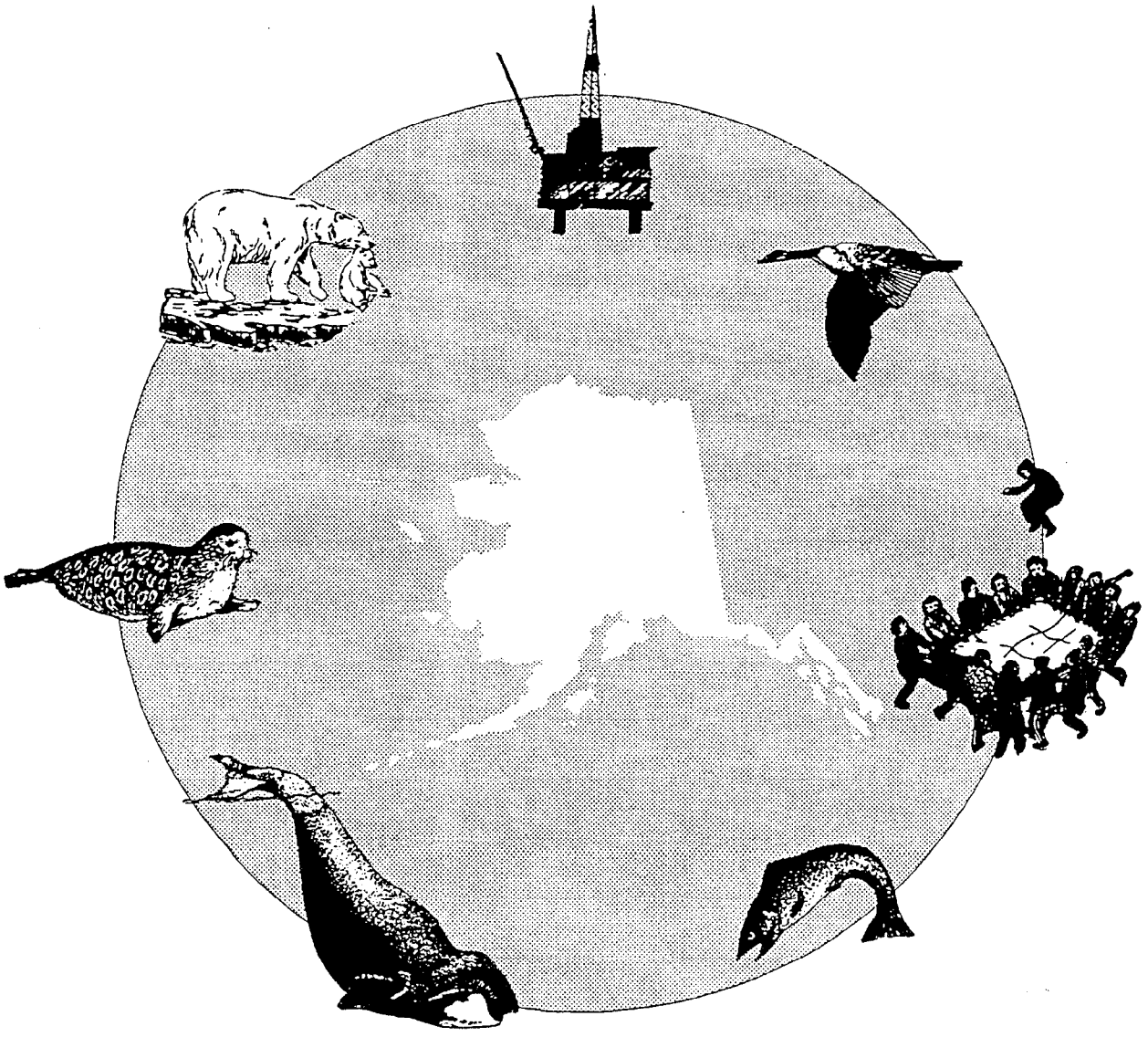
OCS Study
MMS 95-013

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

IV. Kodiak Island



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

IV. Kodiak Island

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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

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 X: KODIAK CITY

by

Craig Mishler, Rachel Mason, and Jeffrey Barnhart

CLIMATE, SETTING, AND GENERAL HISTORY

The city of Kodiak, situated in Chiniak Bay on the forested northeast corner of Kodiak Island in the Gulf of Alaska, is characterized by a cool, mild, rainy climate--similar to that found in southeast Alaska. Especially in the summer months, fog often shrouds the city, making it treacherous for boat navigation and for aircraft attempting to fly in and out. High winds are also a frequent problem for boats and aircraft. The average temperature is about 40.3 degrees Fahrenheit. In the winter Kodiak is about 10-15 degrees warmer than the mainland and the harbor remains ice-free.

An early Russian American outpost first established at Three Saints Bay near the present-day village of Old Harbor in 1784 was moved to its new site at St. Paul's harbor in the spring of 1792 primarily for access to timber for shipbuilding. The fur baron Alexander Baranof is thus credited with founding Kodiak in that year, making it one of North America's oldest cities. Alutiiq-speaking peoples, also known as Pacific Eskimos or "Aleuts", inhabited Kodiak Island from prehistoric times, and there was extensive intermarriage between Alutiiqs and the Russian colonists. Kodiak became part of the United States when Alaska was purchased from Russia in 1867.

In 1898 the U.S. Department of Agriculture started an experimental cattle-breeding ranch in Kalsin Bay. While this industry never flourished and suffered much from brown bear predation, there are still several cattle ranches operating on the road system today. In 1904 the Alaska Commercial Company began running a small saltery in Kodiak, specializing in red and coho salmon bellies. In 1911 Kadiak Fisheries began operating the first salmon cannery in Kodiak, but growth was slow because on June 6, 1912, Kodiak was rocked by a series of severe earthquakes signaling the eruption of Mt. Katmai, and within hours the community was covered by an 18-inch thick layer of volcanic ash (Roppel 1986:33, 233-242). By the 1930s Kodiak still maintained a fairly small population of 400-800 persons without any public utilities or health facilities (Chaffin 1983:53). By this time, however, commercial fishing, which had been focused at Karluk on the west side of the island since the 1880s, became the town's major industry, with pink salmon and herring leading the way to development (Will 1981:82).

America's entry into World War II caused Kodiak to boom. A U.S. naval base, which was later converted to a U.S. Coast Guard base in 1972, was built in 1939, and by 1941 over 10,000 military personnel and many civilians had moved to the community. Gun emplacements were built at Cape Chiniak, Spruce Cape, and Miller Point, spurring the construction of new roads. In 1940 Kodiak was incorporated as a first class city, electing its first mayor and city council. When the military pulled most of its troops out after the war, Kodiak's population dropped sharply but then quickly grew again in response

to a developing commercial seafood industry. In the 1940s, 1950s, and 1960s king crab and shrimp were the dominant targeted species.

On March 27, 1964, Kodiak's harbor was devastated by the Great Alaskan Earthquake and tsunami, inundating the downtown business district and waterfront canneries and destroying the boat harbor. Many boats were swept out to sea and the harbor went nearly dry as residents scrambled to high ground. Losses to fishing boats alone were estimated at $7 million.

Almost immediately afterward, the city began rebuilding, assisted by low interest loans from the Federal Bureau of Commercial Fisheries and the Small Business Administration. The waterfront and boat harbor were rebuilt by the Army Corps of Engineers, and water and sewer lines were replaced. According to Will (1981:106), "By 1966 the city had already made a healthy recovery." In 1978 the Kodiak Island Borough was organized with Kodiak selected as the administrative center.

Today Kodiak's boat harbor has expanded across the channel to Dog Bay on Near Island, nearly doubling in moorage space and hosting large deep water trawlers as well as smaller boats. Today the community is served by a modern airport, the Alaska Marine Highway ferry system, and a network of approximately 75 miles of roads that connect Kodiak City to Monashka Bay and Anton Larson Bay to the north, and to Women's Bay, Kalsin Bay, Chiniak, and Pasagashak Bay to the south. These roads provide important access to subsistence resources such as salmon, clams, mussels, crab, deer, and berries.

PREVIOUS RESEARCH

The Division of Subsistence in collaboration with the Kodiak Area Native Association (KANA) conducted research in Kodiak City, the Kodiak road system, and the Coast Guard Base in 1983, pertaining to resource harvest activities that occurred in 1982/83 (KANA 1983; Schroeder et al. 1987). This earlier survey did not ask about employment, demographic information, and other socioeconomic variables, and was not always species-specific. For example, all "ducks" were lumped together without regard to species. Certain kinds of across the board comparisons, therefore, are not possible. Nevertheless, it is still useful to make some basic comparisons to these earlier years, particularly in the pounds harvested per capita for all resources. Data from this earlier study have been entered into the Division's Community Profile Database (Scott et al. 1993).

STUDY GOALS AND RESEARCH OBJECTIVES

A three-year subsistence harvest survey of Kodiak City was conducted by the Alaska Department of Fish and Game, Division of Subsistence, to determine levels of subsistence takes of wild resources and use areas by local residents. For Year One, 1991, the period between January 1 and December 31, 1991, the harvest survey was administered throughout the Kodiak road-connected area (Fig. I-1). The road-

connected area included three areas: Kodiak City, the road system outside of the city (including Bell's Flats and Chiniak), and the U.S. Coast Guard Base. A substantial portion of the harvest survey research was funded by the Kodiak National Wildlife Refuge, U.S. Fish & Wildlife Service. Additional funding for the social effects survey, which was only administered within the city limits, was provided by the U.S. Minerals Management Service.

During Years Two and Three, which covered the calendar years 1992 and 1993, the harvest surveys and social effects surveys were done only within the city limits of Kodiak, rather than throughout the entire road-connected area. Partial funding for both the 1992 and 1993 surveys was provided by the U.S. Minerals Management Service.

Methodology

A questionnaire was developed which addressed the harvest, distribution, and use of a wide variety of wild resources including salmon, other finfish, marine invertebrates, marine mammals, game, birds and bird eggs, and wild plants. The questionnaire was verbally administered in face-to-face interviews with the heads of households, but participation was strictly voluntary. Household demographic information and participation in commercial fisheries was also collected, along with data about cash employment and other income (for more detail, see Chapter I above). Those households that harvested heavily and extensively were asked to plot their resource use areas on clear mylar overlays of U.S. Geological Survey maps showing Game Management Unit 8, which covers the entire Kodiak Island Borough. The original maps have been turned over to the Kodiak National Wildlife Refuge.

Fieldwork

Interviews in Kodiak for Year One commenced on February 20, 1992, and were completed on May 28, 1992. Interviewing was done in three stages starting with the Kodiak road system, then moving on to the Coast Guard Base, and concluding with Kodiak City. Staff members assigned to the project included Rachel Mason, Jeff Barnhart, Joe Dinnocenzo, Vicki Vanek, David Pestrikoff, and Craig Mishler, who supervised the team. Don Callaway of the U.S. Minerals Management Service also did several days of interviewing in Kodiak City. The average harvest survey interview took 1.01 hours (61 minutes) to complete, not including the mapping of resource use areas (Table I-7). On average, the social effects questionnaire took an additional 0.79 hours (47 minutes) for a combined total of just a little under two hours (Tables I-8).

Kodiak City surveys for Year Two were begun on January 12, 1993, and completed on April 28. Subsistence Division staff who participated in the Kodiak City interviews were Rachel Mason (field supervisor), Jeff Barnhart, Vicki Vanek, and Joe Dinnocenzo. Each harvest survey took an average of 0.45 hours (27 minutes) and the social effects questionnaires required an average of another 0.61 hours (37 minutes) (Tables I-7, I-8). The field work in Kodiak City was spread out over three and a half months

because two staff members, Mason and Vanek, participated in two other ongoing Division research projects during this period, and these projects involved extensive travel.

Kodiak City surveys for Year Three were begun on January 24, 1994, with the target of 100 surveys completed by March 4. Five additional panel households were completed by June 30, 1994. Subsistence Division staff who participated in the Kodiak City interviews were Jeff Barnhart, Joe Dinnocenzo, and Vicki Vanek. In Year Three the average harvest survey interview was completed in 0.53 hours (32 minutes), and the social effects survey required an additional 0.59 hours (35 minutes) (Tables I-7, I-8).

Sample Selection and Achievement

For Year One, 1991, road system households were randomly selected from a set of plat maps and a master printed list of addresses supplied by the Kodiak Island Borough's assessor's office. Coast Guard households were randomly drawn from housing maps supplied by the U.S. Coast Guard. The Kodiak City sample was stratified into two parts: 113 households were picked from a previous randomly drawn Minerals Management Service Social Indicators panel, and another 129 households came from a new random selection taken from the plat map and list supplied by the Kodiak Island Borough assessor's office. From this initial pool of Kodiak City households, we completed 100 interviews. Another 31 households were interviewed from the Coast Guard, and 76 households were interviewed on the road system. Altogether, from the three areas combined, we interviewed 207 households, slightly exceeding our combined goal of 200. We were unable to contact 85 households, had 62 refusals, and encountered 25 vacant structures (Tables I-4, X-1). Ten additional households were contacted but were not interviewed because they were new to the community and did not meet the minimum Alaskan residency requirement.

Compared to the road system and the Coast Guard Base, contacting households and securing interviews inside Kodiak City was very difficult and required a considerable amount of additional effort. The refusal rate in the City was also higher, at 29.1 percent. By the time we got to our list of City residents, the spring frenzy of participants in the Kodiak fishing industry had begun. Fishermen and cannery workers were hard to find or to pin down for interviews.

In the Kodiak City group, we found the need for a Spanish language interpreter. While the several Filipino households that came up in the survey all spoke English well enough to conduct interviews, three Hispanic households indicated they needed a Spanish interpreter. This was accomplished with the assistance of Alex Button, whom we hired on a translator's contract. As it turned out, she only needed to do two interviews (one Hispanic household had only recently moved in and did not meet our 6 months residency requirement). Neither of the two Hispanic households we interviewed did any harvesting at all, but they did get resources from the canneries where household members worked.

Although it was our original intention to sample evenly from all three subcommunities, a somewhat larger sample (18.34 percent) was drawn from the Kodiak Coast Guard base than from the other areas due to the need to obtain a statistically meaningful number of households (at least 30) from its relatively small

estimated subpopulation of 611 persons. Altogether, 6.45 percent of all the identified households from the city, the road system, and the base were sampled (Table I-4, X-1).

For Year Two, 1992, Kodiak City households were again divided into two strata, with 50 respondents targeted from Year One's randomly selected panel and 50 newly drawn at random, for a total goal of 100 surveys. However, since we were only able to locate and interview 31 of the 50 panel members from 1992, the newly drawn second stratum had to be increased to 69 in order to reach our goal of 100 respondents. From the two combined strata we had a total of 33 refusals, 12 no contacts, 8 vacant structures, and 8 non-resident (newly arrived) households (Table I-5, X-1). We discovered that 10 of last year's panel members had moved away. Altogether, we attempted to interview 161 households in order to meet our goal of 100 interviews.

For Year Three, 1993, Kodiak City households were once again divided into two strata, with 40 respondents targeted from the first year's randomly selected panel and 60 newly drawn at random, for a total goal of 100 surveys (Table I-6). However, since we were only able to initially locate and interview 24 of the 40 panel members from 1992, the newly drawn second stratum had to be increased to 76 in order to reach our goal of 100 respondents. From the two combined strata we had a total of 40 refusals, 22 no contacts and one vacant structure (Table I-6, X-1). We discovered four of last year's panel members had moved away. For Year Three we changed the residency requirement during the study year from six months to one month to accommodate those newcomers to the community who announced their intentions of staying on as permanent residents. Altogether, we attempted to contact 168 households in order to meet our goal of 100 interviews which we exceeded by completing 105.

In order to better understand if resource harvests have stabilized or returned to prespill levels we added back two comparison questions in 1993 for each resource category. The first compares the 1993 harvest year with the previous year. The second compares the 1993 harvest year with the year before the *Exxon Valdez* oil spill, 1988. For each we asked if the harvest increased, decreased, or stayed the same and, if there was a change, why the changed occurred. This line of questioning went very well, providing an insight into harvest changes between the years.

DEMOGRAPHY

According to the 1990 U.S. Census (Table I-1), the population in Kodiak City was 6,365, up 34 percent from 1980, when 4,756 persons were counted. These numbers include only those living within the political boundaries of the city limits and not the remainder of the road system or the Coast Guard base (Table X-3). Working with Kodiak Island Borough plat maps, we estimated the population of Kodiak City in January 1992 to be 5,556. With the Coast Guard Base and the Kodiak road system added to the City, we estimated the combined population to be 10,169. This total estimate was reached by computing the mean

number of residents in the 207 randomly sampled households (3.2 persons) and expanding this mean to an estimated total of 3,207 households (Table I-4).

In 1991, the overall Kodiak area population was 52.8 percent male and 47.2 percent female. The community had a relatively young population, with 72.4 percent under the age of 40, 28.7 percent under the age of 15, and only 5.8 percent over the age of 60. The mean age for all residents was 29.1 years (Table X-2).

Kodiak City contrasts with the road system area because it includes a larger number of apartment buildings, duplexes and triplexes, and mobile homes. People in senior citizens' housing and those living on boats in the harbor were also included in the Kodiak City harvest survey sample. The population of Kodiak City includes more Alaska Natives, Filipinos, and Hispanics than either the road system or Coast Guard base. Filipinos and Hispanics have close economic ties to canneries, all of which are located within the city limits, and many of them walk the short distances to and from work. Our sample showed the Kodiak City community to be 14.2 percent Alaska Native. For 1990, the U.S. Census reported that 12.7 percent of Kodiak City's population was Alaska Native (Alaska Department of Labor 1991:93). By contrast, the Coast Guard base consisted largely of young Caucasian families with small children, and no Alaska Natives. The mean length of residency for heads of households in the combined sample for Kodiak City, the Kodiak road system, and the Coast Guard base was 14.1 years (Table X-2).

For Year Two of the study (1992), we estimated that there were 4,768 people permanently living inside the Kodiak City limits. This was a decrease from the 5,556 we estimated the year before. The number of estimated households also dropped to 1,753, compared to 1,877 in 1991 (Tables I-4 and I-5). The mean household size of 2.72 persons compares with 2.96 persons in 1991. The mean age in sampled households was 31.3 years, slightly above the 29.1 years computed in 1992. Of those heads of households who were interviewed, 16 percent said they were Alaska Natives, up from 14.2 percent in 1991 (Fig. X-3, Table X-2).

A population pyramid (Fig. X-3) and population profile (Table X-4) show that a very large segment of the sampled population, 35.7 percent, was between the ages of 30 and 45, while 32.1 percent were under the age of 20. Males outnumbered females by 51.5 percent compared to 48.5 percent. The mean length of residency for heads of households in Kodiak City was 14.9 years, very comparable to what it was for the combined area in 1991.

The influx of newcomers is especially striking, with 25 percent of the households indicating they arrived in the community since 1989, the year of the *Exxon Valdez* oil spill (Fig. X-5). Overall then, while Kodiak City's population seemed to be decreasing and its households getting smaller, the community was accommodating a very high percentage of newcomers.

Since eight percent of all Kodiak City residents surveyed were employed by the federal government and only a few federal agencies maintain offices in Kodiak, it could be that some of these newcomers were Coast Guard personnel living off base. Coast Guard personnel are normally transferred

out and replaced every three years. However, we would expect that with this sharp influx of newcomers, the city would actually be growing rather than shrinking in population. Part of the observed decrease in Kodiak City's population may therefore be due to families relocating outside the city limits to surrounding suburban areas on the road system.

In January, 1994 we estimated the 1993 population of Kodiak to be 6,058 (Fig. X-4, Table X-5), a 27 percent increase over Year Two and a 9 percent increase over Year One. The number of households had skyrocketed to 1,994, a 13.7 percent increase over Year Two and a 6.2 percent increase over Year One. In Year Three the mean household size of 3.04 was significantly larger than the 2.72 of Year Two but just a little above the 2.96 of Year One, while the mean age of 30.7 years was just slightly under what it was in Years One and Two. Of those persons interviewed, only 12.4 percent identified themselves as Alaska Natives, a sharp decline from 16 percent in 1992 and 17 percent in 1993 but similar to the results of the 1990 U.S. Census.

The population pyramid for Year Three (Fig. X-4) shows that a large segment of the sampled population, 28.5 percent, was still between the ages of 30 and 45, although this was quite a bit less than reported for 1992. At the same time, 34.8 percent were declared to be under 20 years of age, an increase over Year Two that suggests the current trend is towards a somewhat younger population. Males just barely outnumbered females by 50.2 percent compared to 49.8 percent (Table X-5). The mean length of residency for heads of households was 14.8 years, a very slight decrease from Year Two and a very slight increase over Year One.

MONETARY ECONOMY

Commercial fishing, including both harvesting and processing, is the principal industry in Kodiak. Nevertheless, government employment (local, state, and federal) is also an important segment of the economy. In 1991, the U.S. Coast Guard base, which is located on Women's Bay near Kodiak, had 1,000 personnel on active duty plus 1,500 dependents. During the late 1960s Kodiak not only rebuilt itself after the 1964 earthquake and tsunami but actually boomed due to the developing king crab fishery. By 1966, there were eighteen seafood plants in Kodiak City alone, with eight more located elsewhere around Kodiak Island (Chaffen et al. 1983:55). In 1981 and again in 1988, the city was the number one seafood port in the United States, based on the ex-vessel value of its landed product (Chaffen et al. 1983:73). Kodiak competes for this prestigious position with Dutch Harbor, Alaska, and several east and west coast ports.

With the collapse in shrimp and king crab stocks in the early 1980s, much effort is now directed at bottomfish such as black cod (sablefish), Pacific cod (gray cod), and pollock, a deep water fish used in the manufacture of surimi. The pollock fishery is essentially restricted to large mid-water trawlers and bottom draggers, while black cod and gray cod are pursued both by trawlers and longliners. In recent years many fishermen have turned to harvesting gray cod in pots. Although the staple money fish for most small boats

is still salmon, many of the smaller boats participate in halibut openings and also fish tanner crab, herring, and cod during the winter months. This commercial harvest is extremely important to subsistence users, since many fishermen bring home or give away part of their surplus commercial catch. In fact, 14.9 percent of all resources harvested by Kodiak area residents in 1991 came from fish and marine invertebrates removed from commercial catches (Table X-21).

Year One

Our survey showed that in 1991 each employed adult in Kodiak City held a mean of 1.4 jobs and worked an average of 9.9 months (Table X-6). The average total household income was $59,934 and the average per capita income was $18,516. Earned income was $52,334 per household and $16,169 per capita (Table X-7). Each Kodiak household also received an average of $7,600 and each person an average of $2,348 in other income--mostly from retirement pensions, social security, and Alaska Permanent Fund dividends (Table X-8).

The most important contributor to earned income was commercial fishing, at 18.8 percent of the total. Next were service industries at 11.0 percent, local government and education at 9.8 percent, retail trade at 9.3 percent, construction at 7.7 percent, state government at 7.5 percent, transportation, communications, and utilities at 6.1 percent, finance, insurance, and real estate at 5.3 percent, and manufacturing (mostly cannery processing) at 4.7 percent. It is somewhat surprising that in this fishing-focused community, mean household income earned from a combination of local, state, and federal government employment actually exceeded what was earned from commercial fishing (Fig. X-6, Table X-7).

While personal and household incomes were relatively high, the cost of living in Kodiak as calculated by the American Chamber of Commerce Researchers Association (ACCRA) Index for the first quarter of 1992 was approximately 45 percent higher than the national average. Groceries were 61 percent higher, housing 57 percent higher, utilities 73 percent higher, and health care 72 percent higher. Miscellaneous goods and services were 30 percent higher, and transportation was 2 percent higher. The ACCRA composite index showed Kodiak's cost of living to be 31 percent higher than Anchorage, 30 percent higher than Fairbanks, and 33 percent higher than Juneau (Stevens 1992).

Each Kodiak City household included in the 1991 sample reported using a wide range of equipment which they used for getting subsistence foods (Table X-9). The average total replacement cost for all this equipment was $27,589. Average fuel costs were estimated at $1,035 per household, and the mean annual cost of maintenance and supplies was estimated at $1,170. An estimated 33 percent or one-third of the households reported borrowing a skiff with an outboard motor from other households, 25 percent reported borrowing boats with inboard motors from other households, 25 percent borrowed crab pots, and 29 percent borrowed nets. Thirty percent of the households loaned out their fishing tackle to others, and 21 percent loaned out their freezers.

Year Two

The average household income from all sources for Kodiak City in 1992 was $66.064, up strongly from 1991, when households received $59,934 (Tables X-7, X-10). The mean per capita of earned income, was also sharply up, coming in at $24,288 compared to $18,516 in 1991, indicative that both individuals and households were making more.

The most important contributor to earned income was commercial fishing, representing 18.7 percent of the total income per capita, followed by service industries at 13.3 percent, local government and education at 11.9 percent, wholesale and retail trade at 11.4 percent, and transportation, communications, and utilities at 9.7 percent (Fig. X-7, Table X-10). When combined, local, state, and federal government agencies were responsible for 27 percent of the community's per capita earned income. On paper, Kodiak City's economy appears to have a great deal of diversity, but the reality is that commercial fishing provides the underpinning for all this diversity.

Of the estimated 3,559 adults in the community, 88.7 percent were gainfully employed, holding an average of 1.6 jobs and working an average of 10.3 months during the year, a fractional increase over 1991, when people reported an average of 1.4 jobs and worked an average of 9.9 months during the year. In 1992 an estimated 56.1 percent of the City's adults were employed year-round. Every household reported someone working in at least one job (Table X-6).

The mean per capita in other income for Kodiak City in 1992 was $2,709, up from the $2,348 reported in 1991 (Tables X-8, X-11). The largest share of this other income came from the Alaska Permanent Fund Dividend, with substantial amounts also coming from retirement pensions and social security. Reductions in dividends and pension and retirement moneys during 1992 were more than offset by increases in longevity bonuses, social security payments, child support, and rental income.

Year Three

The mean per capita of earned income for Kodiak City in 1993 was $17,704, about $1,600 more than it was in 1991 (Table X-12). There was a large loss of income in commercial fisheries and construction but big gains in cannery processing, retail trade and almost a doubling in services industry income. The average total per capita income for every man, woman, and child was $21,258, which was just a little below the 1993 Alaskan statewide average of $23,008 (Table X-12; Alaska Dept. of Labor 1994). Average total household income for Kodiak City in 1993, however, was $64,583, down from 1992, but well above what it was in 1991 and nearly equal to the statewide 1993 average of $64,652. Household incomes remained relatively stable in 1993, however, only because the average household size increased: in 1991 we estimated a mean of 3.2 persons per household; in 1992 this mean dropped sharply to 2.72 persons, and in 1993 it climbed back up to 3.04 persons (Table X-2).

At the same time, the cost of living in Kodiak rose 7 percent over what it was in 1991. According to the American Chamber of Commerce Researchers Association, Kodiak's cost of living in the fourth quarter

of 1994 increased to 52 percent above the national average. Grocery items were 51 percent higher, utilities were 89 percent higher, health care 78 percent higher, and housing 64 percent higher. Miscellaneous goods and services were 36 percent higher and transportation 12 percent higher. The ACCRA composite index showed Kodiak's cost of living to be 15 percent higher than Anchorage and 26 percent higher than Seattle (Kodiak Daily Mirror, 4/18/94:3)

For the first time in the three study years, service industries outgained commercial fishing at 20.5 percent of the 1993 total earned income (Fig. X-8, Table X-12). Commercial fishing still ranked second, at 12.6 percent, but this was down strongly from 1991, when it represented 18.3 percent of the total earned income, and from 1992, when it represented 18.7 percent of the total. Following hard on the heels of commercial fishing was local government and education at 12.4 percent, retail trade at 8.2 percent, transportation, communications, and utilities at 8.2 percent, manufacturing (principally cannery processing) at 5 percent, construction at 3 percent, and finance, insurance, and real estate at 3 percent. This major decline in commercial fisheries income largely reflects a statewide collapse in salmon prices in 1993 (Table X-14) rather than a decline in employment, for employment in commercial fisheries still accounted for 30 percent of all jobs, while service industries only accounted for 9 percent of all jobs (Fig. X-8). Limited Entry salmon permit holders with Kodiak residences in 1993 included 169 with purse seine permits, 18 with beach seine permits, and 106 with set gillnet permits (ADF&G 1993, pp. 59-60). Despite their steep decline from 1992, salmon prices in 1993 were roughly the same as they were in 1991 (Table X-14).

Although harvest quantities were good and the sudden downswing in ex-vessel value of Kodiak commercial salmon in 1993 was actually no worse than 1991, fishermen nevertheless struggled to make ends meet due to lower prices. Compared to 1987, a pre-spill year, fish prices in 1993 collapsed to less than half of what they were. Nevertheless, ex-vessel values have increased due to larger catch volumes, bigger, newer, and faster boats with advanced sonar capability, and more efficient gear. This trend towards higher volume catches has tended to benefit heavily capitalized high-tech purse seiners at the expense of low-tech gear operators such as beach seiners and set gillnetters. In order to maintain incomes at 1987 levels, Kodiak fishermen in the 1990s employing all gear types have had to catch a great many more fish. In 1987, 7.7 million fish were caught; 1993 saw a record high harvest of 39.3 million fish but this did not translate into record profits. Harvest volume in 1993 increased 500 percent over 1987, but the total ex-vessel value of the salmon increased by only 17 percent, not even keeping pace with inflation (ADF&G 1993:61-62).

Out of 4,177 adults in the community, 84.6 percent were gainfully employed, holding an average of 1.5 jobs and working an average of 9.8 months during the year. The months worked during the year showed a decline from both 1991 and 1992. In 1993 an estimated 50.5 percent of all adults were working year-round, down from 56.1 percent the year before but virtually the same as 1991. Every household reported someone working at least one job (Table X-6).

The mean for other income in Kodiak City for 1993 was $3,554 per capita, over $1,200 more than it was in 1991 and $844 more than it was in 1992 (Table X-13). The largest single source of unearned income came from interest and dividends, followed by Alaska Permanent Fund dividends, retirement pensions, and social security. Interest and dividend income, at $1,021 per capita, is largely responsible for the giant increase in total other income during Year Three. This dividend and interest was exclusive of the Alaska Permanent Fund dividend. In 1991, interest and dividend income was just $293 per capita, and in 1992 it dropped to $154 per capita. Why then such a sudden increase in 1993? The answer would seem to lie in random variation due to sample selection, which in 1993 picked up a substantial number of households with retired persons. These retirees have undoubtedly invested very heavily in stocks and bonds, certificates of deposit, and savings accounts which returned fairly large incomes. Three of these retirees were part of our panel from 1991 and 1992, but two additional ones were not, and some of the other high unearned income households consisted of commercial fishermen and teachers with large earned incomes.

RESOURCE HARVESTS AND USES: YEAR ONE

Participation Rates

Participation rates in Kodiak City were fairly high: 98.6 percent of all households used at least one wild resource and 93.0 percent harvested at least one wild resource. Some 80.5 percent gave away at least one resource, and a much larger number, 93.2 percent, reported receiving at least one resource (Table X-15).

Individual participation rates were also substantial. In the expanded estimates, 25.6 percent of those in road-connected area hunted game and 34.6 percent processed game, while 64.1 percent fished and 61.9 percent processed fish. The percentage of those hunting or trapping furbearers, on the other hand, was quite low, at 2.0 percent, and the number processing furbearers was 2.7 percent. The percentage of individuals gathering plants and berries was 63.2 percent, and the percentage processing plants and berries was 55.9 percent, more than half the community (Table X-16).

Households in the combined Kodiak road-connected area used an average of 12.0 different resources and harvested an average of 7.6 different kinds of resources (Table X-15). Altogether, residents harvested approximately 88 different kinds of resources, and these resources were identified in the questionnaire by species except under the category of wild plants and berries.

In addition to the residents of the Kodiak road system, Kodiak City households shared resources with at least fifteen other Alaskan communities (Table XI-17). As a regional hub community, they gave resources most notably to Anchorage, but also to Fairbanks, Larsen Bay, Old Harbor, Port Lions, Ouzinkie, Kenai, Soldotna, Palmer, and Wasilla. In turn they received resources from at least twenty-five communities from around the state.

Harvest Quantities

The mean per capita harvest for all resources in the Kodiak road-connected area was 140.1 pounds edible weight and the mean household harvest was 444.2 pounds (Table X-20). Those residing within the Kodiak City limits had a slightly lower harvest, estimated at 122.6 pounds edible weight per capita, with a mean household harvest of 363 pounds (Scott et al. 1993).

In looking at various resource categories, it is important to note that Kodiak road system area residents harvested 96.6 pounds of fish per capita, about equally divided between the five species of salmon at 50.6 pounds (36.1 percent of the total harvest), and other finfish, at 46.0 pounds (32.8 percent of the total) (Table X-20). By gear type, 28.3 pounds of salmon per household or 17.6 percent were removed from commercial catches, while 48.7 pounds or 30.4 percent were taken by subsistence gill nets, 1.6 pounds or 1.0 percent were taken by subsistence seines, and 81.9 pounds or 51.0 percent were caught by rod and reel (Tables X-22, X-23).

For non-salmon finfish, the largest harvest by volume was represented by halibut, at 31.4 pounds per person, although gray cod, Dolly Varden, black cod, lingcod, flounder, skate, rainbow trout, and steelhead were also utilized. By gear type, 31.4 pounds of non-salmon fish per household or 21.6 percent were removed from commercial catches, 15.4 pounds or 10.5 percent were taken with subsistence gear (either gill nets, seines, or hand lines), 98.6 pounds or 67.7 percent with rod and reel, and 0.3 pounds or 0.2 percent by ice fishing (Tables X-25, X-26, X-27).

As for land mammals, Kodiak residents harvested an average of 25.7 pounds per person (18.5 percent of the total harvest) and 20.7 pounds of this total were deer, while 1.8 pounds were moose, and 1.6 pounds were elk. Only 0.7 pounds per capita of small land mammals were taken, consisting entirely of snowshoe hare and feral rabbits. Marine mammal harvests were fairly negligible at just 0.2 pounds per person (0.2 percent of the total harvest), and all of these harvests were represented exclusively by harbor seals.

Marine invertebrates, at 12.0 pounds per person (8.6 percent of the total), figured importantly, with 6.3 pounds of various kinds of crab taking up most of the volume. Squid, at 0.9 pounds per person, led the way among other shellfish, along with smaller amounts of octopus, butter clams, shrimp, and scallops.

