response			
Count	1	2	2

(continued)

Table III-50. Effectiveness of Responses, Valdez

	STUDY YEAR		
	1991	1992	1993
Col %	1.0%	2.1%	5.9%
Do Not Know			
Count	20	19	5
Col %	20.4%	19.6%	14.7%
Not Effective			
Count	7	13	1
Col %	7.1%	13.4%	2.9%
Somewhat			
Count	17	29	8
Col %	17.3%	29.9%	23.5%
Effective			
Count	53	34	18
Col %	54.1%	35.1%	52.9%
EFFECTIVENESS EVOS: EXXON			
No Response			
Count	2	1	2
Col %	2.0%	1.0%	5.9%
Do Not Know			
Count	1	7	
Col %	1.0%	7.1%	
Not Effective			
Count	32	32	8
Col %	32.3%	32.7%	23.5%
Somewhat			
Count	23	26	14
Col %	23.2%	26.5%	41.2%
Effective			
Count	41	32	10
Col %	41.4%	32.7%	29.4%
EFFECTIVENESS EVOS: VECO			
No Response			
Count	1	1	2
Col %	1.0%	1.0%	5.9%
Do Not Know			
Count	8	14	4

(continued)

1/4PRINT

Table III-50. Effectiveness of Responses, Valdez

	STUDY YEAR		
	1991	1992	1993
Col %	8.1%	14.3%	11.8%
Not Effective			
Count	27	30	4
Col %	27.3%	30.6%	11.8%
Somewhat			
Count	28	29	14
Col %	28.3%	29.6%	41.2%
Effective			
Count	35	24	10
Col %	35.4%	24.5%	29.4%
EFFECTIVENESS EVOS: ALYESKA PIPELINE			
No Response			
Count	2	1	2
Col %	2.0%	1.0%	6.1%
Do Not Know			
Count	8	6	
Col %	8.1%	6.1%	
Not Effective			
Count	30	44	10
Col %	30.3%	44.9%	30.3%
Somewhat			
Count	30	26	15
Col %	30.3%	26.5%	45.5%
Effective			
Count	29	21	6
Col %	29.3%	21.4%	18.2%
EFFECTIVENESS EVOS: VOLUNTEER CLEAN-UP GROUPS			
Not Effective			
Count		1	
Col %		33.3%	
Somewhat			
Count		1	
Col %		33.3%	
Effective			

(continued)

Table III-50. Effectiveness of Responses, Valdez

	STUDY YEAR		
	1991	1992	1993
Count	1	1	
Col %	100.0%	33.3%	
EFFECTIVENESS EVOS: FAMILY SUPPORT GROUPS			
Effective			
Count	1		
Col %	100.0%		
EFFECTIVENESS EVOS: ANIMAL RESCUE GROUPS			
Not Effective			
Count			1
Somewhat			
Count		1	
Effective			
Count		1	
EFFECTIVENESS EVOS: GENERAL ENVIRONMENTAL GROUPS			
Not Effective			
Col %			66.7%
Somewhat			
Col %	100.0%		33.3%
EFFECTIVENESS EVOS: MEDIA INFORMATION GROUPS			
Not Effective			
Count	1		
Col %	100.0%		
EFFECTIVENESS EVOS: PWS REGIONAL CITIZENS ADVISORY COUNCIL			
Do Not Know			
Count	3		
Col %	20.0%		
Not Effective			
Count	4	4	
Col %	26.7%	15.4%	
Somewhat			
Count	4	13	1
Col %	26.7%	50.0%	25.0%

(continued)

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Table III-50. Effectiveness of Responses, Valdez

	STUDY YEAR		
	1991	1992	1993
Effective			
Count	4	9	3
Col %	26.7%	34.6%	75.0%
EFFECTIVENESS EVOS: SHIP ESCORT RESPONSE SYSTEM (SERVS)			
Do Not Know			
Count		1	
Col %		16.7%	
Not Effective			
Count	1		
Col %	11.1%		
Effective			
Count	8	5	3
Col %	88.9%	83.3%	100.0%
EFFECTIVENESS EVOS: OTHER MULTI-AGENCY RESPONSE GROUPS FOR EVOS			
Not Effective			
Count		1	
Col %		100.0%	
EFFECTIVENESS EVOS: PWS CONSERVATION ALLIANCE			
Not Effective			
Count	2	3	2
Col %	25.0%	50.0%	50.0%
Somewhat			
Count	2	1	2
Col %	25.0%	16.7%	50.0%
Effective			
Count	4	2	
Col %	50.0%	33.3%	
EFFECTIVENESS EVOS: OTHER UNIDENTIFIED GROUPS			
Do Not Know			
Count		1	
Col %		33.3%	
Not Effective			
Count	1	1	

(continued)

Table III-50. Effectiveness of Responses, Valdez

	STUDY YEAR		
	1991	1992	1993
Col %	20.0%	33.3%	
Somewhat			
Count	1		
Col %	20.0%		
Effective			
Count	3	1	
Col %	60.0%	33.3%	
EFFECTIVENESS EVOS: OILED MAYORS			
No Response			
Count		1	2
Col %		1.0%	5.9%
Do Not Know			
Count		30	10
Col %		30.6%	29.4%
Not Effective			
Count		29	7
Col %		29.6%	20.6%
Somewhat			
Count		26	11
Col %		26.5%	32.4%
Effective			
Count		12	4
Col %		12.2%	11.8%

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Table III-51. Subsistence Food Safety Information, Valdez

	STUDY YEAR		
	1991	1992	1993
ADEQUATELY INFORMED ABOUT FOOD SAFETY?			
No Response			
Count	2		
Col %	2.0%		
Do Not Know			
Count	6	5	3
Col %	6.1%	5.4%	9.4%
No			
Count	28	34	5
Col %	28.6%	37.0%	15.6%
Somewhat			
Count	4	4	
Col %	4.1%	4.3%	
Yes			
Count	58	49	24
Col %	59.2%	53.3%	75.0%
WHY NOT ADEQUATELY INFORMED			
No Response			
Count	10	6	
Col %	30.3%	15.4%	
Lack of clear or definitive advice			
Count	2	3	1
Col %	6.1%	7.7%	20.0%
Received incomplete information			
Count	2	9	
Col %	6.1%	23.1%	
Received no information			
Count	8	15	4
Col %	24.2%	38.5%	80.0%
Did not trust or believe advice			
Count	7	2	
Col %	21.2%	5.1%	
Did not trust results because of Exxon involvement			
Count	1		1
Col %	3.0%		20.0%

(continued)

Table III-51. Subsistence Food Safety Information, Valdez

	STUDY YEAR		
	1991	1992	1993
Personal observations contradicted advice or findings			
Count		1	
Col %		2.6%	
Heard about damaged resources which contradicted advice			
Count	1		
Col %	3.0%		
Believe information was deliberately withheld			
Count	7	6	1
Col %	21.2%	15.4%	20.0%
Information was too difficult to understand			
Count		1	
Col %		2.6%	

1C14PRINT

Table III-52. OCS Development Effects, Valdez

	STUDY YEAR		
	1991	1992	1993
OCS EFFECT: FISH			
No Response			
Count	2		
Col %	2.0%		
Do Not Know			
Count	18	10	2
Col %	18.0%	10.0%	5.7%
Decrease			
Count	30	33	8
Col %	30.0%	33.0%	22.9%
No Change			
Count	48	51	22
Col %	48.0%	51.0%	62.9%
Increase			
Count	2	6	3
Col %	2.0%	6.0%	8.6%
OCS EFFECT: SHELLFISH			
No Response			
Count	1		
Col %	1.0%		
Do Not Know			
Count	23	15	4
Col %	23.0%	15.0%	11.4%
Decrease			
Count	32	34	8
Col %	32.0%	34.0%	22.9%
No Change			
Count	41	46	21
Col %	41.0%	46.0%	60.0%
Increase			
Count	3	5	2
Col %	3.0%	5.0%	5.7%
OCS EFFECT: MARINE MAMMALS			
No Response			
Count	1		
Col %	1.0%		

(continued)

Table III-52. OCS Development Effects, Valdez

	STUDY YEAR		
	1991	1992	1993
Do Not Know			
Count	16	10	3
Col %	16.0%	10.0%	8.6%
Decrease			
Count	31	35	6
Col %	31.0%	35.0%	17.1%
No Change			
Count	50	51	24
Col %	50.0%	51.0%	68.6%
Increase			
Count	2	4	2
Col %	2.0%	4.0%	5.7%
OCS EFFECT: LAND MAMMALS			
No Response			
Count	1		
Col %	1.0%		
Do Not Know			
Count	15	9	2
Col %	15.0%	9.0%	5.7%
Decrease			
Count	22	23	5
Col %	22.0%	23.0%	14.3%
No Change			
Count	61	67	28
Col %	61.0%	67.0%	80.0%
Increase			
Count	1	1	
Col %	1.0%	1.0%	
OCS EFFECT: BIRDS			
No Response			
Count	1		
Col %	1.0%		
Do Not Know			
Count	16	8	2
Col %	16.0%	8.0%	5.7%

(continued)

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Table III-52. OCS Development Effects, Valdez

	STUDY YEAR		
	1991	1992	1993
Decrease			
Count	33	31	9
Col %	33.0%	31.0%	25.7%
No Change			
Count	47	57	23
Col %	47.0%	57.0%	65.7%
Increase			
Count	3	4	1
Col %	3.0%	4.0%	2.9%
OCS DEVELOPMENT = MORE JOBS?			
No Response			
Count	1	2	
Col %	1.0%	2.0%	
Do Not Know			
Count	1	5	
Col %	1.0%	5.0%	
No			
Count	14	21	7
Col %	14.0%	21.0%	20.0%
Yes			
Count	84	72	28
Col %	84.0%	72.0%	80.0%
CONTAIN AND CLEANUP SMALL OIL SPILL			
Do Not Know			
Count		7	3
Col %		7.0%	8.6%
No			
Count	10	19	8
Col %	10.0%	19.0%	22.9%
Maybe			
Count	21	74	24
Col %	21.0%	74.0%	68.6%
Yes			
Count	69		
Col %	69.0%		

(continued)

Table III-52. OCS Development Effects, Valdez

	STUDY YEAR		
	1991	1992	1993
CONTAIN AND CLEANUP LARGE OIL SPILL			
Do Not Know			
Count	2	13	5
Col %	2.0%	13.0%	14.3%
No			
Count	42	57	17
Col %	42.0%	57.0%	48.6%
Maybe			
Count	27	30	13
Col %	27.0%	30.0%	37.1%
Yes			
Count	29		
Col %	29.0%		
ARE YOU IN FAVOR OF THE SEARCH FOR OIL?			
Do Not Know			
Count		4	1
Col %		4.0%	2.9%
No			
Count		32	9
Col %		32.0%	25.7%
Yes			
Count		64	25
Col %		64.0%	71.4%
OPINION ON SEARCH FOR OIL			
No Response			
Count		1	
Col %		1.0%	
Do Not Know			
Count		6	
Col %		6.0%	
Reduce dependency on foreign oil/enhance national security			
Count		8	6
Col %		8.0%	17.1%
Create more jobs in the community			
Count		20	9

(continued)

1-2-1-4PRINT

Table III-52. OCS Development Effects, Valdez

	STUDY YEAR		
	1991	1992	1993
Col %		20.0%	25.7%
We can live in balance with the environment			
Count		12	3
Col %		12.0%	8.6%
Increase state revenues			
Count		6	3
Col %		6.0%	8.6%
Energy needed			
Count		17	5
Col %		17.0%	14.3%
Conditional: in favor of search/development but not locally			
Count		1	
Col %		1.0%	
Need to know extent of resource availability and reserves			
Count		2	1
Col %		2.0%	2.9%
Generalized: good for everyone			
Count		2	
Col %		2.0%	
Beneficial to the economy			
Count		17	6
Col %		17.0%	17.1%
Positive experiences with development			
Count			1
Col %			2.9%
Because it is there			
Count		3	2
Col %		3.0%	5.7%
Conditional upon technological advancement			
Count		1	
Col %		1.0%	

(continued)

Table III-52. OCS Development Effects, Valdez

	STUDY YEAR		
	1991	1992	1993
Not making sufficient use of current resources			
Count		9	1
Col %		9.0%	2.9%
Environmental conditions (non-pollution/non-biological)			
Count		1	
Col %		1.0%	
Adverse experiences with other development			
Count		4	1
Col %		4.0%	2.9%
Pollution concerns and impacts			
Count		8	2
Col %		8.0%	5.7%
Aesthetic reasons			
Count		4	1
Col %		4.0%	2.9%
Adverse impact of security zones and traffic zones			
Count		1	2
Col %		1.0%	5.7%
In favor of on-shore development instead of off-shore			
Count		2	
Col %		2.0%	
Status quo - leave it the way it is			
Count			1
Col %			2.9%
Should explore alternative energy sources, conservation			
Count		5	3
Col %		5.0%	8.6%
Adverse impact on subsistence and commercial fishing			
Count		2	
Col %		2.0%	

(continued)

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Table III-52. OCS Development Effects, Valdez

	STUDY YEAR		
	1991	1992	1993
Distrust of the oil industry			
Count		1	
Col %		1.0%	
Potential damage to renewable resources			
Count		2	2
Col %		2.0%	5.7%
More difficult to regulate off-shore development			
Count			1
Col %			2.9%
Against any development			
Count		1	
Col %		1.0%	
Fatalistic - no choice in matter			
Count		1	1
Col %		1.0%	2.9%
Adverse impact on Native traditions			
Count		1	
Col %		1.0%	
Technology needs improvement			
Count		2	
Col %		2.0%	
Do not think there is oil in the area			
Count		2	
Col %		2.0%	
Against population increases			
Count		2	2
Col %		2.0%	5.7%
ARE YOU IN FAVOR OF THE DEVELOPMENT AND PRODUCTION OF OIL?			
Do Not Know			
Count		3	2
Col %		3.0%	5.7%
No			
Count		32	8
Col %		32.0%	22.9%

(continued)

Table III-52. OCS Development Effects, Valdez

	STUDY YEAR		
	1991	1992	1993
Yes			
Count		65	25
Col %		65.0%	71.4%
OPINION ON DEVELOPMENT AND PRODUCTION			
No Response			
Count		2	
Col %		2.0%	
Do Not Know			
Count		5	
Col %		5.0%	
Reduce dependency on foreign oil/enhance national security			
Count		9	7
Col %		9.0%	20.0%
Create more jobs in the community			
Count		21	9
Col %		21.0%	25.7%
We can live in balance with the environment			
Count		13	4
Col %		13.0%	11.4%
Increase state revenues			
Count		6	5
Col %		6.0%	14.3%
Energy needed			
Count		15	4
Col %		15.0%	11.4%
Conditional: in favor of search/development but not locally			
Count			2
Col %			5.7%
Need to know extent of resource availability and reserves			
Count			1
Col %			2.9%
Conditions: in favor when necessary			

(continued)

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Table III-52. OCS Development Effects, Valdez

	STUDY YEAR		
	1991	1992	1993
Count		1	
Col %		1.0%	
Generalized: good for everyone			
Count		1	
Col %		1.0%	
Beneficial to the economy			
Count		20	7
Col %		20.0%	20.0%
Positive experiences with development			
Count			2
Col %			5.7%
Because it is there			
Count		3	3
Col %		3.0%	8.6%
Conditional upon technological advancement			
Count		2	1
Col %		2.0%	2.9%
Not making sufficient use of current resources			
Count		8	1
Col %		8.0%	2.9%
Environmental conditions (non-pollution/non-biological)			
Count		2	
Col %		2.0%	
Adverse experiences with other development			
Count		5	1
Col %		5.0%	2.9%
Pollution concerns and impacts			
Count		8	1
Col %		8.0%	2.9%
Aesthetic reasons			
Count		4	1
Col %		4.0%	2.9%

(continued)

Table III-52. OCS Development Effects, Valdez

	STUDY YEAR		
	1991	1992	1993
Adverse impact of security zones and traffic zones			
Count		1	2
Col %		1.0%	5.7%
In favor of on-shore development instead of off-shore			
Count		2	
Col %		2.0%	
Status quo - leave it the way it is			
Count			1
Col %			2.9%
Should explore alternative energy sources, conservation			
Count		3	2
Col %		3.0%	5.7%
Adverse impact on subsistence and commercial fishing			
Count		1	
Col %		1.0%	
Distrust of the oil industry			
Count		2	
Col %		2.0%	
Potential damage to renewable resources			
Count		2	2
Col %		2.0%	5.7%
Against any development			
Count		1	
Col %		1.0%	
No benefit to local economy			
Count			1
Col %			2.9%
Fatalistic - no choice in matter			
Count		1	
Col %		1.0%	
Technology needs improvement			
Count		2	

(continued)

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Table III-52. OCS Development Effects, Valdez

	STUDY YEAR		
	1991	1992	1993
Col %		2.0%	
Do not think there is oil in the area			
Count		2	
Col %		2.0%	
Against population increases			
Count		2	2
Col %		2.0%	5.7%

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CHAPTER IV: CHENEGA BAY

by

Jody Seitz and Rita Miraglia

SETTING AND COMMUNITY BACKGROUND

Chenega Bay village sits above Crab Bay, renamed Chenega Bay, on the southeast side of Evans Island, one of a series of small islands in southwest Prince William Sound (Figure I-1). The shores of these islands, and the shore of the mainland, consist primarily of high rocky cliffs, interspersed with small pocket beaches. From the shore, the terrain rises rapidly into marshy uplands and mountains. The shore of the mainland is irregular, dominated by fjords and glaciers. The climate is moderate in temperature, and wet. Temperatures range 44-51 Fahrenheit in summer and 26-40 Fahrenheit in winter. The annual precipitation is 175 inches, including 245 inches of snow (Selkregg 1974).

The historic site of Chenega was on the south end of Chenega Island. Oral history indicates that there were earlier locations of Chenega on other islands in the area, stretching back into prehistory. A population history is presented in Figure IV-1. Founded before the Russians arrived in the late 1700s, Chenega was the longest occupied village in Prince William Sound at the time of the 1964 earthquake. Minutes after the earthquake, a tidal wave destroyed all the buildings in the village except one house and the school. Twenty-three of the 68 residents lost their lives. Survivors were taken initially to Cordova and later resettled in Tatitlek, by the Bureau of Indian Affairs. The present site was settled by residents of that village and their descendants in 1984 (Stratton and Chisum 1986). Chenega Bay is governed by a traditional council under the Indian Reorganization Act (IRA).

Facilities in the village include a school for grades kindergarten through 12, a community center, a dock for boats and float planes, a helicopter landing pad, and a landing strip. In 1994 there were no stores in the community, both of the private households which carried snack foods having terminated their operations during the last two years.

Chenega Bay is not on any road system. There are three gravel roads which run through the village, connecting the community to the harbor and to the airstrip. All incoming freight arrives by water or by air. The mail plane comes to the community three times a week, from Cordova. The community is 55 air miles east of Seward, and 84 miles southwest of Cordova. Charter service is available out of Anchorage, Valdez, or Cordova.

Twenty-five years after the 1964 earthquake, to the day, the T/V *Exxon Valdez* ran aground on Bligh Reef. Days later the community of Chenega Bay watched in horror as their new community was assaulted by oil. According to the final report of the Alaska Oil Spill Commission (1990:71).

> A sense of panic ensued as the people of Chenega Bay watched as the dark, oil-laden waves rolled in. Currents carried the oil through Montague Strait, past Knight Island and into the bays, coves, and passages surrounding the village.

The main body of the slick arrived at Chenega Bay on April 2. Chenegans joined with Cordova fishermen and the Alaska Department of Environmental Conservation in successfully protecting Armin F. Koernig Hatchery in Sawmill Bay against the impending mass of oil (Piper 1993:94-96). In the weeks and months that followed, the community became a site of on-land communications and vessel support. Of all the communities in the oil spill area, the core subsistence harvest areas of Chenega Bay suffered the most damage from the spill and subsequent clean-up efforts.

METHODS AND SAMPLE SIZE

The division had conducted research on patterns of subsistence use in Chenega Bay in the first two years following the community's resettlement, 1984/85 and 1985/86 (Stratton and Chisum 1986). Following the spill, research was conducted to document post-spill subsistence patterns in 1989/90 (Stratton et al. forthcoming) and 1990/91 (Fall 1992a).

The goal in all three years of this study was to interview 100 percent of all eligible households. In the first two years, eligibility was considered six months' residency in the community. In 1993/94, the eligibility criteria was changed to one month's residency. The study year in all three years was the harvest year, April 1 through March 31 of the next year.

For 1991/92, of the 22 eligible households in Chenega Bay, 18 (81.8 percent) were interviewed by Rita Miraglia during two visits to the village, April 7 - 13, 1992, and May 4 - 7, 1992. Two participating households declined to be interviewed for the social effects survey. Three households declined to participate in the study, and one was not contacted (Table IV-1). The average length of harvest surveys was 0.9 hours (Table I-7), and the social effects interview took an additional 0.77 hours to complete (Table I-8).

For 1992/93, 23 out of 26 eligible households were interviewed by Jody Seitz in May and June of 1993. The harvest surveys lasted an average of 0.64 hours (Table I-7). Two households declined to be interviewed. One household was not contacted. Of the 23 households which completed the harvest survey, two declined to participate in the social effects survey (Table IV-1). In the second year, the social effects questionnaire required an average 0.67 hours to administer (Table I-8).

For 1993/94, Jody Seitz and Vicki Vanek interviewed 23 out of 28 eligible households (82.1 percent) for this project during March 29 - April 3, and May 3 - 6 of 1993. Harvest surveys lasted an average of 1.16 hours, and the social effects questionnaire took 0.64 hours (Table I-7, Table I-8). One household declined to participate and four households were not contacted. A total of five participating households declined to complete the social effects survey (Table IV-1). One person chose not to participate because he felt the survey could be used by others to influence the community's future choices regarding development. In this last study year, key respondents were interviewed regarding the effort required to harvest resources in 1993/94.

DEMOGRAPHY

In 1990, according to the US Census, Chenega Bay had a population of 94 people, 70 percent of whom were Alaska Native. Based upon the division sample for 1991/92, 88.9 percent of the households were headed by at least one Alaska Native and the population of the community was 81 people (Table IV-2). The study population was 47 percent male and 53 percent female (Table IV-3, Figure IV-2). The mean length of residency for household heads was 6.4 years, with a maximum of 9.1 years. Of the entire population, 81.8 percent was Alaska Native (Table IV-2).

The 1993 sample of 23 households produced a population estimate for Chenega Bay of 90 people. The population was 51 percent male and 49 percent female, and 28 years of age on average (Table IV-4, Fig. IV-3). The number of Alaska Natives in the community rose in the 1993 sample, though the population percentage remained about the same as the year before (81.3 percent). The actual number of Alaska Native headed households in the community declined as a percentage of all households in the community with the inclusion of the teachers' and health aides' households, and three households located in Sawmill Bay, two of which were accessible by skiff (Table IV-2).

In the spring of 1994, the criteria for eligibility changed to one month's residence in the community. Based on an 82.1 percent sample of 28 eligible households, the estimated community population grew to 101 people, with an average age of 27.4 years, and an average of 7.2 years of residency by household heads. The sample sex ratio was again nearly equal, 49 percent male compared to about 51 percent female (Table IV-5, Fig. IV-4). The percentage of households headed by at least one Alaska Native declined to 73.9 percent, about the same as the percentage of Alaska Natives in the population (73.5 percent) (Table IV-2).

CASH ECONOMY

Over the course of the three-year study, the economy of Chenega Bay was characterized by a few year-round positions and numerous short-term employment opportunities generated by community infrastructure improvement projects. Most stable employment was with the school, the village council, and the village corporation. Jobs provided by the school included teachers' assistants, a janitor, and a maintenance worker. A postal worker received and handled the community mail. Since 1989, oil spill cleanup and monitoring have provided jobs. During the three years of the project, there was employment with a small commercial fishing industry, Chugachmiut housing, construction of a road and airstrip, nearby timber harvest, and a developing mariculture project. The Ship Escort Response Vessel System (SERVS), a division of the Alyeska Pipeline Service Company, also provided occasional short-term employment. Fisheries enhancement and mariculture projects both began contributing to the local economy in 1992, and showed substantial increases in the amount of income generated for the community in 1992 and 1993.

The 1991/92 Study Year

In the first year of the study, just 24.3 percent of employed adults in Chenega Bay were employed on a year-round basis. In the sample, 86.1 percent of all adults reported that they had some employment during the study year. The common pattern was for a person to hold more than one job (average 1.7 per adult) over a period of about 6.6 months, on average (Table IV-6). As shown in Figure IV-5, the category "transportation, communications and utilities" provided the most jobs (20 percent), followed by local government (16 percent), "finance, insurance, and real estate" (which includes Native corporations) (15 percent), and commercial fishing (15 percent). Chenega Bay residents held a total of nine commercial fishing permits in 1991: three halibut permits, three miscellaneous finfish permits, one shrimp permit, and two salmon permits (Area E drift gill net permits) (Commercial Fisheries Entry Commission (CFEC), special report, 8/14/93). The new oyster mariculture project provided several jobs.

According to the 1990 census, per capita income in Chenega Bay in 1989 was $9,211, and median household income was $22,083 (US Bureau of the Census 1992a). Households surveyed for 1991/92 reported a per capita income of $8,183; of this, $6,668 was earned from jobs and the rest was other income (Table IV-7, Table IV-8). On average, Chenega Bay households estimated that they spent $610 per month on food purchases during the study year, with a median monthly expense of $500. The latter represented 20.1 percent of the average household monetary income (Table I-101). Of the 18 interviewed households, 5 (27.8 percent) said that their financial situation during the study year was better than before the *Exxon Valdez* oil spill, 6 (33.3 percent) reported no change, and 4 (22.2 percent) said their financial situation was worse than before the spill. Three households (16.7 percent) provided no assessment (Table I-103).

A set of questions regarding subsistence equipment and expenses was added to the harvest questionnaire for this study year. The mean estimated replacement value of all equipment owned or used by households for subsistence in Chenega Bay was $10,125 (Table IV-9).

The 1992/93 Study Year

In 1992/93, 78.0 percent of the Chenega Bay adult population was employed at some time during the year. Only 20.5 percent of employed adults worked year-round. Similar to the year before, on average, employed adults worked 1.7 jobs over a 6.9 month period. The percent of households which were employed remained about the same, though the average number of jobs per household fell from 3.7 to 3.0 (Table IV-6).

In 1992/93, there was a shift in the industries providing the jobs (Figure IV-5). The category providing most of the jobs in 1991/92, "transportation, communications, and utilities" declined from 20 percent of jobs to 9 percent in 1992/93. Commercial fishing occupied the top spot at 19 percent of all jobs, followed by local government at 17 percent. Respondents reported jobs as stevedores for the timber harvest on Montague Island and as mariculture workers. There were no construction projects in the community in 1992.

Commercial fishing permit records corroborate the observation of greater numbers of jobs in commercial fishing in Chenega Bay during 1992 (CFEC 1993). Thirteen more permits were obtained in 1992 than in 1991 by Chenega Bay residents. The number and type of commercial salmon limited entry permits in the community (two) remained the same. In 1992, one more halibut, two more miscellaneous finfish permits, eight spawn-on-kelp permits, a sablefish permit, and an octopus permit were obtained by residents.

Although new sources of employment appeared in 1992/93, estimated income rose only slightly. Household income averaged $29,984, and the mean per capita income was $8,621. Of that, $6,946 came from jobs, and the rest, $1,674, came from other sources such as the Alaska Permanent Fund Dividend, which was the largest contributor to that type of income (Table IV-10, Table IV-11).

The 1993/94 Study Year

In 1993/94, there were increases in the percentage of jobs reported in the transportation industry, education, and construction (Fig IV-7). The increase in transportation jobs most likely represents the increased need for stevedores to load logships for the timber harvest on Montague Island. Construction work on the new airstrip and road, as well as work upgrading the local housing stock, is represented by the next largest percent increase in jobs. Chenega Bay's mariculture project provided more local job opportunities in the agriculture category. A project to enhance local stocks of chinook and silver salmon also created a small amount of employment.

Nine commercial fishing permits were obtained by residents in 1993: 3 halibut, 1 sablefish, and 5 miscellaneous finfish. Three salmon drift gillnet permits were owned by residents, one more than in 1991, for a total of twelve CFEC permits. Commercial fishing jobs declined to 16 percent of the total.

These changes in employment opportunities in the community were reflected in an increase in the number of employed adults and the average number of jobs they worked during the year. Employment remained seasonal: an estimated 21.7 percent of employed adults worked year-round. (Table IV-6).

Household income increased considerably, to $41,552, which was reflected in a rise in the per capita income to $11,514, of which $7,061 was from income from jobs, and $4,453 was from other sources (Table IV-12). The largest increase in other sources of income was seen in the Native Corporation dividend, estimated at $2,869 per capita for the study year (Table IV-13). On average, eighty-seven percent of households estimated their monthly food expenses were $657. The median expense for food was $500, as in 1991/92. Average estimated food expenses accounted for less of the total household income in 1993/94 (14.5 percent) than in 1991/92 (20.1 percent) (Table I-102).

WILD RESOURCE HARVESTS AND USES: 1991/92

Participation in Hunting Fishing and Gathering Activities

Frequent use of wild resources in Chenega Bay in 1991/92 was indicated by the finding that 68.8 percent of the social effects questionnaire (SEQ) respondents had eaten wild food the day prior to the interview (Table IV-43). During 1991/92 all of the Chenega Bay households in the sample used at least one wild resource. A total of 88.9 percent of the households attempted and were successful in harvesting 45 different resources, not including plants, which were not reported by species. Also, 77.8 percent reported giving away wild resources, and 100 percent reported receiving wild resources. On average, each household used 14.6 different kinds of resources and harvested 9.7 different kinds (Table IV-14). As an assessment of the importance of wild foods to households throughout the year, seven households (43.8 percent) estimated that wild resource harvests provided 1 - 25 percent of their annual use of meat, fish, and poultry; 12.5 percent estimated this percentage at 26 - 50 percent, 12.5 percent estimated 51 - 75 percent, 25.0 percent estimated 76 - 99 percent, and 6.3 percent reported that their entire supply of meat, fish, and poultry was from wild resources (Table I-104). As Figure IV-8, Figure IV-9, and Figure IV-10 show, 1991/92 illustrated increasing subsistence uses and harvests following the lows experienced in 1989/90 and 1990/91.

Sharing of harvests occurred with residents of six communities in addition to Chenega Bay in 1991/92 (Table IV-16). Chenega Bay households received resources from Tatitlek (38.9 percent), Cordova (27.8 percent), Anchorage (5.6 percent), and Whittier (5.6 percent). They gave resources to households in Anchorage (33.3 percent), Seward (16.7 percent), Cordova (11.1 percent), and Port Graham (5.6 percent) . Residents also reported receiving octopus and fish from commercial fishermen whose home communities were unknown.

Of all Chenega Bay residents, 81.8 percent attempted to harvest at least one wild resource, and 80.3 percent processed a wild resource in 1991/92. While 34.8 percent hunted mammals or birds, 57.6 percent participated in the processing of game. Also, 57.6 percent harvested and processed fish, According to our sample, there was no trapping, hunting, or processing of furbearers in Chenega Bay during the study year. Plant gathering was a popular activity, with 72.7 percent of the residents participating in the harvest, and 59.1 percent processed the plants once harvested (Table IV-15).

Harvest Quantities and Composition

The subsistence harvest at Chenega Bay for the period April 1, 1991, through March 30, 1992, of 345.3 pounds per person, was close to the average harvest of 346.2 pounds per person for the two pre-spill years for which data are available (Table IV-17, Fig. IV-11). It was also more than double the per capita harvests for the two preceding years, 1989/90 and 1990/91, of 147.7 and 139.2 pounds, respectively. In interpreting these data, it is important to remember that the community had only just been reestablished at a new location when the two pre-spill estimates were taken. The residents were

exploring their new harvest areas, and some of the younger adults were trying their hands at a subsistence way of life for the first time (Stratton and Chisum 1986). The actual harvest levels immediately before the oil spill (1988/89) may have been higher. For example, Tatitlek, a community with many close kinship and cultural ties to Chenega Bay, had an average harvest of 483 pounds per person for the years 1987/88 and 1988/89. It is thus possible that Chenega Bay's actual harvest for the same years was higher than was documented in 1984 and 1985.

In 1991/92, as in most other post-spill years, the subsistence harvest at Chenega Bay was dominated by fish, at 73.8 percent of the total harvest (254.7 pounds per capita). This compares to 28.8 percent (91.2 pounds per capita) in 1984/85 and 37.7 percent (140.8 pounds per capita) in 1985/86 (Table IV-18, Fig. IV-13, Fig. IV-17, Fig. IV-18).

More than half of the 1991/92 fish harvest was salmon, at 136.8 pounds per capita. Only 14.9 percent of the salmon harvest by weight was removed from commercial catches, and 81.6 percent was caught with subsistence gear, almost entirely with the use of subsistence nets (Table IV-19, Table IV-20, Table IV-21, Table IV-22).

In 1991/92, 11 percent more households fished for salmon than in 1990/91, the lowest year for fishing on record (Figure IV-10). As shown in Table IV-23, 50.0 percent of Chenega Bay households harvested salmon with subsistence methods, 22.2 percent removed salmon from commercial catches, and 11.1 percent caught salmon with rod and reel gear. Freezing was the salmon preservation method used by most Chenega Bay households (61.1 percent), followed by smoking (38.9 percent), salting (16.7 percent), pickling (16.7 percent), canning (16.7 percent), and kippering (5.6 percent). On average, households in Chenega Bay used more than one method for preserving salmon (Table I-106).

Although the estimated harvest of salmon was three and a half times higher than the previous year, and higher than any estimated harvest prior to the oil spill, Chenega Bay residents did not perceive much improvement in their use and harvest of salmon. When asked to compare their harvest and use of salmon to the previous year, 47.1 percent thought it was the same, and 41.2 percent of Chenega Bay households thought it was less than 1990/91. Only two households (11.8 percent) thought that it was higher, but gave no further indication of the reason for the change. Reasons given for less use and harvest were food safety concerns, reduced resource abundance, time constraints, and reduced interest and effort to harvest (Table I-9, Table I-13).

When asked to compare their 1991/92 salmon harvest and use to 1988/89, 78.6 percent of responding Chenega Bay households said it was less, for several reasons: 27.3 percent were concerned about food safety or the condition of the resource; 27.3 percent reported less interest or effort to harvest; 9.1 percent felt it was related to reduced resource abundance, and the same percent related it to time constraints. Economic factors were important for 18.2 percent of respondents (Fig. IV-14, Table I-14).

The harvest of non-salmon finfish at Chenega Bay increased dramatically in 1991/92 to 117.9 pounds per person (Table IV-17). Most of the increased non-salmon finfish use in 1991/92 came from higher harvests of cod and rockfish (Table IV-19). Before the *Exxon Valdez* oil spill, cod and rockfish

provided less than 3 pounds per person and 5 pounds per person, respectively. The 1991/92 cod harvest of 13.2 pounds per person was more than four times the harvest of cod for any previous year for which information is available. The 1991/92 harvest of rockfish (20.4 pounds per person) was more than five times the average harvest of the two pre-spill estimates.

Most fish other than salmon were harvested using subsistence gear (59.8 percent), with 26.0 percent of the harvest removed from commercial catches and 14.3 percent taken with rod and reel (Table IV-24, Table IV-25). About a third of the households (33.3 percent) removed fish other than salmon from commercial catches, 38.9 percent harvested them with subsistence methods, and 38.9 percent fished with rod and reel (Table IV-26).

In comparing their harvest and use of fish other than salmon to 1990/91, the largest percentage of Chenega Bay respondents felt it was less (41.2 percent); 29.4 percent felt it was the same; and 29.4 percent said their use and harvest was more (Table I-15). The primary reason given for an assessment of increased use and harvest was general interest or effort, by 40.0 percent. Twenty percent felt that it was related to increased resource abundance, access to resources, time, or their own economic situation (Table I-17). Most households felt that their harvest and use of non-salmon finfish was less than the year before the spill (57.1 percent) due to time constraints, reduced general interest or effort to harvest, decreased resource abundance, and food safety concerns (Fig. IV-14, Table I-16, Table I-20).

Land mammals represented only 12.4 percent of the total harvest in 1991/92, as compared to about 20 percent prior to the spill (Table IV-18). Sixty seven percent of households attempted to harvest land mammals in 1991/92 (Fig. IV-10). The land mammal harvest of 42.7 pounds per person, consisted almost entirely of deer at 39.9 pounds per person, with black bear providing a minor portion of the total (Table IV-19). Land mammal harvests dropped dramatically the year after the oil spill, and have risen somewhat in each subsequent year (Table IV-17, Fig. IV-12).

Most Chenega Bay respondents deemed their use and harvest of large land mammals at the same level as the year before (43.8 percent), but 37.5 percent felt it was less, citing reduced resource abundance and access and time constraints (Table I-21, Table I-25). When respondents compared their resource use and harvest of 1991/92 to 1988/89 54 percent felt it was less, primarily due to reduced resource abundance (Fig. IV-14, Table I-22, Table I-26).

Alaska Department of Fish and Game (ADF&G) Division of Wildlife Conservation harvest data for deer support the perception that deer abundance in Unit 6 declined after 1987. Deer harvest data collected almost every year since 1965 indicate that deer density peaked between 1986 and 1987. The number of deer killed by hunters increased through 1987 and declined thereafter. Postnatal fawn mortality in 1988, attributed to lengthy periods of rain between May and July of 1988, and winter mortality due to persistent above-average snow depths, exacerbated by human and aircraft disturbance following the *Exxon Valdez* oil spill, was believed to have reduced deer numbers in 1988-89. Severe winters further reduced the population between 1989-90 and 1990-91. In response to the population decline, the Board of Game reduced the bag limit for fall of 1991 from five deer to four, and delayed opening the

antlerless deer season from September 15 to November 1 (ADF&G 1986 - 1993). Thus, regulatory changes as well as deer density were likely factors in the change in the deer harvest in Chenega Bay.

Before the oil spill, between 63 and 75 percent of Chenega Bay households attempted to harvest marine mammals, and harvests ranged between 140 and 150 pounds per person annually (Fig. IV-10, Table IV-17). Marine mammal harvests ranged from 47.3 percent of the total harvest in 1984/85 to 37.5 percent in 1985/86. In the year of the *Exxon Valdez* oil spill, residents harvested the lowest amount of marine mammals recorded before or since (3.6 pounds per person, 2.4 percent of the total harvest). In 1990/91 the harvest rose to 29.3 pounds per capita. In 1991/92, the harvest of 20.8 pounds per person made up 6.0 percent of the total harvest, indicating continued depressed harvests of marine mammals in the community.

The opinion among a substantial number of Chenega Bay households regarding their 1991/92 marine mammal use was that it was less than 1990/91 and less than pre-spill harvests, as a result of decreased populations of harbor seals and sea. Eight households (47.1 percent) said their uses of marine mammals in the study year were lower than in 1990/91, mostly due to decreased resource abundance. Twelve households (85.7 percent) indicated that their harvest of marine mammals during 1991/92 was lower than their pre-spill harvest, again because marine mammal populations have declined lions (Table I-33, Table I-34, Table I-37, Table I-38; Fig. IV-14).

In 1991/92, food safety concerns persisted regarding seals and were reflected in both the harvest assessments and the social effects questionnaire. Only 53.8 percent of the SEQ felt that seal was safe to eat, 23.1 percent (3 households) did not know if it was safe, and the same percentage felt it was not safe to eat (Table IV-44). Some hunters reported that during 1991/92 they were still seeing oiled and sick or injured seals. For example, in describing his take during the study year, a hunter said, "I got some seals that had sores on the skin, and you could see oil on them."

The following were some of the observations Chenega Bay residents made regarding marine mammal abundance. Several respondents described 1991/92 as the worst in their memory for marine mammal hunting:

> This was the poorest year we ever had for seal. I looked for sea lion, but I didn't get any. We look for the female [sea lion]. We like the breast part with milk in it. We have a special name for that, "mamuduk". Usually between November and January the females have milk in the breast. That's considered a delicacy. The best time to eat sea lion is during the cold months. It has a better flavor. Before the spill I got a lot more [sea lion]. I didn't see any porpoise [during the study year].

And a second hunter said:

> Seals are very scarce. When you go out on a boat, you seldom see seals or sea lions like before. Man, the water is just dead. Along eighteen miles of Knight Island where we used to harvest, I didn't see even one. This was the first year that I never ate a seal pup. We're only catching large seals now, they're not as good eating. Now we have to go thirty miles by boat to find seals. We used to get them less than two miles away from the village.

Another hunter who participated in the interagency August shoreline assessment program (ASAP) in 1991 said,

> I went to Icy Bay on the ASAP survey last year. We had some extra time, so I went seal hunting, but I couldn't get any. They were too few and far between. That's unusual. That used to be our main hunting ground.

A seal census conducted jointly by the Alaska Department of Fish and Game and National Marine Fisheries Service every year since the *Exxon Valdez* oil spill confirms a decline in the population of seals locally of about 60 percent since 1984 (Lewis, personal communication, 1993).

When hunters did get seals, the local people were not always confident that the meat was safe to eat. One woman commented, "I'm real leery of eating seals. I like the liver, kidney and intestines. That's where the toxins are."

Harvests of birds and eggs also dropped substantially after the spill (Table IV-17, Figure IV-12). That pattern continued in 1991/92, with a harvest of 0.8 pounds per person, less than a third of prespill harvest estimates. Seventy-nine percent of the respondents indicated that their household's use and harvest of birds was lower in 1991/92 than before the oil spill (Figure IV-14; Table I-40, Table I-41, Table I-43, Table I-44). The main reason given by these respondents was reduced resource abundance

Chenega Bay residents commented frequently on the scarcity of birds in the area:

> We were out for six hours. [We] saw not one at Cape Elrington. [The] oil spill killed them all. Oil is at Bishop Rock, Sleepy Bay, Pt. Helen, and it comes through here. I have been here [in Prince William Sound] 17 years. Now you can run all day and count all the birds on you see on one hand.

At 16.1 pounds per person, the marine invertebrate harvest has increased since 1989, its all time low of 0.3 pounds per person (Table IV-17, Figure IV-12). Prior to the oil spill, the invertebrate harvest was estimated at an average of 6.4 pounds per person. Octopus contributed nearly half of the 1991/92 harvest, at 7.3 pounds per person (Table IV-19), the highest harvest recorded. Since the oil spill, community residents have said that the octopus dens along the shore, where they normally harvested octopus, were empty. This past year, they said, the dens were still empty, but they were able to harvest octopus from deep water (60 fathoms). These octopus are much larger than those found in the nearshore dens, although they are most likely the same species (Charlie Trowbridge, personal communication, 1992). The smaller octopus are preferred by subsistence users.

The clam harvest of 4.7 pounds per person in 1991/92 was much higher than 1989/90 and 1990/91, and slightly higher than reported in 1985/86. However, much of this harvest occurred outside Chenega Bay's local harvest areas. One household reported that they harvested all their shellfish on the Kenai Peninsula. This household's harvest was 21 percent of the total marine invertebrate harvest for Chenega Bay for the study year. It included the entire community harvests of razor clams, bidarkies,

and sea urchins, as well as 12 percent of the butter clam harvest. On the other hand, the community harvest of Tanner crab is probably underestimated. Several people reported receiving Tanner crab from one household which was not interviewed. A number of respondents reported local declines in some species of shellfish, including octopus, chitons, and shrimp.

In 1991/92, 62.5 percent of respondents said that eating bidarkies (chitons) was important to them, however, 60 percent of respondents (six households) said bidarkie harvest areas were not safe, the main reason given was oil pollution or fear of contamination (Table IV-44).

Although two households (11.8 percent) reported higher marine invertebrate uses and harvests compared to 1990/91 and to 1988, the largest percentage of households reported their use of invertebrates was less compared to the previous year and to 1988 (Fig. IV-14, Table I-45, Table I-46). Community residents attributed these declines to the oil spill. The main reasons given for the difference between 1991/92 and 1990/91 were related to resource conditions and concerns about the safety of eating the resource (Table I-49). In comparing the 1991/92 harvest to 1988, the largest percentage of responding households named reduced resource populations as the main reason for the change (70 percent). Thirty percent of responding households listed resource conditions and food safety concerns as the main reason for the difference, compared to 1988, as illustrated by the following comments (Table I-50):

> I won't eat the clams. There are no more octopus along the beach [along Evans Island] and no gumboots.
>
> I'm still worried about contamination. I couldn't find any shrimp in the normal hot spots. I don't even touch shellfish now. I used to be able to get shrimp just a couple hundred yards in front of my cabin. They're not there now.

As further evidence of food safety concerns, a third of the Chenega Bay households in 1991/92, six households, discarded subsistence resources during because of perceived abnormalities (Table I-107). One household discarded salmon, two households discarded marine mammal meat, and three households reported discarding marine invertebrates. In most cases, respondents could not provide an explanation for these abnormalities, but in all cases, the respondents said that they had not observed these conditions before the spill.

The plant and berry harvest of 10.2 pounds per person in 1991/92 was mostly berries at 8.9 pounds per person. Five households (27.8 percent) used plants for medicinal purposes (Table I-109). One household used fireweed as a treatment for indigestion; another used alder during steam baths. Additionally, two households used cranberries and one used chamomile for unspecified medicinal purposes. Unlike other resources, the vast majority of households felt their wild plant harvests were about the same as the previous year (82.4 percent) and as before the spill (85.7 percent) (Table I-51, Table I-52).

The perception of respondents regarding the changes in the overall harvest conforms with the findings described above. All households which participated in the 1991/92 interviews said their subsistence uses were lower in the study year than in 1988 (Fig. IV-14). Five households (29.4 percent) reported that their harvest and use was higher than in 1990/91, and 4 households (23.5 percent) reported that their harvest was roughly the same between the two years. Eight households (47.1 percent) said that their overall subsistence harvest during the study year was lower than in 1990/91 (Table I-57). The primary reasons given for lower use in both comparisons, was reduced resource abundance, followed by time constraints, and food safety concerns (Tables I-61, Table I-62).

WILD RESOURCE HARVESTS AND USES: 1992/93

Participation in Hunting Fishing and Gathering Activities

All Chenega Bay households used at least one resource during 1992/93, as in 1991/92, and the percentage attempting to harvest resources rose from 88.9 percent to 95.7 percent, almost the level documented prior to the oil spill. As in 1991/92, all households reported receiving a wild resource and more households (87.0 percent) reported giving a resource to another household during 1992/93 (Table IV-14). With the exception of gathering plants, the number of people and percentage of the population who harvested or processed wild resources rose slightly for most harvesting and processing activities (Table IV-15).

Harvest Quantities and Composition

The estimated subsistence harvest at Chenega Bay for 1992/93 of 414.4 pounds per person was higher than previous harvest estimates (Figure IV-11) (but recall the qualification regarding pre-spill harvest estimates discussed above). As Figure IV-8 shows, the range of resources used in Chenega Bay has risen since the year of the spill. The average number of resources used per household in 1992/93 of 19.3 kinds approached pre-spill levels.[1] Chenega Bay residents attempted to harvest an average of 11.7 kinds, up from 10.8 the previous year. The average number harvested increased from 9.7 in 1991/92 to 11.6 in 1992/93 and the mean number of resources given away increased from 6.9 the previous year, to 9.3 in 1992/93.

The overall harvest composition in 1992/93 was similar to 1991/92, with a continued domination by fish (Fig. IV-15, Fig. IV-17). Even though the proportion of the harvest contributed by fish declined slightly, the actual harvest of all fish resources rose to 293.3 pounds per capita. The salmon harvest increased from 136.8 pounds per person in 1991/92 to 184.8 pounds per capita in 1992/93.

Tables IV-28, IV-29, and IV-30 illustrate the gear types used by Chenega Bay residents to harvest salmon in 1992/93. Eighty-three percent of all salmon (most sockeyes, chums, cohos, and

[1] Figure IV-8 reports "adjusted" and "full" values for the average number of resources used per household in Chenega Bay because for the two pre-spill years, certain resource harvests were only recorded at a category level, such as "ducks" and "clams." The adjusted values for the post-spill years use the more limited number of resource categories and are more comparable to the pre-spill estimates.

pinks) were harvested with subsistence gear, usually with drift gillnets, although dip nets were also used to catch pink salmon. As in 1991/92, more than half of all households (52.2 percent) used subsistence gear to catch salmon. About a third of the community's households (34.8 percent) went fishing for salmon with rod and reels and 17.4 percent obtained salmon through removal from commercial fishing catches (Table IV-31).

At 108.5 pounds per person, the non-salmon finfish harvest remained about the same as the year before and well above pre-spill estimates (Table IV-27, Figure IV-19). As in 1991/92, the largest contributor was halibut, followed by herring spawn on kelp and red rockfish. The herring spawn-on-kelp harvest increased dramatically over all previous years. The harvest of rockfish was the highest yet recorded and was used by a higher percentage of households than in pre-spill years.

In 1992/93, the harvest of non-salmon fish was divided roughly into thirds by gear type used (Table IV-31, Table IV-32). The largest portion of the harvest was taken with rod and reel (35.5 percent) Removal from commercial catches contributed about one third of the harvest, up from one quarter of the harvest the year before.

The harvest of land mammals rose for the third year in a row, to 69.1 pounds per capita in 1992/93 (Fig. IV-12). As usual, deer constituted the major portion of the harvest. However, hunters commonly reported that they had to make more trips and travel further to harvest deer than used to be the case. Consequently, some hunting efforts have occurred outside the village's traditional harvest areas. This was the first year that harvests of caribou, which are not available locally, were harvested by Chenega Bay; at 13.1 pounds per person, this harvest accounted for most of the increase in land mammal takes over the year before.

In 1992/93, some Chenega Bay hunters continued to associate the decline in deer to the presence of oil on the beaches, as the following comment illustrates.

> They keep telling us it's a bunch of stuff: Could be a hard winter. I mainly get deer. I still blame it on the spill. [There were some] meetings a couple weeks ago - They don't mention the spill. We argue with them. I disagree when they say the oil didn't have anything to do with it. It's the oil. The deer were eating the oiled kelp. There are fewer deer now. Deer are way down since I moved here in '83. [You] used to see them frequently. I didn't even get my limit last year. You have to walk miles and miles before you see them.

When asked why his use of Evans Island has not returned to pre-spill levels, another man responded:

> [The] oil spill. Most all the animals use the ocean for salt, for kelp, and it's still oiled. [The] land otters and mink are dead. I haven't seen an ermine in 4 years.

When respondents were asked about their use of certain areas, the topic of resource availability arose immediately. About Sawmill Bay, one woman asked, "Where the hell's the game?" About the areas proximal to Chenega Bay, Sawmill Bay, Evans Island, Elrington Passage, an older hunter commented:

> I don't hunt any more. There's nothing to hunt - and [isn't physically able. And doesn't know if he would if he was able] It's getting too scary because of the oil. There isn't anything to hunt any more. I've never seen a change like this all my life since the oil spill.

Another hunter commented about Sawmill Bay:

> There's nothing to use here anymore. We looked for steamers. We found little bitty ones. Deer are now quite rare compared to before the *Exxon Valdez* oil spill. Seal used to go to Bettles Island. Now they're few and far between. There are no ducks.

About Evans Island, the same person commented:

> There are no more animals. Seals are gone. Deer is thinning out. Bear are thinning out.

In reference to Elrington Passage, he said, "There are no animals." Here is yet another comment about Sawmill Bay by another hunter:

> There was more animals, more deer, more ducks before the spill. It's quiet. There's no birds or ducks. Once we saw three geese - in the past two weeks. There's a place where we used to get flocks.

Only one individual expressed optimism about his use of Sawmill Bay, saying that his use during 1989 "went straight down," but has progressively come back up." About Evans Island, this person said:

> [It's] getting progressively better - but nothing like Bainbridge Passage. Fleming or Chenega - it's just like a different world over here.

However, his optimism is not shared by many, when asked why his use of these areas had not returned to pre-spill levels, one respondent said simply, "oil." Another respondent also commented:

> I see a lot of money getting ready to be spent on restoration. I don't see any getting done. [There's] still a lot of oil around here to pick up. Everyone seems to be ignoring it. The general attitude is that the spill is over. There's a noticeable difference in the amount of game since the spill. Seems like it started to come back, but it seems to have faltered. Last year I saw scoters, ducks, but this year they seem to have gone away. I don't know if they have a breeding problem or what's happened.

About Elrington Passage: "There is oil on our picnic areas. We were warned not to go there."

In 1992/93, the marine mammal harvest at Chenega Bay was 25.0 pounds per capita, about one-sixth of the harvest prior to the spill (Figure IV-12). In 1992/93, the overwhelming opinion among residents was that harbor seals and sea lions had virtually disappeared from the area, mainly because of the oil spill. The following illustrates the general nature of comments received during fieldwork in the spring of 1993 and echo those recorded in 1991/92.

> We used to go hunting from Chenega Bay, to Bettles Island, about two miles from here. After the oil spill I never saw any seals out here. I've had to go 20 miles with a boat at times to get seal. I don't see many. I sometimes see five seals in one day. They're really scarce now. I haven't eaten seal for two months. I have friend who is a sharpshooter, makes every shot count. So he's the one that brings me seal meat now and then. He was the only one who did any seal hunting after the oil spill. But he catches mostly large seals, not any pups. The last two years he never got any pups near Chenega anyway. If they go up to Icy Bay there'd be some pups up there, but not like they used to in the old days.

Birds contributed 1.8 pounds per capita to the total harvest in 1992/93, still below the levels estimated before the oil spill (Fig. IV-12). Of the birds harvested, the main contributor by weight were ducks, the harvests of which remained below than pre-spill estimates. Although the number of geese and grouse taken was higher than before the oil spill, some of these harvests occurred during trips outside the Chenega Bay area for other resources. Residents commented frequently on the scarcity of birds in the area:

> We were out for six hours. [We] saw not one at Cape Elrington. [The] oil spill killed them all. Oil is at Bishop Rock, Sleepy Bay, Pt. Helen, and it comes through here. I have been here [in Prince William Sound] 17 years. Now you can run all day and count all the birds on you see on one hand.

Another household's comments about the abundance of birds locally in Sawmill Bay, Evans Island and Elrington Passage were as follows:

> We don't see the animals. We used to have eagles perched out here (Evans Island), and grouse, and porcupine. (About Elrington Passage) It's dead. You don't see the little brown ducks - The ones that are different. They're gone - [There are] fewer seagulls and seals.

One person differentiated among places where bird hunting was better than others:

> The further you get from the North end of the islands [which were oiled] the better the bird hunting.

The marine invertebrate harvest was 13.8 pounds per capita in 1992/93 (Fig. IV-12). Decreases from the year before occurred in harvests of octopus, Tanner crab, and razor clams. The harvest and use of shrimp remained below pre-spill estimates. In 1992/93, only 30.4 percent of households used shrimp, compared to 93.8 percent of households in 1985/86. The decline locally is reflected in these comments by a Chenega Bay resident who set out a shrimp pot in Sawmill Bay in 1992/93: "We didn't get enough shrimps to make a feed. A big set was six shrimp."

In 1992/93, the most popular marine invertebrate harvesting activity at Chenega Bay was clam digging. The highest percent of households went clam digging since the oil spill, 47.8 percent, but remained far below the level of involvement by households in 1985/86 (87.5 percent). Residents

commented frequently in 1992/93 that they did not trust the local clams due to contamination by oil. Many areas within the immediate vicinity of the community were oiled, as well as the bays and passages between Evans Island and neighboring Latouche, Elrington, and Bainbridge Islands. Some residents were able to harvest invertebrates outside the areas affected by the oil spill. One household went to the Kenai Peninsula to find marine invertebrates, and commented that, "We're not getting them [gumboots] here. We get more in English Bay and Port Graham."

Chenega Bay residents continued to be worried about the safety of harvesting clams locally. As one household said, "You don't just pick clams anyplace anymore." They continued:

> The clams in the area I'm afraid to use. We went to Port Ashton to get as far away from oil as possible, and not go too far away. We're not gonna eat clams from the oiled areas. They have the highest level of hydrocarbons of all of them. I still hunger for clams, shrimp, crab, octopus, gumboots. Nothing in this world will replace them. To finally be living in my ancestors' area and be able to teach my kids, but now it's all gone. We still try, but you can't replace them.

In 1992/93, one resident said he quit claming [here] since the oil spill. He goes where the oil did not hit, and explained:

> We don't trust them. Clams are dangerous anyway. At best you have to watch them. We won't touch anywhere near the spill. There was no claming in here last year. From here to Latouche - is off limits to anything below high tide. Where I used to clam there are big patches of what looks like pavement.

In 1992/93 one resident said he threw away 2.5 gallons of clams when, after he dug them, the holes filed up with oil. They harvested 4.0 gallons on Montague Island, outside that oiled area, and ate them. In 1992/93 there were also fears of lingering contamination in resources from bioremediation around the shores of Bettles Island, near Evans Island and Chenega Bay:

> I'm afraid to go. They did bioremediation on Bettles Island. They cleaned boats right here in the harbor. If clumps of oil from Bettles could make it here, so could the chemicals. We were scared to use the area. The oil is still there - but you gotta use common sense.

In 1992/93 another household reported discarding clams because they looked unusual:

> I didn't use them. They didn't look right after I cooked them. I found some last year with sores on them.

Plants contributed 11.5 pounds per capita to the total harvest in 1992/93. Again, berries contributed the largest portion of the harvest (Figure IV-12) (Table IV-27).

WILD RESOURCE HARVESTS AND USES: 1993/94

Participation in Hunting, Fishing, and Gathering Activities

As in the preceding two years, participation in the use of wild resources by Chenega Bay residents was very high in 1993/94. All of the households in the community used wild resources and received them (Table IV-14). The percentage of households which harvested or attempted to harvest a resource increased from 88.9 percent in the first year of the study to 95.7 percent of households in 1993/94. The percent of households which gave away at least one wild resource rose from 77.8 percent in the first year, to 87.0 percent in the second year, to 91.3 percent in the last year. On an individual level, 84.3 percent of the residents of Chenega Bay participated in harvesting at least one resource during 1993/94, very similar to the previous two years (Table IV-15).

Harvest Quantities and Composition

In 1993/94, the per capita harvest of 274.8 pounds was the lowest in the three years of this study and lower than pre-spill levels, although it was above the per capita harvests documented for the two-year period immediately following the grounding of the tanker *Exxon Valdez* (Table IV-17, Fig. IV-11). The average number of resources used per household also dropped, to 16.4, below pre-spill levels (Table IV-14, Fig. IV-8).

For 1993/94, 80 percent of the households felt that their use of all wild resources was less than the year before, an assessment which concurs with the harvest amounts estimated for the community. The explanation the most households offered for their decreased use of wild resources was reduced resource populations (Table I-95, Table I-97).

Twelve households assessed the difference in their household's use of all wild resources in 1993/94 compared to the year before the *Exxon Valdez* oil spill. Of these, 91.7 percent felt their overall resource use was less than in 1988/89 (Fig. IV-14). Again, the vast majority of responding households attributed this decrease to the effects of the oil spill (Table I-95, Table I-97, Fig. XXIV-2).

At the category level in 1993/94, there were notable declines in harvests of salmon and land mammals (Table IV-17, Fig. IV-12). The composition of the harvest in pounds usable weight continued the pattern noted since the oil spill of an emphasis on fish, with marine mammals and land mammals next in importance, followed by marine invertebrates, plants, and birds (Table IV-18, Fig. IV-16, Fig. IV-17).

In 1993/94, the harvest of fish was 197.2 pounds per person. Of this, residents of Chenega Bay harvested 108.7 pounds of salmon, the lowest harvest of the three-year study. Chenega Bay residents reported that the run of sockeyes, pinks, and cohos near the community were very poor. According to one man there were just two good fishing days in July. This was reflected in a 1993/94 sockeye harvest which was a little more than half that taken in 1992/93 in pounds per person (Table IV-19; Table IV-35).

Tables IV-36, IV-37 and IV-38 illustrate the gear types used to catch salmon in 1993/94. Removal from commercial catches contributed much less to the salmon harvest in 1993/94 than in either of the previous two years.

In 1994, 68.4 percent of responding households felt their salmon harvest and use was less than the previous year (1992/93) (Table I-63). Of those who said their use of the resource was less, 47 percent attributed the difference to lack of time available to harvest; 38.5 percent felt it was related to resource abundance; another 38.5 percent of responding households cited economic factors related to sharing, need, expenses, or means to harvest the resources; 30.8 percent said it was related to effort or interest in using the resources; and 15.4 percent gave reasons related to access to the resource such as regulatory restrictions, weather, and competition (Table I-65).

In comparing their 1993/94 uses of salmon to 1988/89, 75.0 percent felt it was less. The reason for less given by 66.7 percent of responding households was abundance, and 44.4 percent also felt it was related to economic factors such as those cited above (Fig. IV-14, Table I-63, Table I-65).

In 1993/94, the per capita harvest of 88.5 pounds of non-salmon finfish represented 32.2 percent of the total community harvest of all wild resources. The per person harvest declined for the second year in row. Much of the change can be attributed to a decline in the herring spawn on kelp harvest. The spring 1993 herring return produced the smallest number of miles of shoreline spawn ever recorded in Prince William Sound. Another portion of the difference was due to a smaller harvests of halibut (Table IV-17, Table IV-18, Fig. IV-12).

Over the course of the three-year study, the amount of fish other than salmon caught with subsistence gear declined successively, while the reliance on removal from commercial catches increased. In 1993/94, half of the harvest of fish other than salmon was removed from commercial catches, compared to one-third the year before, and 26.0 percent in 1991/92 (Table IV-36, Table IV-43). In 1993/94, the percentage of households which fished for fish other than salmon declined from 69.6 percent of households in 1992/93, to 56.5 percent of households, well below pre-spill levels, but higher than 1989/90 and 1990/91 (Fig. IV-10).

Half of the surveyed households felt their 1993/94 harvest and use of non-salmon finfish was about the same as the preceding year, 44.4 percent felt it was less, and 5.6 percent said it was more (Table I-67). Of those that said it was less, half thought it was due to reduced abundance and another 50.0 percent gave economic reasons (such as decreased money available for fuel) for the difference (Table I-69). Comparing 1993/94 to 1988/89, 72.7 percent of responding households generally agreed that their 1993/94 harvest and use of non-salmon finfish was lower, and the main explanations they gave were reduced abundance (50 percent), concerns about food safety (37.5 percent), and economic factors (37.5 percent) (Fig. IV-14, Table I-67, Table I-69).

The 1993/94 harvest of land mammals of 18.3 pounds per capita was a 74 percent decline from 1992/93 and the lowest harvest to date for this category. The deer harvest declined from 46.4 pounds per capita in 1992/93 to 14.6 pounds per capita in 1993/94. The average household harvest fell from 3.7

deer to about 1.2 deer per household. This decline was not due to a lack of effort; approximately the same percentage attempted to harvest land mammals in four out of the six preceding years (Fig. IV-10). One household again went caribou hunting outside Prince William Sound and was successful.

The bag limit in Unit 6 was four deer, but hunters from the community did not come close to getting their bag limits in 1993. According to local hunters, light snow cover and the increased deer hunting effort by non-local hunters led to difficulty in harvesting deer. The light snow cover allowed deer to remain hidden in the forests rather than go down to the beaches to feed. However, even hunters who hiked above the beaches on Elrington, Evans, Latouche, and Knight Islands, said they encountered less deer.

Consistent with these reduced harvest levels, 85 percent of the households said they had used less land mammals in 1993/94 than the preceding year, mainly because of reduced resource abundance, followed by factors related to access to resources such as regulatory constraints, weather, and competition, and economic reasons (Table I-71, Table I-73). Also, 83.3 percent of surveyed households felt their 1993/94 use of land mammals was lower compared to 1988/89 (Table I-71, Table I-73, Fig. IV-14), and attributed the change to less abundance of land mammals, although some also pointed to access problems, and economic factors.

The 1993/94 marine mammal harvest of 34.9 pounds per capita was an increase over the year before but remained far below the community's harvests prior to the *Exxon Valdez* oil spill (Fig. IV-12). Out of eight successful marine mammals hunters in 1993/94, one said he harvested more than the year before and one said his harvest was about the same. The remaining six hunters said they harvested less in 1993/94 than the previous year. Among the reasons given for less harvest compared to the year before were fewer harbor seals, less time to hunt, poor weather, and economic constraints (Table I-79, Table I-81). Seven of those interviewed said their marine mammal uses were less than prior to the oil spill, and that the change was related to the spill. The changes included reduced numbers of seals, the decline in pups, and less sharing than prior to the spill. Several hunters related the decline in the seal population to the continued presence of oil in the water, as reflected by the following comments:

> We used to go to Pleiades for sea lions. If we'd see a seal we'd shoot it then stop at Pleiades and catch a sea lion.

When asked if the change was oil spill related, he answered:

> I don't know if there's something in the water. The seals took off and the sea lions disappeared too.

Another man commented:

> I don't know if they're going to come back to the oiled areas. The oil may be killing what they eat.

The harvest of birds in 1993/94 of 1.5 pounds per person was similar to 1992/93 and more than twice the harvest in 1991/92. Although the last two years of the three year study witnessed higher harvests than those of 1989/90 through 1991/92, the 1993/94 harvest of birds and eggs remained less than half the amounts recorded before the oil spill (Fig. IV-12).

Both use and participation in bird hunting grew during the three year study, but remained below levels documented prior to the spill. In the two pre-spill years for which there is data, between 69 and 75 percent of households in Chenega Bay used bird resources. In 1991/92 only 38.9 percent of households used birds, compared to 1992/93 and 1993/94, when over half of all households used birds (Fig. IV-9). Sixty-three percent of households in 1984/85 and 81 percent in 1985/86 went bird hunting. Bird hunting by households increased progressively from 27.8 percent in 1991/92 to 43.5 percent of households in 1993/94, but remained far below levels documented before the oil spill (Fig. IV-10).

Eight households assessed their use of birds prior to the oil spill, and in accordance with these observed trends, 87.5 percent of them reported lower levels of uses of birds in 1993/94 compared to 1988/89 (Fig. IV-14, Table I-83, Table I-85). The reason to which these household unanimously attributed their lower bird uses was a decline in resource abundance.

In 1993/94, the per person harvest of 14.9 pounds of marine invertebrates was between the 1991/92 harvest of 16.3 pounds, and the 1992/93 harvest of 13.8 pounds per person, and higher than the average pre-spill estimates (Table IV-17, Fig. IV-12). Some of this is due to successively higher percentages and amounts of the harvest of octopus being obtained from the commercial fisheries. However, another important manner in which residents were able to have larger harvests sustained over the three years of this study was through their effort to harvest invertebrates such as clams or chitons in other productive areas outside the spill area.