Birds and bird eggs did not show up very strongly in 1991, showing 0.5 pounds per capita (about one-half of 1 percent of the total harvest). Mallard ducks and goldeneyes were the species most often targeted, at 0.1 and .07 pounds per person, respectively. A small number of Canadian geese and seagull eggs were also taken.

Wild plants and berries were fairly well-represented, with 5.1 pounds per capita (3.7 percent of the total harvest). Of this amount the vast majority, 4.7 pounds, was represented by various kinds of wild berries which grow along the road system and up on the mountain sides.

RESOURCE HARVESTS AND USES: YEAR TWO

Participation Rates

Participation rates were again very high. At least 99 percent of all households used at least one resource, and 91 percent harvested at least one wild resource. Some 80 percent reported giving away at least one resource, and 94 percent reported receiving at least one resource. The mean number of resources given away per household was 4.5, and the mean number received per household was 6.8. In 1992/93, households in Kodiak City used an average of 11.5 resources and harvested an average of 6.6 resources out of 124 reported. These resources were identified in the questionnaire by species except under the category of wild plants and berries (Table X-16).

Harvest Quantities

The mean per capita harvest for all resources in Kodiak City in 1992 was 159.4 pounds edible weight, and the mean household harvest was 433.8 pounds (Table X-28). This represents an increase in the average per capita harvest from 140.1 in 1991 (Table X-20) but a decrease in the average household harvest. This decrease may be attributed to a smaller mean household size of 2.72 persons, compared with 2.96 persons the year before (Table X-2).

With regard to the various resource categories, Kodiak City residents harvested 123.4 pounds of fish per capita, which was 77.4 percent of all the resources harvested and up substantially from the 96.5 pounds per capita harvested in 1991. The five species of salmon added up to 73.2 pounds, and other finfish totaled 50.1 pounds, up from 45.9 pounds the year before. Sockeyes were the most heavily harvested salmon species at 32.4 pounds per person, followed by cohos or silvers at 25.4 pounds, and chinooks (king salmon) at 6.7 pounds per person (Table X-28).

By weight, 33.1 percent of all salmon was caught with subsistence gear, 24.9 percent was removed from commercial catches, and 42 percent was taken with rod and reel. Subsistence catches were split between set gill nets (averaging 52.0 pounds per household), purse seines (12.6 pounds), and dip nets (1.3 pounds). As in 1991, no beach seine harvests were recorded. Salmon removed from commercial catches yielded 49.7 pounds per household, and another 83.6 pounds per household were taken by rod and reel (Tables X-29, X-30, X-31).

For 1992 we asked respondents for the first time to distinguish between beach seines and purse seines. This distinction was more important in the smaller villages than in Kodiak City, where no use of beach seine gear was reported. Purse seining was used by only one percent of the sampled households, matched by the one percent who dipnetted. The most popular gear type was set gill nets, used by 26.0 percent of the households (Table X-32). In total pounds, sockeye salmon caught in set gill nets were responsible for 57.2 percent of the total salmon harvest, and coho salmon caught in set gill nets totaled 34.4 percent of the total salmon harvest.

Among non-salmon finfish, the most heavily targeted species was halibut, at 36.4 pounds per capita (72.5 percent of the total finfish). Much smaller amounts, each at less than 4 pounds per capita, were taken of gray cod, black cod, lingcod, greenling, flounder, sole, herring, red and black rockfish, sculpin, smelt, pollock, steelhead, and rainbow trout (Table X-33, X-34, X-35).

Kodiak City residents took an average of 15.2 pounds of land mammals in 1992, representing 9.5 percent of the overall harvest. Game harvests were heavily dominated by deer at 13 pounds (85.5 percent of the total), with additional small amounts of caribou, elk, and snowshoe hare. The sharing of game meat was impressive. About 72 percent of all households reported using game but only 30 percent actually harvested it. Marine mammal harvests were again very small, limited to 0.2 pounds per person of harbor seal. Nevertheless, the Division of Subsistence did an independent survey of Alaska Native marine mammal hunters in Kodiak City for the National Marine Fisheries Service that showed an estimated 1992 calendar year take of 36.9 harbor seals. No sea lions were reported taken (Wolfe and Mishler 1993).

Marine invertebrate harvests exceeded those for land mammals, registering 14.3 pounds per capita. Crab was the most heavily targeted species, at 8.8 pounds per person, about equally divided between Dungeness, kings, and Tanners. Chitons (bidarkis), clams (butter, razor, pink, and horse), cockles, scallops, mussels, octopus, sea cucumbers, sea urchins, shrimp, snails, and limpets (China caps) were also reported in small quantities.

Birds and bird eggs totaled 0.6 pounds per person, and a little more than half of this amount, 0.4 pounds, came from various species of ducks. A few ptarmigan were reported, along with a few geese and snipe. Some sea gull eggs were gathered, but only 1 percent of the households used and harvested bird eggs. Bird hunting appears to be a fairly specialized activity, with 9 percent of the sampled households harvesting the resource and 21 percent using it.

With regard to plants and berries, Kodiak City residents harvested 5.6 pounds per person in 1992. This amount was up very slightly from 1991, when 5.1 pounds per person were reported. Of this amount, 5.1 pounds were various species of berries, and the rest was made up of other plants, greens, and mushrooms. A few households (3 percent) reported eating kelp, but all of it was received. Some 30 percent of all households used firewood, and 28 percent harvested their own.

In retrospect, 1992 Kodiak City residents focused more than half of their harvest efforts on seven species. By weight, sockeye, king, and coho salmon, halibut, black-tailed deer, and Dungeness, king, and Tanner crab made up 54 percent of the total harvest.

RESOURCE HARVESTS AND USES: YEAR THREE

Participation Rates

Participation continued to be high. In 1993 an estimated 99.1 percent of all Kodiak City households used at least one wild resource, 90.5 percent attempted to harvest at least one resource, and 87.6 percent

succeeded in harvesting at least one resource (Table X-15). About 97.1 percent reported receiving at least one resource, and 83.8 percent reported giving away at least one resource. The mean number of resources received per household was 7.0, and the mean number of resources given away was 4.5. Both of these numbers represent slight increases over Year Two. In 1993 Kodiak City households used an average of 11.8 resources and harvested an average of 7.4 resources out of the 26 reported. Resource quantities were identified in the questionnaire by species except for wild plants and berries.

Individual participation rates were also high (Table X-16). An estimated 22.6 percent of Kodiak City residents hunted game, while 32.0 percent processed game. More impressively, 63.0 per percent fished and 58.6 percent processed fish. The percentage of people trapping furbearers was rather small, at 3.1 percent, and those processing furbearers was also small, at 3.5 percent. The percentage gathering berries, plants, and firewood surpassed those who fished, at 65.5 percent, while those processing wild plants stood at 55.8 percent.

Harvest Quantities

For Year Three (1993), the mean per capita harvest for all resources in Kodiak City was 151.1 pounds per capita usable weight, while the mean household harvest was 458.9 pounds (Table X-36). This is a decrease from the mean per capita harvest of 159.4 pounds in 1992, but an increase over 140.1 pounds per capita in 1991 (Fig. X-9). At the same time, the mean household harvest of 458.9 pounds shows an increase over both 1991 and 1992.

As to the diverse resource categories, Kodiak residents harvested 107.7 pounds of fish per capita. This was below the 123.3 pounds per capita in 1992 but above the 96.6 pounds per capita for all fish in 1991. In 1993 the five species of salmon totaled 47.7 pounds, for 31.6 percent of the total harvest. Sockeyes were almost in a dead heat with coho salmon, harvested at 18.3 and 18.1 pounds per person, respectively, but the quantity of both species was considerably down from 1992. Only a few pounds per capita of chinook, chum, and pink salmon were taken.

By gear type and weight, 38.8 percent of all salmon were caught with subsistence gear, 7.2 percent was removed from commercial catches, and more than half (54 percent) were taken with rod and reel. Subsistence catches were split between set gill nets (averaging 28.3 pounds per household), beach seines (3.6 pounds), purse seines (24 pounds), and dip nets (0.4 pounds). This is the first time in the three years of the study that beach seine harvests were reported. Salmon removed from commercial catches produced 10.5 pounds per household, and 78.3 pounds were accounted for by rod and reel (Tables X-37, X-38, X-39).

Set gill netting was the most popular subsistence salmon gear type, reported by 18 percent of the households. Purse seining was used by only 1.9 percent of the households, and both beach seining and dipnetting were reported by only one percent of the households. About 9.5 percent of Kodiak City households took salmon from commercial catches, and 58.1 percent used rod and reel. In total pounds,

sockeye salmon caught in gill nets made up 64.8 percent of the total salmon harvest by gear type, and coho salmon caught in gill nets made up 27.4 percent (Table X-40).

In the category of non-salmon finfish, the per capita harvest was 60.0 pounds, accounting for 39.7 percent of all the resources harvested. The most heavily targeted species was again halibut, at 42.4 pounds per person. Gray cod was a distant second at 4.8 pounds per person, followed by Dolly Varden at 3.3 pounds per person, black rockfish at 3.1 pounds, lingcod at 2 pounds, and herring at 1.9 pounds. Very small quantities of black cod, kelp greenling, flounder, sole, Irish Lord, capelin, rainbow trout, and steelhead were also recorded (Tables X-41, X-42, X-43).

The harvest of land mammals in 1993 increased to 23.2 pounds per capita, representing 15.2 percent of the total harvest. The favored species for hunters was deer, at 15.4 pounds per capita (66.4 percent of the total), with 5.1 pounds per capita of moose and smaller amounts of elk and goat. The sharing of deer was again very strong, with 26.7 percent of the households harvesting and 69.5 percent using the resource. Edible small game was restricted to a few snowshoe hares at about 0.6 pounds per capita. No marine mammal harvests were reported by survey respondents; however, the Division of Subsistence did an independent survey of Alaska Native marine mammal hunters in Kodiak City for the National Marine Fisheries Service that showed an estimated 1993 calendar year take of 12.7 sea lions and 7.0 harbor seals (Wolfe and Mishler 1994:pp. C-130-131).

Marine invertebrates were taken at 9.5 pounds per capita, for 6.3 percent of the total harvest. The large majority of this amount was made up of Tanner, king, and Dungeness crab (5.1 pounds), and butter, razor, littleneck, and pinkneck clams (3.5 pounds). Chitons, octopus, mussels, cockles, scallops, urchins, and snails were also taken in small quantities.

Birds and bird eggs were again very low, averaging only 0.7 pounds per capita. Very small numbers of scoter, harlequin, goldeneye, bufflehead, merganser, and mallard ducks were taken, along with a few ptarmigan and a few herring gull eggs. An estimated 20.0 percent of all households reported using birds, and an estimated 14.3 percent harvested them.

For plants and berries, Kodiak residents took an average of 10.0 pounds per person, with most of this coming from various kinds of berries (8.7 pounds) and other plants, greens, and mushrooms (1.2 pounds). A few households reported getting kelp for food and for fertilizer, but the amounts were extremely small. About 35.2 percent of all households said they used firewood in 1993.

Year Three was unusual in that, for the first time, per capita non-salmon fish harvests exceeded those for salmon. This ratio is in rather stark contrast to the communities of Larsen Bay, Port Lions, and Ouzinkie, where the ratio of salmon to other finfish taken by weight was 2, 3, or 4 to 1. In 1991 the amounts of salmon and non-salmon fish harvested per capita by Kodiak City residents was nearly equal. It is hypothesized that such a discrepancy has little or nothing to do with local abundance or scarcity but rather with the non-Native ethnic preference for halibut over salmon.

DISCUSSION

Harvest Trends

The per capita harvest of all wild resources in 1991 by residents of the Kodiak road system area of 140.1 pounds was not substantially different than the 147.2 pounds per capita recorded for 1982/83 for the same area (Scott et al. 1993). Figures X-10 and Table X-19 compare harvests in pounds per person at the resource category level for four different study years. Kodiak City subsistence harvest quantities have been extremely stable during the past decade, as shown by estimated harvest amounts for 1982/83, 1991, 1992, and 1993. A comparison of per capita harvests over these years shows a variation of less than 20 pounds per person (Fig. X-9).

With respect to overall harvest trends, it is noteworthy that during 1992 per capita salmon harvests increased along with other finfish and land mammals, while shellfish harvests decreased slightly along with bird and egg harvests and plants and berries (Figs. X-11, X-13) Marine mammal harvests, on the other hand, remained about the same as the year before. The net increase of 19.4 pounds in per capita harvests for all resources between 1991 and 1992 can be attributed to fish and large game, which more than offset the small declines in other resource categories.

Diet is a social and cultural construct, something that becomes readily apparent when Kodiak City is compared to the outlying villages on Kodiak Island. Diet breadth and composition of harvests are additional points of difference between Kodiak City subsistence patterns and the subsistence adaptations of the outlying villages. It was observed above that Kodiak City residents caught more halibut and other finfish than salmon in 1993, and that this harvest composition may well be indicative of ethnic differences between predominately non-Native and predominately Native communities (Figs. X-11, X-12, X-13, and X-14). In 1993, for example, Kodiak City residents used a mean number of 11.8 different resources, while those in Port Lions used 15.6 resources, Ouzinkie residents 16.2 resources, and Larsen Bay 16.8 resources. As noted below under the section on social effects, most Kodiak City residents have an aversion to eating such creatures as sea urchins and bidarkies, which many Alutiiqs prize highly. Alutiiqs also enjoy eating harbor seals and Steller sea lions, which non-Natives are prohibited from hunting.

Kodiak harvest quantities, in order to become meaningful, must be put into context with other mid-sized coastal fishing communities in Southcentral Alaska. The most readily suitable figures for such comparisons are the mean number of pounds harvested per capita for all resources combined and the mean number of resources harvested by each household. Communities for which such data are available in the Division's Community Profile Data Base are Cordova (1990 population of 2,282), Kenai City (1990 population of 6,327), Homer (1990 population of 3,660), and Sitka (1990 population of 8,558).

In 1991 residents of the Kodiak road-connected area harvested a mean of 140.1 pounds per capita and harvested an average of 7.6 different kinds of resources (Table X-15). Residents of Kodiak City proper, however, harvested 122.6 pounds per capita and harvested 7.3 different kinds of resources. Both figures are somewhat less than the 163.8 pounds per capita taken by Cordova residents in 1985 and considerably

less than the 233.8 pounds per capita harvested by Cordovans in 1988. In 1985 Cordovans harvested an average of 7.2 different resources per household, and in 1988 they harvested 9.7 different kinds of resources (Stratton 1992).

On the other hand, the Kodiak per capita harvest for 1991 is considerably higher than the 104 pounds harvested by Homer residents and almost four times as much as the 37 pounds harvested by Kenai City residents in 1982/83. In that year Homer residents harvested 5 different kinds of resources and Kenai residents harvested 3.2 different kinds of resources (Reed 1985).

Perhaps the best overall statewide comparison for Kodiak in terms of population size, ethnic mix, and offshore island setting is Sitka. In 1987 Sitkans harvested an average of 146.3 pounds per capita and 5.7 different kinds of resources (Scott et al. 1993; Kruse and Frazier 1988). Like Sitka, Kodiak City has been considered by the Alaska Boards of Fish and Game and by the Federal Subsistence Board as borderline between urban and rural. In 1991, the Federal Subsistence Board has designated both communities as rural and therefore entitled to a subsistence harvest preference, and under the provisions of the new 1992 State subsistence law, the State Boards have at this writing allowed both communities to remain inside designated subsistence areas.

From a comparative perspective, Kodiak's 1991 harvest and use of wild resources appears to be substantial and diverse, with the greatest overall volume coming from salmon, halibut, and deer. Many residents expressed the underlying importance of subsistence to their lives and noted that hunting and fishing opportunities along the road system and elsewhere on the island were primary reasons behind their decision to move to and live within the community. Since it is difficult to separate recreational and sports harvests from subsistence harvests, it must be concluded that both kinds of uses contributed strongly in the data collected by this survey.

A significant portion of Kodiak City residents treat subsistence and sports harvesting as synonymous. They fish almost exclusively with rod and reel and go deer hunting more for recreation than for food. Some are catch and release fishermen. Many are retired and harvest crab in subsistence crab pots and sport fish for halibut. Another segment of the population is engaged in commercial fishing and has access to marine resources and deer hunting areas through employment on fishing boats. This segment brings home a substantial amount of fish and crab for home use out of their commercial catch. A third segment of the population consists of minority groups such as Alaska Natives, Filipinos, Koreans, and Hispanics. This segment seems to be focused on shore-based resources such as stream-caught salmon and shellfish.

The most outstanding economic difference between Kodiak City residents and Kodiak village residents is cash income. In 1993 Kodiak City residents earned an average of $21,258 per person, while those in Port Lions made $15,627, those in Larsen Bay made $12,574, and those in Ouzinkie got by on $12,117. The amount of cash income per person in each community is almost inversely proportional to the

pounds per capita of wild foods harvested, with perhaps the best balance of cash income and subsistence harvests being reached in Port Lions.

It is quite remarkable that Kodiak City per capita incomes were almost as stable as per capita harvests. Mean per capita income varied only slightly, by $3,030 over the three study years: in 1991 it was $21,874; in 1992, $24,288; and in 1993, $21,258. As stated above, the decline in per capita and household incomes in 1993 may be attributed to low prices for commercially caught salmon, a mainstay in the entire Kodiak Island economy. Hypothetically, it would appear that when people in Kodiak City benefit from rising incomes, they are inclined to move out and live more independently in smaller households. Conversely, when cash incomes decline, they appear more inclined to come together and reduce living expenses by sharing a common roof. In other words, there is a direct logical connection between per capita incomes and household sizes.

One person said that the Filipinos, Koreans, and Hispanics were leaving Kodiak because of lack of work in the canneries, but we have no evidence to support this. A restriction on pollock quotas in the Bering Sea and the Gulf of Alaska for trawlers has resulted in a loss of winter jobs in seafood processing. One man worked only five months in 1992 and said he had to work two jobs simultaneously to get by. Since cannery workers usually receive a fair amount of fish from the commercial bycatch, this loss of employment has also meant less fish taken home for personal consumption. The general statistics compiled and averaged for all sampled households do not reflect the manner in which many of these ethnic minority households "fell through the cracks."

Many respondents employed by local seafood processors reported a significant decrease in the amount of commercially caught bycatch fish they were able to obtain from the canneries. Historically, cannery workers had access to bycatch or other species not utilized by the cannery. For most of these respondents the fish obtained for free at the canneries represent a large portion of the fish in their diet. Seafood processors no longer allow workers to take bycatch species for home use. State and federal management systems designate certain species as prohibited species during commercial bottom fish fisheries. Processors are legally liable for prohibited species that arrive at their docks. They must be discarded either by dumping at sea or taken to the fish meal plant.

Many Kodiak City respondents contacted during the survey indicated they are presently in dire economic straits, largely as the result of the downturn in commercial fisheries and fish processing. Commercial fishermen, cannery workers, and business owners who were surveyed indicated the local economy is in very poor condition and getting worse. Job and business opportunities are drying up, while at the same time the cost of living is rapidly rising. Many households had less opportunity for non-commercial hunting, fishing, and gathering in 1993. There are a number of reasons for this including both household heads having to work, individuals working two jobs, looking harder for work or because they lacked the money for fuel or gear. However, contrary to expectations, this economic downturn did not translate into a significant increase or decrease of per capita harvests.

Unlike the 1991 and 1993 surveys, the 1992 harvest survey questionnaire contained no questions about the effects of the *Exxon Valdez* oil spill, so the only way respondents could express concerns about the spill was at the end of the interview when they were asked for general comments. In general, however, it appears that for all three study years most people in Kodiak City were not concerned about issues of food safety with respect to the *Exxon Valdez* oil spill. This is partly because each year we found an increasing number of respondents who were not living in Kodiak at the time of the spill, including a few who never even knew there was a spill. In our experience, newcomers do not participate as much in traditional subsistence activities as longer-term residents. It generally requires two or three years to get acquainted with harvest methods and gear types and to become familiar with the seasonal locations of available wild resources.

Ongoing Issues

On the whole, we found Kodiak City residents were quite interested in participating in the harvest survey because they sensed that this research was valuable to the community. This was especially true for households that have historically participated in subsistence activities and depend heavily on subsistence harvests. A number of people were concerned about rumors that Kodiak might in the near future lose either its state recognition as a subsistence area or its federal rural status, or both.

A number of individuals expressed the opinion that they were unhappy with the new federal management system for subsistence and regretted the fact that the state had surrendered its authority in this area. Some want to be able to do subsistence fishing with rod and reel, which is now permitted on federal lands, but there are no federal lands on the road system except for the Coast Guard base, which is off limits to the general public. Many people in Kodiak City don't have enough money to invest in a skiff, outboard motor, and gill net but do have an automobile or truck which gives them access to road system salmon streams.

There is a considerable amount of tension between ethnic minority groups and the Caucasian majority, some of whom accuse Natives and Filipinos of receiving special hunting and fishing rights and think they get special treatment from wildlife protection officers as well. Some are contemptuous over the policy of Native corporations to require hunting permits on Native land. A more generalized dissatisfaction was expressed by several households over the lack of enforcement effort on the Island and perceived widespread abuse of the system.

Many Kodiak City respondents were very concerned about the large number of tourists fishing the roadside streams during 1993. Approximately 2,000 people were brought into Kodiak by the Unification Church for the purpose of fishing in the roadside streams. This resulted in overcrowding conditions along the streams, stream degradation, and many thought, an overharvest of salmon. Kodiak residents that do not possess a skiff and subsistence salmon net must obtain their subsistence salmon by rod and reel, with most of the harvest coming from roadside streams. Some subsistence users using rod and reel said they

were displaced by this large influx of "Moonies," resulting in lower or no harvest of subsistence salmon. A similar kind of complaint was heard from Ouzinkie residents who feel that the "Moonies" boats, a fleet of Boston whalers, are threatening their subsistence (see Chapter XII). However, Unification Church leaders responded that all of their people were legally licensed and followed all the regulations. It should be noted that the Unification Church has a controlling interest in International Seafoods and Pacific Pearl Seafoods, two local canneries, and a catcher-processor ship, and has built up a strong economic presence in the community since the early 1980s. However, if the sports catch from nonresidents has a negative effect on subsistence use of salmon, then management and policy decisions regarding rod and reel gear for subsistence and personal use may need to be addressed. At this point, we are not aware of any data compiled on non-resident harvests of salmon from Kodiak road system streams, but in 1994 the numbers of "Moonie" fishermen on the road system were way down and there were no complaints raised except for boats sighted around Afognak Island (Len Schwartz, ADF&G, Division of Sports Fish, personal communication).

SOCIAL EFFECTS

Each year we found an increasing number of respondents who were not living in Kodiak City at the time of the oil spill and for whom a large number of social effects questions were not applicable. This was due to the surge of immigration into the community taking place since 1989 (Fig. X-5). Since our overall population estimates did not grow significantly over the three study years when this tide of newcomers peaked, we must conclude that the community is increasingly characterized by a highly mobile and transient population.

Results of the social effects survey administered to respondents in Kodiak City during Year One show that 36 percent of the households ate wild foods the day before the survey, but only 26 percent said that wild foods were a main part of a meal on that day (Table X-44). Results were about the same in Years Two and Three. An estimated 92 percent said that eating bidarkies was not important to them, and of those few who said they were important, 62.5 percent felt they were safe for children to eat. In Years Two and Three, 11 percent or less of the respondents said they ate bidarkies. Of those who ate bidarkies, a solid majority felt they were safe to eat in local harvest areas.

Respondents were strongly divided over the safety of clams for children's consumption. Although 51.5 percent said they were safe, 33 percent felt they were not safe, and 15.5 percent were not sure. Of those who felt they were unsafe, 50 percent were fearful of paralytic shellfish poisoning (PSP) while 20.6 percent were worried about oil contamination, and 8.8 percent were concerned about pollution from other sources. In Years Two and Three more than 75 percent of those interviewed said they ate clams, and while the majority again felt they were safe for children to eat, nearly one in four respondents felt they were not safe, citing PSP as the main reason. (Table X-45). Of those interviewed in Year One, 95 percent said that

seal oil and seal meat were not important foods. In Years Two and Three 10 percent or less said they ate seal oil and seal meat, but of those who did, the overwhelming majority felt seals taken from the local area were safe to eat.

Opinions over the health of various land and sea mammals, fish, and shellfish used for subsistence were largely split and varied considerably over the three study years. For deer in Year One, 40.9 percent thought there were less compared to the year before the oil spill; 31.8 percent thought they were about the same; 8 percent thought there were more deer; and a substantial 19.3 percent said they did not know. In Year Two, 51.4 percent sensed that there were fewer deer than there were in 1988, but by Year Three only 29.6 percent thought there were fewer. Each year the number of respondents saying they didn't know increased. There was a general lack of consensus on brown bear, harbor seal, sea lion, sea ducks, rockfish, salmon, and clams. In Year One, a slim majority of 51.1 percent were convinced that Dolly Varden populations were about the same as they were before the spill, while another 50.6 percent felt that halibut numbers were unchanged. In years Two and Three these majorities dissolved, with opinions about evenly divided between "less", "same", and "don't know". Reflecting their lack of use of sea urchins, octopus, and bidarkies, an overwhelming majority of respondents claimed they didn't know about the relative abundance or scarcity of these species (Table X-46).

An estimated 71 percent of the households in Year One said that children from other households did not assist them in harvesting and processing wild foods, and of the 29 percent that said they did, only 16.7 percent said the oil spill affected the way they participate with children in subsistence activities. Responses in Years Two and Three were nearly identical (Table X-47).

More than 89 percent of all households for all three study years engaged in sharing. In Year One a substantial majority of the households responded that their sharing patterns for wild resources, for hunting and fishing gear, for money, and for labor were about the same in 1991 as in the previous year and about the same as it was before the oil spill. In Years Two and Three the largest percentage of respondents, although not always a clear majority, responded that their sharing of these things remained the same as the year before and the same as before the spill. The only noticeable change was that the percentage of people sharing more wild resources compared to the previous year and compared to before the spill increased by 7 to 10 percent over the three study years (Table X-48).

Asked about the importance of sharing, many people made eloquent and articulate statements. Each of the following responses came from a different household:

We need to share to survive.
That's the way we were raised.
There's always a time when you need help.
We're all here to help each other.
Sometime down the road I might need to rely on someone else.
It helps the world be a better place to live.
It gives responsibility and involvement.
Sharing is an important human relation concept.

It's a better way to be.
It's the only moral thing to do.
It's good to share when people need it.
The world would be a better place if there was less emphasis on profit and more on community.
When we don't have enough we don't, but if there's over abundance we give away, rather than waste.
What comes around goes around.
It's a way of showing friendship.
I am an old man and half crippled. I can't do the things I used to do. I depend on sharing for resources.
If you're not in the family then they don't usually give you.
I only share with people who really need it.
Traditionally, sharing is a way of life.
Why not share? Native families live that way. We give fish heads to older widows.
It's something I grew up with.
It helps build friendships and community.
If they need help because of physical handicap or lack of knowledge I'll help them. If they are lazy, I won't help them.

There was no consensus at all regarding change in the influence of elders and seniors in the community over the three study years. Responses were about evenly divided between "Do not know," "Decreased," "Increased," and "Stayed the Same."

Political activism was moderate, with most respondents from Year One saying they never or only sometimes attended public meetings before the spill and in the previous year. In Year Two, 47.2 percent said they attended public meetings more than they did before the oil spill, but by Year Three this had dropped to just 15.7 percent. However, in Year One 58.6 percent voted in the last city council election and 70.7 percent voted in the last state-wide election. The percentage of persons voting in the last statewide election was sustained in Year Two and then increased to 77.2 percent during Year Three (Table X-49). The vast majority of respondents during all three years said their view of what makes a good leader has not changed since the *Exxon Valdez* oil spill.

As to reasons why people moved to Kodiak City, 61.3 percent during Year One said it was for employment reasons, 9.4 percent said it was due to the quality of life, 8.5 percent said it was because they were born or raised there, and 6.6 percent said it was because they had relatives there. In Years Two and Three employment still ranked as the leading reason for moving to the community. The most important reasons given during all three study years for why respondents continue to live in Kodiak were job opportunities, hunting and fishing opportunities, recreational opportunities, the beauty of the area, the size of the community, friendships, necessary personal freedoms, and less crime. In Year One an estimated 80.0 percent said they liked the community just as much after the oil spill as before, and only 37.4 percent said they would rather live in another community. In Years Two and Three the number liking the community just as much as before the spill increased to as high as 85.9 percent. In Year One respondents were equally divided when asked whether they expect to be living in the community when they are old: 46.7 percent said "yes", 46.7 percent said "no", and 6.5 percent were undecided. In Years Two and Three

there were just about as many "yes" answers but fewer "no" answers and more (17.0 percent) who were undecided (Table X-50).

A rather large number of respondents in Year One (42.1 percent) said they did not feel confident about hunting, fishing, and gathering opportunities in the future. When asked why, 33.3 percent of this group cited increased restrictions and regulations, 20.0 percent mentioned increasing population pressure, 15.6 percent thought the area was vulnerable to environmental damage, and 13.3 percent felt that Native ownership of lands would restrict access. The percentage lacking confidence in the future actually increased in Years Two and Three, when 47.0 percent and 60.0 percent, respectively, expressed this insecurity. A strong majority of 62.6 percent said they would continue to live in Kodiak even if no wild foods were available, while 32.7 percent said they would probably move. This sentiment was expressed again with less strength in Years Two and Three.

Rating the effectiveness of various agencies and organizations in responding to the spill, only volunteer clean-up groups were highly regarded as "effective." Volunteer groups were not specifically listed on the survey but were mentioned by several respondents each year (Table X-51). A fairly large segment responded with "don't know" to the long series of questions in this category.

A slim majority of 54.0 percent of those surveyed in Year One said they felt adequately informed about the safety of eating subsistence foods after the spill, while 29.0 percent said they were not. Of those who were not, 23.3 percent said they received no information at all, 16.3 percent cited a lack of clear or definite advice, and 16.3 percent said they did not trust or believe the advice they were given. Similar responses were given for Years Two and Three (Table X-52). A range of interesting comments were made on this question that lend insight into public perceptions and the breakdown of communications. A large number of those surveyed were totally unaware of the sample collection and testing done by the National Marine Fisheries Service for the Division of Subsistence and for Exxon (Walker and Field 1990). Each of these comments came from different households:

There was adequate information whether I obtained it or not.
No one said anything to me.
There seemed to a great deal of confusion.
It was not detailed enough, or not definitive.
Don't think much information has been made available.
Tests were done on salmon, crab, halibut but don't know what results were.
The State could have been more prompt in reporting results to the people.
There was no real information. They just said it was being checked and was all right. They had no guiding to go by. We may be eating fish now that's contaminated.
Didn't think got the word out well.
Didn't hear anything in 1991.
" We're looking into that." Quote from public oil spill meetings.
They didn't really know, and they tried to minimize.
Don't think there was enough local input or agreement on accuracy. Different groups would say different things--fishermen, environmentalists. You don't know who to believe.
Because they didn't tell us about the ducks and clams.
They cried "wolf" so often it was hard to tell what was safe and what wasn't.

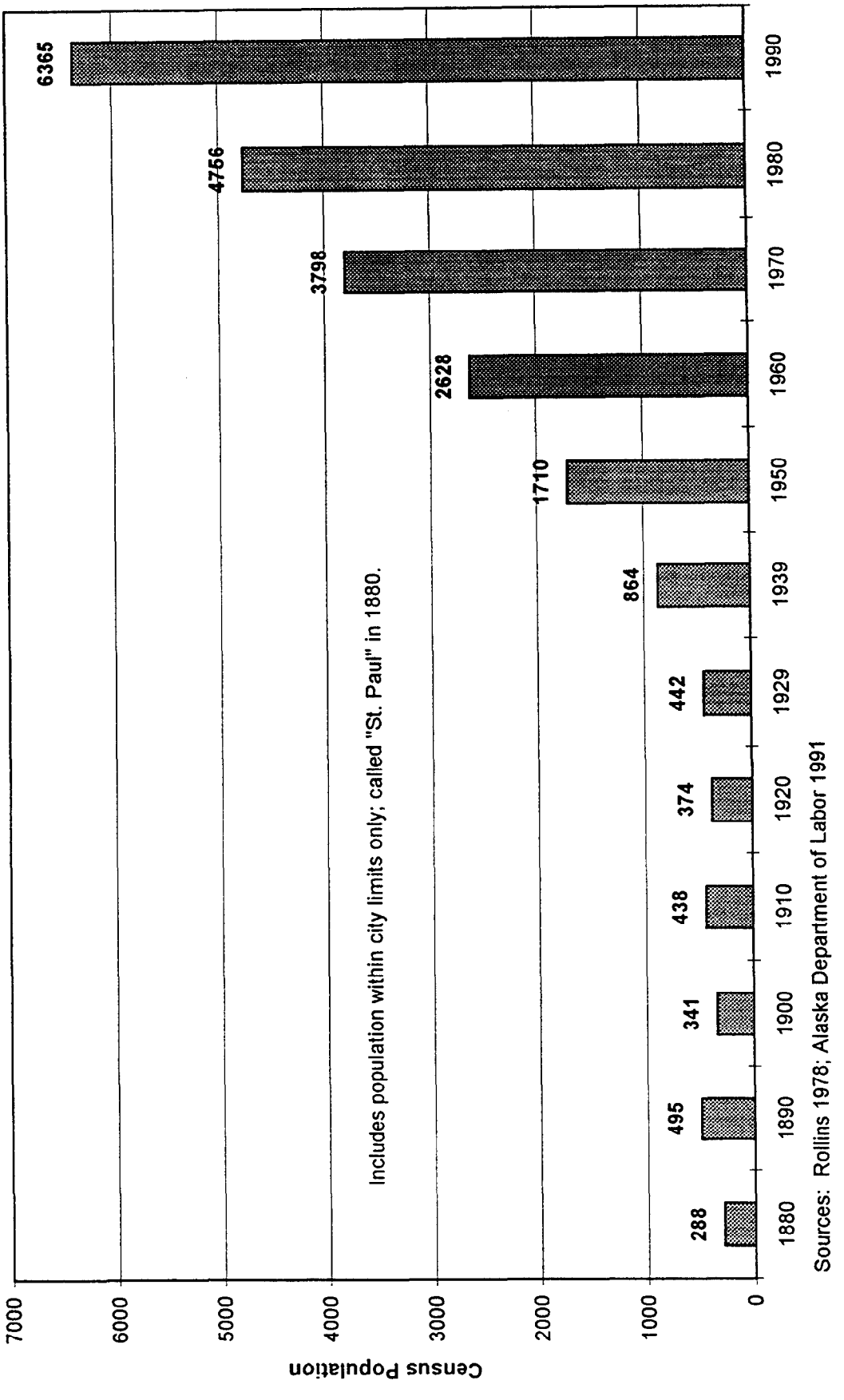
No written reports on the safety of wild resources.

With respect to Outer Continental Shelf (OCS) development, almost half of those surveyed in Year One (46.7 percent and 49.5 percent) said they thought it would decrease the amount of shellfish and marine mammals available for subsistence, with large percentages (39.3 percent and 42.1 percent) also convinced that there would be no change. A majority in all three study years felt it would result in no change for populations of land mammals, and opinions were about evenly divided between a "decrease" and "no change" on the question of birds (Table X-53).

In Year One, 42.1 percent said "yes" to whether a small oil spill of less than 1,000 barrels could be contained and cleaned up, but in Years Two and Three there was a major shift of opinion and not a single "yes" answer was recorded. When asked if a small spill could be contained and cleaned up, the only opinions registered were "maybe," "no," and "don't know." In contrast, 62.6 percent or more of those surveyed in all three years remained pessimistic, convinced that a large oil spill could not be contained and cleaned up.

A slender majority of Kodiak City residents polled in years Two and Three said they were in favor of the search for offshore oil in their area, but they were considerably more cautious and about evenly divided over the development and production of offshore oil. Those in favor of development cited more jobs, benefits to the economy, and needed energy, while those against cited pollution concerns and adverse impacts on subsistence and commercial fishing. About 66.0 percent of those contacted in Year One felt that OCS development would create more jobs for local people, but this majority dropped down to 50.5 percent in Year Three.

Figure X-1. Kodiak Census Population, 1880 - 1990



Sources: Rollins 1978; Alaska Department of Labor 1991

Table X-1. Sample Participation: Kodiak 1992, 1993, and 1994

VARIABLE	1992**** Social Indicators Panel	1992**** Social Indicators Non-Panel*	1992**** TOTAL HOUSEHOLDS	1993 Social Effects Panel	1993 Social Effects Non-Panel*	1993 TOTAL HOUSEHOLDS	1994 Social Effects Panel	1994 Social Effects Non-Panel*	1994 TOTAL HOUSEHOLDS
Estimated Household Structures	105	1923	2028	40	1988	2028	40	2051	2091
Non-Residential Structures	NA	14	14	NA	14	14	NA	3	3
Estimated Households	105	1909	2014	40	1974	2014	36	2048	2084
Total Panel	113	NA	NA	50	50	NA	40	NA	NA
Interview Goal:	50	50	100	50	50	100	40	60	100
Households Interviewed	50	50	100	31	69	100	25	80	105
Failed to Contact/Unavailable	43	22	65	1	11	12	4	17	21
Refused	12	29	41	8	25	33	7	33	40
Vacant Residential Structures	NA	10	10	NA	8	8	NA	6	6
Seasonal Households**	0	0	0	0	0	0	0	0	0
Non-Resident Household ***	0	5	5	0	8	8	0	0	0
Invalid Households and Vacancies	0	15	15	0	16	16	0	6	6
Failed to Contact: HH Interviewed	0	NA	NA	0	NA	NA	0	NA	NA
Refused: HH Interviewed	0	NA	NA	0	NA	NA	0	NA	NA
SI Household Moved	8	NA	NA	10	NA	NA	4	NA	NA
SI Respondent Deceased	0	NA	NA	0	NA	NA	0	NA	NA
SI Panel Disposition	113	NA	NA	50	NA	NA	40	NA	NA
Total Households Attempted:	105	116	221	40	121	161	36	136	172
Refusal Rate:	19.35%	36.71%	29.08%	20.51%	26.60%	24.81%	21.88%	29.20%	27.59%
Non-Perm. HH Rate ("Vacancy Rate"):	0.0%	12.9%	6.8%	0.0%	13.2%	9.9%	0.0%	4.4%	3.5%
Interview Goal (Percentage)	100.0%	100.0%	100.0%	62.0%	138.0%	100.0%	62.5%	133.3%	105.0%
Social Effects Surveys Completed	50	50	100	31	69	100	25	80	105
Total Permanent Households	105	1662	1767	40	1713	1753	36	1958	1994
Percentage Interviewed	47.62%	3.01%	5.66%	77.50%	4.03%	5.70%	69.44%	4.09%	5.27%
Percentage of Total Households	5.94%	94.06%	100.00%	2.28%	97.72%	100.00%	1.81%	98.19%	100.00%
Interview Weighting Factor	2.100	33.240	17.670	1.290	24.826	17.530	1.440	24.475	18.990

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.

**** Includes Kodiak city, Coast Guard Base, and road-connected areas.

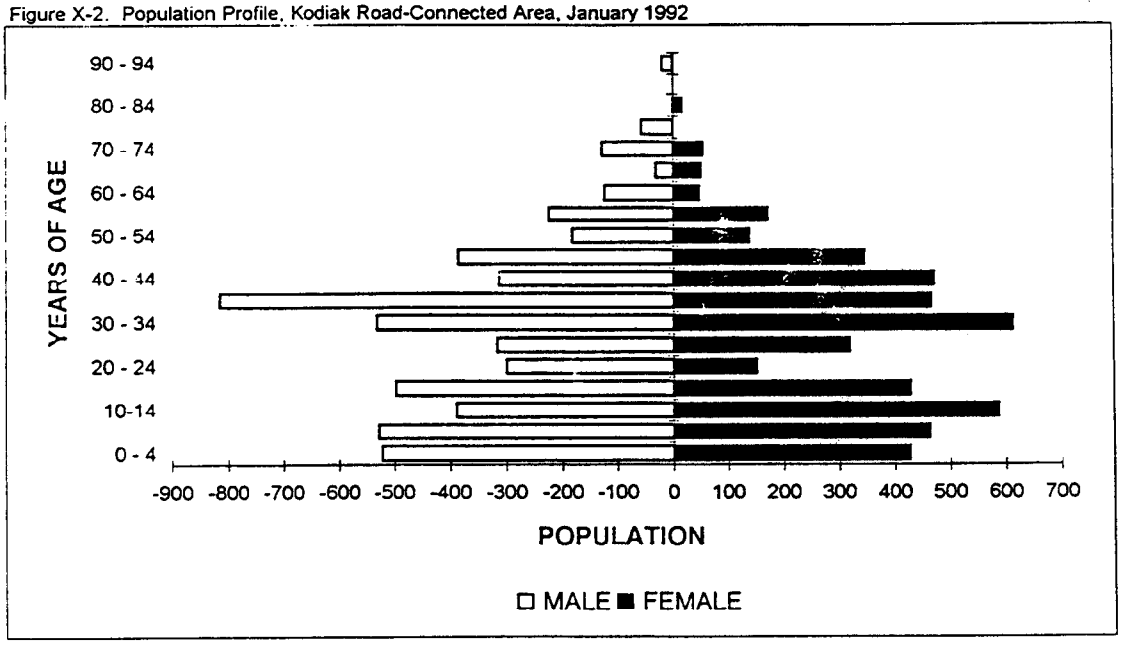
Table X-2 . Demographic Characteristics of Households, Kodiak City, January 1992, January 1993, and January 1994

Characteristics	1991*	1992	1993
Sampled Households	207	100	105
Number of Households in the Community	3,207	1,753	1,994
Percentage of Households Sampled	6.45	5.70	5.27
Household Size			
Mean	3.17	2.72	3.04
Minimum	1	1	1
Maximum	8	9	8
Sample Population	670	272	319
Estimated Community Population	10,168.90	4,768.16	6,057.96
Age			
Mean	29.14	31.34	30.66
Minimum	0.19	0.53	0.02
Maximum	90.44	82.78	80.15
Median	29.79688	33.421	31.049
Length of Residency - Population			
Mean	11.49	12.24	11.59
Minimum	0.188912	0.5	0.024641
Maximum	65.83	66.83	75.46
Length of Residency - Household Heads			
Mean	14.14	14.87	14.75
Minimum	0.5	0.5	0.5
Maximum	65.82615	66.8282	75.46
Sex			
Males			
Number	5,365.54	2,454.20	3,038.48
Percentage	52.76	51.47	50.16
Females			
Number	4,803.35	2,313.96	3,019.49
Percentage	47.24	48.53	49.84
Alaska Native			
Households (Either Head)			
Number	456.58	280.48	246.88
Percentage	14.24	16.00	12.38
Estimated Population			
Number	1,275.88	508.37	569.71
Percentage	12.55	10.66	9.40

* Includes Kodiak city, Coast Guard Base, and road-connected areas.

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

Figure X-2. Population Profile, Kodiak Road-Connected Area, January 1992



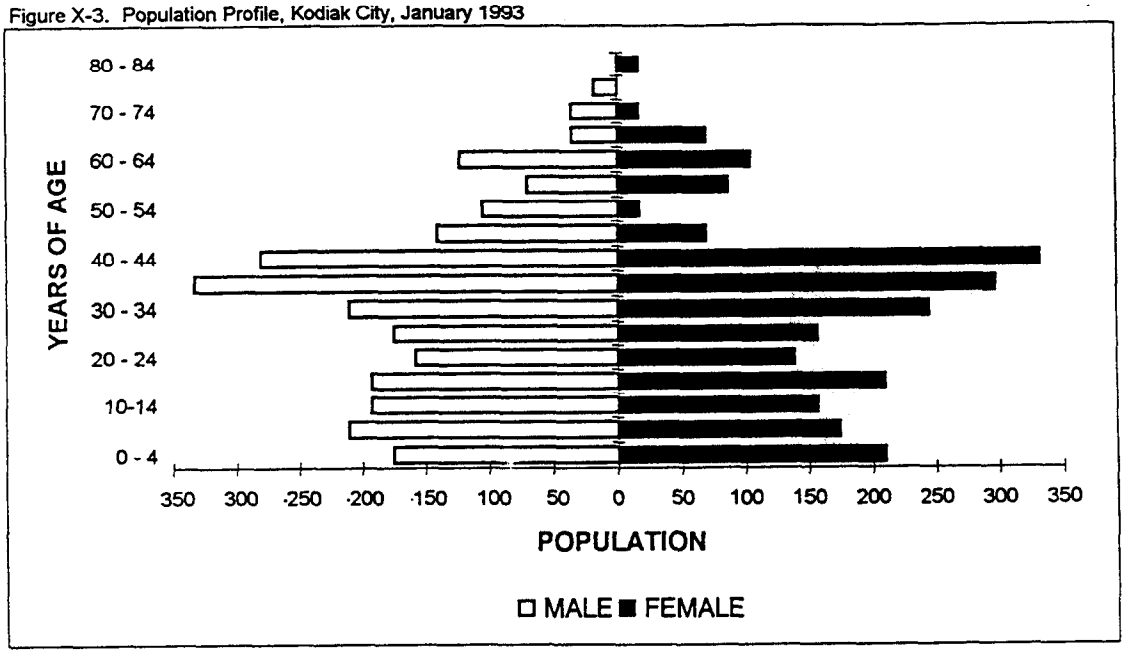
SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table X-3. Population Profile, Kodiak Road-Connected Area, January 1992

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	521.80	9.72%	9.72%	428.83	8.93%	8.93%	950.62	9.35%	9.35%
5-9	527.01	9.82%	19.55%	464.61	9.67%	18.60%	991.62	9.75%	19.10%
10-14	387.99	7.23%	26.78%	589.46	12.27%	30.87%	977.45	9.61%	28.71%
15 - 19	496.50	9.25%	36.03%	430.36	8.96%	39.83%	926.86	9.11%	37.83%
20 - 24	299.21	5.58%	41.61%	153.62	3.20%	43.03%	452.83	4.45%	42.28%
25 - 29	315.56	5.88%	47.49%	320.81	6.68%	49.71%	636.38	6.26%	48.54%
30 - 34	530.51	9.89%	57.38%	614.96	12.80%	62.51%	1,145.46	11.26%	59.80%
35 - 39	814.02	15.17%	72.55%	468.10	9.75%	72.26%	1,282.12	12.61%	72.41%
40 - 44	312.52	5.82%	78.37%	473.81	9.86%	82.12%	786.34	7.73%	80.14%
45 - 49	384.99	7.18%	85.55%	347.45	7.23%	89.35%	732.44	7.20%	87.35%
50 - 54	180.71	3.37%	88.92%	141.64	2.95%	92.30%	322.35	3.17%	90.52%
55 - 59	223.05	4.16%	93.07%	173.73	3.62%	95.92%	396.77	3.90%	94.42%
60 - 64	122.87	2.29%	95.36%	49.32	1.03%	96.95%	172.19	1.69%	96.11%
65 - 69	30.55	0.57%	95.93%	52.82	1.10%	98.05%	83.37	0.82%	96.93%
70 - 74	127.90	2.38%	98.32%	56.31	1.17%	99.22%	184.21	1.81%	98.74%
75 - 79	56.31	1.05%	99.37%	0.00	0.00%	99.22%	56.31	0.55%	99.30%
80 - 84	0.00	0.00%	99.37%	18.77	0.39%	99.61%	18.77	0.18%	99.48%
85 - 89	0.00	0.00%	99.37%	0.00	0.00%	99.61%	0.00	0.00%	99.48%
90 - 94	18.77	0.35%	99.72%	0.00	0.00%	99.61%	18.77	0.18%	99.67%
95 - 99	0.00	0.00%	99.72%	0.00	0.00%	99.61%	0.00	0.00%	99.67%
100 - 104	0.00	0.00%	99.72%	0.00	0.00%	99.61%	0.00	0.00%	99.67%
Missing	15.28	0.28%	100.00%	18.77	0.39%	100.00%	34.05	0.33%	100.00%
TOTAL	5,365.54	52.76%		4,803.35	47.24%		10,168.90	100.00%	

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

Figure X-3. Population Profile, Kodiak City, January 1993



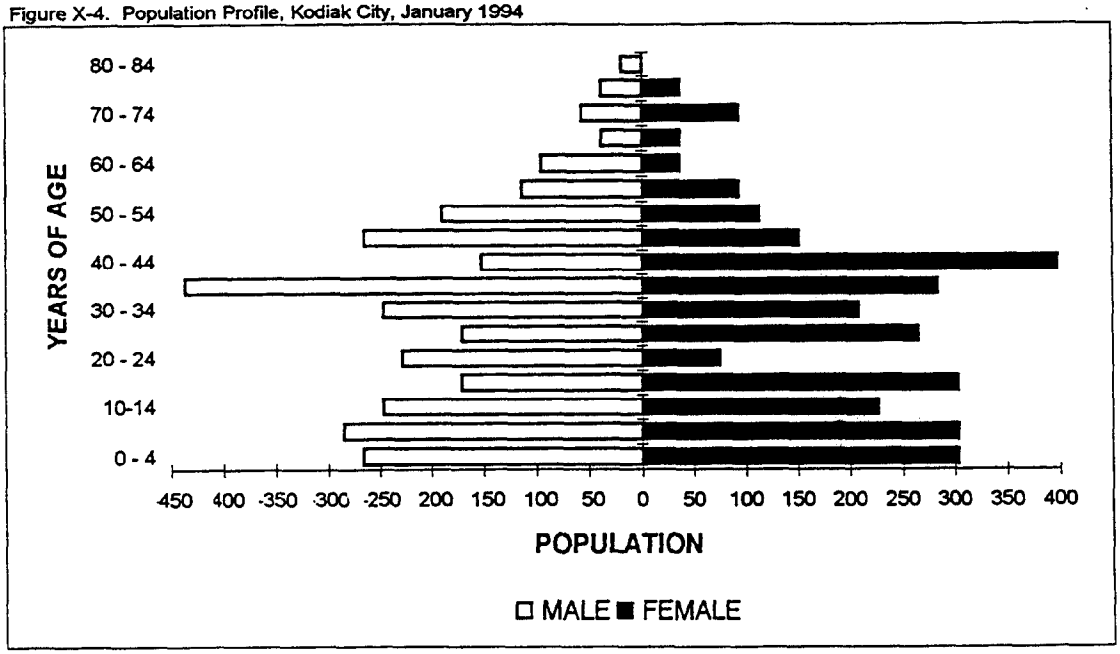
SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table X-4. Population Profile, Kodiak City, January 1993

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	175.30	7.14%	7.14%	210.36	9.09%	9.09%	385.66	8.09%	8.09%
5-9	210.36	8.57%	15.71%	175.30	7.58%	16.67%	385.66	8.09%	16.18%
10-14	192.83	7.86%	23.57%	157.77	6.82%	23.48%	350.60	7.35%	23.53%
15 - 19	192.83	7.86%	31.43%	210.36	9.09%	32.58%	403.19	8.46%	31.99%
20 - 24	157.77	6.43%	37.86%	140.24	6.06%	38.64%	298.01	6.25%	38.24%
25 - 29	175.30	7.14%	45.00%	157.77	6.82%	45.45%	333.07	6.99%	45.22%
30 - 34	210.36	8.57%	53.57%	245.42	10.61%	56.06%	455.78	9.56%	54.78%
35 - 39	333.07	13.57%	67.14%	298.01	12.88%	68.94%	631.08	13.24%	68.01%
40 - 44	280.48	11.43%	78.57%	333.07	14.39%	83.33%	613.55	12.87%	80.88%
45 - 49	140.24	5.71%	84.29%	70.12	3.03%	86.36%	210.36	4.41%	85.29%
50 - 54	105.18	4.29%	88.57%	17.53	0.76%	87.12%	122.71	2.57%	87.87%
55 - 59	70.12	2.86%	91.43%	87.65	3.79%	90.91%	157.77	3.31%	91.18%
60 - 64	122.71	5.00%	96.43%	105.18	4.55%	95.45%	227.89	4.78%	95.96%
65 - 69	35.06	1.43%	97.86%	70.12	3.03%	98.48%	105.18	2.21%	98.16%
70 - 74	35.06	1.43%	99.29%	17.53	0.76%	99.24%	52.59	1.10%	99.26%
75 - 79	17.53	0.71%	100.00%	0.00	0.00%	99.24%	17.53	0.37%	99.63%
80 - 84	0.00	0.00%	100.00%	17.53	0.76%	100.00%	17.53	0.37%	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	2,454.20	51.47%		2,313.96	48.53%		4,768.16	100.00%	

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

Figure X-4. Population Profile, Kodiak City, January 1994



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

Table X-5. Population Profile, Kodiak City, January 1994

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	265.87	8.75%	8.75%	303.85	10.06%	10.06%	569.71	9.40%	9.40%
5-9	284.86	9.38%	18.13%	303.85	10.06%	20.13%	588.70	9.72%	19.12%
10-14	246.88	8.13%	26.25%	227.89	7.55%	27.67%	474.76	7.84%	26.96%
15 - 19	170.91	5.63%	31.88%	303.85	10.06%	37.74%	474.76	7.84%	34.80%
20 - 24	227.89	7.50%	39.38%	75.96	2.52%	40.25%	303.85	5.02%	39.81%
25 - 29	170.91	5.63%	45.00%	265.87	8.81%	49.06%	436.78	7.21%	47.02%
30 - 34	246.88	8.13%	53.13%	208.90	6.92%	55.97%	455.77	7.52%	54.55%
35 - 39	436.78	14.38%	67.50%	284.86	9.43%	65.41%	721.64	11.91%	66.46%
40 - 44	151.92	5.00%	72.50%	398.80	13.21%	78.62%	550.72	9.09%	75.55%
45 - 49	265.87	8.75%	81.25%	151.92	5.03%	83.65%	417.79	6.90%	82.45%
50 - 54	189.90	6.25%	87.50%	113.94	3.77%	87.42%	303.85	5.02%	87.46%
55 - 59	113.94	3.75%	91.25%	94.95	3.14%	90.57%	208.90	3.45%	90.91%
60 - 64	94.95	3.13%	94.38%	37.98	1.26%	91.82%	132.93	2.19%	93.10%
65 - 69	37.98	1.25%	95.63%	37.98	1.26%	93.08%	75.96	1.25%	94.36%
70 - 74	56.97	1.88%	97.50%	94.95	3.14%	96.23%	151.92	2.51%	96.87%
75 - 79	37.98	1.25%	98.75%	37.98	1.26%	97.48%	75.96	1.25%	98.12%
80 - 84	18.99	0.63%	99.38%	0.00	0.00%	97.48%	18.99	0.31%	98.43%
85 - 89	0.00	0.00%	99.38%	0.00	0.00%	97.48%	0.00	0.00%	98.43%
90 - 94	0.00	0.00%	99.38%	0.00	0.00%	97.48%	0.00	0.00%	98.43%
95 - 99	0.00	0.00%	99.38%	0.00	0.00%	97.48%	0.00	0.00%	98.43%
100 - 104	0.00	0.00%	99.38%	0.00	0.00%	97.48%	0.00	0.00%	98.43%
Missing	18.99	0.63%	100.00%	75.96	2.52%	100.00%	94.95	1.57%	100.00%
TOTAL	3,038.48	50.16%		3,019.49	49.84%		6,057.96	100.00%	

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

Figure X-5. Years Residents Moved to Kodiak City, as of April 1994

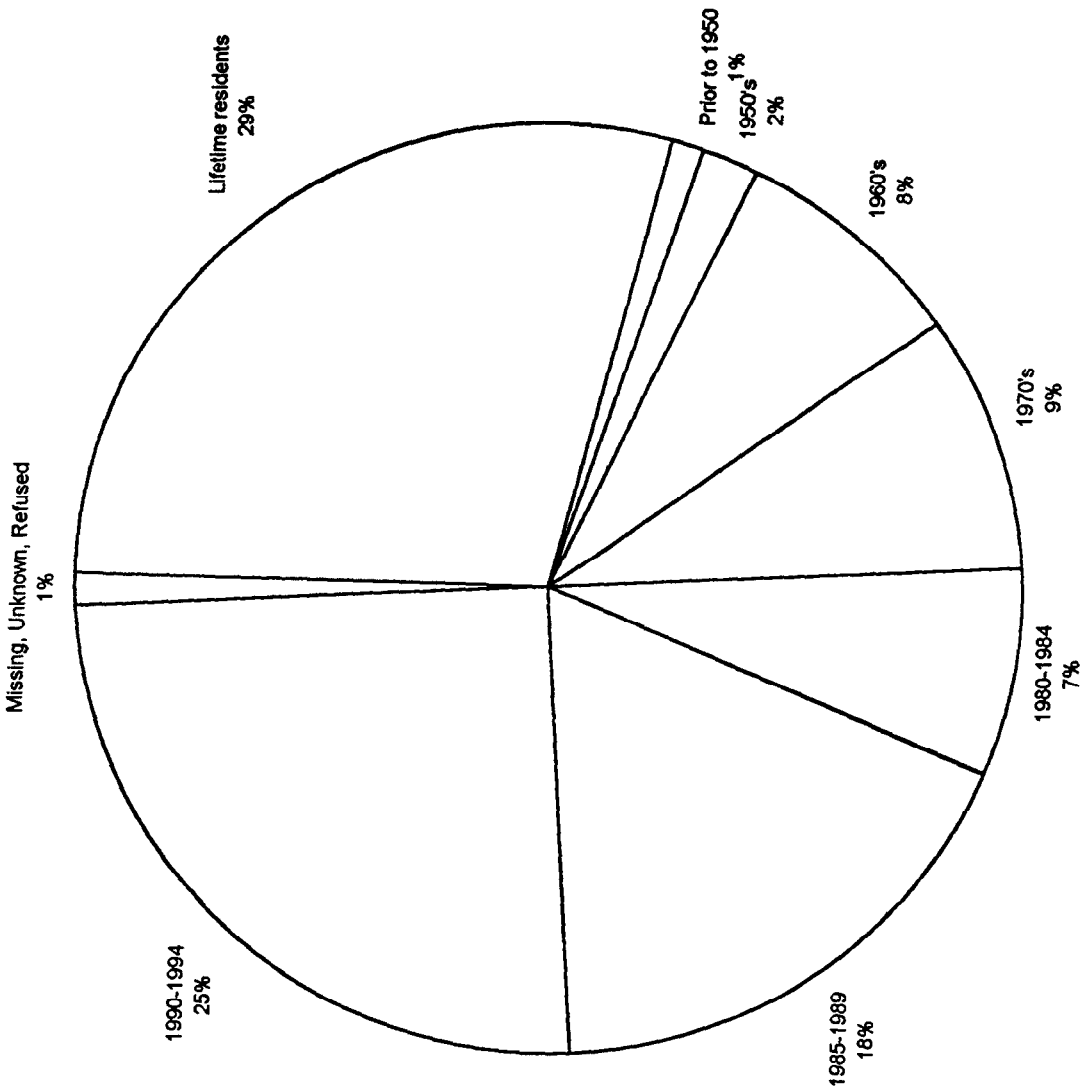


Table X-6. Employment Characteristics, Kodiak City, 1991, 1992, and 1993

Characteristics		1991*	1992	1993
ADULTS				
Total		6,964.39	3,558.59	4,177.90
Employed				
	Number	5,766.04	3,155.40	3,532.23
	Percentage	82.79	88.67	84.55
Jobs				
	Number	8,137.91	4,996.05	5,241.37
	Mean	1.41	1.58	1.48
	Minimum	1	1	1
	Maximum	6	6	5
Months Employed				
	Mean	9.93	10.27	9.75
	Minimum	1	1	1
	Maximum	12	12	12
	Year-Round	50.60	56.11	50.54
HOUSEHOLDS				
Total		3,207.00	1,753.00	1,994.00
Employed				
	Number	2,958.19	1,630.29	1,861.07
	Percentage	92.24	93.00	93.33
Jobs per Employed Household				
	Mean	2.75	3.06	2.82
	Minimum	1	1	1
	Maximum	10	10	9
Employed Adults				
	Mean	1.95	1.94	1.90
	Minimum	1	1	1
	Maximum	5	5	5

* Includes Kodiak City, Coast Guard Base and road-connected areas.

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

Table X-7. Community, Household, and Per Capita Income, All Sources and by Employer Type, Kodiak Raod-Connected Area, 1991

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$192,208,053.59	$59,933.91	$18,516.89
Earned Income	$167,835,621.91	$52,334.15	$16,168.91
Agriculture, Forestry, and Fishing	34,145,578.20	10,647.20	3,289.51
Agriculture	1,219,279.71	380.19	117.46
Forestry	232,391.30	72.46	22.39
Fishing, Hunting, Trapping	32,693,907.19	10,194.55	3,149.66
Hatchery/Enhancement	0.00	0.00	0.00
Commercial Fishing	32,693,907.19	10,194.55	3,149.66
Hunting/Trapping	0.00	0.00	0.00
Mining	0.00	0.00	0.00
Construction	12,340,420.40	3,847.96	1,188.85
Manufacturing	9,977,297.70	3,111.10	961.19
Cannery	9,249,138.28	2,884.05	891.04
Other Manufacturing	340,840.58	106.28	32.84
Logging/Timber	387,318.84	120.77	37.31
Transportation, Communications, and Utilities	12,292,880.29	3,833.14	1,184.27
Trade	16,397,286.98	5,112.97	1,579.68
Wholesale	464,782.61	144.93	44.78
Retail	15,932,504.37	4,968.04	1,534.90
Finance, Insurance, and Real Estate	6,596,814.49	2,057.00	635.52
Services	23,151,311.31	7,218.99	2,230.35
Government	52,934,032.54	16,505.78	5,099.55
Federal	24,072,426.89	7,506.21	2,319.08
State	10,647,859.71	3,320.19	1,025.79
Local	18,213,745.94	5,679.37	1,754.67
Local Government	7,530,717.68	2,348.21	725.49
Local Education	10,683,028.26	3,331.16	1,029.18
Unknown	AMT UNK	AMT UNK	AMT UNK
Other Income	$24,372,431.68	$7,599.76	$2,347.99

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

Table X-8. Community, Household, and Per Capita Other Income by Source, Kodiak Road-Connected Area, 1991

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$24,372,431.68	$7,599.76	$2,347.99
Exxon Claims	0.17	43,317.74	13.51	4.17
Aid to Families with Dependent Children	2.77	630,152.26	196.49	60.71
Adult Public Assistance	0.95	136,227.78	42.48	13.12
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	9.77	6,139,406.43	1,914.38	591.46
Longevity Bonus	7.87	781,609.42	243.72	75.30
Social Security	12.33	2,935,688.83	915.40	282.82
Workman's Comp./Insurance	2.49	325,347.83	101.45	31.34
Energy Assistance	2.01	16,701.19	5.21	1.61
Supplemental Security Income	0.00	0.00	0.00	0.00
Food Stamps	3.66	208,780.35	65.10	20.11
Unemployment	6.85	456,385.54	142.31	43.97
Native Corporation Dividend	14.13	512,507.18	159.81	49.37
Dividend/Interest	23.97	2,173,201.03	677.64	209.36
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	91.24	7,900,669.14	2,463.57	761.13
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	9.89	2,112,436.96	658.70	203.51

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

Figure X-6. Employment by Industry, Kodiak Road-Connected Area, 1991

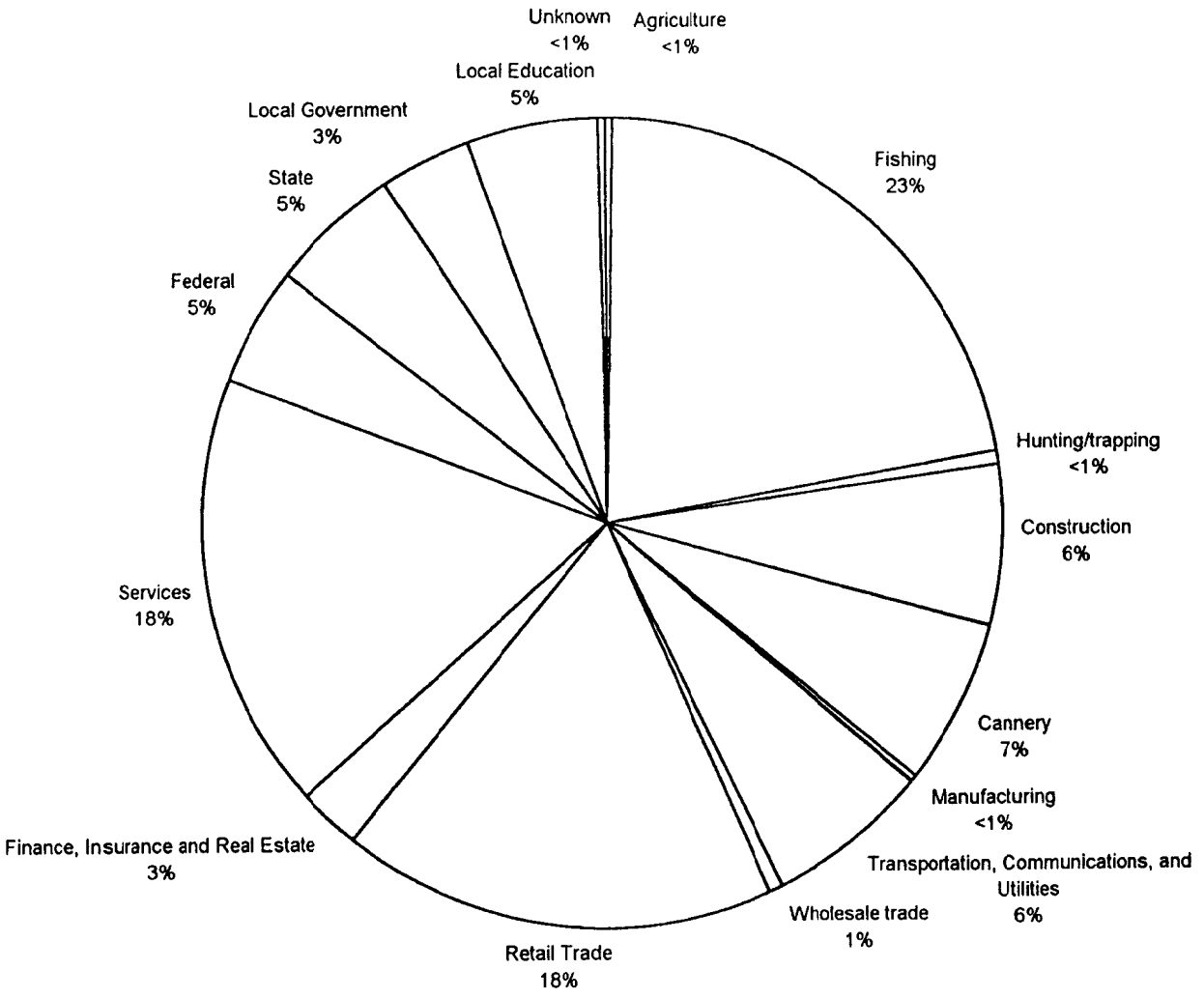


Table X-9. Subsistence Equipment Expenses and Use, Kodiak Road-Connected Area, 1991

Sampled Households = 100
Community Households = 1877

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			$27,588.68	$1,034.96	$1,169.61	33.85	$18,928,843.82	$10,084.63	73.00	61.00
Skiff with outboard	581.87	0.31	$3,177.91		$163.88	48.44	$3,056,683.63	$1,628.49	33.00	13.00
Outboard Motor	412.94	0.22	$512.91	$72.27	$35.88	34.59	$403,253.90	$214.84	11.00	6.00
Boats with inboard	244.01	0.13	$8,309.17	$262.78	$201.50	39.74	$6,543,700.64	$3,486.26	25.00	2.00
Skiff, manually-propelled	262.78	0.14	$228.09		$5.94	60.73	$266,756.89	$142.12	14.00	3.00
ATV/Motorcycle	281.55	0.15	$383.14	$18.40	$16.13	44.99	$352,719.00	$187.92	10.00	3.00
Snowmachine/snowmobile	18.77	0.01	$8.50	$0.20	$1.00	50.00	$9,103.45	$4.85	4.00	0.00
Airplane	75.08	0.04	$2,580.00	$64.00	$89.00	42.79	$2,195,057.65	$1,169.45	17.00	1.00
Highway vehicle	1,820.69	0.97	$5,855.21	$597.32	$434.95	14.22	$1,838,590.87	$979.54	20.00	18.00
Tackle			$749.62		$52.07	87.80	$1,321,194.49	$703.89	17.00	30.00
Pots	1,351.44	0.72	$64.73		$1.43	95.55	$118,646.82	$63.21	25.00	13.00
Fishing Nets	713.26	0.38	$601.76		$6.13	41.63	$475,061.11	$253.10	29.00	15.00
Guns	4,673.73	2.49	$1,567.92				$2,942,979.58	$1,567.92	12.00	20.00
Traps	7,733.24	4.12	$45.45				$85,309.65	$45.45	2.00	3.00
Ammunition					$66.58		$124,975.27	$66.58	8.00	10.00
Cabins	187.70	0.10	$2,182.50		$0.50	26.53	$1,087,252.25	$579.25	20.00	7.00
Miscellaneous Camping Equipment			$541.44				$1,016,291.22	$541.44	11.00	17.00
Fishing/Hunting Camps	1,426.52	0.76	$194.34			59.51	$218,196.56	$116.25	11.00	12.00
Freezer	8,202.49	4.37	$431.83				$810,917.23	$432.03	24.00	21.00
Miscellaneous freezing supplies					$27.59		$51,795.66	$27.59	4.00	5.00
Canner	825.88	0.44	$39.99				$75,070.12	$39.99	10.00	15.00
Miscellaneous canning supplies					$17.16		$32,209.32	$17.16	4.00	4.00
Vacuum sealer/Sealer	619.41	0.33	$76.33				$143,263.76	$76.33	19.00	10.00
Miscellaneous sealer supplies					$37.86		$71,065.78	$37.86	5.00	4.00
Smoke house/dry rack	825.88	0.44	$37.63				$70,639.55	$37.63	17.00	14.00
Miscellaneous smoker supplies					$10.81		$20,658.12	$11.01	4.00	3.00