The use of marine invertebrates rose from 22 percent of households in 1989 to 91.3 percent of households in 1993/94, about the same as in the mid-1980s. Prior to the spill between 63 and 88 percent of households tried to harvest marine invertebrates. In 1989 only 11 percent of households engaged in this activity. By 1993/94, three quarters of all households attempted to harvest invertebrates, all of which were successful (Fig. IV-9, Fig. IV-10)..

Ninety-two percent of twelve households judged their marine invertebrate uses in 1993/94 to be less compared to the year before the spill (Fig. IV-14). For most of the responding households (81.8 percent) resource abundance was thought to be the primary reason, though 63.6 percent of them also felt that suspect resource conditions and concerns about food safety had influenced their household's uses of invertebrates in 1993/94 (Table I-87, Table I-89).

The 1993/94 community harvest of wild plants was 8.0 pounds per person. This was less than either preceding year but remained above pre-spill levels (Fig. IV-9, Fig. IV-10).

DISCUSSION: CHANGES IN SUBSISTENCE HARVEST AND USE PATTERNS

The study documented a notable increase in resources harvests in Chenega Bay in 1991/92 and 1992/93 compared to the first to post-spill years of 1989/90 and 1990/91. In 1993/94, the community's total per capita harvest fell to below the lowest pre-spill per capita estimate (Table IV-17, Fig. IV-11). It remained higher than Cordova, its more populous neighbor to the east, or the Kenai Peninsula communities of Kenai (see Chapter VI), Cooper Landing (91.5 pounds per capita in 1990-91), and Hope (110.7 pounds per capita in 1990-91) (Seitz et al. 1992).

Increases in the harvest of some resources may represent adjustments to the present scarcity of others, such as marine mammals, in the area of Chenega Bay. Some resources were taken from outside the normal community harvest areas. For example, marine invertebrates were harvested on the Kenai Peninsula in 1991/92 and 1992/93. In 1992/93 and 1993/94, caribou were harvested from the Alaska Peninsula. A Chenega Bay resident reported that instead of hunting for birds in their normal areas, around Evans Island, in San Juan Bay and Elrington Passage, some hunters went to unoiled areas near Tatitlek and to the north end of Montague island. The farther residents have to go to harvest resources, the likelihood is that fewer households will participate due to lack of transportation, the high cost of transportation, lack of knowledge of other areas, uncertain weather, and lack of time to travel to other areas. As long as Chenega Bay residents are uneasy about using resources locally available, they will continue to seek them elsewhere when possible.

Beginning with the first year of this study, the composition of the harvest differed dramatically from that recorded prior to 1989, and those changes persisted over the next two years. One change is that residents of Chenega Bay harvested more fish and less marine mammals (Figure IV-12). In 1984/85, fish represented only 28.8 percent of the total harvest and 37.7 in 1985. From 1991/92 through 1993/94, fish made up between 70.8 and 73.8 percent of the total subsistence harvest.

Participation in commercial fishing activities in 1991/92 and 1992/93 contributed substantial amounts of some resources, such as octopus, halibut, and rockfish, to the total harvest. From 1991 through 1993, the amount of non-salmon finfish removed from commercial fisheries contributed an increasing proportion of the category harvest over the three year period of this study, from about one quarter of the harvest of non-salmon finfish in 1991/92, to one third of the harvest of this category of resource in 1992/93; to over one-half (51.0 percent) of the resource category harvest in 1993/94.

Salmon was the second largest contributor to the harvest prior to the oil spill, and since 1989 has been the largest contributor (Figure IV-17; Table IV-18). Part of the general increase in salmon use and harvest may be attributable to changes in the seasons and bag limits for salmon, which were made just prior to the oil spill. Regulatory changes regarding subsistence salmon allowed for easier access and legal reporting of higher harvests for 1988/89. Effective in 1988, residents with commercial permits could also hold subsistence permits (Stratton 1990; Stratton et al. forthcoming). Another reason for the

sustained increase in the salmon harvest may be in response to decreases in the harvest of other wild foods such as marine mammals.

However, there were also declines in Prince William Sound salmon runs during the three study years. In 1992, pink salmon returns to all hatcheries were well below forecasts. Hatchery coho and chum salmon returns were also below forecasts (Donaldson et al. 1993:2). The Prince William Sound Area commercial salmon harvest for 1992 was the smallest since 1978, with 11.4 million fish harvested (Donaldson et al. 1993:1). The 1993 Prince William Sound commercial salmon harvest of 9.3 million fish was even smaller than that of 1992, and the smallest on record since 1978 (Donaldson et al. 1994).

The changes in the use and harvest of marine mammals have been the most dramatic and sustained of all the resource changes at Chenega Bay since the spill. Average harvests before the oil spill, based on 1984/85 and 1985/86 surveys were about 145 pounds per person annually, making up about a third to a half of the total harvest. The year of the *Exxon Valdez* oil spill residents harvested the lowest amount of marine mammals, 3.6 pounds per person, recorded before or since. Harvests for the next four years were between 20.8 pounds and 34.9 pounds per capita, representing between 6.0 percent to 20.1 percent of the total harvest (Table IV-18, Fig. IV-12, Fig. IV-17). Decreased use of marine mammals by Chenega Bay for the past five years was related to two easily identified factors, scarcity and contamination concerns.

The deer harvest has declined substantially at Chenega Bay and is of major concern to the community, especially combined with the marine mammal population declines. These two categories of resources provided a majority (about 60 percent or more) of pre-spill harvests. However, in the three years of this study, their combined contribution ranged from 22.7 percent to 19.3 percent of the total harvest (Table IV-17, Fig. IV-12).

THE *EXXON VALDEZ* OIL SPILL AND CHENEGA BAY

This final section will discuss some of the study findings regarding possible long-term effects of the *Exxon Valdez* oil spill on Chenega Bay. Selected findings from the social effects questionnaire will be used. These are summarized in Tables IV-43 through IV-52. For a review of oil spill events in Chenega Bay in 1989 see Impact Assessment Inc. (IAI) (1990c). For further discussion of the effects of the spill on Chenega Bay, see McNabb's (1993) Summary of Key Respondent Interviews conducted as part of the Minerals Management Service (MMS) sponsored Social Indicators Study.

Foods and Food Safety

In each successive year, the percentage of Chenega Bay respondents stating they ate wild food the day prior to the interview declined, from 68.8 percent in 1991, to 47.6 percent in 1992; to 33.3 percent in 1993. Those who stated that the wild food eaten the day before was a main part of the meal

also declined, from 68.8 percent in 1991, to 16.7 percent in 1993. The percentage of respondents who also harvested the food themselves declined each successive year, as did the percentage who said it had been harvested by a relative in the same household (Table IV-43).

Over the three-year study, concerns about the safety of consuming wild resources persisted in Chenega Bay. When asked if they had been adequately informed about food safety, in 1991, 71.4 percent of respondents answered "no." This declined to 42.9 percent in 1994. During all three years, a high percentage of respondents felt that chiton harvest areas were not safe. The percentage of respondents who felt that this was due principally to oil pollution grew in 1992 and 1993. In all three years, about 60 percent of respondents felt that clams were not safe to eat, according to 30 percent in 1991, because of oil contamination. This increased to two-thirds of those who felt clams were unsafe to eat in 1992 and 1993 (Table IV-44).

Each year the percentage of respondents who ate seal meat declined, from 81.3 percent in 1991 to 55.6 percent of respondents in 1993. The percentage who felt seals from their harvest areas were not safe reached a peak 1992, and declined in 1993 (Table IV-44). That particular period corresponds to the discovery of viral hemorrhagic septicemia (VHS) in herring and the announcement by the Tatitlek IRA Council of a policy not to eat marine resources because of the presence the virus and the failure of the herring to spawn in the spring of 1993, when interviews were being conducted (see Chapter V).

The percentage of respondents who said the oil spill affected their participation with children in harvesting or processing wild foods declined each year, from 50.0 percent in 1991, to 28.6 percent in 1993 (Table IV-46). In all there study years, a relatively large percentage of Chenega Bay respondents reported that less sharing of wild foods had occurred in the community since the oil spill: 57.1 percent for 1991, 43.8 percent for 1992, and 45.5 percent for 1993 (Table IV-47). These were among the highest percentages of all study communities, and most similar to Tatitlek and Nanwalek (Fig. I-7).

In 1992/93, a health official affiliated with the community expressed interest in establishing protocols for sending in samples of animals with abnormalities. She felt the clinic would be a useful outlet for wild food safety information. She answered the harvest survey for the first time since the spill because she had spent a lot of time with a recently deceased elder, and was beginning, she said, to realize that the spill is affecting her children's future as well as her own.

Significance of Place

When asked why they live in Chenega Bay, the most frequent responses in all three years were the beauty of the area and personal freedoms. Those who said hunting and fishing was one of the reasons they live in Chenega Bay represented 87.5 per cent of respondents in 1991 and 66.7 percent in 1993. In 1991, half of all respondents said they liked living in the community less than before the spill, compared to 30.8 percent in 1993. In 1991, one third of respondents felt the main reason for liking their community less was oil contamination of the environment; another third felt that there was more dissension in the community than prior to the spill, and 16.7 percent felt there had been an increase in

drug and alcohol use since 1989. However, when asked if they would rather live in another community, in all years most said no. Furthermore, in the first study year, 87.5 percent of respondents said they expected to be living in the region when they were old, as did 76.2 percent in 1993 and 66.7 percent in 1993 (Table IV-49).

In 1991/92, 46.7 percent of Chenega Bay SEQ respondents said they felt confident they would be able to continue to use the places they now use for hunting, fishing, and gathering. This percent declined to 33.3 percent in the second study year, but bounced up to 50 percent in 1993/94. When asked if they would continue to live in Chenega Bay if no wild foods were available, half of the respondents said no in 1991/92, as did 38.1 percent in 1992/93 and 27.8 percent in 1993/94 (Table IV-49).

Leadership

In 1993, seventy percent of respondents felt that the influence of elders in the community had decreased over the last five years. The highest percentage, 36.4, felt it was due to there being fewer elders in the community because they had passed away. The percentage of respondents who belonged to a native corporation declined from 81.3 percent in 1991 to 61.1 percent in 1993. Most belonged to Chugach Alaska Corporation. A declining percentage of respondents voted in each of the three years, from 92.3 percent in 1991, to 72.7 percent in 1993. Most of those surveyed were members of Chenega Corporation, though there were also members of Tatitlek Corporation Eyak Corporation, Salamatof Native Association, and Port Graham Corporation in the community. Most voted in the last village corporation election (Table IV-48).

CONCLUSION

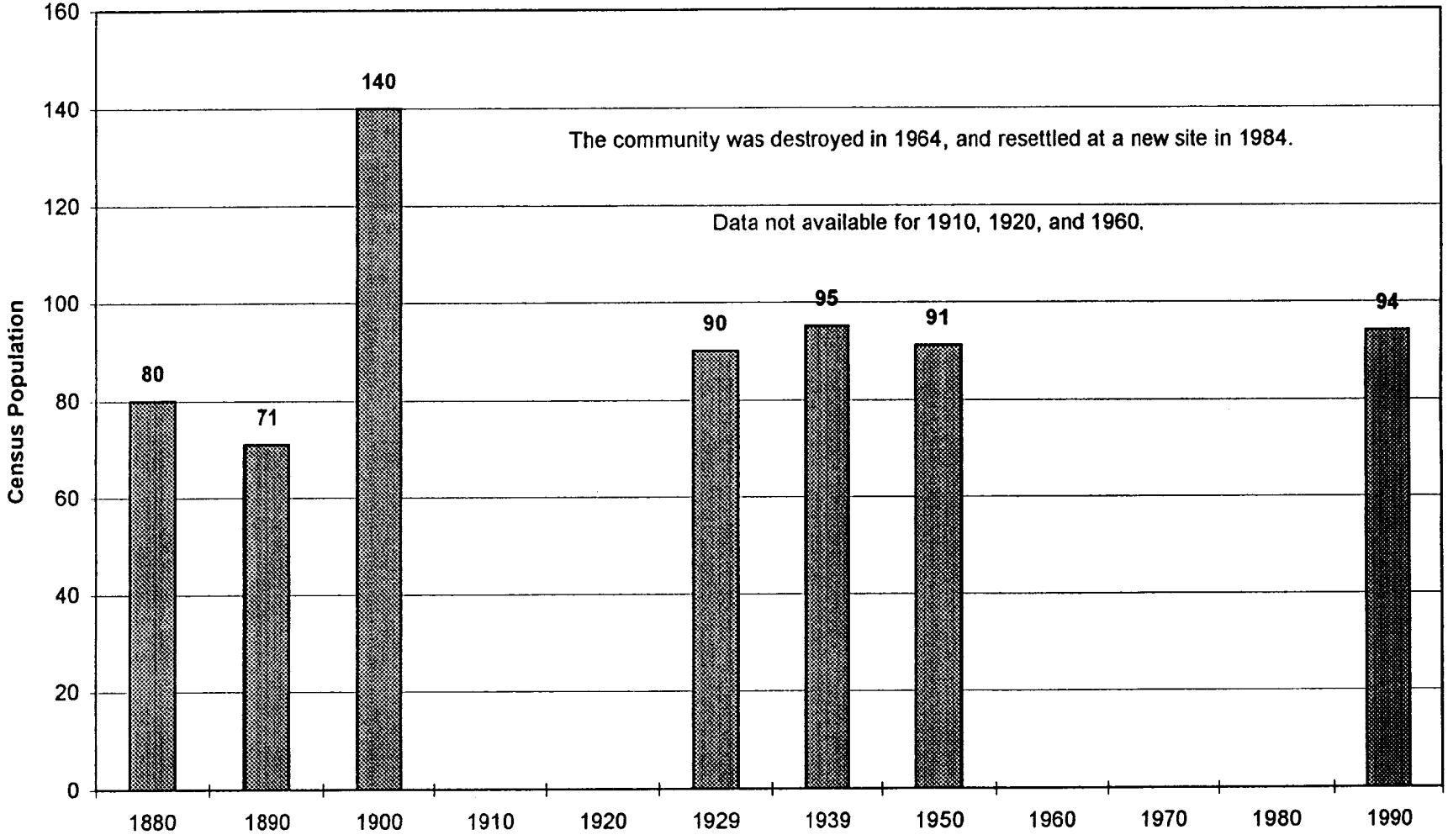
The study found that despite increased subsistence harvests and levels of participation in subsistence activities compared to the first two years after the *Exxon Valdez* oil spill, effects of the spill remained in Chenega Bay into 1994. Harvests of key resources such as land mammals, birds, and marine mammals, remained well below averages for the first two years of the community's resettlement (Table IV-17). There has been a significant shift away from harvests of marine mammals and land mammals to fish (Fig. IV-17). Increases in harvest levels since the spill have come at the cost of increased effort and expense. In some cases, harvesters have traveled from the village's traditional areas to find resources. In part, this is due to continuing concerns about oil contamination, but it is also a result of declines in key resources. While the average number of resources used per household rose steadily through 1992/93, this index of subsistence uses dropped in 1993/94 to below per spill averages (Fig. IV-8).

Also, for virtually every resource category, community residents stated that their levels of use remained below pre-spill levels (Fig. IV-14). Every household interviewed in the first and second years of the study, and all but one in 1993/94, said that their overall levels of subsistence uses were lower than before the spill (Fig. IV-14, Table I-95). Nine of the 11 households that reported lowered harvests in 1993/94 cited the spill as the cause, with spill-related reductions in resource populations being the most commonly cited explanation (Table I-98). In all years, a majority of Chenega Bay respondents to the social effects questionnaire said that populations of deer, harbor seals, sea lions, sea ducks, and clams had declined since before the spill (Table IV-45).

Results of the social effects questionnaire supported the findings from the harvest study regarding the continuing impacts of the spill on Chenega Bay. More than any other community, concerns about oil contamination persist in this village (Fig. I-4, Fig. I-5). Few Chenega Bay residents in any of the three study years felt adequately informed about the safety of subsistence foods, generally a lower percentage than any other community in any year (Fig I-9). Many households perceived that less sharing has occurred since the spill (Fig. I-7), and about a third or more of Chenega Bay respondents believed the spill has affected children's participation in subsistence activities, among the highest levels of any study community (Fig. I-6). For the first study year, half the Chenega Bay respondents to the social effects questionnaire said they liked living in the community less since the spill, the highest percentage recorded for any community that year and the second highest for any community in the study's three years (Fig. I-8). Although this percentage dropped in the second and the third years, it remained relatively high.

In short, the *Exxon Valdez* oil spill continues to affect the subsistence activities of Chenega Bay. Nevertheless, the people of the community continue to try to pursue their way of life, with added harvest efforts and participation in the subsistence restoration process (see Chapter I). Key to their success will be a recovery of essential subsistence resources to pre-spill levels of abundance and a renewed sense that the resources of Prince William Sound are again healthful and safe to use.

Figure IV-1. Chenega and Chenega Bay Census Population, 1880 - 1990



Sources: Rollins 1978; Alaska Department of Labor 1991; Stratton and Chisum 1986:14

Table IV-1. Sample Participation: Chenega Bay 1992, 1993, and 1994

VARIABLE	1992 TOTAL HOUSEHOLDS	1993 TOTAL HOUSEHOLDS	1994 TOTAL HOUSEHOLDS
Estimated Household Structures	25	26	30
Non-Residential Structures	0	0	0
Estimated Households	25	26	30
Interview Goal:	25	26	30
Households Interviewed	18	23	23
Failed to Contact/Unavailable	1	1	4
Refused	3	2	1
Vacant Residential Structures	0	0	0
Seasonal Households*	0	0	1
Non-Resident Household **	3	0	1
Invalid Households and Vacancies	3	0	2
Total Households Attempted:	25	26	30
Refusal Rate:	14.29%	8.00%	4.17%
Non-Perm. HH Rate ("Vacancy Rate"):	12.0%	0.0%	6.7%
Interview Goal (Percentage)	72.0%	88.5%	76.7%
Social Effects Surveys Completed	16	21	18
Total Permanent Households	22	26	28
Percentage Interviewed	81.82%	88.46%	82.14%
Percentage of Total Households	100.00%	100.00%	100.00%
Interview Weighting Factor	1.222	1.130	1.217

NOTES:

* Seasonal households are households which maintain a permanent domicile elsewhere where they spend the majority of their time.

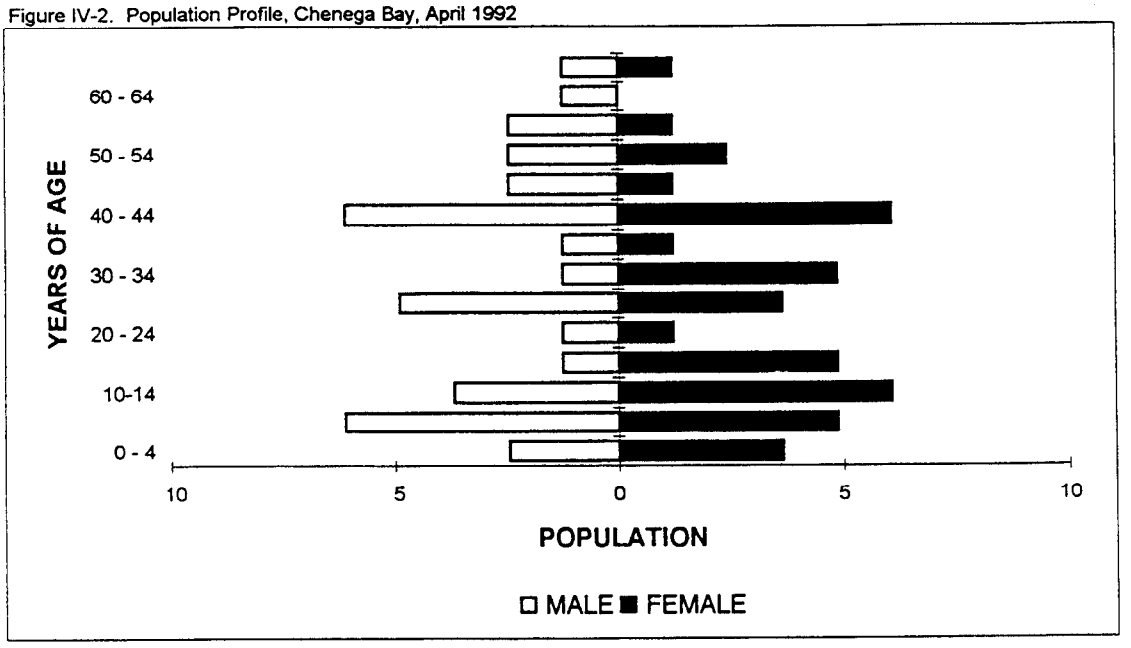
** Non-resident households are households which were not present during the study year or which were resident less than the required number of months.

Table IV-2 . Demographic Characteristics of Households, Chenega Bay, April 1992, April 1993, and April 1994

Characteristics	1991/92	1992/93	1993/94
Sampled Households	18	23	23
Number of Households in the Community	22	26	28
Percentage of Households Sampled	81.82	88.46	82.14
Household Size			
Mean	3.67	3.48	3.61
Minimum	1	1	1
Maximum	6	7	6
Sample Population	66	80	83
Estimated Community Population	80.67	90.43	101.04
Age			
Mean	28.72	27.96	27.38
Minimum	3.04	0.21	0.11
Maximum	68.84	69.84	70.84
Median	27.74	26.89	23.34
Length of Residency - Population			
Mean	6.37	6.70	6.40
Minimum	0.63	0.21	0.11
Maximum	9.13	10.13	11.13
Length of Residency - Household Heads			
Mean	6.55	7.46	7.15
Minimum	0.63	0.63	0.63
Maximum	9.13	10.13	11.13
Sex			
Males			
Number	37.89	46.35	49.91
Percentage	46.97	51.25	49.40
Females			
Number	42.78	44.09	51.13
Percentage	53.03	48.75	50.60
Alaska Native			
Households (Either Head)			
Number	19.56	21.48	20.70
Percentage	88.89	82.61	73.91
Estimated Population			
Number	66.00	73.48	74.26
Percentage	81.82	81.25	73.49

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992, 1993, and 1994.

Figure IV-2. Population Profile, Chenega Bay, April 1992



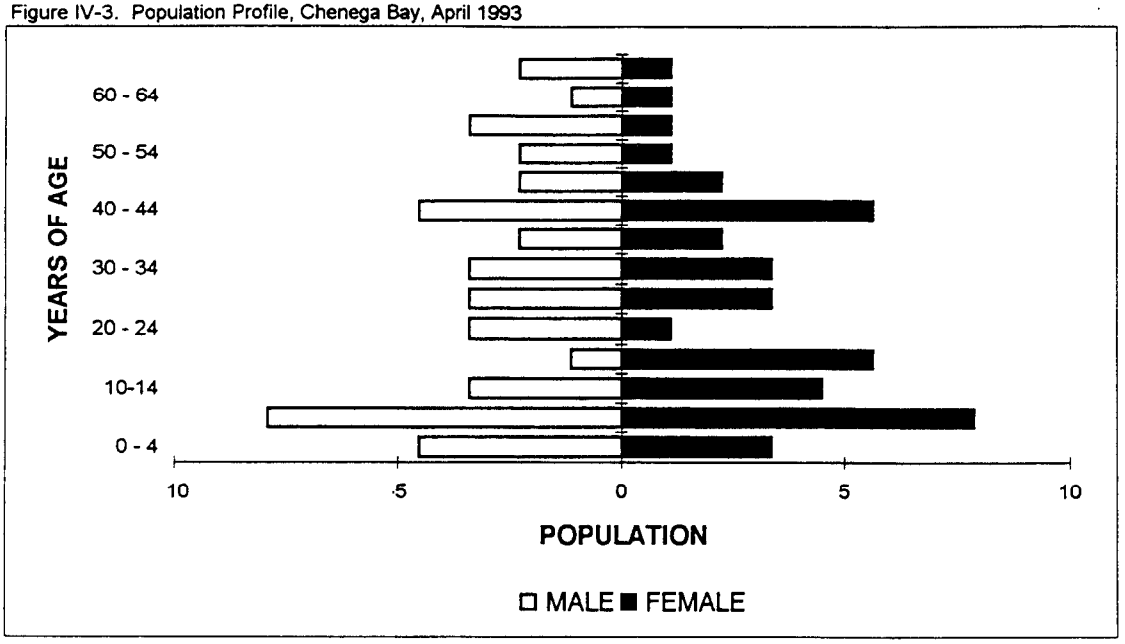
SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table IV-3. Population Profile, Chenega Bay, April 1992

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	2.44	6.45%	6.45%	3.67	8.57%	8.57%	6.11	7.58%	7.58%
5-9	6.11	16.13%	22.58%	4.89	11.43%	20.00%	11.00	13.64%	21.21%
10-14	3.67	9.68%	32.26%	6.11	14.29%	34.29%	9.78	12.12%	33.33%
15 - 19	1.22	3.23%	35.48%	4.89	11.43%	45.71%	6.11	7.58%	40.91%
20 - 24	1.22	3.23%	38.71%	1.22	2.86%	48.57%	2.44	3.03%	43.94%
25 - 29	4.89	12.90%	51.61%	3.67	8.57%	57.14%	8.56	10.61%	54.55%
30 - 34	1.22	3.23%	54.84%	4.89	11.43%	68.57%	6.11	7.58%	62.12%
35 - 39	1.22	3.23%	58.06%	1.22	2.86%	71.43%	2.44	3.03%	65.15%
40 - 44	6.11	16.13%	74.19%	6.11	14.29%	85.71%	12.22	15.15%	80.30%
45 - 49	2.44	6.45%	80.65%	1.22	2.86%	88.57%	3.67	4.55%	84.85%
50 - 54	2.44	6.45%	87.10%	2.44	5.71%	94.29%	4.89	6.06%	90.91%
55 - 59	2.44	6.45%	93.55%	1.22	2.86%	97.14%	3.67	4.55%	95.45%
60 - 64	1.22	3.23%	96.77%	0.00	0.00%	97.14%	1.22	1.52%	96.97%
65 - 69	1.22	3.23%	100.00%	1.22	2.86%	100.00%	2.44	3.03%	100.00%
70 - 74	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
75 - 79	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
80 - 84	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
85 - 89	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
90 - 94	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
95 - 99	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
100 - 104	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
Missing	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
TOTAL	37.89	46.97%		42.78	53.03%		80.67	100.00%	

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Figure IV-3. Population Profile, Chenega Bay, April 1993



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table IV-4. Population Profile, Chenega Bay, April 1993

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	4.52	9.76%	9.76%	3.39	7.69%	7.69%	7.91	8.75%	8.75%
5-9	7.91	17.07%	26.83%	7.91	17.95%	25.64%	15.83	17.50%	26.25%
10-14	3.39	7.32%	34.15%	4.52	10.26%	35.90%	7.91	8.75%	35.00%
15 - 19	1.13	2.44%	36.59%	5.65	12.82%	48.72%	6.78	7.50%	42.50%
20 - 24	3.39	7.32%	43.90%	1.13	2.56%	51.28%	4.52	5.00%	47.50%
25 - 29	3.39	7.32%	51.22%	3.39	7.69%	58.97%	6.78	7.50%	55.00%
30 - 34	3.39	7.32%	58.54%	3.39	7.69%	66.67%	6.78	7.50%	62.50%
35 - 39	2.26	4.88%	63.41%	2.26	5.13%	71.79%	4.52	5.00%	67.50%
40 - 44	4.52	9.76%	73.17%	5.65	12.82%	84.62%	10.17	11.25%	78.75%
45 - 49	2.26	4.88%	78.05%	2.26	5.13%	89.74%	4.52	5.00%	83.75%
50 - 54	2.26	4.88%	82.93%	1.13	2.56%	92.31%	3.39	3.75%	87.50%
55 - 59	3.39	7.32%	90.24%	1.13	2.56%	94.87%	4.52	5.00%	92.50%
60 - 64	1.13	2.44%	92.68%	1.13	2.56%	97.44%	2.26	2.50%	95.00%
65 - 69	2.26	4.88%	97.56%	1.13	2.56%	100.00%	3.39	3.75%	98.75%
70 - 74	0.00	0.00%	97.56%	0.00	0.00%	100.00%	0.00	0.00%	98.75%
75 - 79	0.00	0.00%	97.56%	0.00	0.00%	100.00%	0.00	0.00%	98.75%
80 - 84	0.00	0.00%	97.56%	0.00	0.00%	100.00%	0.00	0.00%	98.75%
85 - 89	0.00	0.00%	97.56%	0.00	0.00%	100.00%	0.00	0.00%	98.75%
90 - 94	0.00	0.00%	97.56%	0.00	0.00%	100.00%	0.00	0.00%	98.75%
95 - 99	0.00	0.00%	97.56%	0.00	0.00%	100.00%	0.00	0.00%	98.75%
100 - 104	0.00	0.00%	97.56%	0.00	0.00%	100.00%	0.00	0.00%	98.75%
Missing	1.13	2.44%	100.00%	0.00	0.00%	100.00%	1.13	1.25%	100.00%
TOTAL	46.35	51.25%		44.09	48.75%		90.43	100.00%	

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Figure IV-4. Population Profile, Chenega Bay, April 1994

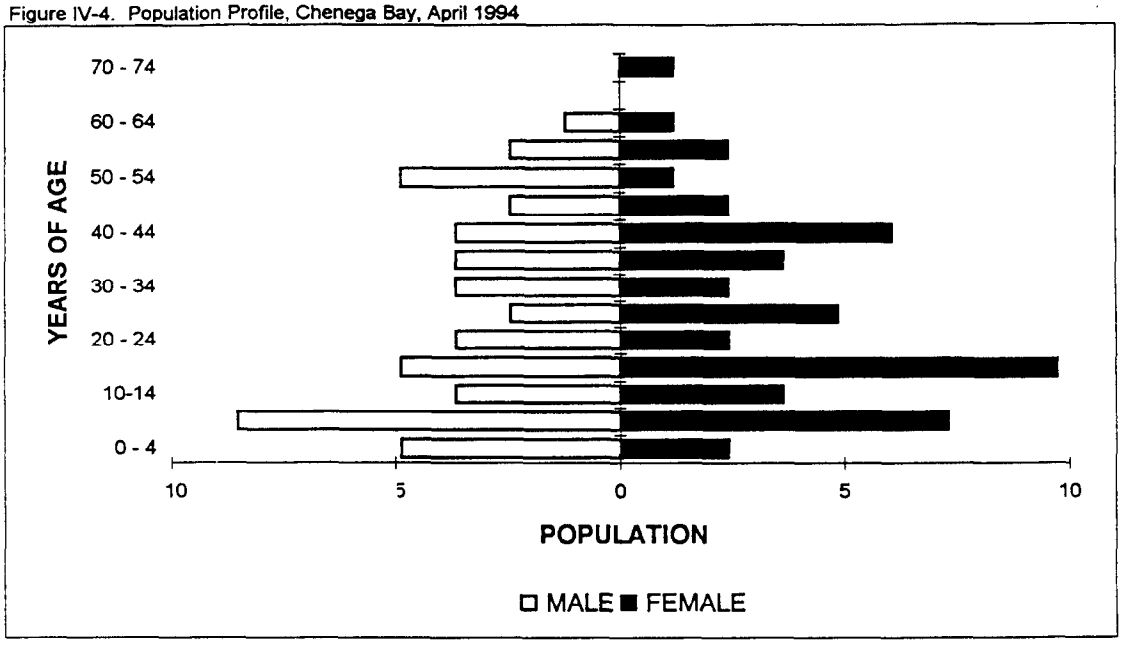


Table IV-5. Population Profile, Chenega Bay, April 1994

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	4.87	9.76%	9.76%	2.43	4.76%	4.76%	7.30	7.23%	7.23%
5-9	8.52	17.07%	26.83%	7.30	14.29%	19.05%	15.83	15.66%	22.89%
10-14	3.65	7.32%	34.15%	3.65	7.14%	26.19%	7.30	7.23%	30.12%
15 - 19	4.87	9.76%	43.90%	9.74	19.05%	45.24%	14.61	14.46%	44.58%
20 - 24	3.65	7.32%	51.22%	2.43	4.76%	50.00%	6.09	6.02%	50.60%
25 - 29	2.43	4.88%	56.10%	4.87	9.52%	59.52%	7.30	7.23%	57.83%
30 - 34	3.65	7.32%	63.41%	2.43	4.76%	64.29%	6.09	6.02%	63.86%
35 - 39	3.65	7.32%	70.73%	3.65	7.14%	71.43%	7.30	7.23%	71.08%
40 - 44	3.65	7.32%	78.05%	6.09	11.90%	83.33%	9.74	9.64%	80.72%
45 - 49	2.43	4.88%	82.93%	2.43	4.76%	88.10%	4.87	4.82%	85.54%
50 - 54	4.87	9.76%	92.68%	1.22	2.38%	90.48%	6.09	6.02%	91.57%
55 - 59	2.43	4.88%	97.56%	2.43	4.76%	95.24%	4.87	4.82%	96.39%
60 - 64	1.22	2.44%	100.00%	1.22	2.38%	97.62%	2.43	2.41%	98.80%
65 - 69	0.00	0.00%	100.00%	0.00	0.00%	97.62%	0.00	0.00%	98.80%
70 - 74	0.00	0.00%	100.00%	1.22	2.38%	100.00%	1.22	1.20%	100.00%
75 - 79	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
80 - 84	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
85 - 89	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
90 - 94	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
95 - 99	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
100 - 104	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
Missing	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
TOTAL	49.91	49.40%		51.13	50.60%		101.04	100.00%	

Source: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table IV-6. Employment Characteristics, Chenega Bay, 1991/92, 1992/93, and 1993/94

Characteristics		1991/92	1992/92	1993/94
ADULTS				
Total		52.56	56.52	66.96
Employed				
	Number	45.22	44.09	56.00
	Percentage	86.05	78.00	83.64
Jobs				
	Number	75.78	74.61	112.00
	Mean	1.68	1.69	2.00
	Minimum	1	1	1
	Maximum	7	5	7
Months Employed				
	Mean	6.59	6.85	7.43
	Minimum	1	1	1
	Maximum	12	12	12
	Year-Round	24.32	20.51	21.74
HOUSEHOLDS				
Total		22.00	26.00	28.00
Employed				
	Number	20.78	24.87	25.57
	Percentage	94.44	95.65	91.30
Jobs per Employed Household				
	Mean	3.65	3.00	4.38
	Minimum	1	1	1
	Maximum	8	8	14
Employed Adults				
	Mean	2.18	1.77	2.19
	Minimum	1	1	1
	Maximum	4	3	5

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, *Household Survey*, 1992, 1993, and 1994.

Table IV-7. Community, Household, and Per Capita Income, All Sources and by Employer Type, Chenega Bay, 1991/92

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$660,105.60	$30,004.80	$8,183.13
Earned Income	$537,893.28	$24,449.69	$6,668.10
Agriculture, Forestry, and Fishing	27,775.00	1,262.50	344.32
Agriculture	0.00	0.00	0.00
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	27,775.00	1,262.50	344.32
Hatchery/Enhancement	0.00	0.00	0.00
Commercial Fishing	27,775.00	1,262.50	344.32
Hunting/Trapping	0.00	0.00	0.00
Mining	0.00	0.00	0.00
Construction	4,888.89	222.22	60.61
Manufacturing	0.00	0.00	0.00
Cannery	0.00	0.00	0.00
Other Manufacturing	0.00	0.00	0.00
Logging/Timber	0.00	0.00	0.00
Transportation, Communications, and Utilities	140,490.78	6,385.94	1,741.62
Trade	4,277.78	194.44	53.03
Wholesale	0.00	0.00	0.00
Retail	4,277.78	194.44	53.03
Finance, Insurance, and Real Estate	192,820.83	8,764.58	2,390.34
Services	AMT UNK	AMT UNK	AMT UNK
Government	167,640.00	7,620.00	2,078.18
Federal	7,333.33	333.33	90.91
State	AMT UNK	AMT UNK	AMT UNK
Local	160,306.67	7,286.67	1,987.27
Local Government	109,511.11	4,977.78	1,357.58
Local Education	50,795.56	2,308.89	629.70
Unknown	AMT UNK	AMT UNK	AMT UNK
Other Income	$122,212.32	$5,555.11	$1,515.03

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table IV-8. Community, Household, and Per Capita Other Income by Source, Chenega Bay, 1991/92

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$122,212.32	$5,555.11	$1,515.03
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	0.00	0.00	0.00	0.00
Adult Public Assistance	0.00	0.00	0.00	0.00
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	5.56	4,400.00	200.00	54.55
Longevity Bonus	0.00	0.00	0.00	0.00
Social Security	0.00	0.00	0.00	0.00
Workman's Comp./Insurance	0.00	0.00	0.00	0.00
Energy Assistance	0.00	0.00	0.00	0.00
Supplemental Security Income	0.00	0.00	0.00	0.00
Food Stamps	0.00	0.00	0.00	0.00
Unemployment	5.56	4,145.78	188.44	51.39
Native Corporation Dividend	33.33	9,460.00	430.00	117.27
Dividend/Interest	0.00	0.00	0.00	0.00
Child Support	0.00	0.00	0.00	0.00
Rental Income	0.00	0.00	0.00	0.00
Veteran Disability	0.00	0.00	0.00	0.00
Equipment Leasing	0.00	0.00	0.00	0.00
Rental Assistance	0.00	0.00	0.00	0.00
Fishing Permit Leasing	0.00	0.00	0.00	0.00
Per Diem	0.00	0.00	0.00	0.00
Disability	0.00	0.00	0.00	0.00
Alaska Permanent Fund Dividend	61.11	48,815.43	2,218.88	605.15
Weatherization	0.00	0.00	0.00	0.00
Veteran's Assistance	0.00	0.00	0.00	0.00
Investments/Stocks/Bonds	0.00	0.00	0.00	0.00
Bureau of Indian Affairs Grants	0.00	0.00	0.00	0.00
Housing Allowances/Off-Base Allowances	0.00	0.00	0.00	0.00
Women, Infants, and Children Program	0.00	0.00	0.00	0.00
General Assistance Grant	0.00	0.00	0.00	0.00
Foster Care	0.00	0.00	0.00	0.00
Inheritance	0.00	0.00	0.00	0.00
Contest Winnings	0.00	0.00	0.00	0.00
Capital Gains	0.00	0.00	0.00	0.00
ASRC Elder Trust	0.00	0.00	0.00	0.00
Other	22.22	55,391.11	2,517.78	686.67

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Figure IV-5. Employment by Industry, Chenega Bay, 1991/92

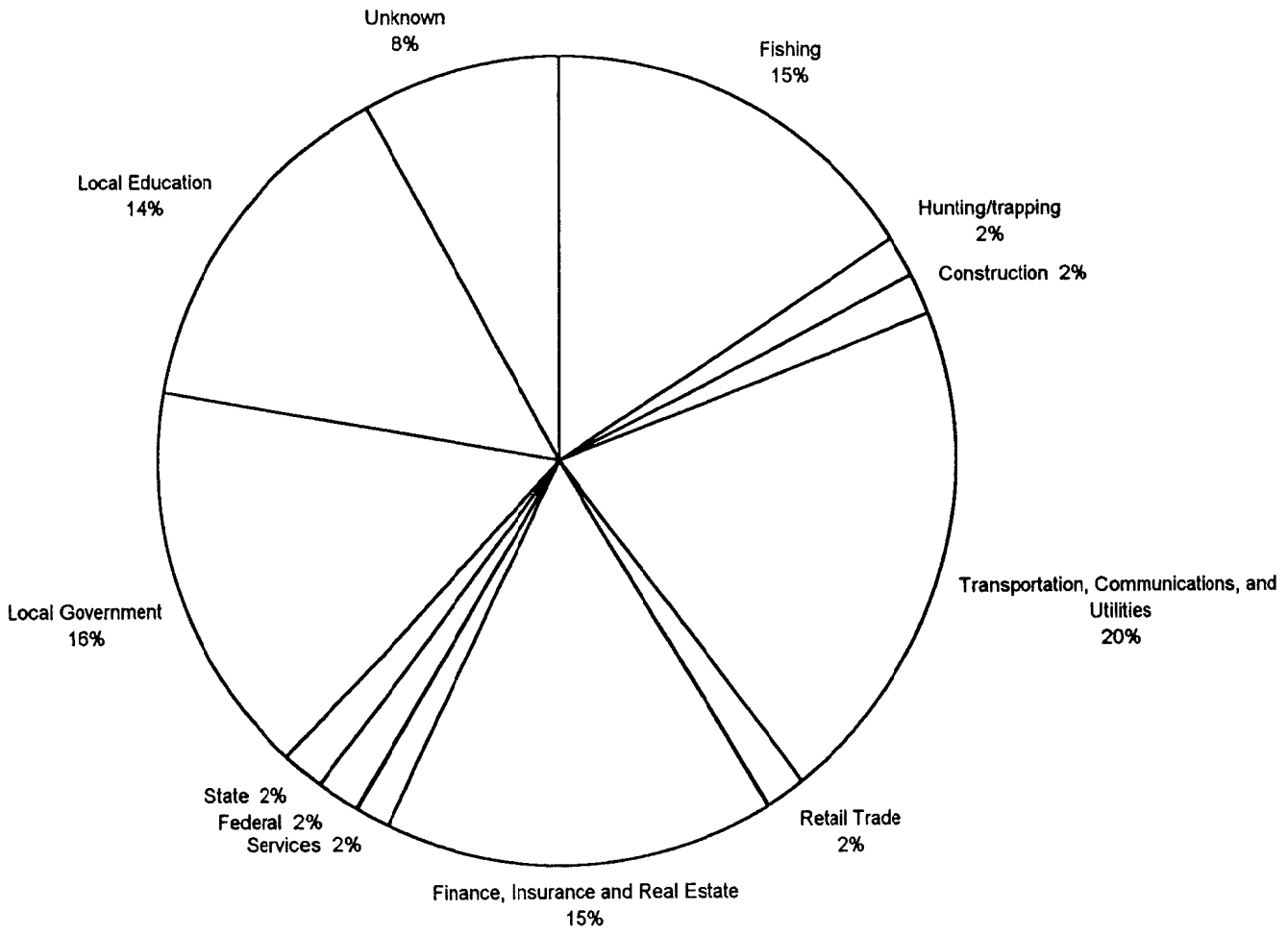


Table IV-9. Subsistence Equipment Expenses and Use, Chenega Bay, 1991/92

Sampled Households = 18
Community Households = 22

Equipment Type	Equipment Count		Equipment Cost			Use of Equipment for Subsistence			HH Sharing of Equipment	
			Replacement	Annual Fuel	Annual Cost		Cost			
	Total.	HH Mean	HH Mean	HH Mean	HH Mean	% of Cost	Total	HH Mean	% Borrowing	% Lending
All Equipment			$18,479.55	$427.08	$1,445.27	49.75	$222,740.68	$10,124.58	55.56	50.00
Skiff with outboard	12.22	0.56	$2,916.67		$144.44	71.23	$47,972.22	$2,180.56	11.11	22.22
Outboard Motor	1.22	0.06	$44.44	$16.67	$5.56	100.00	$1,466.67	$66.67	0.00	5.56
Boats with inboard	7.33	0.33	$11,944.44	$388.19	$733.33	49.63	$142,648.61	$6,484.03	5.56	5.56
Skiff, manually-propelled	2.44	0.11	$233.33		$11.11	85.23	$4,583.33	$208.33	5.56	5.56
ATV/Motorcycle	1.22	0.06	$255.56	$22.22	$13.89	100.00	$6,416.67	$291.67	0.00	5.56
Tackle			$975.00		$215.00	26.00	$6,807.78	$309.44	11.11	27.78
Pots	73.33	3.33	$358.33		$27.94	100.00	$8,498.11	$386.28	16.67	16.67
Fishing Nets	2.44	0.11	$196.77		$0.00	100.00	$4,328.96	$196.77	33.33	11.11
Guns	35.44	1.61	$658.33				$14,483.33	$658.33	5.56	16.67
Traps	18.33	0.83	$1.67				$36.67	$1.67	0.00	0.00
Ammunition					$152.61		$3,357.44	$152.61	0.00	0.00
Miscellaneous Camping Equipment			$11.11				$244.44	$11.11	0.00	5.56
Fishing/Hunting Camps	1.22	0.06	$4.17			20.00	$18.33	$0.83	0.00	5.56
Freezer	15.89	0.72	$343.33				$7,553.33	$343.33	16.67	16.67
Miscellaneous freezing supplies					$68.83		$1,514.20	$68.83	0.00	0.00
Canner	7.33	0.33	$37.50				$825.00	$37.50	11.11	5.56
Miscellaneous canning supplies					$46.44		$1,021.78	$46.44	0.00	0.00
Vacuum sealer/Sealer	3.67	0.17	$105.56				$2,322.22	$105.56	0.00	5.56
Miscellaneous sealer supplies					$11.11		$244.44	$11.11	0.00	0.00
Smoke house/dry rack	7.33	0.33	$393.33				$8,653.33	$393.33	11.11	16.67
Miscellaneous smoker supplies					$15.00		$330.00	$15.00	0.00	0.00
Miscellaneous processing equipment	0.00	0.00	$0.00				$0.00	$0.00	5.56	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992.

Table IV-10. Community, Household, and Per Capita Income, All Sources and by Employer Type, Chenega Bay, 1992/93

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$779,594.60	$29,984.41	$8,620.52
Earned Income	$628,177.41	$24,160.67	$6,946.19
Agriculture, Forestry, and Fishing	86,812.12	3,338.93	959.94
Agriculture	2,783.13	107.04	30.78
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	84,028.99	3,231.88	929.17
Hatchery/Enhancement	2,260.87	86.96	25.00
Commercial Fishing	81,768.12	3,144.93	904.17
Hunting/Trapping	0.00	0.00	0.00
Mining	0.00	0.00	0.00
Construction	0.00	0.00	0.00
Manufacturing	40,243.48	1,547.83	445.00
Cannery	0.00	0.00	0.00
Other Manufacturing	0.00	0.00	0.00
Logging/Timber	40,243.48	1,547.83	445.00
Transportation, Communications, and Utilities	9,326.09	358.70	103.13
Trade	1,271.74	48.91	14.06
Wholesale	0.00	0.00	0.00
Retail	1,271.74	48.91	14.06
Finance, Insurance, and Real Estate	196,560.00	7,560.00	2,173.50
Services	72,498.55	2,788.41	801.67
Government	221,465.44	8,517.90	2,448.90
Federal	0.00	0.00	0.00
State	AMT UNK	AMT UNK	AMT UNK
Local	221,465.44	8,517.90	2,448.90
Local Government	67,914.71	2,612.10	750.98
Local Education	153,550.72	5,905.80	1,697.92
Unknown	AMT UNK	AMT UNK	AMT UNK
Other Income	$151,417.20	$5,823.74	$1,674.32

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table IV-11. Community, Household, and Per Capita Other Income by Source, Chenega Bay, 1992/93

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$151,417.20	$5,823.74	$1,674.32
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	0.00	0.00	0.00	0.00
Adult Public Assistance	4.35	1,130.43	43.48	12.50
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	4.35	4,313.74	165.91	47.70
Longevity Bonus	0.00	0.00	0.00	0.00
Social Security	4.35	6,782.61	260.87	75.00
Workman's Comp./Insurance	4.35	3,391.30	130.43	37.50
Energy Assistance	21.74	2,598.59	99.95	28.73
Supplemental Security Income	0.00	0.00	0.00	0.00
Food Stamps	0.00	0.00	0.00	0.00
Unemployment	13.04	11,424.17	439.39	126.33
Native Corporation Dividend	69.57	28,560.70	1,098.49	315.82
Dividend/Interest	0.00	0.00	0.00	0.00
Child Support	0.00	0.00	0.00	0.00
Rental Income	4.35	6,217.39	239.13	68.75
Veteran Disability	0.00	0.00	0.00	0.00
Equipment Leasing	0.00	0.00	0.00	0.00
Rental Assistance	0.00	0.00	0.00	0.00
Fishing Permit Leasing	0.00	0.00	0.00	0.00
Per Diem	4.35	11,304.35	434.78	125.00
Disability	0.00	0.00	0.00	0.00
Alaska Permanent Fund Dividend	86.96	62,128.70	2,389.57	687.00
Weatherization	0.00	0.00	0.00	0.00
Veteran's Assistance	0.00	0.00	0.00	0.00
Investments/Stocks/Bonds	4.35	13,565.22	521.74	150.00
Bureau of Indian Affairs Grants	0.00	0.00	0.00	0.00
Housing Allowances/Off-Base Allowances	0.00	0.00	0.00	0.00
Women, Infants, and Children Program	0.00	0.00	0.00	0.00
General Assistance Grant	0.00	0.00	0.00	0.00
Foster Care	0.00	0.00	0.00	0.00
Inheritance	0.00	0.00	0.00	0.00
Contest Winnings	0.00	0.00	0.00	0.00
Capital Gains	0.00	0.00	0.00	0.00
ASRC Elder Trust	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Figure IV-6. Employment by Industry, Chenega Bay, 1992/93

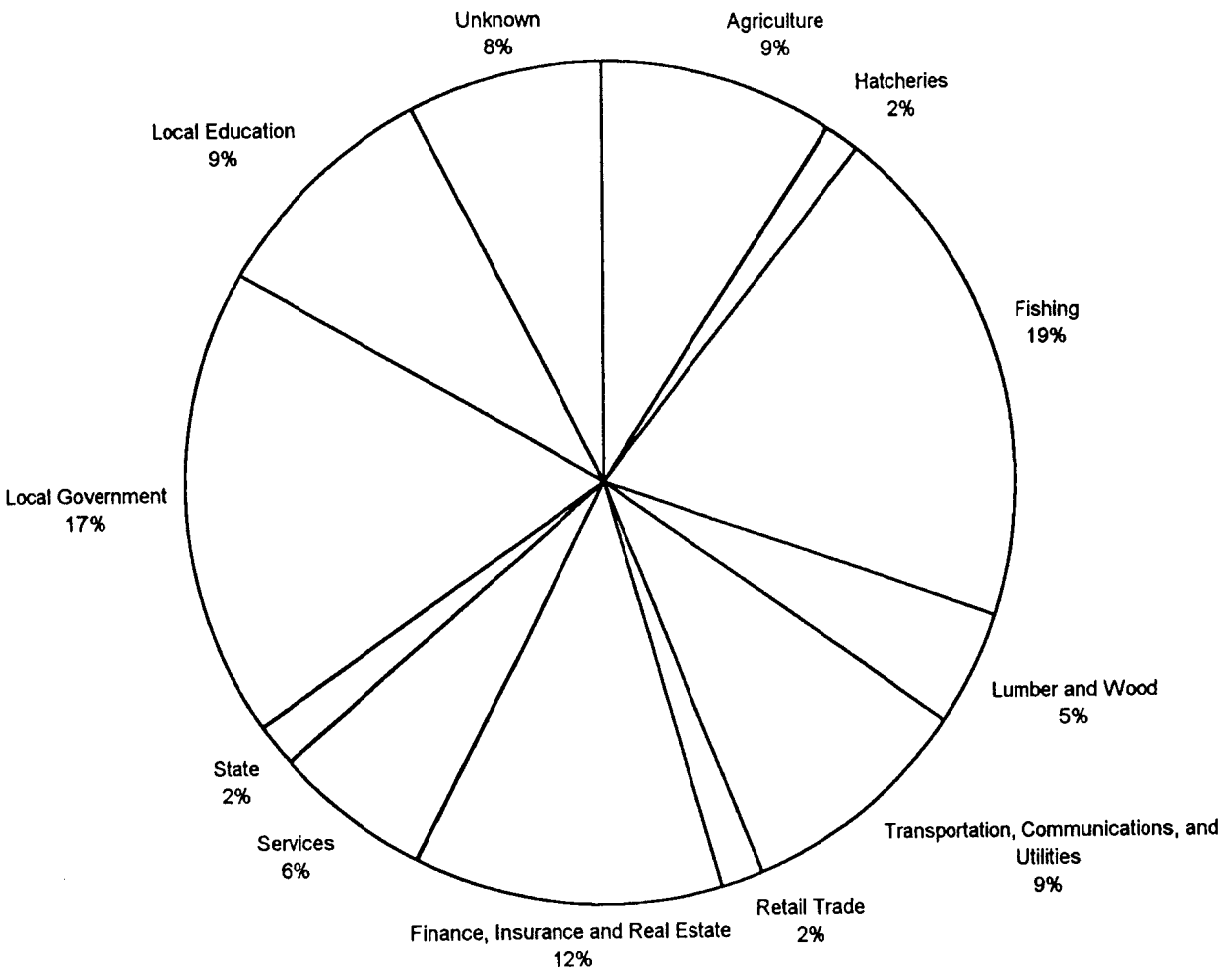


Table IV-12. Community, Household, and Per Capita Income, All Sources and by Employer Type, Chenega Bay, 1993/94

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$1,163,446.67	$41,551.67	$11,514.32
Earned Income	$713,497.10	$25,482.04	$7,061.29
Agriculture, Forestry, and Fishing	178,915.22	6,389.83	1,770.68
Agriculture	15,019.57	536.41	148.64
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	163,895.65	5,853.42	1,622.03
Hatchery/Enhancement	17,043.48	608.70	168.67
Commercial Fishing	145,878.26	5,209.94	1,443.72
Hunting/Trapping	973.91	34.78	9.64
Mining	0.00	0.00	0.00
Construction	99,562.32	3,555.80	985.34
Manufacturing	0.00	0.00	0.00
Cannery	0.00	0.00	0.00
Other Manufacturing	AMT UNK	AMT UNK	AMT UNK
Logging/Timber	0.00	0.00	0.00
Transportation, Communications, and Utilities	41,553.62	1,484.06	411.24
Trade	0.00	0.00	0.00
Wholesale	0.00	0.00	0.00
Retail	0.00	0.00	0.00
Finance, Insurance, and Real Estate	151,367.39	5,405.98	1,498.04
Services	54,782.61	1,956.52	542.17
Government	187,315.94	6,689.86	1,853.82
Federal	AMT UNK	AMT UNK	AMT UNK
State	3,286.96	117.39	32.53
Local	184,028.99	6,572.46	1,821.29
Local Government	54,985.51	1,963.77	544.18
Local Education	129,043.48	4,608.70	1,277.11
Unknown	AMT UNK	AMT UNK	AMT UNK
Other Income	$449,949.57	$16,069.63	$4,453.03

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table IV-13. Community, Household, and Per Capita Other Income by Source, Chenega Bay, 1993/94

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$449,949.57	$16,069.63	$4,453.03
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	4.35	8,348.87	298.17	82.63
Adult Public Assistance	0.00	0.00	0.00	0.00
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	4.35	4,557.91	162.78	45.11
Longevity Bonus	4.35	3,652.17	130.43	36.14
Social Security	13.04	19,339.48	690.70	191.40
Workman's Comp./Insurance	8.70	5,819.13	207.83	57.59
Energy Assistance	17.39	2,235.13	79.83	22.12
Supplemental Security Income	4.35	7,596.52	271.30	75.18
Food Stamps	8.70	1,683.65	60.13	16.66
Unemployment	21.74	15,787.13	563.83	156.24
Native Corporation Dividend	69.57	289,947.83	10,355.28	2,869.54
Dividend/Interest	8.70	1,369.57	48.91	13.55
Child Support	0.00	0.00	0.00	0.00
Rental Income	8.70	4,382.61	156.52	43.37
Veteran Disability	0.00	0.00	0.00	0.00
Equipment Leasing	0.00	0.00	0.00	0.00
Rental Assistance	0.00	0.00	0.00	0.00
Fishing Permit Leasing	0.00	0.00	0.00	0.00
Per Diem	0.00	0.00	0.00	0.00
Disability	0.00	0.00	0.00	0.00
Alaska Permanent Fund Dividend	91.30	79,751.30	2,848.26	789.28
Weatherization	0.00	0.00	0.00	0.00
Veteran's Assistance	0.00	0.00	0.00	0.00
Investments/Stocks/Bonds	0.00	0.00	0.00	0.00
Bureau of Indian Affairs Grants	0.00	0.00	0.00	0.00
General Assistance Grant	0.00	0.00	0.00	0.00
Foster Care	0.00	0.00	0.00	0.00
Inheritance	4.35	5,478.26	195.65	54.22
Contest Winnings	0.00	0.00	0.00	0.00
Capital Gains	0.00	0.00	0.00	0.00
ASRC Elder Trust	0.00	0.00	0.00	0.00
Supplemental Union Benefits	0.00	0.00	0.00	0.00
Gifts	0.00	0.00	0.00	0.00
Medicare/Medicaid	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Figure IV-7. Employment by Industry, Chenega Bay, 1993/94

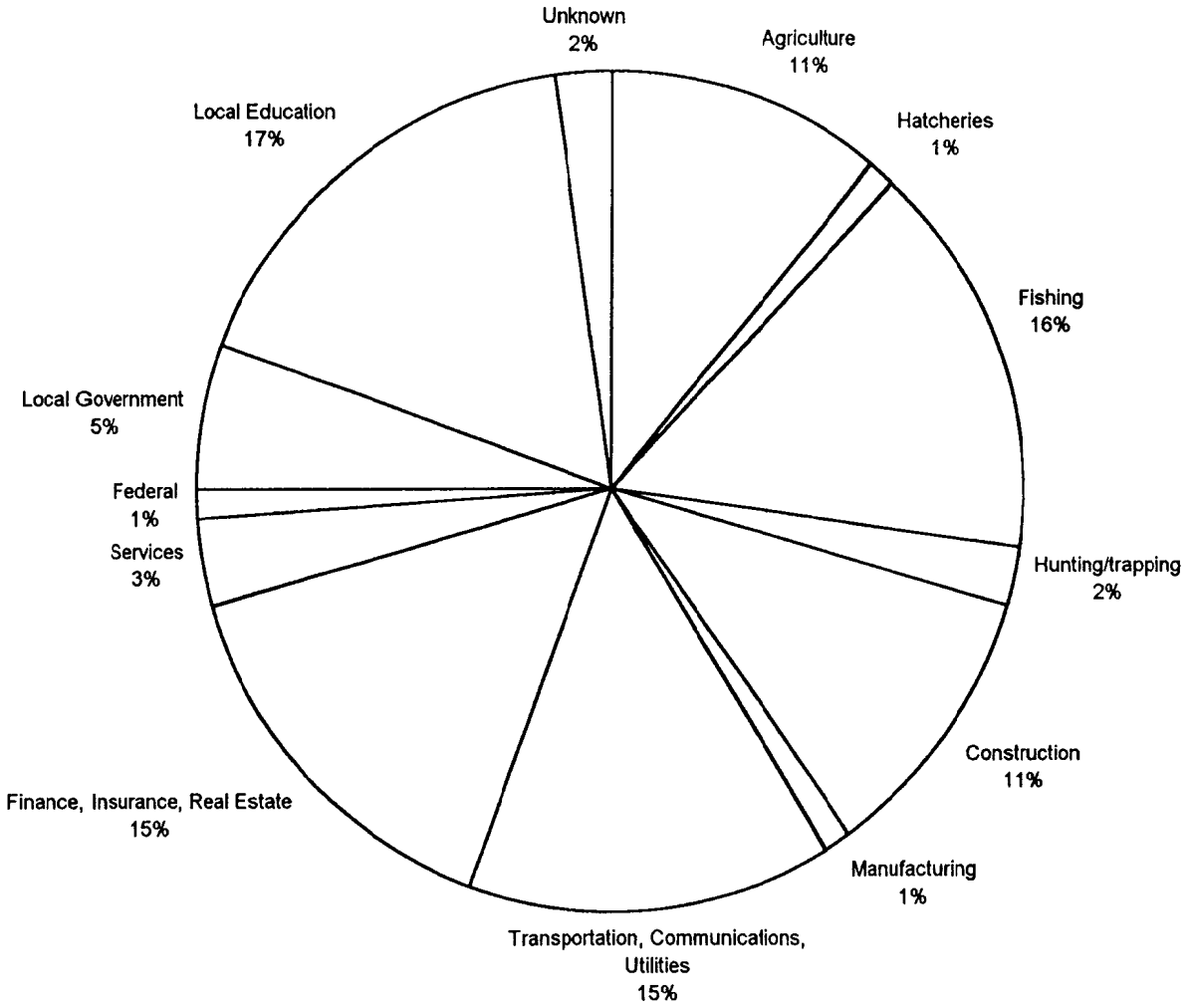


Table IV-14. Characteristics of Resource Harvest and Use, Chenega Bay, 1991/92, 1992/93, and 1993/94

Study Year	1991/92	1992/93	1993/94
Mean Number Of Resources Used Per Household	14.61	19.26	16.35
Minimum	6	2	4
Maximum	30	43	42
95 % Confidence Limit (+/-)	9.56	7.87	9.94
Median	13	18	16
Mean Number Of Resources Attempted To Harvest Per Household	10.33	11.74	11.48
Minimum	0	0	0
Maximum	25	34	30
95 % Confidence Limit (+/-)	16.57	12.36	13.14
Median	9	10	12
Mean Number Of Resources Harvested Per Household	9.72	11.61	10.52
Minimum	0	0	0
Maximum	25	34	30
95 % Confidence Limit (+/-)	16.76	12.49	14.08
Median	8	10	10
Mean Number Of Resources Received Per Household	8.83	13.91	11.04
Minimum	1	1	1
Maximum	16	32	33
95 % Confidence Limit (+/-)	8.68	8.83	11.67
Median	9	13	10
Mean Number Of Resources Given Away Per Household	6.89	9.43	9.74
Minimum	0	0	0
Maximum	22	26	38
95 % Confidence Limit (+/-)	22.14	12.83	17.11
Median	4	8	7
Mean Household Harvest, Pounds	1,266.04	1,441.37	991.55
Minimum	0.00	0.00	0.00
Maximum	7,906.81	7,964.82	5,335.91
Total Pounds Harvested	27,852.83	37,475.56	27,763.33
Community Per Capita Harvest, Pounds	345.28	414.39	274.77
Percent Using Any Resource	100.00	100.00	100.00
Percent Attempting To Harvest Any Resource	88.89	95.65	95.65
Percent Harvesting Any Resource	88.89	95.65	95.65
Percent Receiving Any Resource	100.00	100.00	100.00
Percent Giving Away Any Resource	77.78	86.96	91.30
Number Of Households In Sample	18	23	23
Number of Resources Available	130	133	144

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992, 1993, and 1994

Table IV-15. Participation in the Harvest and Processing of Wild Resources, Chenega Bay, 1991/92, 1992/93, and 1993/94

Study Year			1991/92	1992/93	1993/94
Total Number of People			80.67	90.43	101.04
GAME	Hunt	Number	28.11	31.65	36.52
		Percentage	34.85	35.00	36.14
		Missing	0.00	1.13	0.00
		Missing %	0.00	1.25	0.00
	Process	Number	46.44	56.52	54.78
		Percentage	57.58	62.50	54.22
		Missing	0.00	1.13	0.00
		Missing %	0.00	1.25	0.00
FISH	Fish	Number	46.44	57.65	62.09
		Percentage	57.58	63.75	61.45
		Missing	0.00	1.13	0.00
		Missing %	0.00	1.25	0.00
	Process	Number	46.44	66.70	71.83
		Percentage	57.58	73.75	71.08
		Missing	0.00	1.13	0.00
		Missing %	0.00	1.25	0.00
FURBEARERS	Hunt or Trap	Number	0.00	4.52	2.43
		Percentage	0.00	5.00	2.41
		Missing	0.00	1.13	0.00
		Missing %	0.00	1.25	0.00
	Process	Number	0.00	6.78	12.17
		Percentage	0.00	7.50	12.05
		Missing	0.00	1.13	0.00
		Missing %	0.00	1.25	0.00
PLANTS	Gather	Number	58.67	67.83	82.78
		Percentage	72.73	75.00	81.93
		Missing	0.00	1.13	0.00
		Missing %	0.00	1.25	0.00
	Process	Number	47.67	55.39	74.26
		Percentage	59.09	61.25	73.49
		Missing	0.00	1.13	0.00
		Missing %	0.00	1.25	0.00
ANY RESOURCE					
	Attempt	Number	66.00	78.00	85.22
		Percent	81.82	86.25	84.34
	Process	Number	64.78	73.48	81.57
		Percent	80.30	81.25	80.72

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992, 1993, and 1994.