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

Table X-10. Community, Household, and Per Capita Income, All Sources and by Employer Type, Kodiak City, 1992

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$115,809,908.84	$66,063.84	$24,288.18
Earned Income	$102,892,119.33	$58,694.88	$21,579.00
Agriculture, Forestry, and Fishing	19,764,323.71	11,274.57	4,145.06
Agriculture	613,550.00	350.00	128.68
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	19,150,773.71	10,924.57	4,016.39
Hatchery/Enhancement	0.00	0.00	0.00
Commercial Fishing	19,150,773.71	10,924.57	4,016.39
Hunting/Trapping	0.00	0.00	0.00
Mining	0.00	0.00	0.00
Construction	6,074,145.00	3,465.00	1,273.90
Manufacturing	5,799,463.38	3,308.31	1,216.29
Cannery	5,799,463.38	3,308.31	1,216.29
Other Manufacturing	0.00	0.00	0.00
Logging/Timber	0.00	0.00	0.00
Transportation, Communications, and Utilities	10,584,113.14	6,037.71	2,219.75
Trade	11,612,363.86	6,624.28	2,435.40
Wholesale	2,830,510.67	1,614.67	593.63
Retail	8,781,853.19	5,009.61	1,841.77
Finance, Insurance, and Real Estate	5,931,408.73	3,383.58	1,243.96
Services	14,736,281.46	8,406.32	3,090.56
Government	28,390,020.04	16,195.11	5,954.08
Federal	9,282,018.13	5,294.93	1,946.67
State	6,981,322.50	3,982.50	1,464.15
Local	12,126,679.41	6,917.67	2,543.26
Local Government	5,899,633.85	3,365.45	1,237.30
Local Education	6,227,045.56	3,552.22	1,305.96
Unknown	AMT UNK	AMT UNK	AMT UNK
Other Income	$12,917,789.51	$7,368.96	$2,709.18

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

Table X-11. Community, Household, and Per Capita Other Income by Source, Kodiak City, 1992

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$12,917,789.51	$7,368.96	$2,709.18
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	3.00	416,793.28	237.76	87.41
Adult Public Assistance	1.00	78,674.64	44.88	16.50
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	9.00	2,269,433.80	1,294.60	475.96
Longevity Bonus	9.00	589,008.00	336.00	123.53
Social Security	8.00	1,681,945.07	959.47	352.75
Workman's Comp./Insurance	1.00	147,252.00	84.00	30.88
Energy Assistance	2.00	10,658.24	6.08	2.24
Supplemental Security Income	2.00	143,886.24	82.08	30.18
Food Stamps	5.00	128,845.50	73.50	27.02
Unemployment	13.00	507,738.92	289.64	106.49
Native Corporation Dividend	13.00	185,977.23	106.09	39.00
Dividend/Interest	26.00	737,634.35	420.78	154.70
Child Support	1.00	618,809.00	353.00	129.78
Rental Income	4.00	480,322.00	274.00	100.74
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	87.00	3,820,277.84	2,179.28	801.21
Weatherization	0.00	0.00	0.00	0.00
Veteran's Assistance	0.00	0.00	0.00	0.00
Investments/Stocks/Bonds	4.00	31,203.40	17.80	6.54
Bureau of Indian Affairs Grants	0.00	0.00	0.00	0.00
Housing Allowances/Off-Base Allowances	4.00	420,720.00	240.00	88.24
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	3.00	648,610.00	370.00	136.03

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

Figure X-7. Employment by Industry, Kodiak, 1992

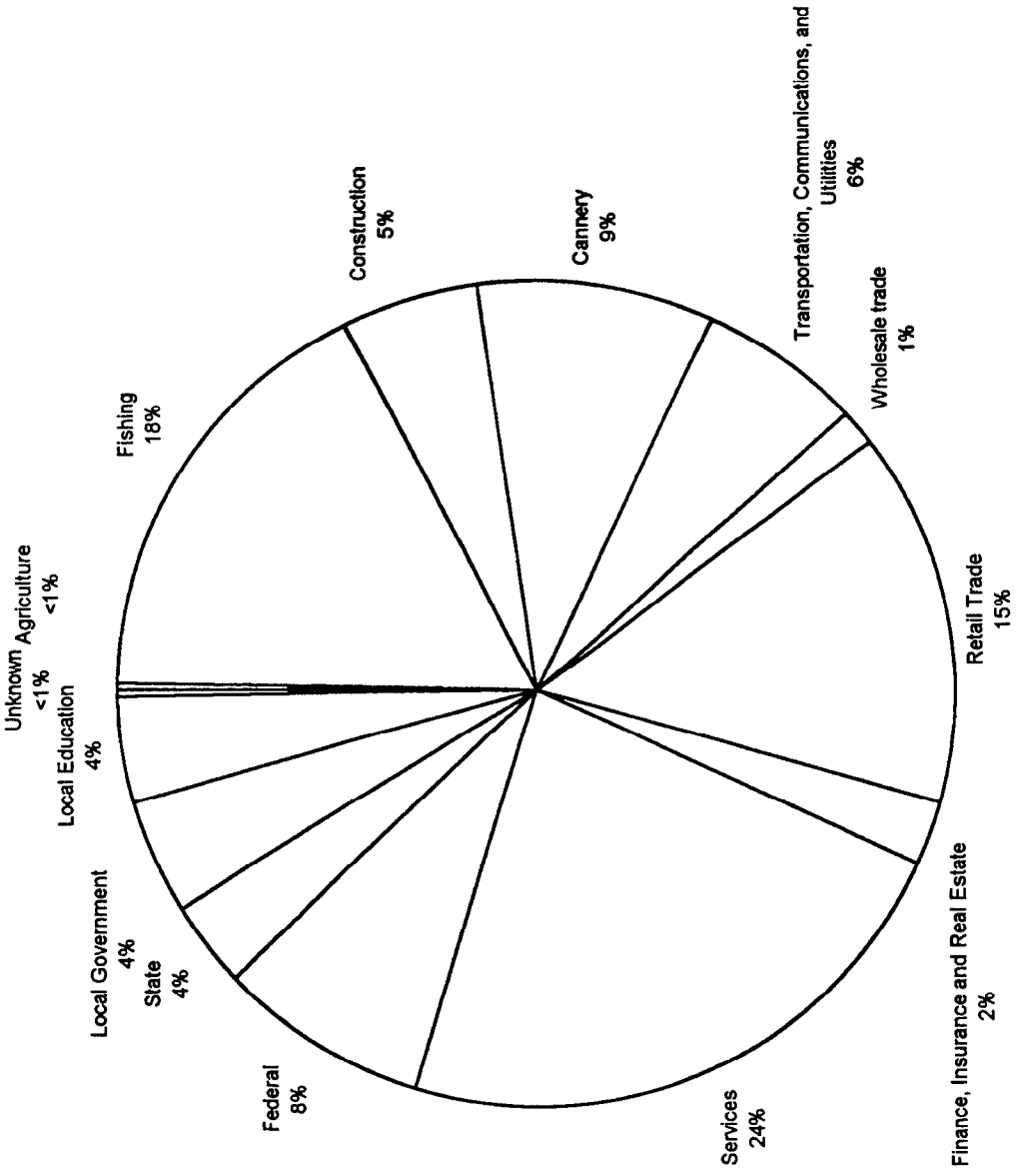


Table X-12. Community, Household, and Per Capita Income, All Sources and by Employer Type, Kodiak City, 1993

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$128,779,379.88	$64,583.44	$21,257.87
Earned Income	$107,250,061.55	$53,786.39	$17,703.98
Agriculture, Forestry, and Fishing	16,220,417.33	8,134.61	2,677.54
Agriculture	0.00	0.00	0.00
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	16,220,417.33	8,134.61	2,677.54
Hatchery/Enhancement	0.00	0.00	0.00
Commercial Fishing	16,220,417.33	8,134.61	2,677.54
Hunting/Trapping	0.00	0.00	0.00
Mining	0.00	0.00	0.00
Construction	3,975,580.23	1,993.77	656.26
Manufacturing	6,499,490.48	3,259.52	1,072.88
Cannery	6,157,661.90	3,088.10	1,016.46
Other Manufacturing	341,828.57	171.43	56.43
Logging/Timber	0.00	0.00	0.00
Transportation, Communications, and Utilities	10,633,936.26	5,332.97	1,755.37
Trade	10,681,731.62	5,356.94	1,763.25
Wholesale	0.00	0.00	0.00
Retail	10,681,731.62	5,356.94	1,763.25
Finance, Insurance, and Real Estate	3,827,568.46	1,919.54	631.82
Services	26,403,068.91	13,241.26	4,358.41
Government	29,008,268.27	14,547.78	4,788.45
Federal	10,299,093.78	5,165.04	1,700.09
State	2,731,115.33	1,369.67	450.83
Local	15,978,059.15	8,013.07	2,637.53
Local Government	3,077,406.67	1,543.33	507.99
Local Education	12,900,652.49	6,469.74	2,129.54
Unknown	AMT UNK	AMT UNK	AMT UNK
Other Income	$21,529,318.33	$10,797.05	$3,553.89

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

Table X-13. Community, Household, and Per Capita Other Income by Source, Kodiak City, 1993

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$21,529,318.33	$10,797.05	$3,553.89
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	0.95	210,338.51	105.49	34.72
Adult Public Assistance	0.00	0.00	0.00	0.00
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	13.33	4,327,112.93	2,170.07	714.29
Longevity Bonus	7.62	740,628.57	371.43	122.26
Social Security	9.52	2,723,234.29	1,365.71	449.53
Workman's Comp./Insurance	1.90	53,173.33	26.67	8.78
Energy Assistance	0.00	0.00	0.00	0.00
Supplemental Security Income	0.00	0.00	0.00	0.00
Food Stamps	2.86	63,770.02	31.98	10.53
Unemployment	9.52	507,045.71	254.29	83.70
Native Corporation Dividend	6.67	574,617.63	288.17	94.85
Dividend/Interest	26.67	6,185,831.11	3,102.22	1,021.11
Child Support	2.86	173,762.86	87.14	28.68
Rental Income	8.57	1,182,513.21	593.04	195.20
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	0.95	AMT UNK	AMT UNK	AMT UNK
Disability	0.00	0.00	0.00	0.00
Alaska Permanent Fund Dividend	84.76	4,579,534.34	2,296.66	755.95
Weatherization	0.00	0.00	0.00	0.00
Veteran's Assistance	0.95	22,788.57	11.43	3.76
Investments/Stocks/Bonds	2.86	85,457.14	42.86	14.11
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	0.95	4,557.71	2.29	0.75
General Assistance Grant	0.00	0.00	0.00	0.00
Foster Care	0.00	0.00	0.00	0.00
Inheritance	0.95	94,952.38	47.62	15.67
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 X-8. Employment by Industry, Kodiak, 1993

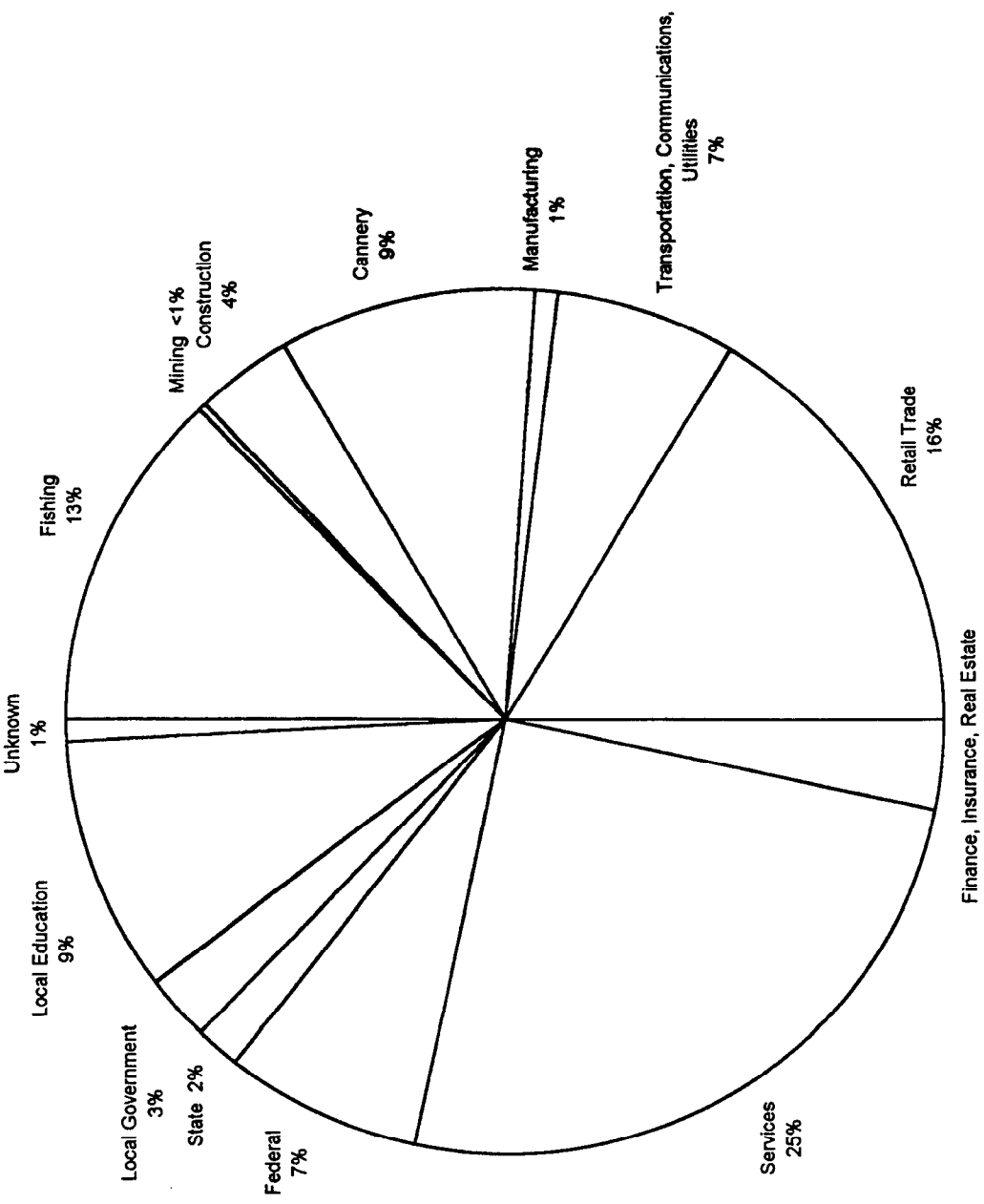


Table X-14. Kodiak Salmon Ex-Vessel Values (in Millions) and Average Prices, 1987, 1991, 1992, and 1993

	1987		1991		1992		1993	
Species	**Income**	**$/Pound**	**Income**	**$/Pound**	**Income**	**$/Pound**	**Income**	**$/Pound**
Sockeye	18.6	1.65	23.3	0.80	34.8	1.47	17.9	0.80
Coho	1.62	1.00	0.7	0.30	1.3	0.56	1	0.50
Chinook	0.73	1.25	0.2	0.70	0.4	1.02	0.3	0.50
Pink	5.7	0.32	5.8	0.12	2.2	0.18	12.8	0.12
Chum	2.1	0.40	1.4	0.20	1.9	0.38	0.9	0.25
Total	$28.10		$31.40		$40.50		$32.90	

Sources: Kodiak Area Annual Management Reports, ADF&G Division of Commercial Fisheries, 1987-1993.

Table X-15. Characteristics of Resource Harvest and Use, Kodiak City, 1991, 1992, and 1993

Study Year	1991*	1992	1993
Mean Number Of Resources Used Per Household	11.99	11.51	11.84
Minimum	0	0	0
Maximum	32	35	32
95 % Confidence Limit (+/-)	7.54	12.34	10.92
Median	11.25	10	11
Mean Number Of Resources Attempted To Harvest Per Household	8.32	7.46	7.42
Minimum	0	0	0
Maximum	27	29	28
95 % Confidence Limit (+/-)	9.73	16.54	15.09
Median	7.62	7	7
Mean Number Of Resources Harvested Per Household	7.57	6.59	6.70
Minimum	0	0	0
Maximum	26	29	26
95 % Confidence Limit (+/-)	10.13	17.95	15.92
Median	7	5	6
Mean Number Of Resources Received Per Household	6.04	6.76	7.09
Minimum	0	0	0
Maximum	25	26	27
95 % Confidence Limit (+/-)	10.93	15.86	14.40
Median	4.53	6	6
Mean Number Of Resources Given Away Per Household	3.88	4.52	4.54
Minimum	0	0	0
Maximum	20	26	26
95 % Confidence Limit (+/-)	13.40	21.87	20.00
Median	2.53	3	3
Mean Household Harvest, Pounds	444.24	433.81	458.92
Minimum	0.00	0.00	0.00
Maximum	3,832.50	3,907.79	4,194.08
Total Pounds Harvested	1,424,661.70	760,466.88	915,081.97
Community Per Capita Harvest, Pounds	140.10	159.49	151.05
Percent Using Any Resource	98.57	99.00	99.05
Percent Attempting To Harvest Any Resource	93.44	91.00	90.48
Percent Harvesting Any Resource	92.96	90.00	87.62
Percent Receiving Any Resource	93.20	94.00	97.14
Percent Giving Away Any Resource	80.50	80.00	83.81
Number Of Households In Sample	207	100	105
Number of Resources Available	111	124	138

* Includes Kodiak City, Coast Guard Base, and road-connected areas.

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

Table X-16. Participation in the Harvest and Processing of Wild Resources, Kodiak City, 1991, 1992, and 1993

Study Year			1991*	1992	1993
Total Number of People			10,168.90	4,768.16	6,057.96
GAME	Hunt	Number	2,607.71	1,192.04	1,367.31
		Percentage	25.64	25.00	22.57
		Missing	0.00	0.00	56.97
		Missing %	0.00	0.00	0.94
	Process	Number	3,517.57	1,244.63	1,937.03
		Percentage	34.59	26.10	31.97
		Missing	0.00	0.00	56.97
		Missing %	0.00	0.00	0.94
FISH	Fish	Number	6,716.13	3,260.58	3,817.09
		Percentage	66.05	68.38	63.01
		Missing	15.28	0.00	56.97
		Missing %	0.15	0.00	0.94
	Process	Number	6,298.51	3,032.69	3,551.22
		Percentage	61.94	63.60	58.62
		Missing	0.00	0.00	56.97
		Missing %	0.00	0.00	0.94
FURBEARERS	Hunt or Trap	Number	201.86	17.53	189.90
		Percentage	1.99	0.37	3.13
		Missing	18.77	0.00	56.97
		Missing %	0.18	0.00	0.94
	Process	Number	275.41	17.53	208.90
		Percentage	2.71	0.37	3.45
		Missing	18.77	0.00	56.97
		Missing %	0.18	0.00	0.94
PLANTS	Gather	Number	6,422.08	2,980.10	3,969.01
		Percentage	63.15	62.50	65.52
		Missing	0.00	0.00	56.97
		Missing %	0.00	0.00	0.94
	Process	Number	5,679.62	2,471.73	3,380.30
		Percentage	55.85	51.84	55.80
		Missing	0.00	0.00	56.97
		Missing %	0.00	0.00	0.94
ANY RESOURCE					
	Attempt	Number	8,271.33	3,926.72	4,728.63
		Percent	81.34	82.35	78.06
	Process	Number	7,626.48	3,541.06	4,234.88
		Percent	75.00	74.26	69.91

Note: Includes Kodiak City, Coast Guard Base, and road-connected areas.
SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992, 1993, and 199

Table X-17. Percentage of Households Sharing Resources by Community, Kodiak Road-Connected Area, 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	65.85	61.67	68.94	52.94	73.46	35.78	56.10	28.67	1.76	0.00	9.38	2.97	28.15	34.73	93.78	80.50
Anchorage	1.76	5.53	1.06	6.37	0.00	3.55	1.82	2.12	0.00	0.00	0.00	0.48	1.06	3.46	4.05	11.48
Kodiak Island Area	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00
Cordova	0.00	0.00	0.00	0.00	0.48	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.00
Dillingham	0.59	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	0.59	0.00
Fairbanks	0.00	1.06	0.00	0.59	0.00	0.59	0.95	0.59	0.00	0.00	0.00	0.00	0.48	0.48	1.43	1.06
Holy Cross	0.59	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	0.59	0.00
Homer	0.48	0.00	0.00	0.95	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.48	0.95
Karluk	0.59	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	0.59	0.00
Kenai	0.59	0.48	0.00	0.59	0.00	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.17	1.06
Ketchikan	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00
Kodiak City	60.43	42.77	66.13	40.56	67.98	29.01	52.86	23.36	0.59	0.00	8.79	2.49	23.90	26.83	91.60	69.43
Kodiak Coast Guard Station	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00
Koyuk	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.59	0.00
Larsen Bay	0.00	0.48	0.48	0.48	1.06	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54	0.48
Ninilchik	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00
Old Harbor	0.00	0.48	0.00	0.00	0.59	0.00	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	1.17	1.06
Ouzinkie	0.00	0.48	0.59	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.59	0.48
Palmer	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
Port Lions	0.00	0.00	0.00	0.00	1.65	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	2.23	0.00
Sand Point	0.59	0.59	0.59	0.00	0.59	0.59	0.00	0.00	0.59	0.00	0.00	0.00	0.59	0.59	0.59	0.59
Seward	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59
Sitka	0.00	0.00	0.59	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.17	0.00
Soldotna	0.00	0.48	0.00	0.00	0.00	0.59	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	1.06
Unalakleet	0.59	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.59	0.00	0.59	0.00
Wasilla	0.00	0.59	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06
Whittier	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00
Olga 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	0.59	0.00	0.59	0.00
Chiniak	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.59
Eagle River	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.17	0.17
Bristol Bay	0.00	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00
Kenai Peninsula	0.00	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00

Table X-17. Percentage of Households Sharing Resources by Community, Kodiak Road-Connected Area, 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
Bering Sea	0.00	0.00	0.00	0.00	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06	0.00
Pleasant Harbor	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	0.48	0.00	0.48
Village Island	0.48	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	0.48	0.00
Hidden Basin	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00
Other Alaska	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.59	0.00
Other U.S.	1.82	34.15	0.17	21.42	0.00	9.48	0.59	5.54	0.00	0.00	0.00	0.00	0.59	8.98	2.40	43.85
Foreign	0.00	1.23	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06	0.00	2.88
Southeast	0.00	0.48	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	0.48
Community Unknown	2.88	1.82	2.29	1.06	5.09	0.95	2.23	1.65	0.00	0.00	0.00	0.00	1.54	2.01	10.37	5.95

* Plants and Berries include 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 X-18. Subsistence Harvests in Pounds Usable Weight per Person by Resource Category, Kodiak, 1982/83, 1991, 1992, and 1993

	Pounds Usable Weight per Person			
	1982/83	1991**	1992	1993
Salmon	42.2	50.6	73.2	47.7
Other Fish	62.4	46.0	50.2	60.0
Marine Invertebrates	16.2	12.0	14.3	9.5
Land Mammals	22.9	25.7	15.2	23.2
Marine Mammals	3.1	0.2	0.2	0.0
Birds and Eggs	0.4	0.5	0.8	0.7
Wild Plants	*	5.2	5.6	10.0
All Resources	147.2	140.1	159.5	151.1

* Note: no plant data collected for 1982/83
** Includes entire road-connected sample.

Table X-19. Composition of Resource Harvests by Resource Category, Kodiak, 1982/83, 1991, 1992, and 1993

	Percentage of Total Harvest			
	1982/83	1991**	1992	1993
Salmon	28.7%	36.1%	45.9%	31.6%
Other Fish	42.4%	32.8%	31.5%	39.7%
Marine Invertebrates	11.0%	8.6%	9.0%	6.3%
Land Mammals	15.6%	18.3%	9.5%	15.4%
Marine Mammals	2.1%	0.1%	0.1%	0.0%
Birds and Eggs	0.3%	0.4%	0.5%	0.5%
Wild Plants	*	3.7%	3.5%	6.6%

* Note: no plant data collected for 1982/83
** Includes entire road-connected sample.

Figure X-9. Harvests of Wild Resources for Home Use, Pounds Usable Weight per Capita, Kodiak, 1982/83, 1991, 1992, and 1993

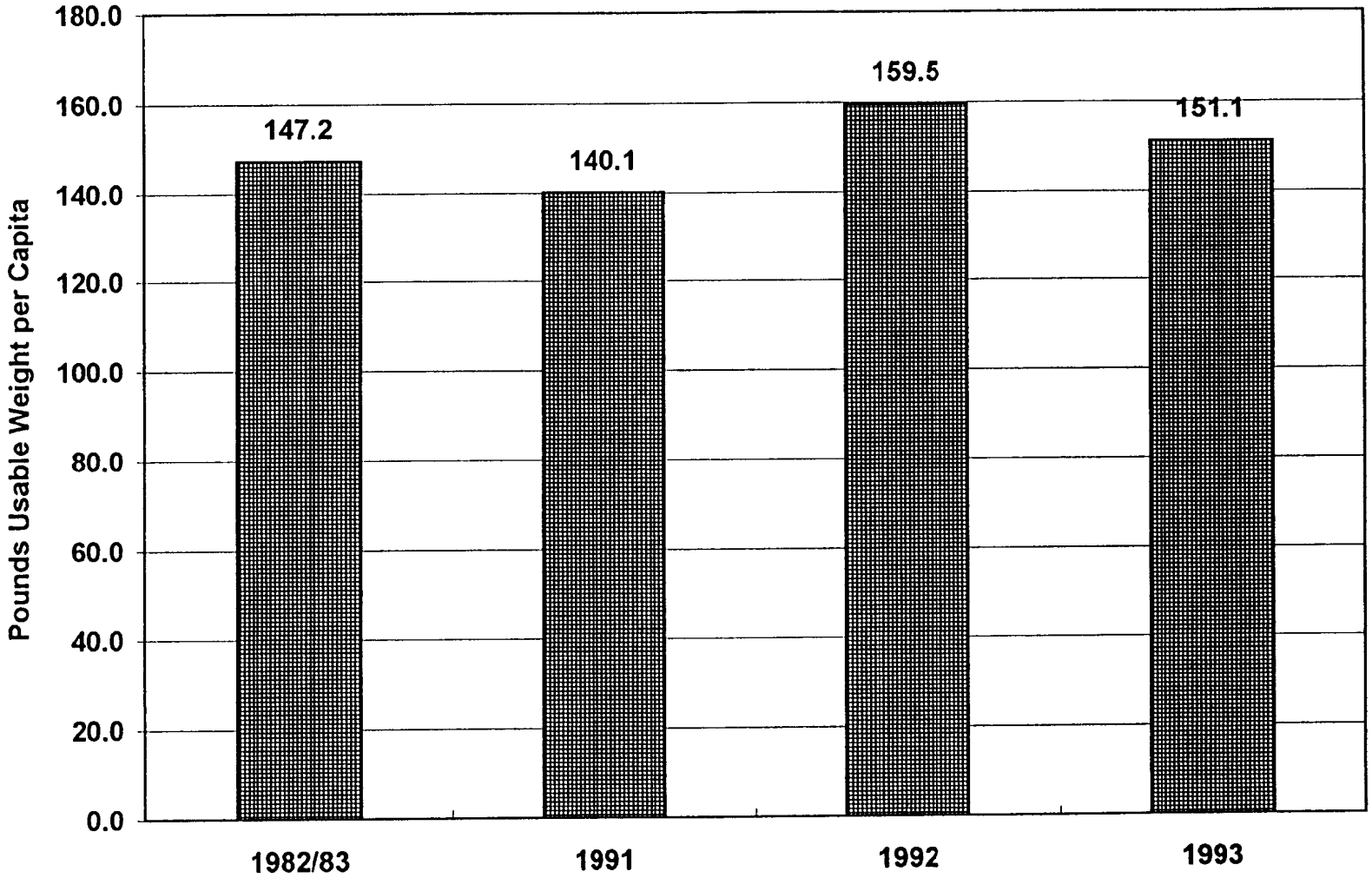


Figure X-10. Per Capita Harvests of Wild Resources by Resource Category, Kodiak, 1982/83, 1991, 1992, and 1993

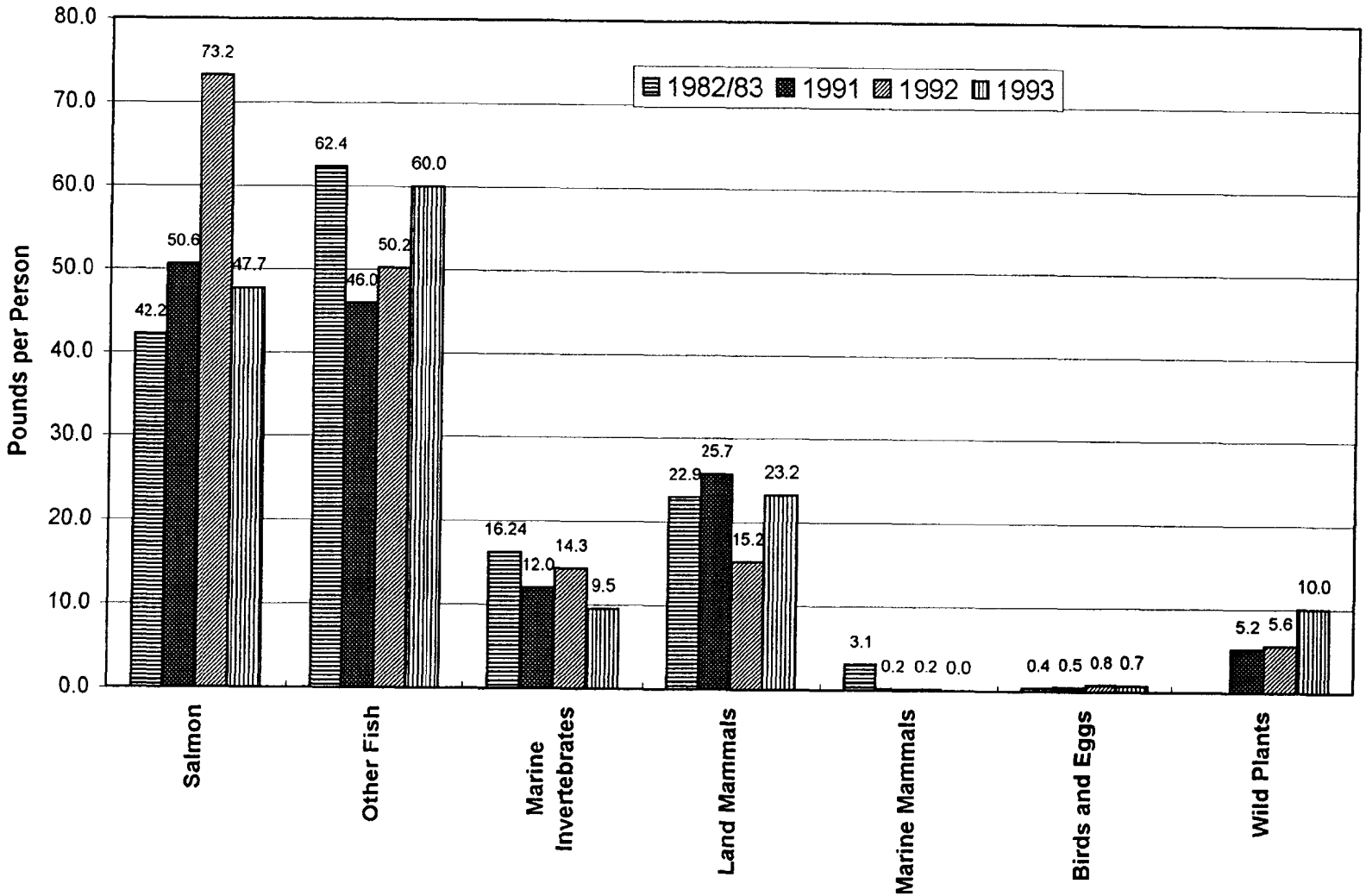


Figure X-11. Composition of Wild Resource Harvests by Resource Category, Kodiak Road-Connected Area, 1991

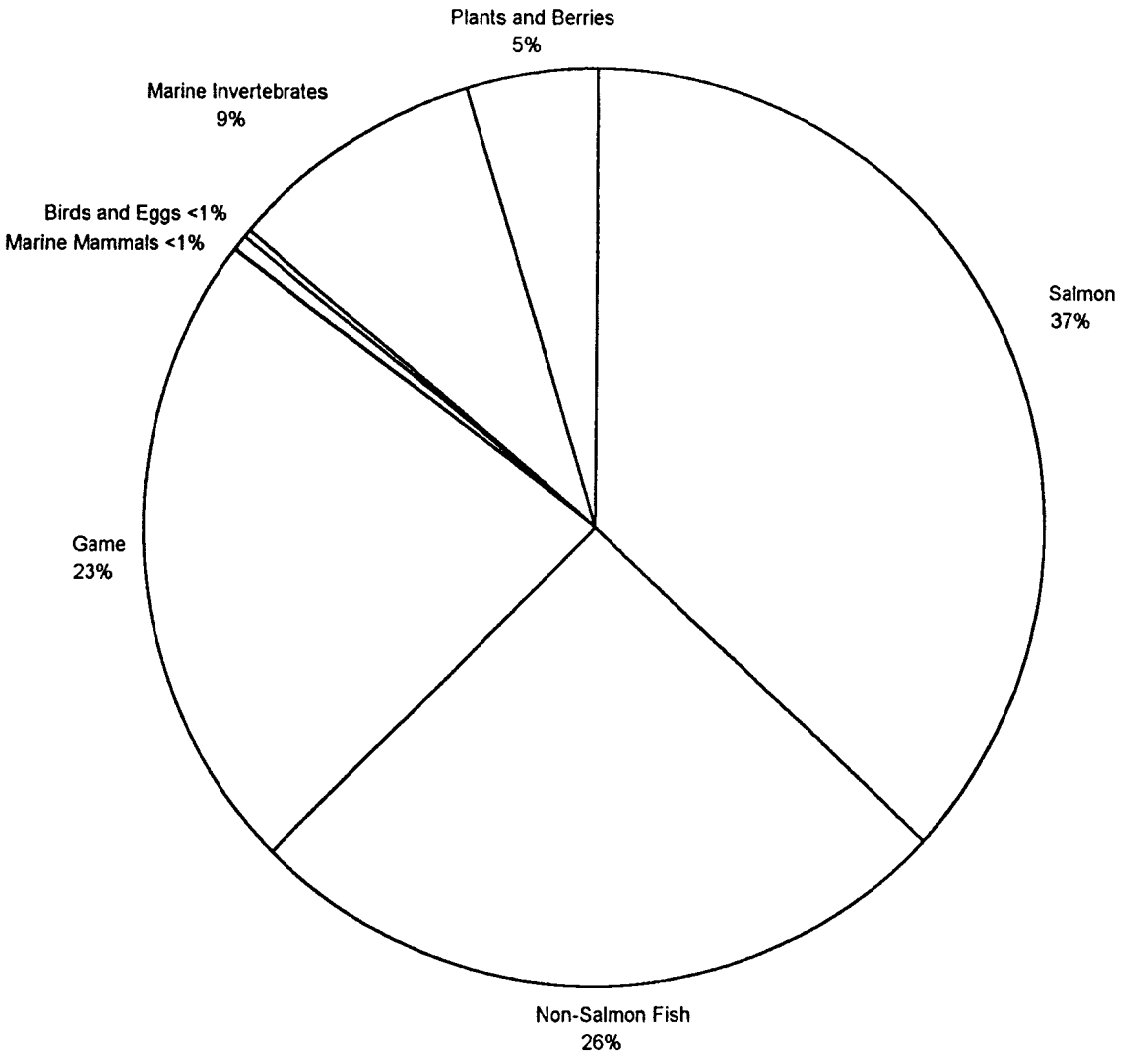


Table X-20. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Kodiak Road-Connected Area, 1991

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	98.6	93.4	93.0	93.2	80.5	1,424,661.70	444.24	140.10			18.02%	18.06%
Fish	97.6	84.7	81.7	81.9	70.4	981,958.63	306.19	96.56			19.97%	20.25%
Salmon	94.7	81.0	77.1	65.4	61.7	514,559.58	160.45	50.60	120,588.25	37.60	20.05%	20.92%
Chum Salmon	21.4	18.8	18.3	3.1	8.3	18,875.44	5.89	1.86	3,643.91	1.14	42.09%	41.81%
Coho Salmon	82.8	69.8	65.6	39.4	45.8	220,150.38	68.65	21.65	40,173.43	12.53	24.81%	25.46%
Chinook Salmon	36.1	22.8	20.8	20.5	14.3	29,473.44	9.19	2.90	3,383.86	1.06	43.78%	43.70%
Pink Salmon	49.1	41.0	40.4	12.5	14.8	39,387.73	12.28	3.87	18,579.12	5.79	34.90%	35.44%
Sockeye Salmon	74.4	57.5	53.8	43.1	30.0	206,039.25	64.25	20.26	54,652.32	17.04	25.85%	26.01%
Unknown Salmon	7.1	1.3	0.8	6.3	1.3	633.34	0.20	0.06	155.61	0.05	184.13%	183.73%
Non-Salmon Fish	90.8	72.0	69.2	64.3	52.9	467,399.04	145.74	45.96			26.56%	26.59%
Pike	0.5	0.0	0.0	0.5	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Cod	31.4	14.3	13.3	17.6	11.7	25,686.96	8.01	2.53	8,027.17	2.50	52.73%	52.19%
Pacific Cod (Gray)	31.4	14.3	13.3	17.6	11.7	25,686.96	8.01	2.53	8,027.17	2.50	52.73%	52.19%
Sablefish (Black Cod)	6.6	2.5	2.5	4.6	2.7	17,434.51	5.44	1.71	5,624.04	1.75	166.52%	165.00%
Greenling	27.7	17.7	16.1	14.9	7.1	13,202.48	4.12	1.30	3,885.07	1.21	95.53%	109.99%
Lingcod	23.9	13.8	12.2	12.8	7.1	12,423.21	3.87	1.22	3,105.80	0.97	117.98%	116.75%
Unknown Greenling	6.2	5.2	4.6	2.1	0.2	779.27	0.24	0.08	779.27	0.24	72.93%	74.47%
Flounder	15.8	12.1	12.1	3.6	5.0	9,769.95	3.05	0.96	3,256.65	1.02	52.89%	53.40%
Arrow Tooth Flounder (Turbot)	0.6	0.6	0.6	0.0	0.0	168.93	0.05	0.02	56.31	0.02	190.71%	190.29%
Unknown Flounder	15.3	11.5	11.5	3.6	5.0	9,601.02	2.99	0.94	3,200.34	1.00	53.80%	54.31%
Sole	1.8	1.2	1.2	0.6	1.2	1,163.74	0.36	0.11	1,163.74	0.36	173.05%	172.16%
Rex Sole	0.6	0.6	0.6	0.0	0.6	525.56	0.16	0.05	525.56	0.16	190.71%	189.64%
Rock Sole	0.6	0.6	0.6	0.0	0.6	525.56	0.16	0.05	525.56	0.16	190.71%	189.64%
Sole, Unknown	1.2	0.6	0.6	0.6	0.6	112.62	0.04	0.01	112.62	0.04	190.71%	192.24%
Halibut	84.9	57.2	52.6	55.2	42.9	319,322.29	99.57	31.40	19,614.39	6.12	29.48%	29.81%
Herring	6.2	2.2	1.6	4.6	2.3	9,210.01	2.87	0.91	1,535.00 gal	0.48	154.74%	155.80%
Herring Roe	0.6	0.0	0.0	0.6	0.6	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Rockfish	39.8	27.9	26.6	18.5	11.4	31,111.89	9.70	3.06	16,783.38	5.23	37.34%	39.10%
Black Rockfish (black bass)	28.5	24.4	23.1	7.0	9.8	21,111.12	6.58	2.08	14,074.08	4.39	39.69%	39.69%
Red Rockfish	23.4	8.6	8.2	15.3	4.5	9,302.45	2.90	0.91	2,325.61	0.73	80.87%	80.37%
Unknown Rockfish	4.5	1.1	1.1	3.4	0.6	698.31	0.22	0.07	383.69	0.12	169.45%	170.79%
Sea Perch	0.6	0.6	0.6	0.0	0.6	563.10	0.18	0.06	563.10	0.18	190.71%	189.64%
Sculpin	1.4	1.0	1.0	0.5	0.5	99.30	0.03	0.01	198.59	0.06	151.61%	152.54%
Irish Lord	1.4	1.0	1.0	0.5	0.5	99.30	0.03	0.01	198.59	0.06	151.61%	152.54%
Smelt	1.2	0.0	0.0	1.2	0.6	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Eulachon (Hooligan, Candlefish)	1.2	0.0	0.0	1.2	0.6	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%

Table X-20. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Kodiak Road-Connected Area, 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
Groundfish	0.6	0.6	0.6	0.0	0.0	93.85	0.03	0.01			190.71%	187.67%
Wolf Eel (Wolffish)	0.6	0.6	0.6	0.0	0.0	9.39	0.00	0.00	18.77	0.01	190.71%	190.29%
Walleye Pollock (Whiting)	1.1	0.6	0.6	0.5	0.6	157.67	0.05	0.02	112.62	0.04	190.71%	190.29%
Skates	1.6	1.1	1.1	0.6	0.0	170.23	0.05	0.02	34.05	0.01	135.21%	135.40%
Grayling	0.8	0.8	0.8	0.0	0.0	93.89	0.03	0.01	134.13	0.04	118.93%	119.25%
Trout and Char	47.8	41.7	40.7	12.1	11.2	39,266.19	12.24	3.86	28,047.28	8.75	31.07%	31.82%
Char	41.2	36.8	35.9	9.1	9.7	32,644.03	10.18	3.21	23,317.16	7.27	30.97%	31.75%
Dolly Varden	41.2	36.8	35.9	9.1	9.7	32,644.03	10.18	3.21	23,317.16	7.27	30.97%	31.75%
Trout	20.3	18.4	15.4	5.6	3.2	6,622.16	2.06	0.65	4,730.12	1.47	48.73%	49.12%
Rainbow Trout	14.3	14.7	12.2	2.7	2.7	6,220.69	1.94	0.61	4,443.35	1.39	51.82%	52.21%
Steelhead	6.2	4.9	3.4	2.8	0.6	401.47	0.13	0.04	286.77	0.09	84.93%	84.84%
Unknown Non-Salmon Fish	0.2	0.2	0.2	0.0	0.0	43.61	0.01	0.00	43.61	0.01	177.11%	179.98%
Game	75.7	56.1	45.4	56.1	28.7	261,082.56	81.41	25.67	9,300.77	2.90	25.30%	23.87%
Big Game	74.9	54.3	40.0	56.1	25.4	253,569.43	79.07	24.94	5,029.12	1.57	22.74%	24.36%
Bison	0.5	0.0	0.0	0.5	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black Bear	0.0	0.2	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Brown Bear	0.6	2.6	0.6	0.0	0.6	3,109.19	0.97	0.31	20.73	0.01	147.21%	146.42%
Caribou	6.5	1.2	0.6	5.3	0.0	5,631.00	1.76	0.55	37.54	0.01	190.71%	189.64%
Deer	72.8	53.8	39.4	46.8	22.8	209,942.07	65.46	20.65	4,859.77	1.52	23.00%	22.34%
Elk	19.1	8.3	2.2	17.0	3.8	16,106.92	5.02	1.58	71.59	0.02	94.79%	94.59%
Goat	4.1	0.2	0.2	3.5	0.2	395.24	0.12	0.04	5.45	0.00	177.11%	175.09%
Moose	12.9	2.1	1.1	11.9	0.6	18,385.01	5.73	1.81	34.05	0.01	135.21%	134.78%
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	17.3	20.5	15.0	5.1	4.8	7,054.84	2.20	0.69	4,042.51	1.26	46.59%	52.04%
Fox	3.5	5.8	2.9	0.5	1.8	0.00	0.00	0.00	239.82	0.07	96.88%	0.00%
Red Fox	3.5	5.8	2.9	0.5	1.8	0.00	0.00	0.00	239.82	0.07	96.88%	0.00%
Beaver	0.6	0.0	0.0	0.6	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Hare	15.7	18.4	13.3	4.0	2.9	7,042.73	2.20	0.69	3,521.36	1.10	51.48%	52.12%
Snowshoe Hare	15.7	18.4	13.3	4.0	2.9	7,042.73	2.20	0.69	3,521.36	1.10	51.48%	52.12%
Land Otter	1.1	1.1	1.1	0.0	0.5	0.00	0.00	0.00	124.40	0.04	151.21%	0.00%
Marten	1.1	1.1	1.1	0.0	0.5	0.00	0.00	0.00	102.14	0.03	135.21%	0.00%
Weasel	0.5	0.5	0.5	0.0	0.0	0.00	0.00	0.00	30.55	0.01	189.48%	0.00%
Squirrel	0.8	1.5	0.8	0.0	0.0	12.11	0.00	0.00	24.22	0.01	153.07%	151.66%
Tree Squirrel	0.8	1.5	0.8	0.0	0.0	12.11	0.00	0.00	24.22	0.01	153.07%	151.66%
Feral Animals	2.8	0.5	0.5	2.3	0.5	458.29	0.14	0.05	229.14	0.07	189.48%	190.78%
Reindeer - Feral	2.3	0.0	0.0	2.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table X-20. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Kodiak Road-Connected Area, 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
Rabbit - Feral	0.5	0.5	0.5	0.0	0.5	458.29	0.14	0.05	229.14	0.07	189.48%	190.78%
Marine Mammals	1.8	0.6	0.6	1.8	0.0	2,102.24	0.66	0.21	37.54	0.01	190.71%	189.64%
Whale	1.2	0.0	0.0	1.2	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whale	1.2	0.0	0.0	1.2	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	1.8	0.6	0.6	1.8	0.0	2,102.24	0.66	0.21	37.54	0.01	190.71%	189.64%
Harbor Seal	1.8	0.6	0.6	1.8	0.0	2,102.24	0.66	0.21	37.54	0.01	190.71%	189.64%
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	19.1	12.4	10.9	9.4	3.0	4,983.14	1.55	0.49	6,902.61	2.15	65.00%	63.84%
Birds	19.1	12.4	10.9	9.4	3.0	4,891.48	1.53	0.48	6,597.08	2.06	65.93%	64.24%
Upland Game Birds	6.8	5.3	3.8	2.9	0.5	662.35	0.21	0.07	946.22	0.30	82.20%	82.69%
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	6.8	5.3	3.8	2.9	0.5	662.35	0.21	0.07	946.22	0.30	82.20%	82.69%
Migratory Birds	15.2	9.9	8.7	7.6	3.0	4,229.13	1.32	0.42	5,650.87	1.76	72.14%	69.73%
Waterfowl	15.2	9.9	8.7	7.6	3.0	4,229.13	1.32	0.42	5,650.87	1.76	72.14%	69.73%
Ducks	15.2	9.9	8.7	7.6	3.0	4,071.47	1.27	0.40	5,575.79	1.74	72.82%	71.01%
Eider	0.5	0.5	0.5	0.0	0.5	48.88	0.02	0.00	30.55	0.01	189.48%	190.78%
Eider, Unknown	0.5	0.5	0.5	0.0	0.5	48.88	0.02	0.00	30.55	0.01	189.48%	190.78%
Scoter	0.6	0.6	0.6	0.0	0.0	50.68	0.02	0.00	56.31	0.02	190.71%	191.59%
Scoter, Unknown	0.6	0.6	0.6	0.0	0.0	50.68	0.02	0.00	56.31	0.02	190.71%	191.59%
Harlequin	4.5	3.9	3.9	0.6	1.5	378.45	0.12	0.04	756.90	0.24	90.47%	91.37%
Goldeneye	6.6	4.2	4.2	2.3	1.9	757.05	0.24	0.07	946.31	0.30	79.31%	80.05%
Bufflehead	3.8	4.2	3.8	0.0	1.5	405.60	0.13	0.04	1,013.99	0.32	92.77%	93.65%
Merganser	1.6	1.6	1.6	0.6	0.5	397.17	0.12	0.04	441.30	0.14	133.34%	133.91%
Scaup	1.1	1.1	1.1	0.0	0.0	475.35	0.15	0.05	528.16	0.16	146.21%	146.70%
Mallard	10.4	7.0	6.4	4.0	1.4	1,041.46	0.32	0.10	1,041.46	0.32	63.84%	64.02%
Pintail	0.6	1.1	0.6	0.0	0.0	30.03	0.01	0.00	37.54	0.01	190.71%	190.29%
Wigeon	1.6	1.1	1.1	0.6	0.0	34.53	0.01	0.00	49.32	0.02	138.00%	138.99%
Teal	1.6	2.1	1.6	0.0	0.0	48.97	0.02	0.00	163.24	0.05	133.38%	132.95%
Gadwall	1.1	1.5	1.1	0.0	0.6	198.33	0.06	0.02	247.91	0.08	175.72%	174.91%
Oldsquaw	0.6	0.6	0.6	0.0	0.0	150.16	0.05	0.01	187.70	0.06	190.71%	191.59%
Ducks, Unknown	3.0	1.8	0.6	2.4	0.0	54.81	0.02	0.01	75.08	0.02	190.71%	189.64%
Geese	1.2	0.6	0.6	0.6	0.0	157.67	0.05	0.02	75.08	0.02	190.71%	190.29%
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	1.2	0.6	0.6	0.6	0.0	157.67	0.05	0.02	75.08	0.02	190.71%	190.29%
Canada Geese, Unknown	1.2	0.6	0.6	0.6	0.0	157.67	0.05	0.02	75.08	0.02	190.71%	190.29%

Table X-20. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Kodiak Road-Connected Area, 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
Shorebirds	0.0	0.5	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Common Snipe	0.0	0.5	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%
Puffins	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
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%
Auklet	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Parakeet Auklet	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	0.5	0.5	0.5	0.0	0.5	91.66	0.03	0.01	305.53	0.10	189.48%	190.78%
Seabird Eggs	0.5	0.5	0.5	0.0	0.5	91.66	0.03	0.01	305.53	0.10	189.48%	190.78%
Gull Eggs	0.5	0.5	0.5	0.0	0.5	91.66	0.03	0.01	305.53	0.10	189.48%	190.78%
Kittiwake 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	80.3	47.1	45.6	72.3	35.8	121,935.44	38.02	11.99			34.35%	34.00%
Clams	34.8	22.8	21.9	21.8	9.1	37,779.03	11.78	3.72	12,593.01 gal	3.93	51.97%	51.81%
Butter Clams	27.9	19.0	18.0	16.0	6.8	28,695.84	8.95	2.82	9,565.28 gal	2.98	54.66%	54.58%
Razor Clams	7.9	4.2	4.2	4.1	1.5	2,143.15	0.67	0.21	714.38 gal	0.22	83.51%	82.25%
Pacific Littleneck Clams (Steamers)	5.4	3.8	3.8	2.2	1.6	3,947.80	1.23	0.39	1,315.93 gal	0.41	118.71%	119.09%
Pinkneck Clams	0.5	0.0	0.0	0.5	0.5	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Unknown Clams	5.1	1.6	1.6	4.0	1.2	2,992.24	0.93	0.29	997.41 gal	0.31	133.48%	132.53%
Cockles	3.3	2.8	2.8	0.5	0.5	707.78	0.22	0.07	235.93 gal	0.07	103.10%	104.11%
Geoducks	0.6	0.6	0.6	0.0	0.6	187.51	0.06	0.02	62.50 gal	0.02	190.71%	192.24%
Scallops	9.2	0.6	0.6	8.6	2.7	540.58	0.17	0.05	9,009.60	2.81	190.71%	187.67%
Mussels	4.1	4.1	3.5	0.6	0.6	563.10	0.18	0.06	375.40 gal	0.12	89.68%	90.37%
Blue Mussels	0.6	0.6	0.6	0.0	0.6	140.78	0.04	0.01	93.85 gal	0.03	190.71%	190.29%
Crabs	75.8	28.8	27.2	66.1	30.2	64,403.82	20.08	6.33	48,012.81	14.97	38.72%	42.02%
Dungeness Crab	57.3	23.1	22.0	42.0	18.1	13,259.54	4.13	1.30	18,942.20	5.91	46.03%	46.63%
King Crab	55.0	17.3	14.7	48.8	18.1	15,217.17	4.74	1.50	6,616.16	2.06	49.08%	48.37%
Tanner Crab	51.3	18.4	17.3	42.5	17.7	35,927.12	11.20	3.53	22,454.45	7.00	61.02%	61.32%
Tanner Crab, Bairdi	0.5	0.5	0.5	0.0	0.0	293.31	0.09	0.03	183.32	0.06	189.48%	189.32%
Tanner Crab, Unknown	2.7	2.7	2.7	0.0	1.1	1,382.53	0.43	0.14	864.08	0.27	91.48%	91.17%
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)	6.6	6.1	6.1	1.8	3.3	1,034.92	0.32	0.10	258.73 gal	0.08	88.32%	88.67%
Chitons (small)	6.6	6.1	6.1	1.8	3.3	1,034.92	0.32	0.10	258.73 gal	0.08	88.32%	88.67%
Octopus	16.5	9.7	8.9	9.2	6.2	5,367.68	1.67	0.53	1,341.92	0.42	59.40%	58.75%
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%

Table X-20. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Kodiak Road-Connected Area, 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 Urchin	6.6	5.4	4.8	2.8	0.6	314.71	0.10	0.03	629.42 gal	0.20	106.52%	105.98%
Shrimp	7.6	2.6	2.1	5.5	2.1	1,565.64	0.49	0.15	782.82 gal	0.24	96.15%	96.08%
Snails	1.3	1.3	1.3	0.0	0.0	37.18	0.01	0.00	24.78 gal	0.01	149.61%	149.01%
Limpets	2.0	2.0	2.0	0.0	0.5	48.49	0.02	0.00	32.33 gal	0.01	109.47%	109.68%
Squid	1.2	0.6	0.6	0.6	0.6	9,385.00	2.93	0.92			190.71%	189.64%
Plants and Berries	80.1	79.4	78.2	23.0	30.7	52,599.69	16.40	5.17	13,149.92 gal	4.10	20.80%	21.52%
Berries	77.4	76.7	76.1	21.4	29.2	48,172.32	15.02	4.74	12,043.08 gal	3.76	20.57%	21.26%
Plants/Greens/Mushrooms	23.2	22.7	22.1	1.6	4.4	3,956.64	1.23	0.39	989.16 gal	0.31	43.08%	43.94%
Seaweed/Kelp (Food)	4.4	3.2	3.2	2.2	0.5	470.73	0.15	0.05	117.68 gal	0.04	127.27%	126.31%
Fertilizer	15.2	15.2	15.2	1.1	1.6	0.00	0.00	0.00	85,564.40 gal	26.68	66.18%	0.00%
Vegetative Fertilizer	15.2	15.2	15.2	1.1	1.6	0.00	0.00	0.00	85,564.40 gal	26.68	66.18%	0.00%
Seaweed/Kelp (Non-food)	15.2	15.2	15.2	1.1	1.6	0.00	0.00	0.00	85,564.40 gal	26.68	66.18%	0.00%
Wood	40.1	38.3	38.3	7.7	7.6	0.00	0.00	0.00	3,805.14 crd	1.19	29.68%	0.00%

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

Table X-21. Estimated Amount of Resources Removed From Commercial Harvest, Kodiak Road-Connected Area, 1991

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		212,755.27	19.27	14.93
Fish		191,471.58	19.50	13.44
Salmon	21900.14	90,709.36	17.63	6.37
Chum Salmon	1459.13	7,558.28	40.04	0.53
Coho Salmon	3507.32	19,220.11	8.73	1.35
Chinook Salmon	1592.50	13,870.71	47.06	0.97
Pink Salmon	4740.04	10,048.89	25.51	0.71
Sockeye Salmon	10450.99	39,400.22	19.12	2.77
Unknown Salmon	150.16	611.15	96.50	0.04
Non-Salmon Fish		100,762.21	21.56	7.07
Cod	2643.27	8,458.47	32.93	0.59
Pacific Cod (Gray)	2643.27	8,458.47	32.93	0.59
Sablefish (Black Cod)	5471.27	16,960.95	97.28	1.19
Greenling	2338.17	9,352.67	70.84	0.66
Lingcod	2338.17	9,352.67	75.28	0.66
Flounder	427.74	1,283.21	13.13	0.09
Unknown Flounder	427.74	1,283.21	13.37	0.09
Sole	1051.12	1,051.12	90.32	0.07
Rex Sole	525.56	525.56	100.00	0.04
Rock Sole	525.56	525.56	100.00	0.04
Halibut	2963.40	48,244.19	15.11	3.39
Herring	1259.65 gal	7,557.87	82.06	0.53
Rockfish	2298.25	7,166.01	23.03	0.50
Black Rockfish (black bass)	516.18	774.26	3.67	0.05
Red Rockfish	1444.21	5,776.84	62.10	0.41
Unknown Rockfish	337.86	614.91	88.06	0.04
Sea Perch	563.10	563.10	100.00	0.04
Groundfish		93.85	100.00	0.01
Wolf Eel (Wolffish)	18.77	9.39	100.00	0.00
Trout and Char	15.28	21.39	0.05	0.00
Trout	15.28	21.39	0.32	0.00
Steelhead	15.28	21.39	5.33	0.00
Marine Invertebrates		21,283.69	17.45	1.49
Scallops	9009.60	540.58	100.00	0.04

Table X-21. Estimated Amount of Resources Removed From Commercial Harvest, Kodiak Road-Connected Area, 1991

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
Mussels	93.85 gal	140.78	25.00	0.01
Blue Mussels	93.85 gal	140.78	100.00	0.01
Crabs	8728.45	8,737.73	13.57	0.61
Dungeness Crab	6627.83	4,639.48	34.99	0.33
King Crab	1053.22	2,422.41	15.92	0.17
Tanner Crab	1047.39	1,675.83	4.66	0.12
Tanner Crab, Bairdi	183.32	293.31	100.00	0.02
Tanner Crab, Unknown	864.08	1,382.53	100.00	0.10
Octopus	454.38	1,817.54	33.86	0.13
Sea Urchin (Neet)	305.53 gal	152.76	48.54	0.01
Shrimp	254.66 gal	509.31	32.53	0.04
Squid		9,385.00	100.00	0.66

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

Table X-22. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Kodiak Road-Connected Area, 1991

Resource	Percent Base	Subsistence Methods: Net No.	Net Lbs.	Seine No.	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	31.44	30.35	1.10	1.00	32.54	31.36	18.16	17.63	49.30	51.02		
Chum Salmon	gear type	2.11	2.65	0.00	0.00	2.04	2.57	6.66	8.33	2.33	2.73		
	resource	21.97	21.97	0.00	0.00	21.97	21.97	40.04	40.04	37.99	37.99		
	total	0.66	0.81	0.00	0.00	0.66	0.81	1.21	1.47	1.15	1.39	3.02	3.67
Coho Salmon	gear type	16.49	21.93	0.00	0.00	15.93	21.23	16.02	21.19	51.16	63.49		
	resource	15.56	15.56	0.00	0.00	15.56	15.56	8.73	8.73	75.71	75.71		
	total	5.18	6.66	0.00	0.00	5.18	6.66	2.91	3.74	25.22	32.39	33.31	42.78
Chinook Salmon	gear type	1.91	4.03	2.57	5.75	1.93	4.09	7.27	15.29	1.74	3.43		
	resource	21.36	21.36	1.01	1.01	22.37	22.37	47.06	47.06	30.57	30.57		
	total	0.60	1.22	0.03	0.06	0.63	1.28	1.32	2.70	0.86	1.75	2.81	5.73
Pink Salmon	gear type	3.43	1.77	0.00	0.00	3.31	1.71	21.64	11.08	21.09	10.13		
	resource	7.00	7.00	0.00	0.00	7.00	7.00	25.51	25.51	67.49	67.49		
	total	1.08	0.54	0.00	0.00	1.08	0.54	3.93	1.95	10.40	5.17	15.41	7.65
Sockeye Salmon	gear type	76.06	69.61	97.43	94.25	76.78	70.40	47.72	43.44	23.67	20.21		
	resource	52.77	52.77	2.36	2.36	55.13	55.13	19.12	19.12	25.75	25.75		
	total	23.92	21.13	1.07	0.94	24.99	22.07	8.67	7.66	11.67	10.31	45.32	40.04
Unknown Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.67	0.01	0.01		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	96.50	96.50	3.50	3.50		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.12	0.00	0.00	0.13	0.12

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

Table X-23. Estimated Salmon Harvest by Gear Type and Species, Kodiak Road-Connected Area, 1991

		Subsistence Methods						Removed from Commercial Catch		Rod and Reel		Any Method	
		Net		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
Salmon	numbers	37,916.02	11.82	1,322.94	0.41	39,238.96	12.24	21,900.14	6.83	59,449.15	18.54	120,588.25	37.60
	pounds	156,187.68	48.70	5,155.68	1.61	161,343.36	50.31	90,709.36	28.28	262,506.86	81.85	514,559.58	160.45
Chum Salmon	numbers	800.53	0.25	0.00	0.00	800.53	0.25	1,459.13	0.45	1,384.25	0.43	3,643.91	1.14
	pounds	4,146.76	1.29	0.00	0.00	4,146.76	1.29	7,558.28	2.36	7,170.39	2.24	18,875.44	5.89
Coho Salmon	numbers	6,251.78	1.95	0.00	0.00	6,251.78	1.95	3,507.32	1.09	30,414.33	9.48	40,173.43	12.53
	pounds	34,259.76	10.68	0.00	0.00	34,259.76	10.68	19,220.11	5.99	166,670.52	51.97	220,150.38	68.65
Chinook Salmon	numbers	722.85	0.23	34.05	0.01	756.90	0.24	1,592.50	0.50	1,034.46	0.32	3,383.86	1.06
	pounds	6,296.03	1.96	296.54	0.09	6,592.57	2.06	13,870.71	4.33	9,010.15	2.81	29,473.44	9.19
Pink Salmon	numbers	1,300.54	0.41	0.00	0.00	1,300.54	0.41	4,740.04	1.48	12,538.54	3.91	18,579.12	5.79
	pounds	2,757.15	0.86	0.00	0.00	2,757.15	0.86	10,048.89	3.13	26,581.70	8.29	39,387.73	12.28
Sockeye Salmon	numbers	28,840.31	8.99	1,288.90	0.40	30,129.21	9.39	10,450.99	3.26	14,072.13	4.39	54,652.32	17.04
	pounds	108,727.98	33.90	4,859.14	1.52	113,587.12	35.42	39,400.22	12.29	53,051.91	16.54	206,039.25	64.25
Unknown Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	150.16	0.05	5.45	0.00	155.61	0.05
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	611.15	0.19	22.19	0.01	633.34	0.20

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

Table XX-24. Percentage of Households Harvesting Salmon by Gear Type and Species, Kodiak Road Connected Area, 1991

Resource	Subsistence Methods			Removed from Commercial Catch	Rod and Reel	Any Method
	Net	Seine	Any Subsistence Gear			
Salmon	24.64	2.12	26.17	14.39	64.86	77.13
Chum Salmon	3.88	0.00	3.88	5.09	10.51	18.31
Coho Salmon	11.20	0.00	11.20	7.80	55.36	65.61
Chinook Salmon	3.66	1.06	4.72	9.34	9.19	20.76
Pink Salmon	4.83	0.00	4.83	4.14	34.13	40.39
Sockeye Salmon	22.99	1.54	24.53	12.05	29.13	53.80
Unknown Salmon	0.00	0.00	0.00	0.59	0.17	0.76

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

Table X-25. Estimated Harvest of Fish Other than Salmon by Gear Type, Kodiak Road-Connected Area, 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	49,250.84	15.36	100,762.21	31.42	316,309.01	98.63	1,076.97	0.34	467,399.04	145.74
Grayling	pounds	0.00	0.00	0.00	0.00	93.89	0.03	0.00	0.00	93.89	0.03
Lingcod	pounds	225.24	0.07	9,352.67	2.92	2,845.30	0.89	0.00	0.00	12,423.21	3.87
Pacific Cod	pounds	4,738.04	1.48	8,458.47	2.64	12,490.44	3.89	0.00	0.00	25,686.96	8.01
Sablefish	pounds	0.00	0.00	16,960.95	5.29	473.57	0.15	0.00	0.00	17,434.51	5.44
Arrow Tooth Flounder	pounds	0.00	0.00	0.00	0.00	168.93	0.05	0.00	0.00	168.93	0.05
Unknown Flounder	pounds	352.25	0.11	1,283.21	0.40	7,965.56	2.48	0.00	0.00	9,601.02	2.99
Rex Sole	pounds	0.00	0.00	525.56	0.16	0.00	0.00	0.00	0.00	525.56	0.16
Rock Sole	pounds	0.00	0.00	525.56	0.16	0.00	0.00	0.00	0.00	525.56	0.16
Sole, Unknown	pounds	0.00	0.00	0.00	0.00	112.62	0.04	0.00	0.00	112.62	0.04
Halibut	pounds	40,678.65	12.68	48,244.19	15.04	230,399.45	71.84	0.00	0.00	319,322.29	99.57
Herring	pounds	1,652.14	0.52	7,557.87	2.36	0.00	0.00	0.00	0.00	9,210.01	2.87
Black Rockfish	pounds	737.52	0.23	774.26	0.24	19,599.34	6.11	0.00	0.00	21,111.12	6.58
Red Rockfish	pounds	579.20	0.18	5,776.84	1.80	2,946.41	0.92	0.00	0.00	9,302.45	2.90
Sea Perch	pounds	0.00	0.00	563.10	0.18	0.00	0.00	0.00	0.00	563.10	0.18
Unknown Rockfish	pounds	0.00	0.00	614.91	0.19	83.41	0.03	0.00	0.00	698.31	0.22
Irish Lord	pounds	0.00	0.00	0.00	0.00	99.30	0.03	0.00	0.00	99.30	0.03
Unknown Greenling	pounds	0.00	0.00	0.00	0.00	779.27	0.24	0.00	0.00	779.27	0.24
Groundfish	pounds	0.00	0.00	93.85	0.03	0.00	0.00	0.00	0.00	93.85	0.03
Wolf Eel	pounds	0.00	0.00	9.39	0.00	0.00	0.00	0.00	0.00	9.39	0.00
Walleye Pollock	pounds	0.00	0.00	0.00	0.00	157.67	0.05	0.00	0.00	157.67	0.05
Skates	pounds	0.00	0.00	0.00	0.00	170.23	0.05	0.00	0.00	170.23	0.05
Dolly Varden	pounds	192.48	0.06	0.00	0.00	32,016.17	9.98	435.37	0.14	32,644.03	10.18
Rainbow Trout	pounds	0.00	0.00	0.00	0.00	5,579.08	1.74	641.61	0.20	6,220.69	1.94
Steelhead	pounds	95.33	0.03	21.39	0.01	284.76	0.09	0.00	0.00	401.47	0.13
Unknown Non-Salmon Fish	pounds	0.00	0.00	0.00	0.00	43.61	0.01	0.00	0.00	43.61	0.01

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

Table X-26. Percentage of Fish Other Than Salmon Harvested by Gear Type, Kodiak Road- Connected Area, 1991