Figure IV-8. Average Number of Resources Used per Household, Chenega Bay

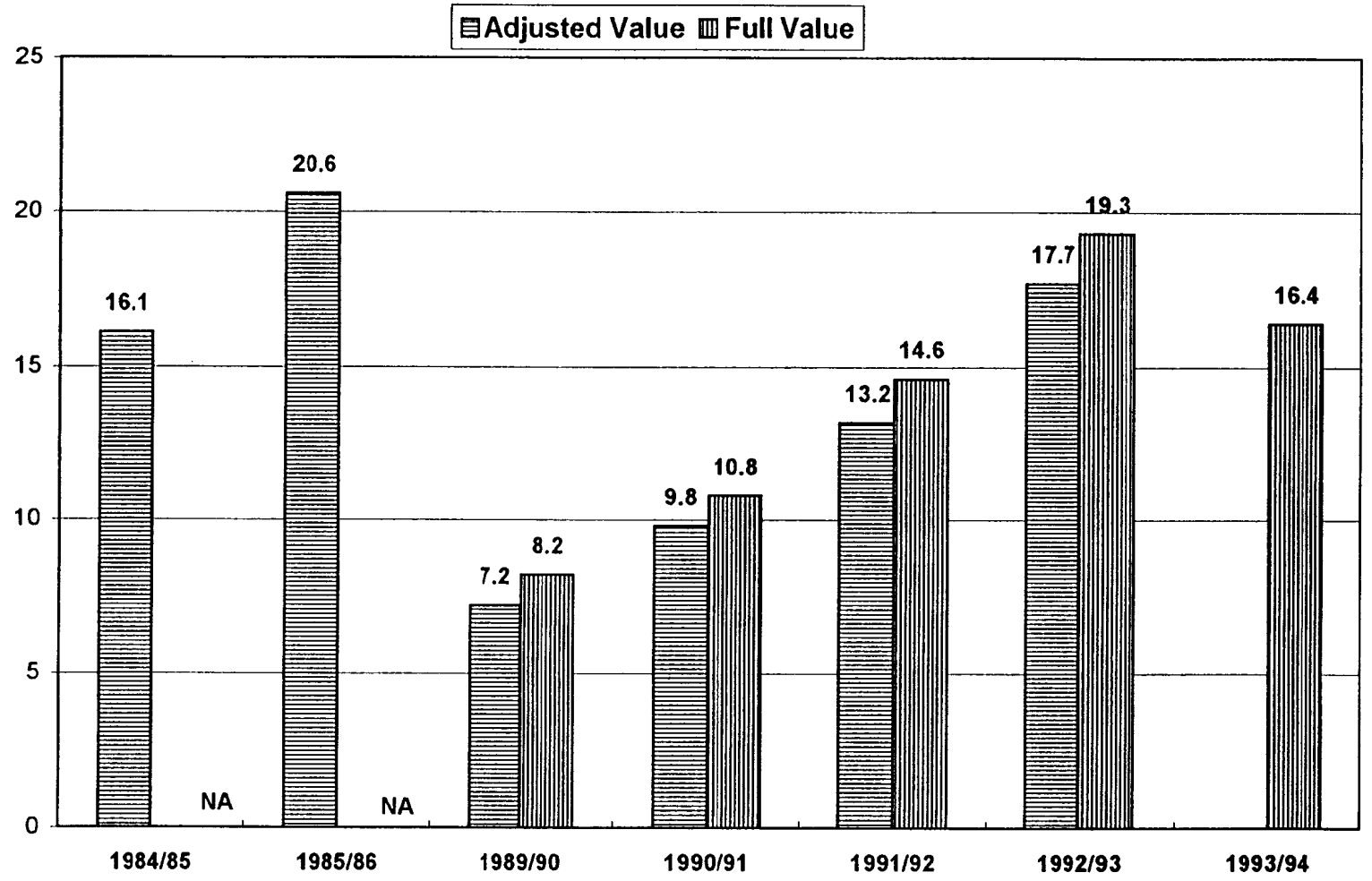


Figure IV-9. Percentage of Chenega Bay Households Using Resource Categories

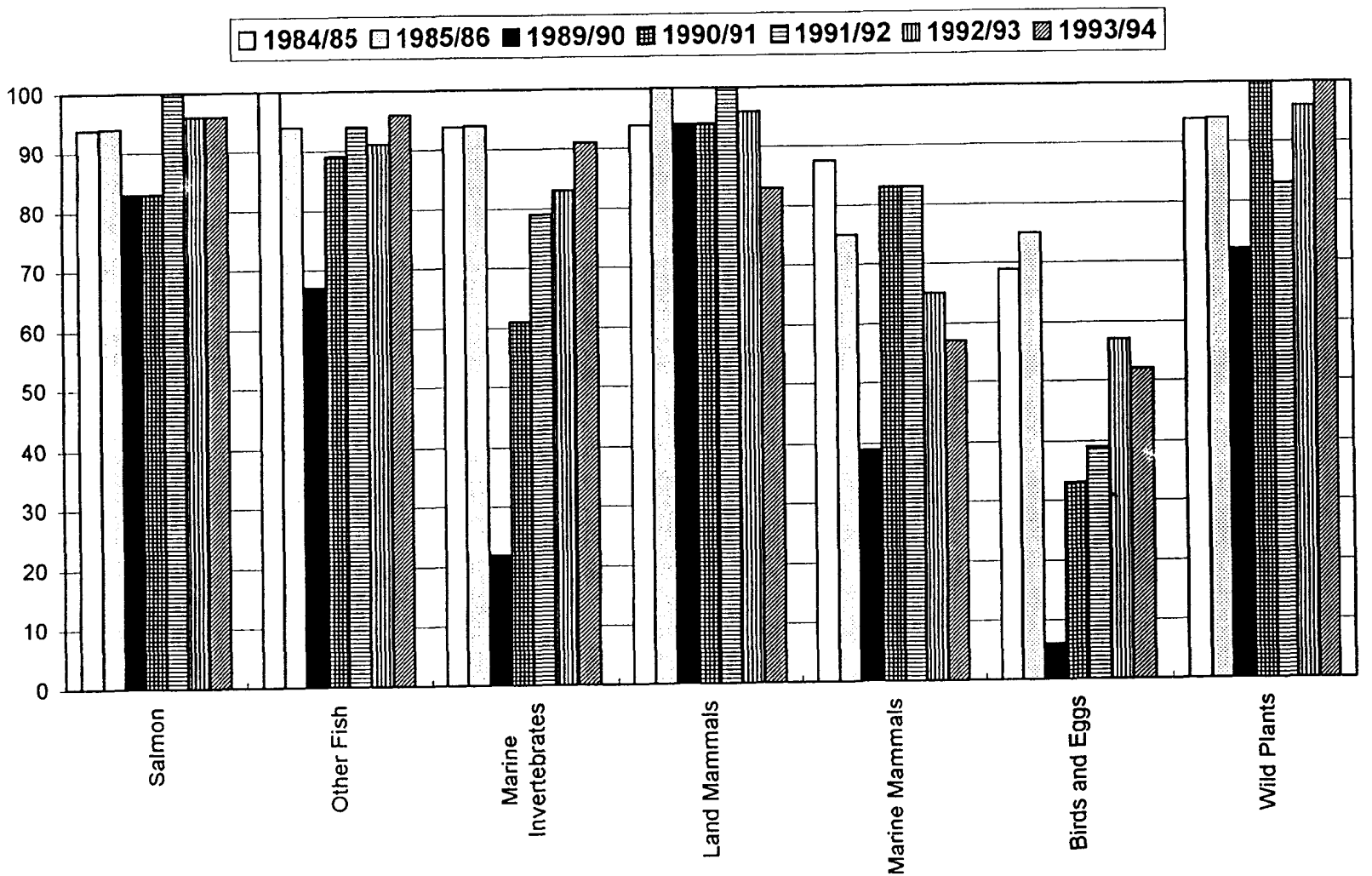


Figure IV-10. Percentage of Chenega Bay Households Attempting to Harvest Resources

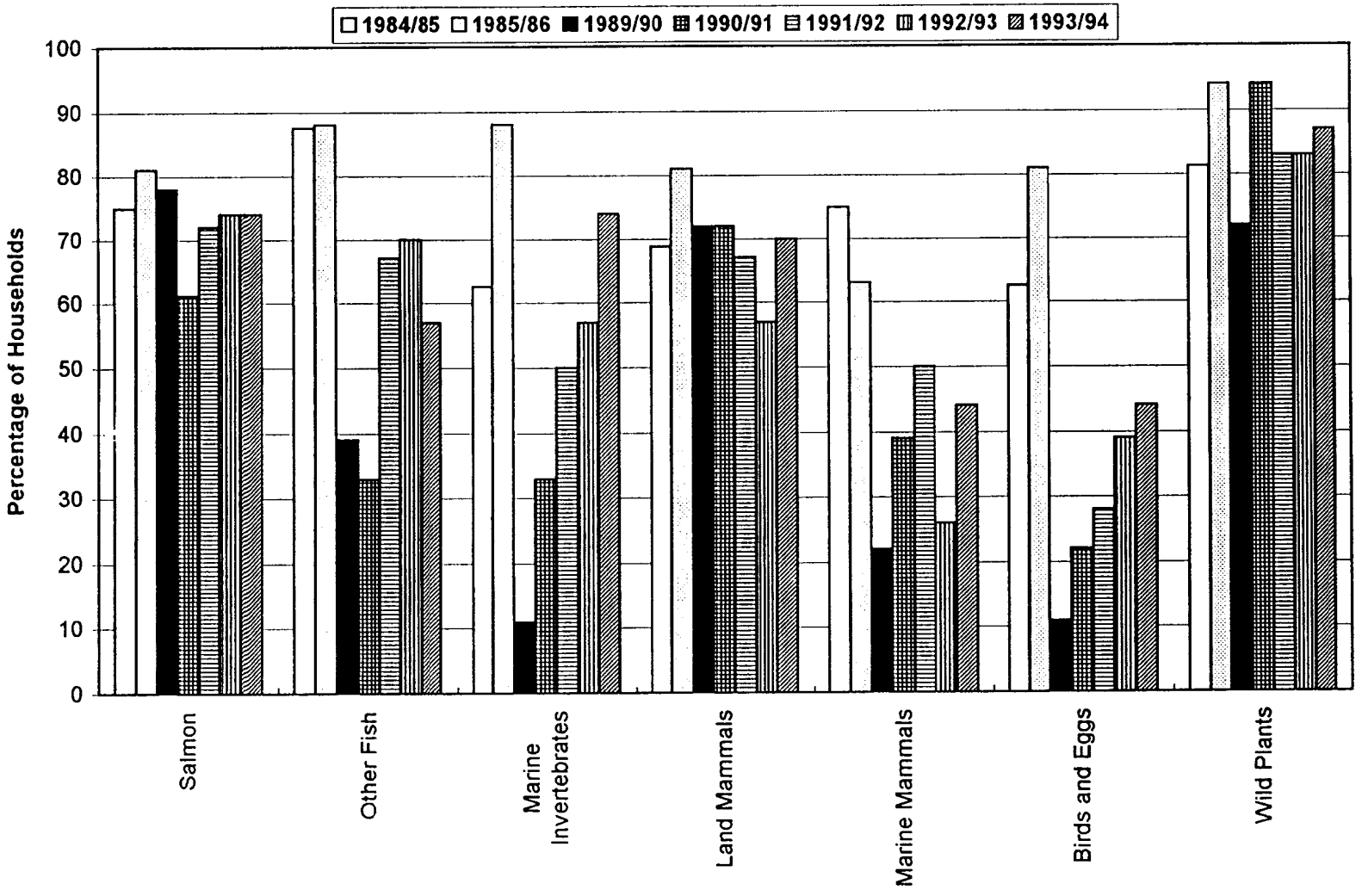


Figure IV-11. Harvests of Wild Resources for Home Use, Pounds Usable Weight per Capita,Chenega Bay, 1984/85, 1985/86, 1989/90, 1990/91, 1991/92, 1992/93, and 1993/94

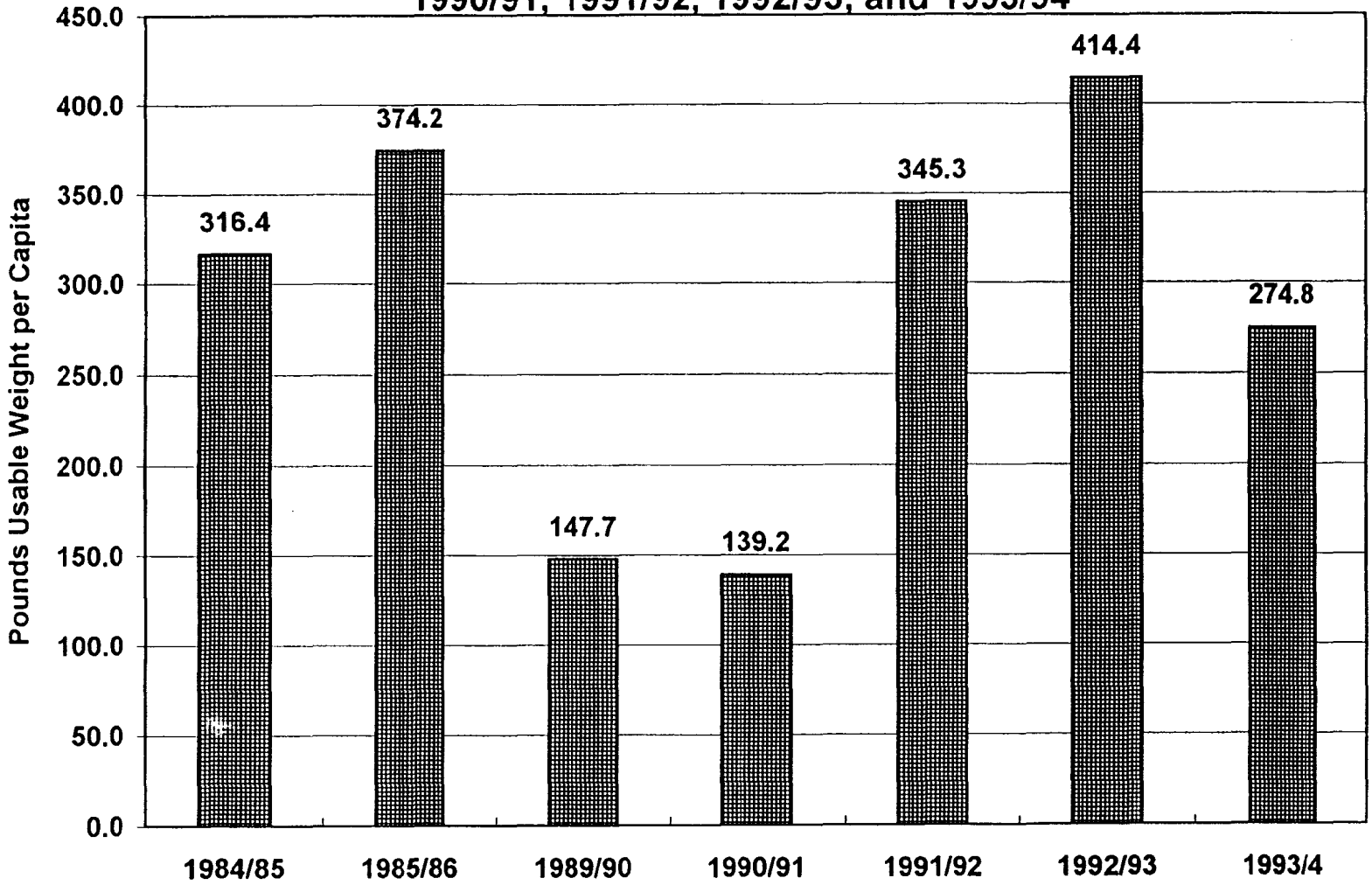


Table IV-16. Percentage of Households Sharing Resources by Community, Chenega Bay, 1991/92

Community	Salmon		Non-salmon Fish		Marine Invertebrates		Game		Marine Mammals		Birds and Eggs		Plants and Berries*		Any Resource	
	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave
All Communities	88.89	50.00	77.78	55.56	72.22	33.33	88.89	55.56	77.78	38.89	27.78	11.11	83.33	66.67	100.00	77.78
Anchorage	0.00	22.22	0.00	27.78	0.00	11.11	0.00	16.67	0.00	5.56	0.00	0.00	5.56	11.11	5.56	33.33
Chenega Bay	61.11	38.89	50.00	55.56	55.56	33.33	88.89	55.56	77.78	38.89	22.22	11.11	83.33	55.56	94.44	72.22
Cordova	11.11	0.00	5.56	0.00	0.00	0.00	5.56	0.00	0.00	0.00	5.56	0.00	0.00	11.11	27.78	11.11
Port Graham	0.00	5.56	0.00	5.56	0.00	0.00	0.00	5.56	0.00	0.00	0.00	0.00	0.00	5.56	0.00	5.56
Seward	0.00	11.11	0.00	5.56	0.00	5.56	0.00	5.56	0.00	5.56	0.00	0.00	0.00	11.11	0.00	16.67
Tatitlek	5.56	0.00	27.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.56	0.00	38.89	0.00
Whittier	0.00	0.00	0.00	0.00	5.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.56	0.00
Community Unknown	33.33	0.00	22.22	0.00	22.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00

Plants and Berries includes sharing of wood and kelp for fertilizer.

Note: Percentages are based upon valid responses.

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992.

Table IV-17. Subsistence Harvests in Pounds Usable Weight per Person by Resource Category, Chenega Bay, 1984/85, 1985/86, 1989/90, 1990/91, 1991/92, 1992/93, and 1993/94

	Pounds Usable Weight per Person						
	1984/85	1985/86	1989/90	1990/91	1991/92	1992/93	1993/94
Salmon	63.6	78.8	93.0	39.3	136.8	184.8	108.7
Other Fish	27.6	62.0	26.1	24.8	117.9	108.5	88.5
Marine Invertebrates	5.8	7.0	0.3	1.6	16.1	13.8	14.9
Land Mammals	62.2	78.4	21.1	38.4	42.7	69.1	18.3
Marine Mammals	149.7	140.3	3.6	29.3	20.8	25.0	34.9
Birds and Eggs	3.5	3.1	0.1	0.6	0.8	1.8	1.5
Wild Plants	4.0	4.7	3.7	5.2	10.2	11.5	8.0
All Resources	316.4	374.2	147.7	139.2	345.3	414.4	274.8

Table IV-18. Composition of Resource Harvests by Resource Category, Chenega Bay, 1984/85, 1985/86, 1989/90, 1990/91, 1991/92, 1992/93, and 1993/94

	Percentage of Total Harvest						
	1984/85	1985/86	1989/90	1990/91	1991/92	1992/93	1993/94
Salmon	20.1%	21.1%	62.9%	28.2%	39.6%	44.6%	39.6%
Other Fish	8.7%	16.6%	17.6%	17.8%	34.2%	26.2%	32.2%
Marine Invertebrates	1.8%	1.9%	0.2%	1.1%	4.7%	3.3%	5.4%
Land Mammals	19.7%	20.9%	14.3%	27.6%	12.4%	16.7%	6.6%
Marine Mammals	47.3%	37.5%	2.4%	21.1%	6.0%	6.0%	12.7%
Birds and Eggs	1.1%	0.8%	0.0%	0.4%	0.2%	0.4%	0.5%
Wild Plants	1.3%	1.3%	2.5%	3.7%	3.0%	2.8%	2.9%

Figure IV-12. Per Capita Harvests of Wild Resources by Resource Category, Chenega Bay

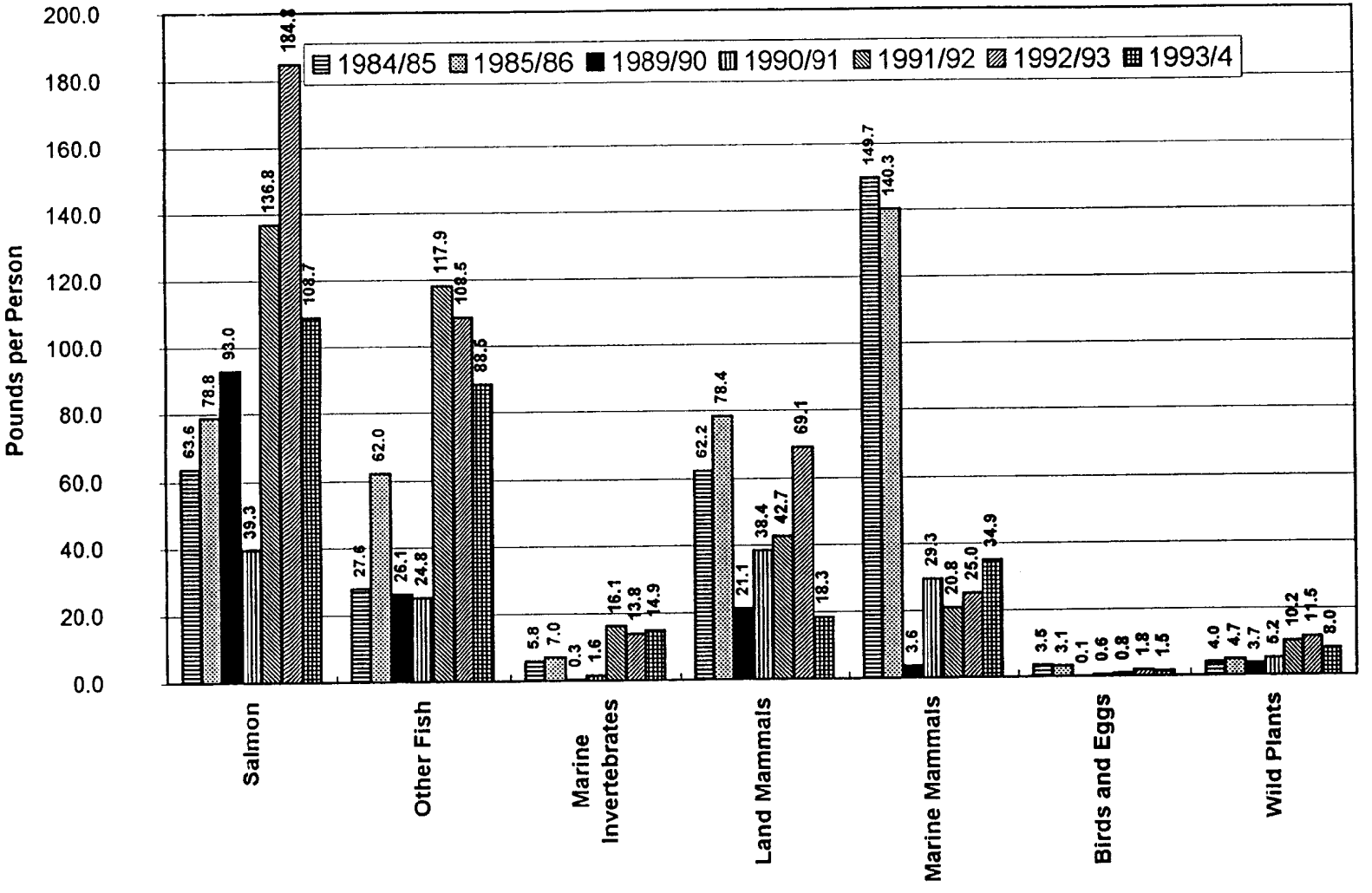


Figure IV-13. Composition of Wild Resource Harvests by Resource Category, Chenega Bay, 1991/92

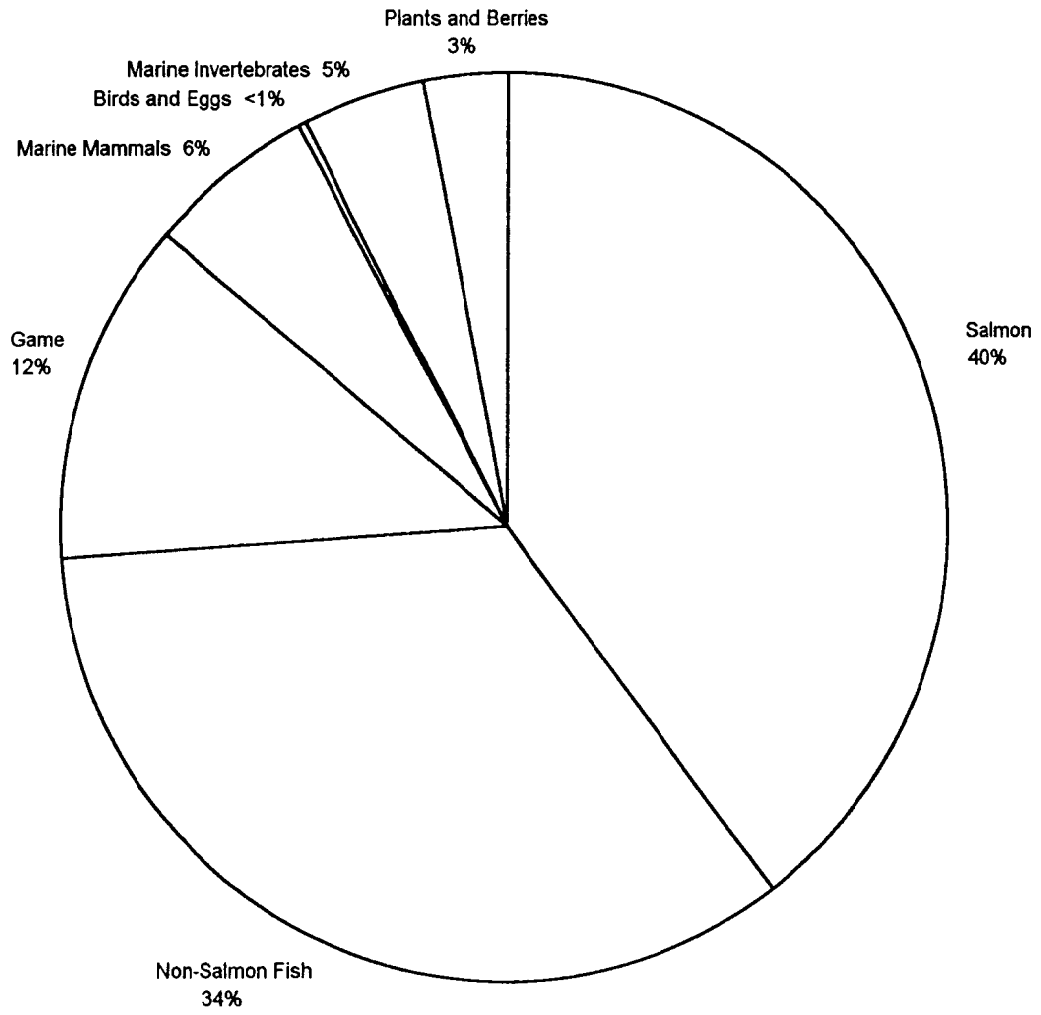


Figure IV-14. Percentage of Chenega Bay Households Reporting Lower Levels of Uses of Wild Resources Compared to 1988, the Year Before the Exxon Valdez Oil Spill

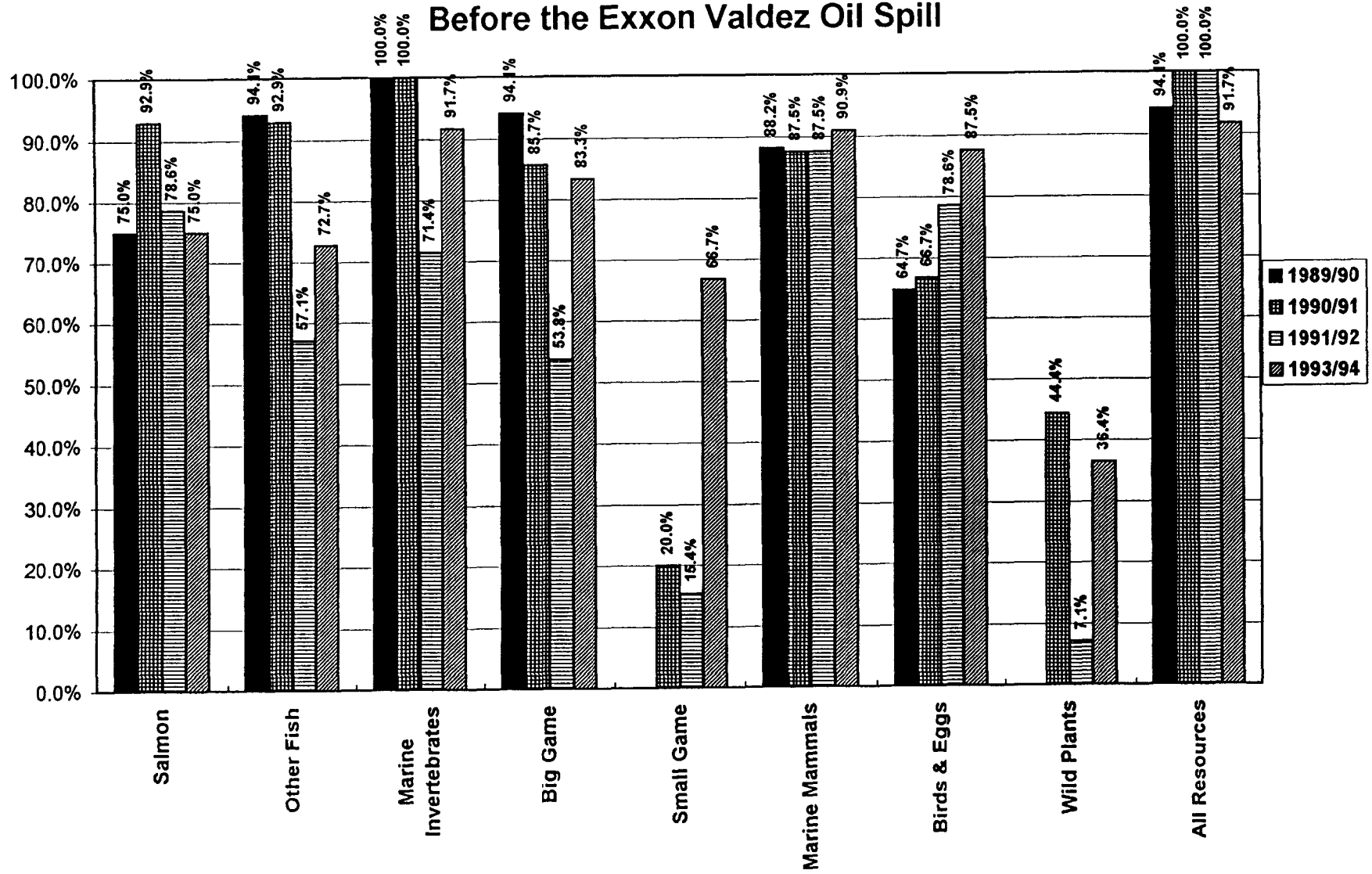


Table IV-19. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Chenega Bay, 1991/92

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
All Resources	100.0	88.9	88.9	100.0	77.8	27,852.83	1,266.04	345.28			31.78%	31.32%
Fish	100.0	77.8	77.8	94.4	66.7	20,549.64	934.07	254.75			38.53%	38.22%
Salmon	100.0	72.2	72.2	88.9	50.0	11,037.12	501.69	136.82	2,562.02	116.46	42.92%	40.34%
Chum Salmon	38.9	27.8	27.8	16.7	22.2	3,351.54	152.34	41.55	541.44	24.61	68.83%	68.77%
Coho Salmon	55.6	44.4	44.4	44.4	22.2	1,404.38	63.84	17.41	228.73	10.40	28.51%	30.32%
Chinook Salmon	38.9	22.2	22.2	22.2	11.1	539.88	24.54	6.69	33.00	1.50	53.83%	53.07%
Pink Salmon	61.1	50.0	50.0	27.8	38.9	1,524.72	69.31	18.90	819.74	37.26	60.37%	59.65%
Sockeye Salmon	88.9	50.0	50.0	77.8	44.4	4,216.59	191.66	52.27	939.11	42.69	33.52%	34.05%
Landlocked Salmon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Salmon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Non-Salmon Fish	94.4	66.7	66.7	77.8	55.6	9,512.53	432.39	117.92			38.24%	37.43%
Pike	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sturgeon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cod	44.4	27.8	27.8	16.7	22.2	1,064.57	48.39	13.20	332.68	15.12	71.16%	70.68%
Pacific Cod (Gray)	44.4	27.8	27.8	16.7	22.2	1,064.57	48.39	13.20	332.68	15.12	71.16%	70.68%
Burbot	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Cod	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sablefish (Black Cod)	5.6	5.6	5.6	0.0	0.0	61.11	2.78	0.76	19.71	0.90	89.96%	88.48%
Greenling	38.9	27.8	27.8	11.1	16.7	767.56	34.89	9.52	210.22	9.56	50.92%	48.38%
Kelp Greenling	5.6	5.6	5.6	0.0	5.6	24.44	1.11	0.30	24.44	1.11	89.96%	89.94%
Lingcod	38.9	27.8	27.8	11.1	16.7	743.11	33.78	9.21	185.78	8.44	48.07%	47.67%
Unknown Greenling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Flounder	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Flounder	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sole	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sole, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Halibut	94.4	61.1	61.1	61.1	50.0	4,209.70	191.35	52.19	93.55	4.25	28.31%	26.28%
Herring	11.1	11.1	11.1	5.6	11.1	733.33	33.33	9.09	122.22 gal	5.56	75.58%	75.84%
Herring Roe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Spawn on Kelp	38.9	16.7	16.7	27.8	11.1	623.36	28.33	7.73	89.05 gal	4.05	64.95%	63.89%
Sac Roe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Rockfish	83.3	55.6	55.6	38.9	50.0	1,648.35	74.93	20.43	432.06	19.64	31.72%	32.79%
Black Rockfish (black bass)	11.1	11.1	11.1	0.0	5.6	34.83	1.58	0.43	23.22	1.06	85.08%	83.60%
Red Rockfish	83.3	55.6	55.6	38.9	50.0	1,400.67	63.67	17.36	350.17	15.92	32.41%	32.85%
Yellow Eye Rockfish	11.1	11.1	11.1	0.0	5.6	63.56	2.89	0.79	15.89	0.72	61.76%	58.54%
Unknown Rockfish	11.1	11.1	11.1	0.0	5.6	149.29	6.79	1.85	42.78	1.94	62.42%	65.58%

Table IV-19. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Chenega Bay, 1991/92

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Sea Bass	5.6	5.6	5.6	0.0	5.6	128.33	5.83	1.59	128.33	5.83	89.96%	89.94%
Sculpin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Sculpin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Smelt	5.6	0.0	0.0	5.6	5.6	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Eulachon (Hooligan, Candlefish)	5.6	0.0	0.0	5.6	5.6	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Unknown Smelt	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Walleye Pollock (Whiting)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Skates	5.6	5.6	5.6	0.0	0.0	24.44	1.11	0.30	4.89	0.22	89.96%	87.01%
Grayling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sheefish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whitefish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whitefish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Trout and Char	16.7	16.7	16.7	0.0	11.1	251.77	11.44	3.12	179.84	8.17	66.21%	66.18%
Char	11.1	11.1	11.1	0.0	11.1	217.55	9.89	2.70	155.39	7.06	76.30%	76.54%
Arctic Char	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Dolly Varden	11.1	11.1	11.1	0.0	11.1	217.55	9.89	2.70	155.39	7.06	76.30%	76.54%
Lake Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Trout	5.6	5.6	5.6	0.0	0.0	34.22	1.56	0.42	24.44	1.11	89.96%	88.48%
Cutthroat Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Rainbow Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steelhead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Trout	5.6	5.6	5.6	0.0	0.0	34.22	1.56	0.42	24.44	1.11	89.96%	88.48%
Unknown Non-Salmon Fish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Game	100.0	66.7	66.7	88.9	55.6	3,443.24	156.51	42.68	79.44	3.61	26.19%	23.43%
Big Game	100.0	66.7	66.7	88.9	55.6	3,433.47	156.07	42.56	78.22	3.56	25.81%	23.34%
Bison	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black Bear	33.3	22.2	16.7	22.2	16.7	212.67	9.67	2.64	3.67	0.17	48.79%	47.85%
Brown Bear	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Caribou	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Deer	100.0	66.7	66.7	83.3	55.6	3,220.80	146.40	39.93	74.56	3.39	26.21%	23.83%
Goat	0.0	5.6	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Moose	16.7	0.0	0.0	16.7	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sheep, Dall	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Small Game/Furbearer	5.6	5.6	5.6	0.0	5.6	9.78	0.44	0.12	1.22	0.06	89.96%	91.37%
Fox	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Beaver	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table IV-19. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Chenega Bay, 1991/92

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Coyote	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Hare	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snowshoe Hare	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Hare	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Land Otter	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Lynx	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marten	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mink	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Muskrat	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Porcupine	5.6	5.6	5.6	0.0	5.6	9.78	0.44	0.12	1.22	0.06	89.96%	91.37%
Weasel	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wolf	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wolverine	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Mammals	83.3	50.0	44.4	77.8	38.9	1,673.71	76.08	20.75	36.67	1.67	36.25%	40.51%
Whale	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whale	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	72.2	44.4	38.9	61.1	38.9	1,062.60	48.30	13.17	28.11	1.28	40.57%	39.39%
Harbor Seal	72.2	44.4	38.9	61.1	38.9	1,062.60	48.30	13.17	28.11	1.28	40.57%	39.39%
Porpoise/Dolphin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steller Sea Lion	72.2	27.8	16.7	66.7	22.2	611.11	27.78	7.58	6.11	0.28	57.40%	59.58%
Sea Otter	5.6	5.6	5.6	0.0	0.0	0.00	0.00	0.00	2.44	0.11	89.96%	0.00%
Birds and Eggs	38.9	27.8	22.2	27.8	11.1	60.35	2.74	0.75	63.56	2.89	49.90%	52.73%
Birds	38.9	27.8	22.2	27.8	11.1	60.35	2.74	0.75	63.56	2.89	49.90%	52.73%
Upland Game Birds	16.7	11.1	11.1	5.6	5.6	11.12	0.51	0.14	15.89	0.72	61.92%	61.07%
Grouse	11.1	11.1	11.1	0.0	5.6	11.12	0.51	0.14	15.89	0.72	61.92%	61.07%
Ptarmigan	5.6	0.0	0.0	5.6	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Migratory Birds	38.9	27.8	22.2	27.8	11.1	49.23	2.24	0.61	47.67	2.17	50.49%	54.05%
Waterfowl	38.9	27.8	22.2	27.8	11.1	49.23	2.24	0.61	47.67	2.17	50.49%	54.05%
Ducks	38.9	22.2	22.2	27.8	11.1	36.28	1.65	0.45	44.00	2.00	50.52%	53.25%
Scoter	5.6	5.6	5.6	0.0	5.6	7.70	0.35	0.10	8.56	0.39	89.96%	91.37%
Scoter, Unknown	5.6	5.6	5.6	0.0	5.6	7.70	0.35	0.10	8.56	0.39	89.96%	91.37%
Harlequin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goldeneye	33.3	22.2	22.2	22.2	11.1	22.49	1.02	0.28	28.11	1.28	46.17%	47.81%
Bufflehead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Merganser	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scaup	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table IV-19. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Chenega Bay, 1991/92

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Mallard	11.1	0.0	0.0	11.1	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Pintail	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wigeon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Teal	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Gadwall	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shoveler	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canvasback	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Ducks, Unknown	5.6	5.6	5.6	0.0	5.6	6.09	0.28	0.08	7.33	0.33	89.96%	92.78%
Geese	11.1	16.7	11.1	0.0	5.6	12.96	0.59	0.16	3.67	0.17	65.46%	67.32%
Brant	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snow Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
White-fronted Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese	5.6	11.1	5.6	0.0	5.6	8.80	0.40	0.11	2.44	0.11	89.96%	91.37%
Canada Geese, Lesser	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese, Dusky	5.6	11.1	5.6	0.0	5.6	8.80	0.40	0.11	2.44	0.11	89.96%	91.37%
Geese, Unknown	5.6	5.6	5.6	0.0	0.0	4.16	0.19	0.05	1.22	0.06	89.96%	89.94%
Crane	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sandhill Crane	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shorebirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Common Snipe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seabirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cormorants	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Seabirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seabird Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Gull Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tern Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Waterfowl Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Invertebrates	77.8	50.0	44.4	72.2	33.3	1,300.88	59.13	16.13			35.12%	36.21%
Abalone	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Clams	27.8	27.8	27.8	5.6	11.1	375.87	17.09	4.66	125.29 gal	5.70	63.25%	62.08%
Butter Clams	27.8	27.8	27.8	0.0	11.1	122.25	5.56	1.52	40.75 gal	1.85	47.94%	48.71%
Razor Clams	11.1	5.6	5.6	5.6	5.6	244.46	11.11	3.03	81.49 gal	3.70	89.96%	88.48%

Table IV-19. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Chenega Bay, 1991/92

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Pacific Littleneck Clams (Steamers)	5.6	5.6	5.6	0.0	5.6	9.17	0.42	0.11	3.06 gal	0.14	89.96%	89.94%
Horse Clams (Gaper)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Unknown Clams	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Cockles	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Geoducks	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Scallops	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mussels	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Crabs	55.6	22.2	16.7	50.0	11.1	333.30	15.15	4.13	209.00	9.50	78.96%	82.23%
Dungeness Crab	5.6	5.6	5.6	0.0	0.0	0.86	0.04	0.01	1.22	0.06	89.96%	88.48%
King Crab	5.6	5.6	0.0	5.6	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tanner Crab	55.6	16.7	11.1	50.0	11.1	332.44	15.11	4.12	207.78	9.44	79.46%	82.46%
Tanner Crab, Opilio	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tanner Crab, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Crabs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Chitons (bidarkis)	5.6	5.6	5.6	5.6	0.0	4.89	0.22	0.06	1.22 gal	0.06	89.96%	88.48%
Chitons (small)	5.6	5.6	5.6	5.6	0.0	4.89	0.22	0.06	1.22 gal	0.06	89.96%	88.48%
Octopus	61.1	44.4	38.9	33.3	27.8	585.44	26.61	7.26	146.36	6.65	50.28%	50.22%
Sea Cucumber	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Sea Urchin	5.6	5.6	5.6	0.0	0.0	0.76	0.03	0.01	1.53 gal	0.07	89.96%	88.48%
Shrimp	16.7	16.7	5.6	11.1	0.0	0.61	0.03	0.01	0.31 gal	0.01	89.96%	91.37%
Whelk	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Limpets	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Oyster	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Plants and Berries	83.3	83.3	83.3	50.0	44.4	825.00	37.50	10.23			20.92%	18.23%
Berries	83.3	83.3	83.3	50.0	44.4	713.78	32.44	8.85	178.44 gal	8.11	20.31%	18.70%
Plants/Greens/Mushrooms	16.7	16.7	16.7	0.0	5.6	101.44	4.61	1.26			59.29%	56.00%
Unknown Greens, from land	16.7	16.7	16.7	0.0	5.6	101.44	4.61	1.26	25.36 gal	1.15	59.29%	56.00%
Unknown Greens, from sea	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Seaweed/Kelp (Food)	11.1	11.1	11.1	0.0	5.6	9.78	0.44	0.12	2.44 gal	0.11	61.71%	58.44%
Wood	88.9	77.8	77.8	77.8	55.6	0.00	0.00	0.00	130.78 crd	5.94	20.78%	0.00%

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table IV-20. Estimated Amount of Resources Removed From Commercial Harvest, Chenega Bay, 1991/92

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		4,237.69	19.39	15.21
Fish		4,115.47	20.03	14.78
Salmon	245.67	1,643.60	14.89	5.90
Chum Salmon	79.44	491.76	14.67	1.77
Coho Salmon	61.11	375.22	26.72	1.35
Chinook Salmon	25.67	419.91	77.78	1.51
Sockeye Salmon	79.44	356.71	8.46	1.28
Non-Salmon Fish		2,471.87	25.99	8.87
Cod	37.35	119.52	11.23	0.43
Pacific Cod (Gray)	37.35	119.52	11.23	0.43
Greenling	30.56	48.89	6.37	0.18
Kelp Greenling	24.44	24.44	100.00	0.09
Lingcod	6.11	24.44	3.29	0.09
Halibut	30.27	1,362.35	32.36	4.89
Rockfish	213.89	855.56	51.90	3.07
Red Rockfish	206.25	825.00	58.90	2.96
Yellow Eye Rockfish	7.64	30.56	48.08	0.11
Sea Bass	61.11	61.11	47.62	0.22
Skates	4.89	24.44	100.00	0.09
Marine Invertebrates		122.22	9.40	0.44
Octopus	30.56	122.22	20.88	0.44

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table IV-21. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Chenega Bay, 1991/92

Resource	Percent Base	Subsistence Methods: Net No.	Net Lbs.	Other No.	Other Lbs.	Subsistence Gear Any Method No.	Subsistence Gear Any Method Lbs.	Removed from Commercial Catch No.	Removed from Commercial Catch Lbs.	Rod and Reel No.	Rod and Reel Lbs.	Any Method No.	Any Method Lbs.
Salmon	total	86.06	81.51	0.19	0.08	86.25	81.59	9.59	14.89	4.16	3.52		
Chum Salmon	gear type	20.95	31.79	0.00	0.00	20.91	31.76	32.34	29.92	0.00	0.00	21.13	30.37
	resource	85.33	85.33	0.00	0.00	85.33	85.33	14.67	14.67	0.00	0.00		
	total	18.03	25.91	0.00	0.00	18.03	25.91	3.10	4.46	0.00	0.00		
Coho Salmon	gear type	6.04	9.09	0.00	0.00	6.03	9.08	24.88	22.83	32.27	54.37	8.93	12.72
	resource	58.25	58.25	0.00	0.00	58.25	58.25	26.72	26.72	15.04	15.04		
	total	5.20	7.41	0.00	0.00	5.20	7.41	2.39	3.40	1.34	1.91		
Chinook Salmon	gear type	0.33	1.33	0.00	0.00	0.33	1.33	10.45	25.55	0.00	0.00	1.29	4.89
	resource	22.22	22.22	0.00	0.00	22.22	22.22	77.78	77.78	0.00	0.00		
	total	0.29	1.09	0.00	0.00	0.29	1.09	1.00	3.80	0.00	0.00		
Pink Salmon	gear type	34.42	15.69	100.00	100.00	34.57	15.78	0.00	0.00	52.41	26.75	32.00	13.81
	resource	92.59	92.59	0.60	0.60	93.19	93.19	0.00	0.00	6.81	6.81		
	total	29.63	12.79	0.19	0.08	29.82	12.87	0.00	0.00	2.18	0.94		
Sockeye Salmon	gear type	38.25	42.09	0.00	0.00	38.16	42.05	32.34	21.70	15.32	18.88	36.65	38.20
	resource	89.80	89.80	0.00	0.00	89.80	89.80	8.46	8.46	1.74	1.74		
	total	32.92	34.31	0.00	0.00	32.92	34.31	3.10	3.23	0.64	0.66		
Landlocked Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Unknown Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table IV-22. Estimated Salmon Harvest by Gear Type and Species, Chenega Bay, 1991/92

		Subsistence Methods						Removed from Commercial Catch		Rod and Reel		Any Method	
		Net		Other		Subsistence Gear Any Method							
	Harvest Units	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Salmon	numbers	2,204.89	100.22	4.89	0.22	2,209.78	100.44	245.67	11.17	106.58	4.84	2,562.02	116.46
	pounds	8,996.04	408.91	9.09	0.41	9,005.14	409.32	1,643.60	74.71	388.38	17.65	11,037.12	501.69
Chum Salmon	numbers	462.00	21.00	0.00	0.00	462.00	21.00	79.44	3.61	0.00	0.00	541.44	24.61
	pounds	2,859.78	129.99	0.00	0.00	2,859.78	129.99	491.76	22.35	0.00	0.00	3,351.54	152.34
Coho Salmon	numbers	133.22	6.06	0.00	0.00	133.22	6.06	61.11	2.78	34.39	1.56	228.73	10.40
	pounds	817.98	37.18	0.00	0.00	817.98	37.18	375.22	17.06	211.18	9.60	1,404.38	63.84
Chinook Salmon	numbers	7.33	0.33	0.00	0.00	7.33	0.33	25.67	1.17	0.00	0.00	33.00	1.50
	pounds	119.97	5.45	0.00	0.00	119.97	5.45	419.91	19.09	0.00	0.00	539.88	24.54
Pink Salmon	numbers	759.00	34.50	4.89	0.22	763.89	34.72	0.00	0.00	55.86	2.54	819.74	37.26
	pounds	1,411.74	64.17	9.09	0.41	1,420.83	64.58	0.00	0.00	103.89	4.72	1,524.72	69.31
Sockeye Salmon	numbers	843.33	38.33	0.00	0.00	843.33	38.33	79.44	3.61	16.33	0.74	939.11	42.69
	pounds	3,786.57	172.12	0.00	0.00	3,786.57	172.12	356.71	16.21	73.32	3.33	4,216.59	191.66
Landlocked Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table IV-23. Percentage of Households Harvesting Salmon by Gear Type and Species, Chenega Bay, 1991/92

Resource	Subsistence Methods			Removed from Commercial Catch	Rod and Reel	Any Method
	Net	Other	Any Subsistence Gear			
Salmon	44.44	5.56	50.00	22.22	11.11	72.22
Chum Salmon	27.78	0.00	27.78	5.56	0.00	27.78
Coho Salmon	27.78	0.00	27.78	11.11	11.11	44.44
Chinook Salmon	11.11	0.00	11.11	11.11	0.00	22.22
Pink Salmon	33.33	5.56	38.89	0.00	11.11	50.00
Sockeye Salmon	33.33	0.00	33.33	22.22	5.56	50.00
Landlocked Salmon	0.00	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table IV-24. Estimated Harvest of Fish Other than Salmon by Gear Type, Chenega Bay, 1991/92

	Harvest Units	Subsistence Gear		Removed From Commercial Catch		Rod and Reel		Ice Fishing		Any Method	
		Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Non-Salmon Fish	pounds	5,683.32	258.33	2,471.87	112.36	1,357.33	61.70	0.00	0.00	9,512.53	432.39
Lingcod	pounds	620.89	28.22	24.44	1.11	97.78	4.44	0.00	0.00	743.11	33.78
Pacific Cod (Gray)	pounds	941.13	42.78	119.52	5.43	3.91	0.18	0.00	0.00	1,064.57	48.39
Sablefish (Black Cod)	pounds	61.11	2.78	0.00	0.00	0.00	0.00	0.00	0.00	61.11	2.78
Halibut	pounds	2,426.05	110.28	1,362.35	61.93	421.30	19.15	0.00	0.00	4,209.70	191.35
Herring	pounds	733.33	33.33	0.00	0.00	0.00	0.00	0.00	0.00	733.33	33.33
Spawn on Kelp	pounds	623.36	28.33	0.00	0.00	0.00	0.00	0.00	0.00	623.36	28.33
Black Rockfish (black bass)	pounds	0.00	0.00	0.00	0.00	34.83	1.58	0.00	0.00	34.83	1.58
Red Rockfish	pounds	210.22	9.56	825.00	37.50	365.44	16.61	0.00	0.00	1,400.67	63.67
Sea Bass	pounds	67.22	3.06	61.11	2.78	0.00	0.00	0.00	0.00	128.33	5.83
Yellow Eye Rockfish	pounds	0.00	0.00	30.56	1.39	33.00	1.50	0.00	0.00	63.56	2.89
Unknown Rockfish	pounds	0.00	0.00	0.00	0.00	149.29	6.79	0.00	0.00	149.29	6.79
Kelp Greenling	pounds	0.00	0.00	24.44	1.11	0.00	0.00	0.00	0.00	24.44	1.11
Skates	pounds	0.00	0.00	24.44	1.11	0.00	0.00	0.00	0.00	24.44	1.11
Dolly Varden	pounds	0.00	0.00	0.00	0.00	217.55	9.89	0.00	0.00	217.55	9.89
Unknown Trout	pounds	0.00	0.00	0.00	0.00	34.22	1.56	0.00	0.00	34.22	1.56

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table IV-25. Percentage of Fish Other Than Salmon Harvested by Gear Type, Chenega Bay, 1991/92

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	59.75	25.99	14.27	0.00
Lingcod	resource	83.55	3.29	13.16	0.00
Pacific Cod (Gray)	resource	88.41	11.23	0.37	0.00
Sablefish (Black Cod)	resource	100.00	0.00	0.00	0.00
Halibut	resource	57.63	32.36	10.01	0.00
Herring	resource	100.00	0.00	0.00	0.00
Spawn on Kelp	resource	100.00	0.00	0.00	0.00
Black Rockfish (black bass)	resource	0.00	0.00	100.00	0.00
Red Rockfish	resource	15.01	58.90	26.09	0.00
Sea Bass	resource	52.38	47.62	0.00	0.00
Yellow Eye Rockfish	resource	0.00	48.08	51.92	0.00
Unknown Rockfish	resource	0.00	0.00	100.00	0.00
Kelp Greenling	resource	0.00	100.00	0.00	0.00
Skates	resource	0.00	100.00	0.00	0.00
Dolly Varden	resource	0.00	0.00	100.00	0.00
Unknown Trout	resource	0.00	0.00	100.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table IV-26. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Chenega Bay, 1991/92

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	38.89	33.33	38.89	0.00	66.67
Lingcod	16.67	5.56	5.56	0.00	27.78
Pacific Cod (Gray)	16.67	16.67	5.56	0.00	27.78
Sablefish (Black Cod)	5.56	0.00	0.00	0.00	5.56
Halibut	33.33	33.33	16.67	0.00	61.11
Herring	11.11	0.00	0.00	0.00	11.11
Spawn on Kelp	16.67	0.00	0.00	0.00	16.67
Black Rockfish (black bass)	0.00	0.00	11.11	0.00	11.11
Red Rockfish	22.22	33.33	22.22	0.00	55.56
Sea Bass	5.56	5.56	0.00	0.00	5.56
Yellow Eye Rockfish	0.00	5.56	5.56	0.00	11.11
Unknown Rockfish	0.00	0.00	11.11	0.00	11.11
Kelp Greenling	0.00	5.56	0.00	0.00	5.56
Skates	0.00	5.56	0.00	0.00	5.56
Dolly Varden	0.00	0.00	11.11	0.00	11.11
Unknown Trout	0.00	0.00	5.56	0.00	5.56

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Figure IV-15. Composition of Wild Resource Harvests by Resource Category, Chenega Bay, 1992/93

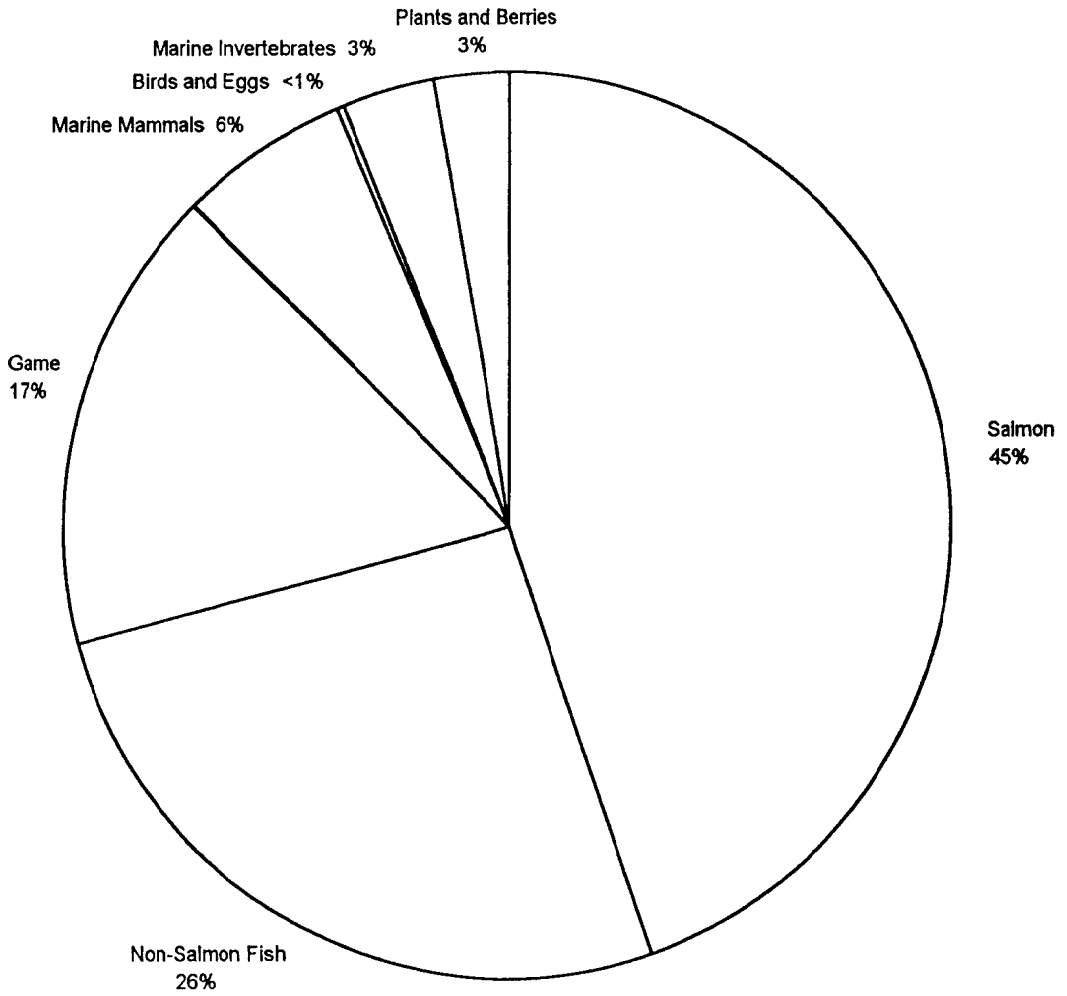


Table IV-27. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Chenega Bay, 1992/93

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
All Resources	100.0	95.7	95.7	100.0	87.0	37,475.56	1,441.37	414.39			21.11%	18.76%
Fish	95.7	78.3	78.3	95.7	78.3	26,525.31	1,020.20	293.31			22.74%	20.43%
Salmon	95.7	73.9	73.9	91.3	65.2	16,712.05	642.77	184.80	4,041.30	155.43	21.20%	18.43%
Chum Salmon	56.5	47.8	47.8	26.1	43.5	2,264.00	87.08	25.03	403.57	15.52	23.92%	22.65%
Coho Salmon	73.9	30.4	30.4	56.5	26.1	1,253.55	48.21	13.86	211.39	8.13	35.88%	36.74%
Chinook Salmon	43.5	13.0	13.0	34.8	13.0	367.07	14.12	4.06	20.35	0.78	51.85%	52.06%
Pink Salmon	91.3	69.6	69.6	56.5	52.2	3,117.35	119.90	34.47	1,267.22	48.74	23.69%	21.84%
Sockeye Salmon	95.7	65.2	65.2	87.0	56.5	9,710.07	373.46	107.37	2,138.78	82.26	22.32%	19.14%
Landlocked Salmon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Non-Salmon Fish	91.3	69.6	69.6	91.3	73.9	9,813.25	377.43	108.51			29.06%	27.13%
Pike	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sturgeon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cod	39.1	30.4	30.4	17.4	17.4	301.17	11.58	3.33	151.34	5.82	38.83%	40.81%
Pacific Tomcod	4.3	4.3	4.3	0.0	0.0	33.91	1.30	0.38	67.83	2.61	70.45%	68.48%
Pacific Cod (Gray)	39.1	26.1	26.1	17.4	17.4	267.25	10.28	2.96	83.52	3.21	45.22%	46.06%
Burbot	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sablefish (Black Cod)	34.8	17.4	17.4	26.1	4.3	262.83	10.11	2.91	84.78	3.26	53.60%	52.37%
Greenling	21.7	13.0	13.0	17.4	13.0	330.09	12.70	3.65	158.83	6.11	53.43%	50.42%
Kelp Greenling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Lingcod	21.7	8.7	8.7	17.4	8.7	228.35	8.78	2.53	57.09	2.20	50.54%	50.05%
Unknown Greenling	13.0	13.0	13.0	8.7	13.0	101.74	3.91	1.13	101.74	3.91	57.41%	56.12%
Flounder	4.3	4.3	4.3	0.0	0.0	10.17	0.39	0.11	3.39	0.13	70.45%	68.48%
Unknown Flounder	4.3	4.3	4.3	0.0	0.0	10.17	0.39	0.11	3.39	0.13	70.45%	68.48%
Sole	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sole, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Halibut	91.3	47.8	47.8	78.3	56.5	4,595.84	176.76	50.82	104.70	4.03	23.27%	21.40%
Herring	26.1	13.0	13.0	21.7	13.0	237.39	9.13	2.63	39.57 gal	1.52	44.72%	42.71%
Herring Roe	8.7	8.7	8.7	4.3	8.7	23.74	0.91	0.26	3.39 gal	0.13	51.54%	49.26%
Spawn on Kelp	69.6	26.1	26.1	52.2	43.5	1,822.93	70.11	20.16	260.42 gal	10.02	42.54%	40.89%
Sac Roe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Rockfish	69.6	52.2	52.2	56.5	43.5	2,052.30	78.93	22.69	707.37	27.21	42.31%	37.57%
Black Rockfish (black bass)	26.1	26.1	26.1	21.7	17.4	466.30	17.93	5.16	310.87	11.96	51.43%	50.22%
Red Rockfish	39.1	26.1	26.1	26.1	21.7	1,305.65	50.22	14.44	326.41	12.55	43.72%	42.16%
Yellow Eye Rockfish	30.4	26.1	26.1	30.4	21.7	280.35	10.78	3.10	70.09	2.70	37.52%	37.58%
Idiotfish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Silvergray Rockfish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table IV-27. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Chenega Bay, 1992/93

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Quillback Rockfish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Rockfish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sculpin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Sculpin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Smelt	13.0	0.0	0.0	13.0	8.7	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Eulachon (Hooligan, Candlefish)	8.7	0.0	0.0	8.7	4.3	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Unknown Smelt	8.7	0.0	0.0	8.7	8.7	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Wolf Eel (Wolffish)	4.3	4.3	4.3	0.0	4.3	1.13	0.04	0.01	2.26	0.09	70.45%	68.48%
Shark	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Salmon Shark	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Walleye Pollock (Whiting)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Skates	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Grayling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sheefish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whitefish	4.3	0.0	0.0	4.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whitefish, Large	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whitefish, Humpback	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whitefish	4.3	0.0	0.0	4.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Trout and Char	30.4	30.4	30.4	8.7	21.7	175.67	6.76	1.94	125.48	4.83	37.40%	35.22%
Char	30.4	30.4	30.4	8.7	21.7	175.67	6.76	1.94	125.48	4.83	37.40%	35.22%
Arctic Char	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Dolly Varden	30.4	30.4	30.4	8.7	21.7	175.67	6.76	1.94	125.48	4.83	37.40%	35.22%
Lake Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cutthroat Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Rainbow Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steelhead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Game	95.7	56.5	56.5	91.3	52.2	6,248.14	240.31	69.09	125.48	4.83	21.42%	21.20%
Big Game	95.7	56.5	56.5	91.3	52.2	6,239.10	239.97	68.99	119.83	4.61	21.72%	21.18%
Bison	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black Bear	39.1	26.1	26.1	26.1	21.7	852.35	32.78	9.43	14.70	0.57	43.51%	42.05%
Brown Bear	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Caribou	60.9	8.7	8.7	56.5	17.4	1,186.96	45.65	13.13	7.91	0.30	53.34%	53.72%
Deer	95.7	56.5	56.5	78.3	47.8	4,199.79	161.53	46.44	97.22	3.74	22.39%	20.06%
Goat	39.1	0.0	0.0	39.1	13.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Moose	21.7	0.0	0.0	21.7	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table IV-27. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Chenega Bay, 1992/93

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Sheep, Dall	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Small Game/Furbearer	17.4	21.7	17.4	4.3	13.0	9.04	0.35	0.10	5.65	0.22	35.03%	69.42%
Fox	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Beaver	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Coyote	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Hare	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snowshoe Hare	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Hare	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Land Otter	8.7	13.0	8.7	0.0	8.7	0.00	0.00	0.00	3.39	0.13	51.54%	0.00%
Lynx	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marten	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mink	4.3	4.3	4.3	4.3	0.0	0.00	0.00	0.00	1.13	0.04	70.45%	0.00%
Muskrat	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Porcupine	4.3	4.3	4.3	0.0	4.3	9.04	0.35	0.10	1.13	0.04	70.45%	69.42%
Weasel	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wolf	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wolverine	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Feral Animals	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Reindeer - Feral	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Rabbit - Feral	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Mammals	65.2	26.1	21.7	65.2	39.1	2,259.29	86.90	24.98	52.00	2.00	36.72%	36.37%
Whale	8.7	0.0	0.0	8.7	4.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Bowhead	4.3	0.0	0.0	4.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whale	4.3	0.0	0.0	4.3	4.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	52.2	26.1	21.7	52.2	26.1	1,581.03	60.81	17.48	41.83	1.61	40.53%	39.25%
Harbor Seal	52.2	26.1	21.7	52.2	26.1	1,581.03	60.81	17.48	41.83	1.61	40.53%	39.25%
Porpoise/Dolphin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steller Sea Lion	60.9	17.4	17.4	56.5	30.4	678.26	26.09	7.50	6.78	0.26	34.87%	34.66%
Sea Otter	8.7	8.7	8.7	0.0	0.0	0.00	0.00	0.00	3.39	0.13	51.54%	0.00%
Birds and Eggs	56.5	39.1	34.8	43.5	26.1	159.23	6.12	1.76	166.17	6.39	27.31%	30.39%
Birds	56.5	39.1	34.8	43.5	26.1	159.23	6.12	1.76	166.17	6.39	27.31%	30.39%
Upland Game Birds	34.8	17.4	17.4	21.7	13.0	42.73	1.64	0.47	61.04	2.35	41.95%	40.02%
Grouse	34.8	17.4	17.4	21.7	13.0	42.73	1.64	0.47	61.04	2.35	41.95%	40.02%
Ptarmigan	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Migratory Birds	52.2	39.1	34.8	39.1	21.7	116.50	4.48	1.29	105.13	4.04	27.48%	30.03%
Waterfowl	52.2	39.1	34.8	39.1	21.7	110.85	4.26	1.23	99.48	3.83	27.06%	30.04%

Table IV-27. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Chenega Bay, 1992/93

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Ducks	39.1	30.4	30.4	21.7	13.0	67.67	2.60	0.75	81.39	3.13	30.39%	31.85%
Scoter	4.3	4.3	4.3	4.3	0.0	4.07	0.16	0.05	4.52	0.17	70.45%	71.26%
Scoter, Unknown	4.3	4.3	4.3	4.3	0.0	4.07	0.16	0.05	4.52	0.17	70.45%	71.26%
Harlequin	4.3	0.0	0.0	4.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goldeneye	30.4	26.1	26.1	17.4	13.0	39.79	1.53	0.44	49.74	1.91	29.91%	30.65%
Bufflehead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Merganser	4.3	4.3	4.3	0.0	0.0	12.21	0.47	0.14	13.57	0.52	70.45%	71.26%
Scaup	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mallard	13.0	13.0	13.0	4.3	0.0	6.78	0.26	0.07	6.78	0.26	48.67%	49.18%
Pintail	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wigeon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Teal	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Gadwall	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shoveler	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canvasback	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Ducks, Unknown	8.7	4.3	4.3	4.3	0.0	4.82	0.19	0.05	6.78	0.26	70.45%	69.42%
Geese	30.4	17.4	13.0	21.7	8.7	43.18	1.66	0.48	18.09	0.70	61.54%	61.01%
Brant	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snow Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
White-fronted Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese	17.4	8.7	8.7	13.0	8.7	39.34	1.51	0.44	16.96	0.65	65.70%	66.95%
Canada Geese, Lesser	4.3	4.3	4.3	4.3	0.0	1.36	0.05	0.02	1.13	0.04	70.45%	71.26%
Canada Geese, Dusky	4.3	0.0	0.0	4.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese, Unknown	8.7	4.3	4.3	4.3	8.7	37.98	1.46	0.42	15.83	0.61	70.45%	69.42%
Geese, Unknown	13.0	8.7	4.3	8.7	0.0	3.84	0.15	0.04	1.13	0.04	70.45%	71.26%
Crane	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sandhill Crane	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shorebirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Common Snipe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seabirds	4.3	4.3	4.3	0.0	0.0	5.65	0.22	0.06	5.65	0.22	70.45%	71.26%
Cormorants	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Loons	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Seabirds	4.3	4.3	4.3	0.0	0.0	5.65	0.22	0.06	5.65	0.22	70.45%	71.26%
Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seabird Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table IV-27. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Chenega Bay, 1992/93