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	10.54	21.56	67.67	0.23
Grayling	resource	0.00	0.00	100.00	0.00
Lingcod	resource	1.81	75.28	22.90	0.00
Pacific Cod	resource	18.45	32.93	48.63	0.00
Sablefish	resource	0.00	97.28	2.72	0.00
Arrow Tooth Flounder	resource	0.00	0.00	100.00	0.00
Unknown Flounder	resource	3.67	13.37	82.97	0.00
Rex Sole	resource	0.00	100.00	0.00	0.00
Rock Sole	resource	0.00	100.00	0.00	0.00
Sole, Unknown	resource	0.00	0.00	100.00	0.00
Halibut	resource	12.74	15.11	72.15	0.00
Herring	resource	17.94	82.06	0.00	0.00
Black Rockfish	resource	3.49	3.67	92.84	0.00
Red Rockfish	resource	6.23	62.10	31.67	0.00
Sea Perch	resource	0.00	100.00	0.00	0.00
Unknown Rockfish	resource	0.00	88.06	11.94	0.00
Irish Lord	resource	0.00	0.00	100.00	0.00
Unknown Greenling	resource	0.00	0.00	100.00	0.00
Groundfish	resource	0.00	100.00	0.00	0.00
Wolf Eel	resource	0.00	100.00	0.00	0.00
Walleye Pollock	resource	0.00	0.00	100.00	0.00
Skates	resource	0.00	0.00	100.00	0.00
Dolly Varden	resource	0.59	0.00	98.08	1.33
Rainbow Trout	resource	0.00	0.00	89.69	10.31
Steelhead	resource	23.74	5.33	70.93	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 X-27. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Kodiak Road-Connected Area, 1991

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	9.98	19.48	61.56	0.65	69.25
Grayling	0.00	0.00	0.82	0.00	0.82
Lingcod	1.76	2.97	8.05	0.00	12.19
Pacific Cod	1.65	6.96	6.82	0.00	13.30
Sablefish	0.00	2.01	0.48	0.00	2.49
Arrow Tooth Flounder	0.00	0.00	0.59	0.00	0.59
Unknown Flounder	1.06	0.95	9.95	0.00	11.49
Rex Sole	0.00	0.59	0.00	0.00	0.59
Rock Sole	0.00	0.59	0.00	0.00	0.59
Sole, Unknown	0.00	0.00	0.59	0.00	0.59
Halibut	6.32	15.71	39.81	0.00	52.59
Herring	0.59	1.06	0.00	0.00	1.65
Black Rockfish	2.12	1.76	19.80	0.00	23.09
Red Rockfish	1.54	2.71	3.91	0.00	8.16
Sea Perch	0.00	0.59	0.00	0.00	0.59
Unknown Rockfish	0.00	0.59	0.48	0.00	1.06
Irish Lord	0.00	0.00	0.95	0.00	0.95
Unknown Greenling	0.00	0.00	4.63	0.00	4.63
Groundfish	0.00	0.59	0.00	0.00	0.59
Wolf Eel	0.00	0.59	0.00	0.00	0.59
Walleye Pollock	0.00	0.00	0.59	0.00	0.59
Skates	0.00	0.00	1.06	0.00	1.06
Dolly Varden	1.43	0.00	35.89	0.65	35.89
Rainbow Trout	0.00	0.00	12.25	0.48	12.25
Steelhead	1.06	0.48	1.82	0.00	3.35
Unknown Non-Salmon Fish	0.00	0.00	0.17	0.00	0.17

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

Figure X- 12. Composition of Wild Resource Harvests by Resource Category, Kodiak, 1992

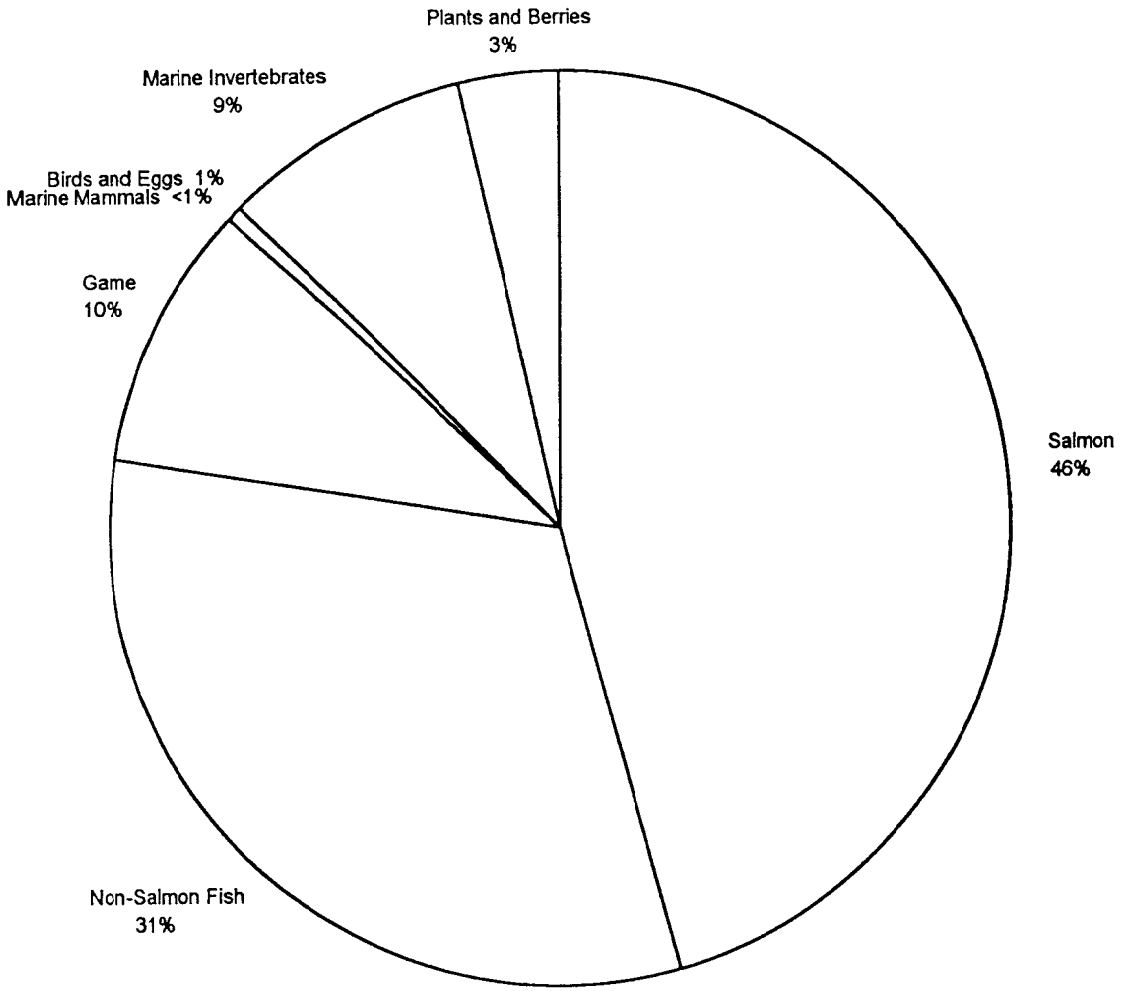


Table X-28. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Kodiak City, 1992

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	99.0	91.0	90.0	94.0	80.0	760,466.88	433.81	159.49			29.81%	28.52%
Fish	97.0	84.0	78.0	81.0	69.0	588,581.92	335.76	123.44			31.28%	30.15%
Salmon	90.0	76.0	69.0	69.0	61.0	349,227.05	199.22	73.24	53,247.38	30.38	39.71%	36.35%
Chum Salmon	19.0	16.0	12.0	9.0	10.0	16,394.93	9.35	3.44	2,261.37	1.29	92.86%	92.76%
Coho Salmon	77.0	67.0	57.0	44.0	47.0	121,025.72	69.04	25.38	14,795.32	8.44	34.76%	33.03%
Chinook Salmon	42.0	32.0	26.0	22.0	18.0	31,836.23	18.16	6.68	2,226.31	1.27	57.05%	56.98%
Pink Salmon	38.0	36.0	33.0	10.0	19.0	25,177.46	14.36	5.28	6,713.99	3.83	51.83%	51.34%
Sockeye Salmon	73.0	59.0	48.0	53.0	40.0	154,682.62	88.24	32.44	27,232.86	15.54	58.58%	58.00%
Unknown Salmon	6.0	1.0	1.0	5.0	2.0	110.09	0.06	0.02	17.53	0.01	192.68%	192.04%
Non-Salmon Fish	90.0	65.0	64.0	71.0	53.0	239,354.87	136.54	50.20			33.27%	32.36%
Cod	25.0	15.0	15.0	14.0	9.0	17,200.72	9.81	[illegible]	5,375.22	3.07	80.96%	78.97%
Pacific Cod (Gray)	25.0	15.0	15.0	14.0	9.0	17,200.72	9.81	3.61	5,375.22	3.07	80.96%	78.97%
Sablefish (Black Cod)	6.0	2.0	2.0	4.0	3.0	1,970.48	1.12	0.41	635.64	0.36	172.52%	171.99%
Greenling	21.0	15.0	15.0	7.0	4.0	7,966.03	4.54	1.67	1,039.70	0.59	61.12%	63.27%
Lingcod	18.0	13.0	12.0	7.0	3.0	7,580.37	4.32	1.59	654.04	0.37	67.20%	66.54%
Unknown Greenling	3.0	3.0	3.0	0.0	1.0	385.66	0.22	0.08	385.66	0.22	124.22%	123.94%
Flounder	11.0	7.0	7.0	5.0	5.0	7,678.14	4.38	1.61	2,559.38	1.46	88.78%	89.01%
Arrow Tooth Flounder (Turbot)	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 Flounder	11.0	7.0	7.0	4.0	5.0	7,678.14	4.38	1.61	2,559.38	1.46	88.78%	89.01%
Sole	3.0	2.0	2.0	1.0	1.0	613.55	0.35	0.13	613.55	0.35	136.96%	138.07%
Sole, Unknown	3.0	2.0	2.0	1.0	1.0	613.55	0.35	0.13	613.55	0.35	136.96%	138.07%
Halibut	86.0	55.0	52.0	63.0	47.0	173,614.48	99.04	36.41	9,974.75	5.69	33.54%	33.09%
Herring	6.0	1.0	1.0	5.0	2.0	105.18	0.06	0.02	17.53 gal	0.01	192.68%	192.04%
Herring Roe	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%
Rockfish	41.0	25.0	23.0	24.0	15.0	16,403.70	9.36	3.44	8,861.42	5.06	88.56%	85.07%
Black Rockfish (black bass)	31.0	21.0	20.0	14.0	8.0	11,425.18	6.52	2.40	7,616.79	4.35	92.06%	91.41%
Red Rockfish	22.0	10.0	9.0	14.0	8.0	4,978.52	2.84	1.04	1,244.63	0.71	91.95%	91.13%
Unknown Rockfish	3.0	0.0	0.0	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sea Perch	1.0	1.0	1.0	0.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sculpin	1.0	1.0	1.0	0.0	0.0	26.30	0.02	0.01	52.59	0.03	192.68%	191.32%
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	1.0	1.0	1.0	0.0	0.0	26.30	0.02	0.01	52.59	0.03	192.68%	191.32%
Smelt	3.0	1.0	1.0	2.0	1.0	1,025.51	0.59	0.22	315.54 gal	0.18	192.68%	194.18%
Eulachon (Hooligan, Candlefish)	3.0	1.0	1.0	2.0	1.0	1,025.51	0.59	0.22	315.54 gal	0.18	192.68%	194.18%
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%

Table X-28. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Kodiak City, 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
Salmon Shark	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Walleye Pollock (Whiting)	6.0	2.0	2.0	4.0	0.0	220.88	0.13	0.05	157.77	0.09	143.03%	143.78%
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	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	41.0	35.0	34.0	17.0	13.0	12,529.92	7.15	2.63	7,450.25	4.25	46.72%	45.38%
Char	33.0	29.0	28.0	12.0	8.0	9,522.30	5.43	2.00	6,801.64	3.88	49.49%	48.75%
Dolly Varden	33.0	29.0	28.0	12.0	8.0	9,522.30	5.43	2.00	6,801.64	3.88	49.49%	48.75%
Dolly Varden-Fingerling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Brook 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 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%
Trout	16.0	9.0	9.0	9.0	8.0	3,007.62	1.72	0.63	648.61	0.37	77.86%	87.42%
Rainbow Trout	6.0	3.0	3.0	3.0	2.0	196.34	0.11	0.04	140.24	0.08	116.99%	118.30%
Steelhead	11.0	7.0	7.0	6.0	6.0	2,811.29	1.60	0.59	508.37	0.29	93.15%	92.86%
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%
Game	72.0	42.0	30.0	55.0	29.0	72,353.32	41.27	15.17	2,243.84	1.28	40.77%	37.47%
Big Game	72.0	41.0	28.0	54.0	26.0	71,301.52	40.67	14.95	1,490.05	0.85	38.85%	37.76%
Bison	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black Bear	1.0	0.0	0.0	1.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Brown Bear	0.0	2.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Caribou	15.0	2.0	2.0	14.0	3.0	5,259.00	3.00	1.10	35.06	0.02	135.55%	135.67%
Deer	70.0	40.0	26.0	45.0	23.0	62,098.27	35.42	13.02	1,437.46	0.82	40.27%	39.22%
Deer, Male	29.0	29.0	22.0	12.0	13.0	37,864.80	21.60	7.94	876.50	0.50	42.95%	41.96%
Deer, Female	17.0	15.0	12.0	6.0	8.0	20,446.99	11.66	4.29	473.31	0.27	62.41%	62.00%
Deer, Sex Unknown	38.0	10.0	2.0	32.0	9.0	3,786.48	2.16	0.79	87.65	0.05	158.51%	157.74%
Elk	13.0	5.0	1.0	11.0	2.0	3,944.25	2.25	0.83	17.53	0.01	192.68%	192.04%
Goat	4.0	0.0	0.0	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Moose	14.0	1.0	0.0	13.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sheep, Dall	1.0	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	13.0	11.0	8.0	6.0	3.0	1,051.80	0.60	0.22	753.79	0.43	71.56%	75.09%
Fox	2.0	1.0	1.0	1.0	1.0	0.00	0.00	0.00	105.18	0.06	192.68%	0.00%
Red Fox	2.0	1.0	1.0	1.0	1.0	0.00	0.00	0.00	105.18	0.06	192.68%	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%
Hare	12.0	10.0	7.0	5.0	2.0	1,051.80	0.60	0.22	648.61	0.37	77.86%	75.09%
Snowshoe Hare	12.0	10.0	7.0	5.0	2.0	1,051.80	0.60	0.22	648.61	0.37	77.86%	75.09%
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%
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%

Table X-28. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Kodiak City, 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
Feral Animals	2.0	0.0	0.0	2.0	2.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Reindeer - Feral	2.0	0.0	0.0	2.0	2.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Mammals	3.0	3.0	2.0	3.0	1.0	981.68	0.56	0.21	87.65	0.05	158.51%	190.60%
Whale	2.0	1.0	1.0	2.0	1.0	0.00	0.00	0.00	17.53	0.01	192.68%	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%
Humpback Whale	1.0	1.0	1.0	1.0	0.0	0.00	0.00	0.00	17.53	0.01	192.68%	0.00%
Unknown Whale	1.0	0.0	0.0	1.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	2.0	2.0	1.0	1.0	1.0	981.68	0.56	0.21	17.53	0.01	192.68%	190.60%
Harbor Seal	2.0	2.0	1.0	1.0	1.0	981.68	0.56	0.21	17.53	0.01	192.68%	190.60%
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	52.59	0.03	192.68%	0.00%
Birds and Eggs	21.0	10.0	9.0	14.0	6.0	3,813.65	2.18	0.80	5,451.83	3.11	88.67%	87.56%
Birds	21.0	10.0	9.0	13.0	6.0	3,645.36	2.08	0.76	4,715.57	2.69	88.84%	90.06%
Upland Game Birds	5.0	5.0	4.0	1.0	1.0	846.70	0.48	0.18	1,209.57	0.69	118.85%	118.92%
Grouse	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Ptarmigan	5.0	5.0	4.0	1.0	1.0	846.70	0.48	0.18	1,209.57	0.69	118.85%	118.92%
Migratory Birds	21.0	9.0	9.0	13.0	6.0	2,798.66	1.60	0.59	3,506.00	2.00	83.96%	82.87%
Waterfowl	21.0	9.0	9.0	13.0	6.0	2,754.84	1.57	0.58	3,067.75	1.75	86.70%	83.64%
Ducks	19.0	8.0	8.0	12.0	4.0	2,092.21	1.19	0.44	2,699.62	1.54	91.08%	86.42%
Elder	0.0	1.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Elder, Unknown	0.0	1.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter	1.0	1.0	1.0	0.0	0.0	47.33	0.03	0.01	52.59	0.03	192.68%	193.47%
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	1.0	1.0	1.0	0.0	0.0	47.33	0.03	0.01	52.59	0.03	192.68%	193.47%
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	3.0	4.0	3.0	1.0	0.0	105.18	0.06	0.02	210.36	0.12	116.99%	116.54%
Goldeneye	6.0	5.0	4.0	2.0	2.0	406.70	0.23	0.09	508.37	0.29	110.25%	108.17%
Bufflehead	1.0	2.0	1.0	0.0	1.0	70.12	0.04	0.01	175.30	0.10	192.68%	192.04%
Merganser	1.0	1.0	1.0	0.0	0.0	31.55	0.02	0.01	35.06	0.02	192.68%	193.47%
Scaup	2.0	2.0	2.0	0.0	1.0	236.66	0.14	0.05	262.95	0.15	143.03%	142.82%
Mallard	9.0	5.0	5.0	4.0	1.0	683.67	0.39	0.14	683.67	0.39	96.51%	95.46%
Pintail	2.0	2.0	2.0	0.0	1.0	252.43	0.14	0.05	315.54	0.18	143.03%	142.82%
Wigeon	2.0	1.0	1.0	1.0	1.0	61.36	0.04	0.01	87.65	0.05	192.68%	192.04%
Teal	3.0	3.0	3.0	0.0	1.0	57.85	0.03	0.01	192.83	0.11	124.22%	124.45%

Table X-28. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Kodiak City, 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
Oldsquaw	1.0	2.0	1.0	0.0	1.0	70.12	0.04	0.01	87.65	0.05	192.68%	192.04%
Redhead Duck	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	6.0	1.0	1.0	5.0	1.0	69.24	0.04	0.01	87.65	0.05	192.68%	192.76%
Geese	4.0	3.0	3.0	1.0	2.0	662.63	0.38	0.14	368.13	0.21	150.00%	155.73%
Black Brant	2.0	2.0	2.0	0.0	0.0	147.25	0.08	0.03	122.71	0.07	136.96%	136.35%
Emperor 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%
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	2.0	2.0	2.0	0.0	2.0	515.38	0.29	0.11	245.42	0.14	167.16%	168.07%
Canada Geese, Unknown	2.0	2.0	2.0	0.0	2.0	515.38	0.29	0.11	245.42	0.14	167.16%	168.07%
Geese, 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%
Shorebirds	1.0	1.0	1.0	0.0	0.0	43.83	0.03	0.01	438.25	0.25	192.68%	190.60%
Common Snipe	1.0	1.0	1.0	0.0	0.0	43.83	0.03	0.01	438.25	0.25	192.68%	190.60%
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%
Gulls	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Auklet	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Parakeet Auklet	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	1.0	1.0	168.29	0.10	0.04	736.26	0.42	192.68%	190.60%
Seabird Eggs	1.0	1.0	1.0	1.0	1.0	168.29	0.10	0.04	736.26	0.42	192.68%	190.60%
Gull Eggs	1.0	1.0	1.0	1.0	1.0	157.77	0.09	0.03	525.90	0.30	192.68%	190.60%
Puffin 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	1.0	1.0	1.0	0.0	0.0	10.52	0.01	0.00	210.36	0.12	192.68%	190.60%
Kittiwake 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%
Eider 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%
Marine Invertebrates	86.0	40.0	38.0	77.0	43.0	68,212.72	38.91	14.31			53.30%	52.02%
Clams	25.0	18.0	17.0	17.0	10.0	12,656.84	7.22	2.65	4,218.95 gal	2.41	56.89%	56.02%
Butter Clams	23.0	18.0	17.0	14.0	7.0	10,579.53	6.04	2.22	3,526.51 gal	2.01	62.26%	61.19%
Razor Clams	7.0	4.0	4.0	5.0	2.0	1,446.23	0.83	0.30	482.08 gal	0.28	126.30%	126.12%
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	3.0	2.0	2.0	1.0	2.0	236.66	0.14	0.05	78.89 gal	0.05	172.39%	173.36%

Table X-28. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Kodiak City, 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
Horse Clams (Gaper)	3.0	2.0	2.0	1.0	1.0	394.43	0.23	0.08	131.48 gal	0.08	143.03%	144.10%
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	7.0	4.0	4.0	4.0	3.0	315.54	0.18	0.07	105.18 gal	0.06	100.21%	99.90%
Scallops	13.0	1.0	1.0	12.0	6.0	37.86	0.02	0.01	631.08	0.36	192.68%	194.18%
Jingles	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%
Mussels	3.0	4.0	3.0	1.0	0.0	59.16	0.03	0.01	39.44 gal	0.02	122.08%	122.95%
Crabs	84.0	32.0	31.0	69.0	38.0	41,947.61	23.93	8.80			55.55%	55.43%
Dungeness Crab	55.0	22.0	21.0	40.0	16.0	10,258.56	5.85	2.15	14,655.08	8.36	75.95%	76.39%
King Crab	60.0	18.0	14.0	53.0	25.0	13,037.13	7.44	2.73			86.78%	87.15%
King Crab Eggs, Red	1.0	1.0	1.0	0.0	0.0	35.06	0.02	0.01			192.68%	193.47%
King Crab, Unknown	60.0	17.0	13.0	53.0	25.0	13,002.07	7.42	2.73	5,653.07	3.22	87.03%	87.39%
Tanner Crab	50.0	17.0	16.0	37.0	27.0	18,651.92	10.64	3.91	11,657.45	6.65	78.11%	77.39%
Tanner Crab, Bairdi	6.0	6.0	6.0	0.0	4.0	1,963.36	1.12	0.41	1,227.10	0.70	116.88%	116.61%
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	45.0	12.0	11.0	37.0	24.0	16,688.56	9.52	3.50	10,430.35	5.95	84.87%	84.17%
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)	3.0	3.0	3.0	1.0	2.0	9,851.86	5.62	2.07	2,462.97 gal	1.41	172.44%	170.55%
Chitons (small)	3.0	3.0	3.0	1.0	2.0	9,851.86	5.62	2.07	2,462.97 gal	1.41	172.44%	170.55%
Octopus	19.0	12.0	11.0	11.0	6.0	2,559.38	1.46	0.54	639.85	0.37	70.57%	68.02%
Sea Cucumber	3.0	2.0	2.0	1.0	1.0	35.06	0.02	0.01	17.53 gal	0.01	192.68%	194.18%
Sea Urchin	5.0	3.0	3.0	2.0	3.0	153.39	0.09	0.03	306.78 gal	0.18	125.28%	124.94%
Shrimp	8.0	2.0	2.0	6.0	2.0	543.43	0.31	0.11	271.72 gal	0.16	186.50%	185.87%
Snails	3.0	1.0	1.0	2.0	0.0	26.30	0.02	0.01	17.53 gal	0.01	192.68%	194.18%
Limpets	1.0	2.0	1.0	0.0	0.0	26.30	0.02	0.01	17.53 gal	0.01	192.68%	194.18%
Squid	6.0	0.0	0.0	6.0	2.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Plants and Berries	74.0	67.0	67.0	41.0	33.0	26,523.59	15.13	5.56	6,630.90 gal	3.78	34.01%	34.03%
Berries	73.0	66.0	66.0	40.0	31.0	24,279.05	13.85	5.09	6,069.76 gal	3.46	35.50%	35.46%
Plants/Greens/Mushrooms	19.0	18.0	18.0	3.0	5.0	2,244.54	1.28	0.47	561.14 gal	0.32	54.93%	55.37%
Seaweed/Kelp (Food)	3.0	1.0	0.0	3.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Fertilizer	10.0	10.0	10.0	1.0	1.0	0.00	0.00	0.00	151,108.60 gal	86.20	125.71%	0.00%
Vegetative Fertilizer	10.0	10.0	10.0	1.0	1.0	0.00	0.00	0.00	151,108.60 gal	86.20	125.71%	0.00%
Seaweed/Kelp (Non-food)	10.0	10.0	10.0	1.0	1.0	0.00	0.00	0.00	151,108.60 gal	86.20	125.71%	0.00%
Wood	30.0	28.0	28.0	6.0	10.0	0.00	0.00	0.00	1,674.12 crd	0.96	45.70%	0.00%

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

Table X-29. Estimated Amount of Resources Removed From Commercial Harvest, Kodiak City, 1992

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		141,400.01	21.53	18.59
Fish		128,766.77	21.88	16.93
Salmon	12,989.73	87,083.08	24.94	11.45
Chum Salmon	1,069.33	7,752.64	47.29	1.02
Coho Salmon	1,314.75	10,754.66	8.89	1.41
Chinook Salmon	1,104.39	15,792.78	49.61	2.08
Pink Salmon	613.55	2,300.81	9.14	0.30
Sockeye Salmon	8,887.71	50,482.19	32.64	6.64
Non-Salmon Fish		41,683.69	17.42	5.48
Cod	1,501.09	4,803.50	27.93	0.63
Pacific Cod (Gray)	1,501.09	4,803.50	27.93	0.63
Sablefish (Black Cod)	635.64	1,970.48	100.00	0.26
Greenling	338.50	3,923.26	49.25	0.52
Lingcod	338.50	3,923.26	51.76	0.52
Flounder	818.13	2,454.38	31.97	0.32
Unknown Flounder	818.13	2,454.38	31.97	0.32
Sole	350.60	350.60	57.14	0.05
Sole, Unknown	350.60	350.60	57.14	0.05
Halibut	752.39	23,474.49	13.52	3.09
Herring	17.53 gal	105.18	100.00	0.01
Rockfish	1,192.04	3,628.71	22.12	0.48
Black Rockfish (black bass)	455.78	683.67	5.98	0.09
Red Rockfish	736.26	2,945.04	59.15	0.39
Walleye Pollock (Whiting)	105.18	147.25	66.67	0.02
Trout and Char	227.89	825.84	6.59	0.11
Char	105.18	147.25	1.55	0.02
Dolly Varden	105.18	147.25	1.55	0.02
Trout	122.71	678.59	22.56	0.09
Steelhead	122.71	678.59	24.14	0.09
Marine Invertebrates		12,633.24	18.52	1.66
Scallops	631.08	37.86	100.00	0.00
Crabs		11,648.76	27.77	1.53
Dungeness Crab	4,715.57	3,300.90	32.18	0.43
King Crab		6,384.50	48.97	0.84
King Crab Eggs, Red		35.06	100.00	0.00
King Crab, Unknown	2,760.62	6,349.44	48.83	0.83
Tanner Crab	1,227.10	1,963.36	10.53	0.26
Tanner Crab, Bairdi	1,227.10	1,963.36	100.00	0.26
Octopus	210.36	841.44	32.88	0.11
Sea Urchin (Neet)	175.30 gal	87.65	57.14	0.01
Shrimp	8.77 gal	17.53	3.23	0.00

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

Table X-30. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Kodiak City, 1992

		Subsistence Methods								Removed from Commercial Catch		Rod and Reel		Any Method	
		Setnet		Purse Seine		Dip Net		Subsistence Gear Any Method							
Resource	Percent Base	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.
Salmon	total	27.06	26.11	6.95	6.32	0.76	0.66	34.77	33.08	24.40	24.94	40.84	41.99		
Chum Salmon	gear type	1.46	1.67	0.95	1.15	0.00	0.00	1.33	1.54	8.23	8.90	4.35	4.68		
	resource	9.30	9.30	1.55	1.55	0.00	0.00	10.85	10.85	47.29	47.29	41.86	41.86		
	total	0.40	0.44	0.07	0.07	0.00	0.00	0.46	0.51	2.01	2.22	1.78	1.97	4.25	4.69
Coho Salmon	gear type	26.64	34.44	0.00	0.00	0.00	0.00	20.74	27.19	10.12	12.35	44.34	53.79		
	resource	25.95	25.95	0.00	0.00	0.00	0.00	25.95	25.95	8.89	8.89	65.17	65.17		
	total	7.21	8.99	0.00	0.00	0.00	0.00	7.21	8.99	2.47	3.08	18.11	22.58	27.79	34.66
Chinook Salmon	gear type	1.09	2.47	3.32	7.96	0.00	0.00	1.52	3.47	6.50	18.14	3.87	8.21		
	resource	7.09	7.09	5.51	5.51	0.00	0.00	12.60	12.60	49.61	49.61	37.80	37.80		
	total	0.30	0.65	0.23	0.50	0.00	0.00	0.53	1.15	2.07	4.52	1.58	3.45	4.18	9.12
Pink Salmon	gear type	7.06	4.18	0.95	0.60	0.00	0.00	5.68	3.41	4.72	2.64	23.22	12.91		
	resource	15.14	15.14	0.52	0.52	0.00	0.00	15.67	15.67	9.14	9.14	75.20	75.20		
	total	1.91	1.09	0.07	0.04	0.00	0.00	1.98	1.13	1.15	0.66	9.48	5.42	12.61	7.21
Sockeye Salmon	gear type	63.75	57.23	94.79	90.29	100.00	100.00	70.74	64.39	68.42	57.97	24.14	20.34		
	resource	33.73	33.73	12.87	12.87	1.48	1.48	48.08	48.08	32.64	32.64	19.28	19.28		
	total	17.25	14.94	6.58	5.70	0.76	0.66	24.59	21.30	16.69	14.46	9.86	8.54	51.14	44.29
Unknown Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.08		
	resource	0.00	0.00	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	0.00	0.00	0.03	0.03	0.03	0.03

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

Table X-31. Estimated Salmon Harvest by Gear Type and Species, Kodiak City, 1992

		Subsistence Methods								Removed from Commercial Catch		Rod and Reel		Any Method	
		Setnet		Purse Seine		Dip 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	Total	HH Mean
Salmon	numbers	14,409.66	8.22	3,698.83	2.11	403.19	0.23	18,511.68	10.56	12,989.73	7.41	21,745.97	12.41	53,247.38	30.38
	pounds	91,172.48	52.01	22,054.49	12.58	2,290.12	1.31	115,517.09	65.90	87,083.08	49.68	146,626.88	83.64	349,227.05	199.22
Chum Salmon	numbers	210.36	0.12	35.06	0.02	0.00	0.00	245.42	0.14	1,069.33	0.61	946.62	0.54	2,261.37	1.29
	pounds	1,525.11	0.87	254.19	0.15	0.00	0.00	1,779.30	1.02	7,752.64	4.42	6,863.00	3.92	16,394.93	9.35
Coho Salmon	numbers	3,839.07	2.19	0.00	0.00	0.00	0.00	3,839.07	2.19	1,314.75	0.75	9,641.50	5.50	14,795.32	8.44
	pounds	31,403.59	17.91	0.00	0.00	0.00	0.00	31,403.59	17.91	10,754.66	6.14	78,867.47	44.99	121,025.72	69.04
Chinook Salmon	numbers	157.77	0.09	122.71	0.07	0.00	0.00	280.48	0.16	1,104.39	0.63	841.44	0.48	2,226.31	1.27
	pounds	2,256.11	1.29	1,754.75	1.00	0.00	0.00	4,010.86	2.29	15,792.78	9.01	12,032.59	6.86	31,836.23	18.16
Pink Salmon	numbers	1,016.74	0.58	35.06	0.02	0.00	0.00	1,051.80	0.60	613.55	0.35	5,048.64	2.88	6,713.99	3.83
	pounds	3,812.78	2.18	131.48	0.08	0.00	0.00	3,944.25	2.25	2,300.81	1.31	18,932.40	10.80	25,177.46	14.36
Sockeye Salmon	numbers	9,185.72	5.24	3,506.00	2.00	403.19	0.23	13,094.91	7.47	8,887.71	5.07	5,250.24	3.00	27,232.86	15.54
	pounds	52,174.89	29.76	19,914.08	11.36	2,290.12	1.31	74,379.09	42.43	50,482.19	28.80	29,821.33	17.01	154,682.62	88.24
Unknown Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.53	0.01	17.53	0.01
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	110.09	0.06	110.09	0.06

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

Table X-32. Percentage of Households Harvesting Salmon by Gear Type and Species, Kodiak City, 1992

Resource	Setnet	Purse Seine	Dip Net	Any Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Any Method
Salmon	26.00	1.00	1.00	27.00	14.00	54.00	69.00
Chum Salmon	2.00	1.00	0.00	3.00	3.00	6.00	12.00
Coho Salmon	14.00	0.00	0.00	14.00	9.00	46.00	57.00
Chinook Salmon	3.00	1.00	0.00	4.00	9.00	17.00	26.00
Pink Salmon	8.00	1.00	0.00	9.00	3.00	25.00	33.00
Sockeye Salmon	21.00	1.00	1.00	23.00	13.00	24.00	48.00
Unknown Salmon	0.00	0.00	0.00	0.00	0.00	1.00	1.00

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

Table X-33. Estimated Harvest of Fish Other than Salmon by Gear Type, Kodiak City, 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	7,139.34	4.07	41,683.69	23.78	190,531.83	108.69	0.00	0.00	239,354.87	136.54
Lingcod	pounds	0.00	0.00	3,923.26	2.24	3,657.11	2.09	0.00	0.00	7,580.37	4.32
Pacific Cod (Gray)	pounds	2,468.22	1.41	4,803.50	2.74	9,928.99	5.66	0.00	0.00	17,200.72	9.81
Sablefish (Black Cod)	pounds	0.00	0.00	1,970.48	1.12	0.00	0.00	0.00	0.00	1,970.48	1.12
Unknown Flounder	pounds	52.59	0.03	2,454.38	1.40	5,171.17	2.95	0.00	0.00	7,678.14	4.38
Sole, Unknown	pounds	0.00	0.00	350.60	0.20	262.95	0.15	0.00	0.00	613.55	0.35
Halibut	pounds	3,347.61	1.91	23,474.49	13.39	146,792.38	83.74	0.00	0.00	173,614.48	99.04
Herring	pounds	0.00	0.00	105.18	0.06	0.00	0.00	0.00	0.00	105.18	0.06
Black Rockfish (black bass)	pounds	0.00	0.00	683.67	0.39	10,741.51	6.13	0.00	0.00	11,425.18	6.52
Red Rockfish	pounds	0.00	0.00	2,945.04	1.68	2,033.48	1.16	0.00	0.00	4,978.52	2.84
Unknown Sculpin	pounds	0.00	0.00	0.00	0.00	26.30	0.02	0.00	0.00	26.30	0.02
Eulachon (Hooligan, Candlefish)	pounds	1,025.51	0.59	0.00	0.00	0.00	0.00	0.00	0.00	1,025.51	0.59
Unknown Greenling	pounds	0.00	0.00	0.00	0.00	385.66	0.22	0.00	0.00	385.66	0.22
Walleye Pollock (Whiting)	pounds	0.00	0.00	147.25	0.08	73.63	0.04	0.00	0.00	220.88	0.13
Dolly Varden	pounds	245.42	0.14	147.25	0.08	9,129.62	5.21	0.00	0.00	9,522.30	5.43
Rainbow Trout	pounds	0.00	0.00	0.00	0.00	196.34	0.11	0.00	0.00	196.34	0.11
Steelhead	pounds	0.00	0.00	678.59	0.39	2,132.70	1.22	0.00	0.00	2,811.29	1.60