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Gull Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tern Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Waterfowl Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Invertebrates	82.6	56.5	56.5	73.9	52.2	1,244.72	47.87	13.76			26.32%	25.55%
Abalone	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Clams	65.2	47.8	47.8	47.8	34.8	388.30	14.93	4.29	129.43 gal	4.98	25.27%	25.37%
Butter Clams	47.8	39.1	39.1	26.1	13.0	146.40	5.63	1.62	48.80 gal	1.88	24.95%	24.90%
Razor Clams	39.1	26.1	26.1	30.4	26.1	206.29	7.93	2.28	68.76 gal	2.64	33.79%	34.45%
Pacific Littleneck Clams (Steamers)	17.4	17.4	17.4	8.7	8.7	35.61	1.37	0.39	11.87 gal	0.46	39.68%	37.16%
Pinkneck Clams	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Horse Clams (Gaper)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Cockles	8.7	8.7	8.7	0.0	4.3	13.57	0.52	0.15	4.52 gal	0.17	48.67%	47.16%
Scallops	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mussels	26.1	26.1	26.1	8.7	13.0	38.15	1.47	0.42	25.43 gal	0.98	47.08%	47.90%
Crabs	21.7	8.7	8.7	21.7	4.3	192.85	7.42	2.13	124.35	4.78	53.89%	55.11%
Dungeness Crab	4.3	4.3	4.3	4.3	0.0	4.75	0.18	0.05	6.78	0.26	70.45%	68.48%
King Crab	8.7	0.0	0.0	8.7	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
King Crab, Unknown	8.7	0.0	0.0	8.7	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tanner Crab	17.4	8.7	8.7	17.4	4.3	188.10	7.23	2.08	117.57	4.52	55.86%	56.09%
Tanner Crab, Unknown	17.4	8.7	8.7	17.4	4.3	188.10	7.23	2.08	117.57	4.52	55.86%	56.09%
Unknown Crabs	4.3	0.0	0.0	4.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Chitons (bidarkis)	43.5	39.1	39.1	30.4	26.1	101.46	3.90	1.12	25.43 gal	0.98	33.06%	33.05%
Chitons (large)	4.3	4.3	4.3	0.0	4.3	0.85	0.03	0.01	0.28 gal	0.01	70.45%	67.52%
Chitons (small)	43.5	39.1	39.1	30.4	26.1	100.61	3.87	1.11	25.15 gal	0.97	33.34%	33.32%
Octopus	69.6	34.8	34.8	52.2	43.5	453.30	17.43	5.01	113.33	4.36	41.90%	39.95%
Sea Cucumber	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Sea Urchin	4.3	4.3	4.3	0.0	0.0	0.57	0.02	0.01	1.13 gal	0.04	70.45%	71.26%
Shrimp	30.4	8.7	8.7	21.7	4.3	56.52	2.17	0.63	28.26 gal	1.09	52.76%	55.50%
Oyster	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Plants and Berries	95.7	82.6	82.6	73.9	56.5	1,038.87	39.96	11.49	259.72 gal	9.99	27.79%	24.84%
Berries	95.7	82.6	82.6	73.9	52.2	851.22	32.74	9.41	212.80 gal	8.18	22.90%	19.69%
Plants/Greens/Mushrooms	21.7	17.4	17.4	4.3	4.3	141.30	5.43	1.56	35.33 gal	1.36	56.51%	54.39%
Seaweed/Kelp (Food)	21.7	8.7	8.7	13.0	13.0	46.35	1.78	0.51	11.59 gal	0.45	68.67%	66.77%
Wood	95.7	78.3	78.3	69.6	60.9	0.00	0.00	0.00	150.91 crd	5.80	13.20%	0.00%

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table IV-28. Estimated Amount of Resources Removed From Commercial Harvest, Chenega Bay, 1992/93

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		5,613.93	20.22	14.98
Fish		5,405.93	20.38	14.43
Salmon	426.17	2,110.14	12.63	5.63
Chum Salmon	94.96	532.71	23.53	1.42
Coho Salmon	76.87	455.84	36.36	1.22
Chinook Salmon	11.30	203.93	55.56	0.54
Pink Salmon	89.30	219.69	7.05	0.59
Sockeye Salmon	153.74	697.98	7.19	1.86
Non-Salmon Fish		3,295.79	33.59	8.79
Cod	41.69	133.41	44.30	0.36
Pacific Cod (Gray)	41.69	133.41	49.92	0.36
Sablefish (Black Cod)	71.22	220.77	84.00	0.59
Greenling	70.65	119.83	36.30	0.32
Lingcod	16.39	65.57	28.71	0.17
Unknown Greenling	54.26	54.26	53.33	0.14
Halibut	13.00	469.30	10.21	1.25
Spawn on Kelp	161.90 gal	1,133.31	62.17	3.02
Rockfish	411.20	1,218.04	59.35	3.25
Black Rockfish (black bass)	170.70	256.04	54.91	0.68
Red Rockfish	231.46	925.83	70.91	2.47
Yellow Eye Rockfish	9.04	36.17	12.90	0.10
Wolf Eel (Wolffish)	2.26	1.13	100.00	0.00
Marine Invertebrates		208.00	16.71	0.56
Octopus	52.00	208.00	45.89	0.56

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table IV-29. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Chenega Bay, 1992/93

Resource	Percent Base	Subsistence Methods: Floating Net No.	Floating Net Lbs.	Other No.	Other Lbs.	Subsistence Gear Any Method No.	Subsistence Gear Any Method Lbs.	Removed from Commercial Catch No.	Removed from Commercial Catch Lbs.	Rod and Reel No.	Rod and Reel Lbs.	Any Method No.	Any Method Lbs.
Salmon	total	81.85	82.56	0.42	0.25	82.27	82.81	10.55	12.63	7.19	4.56		
Chum Salmon	gear type	9.16	12.32	0.00	0.00	9.11	12.28	22.28	25.25	1.95	4.16		
	resource	75.07	75.07	0.00	0.00	75.07	75.07	23.53	23.53	1.40	1.40		
	total	7.50	10.17	0.00	0.00	7.50	10.17	2.35	3.19	0.14	0.19	9.99	13.55
Coho Salmon	gear type	4.03	5.73	0.00	0.00	4.01	5.72	18.04	21.60	0.39	0.88		
	resource	63.10	63.10	0.00	0.00	63.10	63.10	36.36	36.36	0.53	0.53		
	total	3.30	4.73	0.00	0.00	3.30	4.73	1.90	2.73	0.03	0.04	5.23	7.50
Chinook Salmon	gear type	0.27	1.18	0.00	0.00	0.27	1.18	2.65	9.66	0.00	0.00		
	resource	44.44	44.44	0.00	0.00	44.44	44.44	55.56	55.56	0.00	0.00		
	total	0.22	0.98	0.00	0.00	0.22	0.98	0.28	1.22	0.00	0.00	0.50	2.20
Pink Salmon	gear type	26.90	15.86	100.00	100.00	27.27	16.11	20.95	10.41	93.39	87.55		
	resource	70.21	70.21	1.34	1.34	71.54	71.54	7.05	7.05	21.41	21.41		
	total	22.01	13.10	0.42	0.25	22.43	13.35	2.21	1.31	6.71	3.99	31.36	18.65
Sockeye Salmon	gear type	59.64	64.91	0.00	0.00	59.33	64.71	36.07	33.08	4.28	7.41		
	resource	92.23	92.23	0.00	0.00	92.23	92.23	7.19	7.19	0.58	0.58		
	total	48.81	53.59	0.00	0.00	48.81	53.59	3.80	4.18	0.31	0.34	52.92	58.10
Landlocked Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table IV-30. Estimated Salmon Harvest by Gear Type and Species, Chenega Bay, 1992/93

		Subsistence Methods						Removed from Commercial Catch		Rod and Reel		Any Method	
		Floating Net		Other		Subsistence Gear Any Method							
	Harvest Units	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Salmon	numbers	3,307.65	127.22	16.96	0.65	3,324.61	127.87	426.17	16.39	290.52	11.17	4,041.30	155.43
	pounds	13,797.93	530.69	41.71	1.60	13,839.64	532.29	2,110.14	81.16	762.27	29.32	16,712.05	642.77
Chum Salmon	numbers	302.96	11.65	0.00	0.00	302.96	11.65	94.96	3.65	5.65	0.22	403.57	15.52
	pounds	1,699.59	65.37	0.00	0.00	1,699.59	65.37	532.71	20.49	31.71	1.22	2,264.00	87.08
Coho Salmon	numbers	133.39	5.13	0.00	0.00	133.39	5.13	76.87	2.96	1.13	0.04	211.39	8.13
	pounds	791.01	30.42	0.00	0.00	791.01	30.42	455.84	17.53	6.70	0.26	1,253.55	48.21
Chinook Salmon	numbers	9.04	0.35	0.00	0.00	9.04	0.35	11.30	0.43	0.00	0.00	20.35	0.78
	pounds	163.14	6.27	0.00	0.00	163.14	6.27	203.93	7.84	0.00	0.00	367.07	14.12
Pink Salmon	numbers	889.65	34.22	16.96	0.65	906.61	34.87	89.30	3.43	271.30	10.43	1,267.22	48.74
	pounds	2,188.54	84.17	41.71	1.60	2,230.26	85.78	219.69	8.45	667.41	25.67	3,117.35	119.90
Sockeye Salmon	numbers	1,972.61	75.87	0.00	0.00	1,972.61	75.87	153.74	5.91	12.43	0.48	2,138.78	82.26
	pounds	8,955.64	344.45	0.00	0.00	8,955.64	344.45	697.98	26.85	56.45	2.17	9,710.07	373.46
Landlocked Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table IV-31. Percentage of Households Harvesting Salmon by Gear Type and Species, Chenega Bay, 1992/93

Resource	Floating Net	Other	Any Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Any Method
Salmon	52.17	8.70	52.17	17.39	34.78	73.91
Chum Salmon	30.43	0.00	30.43	13.04	4.35	47.83
Coho Salmon	21.74	0.00	21.74	13.04	4.35	30.43
Chinook Salmon	8.70	0.00	8.70	8.70	0.00	13.04
Pink Salmon	43.48	8.70	47.83	13.04	30.43	69.57
Sockeye Salmon	52.17	0.00	52.17	17.39	8.70	65.22
Landlocked Salmon	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table IV-32. Estimated Harvest of Fish Other than Salmon by Gear Type, Chenega Bay, 1992/93

	Harvest Units	Subsistence Gear		Removed From Commercial Catch		Rod and Reel		Ice Fishing		Any Method	
		Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Non-Salmon Fish	pounds	3,047.93	117.23	3,295.79	126.76	3,469.53	133.44	0.00	0.00	9,813.25	377.43
Lingcod	pounds	0.00	0.00	65.57	2.52	162.78	6.26	0.00	0.00	228.35	8.78
Pacific Tom Cod	pounds	0.00	0.00	0.00	0.00	33.91	1.30	0.00	0.00	33.91	1.30
Pacific Cod (Gray)	pounds	7.23	0.28	133.41	5.13	126.61	4.87	0.00	0.00	267.25	10.28
Sablefish (Black Cod)	pounds	0.00	0.00	220.77	8.49	42.05	1.62	0.00	0.00	262.83	10.11
Unknown Flounder	pounds	0.00	0.00	0.00	0.00	10.17	0.39	0.00	0.00	10.17	0.39
Halibut	pounds	1,972.72	75.87	469.30	18.05	2,153.82	82.84	0.00	0.00	4,595.84	176.76
Herring	pounds	217.04	8.35	0.00	0.00	20.35	0.78	0.00	0.00	237.39	9.13
Herring Roe	pounds	23.74	0.91	0.00	0.00	0.00	0.00	0.00	0.00	23.74	0.91
Spawn on Kelp	pounds	689.62	26.52	1,133.31	43.59	0.00	0.00	0.00	0.00	1,822.93	70.11
Black Rockfish (black bass)	pounds	11.87	0.46	256.04	9.85	198.39	7.63	0.00	0.00	466.30	17.93
Red Rockfish	pounds	13.57	0.52	925.83	35.61	366.26	14.09	0.00	0.00	1,305.65	50.22
Yellow Eye Rockfish	pounds	99.48	3.83	36.17	1.39	144.70	5.57	0.00	0.00	280.35	10.78
Unknown Greenling	pounds	0.00	0.00	54.26	2.09	47.48	1.83	0.00	0.00	101.74	3.91
Wolf Eel (Wolffish)	pounds	0.00	0.00	1.13	0.04	0.00	0.00	0.00	0.00	1.13	0.04
Dolly Varden	pounds	12.66	0.49	0.00	0.00	163.01	6.27	0.00	0.00	175.67	6.76

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table IV-33. Percentage of Fish Other Than Salmon Harvested by Gear Type, Chenega Bay, 1992/93

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	31.06	33.59	35.36	0.00
Lingcod	resource	0.00	28.71	71.29	0.00
Pacific Tom Cod	resource	0.00	0.00	100.00	0.00
Pacific Cod (Gray)	resource	2.71	49.92	47.37	0.00
Sablefish (Black Cod)	resource	0.00	84.00	16.00	0.00
Unknown Flounder	resource	0.00	0.00	100.00	0.00
Halibut	resource	42.92	10.21	46.86	0.00
Herring	resource	91.43	0.00	8.57	0.00
Herring Roe	resource	100.00	0.00	0.00	0.00
Spawn on Kelp	resource	37.83	62.17	0.00	0.00
Black Rockfish (black bass)	resource	2.55	54.91	42.55	0.00
Red Rockfish	resource	1.04	70.91	28.05	0.00
Yellow Eye Rockfish	resource	35.48	12.90	51.61	0.00
Unknown Greenling	resource	0.00	53.33	46.67	0.00
Wolf Eel (Wolffish)	resource	0.00	100.00	0.00	0.00
Dolly Varden	resource	7.21	0.00	92.79	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table IV-34. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Chenega Bay, 1992/93

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	43.48	34.78	47.83	0.00	69.57
Lingcod	0.00	8.70	8.70	0.00	8.70
Pacific Tom Cod	0.00	0.00	4.35	0.00	4.35
Pacific Cod (Gray)	4.35	13.04	13.04	0.00	26.09
Sablefish (Black Cod)	0.00	8.70	8.70	0.00	17.39
Unknown Flounder	0.00	0.00	4.35	0.00	4.35
Halibut	21.74	26.09	26.09	0.00	47.83
Herring	8.70	0.00	4.35	0.00	13.04
Herring Roe	8.70	0.00	0.00	0.00	8.70
Spawn on Kelp	17.39	8.70	0.00	0.00	26.09
Black Rockfish (black bass)	4.35	4.35	21.74	0.00	26.09
Red Rockfish	4.35	21.74	21.74	0.00	26.09
Yellow Eye Rockfish	8.70	4.35	13.04	0.00	26.09
Unknown Greenling	0.00	4.35	13.04	0.00	13.04
Wolf Eel (Wolffish)	0.00	4.35	0.00	0.00	4.35
Dolly Varden	4.35	0.00	26.09	0.00	30.43

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Figure IV-16. Composition of Wild Resource Harvests by Resource Category, Chenega Bay, 1993/94

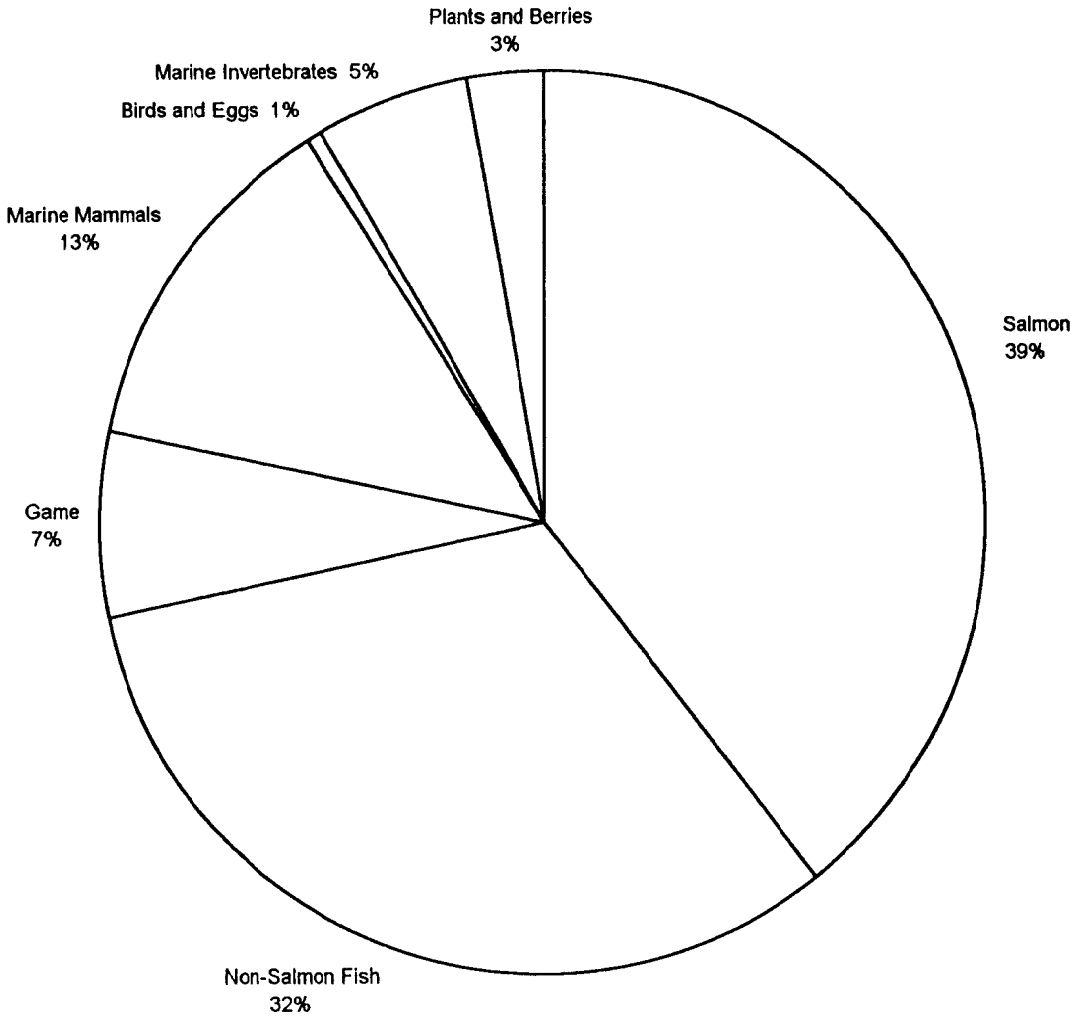


Figure IV-17. Composition of Harvests by Resource Category, Chenega Bay

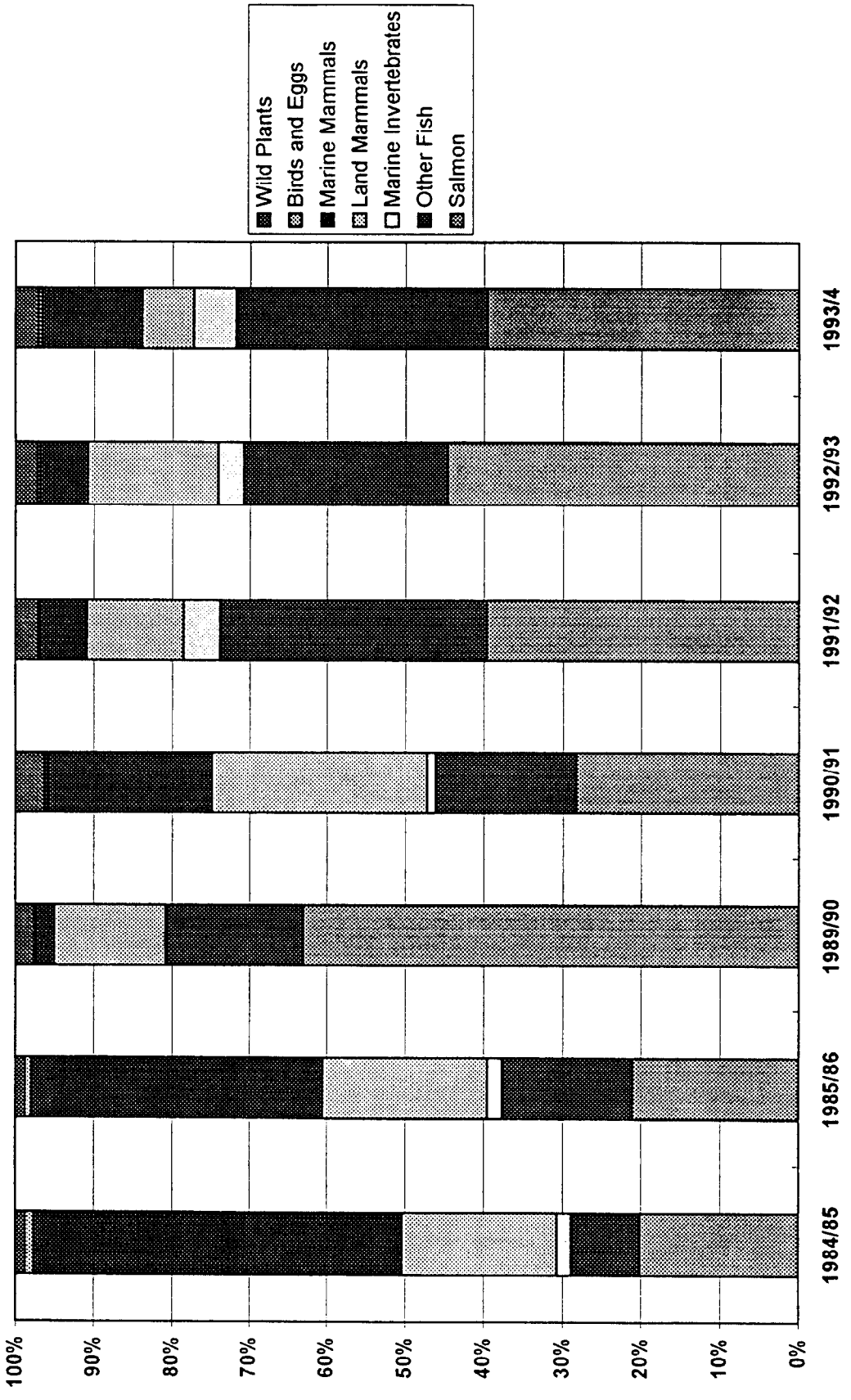


Table IV-35. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Chenega Bay, 1993/94

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
All Resources	100.0	95.7	95.7	100.0	91.3	27,763.33	991.55	274.77			23.76%	22.08%
Fish	100.0	82.6	78.3	95.7	78.3	19,926.29	711.65	197.21			26.64%	25.14%
Salmon	95.7	73.9	69.6	91.3	60.9	10,985.36	392.33	108.72	2,685.57	95.91	25.13%	22.38%
Chum Salmon	65.2	52.2	52.2	47.8	43.5	1,428.85	51.03	14.14	294.61	10.52	23.37%	21.67%
Coho Salmon	73.9	47.8	47.8	65.2	43.5	2,000.03	71.43	19.79	367.65	13.13	26.22%	24.90%
Chinook Salmon	47.8	21.7	17.4	30.4	30.4	358.52	12.80	3.55	23.13	0.83	47.00%	48.09%
Pink Salmon	60.9	56.5	47.8	43.5	39.1	1,388.52	49.59	13.74	670.78	23.96	34.23%	32.16%
Sockeye Salmon	95.7	65.2	65.2	78.3	56.5	5,809.44	207.48	57.49	1,329.39	47.48	30.92%	30.06%
Landlocked Salmon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Salmon	4.3	4.3	0.0	4.3	4.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Non-Salmon Fish	95.7	56.5	56.5	87.0	73.9	8,940.92	319.32	88.49			46.02%	44.98%
Pike	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sturgeon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cod	43.5	21.7	17.4	30.4	21.7	1,004.88	35.89	9.95	315.30	11.26	49.82%	49.56%
Pacific Tomcod	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Pacific Cod (Gray)	39.1	17.4	13.0	26.1	17.4	915.48	32.70	9.06	286.09	10.22	54.83%	54.59%
Burbot	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Cod	4.3	4.3	4.3	4.3	4.3	89.41	3.19	0.88	29.22	1.04	87.64%	86.42%
Sablefish (Black Cod)	26.1	8.7	8.7	17.4	13.0	557.57	19.91	5.52	179.86	6.42	81.65%	80.51%
Greenling	26.1	21.7	21.7	8.7	17.4	343.30	12.26	3.40	252.00	9.00	64.11%	57.41%
Kelp Greenling	4.3	4.3	4.3	0.0	4.3	129.04	4.61	1.28	129.04	4.61	87.64%	86.42%
Lingcod	17.4	17.4	17.4	4.3	17.4	121.74	4.35	1.20	30.43	1.09	47.80%	46.29%
Unknown Greenling	17.4	13.0	13.0	8.7	4.3	92.52	3.30	0.92	92.52	3.30	58.11%	59.94%
Flounder	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Flounder	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sole	4.3	0.0	0.0	4.3	4.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sole, Unknown	4.3	0.0	0.0	4.3	4.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Halibut	91.3	56.5	52.2	78.3	60.9	3,633.00	129.75	35.95	80.73	2.88	35.74%	34.93%
Herring	26.1	8.7	8.7	17.4	21.7	40.17	1.43	0.40	6.70 gal	0.24	60.82%	61.53%
Herring Roe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Spawn on Kelp	30.4	8.7	4.3	30.4	17.4	34.09	1.22	0.34	4.87 gal	0.17	87.64%	86.42%
Sac Roe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Rockfish	73.9	47.8	43.5	60.9	56.5	3,229.30	115.33	31.96	1,083.49	38.70	58.69%	53.51%
Black Rockfish (black bass)	26.1	17.4	17.4	17.4	13.0	368.26	13.15	3.64	245.51	8.77	59.19%	58.01%
Red Rockfish	73.9	47.8	43.5	60.9	56.5	1,240.52	44.30	12.28	310.13	11.08	34.56%	33.75%
Unknown Rockfish	13.0	8.7	8.7	8.7	8.7	1,620.52	57.88	16.04	527.86	18.85	87.22%	86.02%
Sculpin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table IV-35. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Chenega Bay, 1993/94

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Irish Lord	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Sculpin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Smelt	8.7	0.0	0.0	8.7	4.3	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Eulachon (Hooligan, Candlefish)	8.7	0.0	0.0	8.7	4.3	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Unknown Smelt	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Wolf Eel (Wolffish)	8.7	8.7	8.7	0.0	8.7	2.43	0.09	0.02	4.87	0.17	60.54%	58.77%
Shark	4.3	4.3	4.3	0.0	4.3	10.96	0.39	0.11	1.22	0.04	87.64%	88.63%
Salmon Shark	4.3	4.3	4.3	0.0	4.3	10.96	0.39	0.11	1.22	0.04	87.64%	88.63%
Walleye Pollock (Whiting)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Skates	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tuna/Mackerel	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mackerel	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Tuna/Mackerel	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Grayling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sheefish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whitefish	4.3	0.0	0.0	4.3	4.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whitefish, Large	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whitefish, Humpback	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whitefish	4.3	0.0	0.0	4.3	4.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Trout and Char	21.7	21.7	21.7	4.3	4.3	85.22	3.04	0.84	60.87	2.17	43.80%	42.42%
Char	21.7	21.7	21.7	4.3	4.3	85.22	3.04	0.84	60.87	2.17	43.80%	42.42%
Dolly Varden	21.7	21.7	21.7	4.3	4.3	85.22	3.04	0.84	60.87	2.17	43.80%	42.42%
Lake Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cutthroat Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Rainbow Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steelhead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Non-Salmon Fish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Game	82.6	69.6	47.8	73.9	43.5	1,845.08	65.90	18.26	51.13	1.83	27.92%	24.37%
Big Game	82.6	69.6	47.8	73.9	43.5	1,796.38	64.16	17.78	37.74	1.35	25.40%	24.42%
Black Bear	17.4	30.4	8.7	17.4	13.0	141.22	5.04	1.40	2.43	0.09	60.54%	60.40%
Brown Bear	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Caribou	8.7	4.3	4.3	8.7	8.7	182.61	6.52	1.81	1.22	0.04	87.64%	88.63%
Deer	82.6	69.6	47.8	73.9	43.5	1,472.56	52.59	14.57	34.09	1.22	25.18%	23.09%
Elk	4.3	0.0	0.0	4.3	4.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goat	8.7	4.3	0.0	8.7	4.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table IV-35. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Chenega Bay, 1993/94

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Moose	4.3	0.0	0.0	4.3	4.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sheep, Dall	4.3	0.0	0.0	4.3	4.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Small Game/Furbearer	13.0	13.0	13.0	0.0	8.7	48.70	1.74	0.48	13.39	0.48	55.09%	86.42%
Fox	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Beaver	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Coyote	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Hare	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snowshoe Hare	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Land Otter	8.7	8.7	8.7	0.0	4.3	0.00	0.00	0.00	7.30	0.26	73.82%	0.00%
Lynx	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marten	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mink	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Muskrat	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Porcupine	4.3	4.3	4.3	0.0	4.3	48.70	1.74	0.48	6.09	0.22	87.64%	86.42%
Weasel	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wolf	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wolverine	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Squirrel	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Feral Animals	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Rabbit - Feral	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Mammals	56.5	43.5	43.5	56.5	43.5	3,527.51	125.98	34.91	85.22	3.04	34.28%	32.10%
Whale	4.3	0.0	0.0	4.3	4.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Bowhead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whale	4.3	0.0	0.0	4.3	4.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	56.5	43.5	39.1	56.5	43.5	2,530.96	90.39	25.05	66.96	2.39	42.84%	42.47%
Harbor Seal	56.5	43.5	39.1	56.5	43.5	2,530.96	90.39	25.05	66.96	2.39	42.84%	42.47%
Porpoise/Dolphin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steller Sea Lion	43.5	30.4	26.1	34.8	34.8	996.56	35.59	9.86	12.17	0.43	37.65%	37.41%
Sea Otter	13.0	8.7	8.7	4.3	8.7	0.00	0.00	0.00	6.09	0.22	61.86%	0.00%
Birds and Eggs	52.2	43.5	43.5	17.4	30.4	151.19	5.40	1.50	168.00	6.00	42.55%	53.45%
Birds	47.8	39.1	39.1	13.0	30.4	150.21	5.36	1.49	148.52	5.30	47.71%	53.86%
Upland Game Birds	30.4	26.1	26.1	4.3	8.7	44.31	1.58	0.44	63.30	2.26	45.15%	43.73%
Grouse	30.4	26.1	26.1	4.3	8.7	44.31	1.58	0.44	63.30	2.26	45.15%	43.73%
Ptarmigan	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Migratory Birds	30.4	30.4	26.1	8.7	26.1	105.90	3.78	1.05	85.22	3.04	51.73%	59.28%
Waterfowl	30.4	30.4	26.1	8.7	26.1	105.90	3.78	1.05	85.22	3.04	51.73%	59.28%
Ducks	30.4	26.1	26.1	8.7	26.1	60.37	2.16	0.60	71.83	2.57	47.49%	47.16%

Table IV-35. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Chenega Bay, 1993/94

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Eider	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eider, Small	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steller Eiders	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Spectacled Eiders	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eider, Large	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
King Eiders	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Common Eiders	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eider, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter	4.3	4.3	4.3	4.3	4.3	6.57	0.23	0.07	7.30	0.26	87.64%	86.42%
Scoter, White-winged	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, Black	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, Surf	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, Unknown	4.3	4.3	4.3	4.3	4.3	6.57	0.23	0.07	7.30	0.26	87.64%	86.42%
Harlequin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goldeneye	26.1	26.1	26.1	4.3	21.7	29.22	1.04	0.29	36.52	1.30	37.41%	36.99%
Bufflehead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Merganser	4.3	4.3	4.3	0.0	4.3	3.29	0.12	0.03	3.65	0.13	87.64%	88.63%
Scaup	4.3	4.3	4.3	0.0	0.0	3.29	0.12	0.03	3.65	0.13	87.64%	88.63%
Mallard	8.7	8.7	8.7	0.0	4.3	4.87	0.17	0.05	4.87	0.17	60.54%	60.40%
Pintail	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wigeon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Teal	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Gadwall	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shoveler	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canvasback	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Ducks, Unknown	13.0	8.7	8.7	8.7	8.7	13.14	0.47	0.13	15.83	0.57	80.87%	79.74%
Geese	13.0	13.0	8.7	4.3	8.7	45.53	1.63	0.45	13.39	0.48	79.71%	78.59%
Brant	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snow Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
White-fronted Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese, Lesser	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese, Dusky	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese, Unknown	13.0	13.0	8.7	4.3	8.7	45.53	1.63	0.45	13.39	0.48	79.71%	78.59%
Crane	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sandhill Crane	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table IV-35. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Chenega Bay, 1993/94

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Shorebirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Common Snipe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seabirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cormorants	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Loons	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eggs	8.7	4.3	4.3	4.3	0.0	0.97	0.03	0.01	19.48	0.70	87.64%	86.42%
Seabird Eggs	8.7	4.3	4.3	4.3	0.0	0.73	0.03	0.01	14.61	0.52	87.64%	86.42%
Gull Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tern Eggs	8.7	4.3	4.3	4.3	0.0	0.73	0.03	0.01	14.61	0.52	87.64%	86.42%
Shorebird Eggs	4.3	4.3	4.3	0.0	0.0	0.24	0.01	0.00	4.87	0.17	87.64%	86.42%
Snipe Eggs	4.3	4.3	4.3	0.0	0.0	0.24	0.01	0.00	4.87	0.17	87.64%	86.42%
Black Snipe Eggs (Oystercatcher)	4.3	4.3	4.3	0.0	0.0	0.24	0.01	0.00	4.87	0.17	87.64%	86.42%
Waterfowl Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Invertebrates	91.3	73.9	73.9	73.9	56.5	1,504.91	53.75	14.89			54.61%	53.10%
Clams	65.2	52.2	52.2	39.1	30.4	283.04	10.11	2.80	94.35 gal	3.37	30.34%	28.35%
Butter Clams	34.8	30.4	30.4	21.7	17.4	129.65	4.63	1.28	43.22 gal	1.54	40.89%	38.36%
Razor Clams	26.1	13.0	13.0	17.4	13.0	109.57	3.91	1.08	36.52 gal	1.30	52.66%	51.87%
Pacific Littleneck Clams (Steamers)	17.4	17.4	17.4	8.7	8.7	43.83	1.57	0.43	14.61 gal	0.52	47.95%	48.44%
Pinkneck Clams	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Horse Clams (Gaper)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Unknown Clams	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Cockles	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Scallops	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Mussels	13.0	13.0	13.0	4.3	0.0	13.37	0.48	0.13	4.46 gal	0.16	72.19%	73.03%
Crabs	8.7	4.3	4.3	8.7	4.3	23.37	0.83	0.23	14.61	0.52	87.64%	86.42%
Dungeness Crab	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
King Crab	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
King Crab, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tanner Crab	8.7	4.3	4.3	8.7	4.3	23.37	0.83	0.23	14.61	0.52	87.64%	86.42%
Tanner Crab, Unknown	8.7	4.3	4.3	8.7	4.3	23.37	0.83	0.23	14.61	0.52	87.64%	86.42%
Unknown Crabs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Chitons (bidarkis)	47.8	34.8	34.8	30.4	26.1	82.78	2.96	0.82	20.70 gal	0.74	33.52%	32.03%
Chitons (large)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Chitons (small)	43.5	34.8	34.8	26.1	26.1	82.78	2.96	0.82	20.70 gal	0.74	33.52%	32.03%

Table IV-35. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Chenega Bay, 1993/94

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Chitons (unknown)	4.3	0.0	0.0	4.3	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Octopus	60.9	34.8	34.8	47.8	39.1	1,020.17	36.43	10.10	255.04	9.11	74.90%	73.69%
Sea Cucumber	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Sea Urchin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Shrimp	60.9	17.4	17.4	43.5	34.8	71.22	2.54	0.70	35.61 gal	1.27	52.14%	50.21%
Limpets	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Squid	4.3	0.0	0.0	4.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Oyster	4.3	4.3	4.3	0.0	0.0	10.96	0.39	0.11	3.65 gal	0.13	87.64%	86.42%
Rock Oyster	4.3	4.3	4.3	0.0	0.0	10.96	0.39	0.11	3.65 gal	0.13	87.64%	86.42%
Plants and Berries	100.0	87.0	87.0	56.5	39.1	808.35	28.87	8.00	202.09 gal	7.22	19.32%	15.98%
Berries	100.0	87.0	87.0	56.5	39.1	754.78	26.96	7.47	188.70 gal	6.74	19.08%	16.29%
Plants/Greens/Mushrooms	13.0	8.7	8.7	0.0	0.0	53.57	1.91	0.53	13.39 gal	0.48	79.71%	77.24%
Seaweed/Kelp (Food)	4.3	0.0	0.0	4.3	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Bull Kelp	4.3	0.0	0.0	4.3	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Wood	91.3	78.3	78.3	39.1	60.9	0.00	0.00	0.00	200.87 *crd*	7.17	22.11%	0.00%

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table IV-36. Estimated Amount of Resources Removed From Commercial Harvest, Chenega Bay, 1993/94

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		6,438.05	30.04	23.19
Fish		5,493.97	27.57	19.79
Salmon	146.09	932.01	8.48	3.36
Chum Salmon	24.35	118.09	8.26	0.43
Coho Salmon	60.87	331.13	16.56	1.19
Chinook Salmon	19.48	301.91	84.21	1.09
Sockeye Salmon	41.39	180.88	3.11	0.65
Non-Salmon Fish		4,561.95	51.02	16.43
Cod	133.91	428.52	42.64	1.54
Pacific Cod (Gray)	133.91	428.52	46.81	1.54
Sablefish (Black Cod)	118.99	368.87	66.16	1.33
Greenling	129.04	129.04	37.59	0.46
Kelp Greenling	129.04	129.04	100.00	0.46
Halibut	36.58	1,646.22	45.31	5.93
Rockfish	626.16	1,978.35	61.26	7.13
Black Rockfish (black bass)	14.61	21.91	5.95	0.08
Red Rockfish	84.91	339.65	27.38	1.22
Unknown Rockfish	526.64	1,616.78	99.77	5.82
Shark	1.22	10.96	100.00	0.04
Salmon Shark	1.22	10.96	100.00	0.04
Marine Invertebrates		944.09	62.73	3.40
Octopus	230.70	922.78	90.45	3.32
Shrimp	10.65 gal	21.30	29.91	0.08

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table IV-37. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Chenega Bay, 1993/94

		Subsistence Methods				Removed from Commercial Catch		Rod and Reel		Any Method	
		Floating Net		Subsistence Gear Any Method							
Resource	Percent Base	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.
Salmon	total	89.12	87.98	89.12	87.98	5.44	8.48	5.44	3.53		
Chum Salmon	gear type	11.14	13.38	11.14	13.38	16.67	12.67	2.50	4.56		
	resource	90.50	90.50	90.50	90.50	8.26	8.26	1.24	1.24		
	total	9.93	11.77	9.93	11.77	0.91	1.07	0.14	0.16	10.97	13.01
Coho Salmon	gear type	12.16	16.38	12.16	16.38	41.67	35.53	10.83	22.17		
	resource	79.14	79.14	79.14	79.14	16.56	16.56	4.30	4.30		
	total	10.83	14.41	10.83	14.41	2.27	3.01	0.59	0.78	13.69	18.21
Chinook Salmon	gear type	0.15	0.59	0.15	0.59	13.33	32.39	0.00	0.00		
	resource	15.79	15.79	15.79	15.79	84.21	84.21	0.00	0.00		
	total	0.14	0.52	0.14	0.52	0.73	2.75	0.00	0.00	0.86	3.26
Pink Salmon	gear type	23.14	11.86	23.14	11.86	0.00	0.00	80.00	62.30		
	resource	82.58	82.58	82.58	82.58	0.00	0.00	17.42	17.42		
	total	20.63	10.44	20.63	10.44	0.00	0.00	4.35	2.20	24.98	12.64
Sockeye Salmon	gear type	53.41	57.80	53.41	57.80	28.33	19.41	6.67	10.96		
	resource	96.15	96.15	96.15	96.15	3.11	3.11	0.73	0.73		
	total	47.60	50.85	47.60	50.85	1.54	1.65	0.36	0.39	49.50	52.88
Landlocked Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table IV-38. Estimated Salmon Harvest by Gear Type and Species, Chenega Bay, 1993/94

		Subsistence Methods				Removed from Commercial Catch		Rod and Reel		Any Method	
		Floating Net		Subsistence Gear Any Method							
	Harvest Units	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Salmon	numbers	2,393.39	85.48	2,393.39	85.48	146.09	5.22	146.09	5.22	2,685.57	95.91
	pounds	9,665.06	345.18	9,665.06	345.18	932.01	33.29	388.29	13.87	10,985.36	392.33
Chum Salmon	numbers	266.61	9.52	266.61	9.52	24.35	0.87	3.65	0.13	294.61	10.52
	pounds	1,293.05	46.18	1,293.05	46.18	118.09	4.22	17.71	0.63	1,428.85	51.03
Coho Salmon	numbers	290.96	10.39	290.96	10.39	60.87	2.17	15.83	0.57	367.65	13.13
	pounds	1,582.80	56.53	1,582.80	56.53	331.13	11.83	86.09	3.07	2,000.03	71.43
Chinook Salmon	numbers	3.65	0.13	3.65	0.13	19.48	0.70	0.00	0.00	23.13	0.83
	pounds	56.61	2.02	56.61	2.02	301.91	10.78	0.00	0.00	358.52	12.80
Pink Salmon	numbers	553.91	19.78	553.91	19.78	0.00	0.00	116.87	4.17	670.78	23.96
	pounds	1,146.60	40.95	1,146.60	40.95	0.00	0.00	241.92	8.64	1,388.52	49.59
Sockeye Salmon	numbers	1,278.26	45.65	1,278.26	45.65	41.39	1.48	9.74	0.35	1,329.39	47.48
	pounds	5,586.00	199.50	5,586.00	199.50	180.88	6.46	42.56	1.52	5,809.44	207.48
Landlocked Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table IV-39. Percentage of Households Harvesting Salmon by Gear Type and Species, Chenega Bay, 1993/94

Resource	Subsistence Methods		Removed from Commercial Catch	Rod and Reel	Any Method
	Floating Net	Any Subsistence Gear			
Salmon	60.87	60.87	21.74	30.43	69.57
Chum Salmon	47.83	47.83	4.35	4.35	52.17
Coho Salmon	43.48	43.48	4.35	8.70	47.83
Chinook Salmon	4.35	4.35	17.39	0.00	17.39
Pink Salmon	39.13	39.13	0.00	26.09	47.83
Sockeye Salmon	60.87	60.87	8.70	8.70	65.22
Landlocked Salmon	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table IV-40. Estimated Harvest of Fish Other than Salmon by Gear Type, Chenega Bay, 1993/94

	Harvest Units	Subsistence Gear		Removed From Commercial Catch		Rod and Reel		Ice Fishing		Any Method	
		Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Non-Salmon Fish	pounds	1,185.82	42.35	4,561.95	162.93	3,193.14	114.04	0.00	0.00	8,940.92	319.32
Lingcod	pounds	19.48	0.70	0.00	0.00	102.26	3.65	0.00	0.00	121.74	4.35
Pacific Cod (Gray)	pounds	97.39	3.48	428.52	15.30	389.57	13.91	0.00	0.00	915.48	32.70
Sablefish (Black Cod)	pounds	0.00	0.00	368.87	13.17	188.70	6.74	0.00	0.00	557.57	19.91
Unknown Cod	pounds	0.00	0.00	0.00	0.00	89.41	3.19	0.00	0.00	89.41	3.19
Halibut	pounds	836.35	29.87	1,646.22	58.79	1,150.43	41.09	0.00	0.00	3,633.00	129.75
Herring	pounds	40.17	1.43	0.00	0.00	0.00	0.00	0.00	0.00	40.17	1.43
Spawn on Kelp	pounds	34.09	1.22	0.00	0.00	0.00	0.00	0.00	0.00	34.09	1.22
Black Rockfish (black bass)	pounds	36.52	1.30	21.91	0.78	309.83	11.07	0.00	0.00	368.26	13.15
Red Rockfish	pounds	116.87	4.17	339.65	12.13	784.00	28.00	0.00	0.00	1,240.52	44.30
Unknown Rockfish	pounds	3.74	0.13	1,616.78	57.74	0.00	0.00	0.00	0.00	1,620.52	57.88
Kelp Greenling	pounds	0.00	0.00	129.04	4.61	0.00	0.00	0.00	0.00	129.04	4.61
Unknown Greenling	pounds	0.00	0.00	0.00	0.00	92.52	3.30	0.00	0.00	92.52	3.30
Wolf Eel (Wolffish)	pounds	1.22	0.04	0.00	0.00	1.22	0.04	0.00	0.00	2.43	0.09
Salmon Shark	pounds	0.00	0.00	10.96	0.39	0.00	0.00	0.00	0.00	10.96	0.39
Dolly Varden	pounds	0.00	0.00	0.00	0.00	85.22	3.04	0.00	0.00	85.22	3.04

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table IV-41. Percentage of Fish Other Than Salmon Harvested by Gear Type, Chenega Bay, 1993/94

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	13.26	51.02	35.71	0.00
Lingcod	resource	16.00	0.00	84.00	0.00
Pacific Cod (Gray)	resource	10.64	46.81	42.55	0.00
Sablefish (Black Cod)	resource	0.00	66.16	33.84	0.00
Unknown Cod	resource	0.00	0.00	100.00	0.00
Halibut	resource	23.02	45.31	31.67	0.00
Herring	resource	100.00	0.00	0.00	0.00
Spawn on Kelp	resource	100.00	0.00	0.00	0.00
Black Rockfish (black bass)	resource	9.92	5.95	84.13	0.00
Red Rockfish	resource	9.42	27.38	63.20	0.00
Unknown Rockfish	resource	0.23	99.77	0.00	0.00
Kelp Greenling	resource	0.00	100.00	0.00	0.00
Unknown Greenling	resource	0.00	0.00	100.00	0.00
Wolf Eel (Wolffish)	resource	50.00	0.00	50.00	0.00
Salmon Shark	resource	0.00	100.00	0.00	0.00
Dolly Varden	resource	0.00	0.00	100.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table IV-42. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Chenega Bay, 1993/94

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	30.43	30.43	39.13	0.00	56.52
Lingcod	4.35	0.00	13.04	0.00	17.39
Pacific Cod (Gray)	4.35	8.70	8.70	0.00	13.04
Sablefish (Black Cod)	0.00	8.70	4.35	0.00	8.70
Unknown Cod	0.00	0.00	4.35	0.00	4.35
Halibut	26.09	30.43	17.39	0.00	52.17
Herring	8.70	0.00	0.00	0.00	8.70
Spawn on Kelp	4.35	0.00	0.00	0.00	4.35
Black Rockfish (black bass)	4.35	4.35	13.04	0.00	17.39
Red Rockfish	8.70	21.74	26.09	0.00	43.48
Unknown Rockfish	4.35	8.70	0.00	0.00	8.70
Kelp Greenling	0.00	4.35	0.00	0.00	4.35
Unknown Greenling	0.00	0.00	13.04	0.00	13.04
Wolf Eel (Wolffish)	4.35	0.00	4.35	0.00	8.70
Salmon Shark	0.00	4.35	0.00	0.00	4.35
Dolly Varden	0.00	0.00	21.74	0.00	21.74

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table IV-43. Uses of Wild Foods, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
ANY WILD FOODS EATEN YESTERDAY?			
No			
Count	5	11	12
Col %	31.3%	52.4%	66.7%
Yes			
Count	11	10	6
Col %	68.8%	47.6%	33.3%
WILD FOODS AS MAIN PART OF A MEAL			
No			
Count	5	14	15
Col %	31.3%	66.7%	83.3%
Yes			
Count	11	7	3
Col %	68.8%	33.3%	16.7%
HARVEST OF WILD FOODS BY RESPONDENT			
No			
Count	10	17	15
Col %	62.5%	81.0%	83.3%
Yes			
Count	6	4	3
Col %	37.5%	19.0%	16.7%
WF HARVESTED BY RELATIVE IN HH			
No			
Count	14	19	17
Col %	87.5%	90.5%	94.4%
Yes			
Count	2	2	1
Col %	12.5%	9.5%	5.6%
WF HARVESTED BY RELATIVE IN ANOTHER HH			
No			
Count	15	15	17
Col %	93.8%	71.4%	94.4%
Yes			
Count	1	6	1
Col %	6.3%	28.6%	5.6%
WF HARVESTED BY RELATIVE IN ANOTHER COMM.			

(continued)

Table IV-43. Uses of Wild Foods, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
No			
Count	16	19	18
Col %	100.0%	90.5%	100.0%
Yes			
Count		2	
Col %		9.5%	
WF HARVESTED BY FRIEND IN HH			
No			
Count	16	21	18
Col %	100.0%	100.0%	100.0%
WF HARVESTED BY FRIEND IN COMMUNITY			
No			
Count	14	19	16
Col %	87.5%	90.5%	88.9%
Yes			
Count	2	2	2
Col %	12.5%	9.5%	11.1%
WF HARVESTED BY FRIEND IN ANOTHER COMM.			
No			
Count	14	20	18
Col %	87.5%	95.2%	100.0%
Yes			
Count	2	1	
Col %	12.5%	4.8%	

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Table IV-44. Safety of Using Subsistence Foods, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
DO YOU EAT BIDARKIES?			
No			
Count		8	9
Col %		38.1%	50.0%
Yes			
Count		13	9
Col %		61.9%	50.0%
IS EATING BIDARKIES IMPORTANT TO YOU?			
No			
Count	6		
Col %	37.5%		
Yes			
Count	10		
Col %	62.5%		
BIDARKIE HARVEST AREAS SAFE?			
No Response			
Count		1	
Col %		7.7%	
Do Not Know			
Count	3		
Col %	30.0%		
Not Safe			
Count	6	9	5
Col %	60.0%	69.2%	55.6%
Safe			
Count	1	3	4
Col %	10.0%	23.1%	44.4%
WHY BIDARKIES NOT SAFE TO EAT			
Oil pollution or fear of contamination			
Count	2	6	3
Col %	33.3%	66.7%	60.0%
Do not trust food safety information			
Count		1	
Col %		11.1%	
Would not eat personally			
Count	2		

(continued)

Table IV-44. Safety of Using Subsistence Foods, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Col %	33.3%		
Do not like eating them			
Count	1		
Col %	16.7%		
Pollution from non-oil spill source			
Count	1		
Col %	16.7%		
Resource has been destroyed or depleted			
Count		1	1
Col %		11.1%	20.0%
Unsure about safety			
Count		1	
Col %		11.1%	
Safe to eat if you know which ones to take			
Count			1
Col %			20.0%
DO YOU EAT CLAMS?			
No			
Count		2	3
Col %		9.5%	16.7%
Yes			
Count		19	15
Col %		90.5%	83.3%
ARE CLAMS SAFE FOR CHILDREN TO EAT?			
No Response			
Count	1	1	
Col %	6.3%	5.3%	
Do Not Know			
Count	2		
Col %	12.5%		
Not Safe			
Count	10	12	9
Col %	62.5%	63.2%	60.0%
Safe			

(continued)

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Table IV-44. Safety of Using Subsistence Foods, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Count	3	6	6
Col %	18.8%	31.6%	40.0%
WHY CLAMS NOT SAFE TO EAT			
Received conflicting information			
Count	2	1	
Col %	20.0%	8.3%	
Oil pollution or fear of contamination			
Count	3	8	6
Col %	30.0%	66.7%	66.7%
Would not eat personally			
Count	1	2	
Col %	10.0%	16.7%	
Do not like eating them			
Count	2		
Col %	20.0%		
Pollution from non-oil spill source			
Count			1
Col %			11.1%
Unsure about safety			
Count	2	1	
Col %	20.0%	8.3%	
Both PSP and pollution			
Count			1
Col %			11.1%
Do not know the results of studies			
Count			1
Col %			11.1%
DO YOU EAT SEAL OIL OR SEAL MEAT?			
No			
Count		5	8
Col %		23.8%	44.4%
Yes			
Count		16	10
Col %		76.2%	55.6%
IS EATING SEAL MEAT OR OIL IMPORTANT?			

(continued)

Table IV-44. Safety of Using Subsistence Foods, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
No			
Count	3		
Col %	18.8%		
Yes			
Count	13		
Col %	81.3%		
ARE SEALS FROM HARVEST AREAS SAFE TO EAT?			
No Response			
Count		1	
Col %		6.3%	
Do Not Know			
Count	3		
Col %	23.1%		
Not Safe			
Count	3	12	2
Col %	23.1%	75.0%	22.2%
Safe			
Count	7	3	7
Col %	53.8%	18.8%	77.8%
WHY SEAL NOT SAFE TO EAT			
Oil pollution or fear of contamination			
Count		2	2
Col %		16.7%	100.0%
Resource looks bad			
Count		2	
Col %		16.7%	
Would not eat personally			
Count	1		
Col %	33.3%		
Do not like eating them			
Count	1		
Col %	33.3%		
Pollution from non-oil spill source			
Count	1	1	
Col %	33.3%	8.3%	

(continued)

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Table IV-44. Safety of Using Subsistence Foods, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Resource has been destroyed or depleted			
Count		1	
Col %		8.3%	
Unsure about safety			
Count		6	
Col %		50.0%	

Table IV-45. Resource Population Statuses, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
COMPARED TO 1988: DEER			
Do Not Know			
Count		3	
Col %		18.8%	
Less			
Count	9	10	7
Col %	75.0%	62.5%	77.8%
Same			
Count	2	3	2
Col %	16.7%	18.8%	22.2%
More			
Count	1		
Col %	8.3%		
COMPARED TO 1988: MOOSE			
Do Not Know			
Count		2	2
Col %		66.7%	66.7%
Less			
Count			1
Col %			33.3%
Same			
Count		1	
Col %		33.3%	
COMPARED TO 1988: BEAR			
Do Not Know			
Count	1	2	
Col %	8.3%	12.5%	
Less			
Count	3	6	4
Col %	25.0%	37.5%	40.0%
Same			
Count	6	6	4
Col %	50.0%	37.5%	40.0%
More			
Count	2	2	2
Col %	16.7%	12.5%	20.0%

(continued)

Table IV-45. Resource Population Statuses, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
COMPARED TO 1988: HARBOR SEAL			
Do Not Know			
Count		2	
Col %		12.5%	
Less			
Count	12	14	11
Col %	100.0%	87.5%	100.0%
COMPARED TO 1988: SEA LIONS			
Do Not Know			
Count		2	1
Col %		12.5%	9.1%
Less			
Count	12	11	9
Col %	100.0%	68.8%	81.8%
Same			
Count		3	1
Col %		18.8%	9.1%
COMPARED TO 1988: SEA DUCKS			
Do Not Know			
Count	1	2	2
Col %	8.3%	12.5%	18.2%
Less			
Count	11	13	9
Col %	91.7%	81.3%	81.8%
Same			
Count		1	
Col %		6.3%	
COMPARED TO 1988: COMMON MURRE			
No Response			
Count	1		
Col %	9.1%		
Do Not Know			
Count	8	5	5
Col %	72.7%	31.3%	45.5%
Less			
Count	2	8	6

(continued)

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Table IV-45. Resource Population Statuses, Chenega Bay

	STUDY YEAR 1991	1992	1993
Col %	18.2%	50.0%	54.5%
Same			
Count		2	
Col %		12.5%	
More			
Count		1	
Col %		6.3%	
COMPARED TO 1988: SALMON			
Do Not Know			
Count	2	4	2
Col %	16.7%	25.0%	18.2%
Less			
Count	4	9	9
Col %	33.3%	56.3%	81.8%
Same			
Count	5	3	
Col %	41.7%	18.8%	
More			
Count	1		
Col %	8.3%		
COMPARED TO 1988: HALIBUT			
Do Not Know			
Count	3	6	3
Col %	25.0%	37.5%	27.3%
Less			
Count	5	6	6
Col %	41.7%	37.5%	54.5%
Same			
Count	4	4	2
Col %	33.3%	25.0%	18.2%
COMPARED TO 1988: ROCKFISH			
Do Not Know			
Count	4	7	6
Col %	33.3%	43.8%	54.5%
Less			

(continued)

Table IV-45. Resource Population Statuses, Chenega Bay

	STUDY YEAR 1991	1992	1993
Count	5	6	4
Col %	41.7%	37.5%	36.4%
Same			
Count	3	3	1
Col %	25.0%	18.8%	9.1%
COMPARED TO 1988: DOLLY VARDEN			
Do Not Know			
Count	5	9	6
Col %	41.7%	56.3%	60.0%
Less			
Count	4	5	3
Col %	33.3%	31.3%	30.0%
Same			
Count	3	2	1
Col %	25.0%	12.5%	10.0%
COMPARED TO 1988: CLAMS			
Do Not Know			
Count	2	4	3
Col %	16.7%	25.0%	27.3%
Less			
Count	10	10	8
Col %	83.3%	62.5%	72.7%
Same			
Count		1	
Col %		6.3%	
More			
Count		1	
Col %		6.3%	
COMPARED TO 1988: BIDARKIES			
Do Not Know			
Count	3	7	7
Col %	25.0%	43.8%	63.6%
Less			
Count	9	8	4
Col %	75.0%	50.0%	36.4%

(continued)

Table IV-45. Resource Population Statuses, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Same			
Count		1	
Col %		6.3%	
COMPARED TO 1988: SEA URCHINS			
Do Not Know			
Count	7	12	8
Col %	58.3%	75.0%	72.7%
Less			
Count	4	3	3
Col %	33.3%	18.8%	27.3%
Same			
Count	1	1	
Col %	8.3%	6.3%	
COMPARED TO 1988: OCTOPUS			
Do Not Know			
Count	1	5	3
Col %	8.3%	31.3%	27.3%
Less			
Count	7	8	5
Col %	58.3%	50.0%	45.5%
Same			
Count	3	3	3
Col %	25.0%	18.8%	27.3%
More			
Count	1		
Col %	8.3%		

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Table IV-46. Childrens Participation in Subsistence, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
DOES YOUR HOUSEHOLD PROCESS WILD FOODS?			
No			
Count		2	
Col %		9.5%	
Yes			
Count		19	18
Col %		90.5%	100.0%
DO CHILDREN HELP YOUR HH PROCESS WILD FOODS?			
No			
Count	11	15	10
Col %	68.8%	71.4%	55.6%
Yes			
Count	5	6	8
Col %	31.3%	28.6%	44.4%
DID EVOS AFFECT PARTICIPATION WITH CHILDREN?			
No Response			
Count		1	
Col %		5.0%	
Do Not Know			
Count	1		
Col %	7.1%		
No			
Count	6	13	10
Col %	42.9%	65.0%	71.4%
Yes			
Count	7	6	4
Col %	50.0%	30.0%	28.6%
WHY EVOS AFFECTED PARTICIPATION WITH CHILDREN			
Resources were not available			
Count	2	1	2
Col %	28.6%	16.7%	50.0%
Were too busy with other affairs			
Count	3	3	2
Col %	42.9%	50.0%	50.0%

(continued)

Table IV-46. Childrens Participation in Subsistence, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Did not trust foods			
Count	1		
Col %	14.3%		
Afraid to take kids to the beach			
Count		1	
Col %		16.7%	
Less harvesting activity			
Count	1		
Col %	14.3%		
Decreased effort because of the spill			
Count		1	
Col %		16.7%	

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Table IV-47. Sharing, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
DID HOUSEHOLD SHARE?			
No			
Count	4	2	
Col %	25.0%	9.5%	
Yes			
Count	12	19	18
Col %	75.0%	90.5%	100.0%
PREV. YEAR: SHARING OF WILD RES.			
Do Not Know			
Count		1	1
Col %		5.0%	6.7%
Less			
Count	4	4	5
Col %	28.6%	20.0%	33.3%
Same			
Count	8	10	7
Col %	57.1%	50.0%	46.7%
More			
Count	2	5	2
Col %	14.3%	25.0%	13.3%
PREV. YEAR: SHARING OF HUNT/FISH GEAR			
Do Not Know			
Count		1	1
Col %		5.9%	7.1%
Less			
Count	3	4	3
Col %	21.4%	23.5%	21.4%
Same			
Count	9	8	8
Col %	64.3%	47.1%	57.1%
More			
Count	2	4	2
Col %	14.3%	23.5%	14.3%
PREV. YEAR: SHARING OF MONEY			
No Response			
Count		1	

(continued)

Table IV-47. Sharing, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Col %		5.9%	
Do Not Know			
Count		1	
Col %		5.9%	
Less			
Count	2	4	4
Col %	16.7%	23.5%	33.3%
Same			
Count	9	7	5
Col %	75.0%	41.2%	41.7%
More			
Count	1	4	3
Col %	8.3%	23.5%	25.0%
PREV. YEAR: SHARING OF LABOR			
Less			
Count	1	2	2
Col %	6.7%	10.5%	13.3%
Same			
Count	11	13	8
Col %	73.3%	68.4%	53.3%
More			
Count	3	4	5
Col %	20.0%	21.1%	33.3%
PRE-OS: SHARING OF WILD RESOURCES			
Do Not Know			
Count			1
Col %			9.1%
Less			
Count	8	7	5
Col %	61.5%	43.8%	45.5%
Same			
Count	5	7	4
Col %	38.5%	43.8%	36.4%
More			
Count		2	1

(continued)

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Table IV-47. Sharing, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Col %		12.5%	9.1%
PRE-OS: SHARING OF HUNT/FISH GEAR			
Less			
Count	7	4	5
Col %	53.8%	30.8%	45.5%
Same			
Count	6	6	4
Col %	46.2%	46.2%	36.4%
More			
Count		3	2
Col %		23.1%	18.2%
PRE-OS: SHARING OF MONEY			
No Response			
Count		1	
Col %		6.7%	
Do Not Know			
Count		1	
Col %		6.7%	
Less			
Count	3	4	3
Col %	27.3%	26.7%	30.0%
Same			
Count	7	7	3
Col %	63.6%	46.7%	30.0%
More			
Count	1	2	4
Col %	9.1%	13.3%	40.0%
PRE-OS: SHARING OF LABOR			
Less			
Count	4	3	3
Col %	30.8%	20.0%	25.0%
Same			
Count	9	8	4
Col %	69.2%	53.3%	33.3%
More			

(continued)

Table IV-47. Sharing, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Count		4	5
Col %		26.7%	41.7%

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Table IV-48. Political Activities, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
LAST 3 YRS.: ELDERS INFLUENCE			
Decreased			
Count	5		
Col %	35.7%		
Same			
Count	7		
Col %	50.0%		
Increased			
Count	2		
Col %	14.3%		
LAST 4 YRS.: ELDERS INFLUENCE			
No Response			
Count		1	
Col %		5.0%	
Do Not Know			
Count		2	
Col %		10.0%	
Decreased			
Count		7	
Col %		35.0%	
Same			
Count		6	
Col %		30.0%	
Increased			
Count		4	
Col %		20.0%	
LAST 5 YRS.: ELDERS INFLUENCE			
Do Not Know			
Count			1
Col %			7.1%
Decreased			
Count			10
Col %			71.4%
Same			
Count			3
Col %			21.4%

(continued)

Table IV-48. Political Activities, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
LAST 5 YRS.: ELDERS INFLUENCE: WHY			
Fewer elders, traditional people passed away			
Count			4
Col %			36.4%
Elders not as active			
Count			2
Col %			18.2%
Elders knowledge is not appreciated or recognized			
Count			2
Col %			18.2%
Elders are not listened to			
Count			1
Col %			9.1%
Non-specific response			
Count			1
Col %			9.1%
Elders inability to deal with the oil spill			
Count			1
Col %			9.1%
PRE-EVOS: ATTEND PUBLIC MEETINGS			
Sometimes			
Count	7		
Col %	53.8%		
Almost Always			
Count	6		
Col %	46.2%		
PRE-EVOS: ATTEND PUBLIC MEETINGS			
Less			
Count		10	3
Col %		58.8%	27.3%
Same			
Count		5	4
Col %		29.4%	36.4%

(continued)

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Table IV-48. Political Activities, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
More			
Count		2	4
Col %		11.8%	36.4%
LAST YEAR: ATTEND PUBLIC MEETINGS			
Never			
Count	2		
Col %	12.5%		
Sometimes			
Count	7		
Col %	43.8%		
Almost Always			
Count	7		
Col %	43.8%		
LAST YEAR: ATTEND PUBLIC MEETINGS			
Do Not Know			
Count		4	
Col %		19.0%	
Never			
Count		3	4
Col %		14.3%	22.2%
1.00			
Count		1	
Col %		4.8%	
2.00			
Count		1	1
Col %		4.8%	5.6%
3.00			
Count			3
Col %			16.7%
4.00			
Count		2	2
Col %		9.5%	11.1%
5.00			
Count			2
Col %			11.1%

(continued)

Table IV-48. Political Activities, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
7.00			
Count		2	
Col %		9.5%	
8.00			
Count		1	
Col %		4.8%	
10.00			
Count		1	1
Col %		4.8%	5.6%
11.00			
Count			1
Col %			5.6%
12.00			
Count		2	2
Col %		9.5%	11.1%
20.00			
Count			1
Col %			5.6%
22.00			
Count		1	
Col %		4.8%	
23.00			
Count			1
Col %			5.6%
25.00			
Count		2	
Col %		9.5%	
35.00			
Count		1	
Col %		4.8%	
VOTE IN LAST CITY COUNCIL ELECTION?			
Do Not Know			
Count	1		
Col %	100.0%		
VOTE IN LAST STATE-WIDE ELECTION?			

(continued)

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Table IV-48. Political Activities, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
No Response			
Count		1	
Col %		4.8%	
No			
Count	6	13	9
Col %	37.5%	61.9%	56.3%
Yes			
Count	10	7	7
Col %	62.5%	33.3%	43.8%
BELONG TO NATIVE CORPORATION?			
No			
Count	3	6	7
Col %	18.8%	28.6%	38.9%
Yes			
Count	13	15	11
Col %	81.3%	71.4%	61.1%
REGIONAL NATIVE CORPORATION			
Chugach Alaska Corp.			
Count	13	15	10
Col %	100.0%	100.0%	90.9%
Cook Inlet Region, Inc.			
Count			1
Col %			9.1%
VOTE IN LAST REG. CORP. ELECTION?			
No Response			
Count		1	
Col %		6.7%	
No			
Count	1	5	3
Col %	7.7%	33.3%	27.3%
Yes			
Count	12	9	8
Col %	92.3%	60.0%	72.7%
VILLAGE NATIVE CORPORATION			
None, At Large			
Count	1		

(continued)

Table IV-48. Political Activities, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Col %	8.3%		
Chenega Corporation			
Count	8	12	7
Col %	66.7%	80.0%	63.6%
Eyak Corporation (Cordova)			
Count	1		
Col %	8.3%		
Salamantoff Native Association (Kenai)			
Count			1
Col %			9.1%
Port Graham Corporation			
Count	1		
Col %	8.3%		
Tatitlek Corporation			
Count	1	3	3
Col %	8.3%	20.0%	27.3%
VOTE IN LAST NATIVE VILLAGE CORP. ELECTION?			
No			
Count		2	
Col %		13.3%	
Yes			
Count	11	13	11
Col %	100.0%	86.7%	100.0%
HAS VIEW OF LEADER CHANGED SINCE EVOS?			
No Response			
Count	1	1	1
Col %	6.3%	5.0%	7.1%
Do Not Know			
Count		2	4
Col %		10.0%	28.6%
No			
Count	10	11	7
Col %	62.5%	55.0%	50.0%
Yes			

(continued)

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Table IV-48. Political Activities, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Count	5	6	2
Col %	31.3%	30.0%	14.3%
WHY POST EVOS VIEW OF LEADERS			
No Response			
Count		2	2
Col %		28.6%	50.0%
Do Not Know			
Count	2		
Col %	33.3%		
Trust			
Count		1	
Col %		14.3%	
Awareness/involvement			
Count		2	1
Col %		28.6%	25.0%
Education			
Count	2	1	
Col %	33.3%	14.3%	
Level headed/reasonable			
Count		1	
Col %		14.3%	
Decisive			
Count		1	
Col %		14.3%	
Sobriety/maturity			
Count	1	2	
Col %	16.7%	28.6%	
Issue specific reasons			
Count		2	
Col %		28.6%	
New leadership			
Count	1		1
Col %	16.7%		25.0%

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Table IV-49. Significance of Place, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
MAIN REASON MOVED TO COMMUNITY			
No Response			
Count		1	
Col %		4.8%	
Born or reared here			
Count	6	6	3
Col %	37.5%	28.6%	16.7%
Relatives (family)			
Count	2	2	2
Col %	12.5%	9.5%	11.1%
Married a person born or reared here			
Count	1		
Col %	6.3%		
Family has always lived here			
Count		1	
Col %		4.8%	
Subsistence opportunities			
Count		1	1
Col %		4.8%	5.6%
Employment reasons			
Count			1
Col %			5.6%
Educational opportunities			
Count			1
Col %			5.6%
Economic reasons			
Count	1		
Col %	6.3%		
Housing/property			
Count		3	
Col %		14.3%	
Environmental qualities			
Count		1	
Col %		4.8%	
Size of the community			

(continued)

Table IV-49. Significance of Place, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Count	1		
Col %	6.3%		
Personal freedoms (politics)			
Count	1		
Col %	6.3%		
Recreational opportunities			
Count			1
Col %			5.6%
Pace of Life			
Count		1	2
Col %		4.8%	11.1%
Quality of Life			
Count	2	2	1
Col %	12.5%	9.5%	5.6%
Cultural Reasons			
Count	1		
Col %	6.3%		
Location			
Count	1	2	3
Col %	6.3%	9.5%	16.7%
This is where they established their home			
Count		1	3
Col %		4.8%	16.7%
LIVE HERE: WHERE PERSON IS FROM			
No			
Count	9	12	11
Col %	56.3%	57.1%	61.1%
Yes			
Count	7	9	7
Col %	43.8%	42.9%	38.9%
LIVE HERE: RELATIVES LIVE HERE			
No			
Count	5	6	9
Col %	31.3%	28.6%	50.0%
Yes			

(continued)

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Table IV-49. Significance of Place, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Count	11	15	9
Col %	68.8%	71.4%	50.0%
LIVE HERE: MARRIED PERSON FROM HERE			
No			
Count	11	17	13
Col %	68.8%	81.0%	72.2%
Yes			
Count	5	4	5
Col %	31.3%	19.0%	27.8%
LIVE HERE: ALWAYS LIVED HERE			
No Response			
Count		1	
Col %		4.8%	
No			
Count	11	11	11
Col %	68.8%	52.4%	61.1%
Yes			
Count	5	9	7
Col %	31.3%	42.9%	38.9%
LIVE HERE: FRIENDS LIVE HERE			
No Response			
Count		1	
Col %		4.8%	
No			
Count	3	10	10
Col %	18.8%	47.6%	55.6%
Yes			
Count	13	10	8
Col %	81.3%	47.6%	44.4%
LIVE HERE: HUNTING & FISHING HERE			
No			
Count	2	2	6
Col %	12.5%	9.5%	33.3%
Yes			
Count	14	19	12
Col %	87.5%	90.5%	66.7%

(continued)

Table IV-49. Significance of Place, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
LIVE HERE: JOB OPPORTUNITIES HERE			
No Response			
Count		2	
Col %		9.5%	
No			
Count	9	12	7
Col %	56.3%	57.1%	38.9%
Yes			
Count	7	7	11
Col %	43.8%	33.3%	61.1%
LIVE HERE: EDUCATIONAL OPPORTUNITIES			
No			
Count	11	12	12
Col %	68.8%	57.1%	66.7%
Yes			
Count	5	9	6
Col %	31.3%	42.9%	33.3%
LIVE HERE: COST OF LIVING			
No Response			
Count	1	2	
Col %	6.3%	9.5%	
No			
Count	8	7	7
Col %	50.0%	33.3%	38.9%
Yes			
Count	7	12	11
Col %	43.8%	57.1%	61.1%
LIVE HERE: HOUSING AVAILABLE			
No			
Count	4	6	7
Col %	25.0%	28.6%	38.9%
Yes			
Count	12	15	11
Col %	75.0%	71.4%	61.1%
LIVE HERE: STORES			
No Response			

(continued)

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Table IV-49. Significance of Place, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Count			1
Col %			5.6%
No			
Count	16	21	17
Col %	100.0%	100.0%	94.4%
LIVE HERE: MEDICAL SERVICES			
No Response			
Count		1	
Col %		4.8%	
No			
Count	14	16	13
Col %	87.5%	76.2%	72.2%
Yes			
Count	2	4	5
Col %	12.5%	19.0%	27.8%
LIVE HERE: OTHER SERVICES			
No			
Count	14	20	17
Col %	87.5%	95.2%	94.4%
Yes			
Count	2	1	1
Col %	12.5%	4.8%	5.6%
LIVE HERE: BEAUTY OF AREA			
No			
Count	2		2
Col %	12.5%		11.1%
Yes			
Count	14	21	16
Col %	87.5%	100.0%	88.9%
LIVE HERE: SIZE OF COMMUNITY			
No Response			
Count		1	
Col %		4.8%	
No			
Count	3	5	7
Col %	18.8%	23.8%	38.9%

(continued)

Table IV-49. Significance of Place, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Yes			
Count	13	15	11
Col %	81.3%	71.4%	61.1%
LIVE HERE: LESS CRIME			
No Response			
Count		1	
Col %		4.8%	
No			
Count	3	2	8
Col %	18.8%	9.5%	44.4%
Yes			
Count	13	18	10
Col %	81.3%	85.7%	55.6%
LIVE HERE: LESS DRINKING/DRUGS			
No Response			
Count		3	2
Col %		14.3%	11.1%
No			
Count	12	10	11
Col %	75.0%	47.6%	61.1%
Yes			
Count	4	8	5
Col %	25.0%	38.1%	27.8%
LIVE HERE: NECESSARY PERSONAL FREEDOMS			
No			
Count	2	1	4
Col %	12.5%	4.8%	22.2%
Yes			
Count	14	20	14
Col %	87.5%	95.2%	77.8%
LIVE HERE: RECREATIONAL OPPORTUNITIES			
No Response			
Count			1
Col %			5.6%
No			
Count	4	5	3

(continued)

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Table IV-49. Significance of Place, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Col %	25.0%	23.8%	16.7%
Yes			
Count	12	16	14
Col %	75.0%	76.2%	77.8%
OTHER REASONS FOR LIVING IN COMMUNITY			
Pace of Life			
Count	1	2	1
Col %	25.0%	22.2%	14.3%
Quality of Life			
Count	1	7	4
Col %	25.0%	77.8%	57.1%
Cultural Reasons			
Count	2		
Col %	50.0%		
Location			
Count			2
Col %			28.6%
Not here by choice			
Count			1
Col %			14.3%
MAIN REASON REMAINING IN COMMUNITY			
No Response			
Count		1	
Col %		4.8%	
Do Not Know			
Count	1		
Col %	6.3%		
Born or reared here			
Count	2	2	1
Col %	12.5%	9.5%	5.6%
Relatives (family)			
Count	4	3	2
Col %	25.0%	14.3%	11.1%
Family has always lived here			
Count			1

(continued)

Table IV-49. Significance of Place, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Col %			5.6%
Friends			
Count		1	
Col %		4.8%	
Subsistence opportunities			
Count	1	3	2
Col %	6.3%	14.3%	11.1%
Employment reasons			
Count	1	3	3
Col %	6.3%	14.3%	16.7%
Housing/property			
Count		1	
Col %		4.8%	
Environmental qualities			
Count	1	1	1
Col %	6.3%	4.8%	5.6%
Size of the community			
Count		1	
Col %		4.8%	
Personal freedoms (politics)			
Count	3	1	2
Col %	18.8%	4.8%	11.1%
Recreational opportunities			
Count	1		
Col %	6.3%		
Pace of Life			
Count	1	1	
Col %	6.3%	4.8%	
Quality of Life			
Count		1	3
Col %		4.8%	16.7%
Cultural Reasons			
Count	1	1	
Col %	6.3%	4.8%	

(continued)

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Table IV-49. Significance of Place, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Location			
Count			1
Col %			5.6%
Not here by choice			
Count			1
Col %			5.6%
This is where they established their home			
Count			1
Col %			5.6%
Good benefits for senior citizens			
Count		1	
Col %		4.8%	
POST-EVOS: CHANGE IN LIKING COMMUNITY			
No Response			
Count	1		
Col %	8.3%		
Do Not Know			
Count		1	1
Col %		6.3%	7.7%
Less			
Count	6	6	4
Col %	50.0%	37.5%	30.8%
Same			
Count	5	9	7
Col %	41.7%	56.3%	53.8%
More			
Count			1
Col %			7.7%
POST-EVOS: WHY CHANGE IN LIKING COMMUNITY			
Do Not Know			
Count		1	
Col %		14.3%	
Non-specific			
Count	1	1	
Col %	16.7%	14.3%	

(continued)

Table IV-49. Significance of Place, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Oil contamination/fear of oil contamination			
Count	2	2	1
Col %	33.3%	28.6%	20.0%
Increased dissension/conflict/violence			
Count	2	1	
Col %	33.3%	14.3%	
Increased drug/alcohol abuse			
Count	1		
Col %	16.7%		
Animals harvest to find/hunt/fish			
Count			3
Col %			60.0%
More stressful			
Count		1	
Col %		14.3%	
Improved community cohesiveness			
Count			1
Col %			20.0%
Too much politics			
Count		1	
Col %		14.3%	
RATHER LIVE IN ANOTHER COMMUNITY			
No Response			
Count	2		
Col %	12.5%		
Do Not Know			
Count		2	
Col %		9.5%	
No			
Count	11	16	13
Col %	68.8%	76.2%	72.2%
Yes			
Count	3	3	5
Col %	18.8%	14.3%	27.8%

(continued)

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Table IV-49. Significance of Place, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
EXPECT TO LIVE IN REGION WHEN OLD			
Do Not Know			
Count		2	2
Col %		9.5%	11.1%
No			
Count	2	3	4
Col %	12.5%	14.3%	22.2%
Yes			
Count	14	16	12
Col %	87.5%	76.2%	66.7%
CONFIDENT ABOUT HUNT/FISH/GATHERING			
No Response			
Count			1
Col %			5.6%
Do Not Know			
Count	3	4	1
Col %	20.0%	19.0%	5.6%
No			
Count	5	10	7
Col %	33.3%	47.6%	38.9%
Yes			
Count	7	7	9
Col %	46.7%	33.3%	50.0%
WHY UNCONFIDENT ABOUT HUNTING/FISHING/GATHERING			
No Response			
Count	1		1
Col %	16.7%		12.5%
Increased restrictions			
Count		2	
Col %		14.3%	
Uncertainty about the future			
Count	3	1	1
Col %	50.0%	7.1%	12.5%
Increased development			
Count		1	

(continued)

Table IV-49. Significance of Place, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Col %		7.1%	
Timber and logging			
Count		1	
Col %		7.1%	
Road development			
Count	1		
Col %	16.7%		
Uncertainty about food safety			
Count	1	3	2
Col %	16.7%	21.4%	25.0%
Population pressure			
Count		1	2
Col %		7.1%	25.0%
Vulnerable to environmental damage			
Count		7	1
Col %		50.0%	12.5%
Reduced resource availability			
Count		8	5
Col %		57.1%	62.5%
Continued presence of oil in the environment			
Count			1
Col %			12.5%
CONTINUE TO LIVE HERE IF NO WILD FOOD			
No Response			
Count		1	
Col %		4.8%	
Do Not Know			
Count	1	1	2
Col %	6.3%	4.8%	11.1%
No			
Count	8	8	5
Col %	50.0%	38.1%	27.8%
Yes			
Count	7	11	11

(continued)

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Table IV-49. Significance of Place, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Col %	43.8%	52.4%	61.1%

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Table IV-50. Effectiveness of Oil Spill Responses, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
EFFECTIVENESS EVOS: US COAST GUARD			
No Response			
Count		1	
Col %		4.8%	
Do Not Know			
Count	4	4	3
Col %	26.7%	19.0%	23.1%
Not Effective			
Count	4	9	5
Col %	26.7%	42.9%	38.5%
Somewhat			
Count	4	4	3
Col %	26.7%	19.0%	23.1%
Effective			
Count	3	3	2
Col %	20.0%	14.3%	15.4%
EFFECTIVENESS EVOS: ADEC			
No Response			
Count		1	
Col %		5.0%	
Do Not Know			
Count	4	3	2
Col %	28.6%	15.0%	15.4%
Not Effective			
Count	2	6	6
Col %	14.3%	30.0%	46.2%
Somewhat			
Count	6	4	4
Col %	42.9%	20.0%	30.8%
Effective			
Count	2	6	1
Col %	14.3%	30.0%	7.7%
EFFECTIVENESS EVOS: INSURANCE COMPANIES			
Do Not Know			
Count	8		
Col %	57.1%		

(continued)

Table IV-50. Effectiveness of Oil Spill Responses, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Not Effective			
Count	5		
Col %	35.7%		
Effective			
Count	1		
Col %	7.1%		
EFFECTIVENESS EVOS: LOCAL NATIVE PROFIT			
No Response			
Count	1	1	1
Col %	7.1%	4.8%	8.3%
Do Not Know			
Count	1	6	3
Col %	7.1%	28.6%	25.0%
Not Effective			
Count	7	8	4
Col %	50.0%	38.1%	33.3%
Somewhat			
Count	4	2	3
Col %	28.6%	9.5%	25.0%
Effective			
Count	1	4	1
Col %	7.1%	19.0%	8.3%
EFFECTIVENESS EVOS: NATIVE NON-PROFITS			
No Response			
Count	1	1	1
Col %	7.1%	4.8%	7.7%
Do Not Know			
Count		6	3
Col %		28.6%	23.1%
Not Effective			
Count	1	5	2
Col %	7.1%	23.8%	15.4%
Somewhat			
Count	5	2	4
Col %	35.7%	9.5%	30.8%

(continued)

ICF 4 PRINT

Table IV-50. Effectiveness of Oil Spill Responses, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Effective			
Count	7	7	3
Col %	50.0%	33.3%	23.1%
EFFECTIVENESS EVOS: BOROUGH GOVERNMENT			
Do Not Know			
Count		1	3
Col %		100.0%	50.0%
Not Effective			
Count			1
Col %			16.7%
Somewhat			
Count			2
Col %			33.3%
EFFECTIVENESS EVOS: VILLAGE CORPORATION			
No Response			
Count	2	1	
Col %	14.3%	4.8%	
Do Not Know			
Count		3	3
Col %		14.3%	23.1%
Not Effective			
Count		1	1
Col %		4.8%	7.7%
Somewhat			
Count		3	1
Col %		14.3%	7.7%
Effective			
Count	12	13	8
Col %	85.7%	61.9%	61.5%
EFFECTIVENESS EVOS: CITY COUNCIL			
Do Not Know			
Count		1	2
Col %		100.0%	40.0%
Not Effective			
Count			2
Col %			40.0%

(continued)

Table IV-50. Effectiveness of Oil Spill Responses, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Somewhat			
Count			1
Col %			20.0%
EFFECTIVENESS EVOS: IRA COUNCIL			
No Response			
Count	2	2	1
Col %	14.3%	9.5%	7.7%
Do Not Know			
Count	1	5	4
Col %	7.1%	23.8%	30.8%
Not Effective			
Count	2	1	1
Col %	14.3%	4.8%	7.7%
Somewhat			
Count	4	5	4
Col %	28.6%	23.8%	30.8%
Effective			
Count	5	8	3
Col %	35.7%	38.1%	23.1%
EFFECTIVENESS EVOS: CHAMBER OF COMMERCE			
Do Not Know			
Count		1	1
Col %		100.0%	100.0%
EFFECTIVENESS EVOS: COMMERCIAL BUSINESSES			
Do Not Know			
Count		3	1
Col %		42.9%	50.0%
Not Effective			
Count			1
Col %			50.0%
Somewhat			
Count		1	
Col %		14.3%	
Effective			
Count		3	

(continued)

ICF 4PRINT

Table IV-50. Effectiveness of Oil Spill Responses, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Col %		42.9%	
EFFECTIVENESS EVOS: COMMERCIAL FISHING GROUPS			
No Response			
Count		2	
Col %		11.1%	
Do Not Know			
Count		2	2
Col %		11.1%	22.2%
Not Effective			
Count		1	1
Col %		5.6%	11.1%
Somewhat			
Count		1	2
Col %		5.6%	22.2%
Effective			
Count		12	4
Col %		66.7%	44.4%
EFFECTIVENESS EVOS: SCHOOLS			
No Response			
Count	1		
Col %	7.1%		
Do Not Know			
Count	3		
Col %	21.4%		
Not Effective			
Count	4		
Col %	28.6%		
Somewhat			
Count	1		
Col %	7.1%		
Effective			
Count	5		
Col %	35.7%		
EFFECTIVENESS EVOS: CHURCHES			

(continued)

Table IV-50. Effectiveness of Oil Spill Responses, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
No Response			
Count	1		
Col %	7.1%		
Do Not Know			
Count	2		
Col %	14.3%		
Somewhat			
Count	2		
Col %	14.3%		
Effective			
Count	9		
Col %	64.3%		
EFFECTIVENESS EVOS: HEALTH SERVICES			
No Response			
Count		1	
Col %		4.8%	
Do Not Know			
Count		5	4
Col %		23.8%	33.3%
Not Effective			
Count		1	
Col %		4.8%	
Somewhat			
Count		2	1
Col %		9.5%	8.3%
Effective			
Count		12	7
Col %		57.1%	58.3%
EFFECTIVENESS EVOS: HEALTH AIDES			
No Response			
Count	1		
Col %	7.7%		
Do Not Know			
Count	1		
Col %	7.7%		

(continued)

1S14PRINT

Table IV-50. Effectiveness of Oil Spill Responses, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Not Effective			
Count	2		
Col %	15.4%		
Somewhat			
Count	1		
Col %	7.7%		
Effective			
Count	8		
Col %	61.5%		
EFFECTIVENESS EVOS: SOCIAL WORKERS			
No Response			
Count	1	1	
Col %	7.7%	25.0%	
Do Not Know			
Count	3	3	3
Col %	23.1%	75.0%	75.0%
Not Effective			
Count	7		1
Col %	53.8%		25.0%
Somewhat			
Count	1		
Col %	7.7%		
Effective			
Count	1		
Col %	7.7%		
EFFECTIVENESS EVOS: LOCAL LAW ENFORCEMENT			
No Response			
Count		1	
Col %		50.0%	
Do Not Know			
Count		1	1
Col %		50.0%	100.0%
EFFECTIVENESS EVOS: STATE LAW ENFORCEMENT			
No Response			

(continued)

Table IV-50. Effectiveness of Oil Spill Responses, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Count	1	1	
Col %	8.3%	25.0%	
Do Not Know			
Count	3	2	3
Col %	25.0%	50.0%	100.0%
Not Effective			
Count	6		
Col %	50.0%		
Somewhat			
Count	1	1	
Col %	8.3%	25.0%	
Effective			
Count	1		
Col %	8.3%		
EFFECTIVENESS EVOS: EXXON			
No Response			
Count	1	1	1
Col %	7.1%	4.8%	7.7%
Do Not Know			
Count		2	4
Col %		9.5%	30.8%
Not Effective			
Count	7	14	6
Col %	50.0%	66.7%	46.2%
Somewhat			
Count	3	3	2
Col %	21.4%	14.3%	15.4%
Effective			
Count	3	1	
Col %	21.4%	4.8%	
EFFECTIVENESS EVOS: VECO			
No Response			
Count	1	1	1
Col %	7.1%	4.8%	7.7%
Do Not Know			

(continued)

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Table IV-50. Effectiveness of Oil Spill Responses, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Count		2	1
Col %		9.5%	7.7%
Not Effective			
Count	3	5	4
Col %	21.4%	23.8%	30.8%
Somewhat			
Count	8	5	5
Col %	57.1%	23.8%	38.5%
Effective			
Count	2	8	2
Col %	14.3%	38.1%	15.4%
EFFECTIVENESS EVOS: ALYESKA PIPELINE			
No Response			
Count	1	1	
Col %	7.1%	4.8%	
Do Not Know			
Count	2	6	3
Col %	14.3%	28.6%	23.1%
Not Effective			
Count	6	6	6
Col %	42.9%	28.6%	46.2%
Somewhat			
Count	5	5	3
Col %	35.7%	23.8%	23.1%
Effective			
Count		3	1
Col %		14.3%	7.7%
EFFECTIVENESS EVOS: PWS REGIONAL CITIZENS ADVISORY COUNCIL			
Do Not Know			
Count			2
Col %			66.7%
Somewhat			
Count		2	1
Col %		100.0%	33.3%

(continued)

Table IV-50. Effectiveness of Oil Spill Responses, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
EFFECTIVENESS EVOS: FEDERALLY MANDATED SPILL RESPONSE GROUPS			
No Response			
Count			1
Col %			100.0%
Somewhat			
Count	1		
Col %	50.0%		
Effective			
Count	1	1	
Col %	50.0%	100.0%	
EFFECTIVENESS EVOS: SHIP ESCORT RESPONSE SYSTEM (SERVS)			
Somewhat			
Count			1
Col %			100.0%
Effective			
Count		1	
Col %		100.0%	
EFFECTIVENESS EVOS: OTHER MULTI-AGENCY RESPONSE GROUPS FOR EVOS			
Effective			
Count	1		
Col %	100.0%		
EFFECTIVENESS EVOS: NATIVE ORGANIZATION ENVIRONMENTAL GROUPS			
Do Not Know			
Count		1	
Col %		50.0%	
Effective			
Count		1	
Col %		50.0%	
EFFECTIVENESS EVOS: OILED MAYORS			
No Response			
Count		2	
Col %		9.5%	
Do Not Know			

(continued)

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Table IV-50. Effectiveness of Oil Spill Responses, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Count		10	7
Col %		47.6%	58.3%
Not Effective			
Count	1	3	2
Col %	100.0%	14.3%	16.7%
Somewhat			
Count		2	3
Col %		9.5%	25.0%
Effective			
Count		4	
Col %		19.0%	

1674PRINT

Table IV-51. Subsistence Food Safety Information, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
ADEQUATELY INFORMED ABOUT FOOD SAFETY?			
Do Not Know			
Count		3	1
Col %		14.3%	7.1%
No			
Count	10	14	6
Col %	71.4%	66.7%	42.9%
Somewhat			
Count	1		3
Col %	7.1%		21.4%
Yes			
Count	3	4	4
Col %	21.4%	19.0%	28.6%
WHY NOT ADEQUATELY INFORMED			
No Response			
Count	2		
Col %	18.2%		
Do Not Know			
Count	2		
Col %	18.2%		
Lack of clear or definitive advice			
Count	2	4	1
Col %	18.2%	26.7%	11.1%
Received incomplete information			
Count		4	
Col %		26.7%	
Received no information			
Count		2	3
Col %		13.3%	33.3%
Did not trust or believe advice			
Count	3	3	
Col %	27.3%	20.0%	
Untimely			
Count	1	4	2
Col %	9.1%	26.7%	22.2%

(continued)

Table IV-51. Subsistence Food Safety Information, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Did not trust results because of Exxon involvement			
Count	1	1	
Col %	9.1%	6.7%	
Communities were inadequately consulted			
Count	1		
Col %	9.1%		
Personal observations contradicted advice or findings			
Count	1	2	2
Col %	9.1%	13.3%	22.2%
Heard about damaged resources which contradicted advice			
Count		1	1
Col %		6.7%	11.1%
Believe information was deliberately withheld			
Count		1	
Col %		6.7%	
There were not enough tests			
Count		4	1
Col %		26.7%	11.1%
Information was too difficult to understand			
Count	1		
Col %	9.1%		
Personal responsibility to keep informed			
Count		1	
Col %		6.7%	
Oil is still in the environment			
Count			1
Col %			11.1%

1671APRINT

Table IV-52. OCS Development Effects, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
OCS EFFECT: FISH			
No Response			
Count	1		1
Col %	6.3%		5.6%
Do Not Know			
Count	3	9	4
Col %	18.8%	42.9%	22.2%
Decrease			
Count	7	8	11
Col %	43.8%	38.1%	61.1%
No Change			
Count	5	4	2
Col %	31.3%	19.0%	11.1%
OCS EFFECT: SHELLFISH			
No Response			
Count	1		1
Col %	6.3%		5.6%
Do Not Know			
Count	4	8	6
Col %	25.0%	38.1%	33.3%
Decrease			
Count	7	8	8
Col %	43.8%	38.1%	44.4%
No Change			
Count	4	5	3
Col %	25.0%	23.8%	16.7%
OCS EFFECT: MARINE MAMMALS			
No Response			
Count	1		1
Col %	6.3%		5.6%
Do Not Know			
Count	4	8	4
Col %	25.0%	38.1%	22.2%
Decrease			
Count	9	10	11
Col %	56.3%	47.6%	61.1%

(continued)

Table IV-52. OCS Development Effects, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
No Change			
Count	2	3	2
Col %	12.5%	14.3%	11.1%
OCS EFFECT: LAND MAMMALS			
No Response			
Count	1		1
Col %	6.3%		5.6%
Do Not Know			
Count	4	9	6
Col %	25.0%	42.9%	33.3%
Decrease			
Count	8	4	7
Col %	50.0%	19.0%	38.9%
No Change			
Count	3	8	4
Col %	18.8%	38.1%	22.2%
OCS EFFECT: BIRDS			
No Response			
Count	1		1
Col %	6.3%		5.6%
Do Not Know			
Count	4	9	5
Col %	25.0%	42.9%	27.8%
Decrease			
Count	8	8	9
Col %	50.0%	38.1%	50.0%
No Change			
Count	3	4	3
Col %	18.8%	19.0%	16.7%
OCS DEVELOPMENT = MORE JOBS?			
No Response			
Count		1	1
Col %		4.8%	5.6%
Do Not Know			
Count	2	1	3
Col %	12.5%	4.8%	16.7%

(continued)

ICF 4PRINT

Table IV-52. OCS Development Effects, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
No			
Count	8	10	10
Col %	50.0%	47.6%	55.6%
Yes			
Count	6	9	4
Col %	37.5%	42.9%	22.2%
CONTAIN AND CLEANUP SMALL OIL SPILL			
No Response			
Count		1	1
Col %		4.8%	5.6%
Do Not Know			
Count	5	6	
Col %	31.3%	28.6%	
No			
Count	2	9	9
Col %	12.5%	42.9%	50.0%
Maybe			
Count	3	5	8
Col %	18.8%	23.8%	44.4%
Yes			
Count	6		
Col %	37.5%		
CONTAIN AND CLEANUP LARGE OIL SPILL			
No Response			
Count	1	1	
Col %	6.3%	4.8%	
Do Not Know			
Count	2	5	4
Col %	12.5%	23.8%	22.2%
No			
Count	8	13	13
Col %	50.0%	61.9%	72.2%
Maybe			
Count	3	2	1
Col %	18.8%	9.5%	5.6%

(continued)

Table IV-52. OCS Development Effects, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Yes			
Count	2		
Col %	12.5%		
ARE YOU IN FAVOR OF THE SEARCH FOR OIL?			
No Response			
Count		2	
Col %		9.5%	
Do Not Know			
Count		3	
Col %		14.3%	
No			
Count		11	13
Col %		52.4%	72.2%
Yes			
Count		5	5
Col %		23.8%	27.8%
OPINION ON SEARCH FOR OIL			
No Response			
Count		2	
Col %		9.5%	
Do Not Know			
Count		1	
Col %		4.8%	
Reduce dependency on foreign oil/enhance national security			
Count			1
Col %			5.6%
Create more jobs in the community			
Count		2	3
Col %		9.5%	16.7%
We can live in balance with the environment			
Count		2	
Col %		9.5%	
Increase state revenues			
Count			1

(continued)

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Table IV-52. OCS Development Effects, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Col %			5.6%
Energy needed			
Count		3	2
Col %		14.3%	11.1%
Conditions: in favor when necessary			
Count		1	
Col %		4.8%	
Beneficial to the economy			
Count		1	
Col %		4.8%	
Adverse experiences with other development			
Count		5	
Col %		23.8%	
Pollution concerns and impacts			
Count		5	6
Col %		23.8%	33.3%
Should explore alternative energy sources, conservation			
Count			1
Col %			5.6%
Adverse impact on subsistence and commercial fishing			
Count			3
Col %			16.7%
Biological (non-pollution) - migration patterns			
Count		1	
Col %		4.8%	
Potential damage to renewable resources			
Count		1	
Col %		4.8%	
Against any development			
Count		1	
Col %		4.8%	

(continued)

Table IV-52. OCS Development Effects, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
No benefit to local economy			
Count		1	1
Col %		4.8%	5.6%
Disastrous - multi-faceted			
Count		1	1
Col %		4.8%	5.6%
Fatalistic - no choice in matter			
Count		1	
Col %		4.8%	
Not economically feasible to search/develop off-shore			
Count		1	
Col %		4.8%	
Technology needs improvement			
Count		3	2
Col %		14.3%	11.1%
Do not think there is oil in the area			
Count		1	1
Col %		4.8%	5.6%
Against population increases			
Count		1	2
Col %		4.8%	11.1%
Unspecified ecological impacts			
Count			3
Col %			16.7%
Non-specific reason against			
Count			1
Col %			5.6%
Do not know what benefits will be to Native residents			
Count			1
Col %			5.6%
ARE YOU IN FAVOR OF THE DEVELOPMENT AND PRODUCTION OF OIL?			
No Response			
Count		3	

(continued)

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Table IV-52. OCS Development Effects, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Col %		14.3%	
Do Not Know			
Count		2	
Col %		9.5%	
No			
Count		12	13
Col %		57.1%	72.2%
Yes			
Count		4	5
Col %		19.0%	27.8%
OPINION ON DEVELOPMENT AND PRODUCTION			
No Response			
Count		4	1
Col %		19.0%	5.6%
Reduce dependency on foreign oil/enhance national security			
Count			1
Col %			5.6%
Create more jobs in the community			
Count		3	3
Col %		14.3%	16.7%
We can live in balance with the environment			
Count		1	
Col %		4.8%	
Increase state revenues			
Count			1
Col %			5.6%
Energy needed			
Count		2	2
Col %		9.5%	11.1%
Conditional upon technological advancement			
Count		1	
Col %		4.8%	

(continued)

Table IV-52. OCS Development Effects, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Adverse experiences with other development			
Count		3	
Col %		14.3%	
Pollution concerns and impacts			
Count		7	7
Col %		33.3%	38.9%
Aesthetic reasons			
Count		1	
Col %		4.8%	
Status quo - leave it the way it is			
Count		1	
Col %		4.8%	
Should explore alternative energy sources, conservation			
Count		1	1
Col %		4.8%	5.6%
Adverse impact on subsistence and commercial fishing			
Count			3
Col %			16.7%
Distrust of the oil industry			
Count			1
Col %			5.6%
Potential damage to renewable resources			
Count		3	
Col %		14.3%	
No benefit to local economy			
Count		1	1
Col %		4.8%	5.6%
Disastrous - multi-faceted			
Count		2	1
Col %		9.5%	5.6%
Fatalistic - no choice in matter			
Count			1
Col %			5.6%

(continued)

ICF 4PRINT

Table IV-52. OCS Development Effects, Chenega Bay

	STUDY YEAR		
	1991	1992	1993
Adverse impact on Native traditions			
Count		1	
Col %		4.8%	
Technology needs improvement			
Count		2	2
Col %		9.5%	11.1%
Do not think there is oil in the area			
Count		1	1
Col %		4.8%	5.6%
Against population increases			
Count		1	2
Col %		4.8%	11.1%
Unspecified ecological impacts			
Count			2
Col %			11.1%
Non-specific reason against			
Count			1
Col %			5.6%
Do not know what benefits will be to Native residents			
Count			1
Col %			5.6%

INTERPRINT

CHAPTER V: TATITLEK

by

Jody Seitz and James A. Fall

COMMUNITY BACKGROUND

Tatitlek lies on the coast of northeastern Prince William Sound, in Southcentral Alaska, an area known for its rich marine environment, thick stands of hemlock-Sitka spruce, and mineral deposits (Fig. I-1). Tatitlek is within the Chugach National Forest, established in 1907, an area of about six million acres bordered by the Chugach and Kenai mountains on its perimeter. The village is surrounded by trees and tundra and faces Bligh Island, across the Tatitlek Narrows. Tatitlek is the closest community to Bligh Reef, where the tanker *Exxon Valdez* ran aground on March 24, 1989.

Marine resources available within the sound include five species of salmon, herring, halibut, black cod, Pacific cod, shrimp, several species of crab, and other bottomfish such as lingcod, rockfish, flounder, and sole. Sea otter, sea lions, harbor seal, Dall and harbor porpoise, and several species of whale inhabit the sound. The intertidal zone is habitat for cockles, mussels, octopus, several species of clams, seaweed, and chitons.

Grouse and ptarmigan are locally available as well as several species of migratory birds. Canada geese, most of the puddle and diving ducks, and mergansers, breed in the area during the summer. Eiders, harlequins, scoters, and oldsquaw over winter in the sound. Sandhill cranes, scaups and shovelers pass through the area briefly during migration. Mallards and harlequins have resident populations throughout the year.

Sitka black-tailed deer, black bear, brown bear, and mountain goat are the predominant big game species in Prince William Sound. Deer were introduced in 1916 and have expanded their range to every habitable island in the sound. Moose were introduced to the Copper River Delta in 1949 and 1959. A few indigenous moose also inhabit areas of western Prince William Sound. The most numerous furbearers are mink, land otter, and marten.

Most Tatitlek residents are of Chugach Alutiiq (Chugach Eskimo) descent. Radiocarbon dates of archaeological findings document the occupancy of Palugvik on Hawkins Island by the Chugach around 200 A.D. Oral history records eight geographical groups of Chugach people in the sound, each named after their principal village or a locality within their territory (Birket-Smith 1953).

Captain James Cook was the first European to record entering the sound and encountering the Chugach people, in 1778. Subsequently explorers from Spain and Russia traded in the area. During the late eighteenth century the Russian station at Nuchek on Hinchinbrook Island became a focal point for the sea otter trade, and many Chugach people congregated in the area. As the sea otters declined near

Nuchek, the Russians established another post at Palutaq (Ellamar) (Hassen 1978:183-189; Stratton 1990:13).

During the period in which the fur trade declined, commercial fishing and mineral excavation developed. In 1902 the Ellamar copper mine opened near the existing village of Tatitlek, which was one of four villages occupied by the Chugach during most of the contact period. Native involvement in the fur trade gave way to employment as day laborers and fishermen for canneries and salteries, and to providing supplies to the miners. Work associated with the Ellamar mine prompted the relocation of much of the Native population from Nuchek to Tatitlek, between 1900 and 1910. By 1930 mining activity had been replaced by commercial fishing as the primary form of cash income.

According to the U.S. Census, Tatitlek was a community of 119 people in 1990. A summary of U.S. Census data for the village is presented in Figure V-1. Due to the movement of peoples around the sound, contemporary residents may be descended from three or four of the traditional geographic groups, as well as the Chenega people, some of whom relocated to Tatitlek after the 1964 earthquake (Birket-Smith 1953:20-22; de Laguna 1956:11,12,31; Stratton 1990:15).

In 1990, the community was governed by a seven-member council, reorganized from a traditional Native Council to its present elective council pursuant to the Indian Reorganization Act (IRA) of 1936. Most of the residents were Alaska Native, and there were a few of American Indian descent as well.

The division conducted research on subsistence uses in Tatitlek in the 1980s which is summarized in Stratton (1990). Systematic household interviews about subsistence harvests and uses in the first two years following the *Exxon Valdez* oil spill of March 1989 were also conducted in Tatitlek. This earlier research found that Tatitlek was one of the communities most affected by the spill: subsistence harvests declined by 60 percent or more, and the range of resources used for subsistence dropped by half (Stratton et al. forthcoming; Fall 1992a). Issues of oil contamination of subsistence resources and reduced resource populations in the wake of the spill were especially important to the village (Fall 1991b). The research conducted as part of the present study, discussed in this chapter, was designed to add to this analysis of subsistence uses in Tatitlek following the spill.

METHODOLOGY

Tatitlek was included in the first and third years of the study, with both the harvest survey and social effects questionnaire being administered. The research goal for both study years was to conduct oral interviews with representatives of all of the year-round households in the community.

Obtaining community and individual support for the project in Tatitlek was a challenge. When initially approached in December 1991, the council advised that, overall, the village was "tired of surveys" and that consequently, few households would agree to participate. Village spokesmen said that during the spill, several individuals, posing as researchers, came to the village to interview people. They turned out to

be reporters, and had misled people about their intentions. Thus, many people became suspicious of anyone claiming to be doing research. Further, the community was concerned that the results of the research might not be in the best interests of the Alaska Native class's law suit against Exxon (see Chapter I). They maintained that they would need to get clearance from their attorneys before approving the research. Consequently, in December 1991 the council could not support the project. However, when the council was again contacted in March 1992, their position had changed. They believed that the effects of the oil spill continued to require documentation and that the project should receive community support. Also, the Native Class's attorney had advised the community to participate in the research. In support of the project, the village council president and the village administrator contacted households themselves and encouraged participation in the research.

For the first study year, fieldwork took place from April 9 through 19 and May 19 through 21, 1992. Twenty-seven year-round households were identified and 19 households (70.4 percent) were interviewed, including 19 harvest surveys and 18 social effects interviews (Table V-1). Within each household, the most knowledgeable person regarding the household's harvest was the person interviewed. Jody Seitz conducted all the interviews. An attempt was made to hire a local assistant, but no one was interested. The study year was defined as April 1, 1991, through March 31, 1992. On average, the harvest survey interviews took 1.30 hours (78 minutes) to complete in Tatitlek (Table I-7), second-longest among all first year study communities. The social effects surveys required an additional 0.71 hours (about 43 minutes) (Table I-8).

Despite support from the council, a large number of households declined to participate during the initial round of interviewing in April. Due to the efforts of the council president and administrator, a number of people changed their minds and agreed to be interviewed during the second visit in May. Nevertheless, a total of eight households (29.6 percent) declined to participate, the highest refusal rate of any study community in the first year and notably higher than most villages (Table I-4). Among the reasons given for nonparticipation were that the surveys "don't do any good," that people were "tired of surveys," or that they were "too busy." It is very likely that word about the length of time it took to complete the two surveys, which circulated throughout the community, discouraged participation by some households.

After the first study year, the division recommended to the Minerals Management Service (MMS) that interviewing not take place in Tatitlek for the second study year:

> The division has conducted harvest surveys in Tatitlek for five consecutive years. The relatively high refusal rate in this community (29.6 percent) indicates survey "burn out." Unless the community recommends otherwise, we should skip a year, and revisit the village in April 1994 (Fall and Utermohle 1992:150).

MMS concurred with this recommendation.

For the third study year, community approval was obtained from the council president in February 1994. The council was particularly interested in documenting the poor herring spawn-on-kelp subsistence

harvest of 1993. Two division researchers, Jody Seitz and Susan McNeil, conducted the interviews from April 16 until April 22, 1994. The study year was April 1, 1993, through March 31, 1994. Out of a total of 28 year-round households, 20 (71.4 percent) completed harvest surveys and 11 also did social effects interviews. On average, the harvest surveys took 0.94 hours (56 minutes) to complete (Table I-7). The social effects questionnaire required an additional 0.54 hours (32 minutes) (Table I-8).

As in the first study year, many Tatitlek households were reluctant to participate in the research. A total of seven households (25.9 percent) declined to participate in either interview. Nine others chose not to do a social effects survey, but did the harvest survey. Several factors contributed to this nonparticipation. First, as in the earlier study year, some households said they were "burned out" on surveys. Especially regarding the social effects questionnaire, survey length continued to be an issue. Additionally, Tatitlek is a community that values privacy and there is a notable aversion to extended periods of direct questioning.[1] More generally, some potential respondents expressed frustration over hunting and fishing regulations, scarcity of certain resources (especially herring spawn on kelp -- see below), and a ruling in federal court against the Alaska Native claims against Exxon (see Chapter I). These factors contributed to a feeling of "What's the use?" which discouraged some individuals from answering any of the interview questions. This low level of participation in the social effects questionnaire may affect the interpretation of the some of the study findings for Tatitlek, and will be examined when those results are discussed below.

DEMOGRAPHY

The Tatitlek population as estimated by the U.S. Census in 1990 was 119 persons in 33 households. As reported in Table V-2, the estimated population of Tatitlek in April 1992 based upon the household surveys was 108 persons in 27 households. Of this number, 47.4 percent were male and 52.6 percent were female (Table V-3, Fig. V-2). The median age was 23.0 years. Of the total population, 93.4 percent reported themselves to be Alaska Native. The 1990 U.S. Census estimate for Tatitlek was 86.6 percent Alaska Native (Alaska Department of Labor 1991:125).

For the second round of interviews in Tatitlek (third year of the MMS study), the estimated population was 97 people in 28 households (Table V-2). The population was 50.7 percent male and 49.3 percent female (Table V-4, Fig. V-3). Of the entire population, 92.8 percent was Alaska Native (Table V-2).

[1] It should be noted that relatively low participation rates were encountered in earlier work in Tatitlek as well. Response rates were 61.3 percent in 1988, 75.9 percent in 1989, 78.6 percent in 1990, and 60.7 percent in 1991. There were nine refusals in 1988, one in 1989, three in 1990, and six in 1991. This again underscores the value people in this community place on privacy, as well a long standing distrust concerning potential misuse of the information (see especially Stratton 1990:5-6).

CASH ECONOMY

1991/92 Study Year

Employment in Tatitlek is best characterized as seasonal and short-term. There are few year-round permanent jobs. In the 1991/92 study year, 80.4 percent of the adults (16 years of age or older) in the sample had some form of cash employment (Table V-5). They were employed on average for 8.1 months; 16.2 percent were employed year-round.

Of an estimated 100.9 jobs held by Tatitlek residents in 1991/92, by industry, 26 percent were in commercial fishing, 16 percent were in education, 11 percent in other non-education, government jobs; 14 percent were in agriculture (a mariculture project); and 14 percent were in logging (Fig. V-4). This breakdown illustrates the employment choices available in Tatitlek. As in the past, commercial fishing was an important employer. In 1991 there were 13 limited entry permits held by Tatitlek residents. There were three halibut longline permits, two sablefish longline permits, two miscellaneous longline permits, one octopus permit, one Prince William Sound shrimp pot permit, three Prince William Sound salmon purse seine permits, and one Prince William Sound salmon drift gill net permit (Burns, personal communication, 1991). Timber harvesting was another important source of income during the study year. There were also three full-time teachers and five part-time school personnel -- a teacher's aide, custodian, maintenance person, secretary/aide, and cook. Additionally, the Tatitlek IRA Council employed a full-time power plant operator, a part-time water treatment plant operator, and a part-time maintenance person. Laborers were hired occasionally as needed. The regional Native non-profit corporation, Chugachmiut (formerly The North Pacific Rim) employed several mariculture workers, a community health representative, and two community health aides, and funded a health assistant hired through the IRA Council and a Village Public Safety Officer. The Alaska Department of Transportation and Public Facilities (ADOT/PF) employed an airport maintenance person through contracts. The U.S. Postal Service employed a part-time postal clerk. One resident operated a small store in her home. There were also occasional jobs with Alyeska Pipeline Service Company's Ship Escort Response Vessel System (SERVS) oil spill response system. Several individuals took short-term or shift employment in Valdez.

The 1990 US Census reported a median household income of $27,188 and mean per capita income of $8,674 for Tatitlek in 1989. Of Tatitlek's population, 19.8 percent was below poverty level. There were 10 female headed households, five of which had children less than five years of age and were below poverty level. Seven of the 27 households had related children under five years of age and were below the poverty level (U.S. Bureau of the Census 1991a).

For 1991/92, the mean household income for Tatitlek from all sources was $32,653 and the mean per capita income from all sources was $8,163, very similar to the US Census estimate for 1989 (Table V-6). Of the per capita total, $6,496 was from jobs and the remainder from other sources (Table V-7). The

category of government provided the most income ($3,683 per capita), with the agriculture, forestry, and fishing category ranking a distant second ($1,320 per person).

Valdez was the nearest community on which Tatitlek residents depended for supplies. The high cost of transportation and prices in Valdez elevated the cost of living in Tatitlek. On average, households in Tatitlek estimated that they spent $574 per month on food during the 1991/92 study year. The median monthly expense was $500. The median monthly expense of $500 represented 18.4 percent of the cash income of Tatitlek households in 1991/92, more than twice the ratio spent by Valdez residents (Table I-101).

The majority of Tatitlek households (52.6 percent) reported that their financial situation during the study year was worse than before the *Exxon Valdez* oil spill. Only 10.5 percent (two households) said that their financial situation was better than before 1989 and 15.8 percent (three households) said their financial situation was about the same. Four households (21.1 percent) provided no assessment (Table I-103).

1993/94 Study Year

For the 1993/94 study year, 78.6 percent of Tatitlek's adults had some form of cash employment, with a mean number of months employed of 7.2. Only 33.3 percent worked year-round (Table V-5). Thus, Tatitlek's cash economy remained seasonal, as it had been in 1991/92.

Cash incomes in Tatitlek also remained very low in 1993/94. On average, households made $35,557, a per capita income of $10,306 (Table V-8). Of this per capita income, only $5,169 (49.8 percent) was from jobs; the rest was other income, such as Native corporation dividends and Alaska Permanent Fund dividends (Table V-9). Of earned income, the largest portion ($2,490 per person) derived from jobs with federal and local governments, including education (Table V-8). Government employment (local government, federal government, and education) also provided the largest percentage (25 percent) of the jobs held by Tatitlek residents in 1993/94 (Fig. V-5).

Estimated monthly food costs for Tatitlek households increased to a median of $600 in 1993/94 (compared to $500 in 1991/92) and a mean of $675 (compared to $574 in 1991/92). As in 1991/92, in 1993/94 Tatitlek households spent a relatively high percentage of their cash incomes (20.4 percent) on food purchases (Table I-102).

SUBSISTENCE RESOURCE HARVEST AND USE: 1991/92

Participation Rates

In 1991/92, all Tatitlek households used and harvested at least one wild resource. Forty-nine different kinds of resources were reported used by the community (Table V-15). The largest number used by any one household was 35, and the average household used 19.3 distinct kinds and harvested 13.0

kinds[2] (Table V-10). These averages were the highest documented in the village since the oil spill, although they were still slightly below pre-spill levels (Fig. V-6).

During the 1991/92 study year, participation rates (as measured by the percentage of households attempting to harvest resources in particular categories) for fish other than salmon, marine invertebrates, land mammals, marine mammals, and birds and eggs were notably higher than 1989/90 (the year of the oil spill), and higher than 1990/91 as well. Participation rates for salmon were slightly below those of the previous year, but like the other categories, were much higher than in 1989/90. For all of these categories, participation rates were similar to those recorded for the pre-spill years of 1987/88 and 1988/89 (Fig. V-7). However, success rates did not universally match participation rates. All those who hunted marine mammals or harvested marine invertebrates in 1991/92 were successful in harvesting at least one animal of that resource category, but the harvest per capita for both categories was far below the harvest in 1987/88 and 1988/89. Twenty percent of those who went deer hunting in 1991/92 were unsuccessful.

During 1991/92, the subsistence activity in Tatitlek with the highest household participation rates was fishing (94.7 percent of all households), with 73.7 percent attempting to harvest salmon (Table V-15). Berry picking was both done by 89.5 percent of households. Deer hunting was undertaken by 84.2 percent of all households. Wood cutting was carried out by 84.2 percent of households. Almost three-quarters of all households picked herring spawn on kelp (73.7 percent), while 47.4 percent fished for halibut. Harbor seal hunting, gathering black chitons and bird eggs, and fishing for octopus were activities of 52.6 percent of all Tatitlek households in 1991. Duck hunting was done by 47.4 percent of all households (Table V-15).

On the individual level, the majority of Tatitlek residents were involved in some kind of subsistence activity in 1991/92. Most (84.2 percent) residents attempted to harvest some wild resource, while 81.6 percent processed wild resources. The most popular activities at the individual level were gathering plants and berries (81.6 percent), and processing them (73.7 percent); followed by processing fish (69.7 percent), and processing game (57.9 percent). Just over half of residents went fishing (52.6 percent) and 40.8 percent went hunting. There was limited involvement in trapping (Table V-11).

An interesting pattern was noted for many resources harvested by Tatitlek residents regarding resource sharing. In 1991/92, fourteen resources were given away by more households than harvested them: coho salmon, black cod, gray cod, lingcod, halibut, herring spawn on kelp, red rockfish, black bear, porpoise, sea lion, harbor seal, scoters, king crab, and Tanner crab (Table V-15). This illustrates a pattern in which these resources were given away to households who then redistributed portions of what they received to other households.

Some resources were not harvested during the study year by any household within this sample, but were used during the study year. These were chinook salmon, smelt, porpoise, king crab, and Tanner crab (Table V-15). This indicates several possible patterns. One is that the households had some of these

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[2] This tally of the range of resources used does not break down plants by species, but only whether they are land or marine plants.

resources left from the previous year and gave them away during the study year. Another is that households outside of the sample shared their harvests within the sample. A third possibility is that resources were received from friends or relatives living outside the community.

Overall, 94.7 percent of the sampled households in Tatitlek received resources from other households and 94.7 percent gave away wild resources in 1991/92 (Table V-10). Most sharing occurred within Tatitlek. Resource sharing occurred with families in 11 other Alaska communities in addition to Tatitlek itself such as Cordova (42.1 percent) and Valdez (26.3 percent). The largest percentage of Tatitlek households gave wild resources to people living in Chenega Bay (52.6 percent), followed by Anchorage (47.4 percent), Cordova (31.6 percent), and Valdez (10.5 percent) (Table V-12).

Harvest Quantities

During the 1991/92 study year, Tatitlek residents harvested and processed an estimated 37,367 pounds (usable weight) of wild resources. The mean household harvest was 1,384.0 pounds, and the per capita harvest was 346.0 pounds (Table V-10, Table V-13, Fig. V-8). As shown in Table V-16, just 3.3 percent of the total harvest of wild resources for home use at Tatitlek in 1991/92 was removed from commercial catches (either targeted species or bycatch).

As shown in Table I-104, 27.8 percent of the Tatitlek households surveyed for 1991/92 estimated that between 1 - 25 percent of their supply of meat, fish, and poultry in the study year was from wild harvests, 27.8 percent estimated the contribution of wild foods at 26 - 50 percent, 33.3 percent gave an estimate of 51 - 75 percent of all meat, fish, and poultry, and 11.1 percent said that all their meat, fish, and poultry derived from wild harvests.

Almost all (83.3 percent) of the respondents for Tatitlek households which completed a social effects questionnaire for the first study year had used a wild resource the day before the interview (Table V-31). This was the highest percentage of any study community in that year, and was exceeded by only one community (Kivalina) in the three years of the project (Fig. I-3). It is likely that the timing of the surveys in April contributed to this high percentage, since subsistence harvests of herring spawn from an abundant return were underway at the time of the research.

The 1991/92 study year represents the third harvest year following the spill. The per capita harvest at Tatitlek of 346.0 pounds was a very substantial increase, more than a doubling (127 percent) over the 1990/91 harvest of 152.7 pounds per capita. This harvest was virtually the same as that estimated for 1987/88 (351.7 pounds per person), but remained below the estimate of 643.6 pounds per person for 1988/89 and also, by 28.3 percent, below the pre-spill average of 482.9 pounds per person (Table V-13, Fig. V-8). A similar increase was documented for Chenega Bay in the same year, and its harvest increased again in 1992/93, the second year of this study (see Chapter VI).

In 1991/92, the large majority of households in Tatitlek, 85.7 percent, said that they believed that their uses of wild resources, overall, were still below pre-spill levels. Just one household providing an

assessment said their subsistence uses were about the same as before the spill, and one other said they were higher (Table I-58).[3] As illustrated in Figure V-11, this finding is consistent with results from both the 1989/90 and 1990/91 study years, when more than 80 percent of Tatitlek households said their uses were lower than pre spill levels.

Despite the overall increase in subsistence harvest quantities in the community in 1991/92 compared to both 1989/90 and 1990/91, only two Tatitlek households interviewed (11.8 percent) said that they believed their subsistence uses had increased over the previous year (Table I-57). Four others (23.5 percent) said their uses were about the same during the study year as the year before, and 11 (64.7 percent) said that their uses had decreased. For no category did the majority of households report higher levels of use (Table I-10, Table I-16, Table I-22, Table I-28, Table I-34, Table I-40, Table I-46, Table I-52).

There are several possible explanations for this apparent discrepancy. First, it is likely in some cases that respondents may have been comparing current use levels to pre-spill use levels rather than to "the previous year (1990)." Second, households may be weighing factors such as increasing efforts to harvest adequate supplies of wild foods because of declining resource populations in the harvest area. Yet another is that declines in harvests in certain key resources (such as seals) may lead to a perception of overall decline even if increases in harvests of other resources (such as fish) have occurred. Some of these factors are discussed below for particular resource categories.

Composition of the Harvest

The subsistence harvest in Tatitlek in 1991/92 was dominated by fish, with 68.7 percent of the total harvest as measured in edible pounds (Table V-14, Fig. V-10). In comparison, in the two pre-spill study years, fish contributed 45.0 percent and 54.2 percent, for a pre-spill average of 50.9 percent (Table V-14). It is clear that a shift in harvest composition towards a greater percentage of fish has occurred in the community in post-spill years. In contrast to the increased role of fish in the subsistence harvest at Tatitlek, there were declines in the relative contribution of land mammals (11.7 percent of the total in 1991/92 compared to a pre-spill average of 18.0 percent), marine mammals (13.8 percent in 1991/92, 20.6 percent pre-spill), and marine invertebrates (1.9 percent in 1991/92, 6.2 percent pre-spill). These shifts are consistent with respondents' reports of declines in marine mammal and deer populations (see below).

Harvests and Uses by Resource Category

As noted above, as measured in usable pounds, the largest portion of the 1991/92 subsistence harvest at Tatitlek was salmon. The salmon harvest of 148.0 pounds per person represented 42.8 percent of all resources taken (Table V-13, Table V-14, Fig. V-9, Fig. V-10).

The 1991/92 salmon harvest was a notable increase over that of the two previous years (the first two years after the oil spill) and larger than one pre-spill year (1987/88) as well. Also, this harvest

[3] Five households provided no assessment and are not included in the percentages.

approached the pre-spill average of 162.2 pounds per person, but was still notably lower than the 260.9 pounds per person estimated for 1988/89 (Table V-13, Fig. V-9). One factor related to salmon harvests before the spill was that between 1987/88 and 1988/89, state fishing regulations were changed to allow the community greater opportunity to harvest salmon for subsistence. The amount of salmon reported harvested in 1987 likely was below the community's level of use had the restrictive regulations not been in place (Stratton 1990:83). Comparing the pre-spill and post-spill periods, the majority of Tatitlek households (81.3 percent) said that, in their assessment, their salmon uses in 1991/92 remained below pre-spill levels. Most (46.2 percent) said that there were less salmon to harvest than before the spill (Table I-14, Fig. V-12). In response to a question in the social effects questionnaire, 56.3 percent of Tatitlek households said that salmon populations had declined since 1988, the year before the spill, while 31.3 percent said that salmon populations remained about the same, and the remainder (12.5 percent) said they did not know (Table V-33, Fig. V-14).

Despite the increase in overall salmon harvests at Tatitlek in 1991/92, only two households (11.1 percent) said that their uses had increased over the year before, while eight (44.4 percent) said they were about the same and another eight (44.4 percent) said their uses of salmon had declined (Table I-9). Reasons offered for the decline in use varied, but 37.5 percent said that salmon abundance had declined (Table I-13). The perception of decreased runs of salmon may influence people's assessments of trends in their levels of use reported in Table I-9, as may the need to increase harvest effort to obtain an adequate supply of salmon.

Coho salmon was the predominant species harvested in 1991/92, at 103.9 pounds per person, followed by chum salmon (26.2 pounds per person), pink salmon (13.2 pounds per person), and sockeye salmon (4.7 pounds per person). There was no chinook harvest, although 26.3 percent of the households used chinooks that they had received (Table V-15).

Subsistence gillnets and angling with rod and reel were the main gear types used to catch salmon in Tatitlek in 1991/92. For salmon, just 0.7 percent of the harvest as measured in usable pounds were removed from commercial catches for home use, while 13.3 percent was caught with rod and reel, and 86.0 percent was harvested with subsistence methods (Table V-17, Table V-18). Most households at Tatitlek (57.9 percent) harvested salmon with subsistence methods, while 15.8 percent removed salmon from commercial catches, and 47.4 percent caught salmon with rod and reel (Table V-19).

As shown in Table I-106, households at Tatitlek used seven different methods to preserve their salmon catches. The most frequently used methods were freezing (79.0 percent of all households), smoking (52.6 percent), salting (47.4 percent), canning (42.1 percent), and kippering (31.6 percent). On average, households used 2.8 methods to preserve salmon in the 1991/92 study year.

In 1991/92, 25.9 percent of Tatitlek's wild resource harvest (89.5 pounds per person) was composed of fish other than salmon (Table V-14, Fig. V-7, Fig. V-8). This was primarily herring spawn on kelp (36.1 pounds per person), halibut (23.7 pounds per person), and rockfish (15.9 pounds per person)

(Table V-15). Overall, the per capita harvest of fish other than salmon in 1991/92 was much larger than those of the first two years following the oil spill, 16.9 pounds per person in 1989/90 and 39.5 pounds in 1990/91. The 1991/92 harvest level was very similar to the two pre-spill estimates and the pre-spill average of 83.7 pounds per person (Table V-13, Fig. V-8). Non-salmon fish was one of the few resource categories for which the majority of Tatitlek households in 1991/92 did not say that their uses were lower than before the spill: 46.7 percent of households stated that their uses of non-salmon fish were lower, 20.0 percent said their uses were higher than before the spill, and the rest (33.3 percent) said they were about the same (Table I-16, Fig. V-12). As with salmon, despite a large increase in the community's harvest, only one household said they had used more non-salmon fish than the previous year. Unlike salmon, most (72.2 percent) said their uses were about the same as the year before, rather than lower (Table I-15).

Most of the harvest of non-salmon fish at Tatitlek in 1991/92, as measured in usable weight was taken with subsistence methods or angling with rod and reel, although most gray cod and half of the red rockfish were obtained from commercial catches. Of the total harvest of fish other than salmon, 59.7 percent was taken with subsistence methods, 28.5 percent was caught with rod and reel, and 11.8 percent was removed from commercial catches (Table V-20, Table V-21).

For fish other than salmon, the most commonly-used gear types were rod and reel (used by 57.9 percent of households) and subsistence methods (used by 68.4 percent of households). Subsistence methods included gill nets, dip nets, and picking by hand. Removing fish from commercial catches was done by relatively few households (15.8 percent) (Table V-22).

Land mammals comprised 11.7 percent of the community harvest in 1991/92, at 40.4 pounds usable weight per person (Table V-14, Fig. V-9, Fig. V-10). Deer made up most of the game harvest at 35.8 pounds per person. Mountain goats (3.8 pounds per person) and black bears (0.8 pounds per person) also contributed to the land mammal harvest. Land otters (10 individuals) were the only furbearers taken (Table V-15).

The 1991/92 land mammal harvest at Tatitlek was more than double that of the year before (17.5 pounds per person), but remained well below the estimates for the two pre-spill years and the pre-spill average of 86.9 pounds per person (Table V-13, Fig. V-9). As in the two previous years, most (68.8 percent) Tatitlek households said that their uses of land mammals remained below pre-spill levels, primarily because of reduced resource abundance (Table I-22, Table I-26; Fig. V-12). Only two households (11.1 percent) said their uses had increased over the year before; most households (61.1 percent) said they had declined (Table I-21).

Some comments taken during the household interviews may shed light on the apparent contradiction between reported increases in community per capita harvests of land mammals over the last three years and a majority of households reporting lowered uses. One household reported his success in deer hunting was not enjoyed by all: "There was a lot of people that didn't have a good year. I was the only one that did." At least two households went hunting and came back empty-handed. One of these

hunters commented that he has usually been able to harvest deer, but deer were scarce. He could not invest the extra time needed because he had a full time job. Also, he commented that because of the extra effort hunters had to make to take deer for their own families, sharing appeared to have declined:

> Even borrowing deer was hard [last year]. People that usually go out and bring deer back had to go three or four times to bring one back.

A third household agreed. Usually a major hunter, he himself was unable to hunt and found that little deer meat was being shared. "This year people are real poor with it. The deer ate contaminated kelp and died." A fourth household harvested four deer, less than the year before because, they said, "There are fewer deer around." Correspondingly, 68.8 percent of the respondents to the social effects survey said that numbers of deer were down compared to before the oil spill (Table V-33, Fig. V-15). Thus it appears that while an increased effort in 1991/92 resulted in an increased harvest of deer, the scarcity of deer and declines in sharing have resulted in the perception for many households that their deer uses continue to decline.

In this context, it should also be noted that deer density in GMU 6 (Prince William Sound) peaked in 1986 and 1987 and has since been in decline (Alaska Department of Fish and Game (ADF&G) 1986 - 1993). Periods of heavy rain in May through July 1988 contributed to an unusually high postnatal fawn mortality, and winter mortality due to persistent above average snow depth, perhaps exacerbated by human and aircraft disturbance following the *Exxon Valdez* oil spill, reduced numbers further in 1989. There were additional severe winters in 1989/90 and 1990/91. In response, the Alaska Board of Game reduced the seasonal limit beginning in 1991 from five deer to four deer, and delayed opening the antlerless season from September 15 to November 1.

Marine mammals accounted for 13.8 percent of Tatitlek's total harvest in 1991/92, at 47.7 pounds per person (Table V-14, Fig. V-9, Fig. V-10). Most of this was harbor seal (39.8 pounds per capita) and the rest (7.9 pounds per capita) was sea lion. A few households used porpoise (15.8 percent), but no harvest was reported (Table V-15). The per capita marine mammal harvest in 1991/92 was about double that of the year before, but substantially below the pre-spill average of 99.5 pounds per person (Table V-13, Fig. V-9).

Despite the increase in per capita take, the most Tatitlek households said that their uses of marine mammals in 1991/92 had been about the same (47.1 percent) or less (47.1 percent) than the year before; only one household (5.9 percent) said their uses had increased (Table I-33). The large majority of households (76.5 percent) percent said their uses of marine mammals were lower than before the spill (Table I-34, Fig. V-12), mostly because of resource scarcities (Table I-38). As documented by the social effects questionnaire, 81.3 percent of the respondents said that numbers of sea lions were down compared to the year before the spill, as did 87.5 percent concerning harbor seals (Table V-33, Fig. V-15). For example, one hunter reported that it took him longer to find seals in 1991/92. Another household said:

> [Marine mammal harvest numbers] are a lot less because they are more scarce. There are not as many around and they're dropping yearly. We think the *Exxon Valdez* oil spill had a lot more to do with it than people believe. The pups sank. We saw it. How can a mother seal identify its pup if its covered with crude?

A third Tatitlek hunter said his marine mammal use in 1991/92 was less than before the oil spill because there are hardly any marine mammals now. He said that, "The oil spill killed a lot of seals." Another household commented that his household's use of marine mammals in 1991 was bad compared with 1990. His household, a major supplier of seal meat for the village, had taken about 60 to 100 seals a year, but,

> They [seals] have gotten harder to find. We think the pups died during the oil spill. The rookeries got hit hard. Seals recognize their babies by their smell. They can't smell them with oil.

Another Tatitlek respondent stated that on many of his frequent trips he was not able to harvest anything. His successful trips lasted longer than they used to. It was harder to spot deer and, especially, seals. In conclusion, the assessments concerning lower seal uses are most likely the result of the additional effort required to harvest seals because of their scarcity and, for some households, the continued overall lower level of harvest.

Birds and their eggs contributed 7.2 pounds per person usable weight (2.1 percent) to the total harvest in Tatitlek in 1991/92 (Table V-14, Fig. V-9, Fig. V-10). Most of the harvest was scoters, goldeneyes, mallards, and geese (primarily dusky Canada geese), with seabird eggs contributing 1.1 pounds per person (Table V-15). This harvest was a large increase over the year before (2.6 pounds per person) and similar to the pre-spill average of 8.0 pounds per person (Table V-13, Fig. V-8). Most households (56.3 percent) said their uses of birds remained below pre-spill levels, however (Fig. V-12). A large majority of respondents (81.3 percent) said there were less sea ducks available to harvest than before the oil spill (Table V-33, Fig. V-15).

Marine invertebrates made up 1.9 percent of Tatitlek's harvest, with a total take of 6.6 pounds per person (Table V-14, Fig. V-9, Fig. V-10). Chitons and octopus contributed the most to the marine invertebrate harvest (2.1 pounds per person usable weight each), followed by butter clams, razor clams, shrimp, and cockles (Table V-15). While this harvest was more than triple that of 1990/91 (1.9 pounds per person), it remained far below the pre-spill average of 29.8 pounds per person or either of the two pre-spill estimates (Table V-13, Fig. V-9). Almost all the interviewed households which provided an assessment of their uses of marine invertebrates (93.3 percent) said they remained below pre-spill levels (Fig. V-12). Most said this was because there were less resources to harvest; one household said their use of marine invertebrates was still below pre-spill norms because of contamination concerns (Table I-50).