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

Table X-34. Percentage of Fish Other Than Salmon Harvested by Gear Type, Kodiak City, 1992

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	2.98	17.42	79.60	0.00
Lingcod	resource	0.00	51.76	48.24	0.00
Pacific Cod (Gray)	resource	14.35	27.93	57.72	0.00
Sablefish (Black Cod)	resource	0.00	100.00	0.00	0.00
Unknown Flounder	resource	0.68	31.97	67.35	0.00
Sole, Unknown	resource	0.00	57.14	42.86	0.00
Halibut	resource	1.93	13.52	84.55	0.00
Herring	resource	0.00	100.00	0.00	0.00
Black Rockfish (black bass)	resource	0.00	5.98	94.02	0.00
Red Rockfish	resource	0.00	59.15	40.85	0.00
Unknown Sculpin	resource	0.00	0.00	100.00	0.00
Eulachon (Hooligan, Candlefish)	resource	100.00	0.00	0.00	0.00
Unknown Greenling	resource	0.00	0.00	100.00	0.00
Walleye Pollock (Whiting)	resource	0.00	66.67	33.33	0.00
Dolly Varden	resource	2.58	1.55	95.88	0.00
Rainbow Trout	resource	0.00	0.00	100.00	0.00
Steelhead	resource	0.00	24.14	75.86	0.00

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

Table X-35. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Kodiak City, 1992

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	7.00	18.00	56.00	0.00	64.00
Lingcod	0.00	7.00	5.00	0.00	12.00
Pacific Cod (Gray)	2.00	4.00	10.00	0.00	14.00
Sablefish (Black Cod)	0.00	2.00	0.00	0.00	2.00
Unknown Flounder	1.00	2.00	4.00	0.00	7.00
Sole, Unknown	0.00	1.00	1.00	0.00	2.00
Halibut	3.00	14.00	43.00	0.00	52.00
Herring	0.00	1.00	0.00	0.00	1.00
Black Rockfish (black bass)	0.00	5.00	16.00	0.00	20.00
Red Rockfish	0.00	5.00	3.00	0.00	8.00
Unknown Sculpin	0.00	0.00	1.00	0.00	1.00
Eulachon (Hooligan, Candlefish)	1.00	0.00	0.00	0.00	1.00
Unknown Greenling	0.00	0.00	3.00	0.00	3.00
Walleye Pollock (Whiting)	0.00	1.00	1.00	0.00	2.00
Dolly Varden	1.00	1.00	28.00	0.00	28.00
Rainbow Trout	0.00	0.00	3.00	0.00	3.00
Steelhead	0.00	2.00	5.00	0.00	7.00

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

Figure X-13. Composition of Wild Resource Harvests by Resource Category, Kodiak, 1993

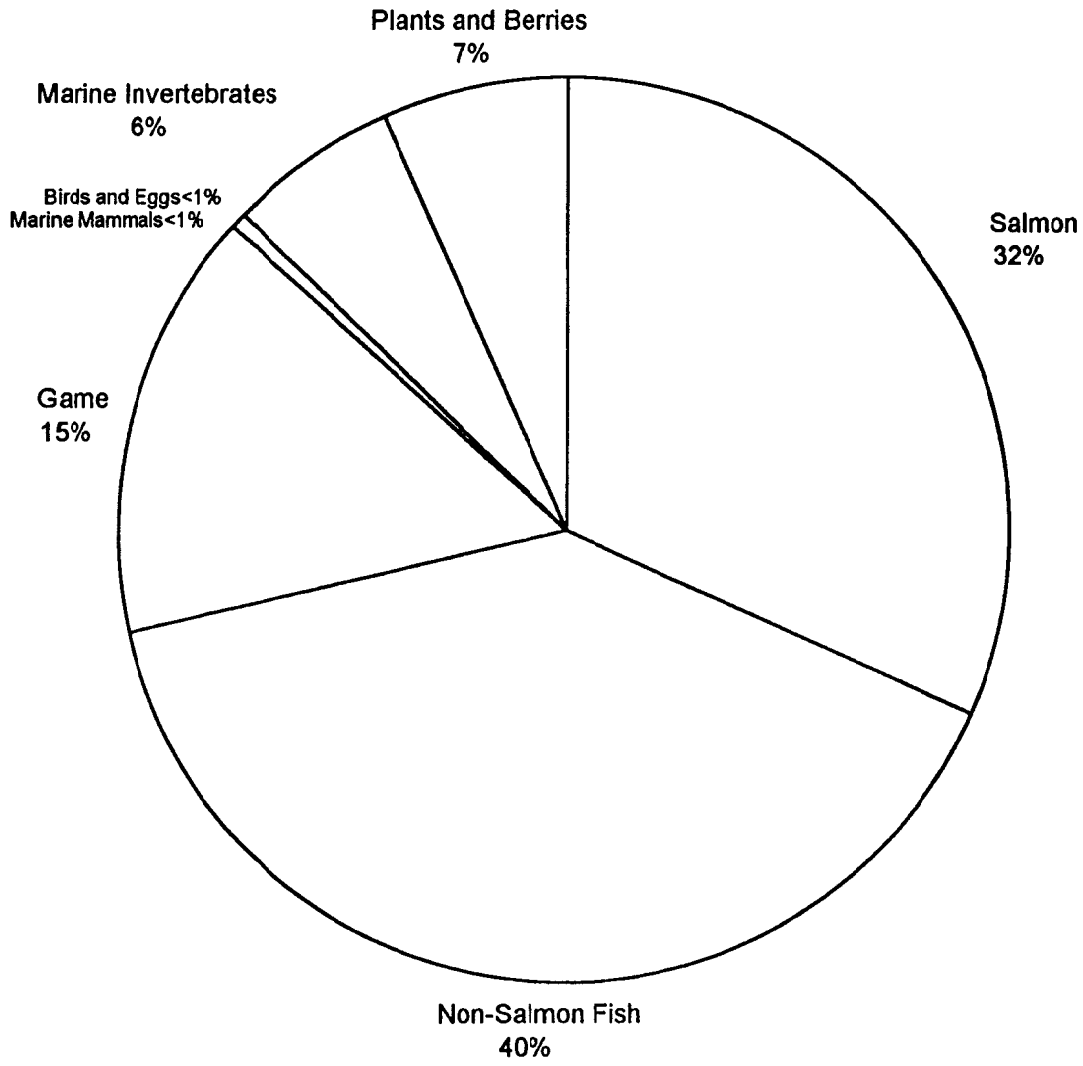


Figure X-14. Composition of Wild Resource Harvests by Resource Category, Kodiak, 1992/83, 1991, 1992, and 1993

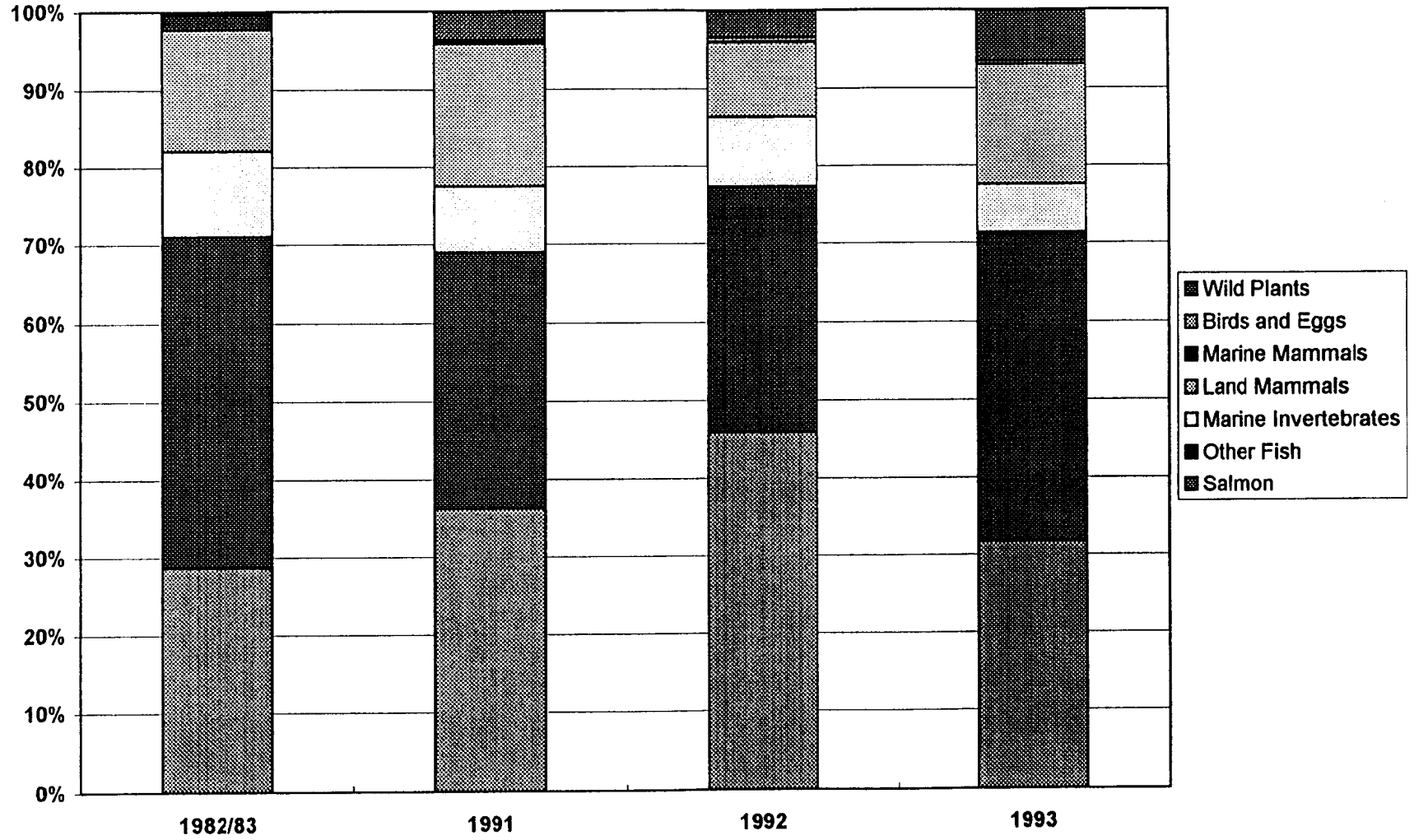


Table X-36. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Kodiak City, 1993

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	99.0	90.5	87.6	97.1	83.8	915,081.97	458.92	151.05			27.14%	27.02%
Fish	98.1	77.1	70.5	91.4	72.4	652,498.00	327.23	107.71			27.97%	27.64%
Salmon	93.3	73.3	68.6	73.3	61.0	289,228.56	145.05	47.74	69,552.62	34.88	38.33%	37.88%
Chum Salmon	6.7	6.7	5.7	2.9	3.8	14,049.34	7.05	2.32	3,171.41	1.59	173.52%	171.81%
Coho Salmon	76.2	58.1	54.3	40.0	41.9	109,494.53	54.91	18.07	21,725.10	10.90	29.17%	30.46%
Chinook Salmon	42.9	23.8	21.9	29.5	17.1	25,744.25	12.91	4.25	3,000.50	1.50	62.06%	60.95%
Pink Salmon	41.0	38.1	38.1	11.4	14.3	27,689.25	13.89	4.57	12,144.41	6.09	42.04%	41.94%
Sockeye Salmon	71.4	50.5	42.9	50.5	36.2	110,554.96	55.44	18.25	29,093.41	14.59	58.85%	57.89%
Unknown Salmon	8.6	2.9	1.0	7.6	1.0	1,696.23	0.85	0.28	417.79	0.21	193.01%	191.40%
Non-Salmon Fish	95.2	66.7	63.8	80.0	61.9	363,269.44	182.18	59.97			31.38%	31.59%
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%
Cod	38.1	21.9	21.9	20.0	14.3	28,937.69	14.51	4.78	9,043.03	4.54	86.17%	87.56%
Pacific Cod (Gray)	38.1	21.9	21.9	20.0	14.3	28,937.69	14.51	4.78	9,043.03	4.54	86.17%	87.56%
Sablefish (Black Cod)	12.4	1.9	1.0	11.4	2.9	2,354.82	1.18	0.39	759.62	0.38	193.01%	193.65%
Greenling	26.7	18.1	16.2	13.3	6.7	14,368.67	7.21	2.37	3,356.69	1.68	111.88%	72.90%
Kelp Greenling	1.0	1.0	1.0	0.0	0.0	1,899.05	0.95	0.31	1,899.05	0.95	193.01%	193.24%
Lingcod	19.0	11.4	9.5	12.4	5.7	12,051.83	6.04	1.99	1,039.85	0.52	81.50%	82.04%
Unknown Greenling	6.7	5.7	5.7	1.0	1.0	417.79	0.21	0.07	417.79	0.21	101.81%	101.15%
Flounder	12.4	8.6	8.6	3.8	5.7	2,164.91	1.09	0.36	721.64	0.36	91.04%	92.11%
Arrow Tooth Flounder (Turbot)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Starry Flounder	1.9	1.0	1.0	1.0	0.0	56.97	0.03	0.01	18.99	0.01	193.01%	193.24%
Greenland Halibut (Greenland Turbot)	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	10.5	7.6	7.6	2.9	5.7	2,107.94	1.06	0.35	702.65	0.35	93.46%	94.52%
Sole	9.5	1.9	1.9	8.6	2.9	683.66	0.34	0.11	683.66	0.34	163.72%	163.64%
Yellowfin 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	9.5	1.9	1.9	8.6	2.9	683.66	0.34	0.11	683.66	0.34	163.72%	163.64%
Halibut	85.7	58.1	50.5	61.0	54.3	256,589.82	128.68	42.36	15,761.05	7.90	34.48%	34.00%
Herring	12.4	1.9	1.9	10.5	4.8	11,204.38	5.62	1.85	1,867.40 gal	0.94	183.36%	184.25%
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%
Rockfish	38.1	26.7	26.7	16.2	15.2	21,720.36	10.89	3.59	13,150.90	6.60	57.48%	56.34%
Black Rockfish (black bass)	32.4	25.7	25.7	10.5	14.3	18,529.96	9.29	3.06	12,353.30	6.20	59.06%	59.54%
Red Rockfish	14.3	4.8	4.8	9.5	1.9	3,190.40	1.60	0.53	797.60	0.40	93.63%	92.61%
Unknown Rockfish	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sea Perch	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	4.8	4.8	4.8	0.0	1.9	731.13	0.37	0.12	1,462.27	0.73	130.20%	130.30%
Irish Lord	4.8	4.8	4.8	0.0	1.9	683.66	0.34	0.11	1,367.31	0.69	137.47%	137.60%

Table X-36. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Kodiak City, 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
Unknown Sculpin	1.0	1.0	1.0	0.0	1.0	47.48	0.02	0.01	94.95	0.05	193.01%	192.63%
Smelt	1.9	1.0	1.0	1.9	1.0	462.89	0.23	0.08	142.43 gal	0.07	193.01%	192.02%
Capelin (Grunion)	1.0	1.0	1.0	1.0	1.0	462.89	0.23	0.08	142.43 gal	0.07	193.01%	192.02%
Eulachon (Hooligan, Candlefish)	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%
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	1.0	0.0	0.0	1.0	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%
Unknown Shark	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Walleye Pollock (Whiting)	5.7	1.9	1.9	3.8	1.9	319.04	0.16	0.05	227.89	0.11	163.72%	163.28%
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%
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	49.5	43.8	42.9	16.2	13.3	23,732.07	11.90	3.92	16,122.91	8.09	54.00%	52.02%
Char	42.9	39.0	38.1	8.6	10.5	20,274.47	10.17	3.35	14,717.62	7.38	59.00%	59.85%
Dolly Varden	40.0	37.1	36.2	7.6	10.5	20,259.04	10.16	3.34	14,470.74	7.26	60.05%	59.90%
Dolly Varden-Fingerling	2.9	1.9	1.9	1.0	0.0	15.43	0.01	0.00	246.88	0.12	154.59%	154.12%
Brook 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 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%
Trout	17.1	12.4	10.5	9.5	2.9	3,457.60	1.73	0.57	1,405.30	0.70	71.86%	72.67%
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	9.5	5.7	5.7	4.8	0.0	1,382.51	0.69	0.23	987.50	0.50	95.54%	95.56%
Steelhead	6.7	3.8	3.8	4.8	2.9	1,995.33	1.00	0.33	360.82	0.18	106.84%	108.18%
Unknown Trout	1.0	2.9	1.0	0.0	0.0	79.76	0.04	0.01	56.97	0.03	193.01%	194.46%
Unknown Non-Salmon Fish	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Game	77.1	47.6	38.1	58.1	31.4	140,582.70	70.50	23.21	4,310.84	2.16	38.11%	41.73%
Big Game	75.2	41.9	30.5	57.1	28.6	137,012.49	68.71	22.62	2,316.84	1.16	42.00%	42.74%
Bison	1.9	0.0	0.0	1.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black 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%
Brown Bear	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Caribou	10.5	3.8	1.9	7.6	2.9	5,697.14	2.86	0.94	37.98	0.02	135.82%	135.72%
Deer	69.5	40.0	26.7	48.6	23.8	93,524.30	46.90	15.44	2,164.91	1.09	44.01%	44.99%
Elk	14.3	3.8	1.0	13.3	1.9	4,272.86	2.14	0.71	18.99	0.01	193.01%	193.24%
Goat	4.8	1.9	1.9	2.9	2.9	2,753.62	1.38	0.45	37.98	0.02	135.82%	134.41%
Moose	20.0	3.8	2.9	16.2	6.7	30,764.57	15.43	5.08	56.97	0.03	110.36%	110.41%
Muskox	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 X-36. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Kodiak City, 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
Sheep, Dall	2.9	1.0	0.0	2.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Small Game/Furbearer	20.0	19.0	13.3	11.4	5.7	3,570.21	1.79	0.59	1,994.00	1.00	59.91%	63.20%
Fox	3.8	5.7	1.9	2.9	1.0	0.00	0.00	0.00	113.94	0.06	135.82%	0.00%
Red Fox	3.8	5.7	1.9	2.9	1.0	0.00	0.00	0.00	113.94	0.06	135.82%	0.00%
Beaver	1.0	1.0	1.0	0.0	0.0	0.00	0.00	0.00	18.99	0.01	193.01%	0.00%
Hare	18.1	15.2	12.4	9.5	5.7	3,570.21	1.79	0.59	1,785.10	0.90	62.84%	63.20%
Snowshoe Hare	18.1	15.2	12.4	9.5	5.7	3,570.21	1.79	0.59	1,785.10	0.90	62.84%	63.20%
Land Otter	1.0	1.0	1.0	0.0	0.0	0.00	0.00	0.00	75.96	0.04	193.01%	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%
Feral Animals	1.9	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Reindeer - Feral	1.9	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Mammals	1.9	1.0	1.0	1.9	1.0	0.00	0.00	0.00	37.98	0.02	193.01%	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%
Bowhead	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Humpback 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	1.0	0.0	0.0	1.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Harbor Seal	1.0	0.0	0.0	1.0	1.0	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	1.0	1.0	1.0	0.0	0.0	0.00	0.00	0.00	37.98	0.02	193.01%	0.00%
Birds and Eggs	20.0	17.1	14.3	12.4	6.7	4,056.75	2.03	0.67	6,266.86	3.14	61.62%	58.07%
Birds	20.0	17.1	14.3	12.4	5.7	3,711.12	1.86	0.61	5,051.47	2.53	57.44%	57.91%
Upland Game Birds	2.9	5.7	2.9	1.9	1.9	638.08	0.32	0.11	911.54	0.46	121.75%	123.08%
Ptarmigan	2.9	5.7	2.9	1.9	1.9	638.08	0.32	0.11	911.54	0.46	121.75%	123.08%
Migratory Birds	20.0	15.2	14.3	11.4	4.8	3,073.04	1.54	0.51	4,139.92	2.08	60.92%	61.75%
Waterfowl	20.0	15.2	14.3	11.4	4.8	3,073.04	1.54	0.51	4,139.92	2.08	60.92%	61.75%
Ducks	20.0	15.2	14.3	11.4	4.8	3,073.04	1.54	0.51	4,139.92	2.08	60.92%	61.75%
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%

Table X-36. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Kodiak City, 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
Scoter	1.0	1.0	1.0	0.0	0.0	102.55	0.05	0.02	113.94	0.06	193.01%	192.63%
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	1.0	1.0	1.0	0.0	0.0	102.55	0.05	0.02	113.94	0.06	193.01%	192.63%
Harlequin	4.8	3.8	3.8	1.0	0.0	180.41	0.09	0.03	360.82	0.18	129.74%	127.78%
Goldeneye	6.7	5.7	5.7	1.9	1.0	896.35	0.45	0.15	1,120.44	0.56	97.28%	97.39%
Bufflehead	8.6	7.6	7.6	2.9	1.0	349.42	0.18	0.06	873.56	0.44	79.31%	78.35%
Merganser	1.0	1.0	1.0	0.0	0.0	51.27	0.03	0.01	56.97	0.03	193.01%	194.46%
Scaup	1.0	1.0	1.0	1.0	0.0	119.64	0.06	0.02	132.93	0.07	193.01%	192.63%
Mallard	11.4	9.5	8.6	3.8	4.8	1,196.40	0.60	0.20	1,196.40	0.60	73.70%	72.76%
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	1.9	1.0	1.0	1.0	1.0	13.29	0.01	0.00	18.99	0.01	193.01%	192.02%
Teal	1.9	1.0	1.0	1.0	0.0	28.49	0.01	0.00	94.95	0.05	193.01%	194.46%
Oldsquaw	1.9	1.0	1.0	1.0	0.0	15.19	0.01	0.00	18.99	0.01	193.01%	194.46%
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%
Redhead Duck	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 Ducks	1.0	0.0	0.0	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Ducks, Unknown	4.8	3.8	2.9	1.9	1.0	120.02	0.06	0.02	151.92	0.08	148.23%	146.74%
Geese	1.0	0.0	0.0	1.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black 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	1.0	0.0	0.0	1.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese, Unknown	1.0	0.0	0.0	1.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese, 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%
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%
Auklet	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Parakeet Auklet	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	1.9	1.9	1.9	1.0	345.63	0.17	0.06	1,215.39	0.61	140.08%	137.25%
Seabird Eggs	2.9	1.9	1.9	1.9	1.0	345.63	0.17	0.06	1,215.39	0.61	140.08%	137.25%
Gull Eggs	2.9	1.9	1.9	1.9	1.0	341.83	0.17	0.06	1,139.43	0.57	138.56%	137.01%
Herring Gull Eggs	2.9	1.9	1.9	1.9	1.0	341.83	0.17	0.06	1,139.43	0.57	138.56%	137.01%
Puffin 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 X-36. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Kodiak City, 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
Tern Eggs	1.0	1.0	1.0	0.0	0.0	3.80	0.00	0.00	75.96	0.04	193.01%	191.40%
Kittiwake 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%
Eider 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%
Marine Invertebrates	79.0	41.0	40.0	73.3	41.0	57,602.29	28.89	9.51			49.41%	48.85%
Clams	37.1	21.9	21.9	22.9	14.3	20,890.85	10.48	3.45	6,963.62 gal	3.49	66.49%	66.06%
Butter Clams	29.5	17.1	17.1	18.1	11.4	15,592.51	7.82	2.57	5,197.50 gal	2.61	80.35%	79.75%
Razor Clams	5.7	2.9	2.9	2.9	1.9	2,848.57	1.43	0.47	949.52 gal	0.48	130.16%	130.69%
Pacific Littleneck Clams (Steamers)	2.9	1.9	1.9	1.9	0.0	1,025.49	0.51	0.17	341.83 gal	0.17	136.67%	137.38%
Pinkneck Clams	1.0	1.0	1.0	1.0	1.0	113.94	0.06	0.02	37.98 gal	0.02	193.01%	193.24%
Horse Clams (Gaper)	1.0	0.0	0.0	1.0	1.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Unknown Clams	6.7	3.8	3.8	2.9	3.8	1,310.34	0.66	0.22	436.78 gal	0.22	133.71%	132.89%
Cockles	6.7	4.8	4.8	2.9	2.9	1,025.49	0.51	0.17	341.83 gal	0.17	120.42%	119.97%
Scallops	21.9	1.0	1.0	21.0	7.6	189.90	0.10	0.03	3,038.48	1.52	193.01%	192.63%
Jingles	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	3.8	2.9	2.9	1.0	2.9	484.26	0.24	0.08	322.84 gal	0.16	111.92%	112.26%
Crabs	76.2	28.6	26.7	68.6	28.6	30,756.98	15.42	5.08			72.50%	72.15%
Dungeness Crab	43.8	12.4	10.5	39.0	8.6	1,641.73	0.82	0.27	2,345.32	1.18	78.01%	78.61%
King Crab	50.5	17.1	14.3	43.8	19.0	10,686.89	5.36	1.76			70.60%	70.02%
King Crab, Blue	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 Eggs, Red	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%
King Crab, Unknown	50.5	17.1	14.3	43.8	19.0	10,686.89	5.36	1.76	4,646.47	2.33	70.60%	70.02%
Tanner Crab	45.7	16.2	13.3	37.1	14.3	18,428.36	9.24	3.04	11,517.72	5.78	83.42%	83.15%
Tanner Crab, Bairdi	1.9	1.9	1.9	0.0	1.9	2,035.78	1.02	0.34	1,272.36	0.64	140.21%	141.36%
Tanner Crab, Opilio	1.0	1.0	1.0	0.0	1.0	6,076.95	3.05	1.00	3,798.10	1.90	193.01%	193.24%
Tanner Crab, Unknown	43.8	15.2	11.4	37.1	11.4	10,315.63	5.17	1.70	6,447.27	3.23	88.64%	87.51%
Unknown Crabs	1.0	0.0	0.0	1.0	1.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Chitons (bidarkis)	3.8	2.9	2.9	1.9	1.9	1,025.49	0.51	0.17	256.37 gal	0.13	119.77%	119.86%
Chitons (small)	3.8	2.9	2.9	1.9	1.9	1,025.49	0.51	0.17	256.37 gal	0.13	119.77%	119.86%
Octopus	21.9	10.5	10.5	12.4	11.4	3,038.48	1.52	0.50	759.62	0.38	64.09%	63.32%
Sea Cucumber	1.0	1.9	1.0	1.0	0.0	5.70	0.00	0.00	2.85 gal	0.00	193.01%	192.63%

Table X-36. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Kodiak City, 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
Sea Urchin	2.9	3.8	2.9	0.0	1.0	85.46	0.04	0.01	170.91 gal	0.09	122.33%	120.44%
Shrimp	3.8	0.0	0.0	3.8	1.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Snails	1.9	1.9	1.9	0.0	1.0	78.34	0.04	0.01	52.22 gal	0.03	149.44%	149.02%
Limpets	1.0	1.0	1.0	0.0	0.0	21.36	0.01	0.00	14.24 gal	0.01	193.01%	194.46%
Squid	4.8	0.0	0.0	4.8	2.9	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Plants and Berries	81.0	73.3	73.3	46.7	42.9	60,342.24	30.26	9.96	15,085.56 gal	7.57	52.94%	53.50%
Berries	79.0	71.4	71.4	46.7	41.0	52,622.61	26.39	8.69	13,155.65 gal	6.60	57.74%	58.35%
Plants/Greens/Mushrooms	21.0	18.1	18.1	7.6	7.6	7,463.26	3.74	1.23	1,865.81 gal	0.94	91.00%	90.88%
Seaweed/Kelp (Food)	4.8	4.8	4.8	0.0	1.9	256.37	0.13	0.04	64.09 gal	0.03	99.02%	99.21%
Fertilizer	8.6	6.7	6.7	2.9	1.0	0.00	0.00	0.00			0.00%	0.00%
Vegetative Fertilizer	8.6	6.7	6.7	2.9	1.0	0.00	0.00	0.00	72,277.75 gal	36.25	86.22%	0.00%
Seaweed/Kelp (Non-food)	8.6	6.7	6.7	2.9	1.0	0.00	0.00	0.00	72,277.75 gal	36.25	86.22%	0.00%
Fish Fertilizer	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Herring [Fertilizer]	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Invertebrate Fertilizer	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Starfish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Wood	35.2	30.5	30.5	6.7	9.5	0.00	0.00	0.00	2,791.13 crd	1.40	84.86%	0.00%

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

Table X-37. Estimated Amount of Resources Removed From Commercial Harvest, Kodiak City, 1993

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		94,030.39	13.24	10.28
Fish		81,901.18	12.55	8.95
Salmon	4785.60	20,934.53	7.24	2.29
Chum Salmon	94.95	420.64	2.99	0.05
Coho Salmon	854.57	4,307.04	3.93	0.47
Chinook Salmon	398.80	3,421.70	13.29	0.37
Pink Salmon	246.88	562.88	2.03	0.06
Sockeye Salmon	2810.59	10,680.24	9.66	1.17
Unknown Salmon	379.81	1,542.03	90.91	0.17
Non-Salmon Fish		60,966.64	16.78	6.66
Cod	2402.30	7,687.34	26.57	0.84
Pacific Cod (Gray)	2402.30	7,687.34	26.57	0.84
Sablefish (Black Cod)	759.62	2,354.82	100.00	0.26
Greenling	2264.73	6,137.34	42.71	0.67
Kelp Greenling	1899.05	1,899.05	100.00	0.21
Lingcod	365.69	4,238.29	35.17	0.46
Halibut	2286.32	37,221.33	14.51	4.07
Herring	94.95 gal	569.71	5.08	0.06
Rockfish	1899.05	4,177.90	19.23	0.46
Black Rockfish (black bass)	1367.31	2,050.97	11.07	0.22
Red Rockfish	531.73	2,126.93	66.67	0.23
Trout and Char	2012.99	2,818.19	11.88	0.31
Char	2012.99	2,818.19	13.90	0.31
Dolly Varden	2012.99	2,818.19	13.91	0.31
Marine Invertebrates		12,129.22	21.06	1.33
Crabs		11,749.41	38.20	1.28
Dungeness Crab	379.81	265.87	16.19	0.03
King Crab		3,370.81	31.54	0.37
King Crab, Unknown	1465.57	3,370.81	31.54	0.37
Tanner Crab	5070.46	8,112.73	44.02	0.89
Tanner Crab, Bairdi	1272.36	2,035.78	100.00	0.22
Tanner Crab, Opilio	3798.10	6,076.95	100.00	0.66
Octopus	94.95	379.81	12.50	0.04

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

Table X-38. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Kodiak City, 1993

Resource	Percent Base	Subsistence Methods: Setnet No.	Setnet Lbs.	Beach Seine No.	Beach Seine Lbs.	Purse Seine No.	Purse Seine Lbs.	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	20.07	19.48	2.73	2.50	16.11	16.53	0.33	0.30	39.24	38.80	6.88	7.24	53.88	53.96		
Chum Salmon	gear type	0.14	0.15	0.00	0.00	25.42	26.40	0.00	0.00	10.51	11.32	1.98	2.01	0.56	0.59		
	resource	0.60	0.60	0.00	0.00	89.82	89.82	0.00	0.00	90.42	90.42	2.99	2.99	6.59	6.59		
	total	0.03	0.03	0.00	0.00	4.10	4.36	0.00	0.00	4.12	4.39	0.14	0.15	0.30	0.32	4.56	4.86
Coho Salmon	gear type	21.90	27.35	0.00	0.00	0.51	0.60	0.00	0.00	11.41	13.99	17.86	20.57	47.38	57.34		
	resource	14.07	14.07	0.00	0.00	0.26	0.26	0.00	0.00	14.34	14.34	3.93	3.93	81.73	81.73		
	total	4.40	5.33	0.00	0.00	0.08	0.10	0.00	0.00	4.48	5.43	1.23	1.49	25.53	30.94	31.24	37.86
Chinook Salmon	gear type	1.63	3.47	0.00	0.00	6.27	12.61	0.00	0.00	3.41	7.11	8.33	16.34	4.46	9.19		
	resource	7.59	7.59	0.00	0.00	23.42	23.42	0.00	0.00	31.01	31.01	13.29	13.29	55.70	55.70		
	total	0.33	0.68	0.00	0.00	1.01	2.08	0.00	0.00	1.34	2.76	0.57	1.18	2.40	4.96	4.31	8.90
Pink Salmon	gear type	7.48	4.23	0.00	0.00	0.00	0.00	0.00	0.00	3.83	2.12	5.16	2.69	28.96	15.86		
	resource	8.60	8.60	0.00	0.00	0.00	0.00	0.00	0.00	8.60	8.60	2.03	2.03	89.37	89.37		
	total	1.50	0.82	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.82	0.35	0.19	15.60	8.56	17.46	9.57
Sockeye Salmon	gear type	68.84	64.81	100.00	####	67.80	60.39	100.00	100.00	70.84	65.46	58.73	51.02	18.55	16.92		
	resource	33.03	33.03	6.53	6.53	26.11	26.11	0.78	0.78	66.45	66.45	9.66	9.66	23.89	23.89		
	total	13.82	12.62	2.73	2.50	10.92	9.98	0.33	0.30	27.80	25.40	4.04	3.69	9.99	9.13	41.83	38.22
Unknown Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.94	7.37	0.10	0.10		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.91	90.91	9.09	9.09		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.53	0.05	0.05	0.60	0.59