Tatitlek respondents frequently commented upon octopus. Most respondents (68.8 percent) said that the numbers of octopus had declined since the oil spill, as had clams (66.7 percent) and bidarkies (50.0 percent) (Table V-33, Fig. V-15). One household reported that since the oil spill, there were no

octopus around the Tatitlek area. They said they relied on others who go out to get octopus, and who say they are very hard to get compared to 1989. Another commented that octopus were hard to find, saying, "People used to get crab and put them on the dock. We used to get more octopus." Another household pointed out that some oil contamination issues remain for the community regarding octopus:

> We used to go more for them [octopus]. People are still wary. They think the oil may have reached under the rocks and in the holes where the octopus are.

Octopus are caught in the nearshore areas as well as during longlining and fishing with pots for shellfish. Availability of boats or participation in commercial fishing may also have affected the availability of octopus and other marine invertebrates to the community. For instance, one household reported that the community relied on commercial fishermen for shrimp, and there are fewer openings and less shrimp than before the oil spill.

The community harvested an estimated total of 173.6 gallons of berries in 1991/92. This harvest (6.4 pounds per person), combined with other plants of both the sea and the land, made up the total plant harvest of 6.7 pounds usable weight per person, accounting for 1.9 percent of the community harvest. The harvest was about the same as the year before (7.2 pounds per person), but below the pre-spill average (12.9 pounds per person) (Table V-13, Fig. V-9). Most households (60.0 percent) said their uses of plants were about the same as before the spill, although 33.3 percent said they were lower (Table I-52, Fig. V-12).

Five sampled households in Tatitlek (26.3 percent) used plants for medicinal purposes during the study year (Table I-109). Six kinds of plants were used, each by one household. These included alder and high bush cranberries (for treating sore throats), devil's club (a treatment for arthritis), unspecified ferns (used in steam baths), "stinkweed" (wormwood; *Artemisia* sp.) (for treating boils and infections), and putchkie (wild celery or cow parsnip; *Heracleum lanatum*) (unspecified use).

SUBSISTENCE RESOURCE HARVEST AND USE: 1993/94

Participation Rates

As in 1991/92, in the 1993/94 study year all households in Tatitlek used and harvested wild resources. Also, every household received and gave away wild resources. The average range of resources used per household (19.0 kinds) and harvested (11.1 kinds) was about the same as in the earlier study year (Table V-10). These remained similar, although slightly below, pre-spill levels (Fig. V-6).

Similarly, a large majority of Tatitlek residents 1993/94 again participated in subsistence harvest activities (91.3 percent) and processing (85.5 percent). Most gathered plants (87.0 percent), while 58.0 percent fished, 33.3 hunted, and 2.9 percent trapped (Table V-11).

Harvest Quantities

The wild resource harvest of 270.1 pounds per person in Tatitlek in 1993/94 was a notable drop from the 346.0 pounds per person estimated for 1991/92 (Table V-10, Fig. V-8). The mean household harvest also declined, to 931.8 pounds, from 1,384 pounds per household two years before. Compared to 1991/92, there were substantial declines in harvests of salmon (105.9 pounds per person in 1993/94, 148.0 pounds in 1991/92), fish other than salmon (37.6 pounds per person in 1991/92, 89.5 pounds in 1991/92), and birds (3.2 pounds per person in 1993/94, 7.2 pounds in 1991/92). There were less substantial increases in harvests of marine invertebrates, land mammals, and wild plants, while marine mammal harvests were about the same in both study years (Table V-13, Fig. V-9).

The largest percentage of Tatitlek households (62.5 percent) estimated that between one and twenty five percent of their meat, fish, and poultry supply derived from wild foods in 1993/94, compared to just 26.3 percent in this lowest category in 1991/92. There were 12.5 percent of the households which gave an estimate of 51 to 75 percent for 1993/94 (compared to 31.6 percent in 1991/92, the largest category that year), another 12.5 percent which estimated 75 to 99 percent, and yet another 12.5 percent which said that all their meat was from wild foods (Table I-105). Thus, there was, generally, a decrease in estimated percentages compared to 1991/92.

Further evidence of lower subsistence harvests in 1993/94 in Tatitlek was a decline in the percentage of respondents to the social effects questionnaire (SEQ) that had used wild resources the day before the interview, to 36.4 percent, compared to 83.3 percent in 1991/92 when Tatitlek had the highest percentage of any community (Table V-31). The failure of the herring run and the virtual absence of a spawn-on-kelp harvest may explain this decrease (see below).

For the 1993/94 study year, every sampled household in Tatitlek said that their uses were lower than the year before the spill (Table I-95, Fig. V-11). All but one (94.1 percent) attributed this to resource population reductions that they felt were caused by the spill (Table I-98). Most Tatitlek households (63.2 percent) also believed that their uses in 1993/94 were lower than the year before (1992/93); only 26.3 percent said their uses stayed the same and just 10.5 percent indicated an increase (Table I-95). Thus, the perception of declining subsistence uses persists in Tatitlek, and is as strongly held as in any other community in the oil spill area.

Composition of the Harvest

Concerning the composition of the harvest, salmon predominated in 1993/94 with 39.5 percent of the total harvest, as measured in usable pounds, as it had in 1991/92 (42.8 percent). The relative contribution of fish other than salmon dropped, from 25.9 percent in 1991/92 (and second place among all categories) to 14.0 percent (and fourth place) in 1993/94. On the other hand, land mammals increased from 11.7 percent to 19.3 percent (ranking second overall), and marine mammals jumped from 13.8

percent to 17.6 percent (third place). Also, the contribution of wild plants went up to 4.8 percent of the total harvest, ranking fifth among resource categories (Table V-14, Fig. V-12, Fig. V-13).

In some ways, the composition of the subsistence harvest in Tatitlek in 1993/94 resembled pre-spill averages more than did that of 1991/92. Primarily because of the decline in harvests of salmon and fish other than salmon, fish made up 53.5 percent of the 1993/94 harvest, the lowest percentage since the spill but similar to the pre-spill average of 50.9 percent. Correspondingly, the relative contribution of land mammals and marine mammals, in going up, was more like the pre-spill pattern than the 1991/92 harvest composition had been. (It must be recalled, however, that harvests per person of these two categories were much lower than pre-spill averages.) On the other hand, the relative contribution of marine invertebrates in 1993/94 was still lower than pre-spill levels (Table V-14, Fig. V-13).

Harvests and Uses by Resource Category

Among salmon species, sockeyes ranked first in Tatitlek's harvest in 1993/94 with 47.7 percent of the salmon catch (as measured in pounds). This contrasts with 1991/92, when cohos ranked first by far. In 1993/94, cohos were second, with 28.9 percent of the salmon harvest, followed by chum (11.5 percent), pink (6.0 percent), and chinook (5.9 percent) (Table V-25, Table V-26).

This change in the salmon harvest composition and the reduced level of take were noted by the president of the Tatitlek IRA Council in November 1993 during a visit by division staff. Since 1989, Tatitlek and the Valdez Fisheries Development Association (VFDA) have cooperated in an annual release of coho salmon smolts in Boulder Bay. Smolts return as adult fish in about 18 months. However, the coho return was very poor in 1993, as was the run of pink salmon, according to the council president. He estimated that the community had put up just 30 percent of its usual winter supply of salmon. Most of the cohos were taken from Irish Cove, near Two Moon Bay, an area increasingly popular with sport fishermen. Sockeyes were harvested during trips by boat to Billy's Hole.

Consistent with this lowered salmon harvest in 1993, every Tatitlek household said its salmon uses in 1993/94 were below pre-spill levels (Table I-63). Most said they thought that spill impacts on salmon returns were the reason for their reduced harvests (Table I-70). In 1993/94, 87.5 percent of Tatitlek's SEQ respondents said that, in their view, salmon populations had declined since the oil spill, a notable increase over the 56.3 percent who reported lower salmon populations in 1991/92 (Table V-33, Fig. V-16).

These assessments and the reduced salmon harvest by Tatitlek residents are also consistent with the poor performance of the Prince William Sound commercial salmon fishery in 1993. The 1993 commercial catch was the lowest on record since 1978. Harvests of chinook, coho, and pink salmon were all below the 10-year average; the overall harvest was 63.7 percent lower than the ten-year average. Pink salmon harvests and returns were especially disappointing. The commercial harvest of pinks was only 5.4 million fish, compared to a pre-season forecast of about 18 million. The harvest was only about 25 percent of the 10-year average (Donaldson 1993a; Donaldson et al. 1994:14).

As measured in usable pounds, most of the 1993/94 harvest of salmon by Tatitlek residents (79.9 percent) was taken with subsistence methods (Table V-25, Table V-26). As in the earlier study year, a relatively low percentage of Tatitlek's home use harvest (4.8 percent) was removed from commercial catches (Table V-24). Fifteen percent of the households removed salmon from commercial catches for home use; 65 percent used subsistence methods and 35 percent used rod and reel (Table V-27).

Halibut, rockfish, and gray cod ranked highest among fish other than salmon in the 1993/94 harvest at Tatitlek (Table V-23), but harvests of all three were down from 1991/92. Accounting for a very large portion of the decline in nonsalmon fish harvests was the virtual absence of a harvest of herring spawn on kelp in the spring of 1993, just an estimated 10.5 gallons (0.8 pounds per person), compared to 557 gallons (36.1 pounds per person) in 1991. All interviewed households believed their uses of nonsalmon fish were lower than before the spill, a sharp increase from the 46.7 percent of the households that reported such a change in 1991/92 (Fig. V-12). Most believed that the spill reduced the amount of fish available to harvest (Table I-70). Also, most Tatitlek SEQ respondents thought that numbers of halibut were down compared to 1988 (87.5 percent) (Table V-33, Fig. V-16).

In 1993/94, most fish other than salmon were harvested with subsistence gear (59.9 percent), followed by rod and reel (22.1 percent), and commercial removal (18.0 percent) (Table V-28, Table V-29). Most households (55.0 percent) harvested nonsalmon fish with subsistence gear; 45 percent used rod and reel and 15 percent obtained them from commercial catches (Table V-30).

The land mammal harvest by Tatitlek hunters in 1993/94 consisted entirely of deer (about 106 animals, 47.6 pounds per person) and mountain goats (about 6 animals harvested, 4.2 pounds per person) (Table V-23). Unlike previous years, there was no black bear harvest or use reported for 1993/94. As in other post-spill years, most Tatitlek households (73.3 percent) believed their uses of land mammals have declined since the spill (Fig. V-12). However, fewer point to the spill as the cause of this decline than with some other resources (Table I-74). As in the previous study year, most respondents (62.5 percent) said deer populations were lower than the year before the oil spill (Table V-33, Fig. V-16).

In 1993/94, marine mammals continued to be a very significant subsistence resource in Tatitlek, representing 17.6 percent of the total resource harvest, at 47.0 pounds per capita. The per capita harvest in 1993/94 was virtually identical to the 1991/92 harvest. An estimated 161 harbor seals and 7 sea lions were harvested, compared to 114 and 9, respectively, in 1991/92 (Table V-15, Table V-23).[4] About 94 percent of Tatitlek households said that their uses of marine mammals were lower in 1993/94 compared to before the spill (Fig. V-12). Most believe the spill caused a reduction in marine mammal populations that led directly to lower subsistence uses (Table I-82). Most Tatitlek social effects questionnaire (SEQ)

[4] Under a contract with the National Marine Fisheries Service, the division conducted harvest interviews with Tatitlek marine mammal hunters for the 1992 and 1993 calendar years. Harvests were estimated by month. It is thus possible to estimate the harvests of these species for the period April 1992 through March 1993, the year missing from the MMS research. Based upon data reported in Wolfe and Mishler (1993), the estimated harbor seal harvest was 152 animals, and the estimate for sea lions was 6. These estimates do not include animals struck and lost. These data suggest a relatively stable harvest of these animals at Tatitlek for the 1991 through 1993 period.

respondents also said they believed that populations of sea lions (87.5 percent) and harbor seals (75.0 percent) were lower than before the spill (Table V-33, Fig. V-16).

The marine invertebrate harvest at Tatitlek in 1993/94 increased by 3.0 pounds per person, to 9.6 pounds, over the 1991/92 estimated harvest. This harvest remained less than a third of the pre-spill average, however, and was notably lower than either pre-spill estimate (Table V-13, Fig. V-8). Almost all the interviewed households (93.3 percent) said their uses of marine invertebrates were still below pre-spill norms. Only one household cited contamination concerns as a cause of their reduced uses of shellfish; most pointed to reduced abundance, something they believe is a result of the spill (Table I-90). In the opinion of most Tatitlek SEQ respondents, populations of octopus (87.5 percent of respondents) and bidarkies (62.5 percent) were lower than in 1988 (Table V-33, Fig. V-16).

As noted above, bird harvests dropped in 1993/94 compared to two years before. In 1993/94, bird harvests were less than half of the pre-spill average (Table V-13, Fig. V-8). The large majority of households (68.8 percent) said their uses of birds remained below pre-spill norms (Fig. V-12). Most households (87.5 percent) said that populations of sea ducks were lower than before the spill (Fig. V-16).

Wild plant harvests almost doubled over the 1991/92 level, with most of this harvest consisting of berries (Table V-23). This was the only resource category whose 1993/94 harvest was similar to the pre-spill average and exceeded any pre-spill annual estimate (Table V-13, Fig. V-8). In contrast to all other resource categories, no households said their uses of wild plants were below pre-spill levels (Fig. V-12). Two households (11.8 percent) said their uses were higher in 1993/94 than before the spill, and the rest said they were about the same (Table I-91).

DISCUSSION: COMPARISONS WITH PREVIOUS YEARS

Subsistence Harvests Quantities: Overall Levels of Harvest

In the year following the *Exxon Valdez* oil spill, subsistence harvests at Tatitlek dropped almost 60 percent, to 214.8 pounds per person from a pre-spill average of 482.9 pounds per person (Fall 1991b, Stratton et al., forthcoming). There was a further drop in 1990/91, to 152.7 pounds per person (Fall 1992a, 1992b). A 60 percent decline in subsistence harvests with no signs of recovery for two years was also documented for Chenega Bay, the other Alaska Native village of Prince William Sound (see Chapter IV). In most other oil spill area villages, a substantial decrease in subsistence harvests in 1989 was followed by a notable increase in subsistence uses in the second post-spill year (Fall 1992b). Recovery of subsistence uses in the Prince William Sound villages clearly lagged behind those of these other communities.

Subsistence harvests in Tatitlek increased substantially in 1991/92, the third year after the spill, to 346.0 pounds per person. The average number of resources used per household increased to near pre-spill levels, and participation in subsistence activities was high. However, subsistence harvest levels remained well below pre-spill averages, especially for marine mammals, marine invertebrates, and land

mammals. The increase in harvests in 1991/92 were produced through increased household effort. Most households felt that key resources such as deer, seals, sea lions, clams, ducks, halibut, and salmon were scarcer than before the spill. The composition of the harvest changed as well, with more fish being taken and proportionately fewer mammals and marine invertebrates. The assessment of virtually every household in the village was that subsistence uses in 1991/92 had not returned to pre-spill norms.

In 1993/94, subsistence harvests declined at Tatitlek to 267.9 pounds per person, well below 1991/92 and the pre-spill years, although still higher than either 1989/90 and 1990/91. A similar decline occurred in Chenega Bay. Harvests declined in most resource categories, but especially in harvests of fish other than salmon due to the 1993 Prince William Sound herring run failure. Compared with 1991/92, more households reported declines in resource populations. Again, almost all households reported that they thought that subsistence uses were very low compared to before the spill.

Tatitlek and the *Exxon Valdez* Oil Spill: Social Effects Questionnaire Results

In the year after the spill, fear that subsistence resources had been contaminated by oil was the primary reason Tatitlek respondents gave for lowered levels of subsistence use, representing 81.3 percent of respondents who said their uses had gone down (Stratton et al. forthcoming). In 1991/92, just 37.5 percent of the Tatitlek SEQ respondents said they felt they were adequately informed about the safety of subsistence foods. In 1993/94, 54.5 percent of respondents stated they were adequately informed (Table V-39).[5]

In 1991/92, 55.5 percent of the Tatitlek SEQ respondents believed that clams were not safe to eat or were not sure. In 1993/94, 27.3 percent expressed concerns about clams (Table V-32).

Regarding marine mammals, most Tatitlek SEQ respondents in both study years (76.9 percent in 1992, 72.7 percent in 1994) said that they believed that seals and seal oil were safe to use (Table V-32). But concerns about particular animals remained, along with a broader suspicion that the spill damaged these resources in ways which scientific studies have failed to detect. For example, a sea lion was killed by two young hunters in April 1993 that was described as having "spots all over it." They decided not to use the animal. With their aid, the division obtained samples from this animal and took photographs of it. Biologists with ADF&G diagnosed the problem as an usually large number of "target lesions," which are caused by a skin fungus. They advised that such lesions would not affect the health of the animal or render it unsafe to eat (Calkins 1993). However, when members of 11 households in Tatitlek were shown photographs of the animals, they said they had never observed these lesions before. One elder shook his head and vehemently stated he had never seen anything like this on a sea lion before. As a second

[5] These percentages may underestimate the level of dissatisfaction with subsistence food safety information in Tatitlek. As discussed earlier, most Tatitlek households did not participate in the social effects surveys in the second study year (1993/94). Many who did not were particularly affected by the post-spill situation of declining resource populations and reduced subsistence harvests, and most were also distrustful of the uses of the data. It is likely that these households would have expressed dissatisfaction with the level of information they received about subsistence food safety had they participated in the SEQ survey.

example, a woman explained that her five-year-old granddaughter had asked if the seal her grandfather had killed had come from Bligh Reef (the site where the *Exxon Valdez* had run aground).

Concerns on the part of Tatitlek residents regarding the herring stocks of Prince William Sound are perhaps the best illustration of the continuing issue in the village of the safety of subsistence foods and the health of all resources of the sound following the spill. The 1993 herring run in Prince William Sound was about half the size of the forecast, and the harvest was the lowest since 1983 (Donaldson et al. 1994:19-20). During sampling at Montague Island in April, commercial fishermen reported abnormal behavior and surface hemorrhages on herring. Although the cause of the hemorrhages was unknown at the time, ADF&G believed that no human health risk was involved and commercial fisheries took place (Donaldson 1993b).

In early May, before results of tests on the herring were available, the Oil Spill Health Task Force (OSHTF) received a letter from the Tatitlek IRA Council (Kompkoff 1993a). The letter announced that the council was recommending to community residents that they not use subsistence resources from Prince William Sound.

> The residents of the Native Village of Tatitlek, most of whom are very dependent on subsistence resources for their lifestyles have become extremely concerned (probably more concerned than we have been since the first days of the *Exxon Valdez* Oil Spill) with the safety of consuming any of the marine subsistence resources. Our concerns relate primarily to the condition of the herring, which is not only a staple subsistence resource in our village, but also a main food source of many of the other resources that we enjoy. The effect that the herring may have on the safety of consuming any of the resources has necessitated the discontinuance of harvests of any of the subsistence resources until we are certain that they are safe for human consumption.

Subsequently, later in May the results of tests on the herring indicated a viral infection called "viral hemorrhagic septicemia" (VHS), a condition that posed no human health threat (Meyers 1993).[6] In response to the letter from the IRA Council, the ADF&G provided the community with background on the VHS virus. Regarding the safety of using the herring for food, this communication said the following (Meyers 1993):

> An important fact for Prince William Sound residents is that this virus is strictly a fish virus which poses no threat to human consumption of the affected herring nor of other animals feeding on the herring.

In June, division personnel traveled to Tatitlek to discuss these findings regarding the VHS virus with the community. During this visit, village residents remained concerned, despite the assurances from ADF&G and the commercial fishery openings, about the disease's impacts on both other animals in the

[6] The author of this report on the VHS virus, Dr. Theodore Meyers, the chief fisheries pathologist for ADF&G, attended a meeting of the OSHTF in August 1993 where he provided community representatives with further background on the virus. An account of Meyers' overview also appeared in a subsistence restoration newsletter distributed by the division (ADF&G 1994).

food chain and on humans. These concerns were exacerbated by several factors: the poor returns of herring and pink salmon; the harvest of a sea lion with target lesions (see above); and the extended presence of a school of herring near the Tatitlek dock from mid April until late June which showed obvious signs of the disease. The presence of herring was particularly significant because everyone in the community could observe this phenomenon, not just hunters in the field. These observations supported the widely-held view in the village that oil contamination was creating long-term effects on the environment, some of which would only be detected years after the spill. One elder, in commenting on damage assessment studies, said that they had ended too early: "Where it was heavily oiled, they'd start noticing the effects right away. Here [near Tatitlek, which was not directly oiled] it was too early to tell." This elder, in 1991, had predicted that oil spill effects would appear in a few years. When the herring failed to return and exhibited effects of the VHS virus, people remembered this prediction: "They [the elders] said it [the spill's impacts] would show up this year, and they're right on time."

When the herring near the Tatitlek dock were observed with "white patches and spots" along with hemorrhaging under the scales, village residents concluded that they were unsafe to eat because they were clearly sick. One man said, "We're not going to test these fish around here. [That is, people refused to "test" the fish themselves by eating them and then seeing if they got ill.] Everything is not okay, no matter what Exxon said."

Some Tatitlek residents tried to understand what was wrong with the herring through observations. One person reported that about a third of the fish appeared sick. Another person caught five or six and found they contained very small eggs. This was unusual, she said, in a fish of that size. Some of the fish were missing scales from half their bodies and appeared to be decaying. Other people reported that the herring were lethargic and moved erratically. Large schools such as this usually moved in synchronized patterns and passed by the village quickly, but these remained for months. Another woman said that she refused to let her children eat any herring because of these observations. Villagers expressed frustration and outrage that they had been told that such fish could be safe to eat.

> I'm not going to eat something that looks like shit. A virus is a virus. You don't feed something sick to humans.

And an elder expressed the shared cultural norm concerning the healthfulness of resources as follows:

> We never ate anything strange. We hardly had occasion to throw away things. We want to know why we are seeing so many strange things.

It was thus clear from this meeting that the people in Tatitlek had a fundamental problem with the idea that an animal can have something wrong with it and still be safe to eat. The view was that if an animal has an abnormal appearance or behaves oddly, it is sick, and if it is sick, it is not good food.

A further problem was that the ADF&G had opened the community herring fishery based on assurances that the herring were safe to use without knowing what the cause of the aberrant behavior and hemorrhages might be. In a letter addressed to the Oil Spill Health Task Force, the village council president stated the crux of the issue for Tatitlek (Kompkoff 1993b):

> Residents of the Native Village of Tatitlek were concerned with the safety of consuming any of the subsistence resources in 1989; it has been more than four years since the oil was spilled and the residents are still concerned and their concerns are growing with each failed commercial or subsistence fishing season. Prior to the oil spill, our people never had to worry about their resources, for generations we have been able to harvest whatever we wanted without worrying about the safety of consuming anything. The total failures of the herring and salmon seasons this year have made residents of Prince William Sound wonder what the true impact of the oil spill has been on the Sound. The herring are an integral part of the food chain, almost all of the subsistence resources that we rely on depend largely on herring for their sustenance. When the herring returned to the sound with sores and lesions on them, we became extremely concerned about the safety of harvesting any and contacted the Alaska Department of Fish and Game and the Department of Environmental Conservation about their condition; we were told that while both agencies were not sure what was affecting the herring, they were safe for human consumption. This made absolutely no sense at all to us. Suppose there were meats in the American Super Markets that had sores and lesions on them, do you think that either agency would have told the consumers that the meats were safe, even before they had determined what was affecting the meats? We very seriously doubt that. Why is this so?

Thus, as in the first several years after the spill (see Chapter I), the community raised questions about the quality of the information being used to reassure them about food safety, casting doubt about the trustworthiness of any advice about this critical issue.

Tatitlek residents continued to report perceived changes to the way of life in the community in comparison to the years before the spill. More than half the social effects respondents in Tatitlek said that the spill had affected children's participation in subsistence activities: 56.3 percent in 1992 and 54.5 percent in 1994 (Table V-34). This was the highest percentage in the first study year and was exceeded only slightly by Port Graham and Nanwalek in 1993/94 (Fig. I-6). Similarly, a relatively large percentage (37.5 percent, third highest following Nanwalek and Chenega Bay) of Tatitlek respondents said that sharing of subsistence resources was lower since the spill. This percentage increased substantially to 72.7 percent in 1994, the highest of any community in any study year (Table V-35, Fig. I-7). In 1992, a relatively large percentage of Tatitlek respondents (28.6 percent) said they liked living in the village less since the spill, third among all study communities, although this was only about half the rate of Cordova and Chenega Bay (Table V-37, Fig. I-8). This percentage dropped to just 10 percent in 1994, but since many households which were concerned about the spill's effects on the community did not participate in the SEQ survey that year, this may be an underestimate for Tatitlek.

In both study years, a majority of Tatitlek respondents to the social effects questionnaire predicted lowered populations of most wild resources as a consequence of Outer Continental Shelf (OCS) development. In all cases, the percentage predicting lowered populations increased in 1994 over 1992.

This was particularly notable for land mammals and birds (Table V-40, Figs I-10 to Fig. I-14). While about half the respondents said they thought more jobs would result from OCS activities, the percentage dropped slightly in 1994 and was well below that of Valdez and Kenai (Fig I-15).

CONCLUSION

The findings from this study demonstrate that Tatitlek remains one of the communities most affected by the *Exxon Valdez* oil spill. Some of these affects are evident in reduced harvest levels despite increased efforts. In 1992, one of the most skilled hunters in the village offered the following assessment of implications of the oil spill's damage to wildlife for Tatitlek.

> It's like a town the size of Cordova had one Safeway [supermarket] and it got blown up. So what do you do? You have to go digging among the scraps, the dregs, the burned up pieces for bits of food.

Being a successful subsistence provider is a central cultural value and at the core of self-worth in Tatitlek. Subsistence providers shoulder the social responsibility of feeding those dependent upon them. There is a strong ethic that one does not come back empty-handed when one sets out to hunt or fish. However, unsuccessful subsistence efforts are no much more common in Tatitlek than before the spill.

The difficulties which reduced success in subsistence activities brought to the community were noted by a former resident of the community who conducted seal harvest interviews for the division in Tatitlek in 1993. In a letter to the staff of the division, he wrote:

> I am no biologist, but Tatitlek is very depressed for no seals or sea lions, no wild ducks or signs of animals life around that narrows. Very quiet. I brought two seal over [from Cordova] for the people. I only wish I could've had more to bring to them. . . They really appreciated that. I only wish this was all a bad dream and we all could go back to our regular Aleut life and be what we use to be, a proud and good hunter (O'Brien 1994).

As noted earlier, the failure of the herring run in both 1993 and 1994 and herring virus in 1993 was particularly distressing for the community. Herring are an integral link in the sound's food web and is the prey of several subsistence resources. Herring spawn is also one of the most highly valued foods in the village. Its harvest in the spring is a sign of renewed life in the sound and an important symbol of continuing subsistence activities and Alutiiq culture. Accompanying the herring are other important resources such as seals and birds. For Tatitlek residents, the status of the herring return is an indicator of the health of the environment overall. In 1989, the subsistence harvest of herring spawn was entirely lost when the Department of Fish and Game closed the season because of oil contamination concerns. Good returns occurred the next two years, suggesting a recovery, but this optimism disappeared in 1993 and 1994. For example, in the spring of 1994, an elder, distressed over the failure of the herring run for the second straight year, said:

> Two years! Two years there's no spawn! This has never happened before! Something is happening. It's dying. The whole thing is dying.

He went on to express his deep concern about the consequent loss of culture in the community which a failure to use traditional foods would bring.

Similarly, in commenting on the failure of the herring run for the second year, one young man said that without the herring, other animals would disappear as well. He himself had been unable to harvest a sea lion in almost a year. He was thinking about leaving the village and moving to Valdez for employment, because:

> There's nothing here to do [neither hunting nor jobs]. It's too hard to make it here. I'm going to learn how to live like a white man.

By the spring of 1994, five households had moved away from Tatitlek, three of them major harvesters. This has a tremendous affect on a small community like Tatitlek.

One disheartened young man, when asked to assist in documenting his household's harvests, said, "It's all a big zero" and then declined to do the interview, as did his hunting partner. A woman explained their reluctance, almost as an apology: "Everyone is waiting for it to happen -- for the spawn."

It is important to note that the most experienced and active hunters in the village did not express the extremely negative view that "there is nothing here to do" and "there is nothing out there." They said that that wild resources were there in shorter supply, and that people had to try harder and go further to harvest them. Of course, such efforts require increased expenditures of labor and purchases of fuel and supplies, something that is difficult in a community with limited labor and per capita incomes such as Tatitlek.

The diseased and depleted herring stocks added to doubts about the future of other resource populations and the ecosystem of the sound. One woman said that the failure of the return made her think the herring might not be safe to eat. Another man said:

> If the rookeries are ruined, seals were going to go elsewhere. I don't know if the seaweed will come back. You can't believe the biologists who worked here during the spill. You didn't know who was working for who. The only people who showed us credentials were the news people. You didn't know who to believe. There should be more of a follow-up. I think they have kind of forgotten Tatitlek. Just because there was no oil on our beaches they think it didn't impact Tatitlek. They're wrong.

Another person offered a bleak outlook on the prospects for recovery, either of the injured resources themselves or the people who depend upon them. He said that he doubted that the resources themselves could be restored or that Exxon would make adequate reparations to Alaska Natives for the losses they suffered:

> They just keep doing studies and we understand that, but it's only to benefit themselves, not us. Only a Native person in our position of using these resources could understand what it means to us to lose them.

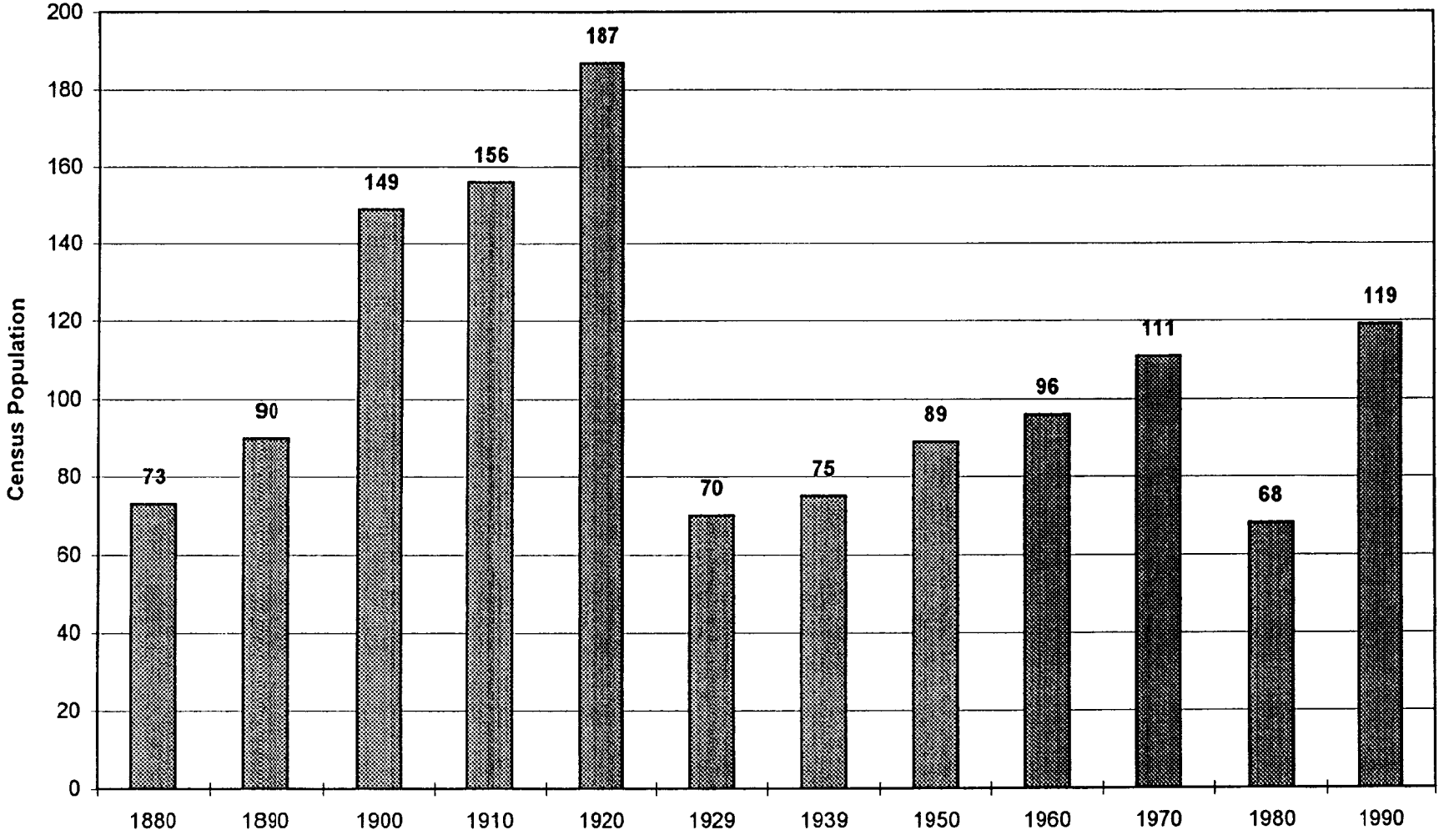
The spill exacerbated problems and issues that had been difficult for Tatitlek in the face of increasing competition for fish and wildlife resources and inappropriate harvest regulations. One woman, in 1992, discussed the conflicts that arise when hunting regulations do not accommodate traditional uses.

> We teach our kids to be providers. And we want to obey the law. It makes them really proud to be able to bring food home.

She went on to describe how her son had gone hunting and killed a duck. But he heard a plane. He ran home, put away the gun, and hid the duck behind a bush. "Isn't that sad?" she said: her son was so proud, but he had to "sneak around with his duck." She said that if young men were allowed to continue their hunting traditions, problems with drugs and alcohol would certainly diminish. These kinds of problems were evident during the fieldwork; examples include three attempted suicides.

In summary during both years of this study in Tatitlek, but especially when the second round of interviewing was taking place in the spring of 1994, many people in the community appeared extremely depressed about subsistence uses. The surveys reminded them of their recent pattern of harvests and the problems associated with their wild foods and the ecosystem. The questions that asked people to compare the study year with the year before the spill forced people to recall the spill and the tragedy of the enormous loss of animal life which they witnessed. These painful memories, the lack of normal subsistence activity during the survey period, and the perceived declines in wild resource populations have contributed to this sense of loss and pessimism about the future.

Figure V-1. Tatitlek Census Population, 1880 - 1990



Sources: Rollins 1978; Alaska Department of Labor 1991

Table V-1. Sample Participation: Tatitlek 1992 and 1994

VARIABLE	1992 Social Indicators Panel	1992 Social Indicators Non-Panel*	1992 TOTAL HOUSEHOLDS	1994 HOUSEHOLDS	1994 TOTAL HOUSEHOLDS
Estimated Household Structures	10	31	41	35	35
Less Annex Structures	NA	1	1	0	0
Estimated Households	10	30	40	35	35
Total Panel	15	NA	NA	NA	NA
Interview Goal:	15	25	40	35	35
Households Interviewed	5	14	19	20	20
Failed to Contact/Unavailable	0	0	0	1	1
Refused	5	3	8	7	7
Vacant Residential Structures	NA	12	12	6	6
Seasonal Households**	0	0	0	0	0
Non-Resident Household ***	0	1	1	1	1
Invalid Households and Vacancies	0	13	13	7	7
Failed to Contact: HH Interviewed	0	NA	NA	NA	NA
Refused: HH Interviewed	1	NA	NA	NA	NA
SI Household Moved	3	NA	NA	NA	NA
SI Household Merged	1	NA	NA	NA	NA
SI Panel Disposition	15	NA	NA	NA	NA
Total Households Attempted:	10	30	40	35	35
Refusal Rate:	50.00%	17.65%	29.63%	25.93%	25.93%
Non-Perm. HH Rate ("Vacancy Rate"):	0.0%	43.3%	32.5%	20.0%	20.0%
Interview Goal (Percentage)	33.3%	56.0%	47.5%	57.1%	57.1%
Social Effects Surveys Completed	4	14	18	11	11
Total Permanent Households	10	17	27	28	28
Percentage Interviewed	50.00%	82.35%	70.37%	71.43%	71.43%
Percentage of Total Households	37.04%	62.96%	100.00%	100.00%	100.00%
Interview Weighting Factor	2.000	1.214	1.421	1.400	1.400

NOTES:

* Includes panel members who were not attempted to contact.

** Seasonal households are households which maintain a permanent domicile elsewhere where they spend the majority of their time.

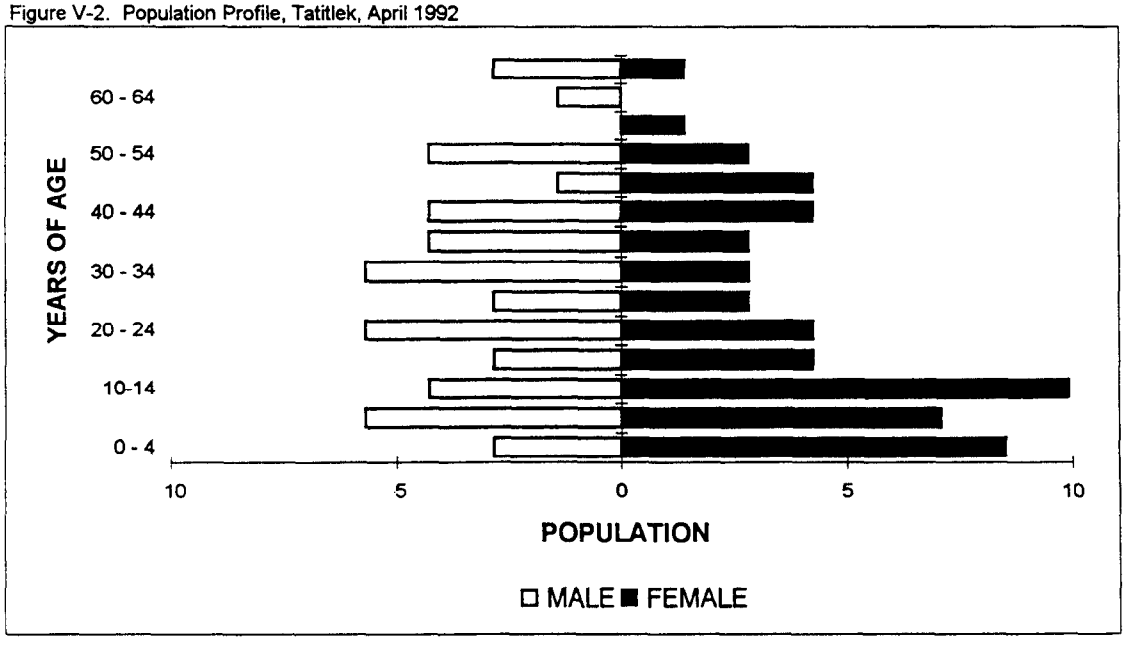
*** Non-resident households are households which were not present during the study year or which were resident less than the required number of months.

Table V-2. Demographic Characteristics of Households, Tatitlek, April 1992, and April 1994

Characteristics	1991/92	1993/94
Sampled Households	19	20
Number of Households in the Community	27	28
Percentage of Households Sampled	70.37	71.43
Household Size		
Mean	4.00	3.45
Minimum	1	1
Maximum	9	7
Sample Population	76	69
Estimated Community Population	108.00	96.60
Age		
Mean	26.70	27.80
Minimum	0.40	0.84
Maximum	68.87	71.52
Median	23.08	24.42
Length of Residency - Population		
Mean	16.64	16.27
Minimum	0.40	0.63
Maximum	65.52	67.52
Length of Residency - Household Heads		
Mean	23.54	23.69
Minimum	0.625	0.63
Maximum	65.52	67.52
Sex		
Males		
Number	51.16	49.00
Percentage	47.37	50.72
Females		
Number	56.84	47.60
Percentage	52.63	49.28
Alaska Native		
Households (Either Head)		
Number	24.16	26.60
Percentage	89.47	95.00
Estimated Population		
Number	100.89	89.60
Percentage	93.42	92.75

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992 and 1994.

Figure V-2. Population Profile, Tatitlek, April 1992



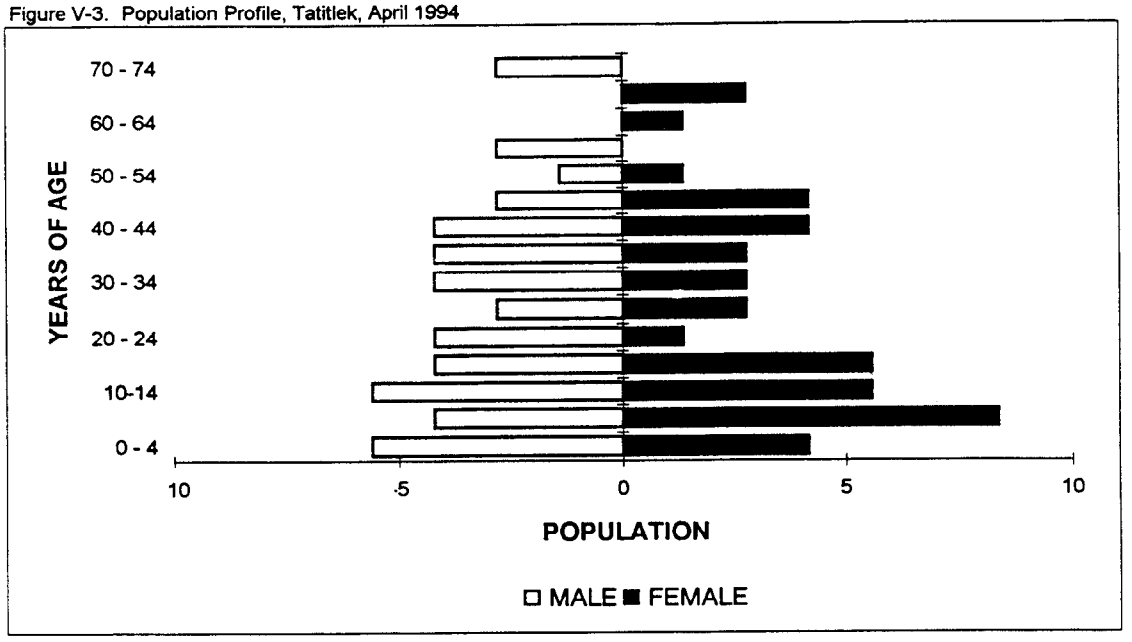
SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table V-3. Population Profile, Tatitlek, April 1992

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	2.84	5.56%	5.56%	8.53	15.00%	15.00%	11.37	10.53%	10.53%
5-9	5.68	11.11%	16.67%	7.11	12.50%	27.50%	12.79	11.84%	22.37%
10-14	4.26	8.33%	25.00%	9.95	17.50%	45.00%	14.21	13.16%	35.53%
15 - 19	2.84	5.56%	30.56%	4.26	7.50%	52.50%	7.11	6.58%	42.11%
20 - 24	5.68	11.11%	41.67%	4.26	7.50%	60.00%	9.95	9.21%	51.32%
25 - 29	2.84	5.56%	47.22%	2.84	5.00%	65.00%	5.68	5.26%	56.58%
30 - 34	5.68	11.11%	58.33%	2.84	5.00%	70.00%	8.53	7.89%	64.47%
35 - 39	4.26	8.33%	66.67%	2.84	5.00%	75.00%	7.11	6.58%	71.05%
40 - 44	4.26	8.33%	75.00%	4.26	7.50%	82.50%	8.53	7.89%	78.95%
45 - 49	1.42	2.78%	77.78%	4.26	7.50%	90.00%	5.68	5.26%	84.21%
50 - 54	4.26	8.33%	86.11%	2.84	5.00%	95.00%	7.11	6.58%	90.79%
55 - 59	0.00	0.00%	86.11%	1.42	2.50%	97.50%	1.42	1.32%	92.11%
60 - 64	1.42	2.78%	88.89%	0.00	0.00%	97.50%	1.42	1.32%	93.42%
65 - 69	2.84	5.56%	94.44%	1.42	2.50%	100.00%	4.26	3.95%	97.37%
70 - 74	0.00	0.00%	94.44%	0.00	0.00%	100.00%	0.00	0.00%	97.37%
75 - 79	0.00	0.00%	94.44%	0.00	0.00%	100.00%	0.00	0.00%	97.37%
80 - 84	0.00	0.00%	94.44%	0.00	0.00%	100.00%	0.00	0.00%	97.37%
85 - 89	0.00	0.00%	94.44%	0.00	0.00%	100.00%	0.00	0.00%	97.37%
90 - 94	0.00	0.00%	94.44%	0.00	0.00%	100.00%	0.00	0.00%	97.37%
95 - 99	0.00	0.00%	94.44%	0.00	0.00%	100.00%	0.00	0.00%	97.37%
100 - 104	0.00	0.00%	94.44%	0.00	0.00%	100.00%	0.00	0.00%	97.37%
Missing	2.84	5.56%	100.00%	0.00	0.00%	100.00%	2.84	2.63%	100.00%
TOTAL	51.16	47.37%		56.84	52.63%		108.00	100.00%	

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Figure V-3. Population Profile, Tatitlek, April 1994



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table V-4. Population Profile, Tatitlek, April 1994

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	5.60	11.43%	11.43%	4.20	8.82%	8.82%	9.80	10.14%	10.14%
5-9	4.20	8.57%	20.00%	8.40	17.65%	26.47%	12.60	13.04%	23.19%
10-14	5.60	11.43%	31.43%	5.60	11.76%	38.24%	11.20	11.59%	34.78%
15 - 19	4.20	8.57%	40.00%	5.60	11.76%	50.00%	9.80	10.14%	44.93%
20 - 24	4.20	8.57%	48.57%	1.40	2.94%	52.94%	5.60	5.80%	50.72%
25 - 29	2.80	5.71%	54.29%	2.80	5.88%	58.82%	5.60	5.80%	56.52%
30 - 34	4.20	8.57%	62.86%	2.80	5.88%	64.71%	7.00	7.25%	63.77%
35 - 39	4.20	8.57%	71.43%	2.80	5.88%	70.59%	7.00	7.25%	71.01%
40 - 44	4.20	8.57%	80.00%	4.20	8.82%	79.41%	8.40	8.70%	79.71%
45 - 49	2.80	5.71%	85.71%	4.20	8.82%	88.24%	7.00	7.25%	86.96%
50 - 54	1.40	2.86%	88.57%	1.40	2.94%	91.18%	2.80	2.90%	89.86%
55 - 59	2.80	5.71%	94.29%	0.00	0.00%	91.18%	2.80	2.90%	92.75%
60 - 64	0.00	0.00%	94.29%	1.40	2.94%	94.12%	1.40	1.45%	94.20%
65 - 69	0.00	0.00%	94.29%	2.80	5.88%	100.00%	2.80	2.90%	97.10%
70 - 74	2.80	5.71%	100.00%	0.00	0.00%	100.00%	2.80	2.90%	100.00%
75 - 79	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
80 - 84	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
85 - 89	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
90 - 94	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
95 - 99	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
100 - 104	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
Missing	0.00	0.00%	100.00%	0.00	0.00%	100.00%	0.00	0.00%	100.00%
TOTAL	49.00	50.72%		47.60	49.28%		96.60	100.00%	

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table V-5. Employment Characteristics, Tatitlek, 1991/92 and 1993/94

Characteristics		1991/92	1993/94
ADULTS			
Total		65.37	58.80
Employed			
	Number	52.58	46.20
	Percentage	80.43	78.57
Jobs			
	Number	100.89	79.80
	Mean	1.92	1.73
	Minimum	1	1
	Maximum	6	5
Months Employed			
	Mean	8.05	7.21
	Minimum	1	1
	Maximum	12	12
	Year-Round	16.22	33.33
HOUSEHOLDS			
Total		27.00	28.00
Employed			
	Number	25.58	25.20
	Percentage	94.74	90.00
Jobs per Employed Household			
	Mean	3.94	3.17
	Minimum	1	1
	Maximum	9	7
Employed Adults			
	Mean	2.06	1.83
	Minimum	1	1
	Maximum	3	3

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, *Household Survey, 1992 and 1994.*

Table V-6. Community, Household, and Per Capita Incomes, All Sources and by Employer Type, Tatitlek, 1991/92

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$881,623.50	$32,652.72	$8,163.18
Earned Income	$701,601.71	$25,985.25	$6,496.31
Agriculture, Forestry, and Fishing	142,508.68	5,278.10	1,319.52
Agriculture	74,853.95	2,772.37	693.09
Forestry	AMT UNK	AMT UNK	AMT UNK
Fishing, Hunting, Trapping	67,654.74	2,505.73	626.43
Hatchery/Enhancement	0.00	0.00	0.00
Commercial Fishing	67,654.74	2,505.73	626.43
Hunting/Trapping	0.00	0.00	0.00
Mining	0.00	0.00	0.00
Construction	0.00	0.00	0.00
Manufacturing	45,473.68	1,684.21	421.05
Cannery	0.00	0.00	0.00
Other Manufacturing	0.00	0.00	0.00
Logging/Timber	45,473.68	1,684.21	421.05
Transportation, Communications, and Utilities	26,171.53	969.32	242.33
Trade	0.00	0.00	0.00
Wholesale	0.00	0.00	0.00
Retail	AMT UNK	AMT UNK	AMT UNK
Finance, Insurance, and Real Estate	28,421.05	1,052.63	263.16
Services	61,253.05	2,268.63	567.16
Government	397,773.71	14,732.36	3,683.09
Federal	0.00	0.00	0.00
State	0.00	0.00	0.00
Local	397,773.71	14,732.36	3,683.09
Local Government	133,626.32	4,949.12	1,237.28
Local Education	264,147.39	9,783.24	2,445.81
Unknown	AMT UNK	AMT UNK	AMT UNK
Other Income	$180,021.79	$6,667.47	$1,666.87

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Figure V-4. Employment by Industry, 1991/92

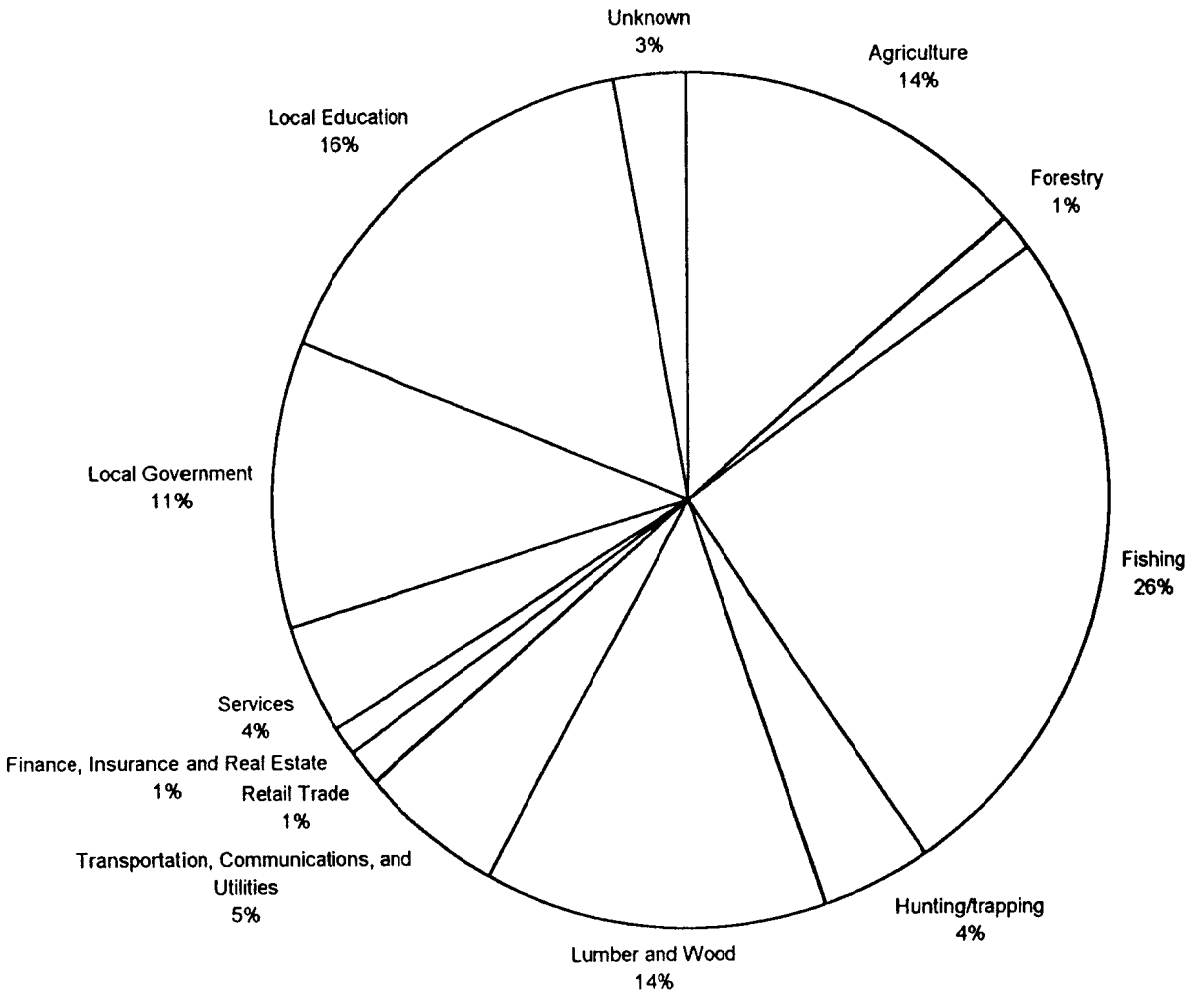


Table V-7. Community, Household, and Per Capita Other Income by Source, Tatitlek, 1991/92

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$180,021.79	$6,667.47	$1,666.87
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	0.00	0.00	0.00	0.00
Adult Public Assistance	0.00	0.00	0.00	0.00
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	5.26	5,739.63	212.58	53.14
Longevity Bonus	10.53	8,526.32	315.79	78.95
Social Security	26.32	19,894.74	736.84	184.21
Workman's Comp./Insurance	0.00	0.00	0.00	0.00
Energy Assistance	36.84	5,346.71	198.03	49.51
Supplemental Security Income	5.26	AMT UNK	AMT UNK	AMT UNK
Food Stamps	0.00	0.00	0.00	0.00
Unemployment	26.32	17,072.53	632.32	158.08
Native Corporation Dividend	78.95	45,285.39	1,677.24	419.31
Dividend/Interest	5.26	99.47	3.68	0.92
Child Support	0.00	0.00	0.00	0.00
Rental Income	0.00	0.00	0.00	0.00
Veteran Disability	0.00	0.00	0.00	0.00
Equipment Leasing	0.00	0.00	0.00	0.00
Rental Assistance	0.00	0.00	0.00	0.00
Fishing Permit Leasing	0.00	0.00	0.00	0.00
Per Diem	0.00	0.00	0.00	0.00
Disability	0.00	0.00	0.00	0.00
Alaska Permanent Fund Dividend	84.21	78,057.00	2,891.00	722.75
Weatherization	0.00	0.00	0.00	0.00
Veteran's Assistance	0.00	0.00	0.00	0.00
Investments/Stocks/Bonds	0.00	0.00	0.00	0.00
Bureau of Indian Affairs Grants	0.00	0.00	0.00	0.00
Housing Allowances/Off-Base Allowances	0.00	0.00	0.00	0.00
Women, Infants, and Children Program	0.00	0.00	0.00	0.00
General Assistance Grant	0.00	0.00	0.00	0.00
Foster Care	0.00	0.00	0.00	0.00
Inheritance	0.00	0.00	0.00	0.00
Contest Winnings	0.00	0.00	0.00	0.00
Capital Gains	0.00	0.00	0.00	0.00
ASRC Elder Trust	0.00	0.00	0.00	0.00
Other	5.26	AMT UNK	AMT UNK	AMT UNK

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table V-8. Community, Household, and Per Capita Incomes, All Sources and by Employer Type, Tatitlek, 1993/94

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$995,603.25	$35,557.26	$10,306.45
Earned Income	$499,361.40	$17,834.34	$5,169.37
Agriculture, Forestry, and Fishing	34,101.20	1,217.90	353.01
Agriculture	22,400.00	800.00	231.88
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	11,701.20	417.90	121.13
Hatchery/Enhancement	0.00	0.00	0.00
Commercial Fishing	2,100.00	75.00	21.74
Hunting/Trapping	9,601.20	342.90	99.39
Mining	0.00	0.00	0.00
Construction	28,000.00	1,000.00	289.86
Manufacturing	0.00	0.00	0.00
Cannery	0.00	0.00	0.00
Other Manufacturing	0.00	0.00	0.00
Logging/Timber	0.00	0.00	0.00
Transportation, Communications, and Utilities	144,900.00	5,175.00	1,500.00
Trade	0.00	0.00	0.00
Wholesale	0.00	0.00	0.00
Retail	0.00	0.00	0.00
Finance, Insurance, and Real Estate	4,200.00	150.00	43.48
Services	47,600.00	1,700.00	492.75
Government	240,560.20	8,591.44	2,490.27
Federal	AMT UNK	AMT UNK	AMT UNK
State	0.00	0.00	0.00
Local	240,560.20	8,591.44	2,490.27
Local Government	60,760.00	2,170.00	628.99
Local Education	179,800.20	6,421.44	1,861.29
Unknown	AMT UNK	AMT UNK	AMT UNK
Other Income	$496,241.85	$17,722.92	$5,137.08

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table V-9. Community, Household, and Per Capita Other Income by Source, Tatitlek, 1993/94

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$496,241.85	$17,722.92	$5,137.08
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	25.00	AMT UNK	AMT UNK	AMT UNK
Adult Public Assistance	25.00	AMT UNK	AMT UNK	AMT UNK
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	25.00	AMT UNK	AMT UNK	AMT UNK
Longevity Bonus	25.00	AMT UNK	AMT UNK	AMT UNK
Social Security	30.00	78,724.80	2,811.60	814.96
Workman's Comp./Insurance	25.00	AMT UNK	AMT UNK	AMT UNK
Energy Assistance	40.00	4,620.00	165.00	47.83
Supplemental Security Income	25.00	AMT UNK	AMT UNK	AMT UNK
Food Stamps	25.00	AMT UNK	AMT UNK	AMT UNK
Unemployment	30.00	16,800.00	600.00	173.91
Native Corporation Dividend	85.00	243,950.00	8,712.50	2,525.36
Dividend/Interest	30.00	AMT UNK	AMT UNK	AMT UNK
Child Support	0.00	0.00	0.00	0.00
Rental Income	0.00	0.00	0.00	0.00
Veteran Disability	0.00	0.00	0.00	0.00
Equipment Leasing	0.00	0.00	0.00	0.00
Rental Assistance	0.00	0.00	0.00	0.00
Fishing Permit Leasing	0.00	0.00	0.00	0.00
Per Diem	0.00	0.00	0.00	0.00
Disability	0.00	0.00	0.00	0.00
Alaska Permanent Fund Dividend	155.00	152,147.05	5,433.82	1,575.02
Weatherization	0.00	0.00	0.00	0.00
Veteran's Assistance	0.00	0.00	0.00	0.00
Investments/Stocks/Bonds	0.00	0.00	0.00	0.00
Bureau of Indian Affairs Grants	0.00	0.00	0.00	0.00
General Assistance Grant	0.00	0.00	0.00	0.00
Foster Care	0.00	0.00	0.00	0.00
Inheritance	0.00	0.00	0.00	0.00
Contest Winnings	0.00	0.00	0.00	0.00
Capital Gains	0.00	0.00	0.00	0.00
ASRC Elder Trust	0.00	0.00	0.00	0.00
Supplemental Union Benefits	0.00	0.00	0.00	0.00
Gifts	0.00	0.00	0.00	0.00
Medicare/Medicaid	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Figure V-5. Employment by Industry, Tatitlek, 1993/94

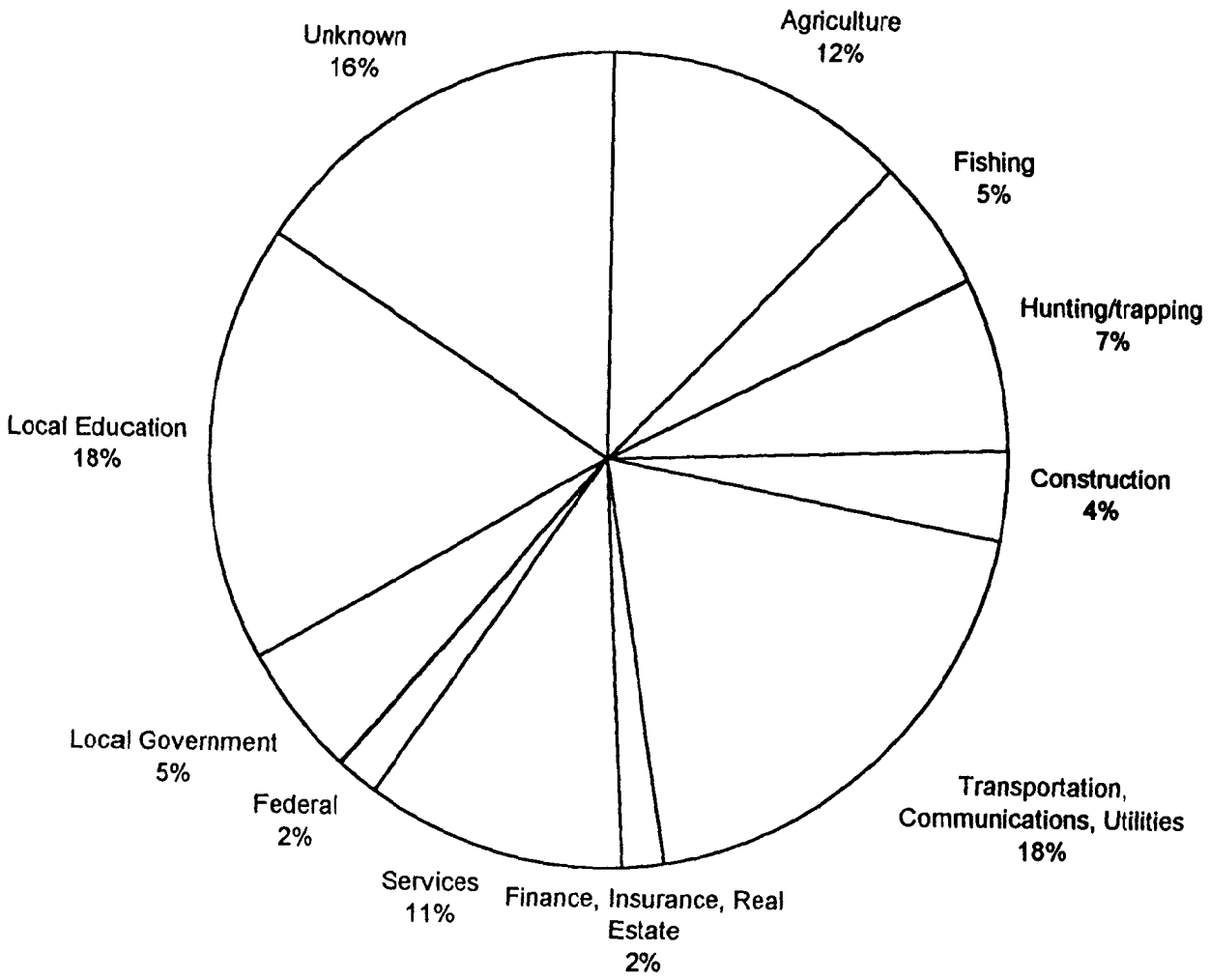


Table V-10. Characteristics of Resource Harvest and Use, Tatitlek, 1991/92 and 1993/94

Study Year	1991/92	1993/94
Mean Number Of Resources Used Per Household	19.26	19.00
Minimum	5	10
Maximum	35	31
95 % Confidence Limit (+/-)	11.16	7.02
Median	18	19
Mean Number Of Resources Attempted To Harvest Per Household	12.95	12.00
Minimum	2	1
Maximum	25	27
95 % Confidence Limit (+/-)	14.05	12.58
Median	13	12
Mean Number Of Resources Harvested Per Household	12.37	11.05
Minimum	2	1
Maximum	24	26
95 % Confidence Limit (+/-)	14.51	13.95
Median	12	11
Mean Number Of Resources Received Per Household	12.74	12.95
Minimum	0	1
Maximum	34	23
95 % Confidence Limit (+/-)	17.46	12.70
Median	12	14
Mean Number Of Resources Given Away Per Household	11.16	9.9
Minimum	0	1
Maximum	20	23
95 % Confidence Limit (+/-)	14.96	14.91
Median	10	10
Mean Household Harvest, Pounds	1,383.97	931.75
Minimum	23.00	40.00
Maximum	5,022.65	3,025.98
Total Pounds Harvested	37,367.30	26,088.99
Community Per Capita Harvest, Pounds	345.99	270.07
Percent Using Any Resource	100.00	100.00
Percent Attempting To Harvest Any Resource	100.00	100.00
Percent Harvesting Any Resource	100.00	100.00
Percent Receiving Any Resource	94.74	100.00
Percent Giving Away Any Resource	94.74	100.00
Number Of Households In Sample	19	20
Number of Resources Available	130	144

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992 and 1994

Table V-11. Participation in the Harvest and Processing of Wild Resources, Tatitlek, 1991/92 and 1993/94

Study Year			1991/92	1993/94
Total Number of People			108.00	96.60
GAME	Hunt	Number	44.05	32.20
		Percentage	40.79	33.33
		Missing	2.84	0.00
		Missing %	2.63	0.00
	Process	Number	62.53	47.60
		Percentage	57.89	49.28
		Missing	2.84	0.00
		Missing %	2.63	0.00
FISH	Fish	Number	56.84	56.00
		Percentage	52.63	57.97
		Missing	2.84	0.00
		Missing %	2.63	0.00
	Process	Number	75.32	56.00
		Percentage	69.74	57.97
		Missing	2.84	0.00
		Missing %	2.63	0.00
FURBEARERS	Hunt or Trap	Number	1.42	2.80
		Percentage	1.32	2.90
		Missing	2.84	0.00
		Missing %	2.63	0.00
	Process	Number	1.42	11.20
		Percentage	1.32	11.59
		Missing	2.84	0.00
		Missing %	2.63	0.00
PLANTS	Gather	Number	88.11	84.00
		Percentage	81.58	86.96
		Missing	2.84	0.00
		Missing %	2.63	0.00
	Process	Number	79.58	75.60
		Percentage	73.68	78.26
		Missing	2.84	0.00
		Missing %	2.63	0.00
ANY RESOURCE				
	Attempt	Number	90.95	88.20
		Percent	84.21	91.30
	Process	Number	88.11	82.60
		Percent	81.58	85.51

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992 and 1994.

Table V-12. Percentage of Households Sharing Resources in Tatitlek, 1991/92

Community	Salmon		Non-salmon Fish		Marine Invertebrates		Game		Marine Mammals		Birds and Eggs		Plants and Berries*		Any Resource	
	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave	Recv	Gave
All Communities	68.42	89.47	94.74	84.21	78.95	73.68	68.42	68.42	73.68	73.68	57.89	57.89	68.42	84.21	94.74	94.74
Anchorage	0.00	15.79	0.00	36.84	5.26	10.53	0.00	0.00	0.00	15.79	0.00	5.26	0.00	5.26	5.26	47.37
Chenega Bay	0.00	10.53	5.26	47.37	5.26	5.26	5.26	10.53	0.00	0.00	5.26	0.00	0.00	10.53	5.26	52.63
Cordova	26.32	5.26	26.32	31.58	21.05	5.26	0.00	10.53	0.00	10.53	0.00	10.53	5.26	15.79	42.11	31.58
Kodiak City	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.26	0.00	5.26
Kotzebue	0.00	0.00	0.00	0.00	0.00	0.00	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.26	0.00
Ouzinkie	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.26	0.00	5.26
Palmer	0.00	0.00	0.00	0.00	5.26	0.00	0.00	5.26	0.00	0.00	0.00	0.00	0.00	0.00	5.26	5.26
Soldotna	0.00	0.00	0.00	0.00	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.26	0.00
Tatitlek	63.16	68.42	78.95	63.16	68.42	63.16	63.16	57.89	73.68	63.16	52.63	52.63	68.42	73.68	94.74	89.47
Valdez	0.00	10.53	10.53	0.00	21.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.32	10.53
Wasilla	5.26	0.00	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.26	0.00	5.26	0.00
Icy Bay	0.00	0.00	0.00	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.26
Other U.S.	0.00	5.26	0.00	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.53
Foreign	0.00	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.26
Community Unknown	0.00	0.00	15.79	5.26	0.00	0.00	0.00	0.00	0.00	0.00	5.26	0.00	5.26	0.00	21.05	5.26

Note: Plants and Berries includes sharing of wood and kelp for fertilizer.

Note: Percentages are based upon valid responses.

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992.

Figure V-6. Average Number of Resources Used per Household, Tatitlek, 1987/88, 1988/89, 1989/90, 1990/91, 1991/92, and 1993/94

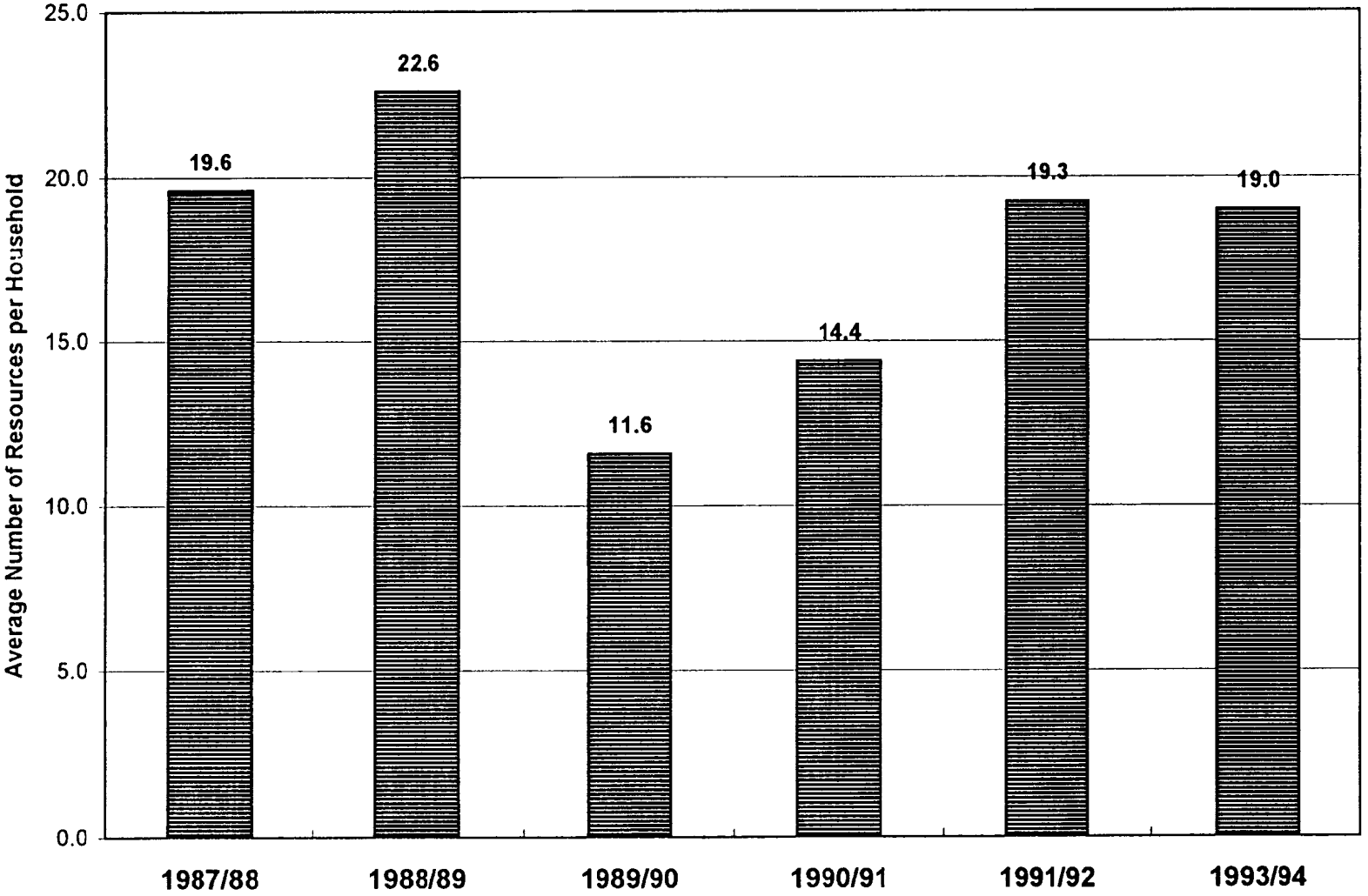


Figure V-7. Percentage of Tatitlek Households Attempting to Harvest Resources

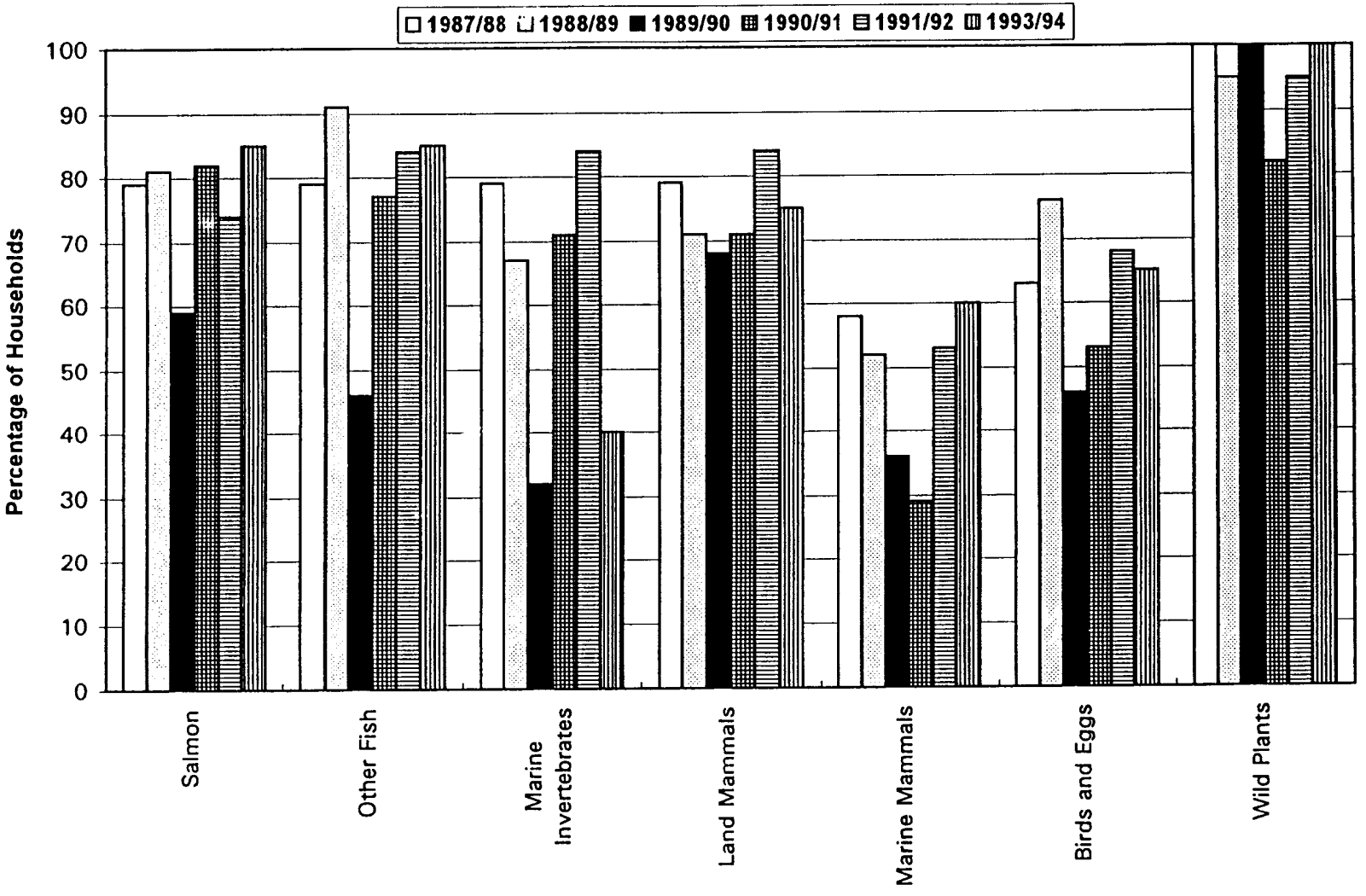


Figure V-8. Harvests of Wild Resources for Home Use, Pounds Usable Weight per Capita, Tatitlek, 1987/88, 1988/89, 1989/90, 1990/91, 1991/92, and 1993/94

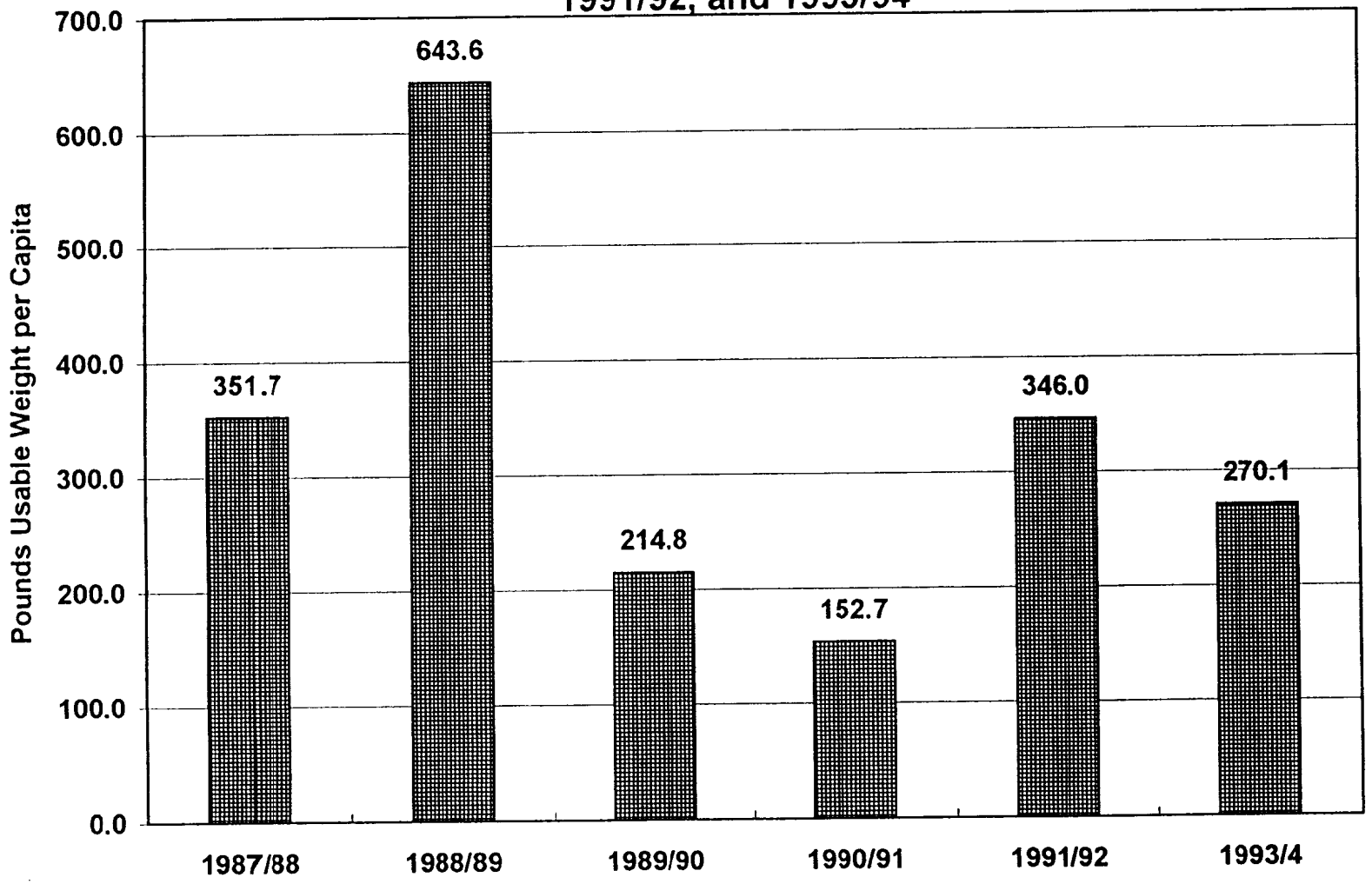


Figure V-9. Per Capita Harvests of Wild Resources by Resource Category, Tatitlek, 1987/88, 1988/89, 1989/90, 1990/91, 1991/92, and 1993/94

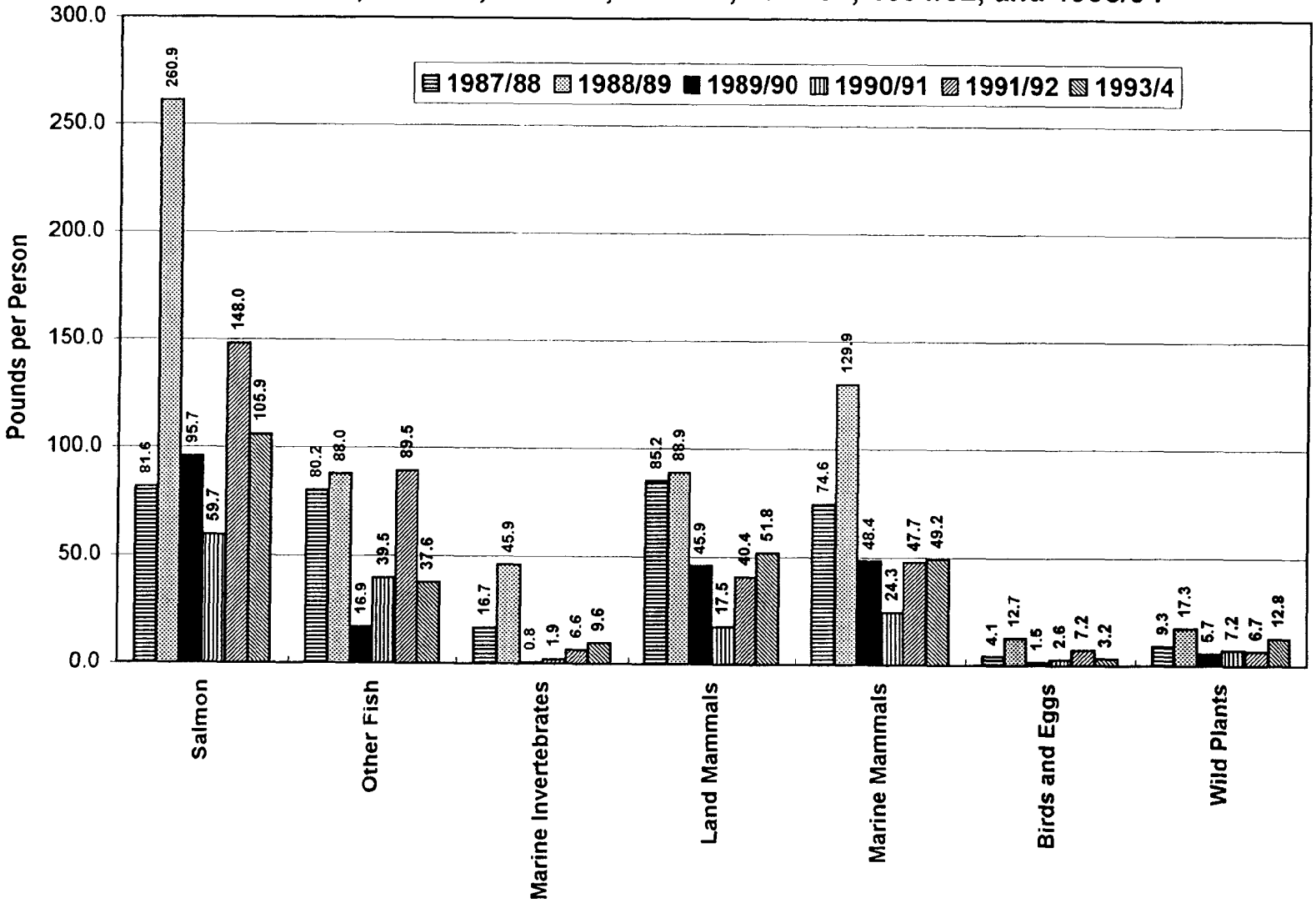


Figure V-10. Composition of Wild Resource Harvests by Resource Category, Tatitlek, 1991/92

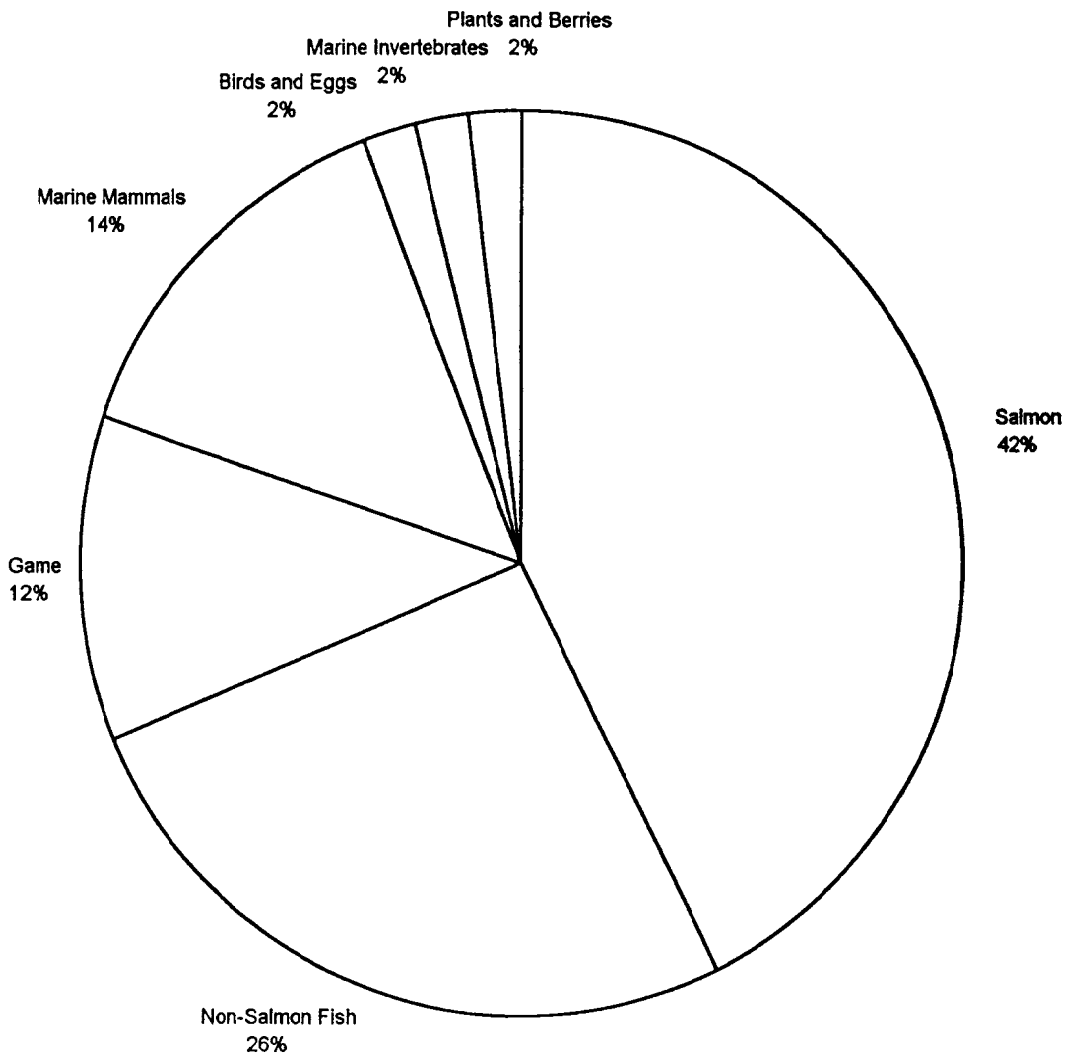


Table V-13. Subsistence Harvests in Pounds Usable Weight per Person by Resource Category, Tatitlek, 1987/88, 1988/89, 1989/90, 1990/91, 1991/92, and 1993/94

	Pounds Usable Weight per Person						
	1987/88	1988/89	Pre-spill Average	1989/90	1990/91	1991/92	1993/4
Salmon	81.6	260.9	162.2	95.7	59.7	148.0	105.9
Other Fish	80.2	88.0	83.7	16.9	39.5	89.5	37.6
Marine Invertebrates	16.7	45.9	29.8	0.8	1.9	6.6	9.6
Land Mammals	85.2	88.9	86.9	45.9	17.5	40.4	51.8
Marine Mammals	74.6	129.9	99.5	48.4	24.3	47.7	49.2
Birds and Eggs	4.1	12.7	8.0	1.5	2.6	7.2	3.2
Wild Plants	9.3	17.3	12.9	5.7	7.2	6.7	12.8
All Resources	351.7	643.6	482.9	214.8	152.7	346.0	270.1

Table V-14. Composition of Resource Harvests by Resource Category, Tatitlek, 1987/88, 1988/89, 1989/90, 1990/91, 1991/92, and 1993/94

	Percentage of Total Harvest						
	1987/88	1988/89	Pre-spill Average	1989/90	1990/91	1991/92	1993/4
Salmon	23.2%	40.5%	33.6%	44.6%	39.1%	42.8%	39.2%
Other Fish	22.8%	13.7%	17.3%	7.9%	25.8%	25.9%	13.9%
Marine Invertebrates	4.7%	7.1%	6.2%	0.4%	1.3%	1.9%	3.6%
Land Mammals	24.2%	13.8%	18.0%	21.3%	11.4%	11.7%	19.2%
Marine Mammals	21.2%	20.2%	20.6%	22.5%	15.9%	13.8%	18.2%
Birds and Eggs	1.2%	2.0%	1.7%	0.7%	1.7%	2.1%	1.2%
Wild Plants	2.6%	2.7%	2.7%	2.7%	4.7%	1.9%	4.7%

Table V-15. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Tatitlek, 1991/92

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
All Resources	100.0	100.0	100.0	94.7	94.7	37,367.30	1,383.97	345.99			26.35%	28.51%
Fish	100.0	84.2	84.2	94.7	94.7	25,648.96	949.96	237.49			31.75%	33.58%
Salmon	100.0	73.7	73.7	68.4	89.5	15,982.71	591.95	147.99	3,165.39	117.24	34.69%	40.86%
Chum Salmon	63.2	47.4	42.1	36.8	42.1	2,828.02	104.74	26.19	456.87	16.92	72.56%	72.15%
Coho Salmon	100.0	73.7	73.7	63.2	84.2	11,220.69	415.58	103.90	1,827.47	67.68	48.71%	50.73%
Chinook Salmon	26.3	0.0	0.0	26.3	5.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Pink Salmon	52.6	47.4	47.4	26.3	47.4	1,429.95	52.96	13.24	768.79	28.47	52.59%	55.46%
Sockeye Salmon	42.1	31.6	26.3	26.3	26.3	504.06	18.67	4.67	112.26	4.16	62.86%	65.98%
Landlocked Salmon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Salmon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Non-Salmon Fish	100.0	84.2	78.9	94.7	84.2	9,666.24	358.01	89.50			42.41%	42.83%
Pike	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sturgeon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cod	36.8	10.5	10.5	26.3	21.1	473.52	17.54	4.38	147.97	5.48	89.67%	91.00%
Pacific Cod (Gray)	31.6	10.5	10.5	21.1	21.1	473.52	17.54	4.38	147.97	5.48	89.67%	91.00%
Burbot	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Cod	5.3	0.0	0.0	5.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sablefish (Black Cod)	15.8	5.3	5.3	15.8	10.5	66.08	2.45	0.61	21.32	0.79	114.36%	118.14%
Greenling	5.3	0.0	0.0	5.3	5.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Kelp Greenling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Lingcod	5.3	0.0	0.0	5.3	5.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Greenling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Flounder	5.3	5.3	5.3	0.0	0.0	31.97	1.18	0.30	10.66	0.39	114.36%	116.59%
Unknown Flounder	5.3	5.3	5.3	0.0	0.0	31.97	1.18	0.30	10.66	0.39	114.36%	116.59%
Sole	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sole, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Halibut	100.0	47.4	47.4	84.2	52.6	2,557.26	94.71	23.68	56.83	2.10	45.34%	47.53%
Herring	57.9	31.6	31.6	42.1	31.6	875.23	32.42	8.10	145.87 gal	5.40	92.44%	92.86%
Herring Roe	5.3	0.0	0.0	5.3	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Spawn on Kelp	84.2	73.7	68.4	42.1	73.7	3,900.76	144.47	36.12	557.25 gal	20.64	35.21%	32.50%
Sac Roe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Rockfish	84.2	42.1	42.1	73.7	42.1	1,711.69	63.40	15.85	496.02	18.37	53.26%	61.16%
Black Rockfish (black bass)	36.8	26.3	26.3	26.3	5.3	163.43	6.05	1.51	108.95	4.04	50.87%	51.67%
Red Rockfish	78.9	36.8	36.8	68.4	42.1	1,548.27	57.34	14.34	387.07	14.34	65.39%	66.70%
Yellow Eye Rockfish	5.3	0.0	0.0	5.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Rockfish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table V-15. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Tatitlek, 1991/92

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Sea Bass	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sculpin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Sculpin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Smelt	36.8	5.3	0.0	36.8	26.3	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Eulachon (Hooligan, Candlefish)	36.8	5.3	0.0	36.8	26.3	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Unknown Smelt	5.3	0.0	0.0	5.3	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Walleye Pollock (Whiting)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Skates	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Grayling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sheefish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Whitefish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whitefish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Trout and Char	21.1	21.1	21.1	5.3	5.3	49.74	1.84	0.46	35.53	1.32	63.77%	63.94%
Char	15.8	15.8	15.8	5.3	5.3	41.78	1.55	0.39	29.84	1.11	74.60%	73.65%
Arctic Char	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Dolly Varden	10.5	10.5	10.5	0.0	0.0	11.94	0.44	0.11	8.53	0.32	96.14%	96.31%
Lake Trout	10.5	10.5	10.5	5.3	5.3	29.84	1.11	0.28	21.32	0.79	83.32%	82.05%
Trout	5.3	5.3	5.3	0.0	0.0	7.96	0.29	0.07	5.68	0.21	114.36%	118.14%
Cutthroat Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Rainbow Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steelhead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Trout	5.3	5.3	5.3	0.0	0.0	7.96	0.29	0.07	5.68	0.21	114.36%	118.14%
Unknown Non-Salmon Fish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Game	89.5	84.2	63.2	68.4	68.4	4,362.06	161.56	40.39	106.58	3.95	30.90%	33.27%
Big Game	89.5	84.2	63.2	68.4	68.4	4,362.06	161.56	40.39	96.63	3.58	32.99%	33.27%
Bison	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black Bear	26.3	5.3	5.3	21.1	15.8	82.42	3.05	0.76	1.42	0.05	114.36%	115.03%
Brown Bear	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Caribou	5.3	0.0	0.0	5.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Deer	89.5	84.2	63.2	68.4	57.9	3,867.54	143.24	35.81	89.53	3.32	34.19%	34.65%
Goat	42.1	21.1	21.1	26.3	21.1	412.11	15.26	3.82	5.68	0.21	52.20%	53.64%
Moose	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sheep, Dall	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Small Game/Furbearer	5.3	5.3	5.3	0.0	0.0	0.00	0.00	0.00	9.95	0.37	114.36%	0.00%
Fox	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Beaver	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table V-15. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Tatitlek, 1991/92

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Coyote	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Hare	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snowshoe Hare	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Hare	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Land Otter	5.3	5.3	5.3	0.0	0.0	0.00	0.00	0.00	9.95	0.37	114.36%	0.00%
Lynx	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marten	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mink	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Muskrat	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Porcupine	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Weasel	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wolf	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wolverine	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Mammals	84.2	52.6	52.6	73.7	73.7	5,149.89	190.74	47.68	122.21	4.53	33.71%	36.09%
Whale	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whale	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	84.2	52.6	52.6	68.4	73.7	4,297.26	159.16	39.79	113.68	4.21	34.04%	36.59%
Harbor Seal	84.2	52.6	52.6	68.4	73.7	4,297.26	159.16	39.79	113.68	4.21	34.04%	36.59%
Porpoise/Dolphin	15.8	0.0	0.0	15.8	10.5	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steller Sea Lion	57.9	31.6	21.1	52.6	42.1	852.63	31.58	7.89	8.53	0.32	62.25%	62.02%
Sea Otter	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Birds and Eggs	84.2	68.4	68.4	57.9	57.9	773.76	28.66	7.16	1,001.84	37.11	29.71%	37.41%
Birds	84.2	47.4	47.4	57.9	52.6	650.49	24.09	6.02	490.26	18.16	36.16%	39.54%
Upland Game Birds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Grouse	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Ptarmigan	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Migratory Birds	84.2	47.4	47.4	57.9	52.6	650.49	24.09	6.02	490.26	18.16	36.16%	39.54%
Waterfowl	84.2	47.4	47.4	57.9	47.4	602.74	22.32	5.58	484.58	17.95	36.26%	40.65%
Ducks	84.2	47.4	47.4	57.9	47.4	360.59	13.36	3.34	412.11	15.26	36.46%	39.13%
Scoter	63.2	31.6	31.6	47.4	36.8	117.66	4.36	1.09	130.74	4.84	52.04%	51.92%
Scoter, Unknown	63.2	31.6	31.6	47.4	36.8	117.66	4.36	1.09	130.74	4.84	52.04%	51.92%
Harlequin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goldeneye	31.6	21.1	21.1	15.8	15.8	100.04	3.71	0.93	125.05	4.63	64.62%	67.95%
Bufflehead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Merganser	5.3	5.3	5.3	0.0	0.0	19.18	0.71	0.18	21.32	0.79	114.36%	115.03%
Scaup	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table V-15. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Tatitlek, 1991/92

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Mallard	31.6	26.3	26.3	15.8	26.3	75.32	2.79	0.70	75.32	2.79	47.40%	49.06%
Pintail	15.8	15.8	15.8	5.3	15.8	30.69	1.14	0.28	38.37	1.42	101.37%	103.62%
Wigeon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Teal	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Gadwall	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shoveler	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canvasback	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Ducks, Unknown	5.3	5.3	5.3	0.0	5.3	17.69	0.66	0.16	21.32	0.79	114.36%	113.44%
Geese	42.1	31.6	31.6	15.8	26.3	242.15	8.97	2.24	72.47	2.68	46.54%	50.40%
Brant	5.3	5.3	5.3	0.0	0.0	5.12	0.19	0.05	4.26	0.16	114.36%	115.03%
Snow Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
White-fronted Geese	5.3	5.3	5.3	0.0	5.3	10.23	0.38	0.09	4.26	0.16	114.36%	113.44%
Canada Geese	15.8	15.8	15.8	5.3	15.8	168.82	6.25	1.56	46.89	1.74	63.66%	66.44%
Canada Geese, Lesser	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese, Dusky	15.8	15.8	15.8	5.3	15.8	168.82	6.25	1.56	46.89	1.74	63.66%	66.44%
Geese, Unknown	21.1	10.5	10.5	10.5	10.5	57.98	2.15	0.54	17.05	0.63	78.59%	77.24%
Crane	10.5	10.5	10.5	0.0	10.5	47.75	1.77	0.44	5.68	0.21	78.59%	78.40%
Sandhill Crane	10.5	10.5	10.5	0.0	10.5	47.75	1.77	0.44	5.68	0.21	78.59%	78.40%
Shorebirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Common Snipe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seabirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cormorants	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Seabirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eggs	63.2	52.6	52.6	21.1	26.3	123.28	4.57	1.14	511.58	18.95	35.97%	42.23%
Seabird Eggs	63.2	52.6	52.6	21.1	26.3	118.16	4.38	1.09	494.53	18.32	35.89%	43.12%
Gull Eggs	63.2	52.6	52.6	21.1	26.3	112.12	4.15	1.04	373.74	13.84	42.35%	45.25%
Tern Eggs	26.3	26.3	26.3	10.5	10.5	6.04	0.22	0.06	120.79	4.47	53.40%	47.87%
Waterfowl Eggs	5.3	5.3	5.3	5.3	5.3	5.12	0.19	0.05	17.05	0.63	114.36%	113.44%
Duck Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese Eggs	5.3	5.3	5.3	5.3	5.3	5.12	0.19	0.05	17.05	0.63	114.36%	113.44%
Marine Invertebrates	94.7	84.2	84.2	78.9	73.7	709.99	26.30	6.57			44.21%	47.42%
Abalone	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Clams	52.6	36.8	36.8	42.1	15.8	189.20	7.01	1.75	63.07 gal	2.34	67.07%	69.86%
Butter Clams	36.8	31.6	31.6	26.3	5.3	145.50	5.39	1.35	48.50 gal	1.80	83.17%	84.56%
Razor Clams	31.6	10.5	10.5	21.1	10.5	43.70	1.62	0.40	14.57 gal	0.54	111.45%	115.33%

Table V-15. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Tatitlek, 1991/92

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Pacific Littleneck Clams (Steamers)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Horse Clams (Gaper)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Unknown Clams	5.3	0.0	0.0	5.3	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Cockles	26.3	26.3	26.3	10.5	0.0	29.84	1.11	0.28	9.95 gal	0.37	49.62%	45.67%
Geoducks	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Scallops	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mussels	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Crabs	31.6	0.0	0.0	31.6	15.8	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Dungeness Crab	5.3	0.0	0.0	5.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
King Crab	5.3	0.0	0.0	5.3	5.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tanner Crab	21.1	0.0	0.0	21.1	10.5	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tanner Crab, Opilio	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tanner Crab, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Crabs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Chitons (bidarkis)	57.9	52.6	52.6	36.8	31.6	225.21	8.34	2.09	56.30 gal	2.09	43.85%	45.50%
Chitons (small)	57.9	52.6	52.6	36.8	31.6	225.21	8.34	2.09	56.30 gal	2.09	43.85%	45.50%
Octopus	89.5	52.6	52.6	73.7	47.4	221.68	8.21	2.05	55.42	2.05	58.18%	61.10%
Sea Cucumber	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Sea Urchin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Shrimp	26.3	15.8	10.5	21.1	10.5	44.05	1.63	0.41	22.03 gal	0.82	110.53%	114.28%
Whelk	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Limpets	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Oyster	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Plants and Berries	94.7	94.7	94.7	63.2	47.4	722.63	26.76	6.69			28.10%	29.56%
Berries	94.7	89.5	89.5	63.2	47.4	694.21	25.71	6.43	173.55 gal	6.43	28.65%	30.18%
Plants/Greens/Mushrooms	26.3	26.3	26.3	5.3	0.0	28.42	1.05	0.26			45.10%	44.38%
Unknown Greens, from land	26.3	26.3	26.3	5.3	0.0	28.42	1.05	0.26	7.11 gal	0.26	45.10%	44.38%
Unknown Greens, from sea	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Seaweed/Kelp (Food)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Wood	84.2	84.2	84.2	36.8	63.2	0.00	0.00	0.00	161.29 crd	5.97	32.66%	0.00%

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table V-16. Estimated Amount of Resources Removed From Commercial Harvest, Tatitlek, 1991/92

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		1,247.37	4.73	3.34
Fish		1,247.37	4.86	3.34
Salmon	19.89	104.85	0.66	0.28
Chum Salmon	9.95	61.57	2.18	0.16
Coho Salmon	1.42	8.73	0.08	0.02
Pink Salmon	1.42	2.64	0.18	0.01
Sockeye Salmon	7.11	31.90	6.33	0.09
Non-Salmon Fish		1,142.53	11.82	3.06
Cod	90.24	288.76	60.98	0.77
Pacific Cod (Gray)	90.24	288.76	60.98	0.77
Halibut	2.05	92.08	3.60	0.25
Rockfish	190.42	761.68	44.50	2.04
Red Rockfish	190.42	761.68	49.20	2.04

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Figure V-11. Nanwalek Households' Assessments of Their Overall Subsistence Uses Compared to Before the Exxon Valdez Oil Spill

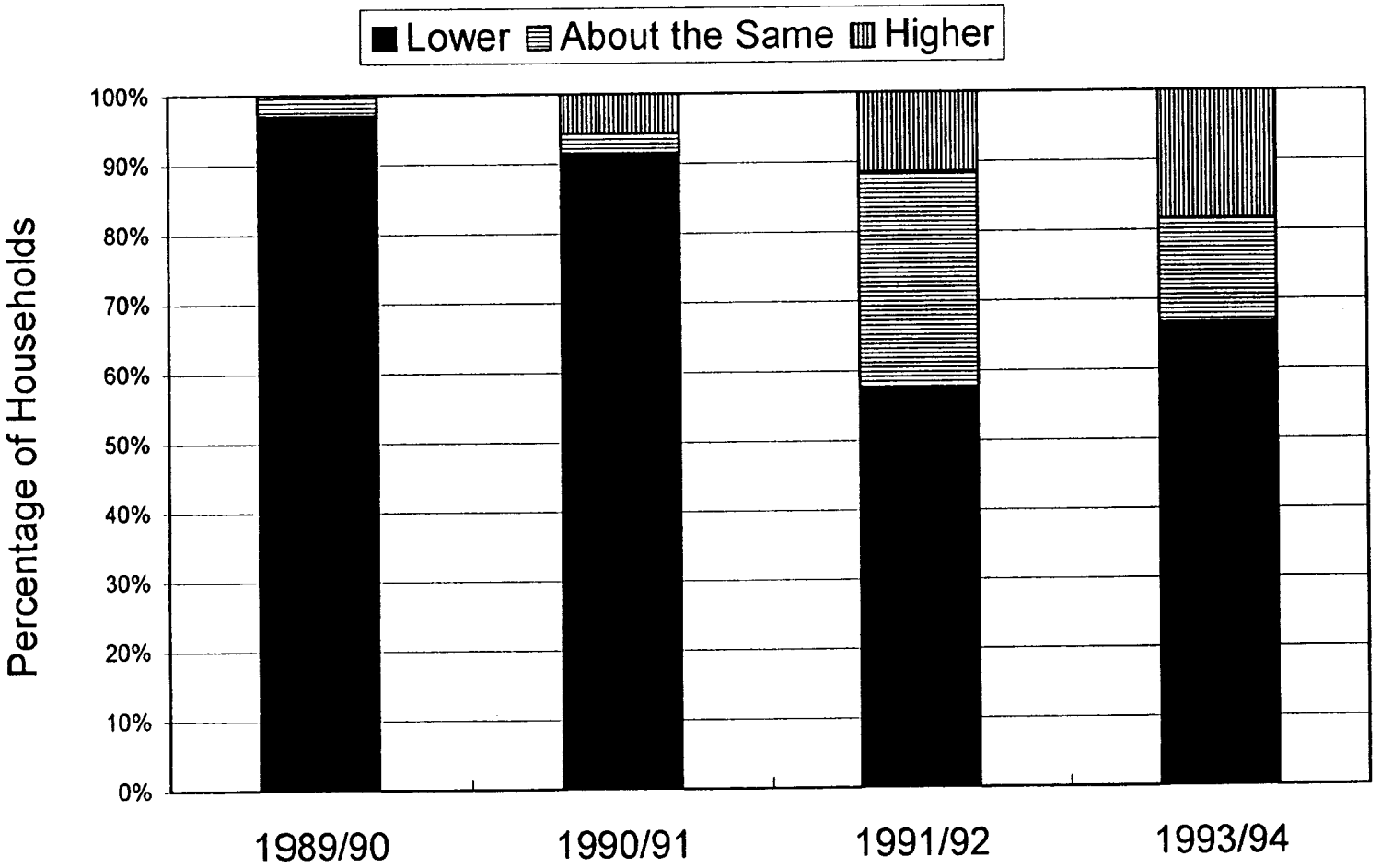


Figure V-12. Percentage of Tatitlek Households Reporting Lower Levels of Uses of Wild Resources Compared to 1988, the Year Before the Exxon Valdez Oil Spill

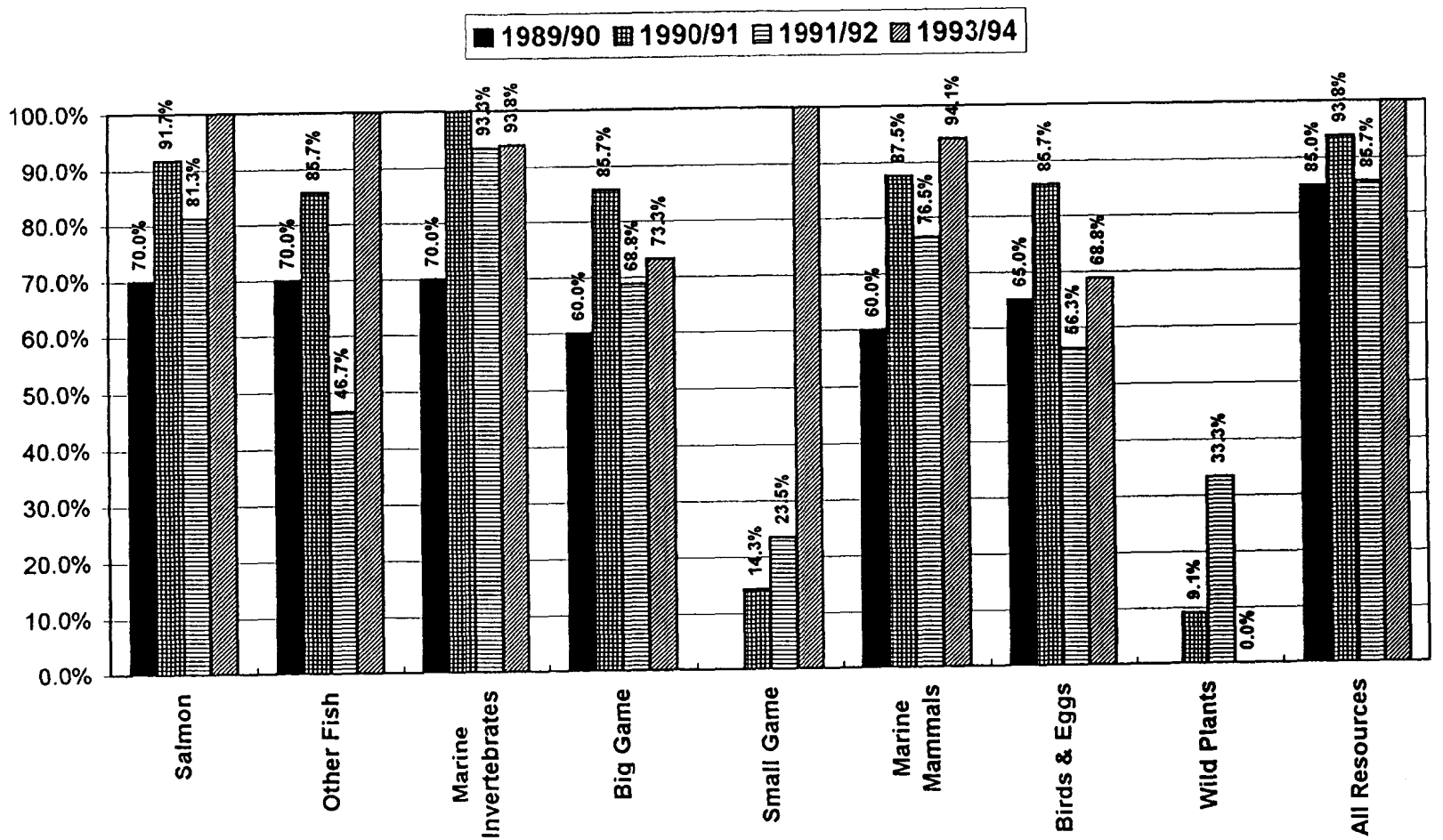


Table V-17. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Tatitlek, 1991/92

		Subsistence Methods															
		Net		Seine		Dip Net		Other		Subsistence Gear Any Method		Removed from Commercial Catch		Rod and Reel		Any Method	
Resource	Percent Base	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.
Salmon	total	81.50	84.10	0.67	0.60	1.35	0.50	2.24	0.83	85.77	86.02	0.63	0.66	13.60	13.32		
Chum Salmon	gear type	15.40	18.29	0.00	0.00	0.00	0.00	0.00	0.00	14.63	17.88	50.00	58.73	11.55	14.46		
	resource	86.94	86.94	0.00	0.00	0.00	0.00	0.00	0.00	86.94	86.94	2.18	2.18	10.89	10.89		
	total	12.55	15.38	0.00	0.00	0.00	0.00	0.00	0.00	12.55	15.38	0.31	0.39	1.57	1.93	14.43	17.69
Coho Salmon	gear type	61.14	72.05	0.00	0.00	0.00	0.00	0.00	0.00	58.10	70.44	7.14	8.32	57.76	71.71		
	resource	86.31	86.31	0.00	0.00	0.00	0.00	0.00	0.00	86.31	86.31	0.08	0.08	13.61	13.61		
	total	49.83	60.60	0.00	0.00	0.00	0.00	0.00	0.00	49.83	60.60	0.04	0.05	7.86	9.55	57.73	70.21
Chinook Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pink Salmon	gear type	20.93	7.47	0.00	0.00	100.00	100.00	100.00	100.00	24.08	8.84	7.14	2.52	26.40	9.93		
	resource	70.24	70.24	0.00	0.00	5.55	5.55	9.24	9.24	85.03	85.03	0.18	0.18	14.79	14.79		
	total	17.06	6.28	0.00	0.00	1.35	0.50	2.24	0.83	20.65	7.61	0.04	0.02	3.59	1.32	24.29	8.95
Sockeye Salmon	gear type	2.53	2.18	100.00	100.00	0.00	0.00	0.00	0.00	3.19	2.83	35.71	30.43	4.29	3.90		
	resource	58.23	58.23	18.99	18.99	0.00	0.00	0.00	0.00	77.22	77.22	6.33	6.33	16.46	16.46		
	total	2.07	1.84	0.67	0.60	0.00	0.00	0.00	0.00	2.74	2.44	0.22	0.20	0.58	0.52	3.55	3.15
Landlocked Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table V-18. Estimated Salmon Harvest by Gear Type and Species, Tatitlek, 1991/92

		Subsistence Methods										Removed from Commercial Catch		Rod and Reel		Any Method	
		Net		Seine		Dip Net		Other		Subsistence Gear Any Method							
	Harvest Units	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Salmon	numbers	2,579.92	95.55	21.32	0.79	42.63	1.58	71.05	2.63	2,714.92	100.55	19.89	0.74	430.58	15.95	3,165.39	117.24
	pounds	13,441.52	497.83	95.71	3.54	79.29	2.94	132.16	4.89	13,748.68	509.21	104.85	3.88	2,129.19	78.86	15,982.71	591.95
Chum Salmon	numbers	397.18	14.71	0.00	0.00	0.00	0.00	0.00	0.00	397.18	14.71	9.95	0.37	49.74	1.84	456.87	16.92
	pounds	2,458.57	91.06	0.00	0.00	0.00	0.00	0.00	0.00	2,458.57	91.06	61.57	2.28	307.87	11.40	2,828.02	104.74
Coho Salmon	numbers	1,577.37	58.42	0.00	0.00	0.00	0.00	0.00	0.00	1,577.37	58.42	1.42	0.05	248.68	9.21	1,827.47	67.68
	pounds	9,685.04	358.71	0.00	0.00	0.00	0.00	0.00	0.00	9,685.04	358.71	8.73	0.32	1,526.92	56.55	11,220.69	415.58
Chinook Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pink Salmon	numbers	540.00	20.00	0.00	0.00	42.63	1.58	71.05	2.63	653.68	24.21	1.42	0.05	113.68	4.21	768.79	28.47
	pounds	1,004.40	37.20	0.00	0.00	79.29	2.94	132.16	4.89	1,215.85	45.03	2.64	0.10	211.45	7.83	1,429.95	52.96
Sockeye Salmon	numbers	65.37	2.42	21.32	0.79	0.00	0.00	0.00	0.00	86.68	3.21	7.11	0.26	18.47	0.68	112.26	4.16
	pounds	293.50	10.87	95.71	3.54	0.00	0.00	0.00	0.00	389.21	14.42	31.90	1.18	82.95	3.07	504.06	18.67
Landlocked Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table XV-19. Percentage of Households Harvesting Salmon by Gear Type and Species, Tatitlek, 1991/92

Resource	Subsistence Methods					Removed from Commercial Catch	Rod and Reel	Any Method
	Net	Seine	Dip Net	Other	Any Subsistence Gear			
Salmon	57.89	5.26	5.26	5.26	57.89	15.79	47.37	73.68
Chum Salmon	21.05	0.00	0.00	0.00	21.05	15.79	10.53	42.11
Coho Salmon	52.63	0.00	0.00	0.00	52.63	5.26	42.11	73.68
Chinook Salmon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pink Salmon	21.05	0.00	5.26	5.26	31.58	5.26	21.05	47.37
Sockeye Salmon	10.53	5.26	0.00	0.00	15.79	5.26	10.53	26.32
Landlocked Salmon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table V-20. Estimated Harvest of Fish Other than Salmon by Gear Type, Tatitlek, 1991/92

	Harvest Units	Subsistence Gear		Removed From Commercial Catch		Rod and Reel		Ice Fishing		Any Method	
		Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Non-Salmon Fish	pounds	5,774.06	213.85	1,142.53	42.32	2,749.66	101.84	0.00	0.00	9,666.24	358.01
Pacific Cod (Gray)	pounds	71.08	2.63	288.76	10.69	113.68	4.21	0.00	0.00	473.52	17.54
Sablefish (Black Cod)	pounds	0.00	0.00	0.00	0.00	66.08	2.45	0.00	0.00	66.08	2.45
Unknown Flounder	pounds	0.00	0.00	0.00	0.00	31.97	1.18	0.00	0.00	31.97	1.18
Halibut	pounds	852.42	31.57	92.08	3.41	1,612.75	59.73	0.00	0.00	2,557.26	94.71
Herring	pounds	807.70	29.91	0.00	0.00	67.53	2.50	0.00	0.00	875.23	32.42
Spawn on Kelp	pounds	3,900.76	144.47	0.00	0.00	0.00	0.00	0.00	0.00	3,900.76	144.47
Black Rockfish (black bass)	pounds	0.00	0.00	0.00	0.00	163.43	6.05	0.00	0.00	163.43	6.05
Red Rockfish	pounds	142.11	5.26	761.68	28.21	644.48	23.87	0.00	0.00	1,548.27	57.34
Dolly Varden	pounds	0.00	0.00	0.00	0.00	11.94	0.44	0.00	0.00	11.94	0.44
Lake Trout	pounds	0.00	0.00	0.00	0.00	29.84	1.11	0.00	0.00	29.84	1.11
Unknown Trout	pounds	0.00	0.00	0.00	0.00	7.96	0.29	0.00	0.00	7.96	0.29

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table V-21. Percentage of Fish Other Than Salmon Harvested by Gear Type, Tatitlek, 1991/92

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	59.73	11.82	28.45	0.00
Pacific Cod (Gray)	resource	15.01	60.98	24.01	0.00
Sablefish (Black Cod)	resource	0.00	0.00	100.00	0.00
Unknown Flounder	resource	0.00	0.00	100.00	0.00
Halibut	resource	33.33	3.60	63.07	0.00
Herring	resource	92.28	0.00	7.72	0.00
Spawn on Kelp	resource	100.00	0.00	0.00	0.00
Black Rockfish (black bass)	resource	0.00	0.00	100.00	0.00
Red Rockfish	resource	9.18	49.20	41.63	0.00
Dolly Varden	resource	0.00	0.00	100.00	0.00
Lake Trout	resource	0.00	0.00	100.00	0.00
Unknown Trout	resource	0.00	0.00	100.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table V-22. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Tatitlek, 1991/92

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	68.42	15.79	57.89	0.00	78.95
Pacific Cod (Gray)	5.26	5.26	5.26	0.00	10.53
Sablefish (Black Cod)	0.00	0.00	5.26	0.00	5.26
Unknown Flounder	0.00	0.00	5.26	0.00	5.26
Halibut	5.26	5.26	36.84	0.00	47.37
Herring	21.05	0.00	15.79	0.00	31.58
Spawn on Kelp	68.42	0.00	0.00	0.00	68.42
Black Rockfish (black bass)	0.00	0.00	26.32	0.00	26.32
Red Rockfish	5.26	10.53	26.32	0.00	36.84
Dolly Varden	0.00	0.00	10.53	0.00	10.53
Lake Trout	0.00	0.00	10.53	0.00	10.53
Unknown Trout	0.00	0.00	5.26	0.00	5.26

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Figure V-13. Composition of Wild Resource Harvests by Resource Category, Tatitlek, 1993/94

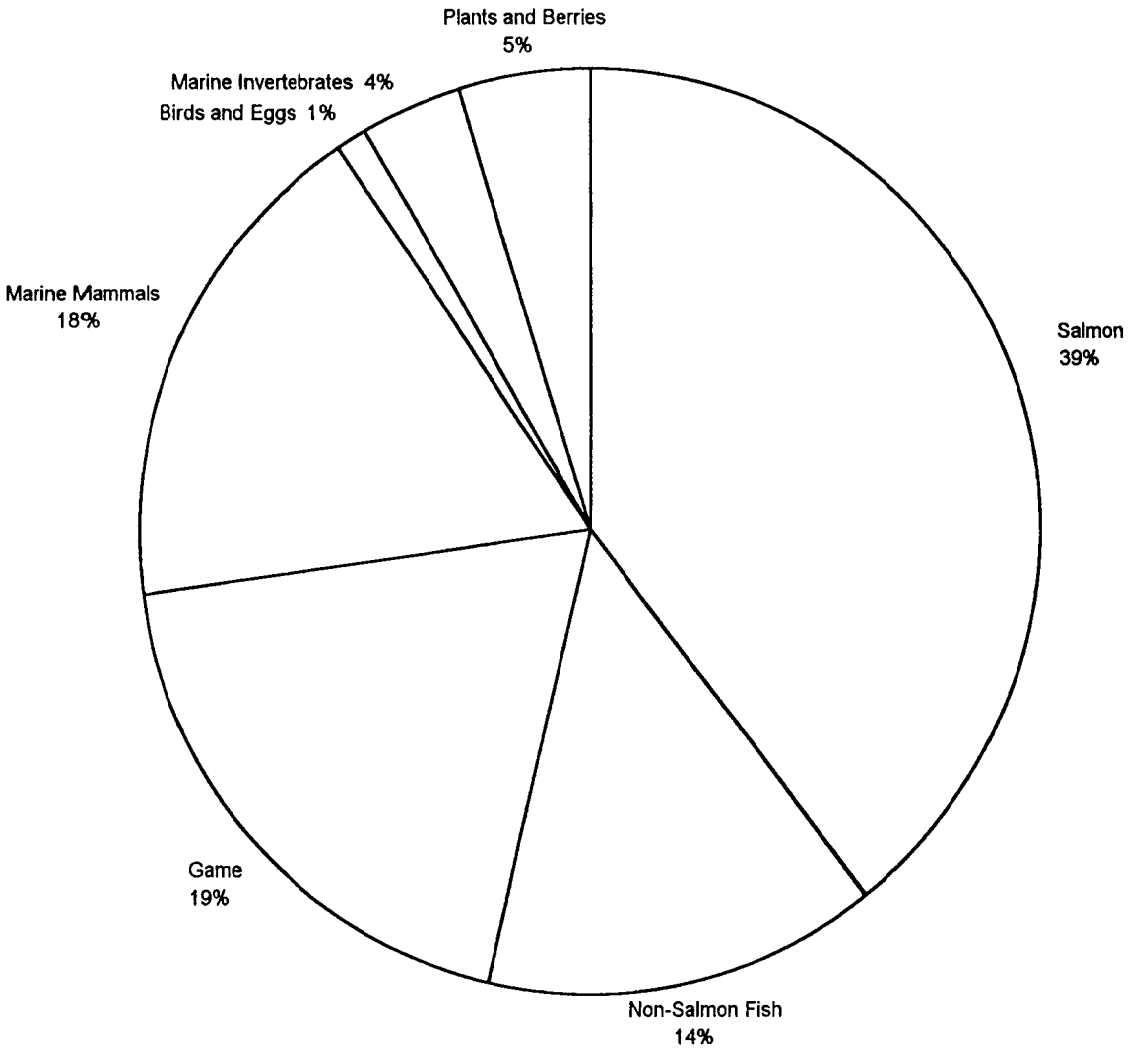


Figure V-14. Composition of Harvests of Wild Resources by Resource Category, Tatitlek, 1987/88, 1988/89, 1989/90, 1990/91, 1991/92, and 1993/94

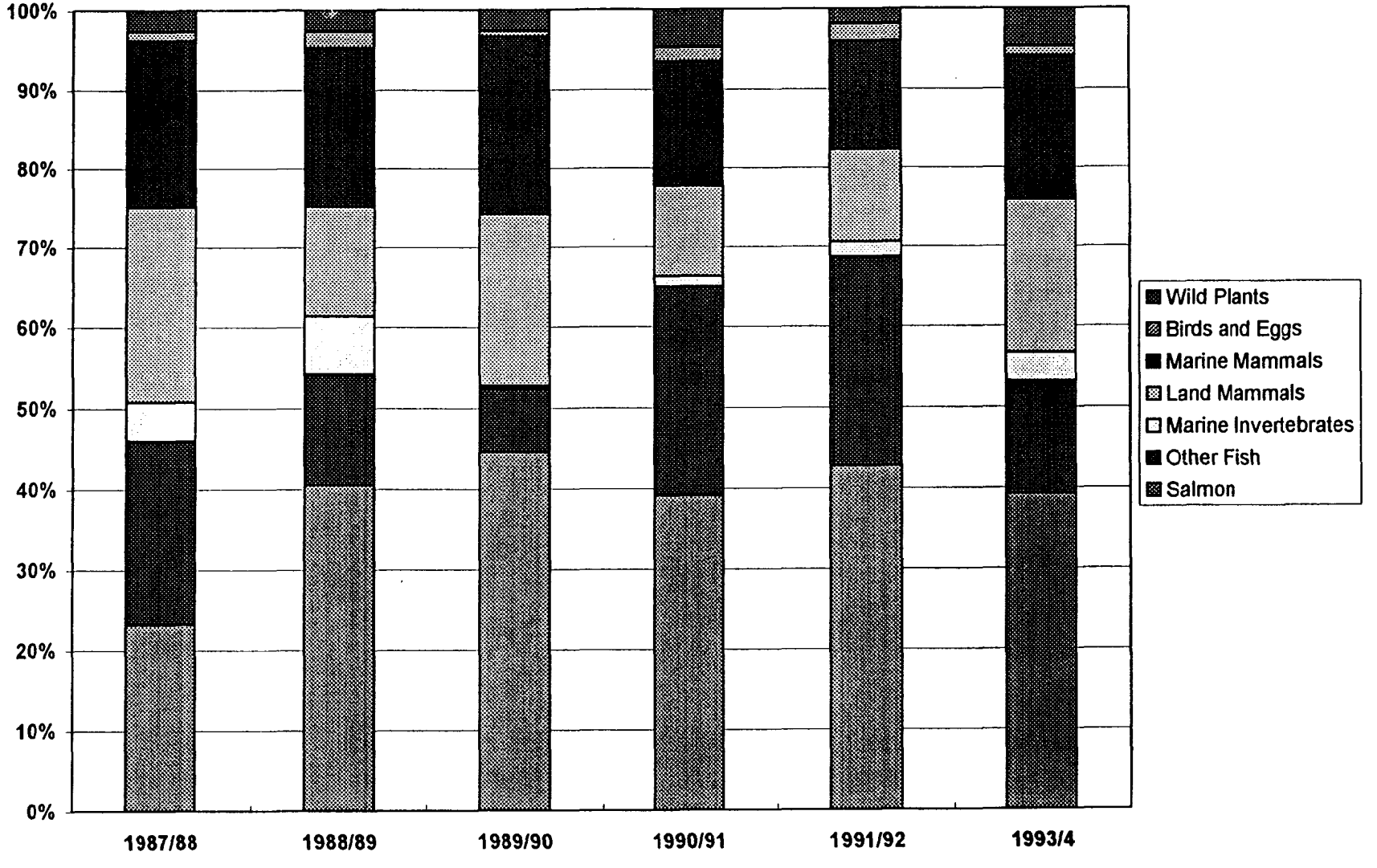


Table V-23. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Tatitlek, 1993/94

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Elk	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goat	40.0	20.0	15.0	25.0	15.0	406.00	14.50	4.20	5.60	0.20	65.44%	63.59%
Moose	5.0	0.0	0.0	5.0	5.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sheep, Dall	5.0	0.0	0.0	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Small Game/Furbearer	10.0	10.0	10.0	0.0	0.0	0.00	0.00	0.00	23.80	0.85	78.32%	0.00%
Fox	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Beaver	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Coyote	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Hare	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snowshoe Hare	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Land Otter	10.0	10.0	10.0	0.0	0.0	0.00	0.00	0.00	23.80	0.85	78.32%	0.00%
Lynx	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marten	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mink	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Muskrat	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Porcupine	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Weasel	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wolf	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wolverine	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Squirrel	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Feral Animals	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Rabbit - Feral	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Mammals	95.0	60.0	55.0	90.0	60.0	4,753.70	169.78	49.21	285.60	10.20	47.13%	42.19%
Whale	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Bowhead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whale	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	95.0	55.0	45.0	85.0	60.0	4,180.68	149.31	43.28	166.60	5.95	51.95%	41.77%
Harbor Seal	95.0	55.0	45.0	85.0	60.0	4,180.68	149.31	43.28	166.60	5.95	51.95%	41.77%
Porpoise/Dolphin	5.0	0.0	0.0	5.0	5.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steller Sea Lion	50.0	20.0	15.0	50.0	15.0	573.02	20.47	5.93	7.00	0.25	71.68%	75.01%
Sea Otter	35.0	30.0	30.0	10.0	15.0	0.00	0.00	0.00	112.00	4.00	48.70%	0.00%
Birds and Eggs	85.0	65.0	65.0	65.0	40.0	312.28	11.15	3.23	597.80	21.35	38.84%	33.20%
Birds	70.0	50.0	50.0	50.0	35.0	212.67	7.60	2.20	250.60	8.95	40.40%	38.70%
Upland Game Birds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Grouse	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Ptarmigan	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table V-23. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Tatitlek, 1993/94

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Migratory Birds	70.0	50.0	50.0	50.0	35.0	212.67	7.60	2.20	250.60	8.95	40.40%	38.70%
Waterfowl	70.0	50.0	50.0	50.0	35.0	211.27	7.55	2.19	236.60	8.45	38.68%	38.47%
Ducks	70.0	50.0	50.0	45.0	35.0	201.47	7.20	2.09	231.00	8.25	39.12%	39.96%
Eider	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eider, Small	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Steller Eiders	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Spectacled Eiders	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eider, Large	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
King Eiders	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Common Eiders	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eider, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter	55.0	30.0	30.0	40.0	30.0	99.54	3.56	1.03	110.60	3.95	45.41%	43.64%
Scoter, White-winged	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, Black	55.0	30.0	30.0	40.0	30.0	99.54	3.56	1.03	110.60	3.95	45.41%	43.64%
Scoter, Surf	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Harlequin	5.0	5.0	5.0	0.0	0.0	2.80	0.10	0.03	5.60	0.20	111.88%	116.68%
Goldeneye	25.0	20.0	20.0	15.0	15.0	36.96	1.32	0.38	46.20	1.65	64.00%	65.25%
Bufflehead	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Merganser	20.0	20.0	20.0	5.0	5.0	25.20	0.90	0.26	28.00	1.00	62.34%	64.68%
Scaup	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mallard	15.0	15.0	15.0	0.0	5.0	28.00	1.00	0.29	28.00	1.00	73.50%	75.74%
Pintail	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Wigeon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Teal	5.0	5.0	5.0	0.0	0.0	0.84	0.03	0.01	2.80	0.10	111.88%	111.67%
Gadwall	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shoveler	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canvasback	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Ducks, Unknown	10.0	10.0	10.0	0.0	5.0	8.13	0.29	0.08	9.80	0.35	96.38%	96.14%
Geese	20.0	10.0	10.0	15.0	10.0	9.80	0.35	0.10	5.60	0.20	87.04%	72.79%
Brant	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snow Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
White-fronted Geese	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese	5.0	5.0	5.0	5.0	5.0	5.04	0.18	0.05	4.20	0.15	111.88%	106.41%
Canada Geese, Lesser	5.0	5.0	5.0	5.0	5.0	5.04	0.18	0.05	4.20	0.15	111.88%	106.41%

Table V-23. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Tatitlek, 1993/94

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Canada Geese, Dusky	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese, Unknown	15.0	5.0	5.0	10.0	5.0	4.76	0.17	0.05	1.40	0.05	111.88%	111.67%
Crane	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sandhill Crane	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shorebirds	5.0	5.0	5.0	0.0	0.0	1.40	0.05	0.01	14.00	0.50	111.88%	115.03%
Common Snipe	5.0	5.0	5.0	0.0	0.0	1.40	0.05	0.01	14.00	0.50	111.88%	115.03%
Seabirds	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cormorants	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Loons	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eggs	65.0	35.0	35.0	50.0	25.0	99.61	3.56	1.03	347.20	12.40	57.38%	59.08%
Seabird Eggs	60.0	30.0	30.0	50.0	20.0	97.51	3.48	1.01	340.20	12.15	58.75%	60.68%
Gull Eggs	55.0	30.0	30.0	45.0	20.0	96.60	3.45	1.00	322.00	11.50	60.75%	61.02%
Tern Eggs	25.0	15.0	15.0	15.0	5.0	0.91	0.03	0.01	18.20	0.65	86.76%	89.66%
Shorebird Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snipe Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black Snipe Eggs (Oystercatcher)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Waterfowl Eggs	5.0	5.0	5.0	0.0	5.0	2.10	0.08	0.02	7.00	0.25	111.88%	108.19%
Duck Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Duck Eggs, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese Eggs	5.0	5.0	5.0	0.0	5.0	2.10	0.08	0.02	7.00	0.25	111.88%	108.19%
Marine Invertebrates	80.0	40.0	40.0	70.0	45.0	927.76	33.13	9.60			49.44%	48.60%
Clams	60.0	30.0	30.0	45.0	25.0	136.50	4.88	1.41	45.50 gal	1.63	56.78%	61.69%
Butter Clams	40.0	25.0	25.0	20.0	20.0	105.00	3.75	1.09	35.00 gal	1.25	68.68%	74.84%
Razor Clams	30.0	5.0	5.0	30.0	10.0	31.50	1.13	0.33	10.50 gal	0.38	111.88%	109.94%
Pacific Littleneck Clams (Steamers)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Pinkneck Clams	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Horse Clams (Gaper)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Unknown Clams	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Cockles	10.0	10.0	10.0	5.0	0.0	8.40	0.30	0.09	2.80 gal	0.10	77.00%	81.52%
Scallops	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Mussels	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Crabs	40.0	20.0	20.0	35.0	25.0	302.12	10.79	3.13	187.60	6.70	61.89%	62.68%
Dungeness Crab	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
King Crab	5.0	5.0	5.0	0.0	5.0	6.44	0.23	0.07	2.80	0.10	111.88%	111.67%
King Crab, Unknown	5.0	5.0	5.0	0.0	5.0	6.44	0.23	0.07	2.80	0.10	111.88%	111.67%
Tanner Crab	40.0	20.0	20.0	35.0	25.0	295.68	10.56	3.06	184.80	6.60	61.63%	62.32%

Table V-23. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Tatitlek, 1993/94

Resource Name	Percentage of Households					Pounds Harvested			Amount Harvested		95% Conf Limit (+/-)	
	Use	Att	Harv	Recv	Give	Total	Mean HH	Percapita	Total	Mean HH	Harvest	Percapita
Tanner Crab, Unknown	40.0	20.0	20.0	35.0	25.0	295.68	10.56	3.06	184.80	6.60	61.63%	62.32%
Unknown Crabs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Chitons (bidarkis)	25.0	20.0	20.0	10.0	5.0	84.54	3.02	0.88	21.13 gal	0.75	76.65%	72.64%
Chitons (large)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Chitons (small)	25.0	20.0	20.0	10.0	5.0	84.54	3.02	0.88	21.13 gal	0.75	76.65%	72.64%
Chitons (unknown)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Octopus	65.0	20.0	20.0	60.0	30.0	184.80	6.60	1.91	46.20	1.65	81.61%	79.16%
Sea Cucumber	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Sea Urchin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Shrimp	40.0	15.0	15.0	30.0	15.0	211.40	7.55	2.19	105.70 gal	3.78	81.02%	79.15%
Limpets	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Squid	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Oyster	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Rock Oyster	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Plants and Berries	100.0	100.0	100.0	70.0	80.0	1,232.00	44.00	12.75	308.00 gal	11.00	25.06%	29.29%
Berries	100.0	95.0	95.0	70.0	80.0	1,223.60	43.70	12.67	305.90 gal	10.93	25.35%	29.46%
Plants/Greens/Mushrooms	10.0	10.0	10.0	0.0	5.0	8.40	0.30	0.09	2.10 gal	0.08	81.61%	87.36%
Seaweed/Kelp (Food)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Bull Kelp	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Wood	85.0	75.0	75.0	45.0	55.0	0.00	0.00	0.00	93.80 crd	3.35	57.23%	0.00%

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table V-24. Estimated Amount of Resources Removed From Commercial Harvest, Tatitlek, 1993/94

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		1,243.24	8.41	4.77
Fish		1,243.24	8.97	4.77
Salmon	71.40	588.74	5.75	2.26
Chum Salmon	1.40	6.79	0.58	0.03
Coho Salmon	28.00	152.32	5.15	0.58
Chinook Salmon	22.40	347.20	57.14	1.33
Pink Salmon	1.40	2.90	0.47	0.01
Sockeye Salmon	18.20	79.53	1.63	0.30
Non-Salmon Fish		654.50	18.03	2.51
Cod	24.68	78.96	20.11	0.30
Pacific Cod (Gray)	24.68	78.96	20.11	0.30
Sablefish (Black Cod)	23.98	74.34	39.72	0.28
Halibut	9.33	420.00	28.79	1.61
Rockfish	11.20	44.80	6.41	0.17
Red Rockfish	11.20	44.80	8.60	0.17
Wolf Eel (Wolffish)	2.80	1.40	100.00	0.01
Skates	7.00	35.00	100.00	0.13

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table V-25. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Tatitlek, 1993/94

Resource	Percent Base	Subsistence Methods: Floating Net No.	Floating Net Lbs.	Beach Seine No.	Beach Seine Lbs.	Handpick No.	Handpick Lbs.	Subsistence Gear Any Method No.	Subsistence Gear Any Method Lbs.	Removed from Commercial Catch No.	Removed from Commercial Catch Lbs.	Rod and Reel No.	Rod and Reel Lbs.	Any Method No.	Any Method Lbs.
Salmon	total	50.28	52.21	26.89	25.91	3.94	1.78	81.11	79.91	3.19	5.75	15.70	14.34		
Chum Salmon	gear type	12.06	12.33	6.98	7.68	0.00	0.00	9.79	10.55	1.96	1.15	17.93	20.83		
	resource	56.07	56.07	17.34	17.34	0.00	0.00	73.41	73.41	0.58	0.58	26.01	26.01		
	total	6.07	6.44	1.88	1.99	0.00	0.00	7.94	8.43	0.06	0.07	2.81	2.99	10.82	11.48
Coho Salmon	gear type	33.33	38.21	0.00	0.00	0.00	0.00	20.66	24.97	39.22	25.87	39.84	51.93		
	resource	69.07	69.07	0.00	0.00	0.00	0.00	69.07	69.07	5.15	5.15	25.77	25.77		
	total	16.76	19.95	0.00	0.00	0.00	0.00	16.76	19.95	1.25	1.49	6.25	7.44	24.27	28.88
Chinook Salmon	gear type	1.24	4.06	0.00	0.00	0.00	0.00	0.77	2.65	31.37	58.97	0.80	2.96		
	resource	35.71	35.71	0.00	0.00	0.00	0.00	35.71	35.71	57.14	57.14	7.14	7.14		
	total	0.63	2.12	0.00	0.00	0.00	0.00	0.63	2.12	1.00	3.39	0.13	0.42	1.75	5.94
Pink Salmon	gear type	7.71	3.36	0.00	0.00	100.00	100.00	9.64	4.43	1.96	0.49	34.66	17.19		
	resource	29.11	29.11	0.00	0.00	29.58	29.58	58.69	58.69	0.47	0.47	40.85	40.85		
	total	3.88	1.76	0.00	0.00	3.94	1.78	7.82	3.54	0.06	0.03	5.44	2.46	13.32	6.03
Sockeye Salmon	gear type	45.65	42.03	93.02	92.32	0.00	0.00	59.14	57.40	25.49	13.51	6.77	7.09		
	resource	46.05	46.05	50.19	50.19	0.00	0.00	96.24	96.24	1.63	1.63	2.13	2.13		
	total	22.95	21.95	25.02	23.92	0.00	0.00	47.97	45.87	0.81	0.78	1.06	1.02	49.84	47.66
Landlocked Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table V-26. Estimated Salmon Harvest by Gear Type and Species, Tatitlek, 1993/94

		Subsistence Methods								Removed from Commercial Catch		Rod and Reel		Any Method	
		Floating Net		Beach Seine		Handpick		Subsistence Gear Any Method							
	Harvest Units	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Salmon	numbers	1,125.60	40.20	602.00	21.50	88.20	3.15	1,815.80	64.85	71.40	2.55	351.40	12.55	2,238.60	79.95
	pounds	5,341.70	190.78	2,650.90	94.68	182.57	6.52	8,175.17	291.97	588.74	21.03	1,466.68	52.38	10,230.60	365.38
Chum Salmon	numbers	135.80	4.85	42.00	1.50	0.00	0.00	177.80	6.35	1.40	0.05	63.00	2.25	242.20	8.65
	pounds	658.63	23.52	203.70	7.28	0.00	0.00	862.33	30.80	6.79	0.24	305.55	10.91	1,174.67	41.95
Coho Salmon	numbers	375.20	13.40	0.00	0.00	0.00	0.00	375.20	13.40	28.00	1.00	140.00	5.00	543.20	19.40
	pounds	2,041.09	72.90	0.00	0.00	0.00	0.00	2,041.09	72.90	152.32	5.44	761.60	27.20	2,955.01	105.54
Chinook Salmon	numbers	14.00	0.50	0.00	0.00	0.00	0.00	14.00	0.50	22.40	0.80	2.80	0.10	39.20	1.40
	pounds	217.00	7.75	0.00	0.00	0.00	0.00	217.00	7.75	347.20	12.40	43.40	1.55	607.60	21.70
Pink Salmon	numbers	86.80	3.10	0.00	0.00	88.20	3.15	175.00	6.25	1.40	0.05	121.80	4.35	298.20	10.65
	pounds	179.68	6.42	0.00	0.00	182.57	6.52	362.25	12.94	2.90	0.10	252.13	9.00	617.27	22.05
Sockeye Salmon	numbers	513.80	18.35	560.00	20.00	0.00	0.00	1,073.80	38.35	18.20	0.65	23.80	0.85	1,115.80	39.85
	pounds	2,245.31	80.19	2,447.20	87.40	0.00	0.00	4,692.51	167.59	79.53	2.84	104.01	3.71	4,876.05	174.14
Landlocked Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table V-27. Percentage of Households Harvesting Salmon by Gear Type and Species, Tatitlek, 1993/94

Resource	Subsistence Methods				Removed from Commercial Catch	Rod and Reel	Any Method
	Floating Net	Beach Seine	Handpick	Any Subsistence Gear			
Salmon	45.00	5.00	45.00	65.00	15.00	35.00	85.00
Chum Salmon	25.00	5.00	0.00	30.00	5.00	5.00	40.00
Coho Salmon	35.00	0.00	0.00	35.00	5.00	30.00	65.00
Chinook Salmon	5.00	0.00	0.00	5.00	5.00	5.00	15.00
Pink Salmon	15.00	0.00	45.00	55.00	5.00	20.00	75.00
Sockeye Salmon	25.00	5.00	0.00	30.00	5.00	10.00	40.00
Landlocked Salmon	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unknown Salmon	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table V-28. Estimated Harvest of Fish Other than Salmon by Gear Type, Tatitlek, 1993/94

	Harvest Units	Subsistence Gear		Removed From Commercial Catch		Rod and Reel		Ice Fishing		Any Method	
		Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Non-Salmon Fish	pounds	2,173.47	77.62	654.50	23.38	802.20	28.65	0.00	0.00	3,630.17	129.65
Pacific Cod (Gray)	pounds	313.60	11.20	78.96	2.82	0.00	0.00	0.00	0.00	392.56	14.02
Sablefish (Black Cod)	pounds	112.84	4.03	74.34	2.66	0.00	0.00	0.00	0.00	187.18	6.69
Halibut	pounds	618.80	22.10	420.00	15.00	420.00	15.00	0.00	0.00	1,458.80	52.10
Herring	pounds	390.43	13.94	0.00	0.00	264.60	9.45	0.00	0.00	655.03	23.39
Herring Roe	pounds	9.80	0.35	0.00	0.00	0.00	0.00	0.00	0.00	9.80	0.35
Spawn on Kelp	pounds	73.50	2.63	0.00	0.00	0.00	0.00	0.00	0.00	73.50	2.63
Black Rockfish (black bass)	pounds	178.50	6.38	0.00	0.00	0.00	0.00	0.00	0.00	178.50	6.38
Red Rockfish	pounds	476.00	17.00	44.80	1.60	0.00	0.00	0.00	0.00	520.80	18.60
Wolf Eel (Wolffish)	pounds	0.00	0.00	1.40	0.05	0.00	0.00	0.00	0.00	1.40	0.05
Skates	pounds	0.00	0.00	35.00	1.25	0.00	0.00	0.00	0.00	35.00	1.25
Dolly Varden	pounds	0.00	0.00	0.00	0.00	11.76	0.42	0.00	0.00	11.76	0.42
Lake Trout	pounds	0.00	0.00	0.00	0.00	5.88	0.21	0.00	0.00	5.88	0.21
Rainbow Trout	pounds	0.00	0.00	0.00	0.00	9.80	0.35	0.00	0.00	9.80	0.35
Unknown Trout	pounds	0.00	0.00	0.00	0.00	90.16	3.22	0.00	0.00	90.16	3.22

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table V-29. Percentage of Fish Other Than Salmon Harvested by Gear Type, Tatitlek, 1993/94

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	59.87	18.03	22.10	0.00
Pacific Cod (Gray)	resource	79.89	20.11	0.00	0.00
Sablefish (Black Cod)	resource	60.28	39.72	0.00	0.00
Halibut	resource	42.42	28.79	28.79	0.00
Herring	resource	59.61	0.00	40.39	0.00
Herring Roe	resource	100.00	0.00	0.00	0.00
Spawn on Kelp	resource	100.00	0.00	0.00	0.00
Black Rockfish (black bass)	resource	100.00	0.00	0.00	0.00
Red Rockfish	resource	91.40	8.60	0.00	0.00
Wolf Eel (Wolffish)	resource	0.00	100.00	0.00	0.00
Skates	resource	0.00	100.00	0.00	0.00
Dolly Varden	resource	0.00	0.00	100.00	0.00
Lake Trout	resource	0.00	0.00	100.00	0.00
Rainbow Trout	resource	0.00	0.00	100.00	0.00
Unknown Trout	resource	0.00	0.00	100.00	0.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Table V-30. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Tatitlek, 1993/94

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	55.00	15.00	45.00	0.00	75.00
Pacific Cod (Gray)	20.00	10.00	0.00	0.00	20.00
Sablefish (Black Cod)	10.00	10.00	0.00	0.00	20.00
Halibut	25.00	10.00	5.00	0.00	35.00
Herring	25.00	0.00	10.00	0.00	35.00
Herring Roe	5.00	0.00	0.00	0.00	5.00
Spawn on Kelp	15.00	0.00	0.00	0.00	15.00
Black Rockfish (black bass)	20.00	0.00	0.00	0.00	20.00
Red Rockfish	25.00	10.00	0.00	0.00	30.00
Wolf Eel (Wolffish)	0.00	5.00	0.00	0.00	5.00
Skates	0.00	5.00	0.00	0.00	5.00
Dolly Varden	0.00	0.00	10.00	0.00	10.00
Lake Trout	0.00	0.00	5.00	0.00	5.00
Rainbow Trout	0.00	0.00	5.00	0.00	5.00
Unknown Trout	0.00	0.00	20.00	0.00	20.00

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1994

Figure V-15. Tatitlek: Respondents' Assessments of Resource Status in 1991 Compared to 1988

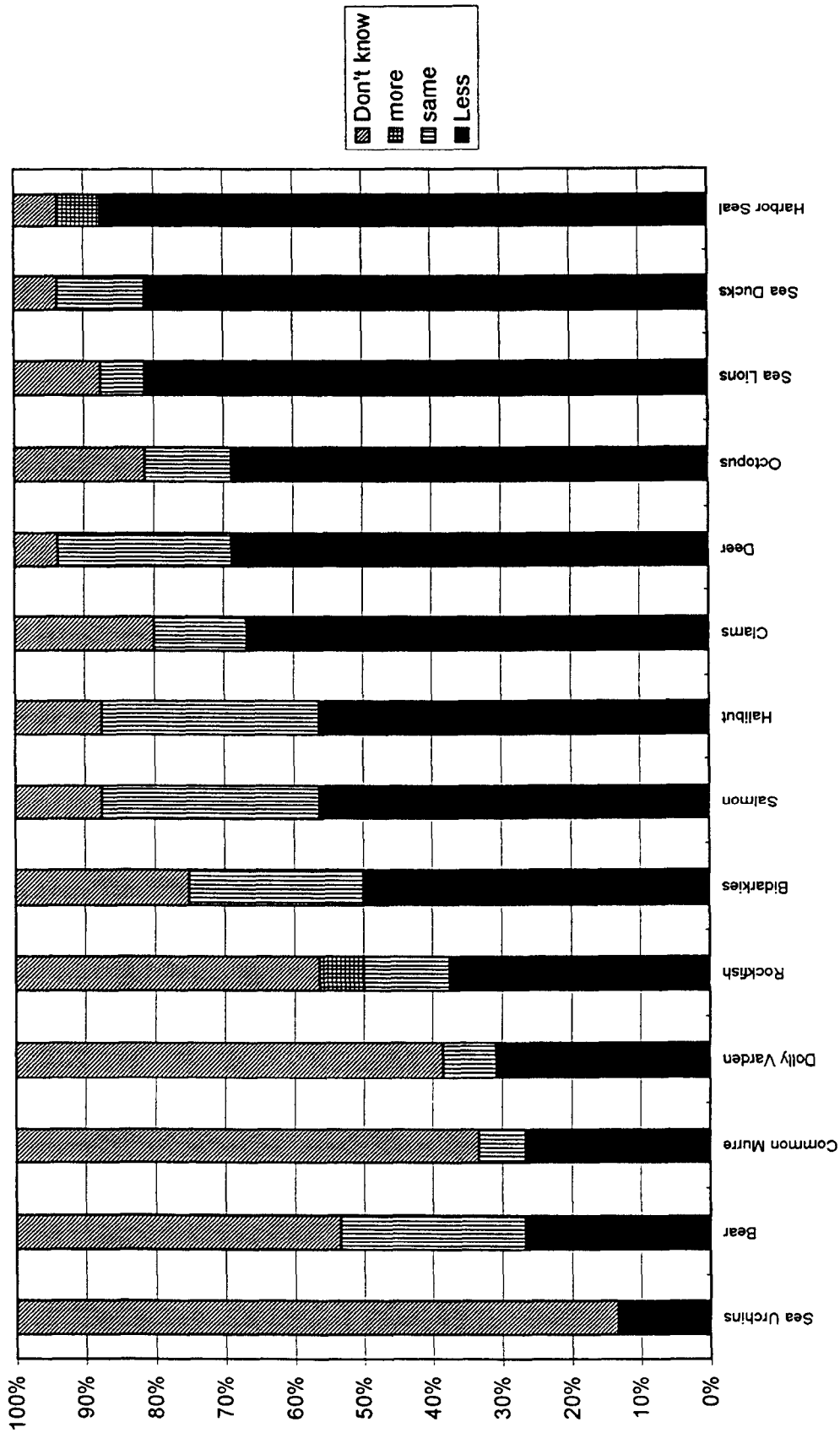


Figure V-16. Tatitlek: Respondents' Assessments of Resource Status in 1993 Compared to 1988

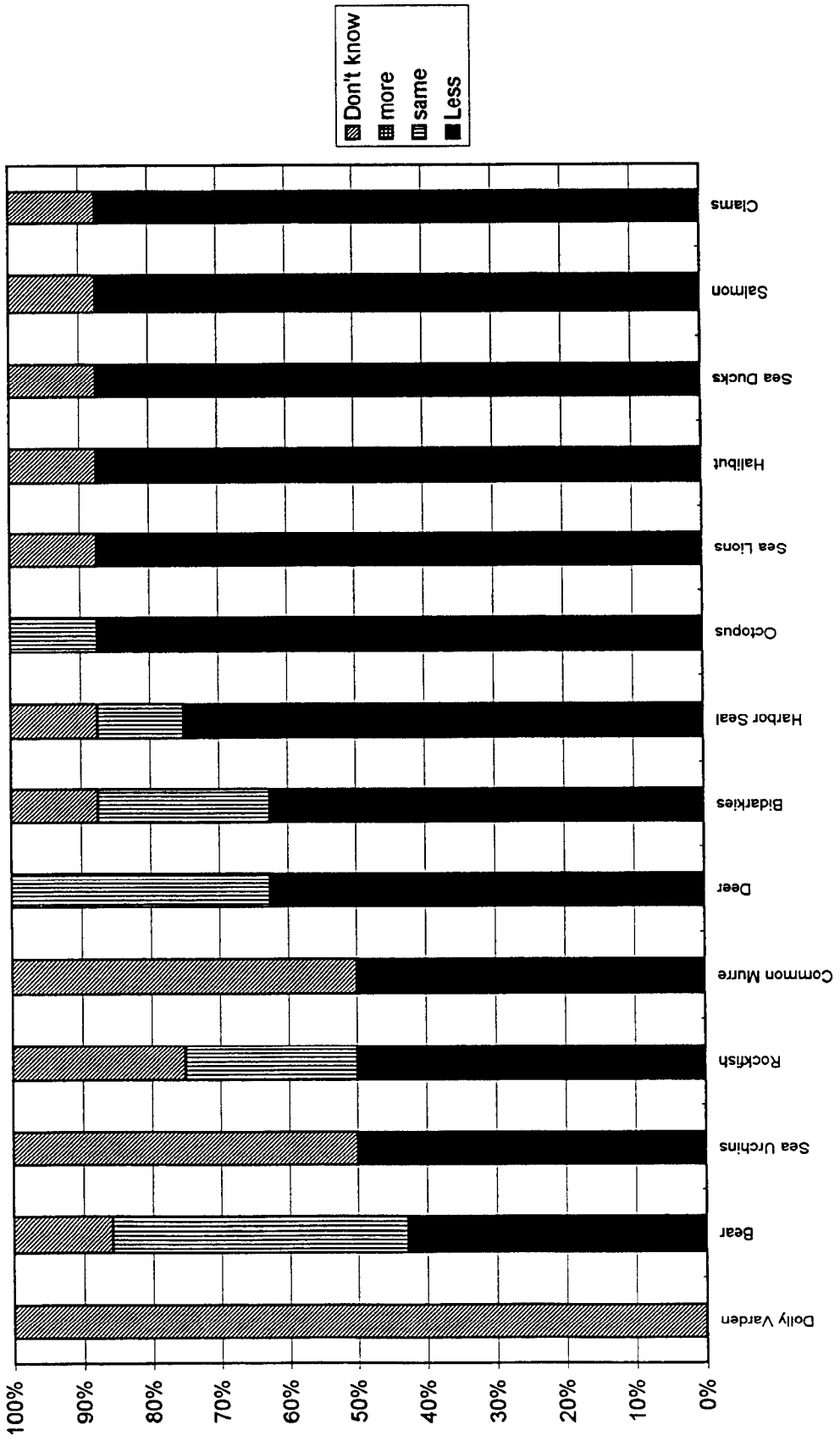


Table V-31. Uses of Wild Foods, Tatitlek

	STUDY YEAR	
	1991	1993
ANY WILD FOODS EATEN YESTERDAY?		
No		
Count	3	7
Col %	16.7%	63.6%
Yes		
Count	15	4
Col %	83.3%	36.4%
WILD FOODS AS MAIN PART OF A MEAL		
No		
Count	8	7
Col %	44.4%	63.6%
Yes		
Count	10	4
Col %	55.6%	36.4%
HARVEST OF WILD FOODS BY RESPONDENT		
Do Not Know		
Count	1	
Col %	5.6%	
No		
Count	14	9
Col %	77.8%	81.8%
Yes		
Count	3	2
Col %	16.7%	18.2%
WF HARVESTED BY RELATIVE IN HH		
Do Not Know		
Count	1	
Col %	5.6%	
No		
Count	13	10
Col %	72.2%	90.9%
Yes		
Count	4	1
Col %	22.2%	9.1%
WF HARVESTED BY RELATIVE IN ANOTHER HH		
Do Not Know		

(continued)

Table V-31. Uses of Wild Foods, Tatitlek

	STUDY YEAR	
	1991	1993
Count	1	
Col %	5.6%	
No		
Count	13	10
Col %	72.2%	90.9%
Yes		
Count	4	1
Col %	22.2%	9.1%
WF HARVESTED BY RELATIVE IN ANOTHER COMM.		
Do Not Know		
Count	1	
Col %	5.6%	
No		
Count	17	11
Col %	94.4%	100.0%
WF HARVESTED BY FRIEND IN HH		
Do Not Know		
Count	1	
Col %	5.6%	
No		
Count	17	11
Col %	94.4%	100.0%
WF HARVESTED BY FRIEND IN COMMUNITY		
Do Not Know		
Count	1	
Col %	5.6%	
No		
Count	11	9
Col %	61.1%	81.8%
Yes		
Count	6	2
Col %	33.3%	18.2%
WF HARVESTED BY FRIEND IN ANOTHER COMM.		
Do Not Know		
Count	1	
Col %	5.6%	

(continued)

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Table V-31. Uses of Wild Foods, Tatitlek

	STUDY YEAR	
	1991	1993
No		
Count	16	11
Col %	88.9%	100.0%
Yes		
Count	1	
Col %	5.6%	

Table V-32. Safety of Using Subsistence Foods, Tatitlek

	STUDY YEAR	
	1991	1993
DO YOU EAT BIDARKIES?		
No		
Count		3
Col %		27.3%
Yes		
Count		8
Col %		72.7%
IS EATING BIDARKIES IMPORTANT TO YOU?		
No		
Count	8	
Col %	44.4%	
Yes		
Count	10	
Col %	55.6%	
BIDARKIE HARVEST AREAS SAFE?		
Do Not Know		
Count	2	
Col %	20.0%	
Not Safe		
Count	1	2
Col %	10.0%	25.0%
Safe		
Count	7	6
Col %	70.0%	75.0%
WHY BIDARKIES NOT SAFE TO EAT		
Oil pollution or fear of contamination		
Count		1
Col %		50.0%
Do not trust food safety information		
Count	1	
Col %	100.0%	
Do not know the results of studies		
Count		1
Col %		50.0%
DO YOU EAT CLAMS?		
Yes		

(continued)

Table V-32. Safety of Using Subsistence Foods, Tatitlek

	STUDY YEAR	
	1991	1993
Count		11
Col %		100.0%
ARE CLAMS SAFE FOR CHILDREN TO EAT?		
Do Not Know		
Count	8	
Col %	44.4%	
Not Safe		
Count	2	3
Col %	11.1%	27.3%
Safe		
Count	8	8
Col %	44.4%	72.7%
WHY CLAMS NOT SAFE TO EAT		
Do not trust food safety information		
Count	1	
Col %	100.0%	
Resource has been destroyed or depleted		
Count		1
Col %		33.3%
Told not to eat them by agencies		
Count		1
Col %		33.3%
Do not know the results of studies		
Count		1
Col %		33.3%
DO YOU EAT SEAL OIL OR SEAL MEAT?		
Yes		
Count		11
Col %		100.0%
IS EATING SEAL MEAT OR OIL IMPORTANT?		
No		
Count	5	
Col %	27.8%	
Yes		
Count	13	
Col %	72.2%	

(continued)

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Table V-32. Safety of Using Subsistence Foods, Tatitlek

	STUDY YEAR	
	1991	1993
ARE SEALS FROM HARVEST AREAS SAFE TO EAT?		
No Response		
Count		1
Col %		9.1%
Do Not Know		
Count	3	
Col %	23.1%	
Not Safe		
Count		2
Col %		18.2%
Safe		
Count	10	8
Col %	76.9%	72.7%
WHY SEAL NOT SAFE TO EAT		
Resource looks bad		
Count		1
Col %		50.0%
Others have gotten sick		
Count		1
Col %		50.0%

1/21/4PRINT

Table V-33. Resource Population Statuses, Tatitlek

	STUDY YEAR	
	1991	1993
COMPARED TO 1988: DEER		
Do Not Know		
Count	1	
Col %	6.3%	
Less		
Count	11	5
Col %	68.8%	62.5%
Same		
Count	4	3
Col %	25.0%	37.5%
COMPARED TO 1988: MOOSE		
Less		
Count		1
Col %		100.0%
COMPARED TO 1988: BEAR		
No Response		
Count	1	
Col %	6.3%	
Do Not Know		
Count	7	1
Col %	43.8%	14.3%
Less		
Count	4	3
Col %	25.0%	42.9%
Same		
Count	4	3
Col %	25.0%	42.9%
COMPARED TO 1988: HARBOR SEAL		
Do Not Know		
Count	1	1
Col %	6.3%	12.5%
Less		
Count	14	6
Col %	87.5%	75.0%
Same		
Count		1

(continued)

Table V-33. Resource Population Statuses, Tatitlek

	STUDY YEAR	
	1991	1993
Col %		12.5%
More		
Count	1	
Col %	6.3%	
COMPARED TO 1988: SEA LIONS		
Do Not Know		
Count	2	1
Col %	12.5%	12.5%
Less		
Count	13	7
Col %	81.3%	87.5%
Same		
Count	1	
Col %	6.3%	
COMPARED TO 1988: SEA DUCKS		
Do Not Know		
Count	1	1
Col %	6.3%	12.5%
Less		
Count	13	7
Col %	81.3%	87.5%
Same		
Count	2	
Col %	12.5%	
COMPARED TO 1988: COMMON MURRE		
Do Not Know		
Count	10	4
Col %	66.7%	50.0%
Less		
Count	4	4
Col %	26.7%	50.0%
Same		
Count	1	
Col %	6.7%	
COMPARED TO 1988: SALMON		

(continued)

KCS-4PRINT

Table V-33. Resource Population Statuses, Tatitlek

	STUDY YEAR	
	1991	1993
Do Not Know		
Count	2	1
Col %	12.5%	12.5%
Less		
Count	9	7
Col %	56.3%	87.5%
Same		
Count	5	
Col %	31.3%	
COMPARED TO 1988: HALIBUT		
Do Not Know		
Count	2	
Col %	12.5%	
Less		
Count	9	7
Col %	56.3%	87.5%
Same		
Count	5	1
Col %	31.3%	12.5%
COMPARED TO 1988: ROCKFISH		
Do Not Know		
Count	7	2
Col %	43.8%	25.0%
Less		
Count	6	4
Col %	37.5%	50.0%
Same		
Count	2	2
Col %	12.5%	25.0%
More		
Count	1	
Col %	6.3%	
COMPARED TO 1988: DOLLY VARDEN		
Do Not Know		
Count	8	8
Col %	61.5%	100.0%

(continued)

Table V-33. Resource Population Statuses, Tatitlek

	STUDY YEAR	
	1991	1993
Less		
Count	4	
Col %	30.8%	
Same		
Count	1	
Col %	7.7%	
COMPARED TO 1988: CLAMS		
Do Not Know		
Count	3	1
Col %	20.0%	12.5%
Less		
Count	10	7
Col %	66.7%	87.5%
Same		
Count	2	
Col %	13.3%	
COMPARED TO 1988: BIDARKIES		
Do Not Know		
Count	4	1
Col %	25.0%	12.5%
Less		
Count	8	5
Col %	50.0%	62.5%
Same		
Count	4	2
Col %	25.0%	25.0%
COMPARED TO 1988: SEA URCHINS		
Do Not Know		
Count	13	4
Col %	86.7%	50.0%
Less		
Count	2	4
Col %	13.3%	50.0%
COMPARED TO 1988: OCTOPUS		
Do Not Know		
Count	3	

(continued)

ICF 4PRINT

Table V-33. Resource Population Statuses, Tatitlek

	STUDY YEAR	
	1991	1993
Col %	18.8%	
Less		
Count	11	7
Col %	68.8%	87.5%
Same		
Count	2	1
Col %	12.5%	12.5%

ICF 4PRINT

Table V-34. Children's Participation in Subsistence, Tatitlek

	STUDY YEAR	
	1991	1993
DOES YOUR HOUSEHOLD PROCESS WILD FOODS?		
Yes		
Count		11
Col %		100.0%
DO CHILDREN HELP YOUR HH PROCESS WILD FOODS?		
No		
Count	8	3
Col %	44.4%	27.3%
Yes		
Count	10	8
Col %	55.6%	72.7%
DID EVOS AFFECT PARTICIPATION WITH CHILDREN?		
No		
Count	7	5
Col %	43.8%	45.5%
Yes		
Count	9	6
Col %	56.3%	54.5%
WHY EVOS AFFECTED PARTICIPATION WITH CHILDREN		
No Response		
Count	1	
Col %	11.1%	
Resources were not available		
Count		2
Col %		33.3%
Were too busy with other affairs		
Count	2	3
Col %	22.2%	50.0%
Did not trust foods		
Count	2	
Col %	22.2%	
Afraid to take kids to the beach		
Count	1	
Col %	11.1%	

(continued)

Table V-34. Children's Participation in Subsistence, Tatitlek

	STUDY YEAR	
	1991	1993
Were not allowed to commercial fish		
Count	2	
Col %	22.2%	
Decreased effort because of the spill		
Count	1	
Col %	11.1%	
Did not want to go out because of the oil spill		
Count		1
Col %		16.7%

1/7/94PRINT

Table V-35. Sharing, Tatitlek

	STUDY YEAR	
	1991	1993
DID HOUSEHOLD SHARE?		
No		
Count	2	
Col %	11.8%	
Yes		
Count	15	11
Col %	88.2%	100.0%
PREV. YEAR: SHARING OF WILD RES.		
Do Not Know		
Count	2	
Col %	11.1%	
Less		
Count	4	6
Col %	22.2%	60.0%
Same		
Count	12	3
Col %	66.7%	30.0%
More		
Count		1
Col %		10.0%
PREV. YEAR: SHARING OF HUNT/FISH GEAR		
Do Not Know		
Count	1	
Col %	5.9%	
Less		
Count	6	7
Col %	35.3%	77.8%
Same		
Count	10	1
Col %	58.8%	11.1%
More		
Count		1
Col %		11.1%
PREV. YEAR: SHARING OF MONEY		
No Response		
Count	1	

(continued)

Table V-35. Sharing, Tatitlek

	STUDY YEAR	
	1991	1993
Col %	6.3%	
Less		
Count	5	4
Col %	31.3%	44.4%
Same		
Count	10	3
Col %	62.5%	33.3%
More		
Count		2
Col %		22.2%
PREV. YEAR: SHARING OF LABOR		
Do Not Know		
Count		1
Col %		10.0%
Less		
Count	2	2
Col %	11.1%	20.0%
Same		
Count	16	4
Col %	88.9%	40.0%
More		
Count		3
Col %		30.0%
PRE-OS: SHARING OF WILD RESOURCES		
Do Not Know		
Count		1
Col %		9.1%
Less		
Count	6	8
Col %	37.5%	72.7%
Same		
Count	8	1
Col %	50.0%	9.1%
More		
Count	2	1

(continued)

1/7/94INT

Table V-35. Sharing, Tatitlek

	STUDY YEAR	
	1991	1993
Col %	12.5%	9.1%
PRE-OS: SHARING OF HUNT/FISH GEAR		
Do Not Know		
Count		1
Col %		9.1%
Less		
Count	5	8
Col %	35.7%	72.7%
Same		
Count	9	1
Col %	64.3%	9.1%
More		
Count		1
Col %		9.1%
PRE-OS: SHARING OF MONEY		
No Response		
Count	1	
Col %	6.3%	
Do Not Know		
Count	1	1
Col %	6.3%	10.0%
Less		
Count	2	3
Col %	12.5%	30.0%
Same		
Count	12	4
Col %	75.0%	40.0%
More		
Count		2
Col %		20.0%
PRE-OS: SHARING OF LABOR		
Do Not Know		
Count		1
Col %		9.1%
Less		

(continued)

Table V-35. Sharing, Tatitlek

	STUDY YEAR	
	1991	1993
Count	3	2
Col %	18.8%	18.2%
Same		
Count	11	5
Col %	68.8%	45.5%
More		
Count	2	3
Col %	12.5%	27.3%

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Table V-36. Political Activities, Tatitlek

	STUDY YEAR	
	1991	1993
LAST 3 YRS.: ELDERS INFLUENCE		
Decreased		
Count	9	
Col %	56.3%	
Same		
Count	4	
Col %	25.0%	
Increased		
Count	3	
Col %	18.8%	
LAST 5 YRS.: ELDERS INFLUENCE		
Do Not Know		
Count		1
Col %		9.1%
Decreased		
Count		3
Col %		27.3%
Same		
Count		4
Col %		36.4%
Increased		
Count		3
Col %		27.3%
LAST 5 YRS.: ELDERS INFLUENCE: WHY		
No Response		
Count		1
Col %		14.3%
Do Not Know		
Count		1
Col %		14.3%
Elders not as active		
Count		2
Col %		28.6%
Elders knowledge is more appreciated or recognized		
Count		1

(continued)

Table V-36. Political Activities, Tatitlek

	STUDY YEAR	
	1991	1993
Col %		14.3%
Non-specific response		
Count		1
Col %		14.3%
Community is trying to encourage more elder participation		
Count		1
Col %		14.3%
PRE-EVOS: ATTEND PUBLIC MEETINGS		
Never		
Count	2	
Col %	12.5%	
Sometimes		
Count	5	
Col %	31.3%	
Almost Always		
Count	9	
Col %	56.3%	
PRE-EVOS: ATTEND PUBLIC MEETINGS		
Do Not Know		
Count		2
Col %		22.2%
Less		
Count		5
Col %		55.6%
Same		
Count		2
Col %		22.2%
LAST YEAR: ATTEND PUBLIC MEETINGS		
Never		
Count	3	
Col %	16.7%	
Sometimes		
Count	8	
Col %	44.4%	

(continued)

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Table V-36. Political Activities, Tatitlek

	STUDY YEAR	
	1991	1993
Almost Always		
Count	7	
Col %	38.9%	
LAST YEAR: ATTEND PUBLIC MEETINGS		
Do Not Know		
Count		1
Col %		9.1%
Never		
Count		1
Col %		9.1%
1.00		
Count		1
Col %		9.1%
2.00		
Count		1
Col %		9.1%
5.00		
Count		3
Col %		27.3%
6.00		
Count		2
Col %		18.2%
9.00		
Count		1
Col %		9.1%
30.00		
Count		1
Col %		9.1%
VOTE IN LAST CITY COUNCIL ELECTION?		
No		
Count	5	
Col %	29.4%	
Yes		
Count	12	
Col %	70.6%	

(continued)

Table V-36. Political Activities, Tatitlek

	STUDY YEAR	
	1991	1993
VOTE IN LAST STATE-WIDE ELECTION?		
No		
Count	8	3
Col %	44.4%	27.3%
Yes		
Count	10	8
Col %	55.6%	72.7%
BELONG TO NATIVE CORPORATION?		
No		
Count	2	2
Col %	11.1%	18.2%
Yes		
Count	16	9
Col %	88.9%	81.8%
REGIONAL NATIVE CORPORATION		
Calista Corp.		
Count	1	
Col %	6.3%	
Chugach Alaska Corp.		
Count	13	9
Col %	81.3%	100.0%
Cook Inlet Region, Inc.		
Count	1	
Col %	6.3%	
NANA Regional Corp., Inc.		
Count	1	
Col %	6.3%	
VOTE IN LAST REG. CORP. ELECTION?		
No		
Count	5	
Col %	31.3%	
Yes		
Count	11	9
Col %	68.8%	100.0%
VILLAGE NATIVE CORPORATION		
No Response		

(continued)

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Table V-36. Political Activities, Tatitlek

	STUDY YEAR	
	1991	1993
Count	1	
Col %	6.3%	
Aniak Incorporated		
Count	1	
Col %	6.3%	
Chenega Corporation		
Count	2	1
Col %	12.5%	11.1%
Eyak Corporation (Cordova)		
Count	1	1
Col %	6.3%	11.1%
Kikkitagruk Inupiat Corporation (Kotzebue)		
Count	1	
Col %	6.3%	
Tatitlek Corporation		
Count	10	7
Col %	62.5%	77.8%
VOTE IN LAST NATIVE VILLAGE CORP. ELECTION?		
No		
Count	3	2
Col %	20.0%	22.2%
Yes		
Count	12	7
Col %	80.0%	77.8%
HAS VIEW OF LEADER CHANGED SINCE EVOS?		
Do Not Know		
Count	1	
Col %	5.9%	
No		
Count	13	9
Col %	76.5%	81.8%
Yes		
Count	3	2
Col %	17.6%	18.2%

(continued)

Table V-36. Political Activities, Tatitlek

	STUDY YEAR	
	1991	1993
WHY POST EVOS VIEW OF LEADERS		
No Response		
Count		2
Col %		50.0%
Do Not Know		
Count	1	
Col %	33.3%	
Trust		
Count	1	1
Col %	33.3%	25.0%
Awareness/involvement		
Count	1	1
Col %	33.3%	25.0%
Lifestyle		
Count	1	
Col %	33.3%	
Political awareness		
Count		1
Col %		25.0%

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Table V-37. Significance of Place, Tatitlek

	STUDY YEAR	
	1991	1993
MAIN REASON MOVED TO COMMUNITY		
Born or reared here		
Count	8	7
Col %	44.4%	63.6%
Relatives (family)		
Count	1	
Col %	5.6%	
Married a person born or reared here		
Count	3	1
Col %	16.7%	9.1%
Employment reasons		
Count	2	1
Col %	11.1%	9.1%
Housing/property		
Count	2	
Col %	11.1%	
Size of the community		
Count		1
Col %		9.1%
Quality of Life		
Count	1	
Col %	5.6%	
Natural disasters forced movement		
Count	1	1
Col %	5.6%	9.1%
LIVE HERE: WHERE PERSON IS FROM		
No		
Count	11	5
Col %	61.1%	45.5%
Yes		
Count	7	6
Col %	38.9%	54.5%
LIVE HERE: RELATIVES LIVE HERE		
No		
Count	8	3
Col %	44.4%	27.3%

(continued)

Table V-37. Significance of Place, Tatitlek

	STUDY YEAR	
	1991	1993
Yes		
Count	10	8
Col %	55.6%	72.7%
LIVE HERE: MARRIED PERSON FROM HERE		
No		
Count	8	6
Col %	44.4%	54.5%
Yes		
Count	10	5
Col %	55.6%	45.5%
LIVE HERE: ALWAYS LIVED HERE		
No		
Count	12	3
Col %	66.7%	27.3%
Yes		
Count	6	8
Col %	33.3%	72.7%
LIVE HERE: FRIENDS LIVE HERE		
No		
Count	11	2
Col %	61.1%	18.2%
Yes		
Count	7	9
Col %	38.9%	81.8%
LIVE HERE: HUNTING & FISHING HERE		
No		
Count	7	1
Col %	38.9%	9.1%
Yes		
Count	11	10
Col %	61.1%	90.9%
LIVE HERE: JOB OPPORTUNITIES HERE		
No		
Count	11	7
Col %	61.1%	63.6%
Yes		

(continued)

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Table V-37. Significance of Place, Tatitlek

	STUDY YEAR	
	1991	1993
Count	7	4
Col %	38.9%	36.4%
LIVE HERE: EDUCATIONAL OPPORTUNITIES		
No		
Count	17	5
Col %	94.4%	45.5%
Yes		
Count	1	6
Col %	5.6%	54.5%
LIVE HERE: COST OF LIVING		
No		
Count	8	6
Col %	44.4%	54.5%
Yes		
Count	10	5
Col %	55.6%	45.5%
LIVE HERE: HOUSING AVAILABLE		
No		
Count	7	6
Col %	38.9%	54.5%
Yes		
Count	11	5
Col %	61.1%	45.5%
LIVE HERE: STORES		
No		
Count	18	11
Col %	100.0%	100.0%
LIVE HERE: MEDICAL SERVICES		
No		
Count	14	8
Col %	77.8%	72.7%
Yes		
Count	4	3
Col %	22.2%	27.3%
LIVE HERE: OTHER SERVICES		
No		

(continued)

Table V-37. Significance of Place, Tatitlek

	STUDY YEAR	
	1991	1993
Count	15	10
Col %	83.3%	90.9%
Yes		
Count	3	1
Col %	16.7%	9.1%
LIVE HERE: BEAUTY OF AREA		
No		
Count	4	1
Col %	22.2%	9.1%
Yes		
Count	14	10
Col %	77.8%	90.9%
LIVE HERE: SIZE OF COMMUNITY		
No		
Count	7	1
Col %	38.9%	9.1%
Yes		
Count	11	10
Col %	61.1%	90.9%
LIVE HERE: LESS CRIME		
No		
Count	3	3
Col %	16.7%	27.3%
Yes		
Count	15	8
Col %	83.3%	72.7%
LIVE HERE: LESS DRINKING/DRUGS		
No		
Count	12	6
Col %	66.7%	54.5%
Yes		
Count	6	5
Col %	33.3%	45.5%
LIVE HERE: NECESSARY PERSONAL FREEDOMS		
No		
Count	6	3

(continued)

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Table V-37. Significance of Place, Tatitlek

	STUDY YEAR	
	1991	1993
Col %	33.3%	27.3%
Yes		
Count	12	8
Col %	66.7%	72.7%
LIVE HERE: RECREATIONAL OPPORTUNITIES		
No Response		
Count		1
Col %		9.1%
No		
Count	10	3
Col %	55.6%	27.3%
Yes		
Count	8	7
Col %	44.4%	63.6%
OTHER REASONS FOR LIVING IN COMMUNITY		
Quality of Life		
Count	2	2
Col %	40.0%	100.0%
Not here by choice		
Count	3	
Col %	60.0%	
MAIN REASON REMAINING IN COMMUNITY		
No Response		
Count		2
Col %		18.2%
Do Not Know		
Count	2	
Col %	11.1%	
Born or reared here		
Count	2	3
Col %	11.1%	27.3%
Relatives (family)		
Count	3	1
Col %	16.7%	9.1%
Friends		

(continued)

Table V-37. Significance of Place, Tatitlek

	STUDY YEAR	
	1991	1993
Count		1
Col %		9.1%
Employment reasons		
Count	2	
Col %	11.1%	
Environmental qualities		
Count	2	1
Col %	11.1%	9.1%
Size of the community		
Count		1
Col %		9.1%
Quality of Life		
Count	7	1
Col %	38.9%	9.1%
This is where they established their home		
Count		1
Col %		9.1%
POST-EVOS: CHANGE IN LIKING COMMUNITY		
Less		
Count	4	1
Col %	28.6%	10.0%
Same		
Count	9	8
Col %	64.3%	80.0%
More		
Count	1	1
Col %	7.1%	10.0%
POST-EVOS: WHY CHANGE IN LIKING COMMUNITY		
No Response		
Count		1
Col %		50.0%
Financial situation worse		
Count	1	
Col %	20.0%	

(continued)

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Table V-37. Significance of Place, Tatitlek

	STUDY YEAR	
	1991	1993
Other reasons		
Count	3	
Col %	60.0%	
Increased appreciation of surroundings		
Count	1	
Col %	20.0%	
Dissatisfaction about Exxon		
Count		1
Col %		50.0%
RATHER LIVE IN ANOTHER COMMUNITY		
Do Not Know		
Count	1	
Col %	5.6%	
No		
Count	10	8
Col %	55.6%	72.7%
Yes		
Count	7	3
Col %	38.9%	27.3%
EXPECT TO LIVE IN REGION WHEN OLD		
Do Not Know		
Count	2	
Col %	11.1%	
No		
Count	7	1
Col %	38.9%	9.1%
Yes		
Count	9	10
Col %	50.0%	90.9%
CONFIDENT ABOUT HUNT/FISH/GATHERING		
Do Not Know		
Count	4	
Col %	23.5%	
No		
Count	4	7
Col %	23.5%	63.6%

(continued)

Table V-37. Significance of Place, Tatitlek

	STUDY YEAR	
	1991	1993
Yes		
Count	9	4
Col %	52.9%	36.4%
WHY UNCONFIDENT ABOUT HUNTING/FISHING/GATHERING		
Increased restrictions		
Count	2	2
Col %	28.6%	28.6%
Uncertainty about the future		
Count	3	2
Col %	42.9%	28.6%
Uncertainty about food safety		
Count		2
Col %		28.6%
Vulnerable to environmental damage		
Count	3	1
Col %	42.9%	14.3%
Miscellaneous reasons		
Count		1
Col %		14.3%
Reduced resource availability		
Count		4
Col %		57.1%
CONTINUE TO LIVE HERE IF NO WILD FOOD		
Do Not Know		
Count		2
Col %		18.2%
No		
Count	10	1
Col %	55.6%	9.1%
Yes		
Count	8	8
Col %	44.4%	72.7%

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Table V-38. Effectiveness of Oil Spill Responses, Tatitlek

	STUDY YEAR	
	1991	1993
EFFECTIVENESS EVOS: US COAST GUARD		
No Response		
Count	1	
Col %	5.9%	
Do Not Know		
Count	1	4
Col %	5.9%	36.4%
Not Effective		
Count	3	2
Col %	17.6%	18.2%
Somewhat		
Count	6	3
Col %	35.3%	27.3%
Effective		
Count	6	2
Col %	35.3%	18.2%
EFFECTIVENESS EVOS: ADEC		
No Response		
Count	1	
Col %	5.9%	
Do Not Know		
Count		3
Col %		27.3%
Not Effective		
Count	2	1
Col %	11.8%	9.1%
Somewhat		
Count	9	3
Col %	52.9%	27.3%
Effective		
Count	5	4
Col %	29.4%	36.4%
EFFECTIVENESS EVOS: INSURANCE COMPANIES		
No Response		
Count	1	
Col %	6.7%	

(continued)

Table V-38. Effectiveness of Oil Spill Responses, Tatitlek

	STUDY YEAR	
	1991	1993
Do Not Know		
Count	7	
Col %	46.7%	
Not Effective		
Count	4	
Col %	26.7%	
Somewhat		
Count	2	
Col %	13.3%	
Effective		
Count	1	
Col %	6.7%	
EFFECTIVENESS EVOS: LOCAL NATIVE PROFIT		
No Response		
Count	2	
Col %	11.8%	
Do Not Know		
Count	4	6
Col %	23.5%	54.5%
Not Effective		
Count	5	1
Col %	29.4%	9.1%
Somewhat		
Count	1	3
Col %	5.9%	27.3%
Effective		
Count	5	1
Col %	29.4%	9.1%
EFFECTIVENESS EVOS: NATIVE NON-PROFITS		
No Response		
Count	1	
Col %	5.9%	
Do Not Know		
Count	4	6
Col %	23.5%	54.5%

(continued)

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Table V-38. Effectiveness of Oil Spill Responses, Tatitlek

	STUDY YEAR	
	1991	1993
Not Effective		
Count	1	
Col %	5.9%	
Somewhat		
Count	7	4
Col %	41.2%	36.4%
Effective		
Count	4	1
Col %	23.5%	9.1%
EFFECTIVENESS EVOS: BOROUGH GOVERNMENT		
No Response		
Count	1	
Col %	100.0%	
Do Not Know		
Count		2
Col %		100.0%
EFFECTIVENESS EVOS: VILLAGE CORPORATION		
No Response		
Count	1	
Col %	5.9%	
Do Not Know		
Count	4	3
Col %	23.5%	27.3%
Not Effective		
Count	1	
Col %	5.9%	
Somewhat		
Count	4	4
Col %	23.5%	36.4%
Effective		
Count	7	4
Col %	41.2%	36.4%
EFFECTIVENESS EVOS: CITY COUNCIL		
No Response		
Count	2	
Col %	66.7%	

(continued)

Table V-38. Effectiveness of Oil Spill Responses, Tatitlek

	STUDY YEAR	
	1991	1993
Somewhat		
Count	1	1
Col %	33.3%	50.0%
Effective		
Count		1
Col %		50.0%
EFFECTIVENESS EVOS: IRA COUNCIL		
No Response		
Count	2	
Col %	11.8%	
Do Not Know		
Count	1	3
Col %	5.9%	27.3%
Somewhat		
Count	7	4
Col %	41.2%	36.4%
Effective		
Count	7	4
Col %	41.2%	36.4%
EFFECTIVENESS EVOS: CHAMBER OF COMMERCE		
No Response		
Count	1	
Col %	50.0%	
Do Not Know		
Count	1	
Col %	50.0%	
EFFECTIVENESS EVOS: COMMERCIAL BUSINESSES		
No Response		
Count	1	
Col %	20.0%	
Do Not Know		
Count	2	2
Col %	40.0%	66.7%
Somewhat		
Count	1	1

(continued)

1-71-4PRINT

Table V-38. Effectiveness of Oil Spill Responses, Tatitlek

	STUDY YEAR	
	1991	1993
Col %	20.0%	33.3%
Effective		
Count	1	
Col %	20.0%	
EFFECTIVENESS EVOS: COMMERCIAL FISHING GROUPS		
No Response		
Count	1	1
Col %	7.7%	9.1%
Do Not Know		
Count	3	4
Col %	23.1%	36.4%
Somewhat		
Count	5	2
Col %	38.5%	18.2%
Effective		
Count	4	4
Col %	30.8%	36.4%
EFFECTIVENESS EVOS: OTHER BUSINESS GROUPS		
No Response		
Count	1	
Col %	33.3%	
Do Not Know		
Count	1	
Col %	33.3%	
Effective		
Count	1	
Col %	33.3%	
EFFECTIVENESS EVOS: SCHOOLS		
No Response		
Count	1	
Col %	6.3%	
Do Not Know		
Count	4	
Col %	25.0%	

(continued)

Table V-38. Effectiveness of Oil Spill Responses, Tatitlek

	STUDY YEAR	
	1991	1993
Somewhat		
Count	6	
Col %	37.5%	
Effective		
Count	5	
Col %	31.3%	
EFFECTIVENESS EVOS: CHURCHES		
No Response		
Count	1	
Col %	5.9%	
Do Not Know		
Count	2	
Col %	11.8%	
Not Effective		
Count	1	
Col %	5.9%	
Somewhat		
Count	6	
Col %	35.3%	
Effective		
Count	7	
Col %	41.2%	
EFFECTIVENESS EVOS: HEALTH SERVICES		
No Response		
Count		1
Col %		9.1%
Do Not Know		
Count		2
Col %		18.2%
Somewhat		
Count		4
Col %		36.4%
Effective		
Count		4
Col %		36.4%

(continued)

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Table V-38. Effectiveness of Oil Spill Responses, Tatitlek

	STUDY YEAR	
	1991	1993
EFFECTIVENESS EVOS: MEDICAL PROFESSION		
No Response		
Count	1	
Col %	5.9%	
Do Not Know		
Count	3	
Col %	17.6%	
Not Effective		
Count	2	
Col %	11.8%	
Somewhat		
Count	5	
Col %	29.4%	
Effective		
Count	6	
Col %	35.3%	
EFFECTIVENESS EVOS: HEALTH AIDES		
No Response		
Count	1	
Col %	5.9%	
Do Not Know		
Count	3	
Col %	17.6%	
Not Effective		
Count	1	
Col %	5.9%	
Somewhat		
Count	5	
Col %	29.4%	
Effective		
Count	7	
Col %	41.2%	
EFFECTIVENESS EVOS: SOCIAL WORKERS		
No Response		
Count	1	
Col %	7.1%	

(continued)

Table V-38. Effectiveness of Oil Spill Responses, Tatitlek

	STUDY YEAR	
	1991	1993
Do Not Know		
Count	4	2
Col %	28.6%	40.0%
Not Effective		
Count	4	
Col %	28.6%	
Somewhat		
Count	3	2
Col %	21.4%	40.0%
Effective		
Count	2	1
Col %	14.3%	20.0%
EFFECTIVENESS EVOS: LOCAL LAW ENFORCEMENT		
No Response		
Count	1	
Col %	5.9%	
Do Not Know		
Count	3	2
Col %	17.6%	40.0%
Not Effective		
Count	6	1
Col %	35.3%	20.0%
Somewhat		
Count	4	1
Col %	23.5%	20.0%
Effective		
Count	3	1
Col %	17.6%	20.0%
EFFECTIVENESS EVOS: STATE LAW ENFORCEMENT		
No Response		
Count	1	1
Col %	6.3%	14.3%
Do Not Know		
Count	6	5

(continued)

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Table V-38. Effectiveness of Oil Spill Responses, Tatitlek

	STUDY YEAR	
	1991	1993
Col %	37.5%	71.4%
Not Effective		
Count	2	
Col %	12.5%	
Somewhat		
Count	5	1
Col %	31.3%	14.3%
Effective		
Count	2	
Col %	12.5%	
EFFECTIVENESS EVOS: EXXON		
No Response		
Count	1	
Col %	5.9%	
Do Not Know		
Count	1	2
Col %	5.9%	18.2%
Not Effective		
Count	9	4
Col %	52.9%	36.4%
Somewhat		
Count	4	4
Col %	23.5%	36.4%
Effective		
Count	2	1
Col %	11.8%	9.1%
EFFECTIVENESS EVOS: VECO		
No Response		
Count	1	
Col %	5.9%	
Do Not Know		
Count	1	4
Col %	5.9%	36.4%
Not Effective		
Count	2	1

(continued)

Table V-38. Effectiveness of Oil Spill Responses, Tatitlek

	STUDY YEAR	
	1991	1993
Col %	11.8%	9.1%
Somewhat		
Count	9	5
Col %	52.9%	45.5%
Effective		
Count	4	1
Col %	23.5%	9.1%
EFFECTIVENESS EVOS: ALYESKA PIPELINE		
No Response		
Count	1	
Col %	5.9%	
Do Not Know		
Count	2	3
Col %	11.8%	27.3%
Not Effective		
Count	4	4
Col %	23.5%	36.4%
Somewhat		
Count	7	4
Col %	41.2%	36.4%
Effective		
Count	3	
Col %	17.6%	
EFFECTIVENESS EVOS: PWS REGIONAL CITIZENS ADVISORY COUNCIL		
Somewhat		
Count		1
Col %		100.0%
EFFECTIVENESS EVOS: OTHER MULTI-AGENCY RESPONSE GROUPS FOR EVOS		
Effective		
Count		1
Col %		100.0%
EFFECTIVENESS EVOS: OILED MAYORS		
Do Not Know		
Count		5

(continued)

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Table V-38. Effectiveness of Oil Spill Responses, Tatitlek

	STUDY YEAR	
	1991	1993
Col %		45.5%
Somewhat		
Count		4
Col %		36.4%
Effective		
Count		2
Col %		18.2%

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Table V-39. Subsistence Food Safety Information, Tatitlek

	STUDY YEAR	
	1991	1993
ADEQUATELY INFORMED ABOUT FOOD SAFETY?		
No		
Count	9	3
Col %	56.3%	27.3%
Somewhat		
Count	1	2
Col %	6.3%	18.2%
Yes		
Count	6	6
Col %	37.5%	54.5%
WHY NOT ADEQUATELY INFORMED		
Do Not Know		
Count	1	
Col %	10.0%	
Lack of clear or definitive advice		
Count	3	1
Col %	30.0%	25.0%
Received incomplete information		
Count	3	1
Col %	30.0%	25.0%
Received no information		
Count	1	1
Col %	10.0%	25.0%
Did not trust or believe advice		
Count	2	
Col %	20.0%	
Untimely		
Count	1	
Col %	10.0%	
Did not trust results because of Exxon involvement		
Count	2	
Col %	20.0%	
Believe information was deliberately withheld		
Count	6	
Col %	60.0%	
There were not enough tests		
Count		1
Col %		25.0%

(continued)

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Table V-40. OCS Development Effects, Tatitlek

	STUDY YEAR	
	1991	1993
OCS EFFECT: FISH		
Do Not Know		
Count	5	4
Col %	27.8%	36.4%
Decrease		
Count	9	7
Col %	50.0%	63.6%
No Change		
Count	4	
Col %	22.2%	
OCS EFFECT: SHELLFISH		
Do Not Know		
Count	7	4
Col %	38.9%	36.4%
Decrease		
Count	9	7
Col %	50.0%	63.6%
No Change		
Count	2	
Col %	11.1%	
OCS EFFECT: MARINE MAMMALS		
Do Not Know		
Count	5	2
Col %	27.8%	18.2%
Decrease		
Count	10	8
Col %	55.6%	72.7%
No Change		
Count	3	1
Col %	16.7%	9.1%
OCS EFFECT: LAND MAMMALS		
Do Not Know		
Count	6	4
Col %	33.3%	36.4%
Decrease		
Count	6	6

(continued)

Table V-40. OCS Development Effects, Tatitlek

	STUDY YEAR	
	1991	1993
Col %	33.3%	54.5%
No Change		
Count	5	1
Col %	27.8%	9.1%
Increase		
Count	1	
Col %	5.6%	
OCS EFFECT: BIRDS		
Do Not Know		
Count	5	3
Col %	27.8%	27.3%
Decrease		
Count	9	8
Col %	50.0%	72.7%
No Change		
Count	4	
Col %	22.2%	
OCS DEVELOPMENT = MORE JOBS?		
No Response		
Count	1	
Col %	5.6%	
Do Not Know		
Count	2	1
Col %	11.1%	9.1%
No		
Count	5	5
Col %	27.8%	45.5%
Yes		
Count	10	5
Col %	55.6%	45.5%
CONTAIN AND CLEANUP SMALL OIL SPILL		
Do Not Know		
Count		3
Col %		27.3%
No		

(continued)

1/5/94PRINT

Table V-40. OCS Development Effects, Tatitlek

	STUDY YEAR	
	1991	1993
Count	3	4
Col %	16.7%	36.4%
Maybe		
Count	10	4
Col %	55.6%	36.4%
Yes		
Count	5	
Col %	27.8%	
CONTAIN AND CLEANUP LARGE OIL SPILL		
Do Not Know		
Count		3
Col %		27.3%
No		
Count	16	7
Col %	88.9%	63.6%
Maybe		
Count	2	1
Col %	11.1%	9.1%
ARE YOU IN FAVOR OF THE SEARCH FOR OIL?		
Do Not Know		
Count		1
Col %		9.1%
No		
Count		8
Col %		72.7%
Yes		
Count		2
Col %		18.2%
OPINION ON SEARCH FOR OIL		
No Response		
Count		1
Col %		9.1%
Need to know extent of resource availability and reserves		
Count		1
Col %		9.1%

(continued)

Table V-40. OCS Development Effects, Tatitlek

	STUDY YEAR	
	1991	1993
Not making sufficient use of current resources		
Count		2
Col %		18.2%
Adverse experiences with other development		
Count		1
Col %		9.1%
Pollution concerns and impacts		
Count		2
Col %		18.2%
Aesthetic reasons		
Count		1
Col %		9.1%
Status quo - leave it the way it is		
Count		1
Col %		9.1%
Should explore alternative energy sources, conservation		
Count		1
Col %		9.1%
Adverse impact on subsistence and commercial fishing		
Count		1
Col %		9.1%
Distrust of the oil industry		
Count		2
Col %		18.2%
Disastrous - multi-faceted		
Count		2
Col %		18.2%
Technology needs improvement		
Count		2
Col %		18.2%
Unspecified ecological impacts		
Count		1

(continued)

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Table V-40. OCS Development Effects, Tatitlek

	STUDY YEAR	
	1991	1993
Col %		9.1%
Conditional: in favor if done carefully		
Count		1
Col %		9.1%
ARE YOU IN FAVOR OF THE DEVELOPMENT AND PRODUCTION OF OIL?		
Do Not Know		
Count		1
Col %		9.1%
No		
Count		8
Col %		72.7%
Yes		
Count		2
Col %		18.2%
OPINION ON DEVELOPMENT AND PRODUCTION		
No Response		
Count		1
Col %		9.1%
Do Not Know		
Count		1
Col %		9.1%
Beneficial to the economy		
Count		1
Col %		9.1%
Not making sufficient use of current resources		
Count		2
Col %		18.2%
Adverse experiences with other development		
Count		1
Col %		9.1%
Pollution concerns and impacts		
Count		2
Col %		18.2%

(continued)

Table V-40. OCS Development Effects, Tatitlek

	STUDY YEAR	
	1991	1993
Aesthetic reasons		
Count		1
Col %		9.1%
Status quo - leave it the way it is		
Count		1
Col %		9.1%
Should explore alternative energy sources, conservation		
Count		1
Col %		9.1%
Adverse impact on subsistence and commercial fishing		
Count		1
Col %		9.1%
Distrust of the oil industry		
Count		2
Col %		18.2%
Disastrous - multi-faceted		
Count		2
Col %		18.2%
Technology needs improvement		
Count		2
Col %		18.2%
Do not think there is oil in the area		
Count		1
Col %		9.1%
Unspecified ecological impacts		
Count		1
Col %		9.1%

KCTA PRINT

The Department of the Interior Mission

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places;
and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

The Minerals Management Service Mission

As a bureau of the Department of the Interior, the Minerals Management Service's (MMS) primary responsibilities are to manage the mineral resources located on the Nation's Outer Continental Shelf (OCS), collect revenue from the Federal OCS and onshore Federal and Indian lands, and distribute those revenues.

Moreover, in working to meet its responsibilities, the **Offshore Minerals Management Program** administers the OCS competitive leasing program and oversees the safe and environmentally sound exploration and production of our Nation's offshore natural gas, oil and other mineral resources. The MMS **Royalty Management Program** meets its responsibilities by ensuring the efficient, timely and accurate collection and disbursement of revenue from mineral leasing and production due to Indian tribes and allottees, States and the U.S. Treasury.

The MMS strives to fulfill its responsibilities through the general guiding principles of: (1) being responsive to the public's concerns and interests by maintaining a dialogue with all potentially affected parties and (2) carrying out its programs with an emphasis on working to enhance the quality of life for all Americans by lending MMS assistance and expertise to economic development and environmental protection.