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

Table X-39. Estimated Salmon Harvest by Gear Type and Species, Kodiak City, 1993

		Subsistence Methods										Removed from Commercial Catch		Rod and Reel		Any Method	
		Setnet		Beach Seine		Purse Seine		Dip 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	Total	HH Mean	Total	HH Mean
Salmon	numbers	13,958.00	7.00	1,899.05	0.95	11,204.38	5.62	227.89	0.11	27,289.31	13.69	4,785.60	2.40	37,477.70	18.80	69,552.62	34.88
	pounds	56,345.31	28.26	7,216.38	3.62	47,800.55	23.97	865.97	0.43	112,228.21	56.28	20,934.53	10.50	156,065.82	78.27	289,228.56	145.05
Chum	numbers	18.99	0.01	0.00	0.00	2,848.57	1.43	0.00	0.00	2,867.56	1.44	94.95	0.05	208.90	0.10	3,171.41	1.59
	pounds	84.13	0.04	0.00	0.00	12,619.17	6.33	0.00	0.00	12,703.30	6.37	420.64	0.21	925.41	0.46	14,049.34	7.05
Coho	numbers	3,057.47	1.53	0.00	0.00	56.97	0.03	0.00	0.00	3,114.44	1.56	854.57	0.43	17,756.10	8.90	21,725.10	10.90
	pounds	15,409.63	7.73	0.00	0.00	287.14	0.14	0.00	0.00	15,696.77	7.87	4,307.04	2.16	89,490.72	44.88	109,494.53	54.91
Chinook	numbers	227.89	0.11	0.00	0.00	702.65	0.35	0.00	0.00	930.53	0.47	398.80	0.20	1,671.16	0.84	3,000.50	1.50
	pounds	1,955.26	0.98	0.00	0.00	6,028.72	3.02	0.00	0.00	7,983.98	4.00	3,421.70	1.72	14,338.57	7.19	25,744.25	12.91
Pink	numbers	1,044.48	0.52	0.00	0.00	0.00	0.00	0.00	0.00	1,044.48	0.52	246.88	0.12	10,853.06	5.44	12,144.41	6.09
	pounds	2,381.41	1.19	0.00	0.00	0.00	0.00	0.00	0.00	2,381.41	1.19	562.88	0.28	24,744.97	12.41	27,689.25	13.89
Sockeye	numbers	9,609.18	4.82	1,899.05	0.95	7,596.19	3.81	227.89	0.11	19,332.30	9.70	2,810.59	1.41	6,950.51	3.49	29,093.41	14.59
	pounds	36,514.89	18.31	7,216.38	3.62	28,865.52	14.48	865.97	0.43	73,462.76	36.84	10,680.24	5.36	26,411.95	13.25	110,554.96	55.44
Unknown	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	379.81	0.19	37.98	0.02	417.79	0.21
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,542.03	0.77	154.20	0.08	1,696.23	0.85

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

Table X-40. Percentage of Households Harvesting Salmon by Gear Type and Species, Kodiak City, 1993

Resource	Setnet	Beach Seine	Purse Seine	Dip Net	Any Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Any Method
Salmon	18.10	0.95	1.90	0.95	21.90	9.52	58.10	68.57
Chum Salmon	0.95	0.00	0.95	0.00	1.90	0.95	3.81	5.71
Coho Salmon	6.67	0.00	0.95	0.00	7.62	2.86	48.57	54.29
Chinook Salmon	0.95	0.00	0.95	0.00	1.90	4.76	16.19	21.90
Pink Salmon	4.76	0.00	0.00	0.00	4.76	1.90	33.33	38.10
Sockeye Salmon	16.19	0.95	0.95	0.95	19.05	7.62	25.71	42.86
Unknown Salmon	0.00	0.00	0.00	0.00	0.00	0.95	0.95	0.95

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

Table X-41. Estimated Harvest of Fish Other than Salmon by Gear Type, Kodiak City, 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	20,911.84	10.49	60,966.64	30.58	281,390.95	141.12	0.00	0.00	363,269.44	182.18
Capelin (Grunion)	pounds	462.89	0.23	0.00	0.00	0.00	0.00	0.00	0.00	462.89	0.23
Lingcod	pounds	0.00	0.00	4,238.29	2.13	7,813.54	3.92	0.00	0.00	12,051.83	6.04
Pacific Cod (Gray)	pounds	303.85	0.15	7,687.34	3.86	20,946.50	10.50	0.00	0.00	28,937.69	14.51
Sablefish (Black Cod)	pounds	0.00	0.00	2,354.82	1.18	0.00	0.00	0.00	0.00	2,354.82	1.18
Starry Flounder	pounds	56.97	0.03	0.00	0.00	0.00	0.00	0.00	0.00	56.97	0.03
Unknown Flounder	pounds	56.97	0.03	0.00	0.00	2,050.97	1.03	0.00	0.00	2,107.94	1.06
Sole, Unknown	pounds	0.00	0.00	0.00	0.00	683.66	0.34	0.00	0.00	683.66	0.34
Halibut	pounds	5,697.14	2.86	37,221.33	18.67	213,671.34	107.16	0.00	0.00	256,589.82	128.68
Herring	pounds	10,634.67	5.33	569.71	0.29	0.00	0.00	0.00	0.00	11,204.38	5.62
Black Rockfish (black bass)	pounds	2,848.57	1.43	2,050.97	1.03	13,630.41	6.84	0.00	0.00	18,529.96	9.29
Red Rockfish	pounds	0.00	0.00	2,126.93	1.07	1,063.47	0.53	0.00	0.00	3,190.40	1.60
Irish Lord	pounds	0.00	0.00	0.00	0.00	683.66	0.34	0.00	0.00	683.66	0.34
Unknown Sculpin	pounds	0.00	0.00	0.00	0.00	47.48	0.02	0.00	0.00	47.48	0.02
Kelp Greenling	pounds	0.00	0.00	1,899.05	0.95	0.00	0.00	0.00	0.00	1,899.05	0.95
Unknown Greenling	pounds	0.00	0.00	0.00	0.00	417.79	0.21	0.00	0.00	417.79	0.21
Walleye Pollock (Whiting)	pounds	0.00	0.00	0.00	0.00	319.04	0.16	0.00	0.00	319.04	0.16
Dolly Varden	pounds	850.77	0.43	2,818.19	1.41	16,590.08	8.32	0.00	0.00	20,259.04	10.16
Dolly Varden-Fingerling	pounds	0.00	0.00	0.00	0.00	15.43	0.01	0.00	0.00	15.43	0.01
Rainbow Trout	pounds	0.00	0.00	0.00	0.00	1,382.51	0.69	0.00	0.00	1,382.51	0.69
Steelhead	pounds	0.00	0.00	0.00	0.00	1,995.33	1.00	0.00	0.00	1,995.33	1.00
Unknown Trout	pounds	0.00	0.00	0.00	0.00	79.76	0.04	0.00	0.00	79.76	0.04

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

Table X-42. Percentage of Fish Other Than Salmon Harvested by Gear Type, Kodiak City, 1993

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	5.76	16.78	77.46	0.00
Capelin (Grunion)	resource	100.00	0.00	0.00	0.00
Lingcod	resource	0.00	35.17	64.83	0.00
Pacific Cod (Gray)	resource	1.05	26.57	72.38	0.00
Sablefish (Black Cod)	resource	0.00	100.00	0.00	0.00
Starry Flounder	resource	100.00	0.00	0.00	0.00
Unknown Flounder	resource	2.70	0.00	97.30	0.00
Sole, Unknown	resource	0.00	0.00	100.00	0.00
Halibut	resource	2.22	14.51	83.27	0.00
Herring	resource	94.92	5.08	0.00	0.00
Black Rockfish (black bass)	resource	15.37	11.07	73.56	0.00
Red Rockfish	resource	0.00	66.67	33.33	0.00
Irish Lord	resource	0.00	0.00	100.00	0.00
Unknown Sculpin	resource	0.00	0.00	100.00	0.00
Kelp Greenling	resource	0.00	100.00	0.00	0.00
Unknown Greenling	resource	0.00	0.00	100.00	0.00
Walleye Pollock (Whiting)	resource	0.00	0.00	100.00	0.00
Dolly Varden	resource	4.20	13.91	81.89	0.00
Dolly Varden-Fingerling	resource	0.00	0.00	100.00	0.00
Rainbow Trout	resource	0.00	0.00	100.00	0.00
Steelhead	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 X-43. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Kodiak City, 1993

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	9.52	11.43	58.10	0.00	63.81
Capelin (Grunion)	0.95	0.00	0.00	0.00	0.95
Lingcod	0.00	1.90	7.62	0.00	9.52
Pacific Cod (Gray)	0.95	4.76	17.14	0.00	21.90
Sablefish (Black Cod)	0.00	0.95	0.00	0.00	0.95
Starry Flounder	0.95	0.00	0.00	0.00	0.95
Unknown Flounder	0.95	0.00	6.67	0.00	7.62
Sole, Unknown	0.00	0.00	1.90	0.00	1.90
Halibut	2.86	8.57	42.86	0.00	50.48
Herring	0.95	0.95	0.00	0.00	1.90
Black Rockfish (black bass)	0.95	2.86	22.86	0.00	25.71
Red Rockfish	0.00	2.86	1.90	0.00	4.76
Irish Lord	0.00	0.00	4.76	0.00	4.76
Unknown Sculpin	0.00	0.00	0.95	0.00	0.95
Kelp Greenling	0.00	0.95	0.00	0.00	0.95
Unknown Greenling	0.00	0.00	5.71	0.00	5.71
Walleye Pollock (Whiting)	0.00	0.00	1.90	0.00	1.90
Dolly Varden	2.86	1.90	33.33	0.00	36.19
Dolly Varden-Fingerling	0.00	0.00	1.90	0.00	1.90
Rainbow Trout	0.00	0.00	5.71	0.00	5.71
Steelhead	0.00	0.00	3.81	0.00	3.81
Unknown Trout	0.00	0.00	0.95	0.00	0.95

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

Table X-44. Uses of Wild Foods, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
ANY WILD FOODS EATEN YESTERDAY?			
No			
Count	68	66	72
Col %	63.6%	66.0%	68.6%
Yes			
Count	39	34	33
Col %	36.4%	34.0%	31.4%
WILD FOODS AS MAIN PART OF A MEAL			
No			
Count	79	71	77
Col %	73.8%	71.0%	73.3%
Yes			
Count	28	29	28
Col %	26.2%	29.0%	26.7%
HARVEST OF WILD FOODS BY RESPONDENT			
No Response			
Count	1		
Col %	.9%		
No			
Count	92	83	84
Col %	86.0%	83.0%	80.0%
Yes			
Count	14	17	21
Col %	13.1%	17.0%	20.0%
WF HARVESTED BY RELATIVE IN HH			
No Response			
Count	1		
Col %	.9%		
No			
Count	97	93	102
Col %	90.7%	93.0%	97.1%
Yes			
Count	9	7	3
Col %	8.4%	7.0%	2.9%
WF HARVESTED BY RELATIVE IN ANOTHER HH			
No Response			
Count	1		
Col %	.9%		
No			
Count	100	99	104
Col %	93.5%	99.0%	99.0%
Yes			
Count	6	1	1
Col %	5.6%	1.0%	1.0%
WF HARVESTED BY RELATIVE IN ANOTHER COMM.			
No			
Count	105	97	105
Col %	98.1%	97.0%	100.0%
Yes			
Count	2	3	
Col %	1.9%	3.0%	
WF HARVESTED BY FRIEND IN HH			
No Response			
Count	1		
Col %	.9%		
No			
Count	106	100	103
Col %	99.1%	100.0%	98.1%
Yes			
Count			2
Col %			1.9%
WF HARVESTED BY FRIEND IN COMMUNITY			
No Response			
Count	1		
Col %	.9%		
No			
Count	93	90	100
Col %	86.9%	90.0%	95.2%
Yes			
Count	13	10	5
Col %	12.1%	10.0%	4.8%

(continued)

Table X-44. Uses of Wild Foods, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
WF HARVESTED BY FRIEND IN ANOTHER COMM.			
No Response			
Count	1		
Col %	.9%		
No			
Count	105	100	103
Col %	98.1%	100.0%	98.1%
Yes			
Count	1		2
Col %	.9%		1.9%

* Includes Kodiak City, Kodiak Coast Guard Base and Road-connected area.

Table X-45. Safety of Using Subsistence Foods, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
DO YOU EAT BIDARKIES?			
No			
Count		89	96
Col %		89.0%	91.4%
Yes			
Count		11	9
Col %		11.0%	8.6%
IS EATING BIDARKIES IMPORTANT TO YOU?			
No			
Count	99		
Col %	92.5%		
Yes			
Count	8		
Col %	7.5%		
BIDARKIE HARVEST AREAS SAFE?			
Do Not Know			
Count	1	1	
Col %	12.5%	9.1%	
Not Safe			
Count	2	3	1
Col %	25.0%	27.3%	10.0%
Safe			
Count	5	7	9
Col %	62.5%	63.6%	90.0%
WHY BIDARKIES NOT SAFE TO EAT			
Fearful of PSP poisoning			
Count	1	1	
Col %	50.0%	33.3%	
Oil pollution or fear of contamination			
Count		2	
Col %		66.7%	
Safe to eat if you know which ones to take			
Count	1		
Col %	50.0%		
DO YOU EAT CLAMS?			
No			
Count		25	25
Col %		25.0%	23.8%
Yes			
Count		75	80
Col %		75.0%	76.2%
ARE CLAMS SAFE FOR CHILDREN TO EAT?			
No Response			
Count	1	1	
Col %	1.0%	1.3%	
Do Not Know			
Count	16	12	7
Col %	15.2%	16.0%	8.8%
Not Safe			
Count	34	18	20
Col %	32.4%	24.0%	25.0%
Safe			
Count	54	44	53
Col %	51.4%	58.7%	66.3%
WHY CLAMS NOT SAFE TO EAT			
No Response			
Count	4		
Col %	12.9%		
Do Not Know			
Count		1	
Col %		5.3%	
Fearful of PSP poisoning			
Count	17	8	13
Col %	54.8%	42.1%	72.2%
Oil pollution or fear of contamination			
Count	7	2	
Col %	22.6%	10.5%	
Pollution from non-oil spill source			
Count	2		1
Col %	6.5%		5.6%

(continued)

Table X-45. Safety of Using Subsistence Foods, Kodiak City

(continued)

Table X-45. Safety of Using Subsistence Foods, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Safe to eat if you know which ones to take			
Count	1	1	
Col %	3.2%	5.3%	
Both PSP and pollution			
Count		7	3
Col %		36.8%	16.7%
Nonspecific concern			
Count			1
Col %			5.6%
DO YOU EAT SEAL OIL OR SEAL MEAT?			
No			
Count		90	98
Col %		90.0%	93.3%
Yes			
Count		10	7
Col %		10.0%	6.7%
IS EATING SEAL MEAT OR OIL IMPORTANT?			
No			
Count	102		
Col %	95.3%		
Yes			
Count	5		
Col %	4.7%		
ARE SEALS FROM HARVEST AREAS SAFE TO EAT?			
Do Not Know			
Count	1	1	
Col %	25.0%	11.1%	
Not Safe			
Count		1	
Col %		11.1%	
Safe			
Count	3	7	7
Col %	75.0%	77.8%	100.0%
WHY SEAL NOT SAFE TO EAT			
Oil pollution or fear of contamination			

(continued)

Table X-45. Safety of Using Subsistence Foods, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Count		1	
Col %		100.0%	

* Includes Kodiak City, Kodiak Coast Guard Base and Road-connected area.

Table X-46. Resource Population Statuses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
COMPARED TO 1988: DEER			
Do Not Know			
Count	20	17	21
Col %	21.3%	24.3%	29.6%
Less			
Count	37	36	21
Col %	39.4%	51.4%	29.6%
Same			
Count	30	11	21
Col %	31.9%	15.7%	29.6%
More			
Count	7	6	8
Col %	7.4%	8.6%	11.3%
COMPARED TO 1988: MOOSE			
Do Not Know			
Count			1
Col %			100.0%
COMPARED TO 1988: BEAR			
Do Not Know			
Count	37	38	27
Col %	39.4%	54.3%	37.5%
Less			
Count	4	3	5
Col %	4.3%	4.3%	6.9%
Same			
Count	29	15	17
Col %	30.9%	21.4%	23.6%
More			
Count	24	14	23
Col %	25.5%	20.0%	31.9%
COMPARED TO 1988: HARBOR SEAL			
No Response			
Count	1		
Col %	1.1%		
Do Not Know			
Count	44	31	34

(continued)

Table X-46. Resource Population Statuses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Col %	46.8%	44.3%	47.2%
Less			
Count	22	24	24
Col %	23.4%	34.3%	33.3%
Same			
Count	22	11	9
Col %	23.4%	15.7%	12.5%
More			
Count	5	4	5
Col %	5.3%	5.7%	6.9%
COMPARED TO 1988: SEA LIONS			
Do Not Know			
Count	22	16	21
Col %	23.4%	22.9%	29.2%
Less			
Count	18	28	30
Col %	19.1%	40.0%	41.7%
Same			
Count	31	8	10
Col %	33.0%	11.4%	13.9%
More			
Count	23	18	11
Col %	24.5%	25.7%	15.3%
COMPARED TO 1988: BEARDED SEAL			
Same			
Count	1		
Col %	100.0%		
COMPARED TO 1988: SEA DUCKS			
Do Not Know			
Count	37	46	36
Col %	39.4%	65.7%	50.0%
Less			
Count	22	13	12
Col %	23.4%	18.6%	16.7%
Same			

(continued)

Table X-46. Resource Population Statuses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Count	30	11	22
Col %	31.9%	15.7%	30.6%
More			
Count	5		2
Col %	5.3%		2.8%
COMPARED TO 1988: COMMON MURRE			
No Response			
Count	2		
Col %	2.2%		
Do Not Know			
Count	54	46	46
Col %	58.1%	65.7%	63.9%
Less			
Count	14	14	11
Col %	15.1%	20.0%	15.3%
Same			
Count	23	8	15
Col %	24.7%	11.4%	20.8%
More			
Count		2	
Col %		2.9%	
COMPARED TO 1988: SALMON			
Do Not Know			
Count	16	15	13
Col %	17.0%	21.4%	18.1%
Less			
Count	22	33	18
Col %	23.4%	47.1%	25.0%
Same			
Count	45	17	28
Col %	47.9%	24.3%	38.9%
More			
Count	11	5	13
Col %	11.7%	7.1%	18.1%
COMPARED TO 1988: HALIBUT			

(continued)

Table X-46. Resource Population Statuses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
No Response			
Count	1		1
Col %	1.1%		1.4%
Do Not Know			
Count	18	22	19
Col %	19.4%	31.4%	26.4%
Less			
Count	24	31	18
Col %	25.8%	44.3%	25.0%
Same			
Count	47	14	28
Col %	50.5%	20.0%	38.9%
More			
Count	3	3	6
Col %	3.2%	4.3%	8.3%
COMPARED TO 1988: WHITEFISH			
Do Not Know			
Count	1		
Col %	100.0%		
COMPARED TO 1988: ROCKFISH			
No Response			
Count	1		
Col %	1.1%		
Do Not Know			
Count	36	44	37
Col %	38.7%	62.9%	51.4%
Less			
Count	10	9	15
Col %	10.8%	12.9%	20.8%
Same			
Count	42	17	17
Col %	45.2%	24.3%	23.6%
More			
Count	4		3
Col %	4.3%		4.2%

(continued)

Table X-46. Resource Population Statuses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
COMPARED TO 1988: ARCTIC CHAR			
Do Not Know			
Count	1		
Col %	100.0%		
COMPARED TO 1988: DOLLY VARDEN			
Do Not Know			
Count	35	42	38
Col %	37.2%	60.0%	52.8%
Less			
Count	10	7	7
Col %	10.6%	10.0%	9.7%
Same			
Count	46	19	24
Col %	48.9%	27.1%	33.3%
More			
Count	3	2	3
Col %	3.2%	2.9%	4.2%
COMPARED TO 1988: CLAMS			
Do Not Know			
Count	33	40	30
Col %	35.5%	57.1%	41.7%
Less			
Count	23	21	19
Col %	24.7%	30.0%	26.4%
Same			
Count	35	9	22
Col %	37.6%	12.9%	30.6%
More			
Count	2		1
Col %	2.2%		1.4%
COMPARED TO 1988: BIDARKIES			
No Response			
Count	1		
Col %	1.1%		
Do Not Know			
Count	66	58	57

(continued)

Table X-46. Resource Population Statuses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Col %	70.2%	82.9%	79.2%
Less			
Count	7	4	5
Col %	7.4%	5.7%	6.9%
Same			
Count	20	7	9
Col %	21.3%	10.0%	12.5%
More			
Count		1	1
Col %		1.4%	1.4%
COMPARED TO 1988: SEA URCHINS			
Do Not Know			
Count	59	57	45
Col %	62.8%	81.4%	62.5%
Less			
Count	17	6	12
Col %	18.1%	8.6%	16.7%
Same			
Count	16	6	13
Col %	17.0%	8.6%	18.1%
More			
Count	2	1	2
Col %	2.1%	1.4%	2.8%
COMPARED TO 1988: OCTOPUS			
Do Not Know			
Count	58	46	46
Col %	61.7%	65.7%	63.9%
Less			
Count	6	5	4
Col %	6.4%	7.1%	5.6%
Same			
Count	27	16	20
Col %	28.7%	22.9%	27.8%
More			
Count	3	3	2

(continued)

Table X-46. Resource Population Statuses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Col %	3.2%	4.3%	2.8%

* Includes Kodiak City, Kodiak Coast Guard Base and Road-connected area.

Table X-47. Children's Participation in Subsistence, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
DOES YOUR HOUSEHOLD PROCESS WILD FOODS?			
No			
Count		14	16
Col %		14.0%	15.2%
Yes			
Count		86	89
Col %		86.0%	84.8%
DO CHILDREN HELP YOUR HH PROCESS WILD FOODS?			
No			
Count	77	67	81
Col %	72.0%	67.0%	77.1%
Yes			
Count	30	33	24
Col %	28.0%	33.0%	22.9%
DID EVOS AFFECT PARTICIPATION WITH CHILDREN?			
No Response			
Count		1	
Col %		1.3%	
No			
Count	84	66	71
Col %	84.8%	83.5%	89.9%
Yes			
Count	15	12	8
Col %	15.2%	15.2%	10.1%
WHY EVOS AFFECTED PARTICIPATION WITH CHILDREN			
No Response			
Count	3		
Col %	20.0%		
Resources were not available			
Count	2	2	
Col %	13.3%	16.7%	
Were too busy with other affairs			
Count	2	2	1
Col %	13.3%	16.7%	12.5%

(continued)

Table X-47. Children's Participation in Subsistence, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Did not trust foods			
Count		1	1
Col %		8.3%	12.5%
Were not allowed to commercial fish			
Count	1	2	2
Col %	6.7%	16.7%	25.0%
Less harvesting activity			
Count	4	4	2
Col %	26.7%	33.3%	25.0%
Areas were no longer available for harvesting			
Count			1
Col %			12.5%
Oil pollution threatened everything			
Count	1		
Col %	6.7%		
Decreased effort because of the spill			
Count	1		
Col %	6.7%		
Did not keep the resources they harvested			
Count	1		
Col %	6.7%		
Required more supervision			
Count		1	
Col %		8.3%	
For safety, parents took over more harvesting/processing			
Count			1
Col %			12.5%

* Includes Kodiak City, Kodiak Coast Guard Base and Road-connected area.

Table X-48. Sharing, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
DID HOUSEHOLD SHARE?			
No			
Count	11	9	5
Col %	10.3%	9.0%	4.8%
Yes			
Count	96	91	100
Col %	89.7%	91.0%	95.2%
PREV. YEAR: SHARING OF WILD RES.			
Do Not Know			
Count		1	
Col %		1.1%	
Less			
Count	21	26	10
Col %	21.0%	27.4%	10.4%
Same			
Count	58	44	57
Col %	58.0%	46.3%	59.4%
More			
Count	21	24	29
Col %	21.0%	25.3%	30.2%
PREV. YEAR: SHARING OF HUNT/FISH GEAR			
Do Not Know			
Count	1	2	
Col %	1.2%	2.4%	
Less			
Count	13	17	7
Col %	15.7%	20.7%	8.8%
Same			
Count	63	47	53
Col %	75.9%	57.3%	66.3%
More			
Count	6	16	20
Col %	7.2%	19.5%	25.0%
PREV. YEAR: SHARING OF MONEY			
Do Not Know			
Count	2	3	

(continued)

Table X-48. Sharing, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Col %	2.6%	3.8%	
Less			
Count	13	15	6
Col %	16.9%	19.0%	7.9%
Same			
Count	53	38	52
Col %	68.8%	48.1%	68.4%
More			
Count	9	23	18
Col %	11.7%	29.1%	23.7%
PREV. YEAR: SHARING OF LABOR			
Do Not Know			
Count	2	1	2
Col %	2.2%	1.1%	2.2%
Less			
Count	12	8	6
Col %	13.0%	9.0%	6.7%
Same			
Count	56	46	52
Col %	60.9%	51.7%	57.8%
More			
Count	22	34	30
Col %	23.9%	38.2%	33.3%
PRE-OS: SHARING OF WILD RESOURCES			
No Response			
Count			3
Col %			4.1%
Do Not Know			
Count	2	2	8
Col %	2.1%	2.8%	10.8%
Less			
Count	26	26	18
Col %	27.1%	36.6%	24.3%
Same			
Count	53	26	29

(continued)

Table X-48. Sharing, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Col %	55.2%	36.6%	39.2%
More			
Count	15	17	16
Col %	15.6%	23.9%	21.6%
PRE-OS: SHARING OF HUNT/FISH GEAR			
No Response			
Count			3
Col %			4.8%
Do Not Know			
Count	2		5
Col %	2.5%		8.1%
Less			
Count	14	24	8
Col %	17.5%	37.5%	12.9%
Same			
Count	58	26	29
Col %	72.5%	40.6%	46.8%
More			
Count	6	14	17
Col %	7.5%	21.9%	27.4%
PRE-OS: SHARING OF MONEY			
No Response			
Count			3
Col %			5.1%
Do Not Know			
Count	2	4	5
Col %	2.6%	6.7%	8.5%
Less			
Count	13	13	7
Col %	17.1%	21.7%	11.9%
Same			
Count	51	25	32
Col %	67.1%	41.7%	54.2%
More			
Count	10	18	12

(continued)

Table X-48. Sharing, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Col %	13.2%	30.0%	20.3%
PRE-OS: SHARING OF LABOR			
No Response			
Count			3
Col %			4.3%
Do Not Know			
Count	5	1	5
Col %	5.6%	1.5%	7.2%
Less			
Count	11	22	8
Col %	12.4%	33.3%	11.6%
Same			
Count	60	29	38
Col %	67.4%	43.9%	55.1%
More			
Count	13	14	15
Col %	14.6%	21.2%	21.7%

* Includes Kodiak City, Kodiak Coast Guard Base and Road-connected area.

Table X-49. Political Activities, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
LAST 3 YRS.: ELDERS INFLUENCE			
No Response			
Count	1		
Col %	1.0%		
Do Not Know			
Count	24		
Col %	23.1%		
Decreased			
Count	21		
Col %	20.2%		
Same			
Count	32		
Col %	30.8%		
Increased			
Count	26		
Col %	25.0%		
LAST 4 YRS.: ELDERS INFLUENCE			
Do Not Know			
Count		19	
Col %		25.7%	
Decreased			
Count		19	
Col %		25.7%	
Same			
Count		24	
Col %		32.4%	
Increased			
Count		12	
Col %		16.2%	
LAST 5 YRS.: ELDERS INFLUENCE			
No Response			
Count			2
Col %			2.6%
Do Not Know			
Count			15
Col %			19.5%

(continued)

Table X-49. Political Activities, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Decreased			
Count			20
Col %			26.0%
Same			
Count			22
Col %			28.6%
Increased			
Count			18
Col %			23.4%
LAST 5 YRS.: ELDERS INFLUENCE: WHY			
No Response			
Count			5
Col %			13.5%
Do Not Know			
Count			2
Col %			5.4%
Fewer elders, traditional people passed away			
Count			3
Col %			8.1%
Elders not as active			
Count			3
Col %			8.1%
Trying to maintain culture			
Count			1
Col %			2.7%
Elders more aware of the power they hold			
Count			1
Col %			2.7%
More voters, more involved			
Count			8
Col %			21.6%
Elders knowledge is not appreciated or recognized			
Count			6
Col %			16.2%

(continued)

Table X-49. Political Activities, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Elders knowledge is more appreciated or recognized			
Count			4
Col %			10.8%
Increasing number of elders			
Count			1
Col %			2.7%
Change in the direction of the community			
Count			1
Col %			2.7%
Elders are not listened to			
Count			1
Col %			2.7%
Younger people are leaving community			
Count			1
Col %			2.7%
PRE-EVOS: ATTEND PUBLIC MEETINGS			
Never			
Count	51		
Col %	50.5%		
Sometimes			
Count	44		
Col %	43.6%		
Almost Always			
Count	6		
Col %	5.9%		
PRE-EVOS: ATTEND PUBLIC MEETINGS			
Do Not Know			
Count			2
Col %			2.9%
Less			
Count		11	19
Col %		20.8%	27.1%
Same			
Count		17	38
Col %		32.1%	54.3%

(continued)

Table X-49. Political Activities, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
More			
Count		25	11
Col %		47.2%	15.7%
LAST YEAR: ATTEND PUBLIC MEETINGS			
Never			
Count	52		
Col %	48.6%		
Sometimes			
Count	46		
Col %	43.0%		
Almost Always			
Count	9		
Col %	8.4%		
LAST YEAR: ATTEND PUBLIC MEETINGS			
Never			
Count		49	47
Col %		49.0%	44.8%
1.00			
Count		4	6
Col %		4.0%	5.7%
2.00			
Count		4	9
Col %		4.0%	8.6%
3.00			
Count		9	13
Col %		9.0%	12.4%
4.00			
Count		8	5
Col %		8.0%	4.8%
5.00			
Count			3
Col %			2.9%
6.00			
Count		5	3
Col %		5.0%	2.9%

(continued)

Table X-49. Political Activities, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
7.00			
Count			1
Col %			1.0%
8.00			
Count			1
Col %			1.0%
10.00			
Count		1	2
Col %		1.0%	1.9%
12.00			
Count		4	1
Col %		4.0%	1.0%
13.00			
Count		1	
Col %		1.0%	
15.00			
Count		2	3
Col %		2.0%	2.9%
20.00			
Count		2	2
Col %		2.0%	1.9%
24.00			
Count		1	2
Col %		1.0%	1.9%
25.00			
Count		1	3
Col %		1.0%	2.9%
30.00			
Count		2	
Col %		2.0%	
35.00			
Count			1
Col %			1.0%
40.00			
Count			1

(continued)

Table X-49. Political Activities, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Col %			1.0%
50.00			
Count		2	
Col %		2.0%	
55.00			
Count		1	
Col %		1.0%	
74.00			
Count		1	
Col %		1.0%	
75.00			
Count		1	
Col %		1.0%	
99.00			
Count		2	2
Col %		2.0%	1.9%
VOTE IN LAST CITY COUNCIL ELECTION?			
No			
Count	47		
Col %	44.3%		
Yes			
Count	59		
Col %	55.7%		
VOTE IN LAST STATE-WIDE ELECTION?			
No			
Count	33	29	23
Col %	31.1%	29.3%	22.8%
Yes			
Count	73	70	78
Col %	68.9%	70.7%	77.2%
BELONG TO NATIVE CORPORATION?			
No Response			
Count	3		
Col %	2.8%		
No			

(continued)

Table X-49. Political Activities, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Count	94	89	97
Col %	87.9%	89.0%	92.4%
Yes			
Count	10	11	8
Col %	9.3%	11.0%	7.6%
REGIONAL NATIVE CORPORATION			
Aleut Corp.			
Count	1		1
Col %	10.0%		12.5%
Doyon, Ltd.			
Count	1	1	
Col %	10.0%	9.1%	
Koniag, Inc.			
Count	8	9	7
Col %	80.0%	81.8%	87.5%
Sealaska Corp.			
Count		1	
Col %		9.1%	
VOTE IN LAST REG. CORP. ELECTION?			
No			
Count	1	1	2
Col %	10.0%	9.1%	25.0%
Yes			
Count	9	10	6
Col %	90.0%	90.9%	75.0%
VILLAGE NATIVE CORPORATION			
No Response			
Count		1	
Col %		10.0%	
Do Not Know			
Count	1		
Col %	10.0%		
None, At Large			
Count	1		
Col %	10.0%		

(continued)

Table X-49. Political Activities, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Afognak Native Corporation			
Count	3	3	1
Col %	30.0%	30.0%	12.5%
Anton Larsen, Incorporated			
Count	1	2	1
Col %	10.0%	20.0%	12.5%
Chaluka Corporation (Nikolski)			
Count	1		
Col %	10.0%		
Old Harbor Native Corporation			
Count		2	
Col %		20.0%	
Ouzinkie Native Corporation			
Count			1
Col %			12.5%
Lesnoi (Woody Is. Village Corp., Kodiak)			
Count	2	1	
Col %	20.0%	10.0%	
Natives of Kodiak			
Count	1	1	4
Col %	10.0%	10.0%	50.0%
Chaluka Corp. (Nikolski)			
Count			1
Col %			12.5%
VOTE IN LAST NATIVE VILLAGE CORP. ELECTION?			
No			
Count	3	1	1
Col %	30.0%	11.1%	12.5%
Yes			
Count	7	8	7
Col %	70.0%	88.9%	87.5%
HAS VIEW OF LEADER CHANGED SINCE EVOS?			
No Response			
Count	2	1	1
Col %	2.0%	1.3%	1.3%

(continued)

Table X-49. Political Activities, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Do Not Know			
Count	10	3	4
Col %	9.9%	4.0%	5.2%
No			
Count	77	60	65
Col %	76.2%	80.0%	84.4%
Yes			
Count	12	11	7
Col %	11.9%	14.7%	9.1%
WHY POST EVOS VIEW OF LEADERS			
No Response			
Count			4
Col %			36.4%
Do Not Know			
Count	2	1	4
Col %	16.7%	8.3%	36.4%
Trust			
Count	5	5	5
Col %	41.7%	41.7%	45.5%
Awareness/involvement			
Count	1	3	2
Col %	8.3%	25.0%	18.2%
Education			
Count		2	
Col %		16.7%	
Represents concerns			
Count		1	1
Col %		8.3%	9.1%
Decisive			
Count	1		
Col %	8.3%		
Sobriety/maturity			
Count	1	1	
Col %	8.3%	8.3%	
Lifestyle			

(continued)

Table X-49. Political Activities, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Count		1	
Col %		8.3%	
Issue specific reasons			
Count	1	1	
Col %	8.3%	8.3%	
Women in leadership roles			
Count	1		
Col %	8.3%		

* Includes Kodiak City, Kodiak Coast Guard Base and Road-connected area.

Table X-50. Significance of Place, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
MAIN REASON MOVED TO COMMUNITY			
No Response			
Count		10	1
Col %		10.0%	1.0%
Born or reared here			
Count	9	12	11
Col %	8.5%	12.0%	10.5%
Relatives (family)			
Count	7	3	13
Col %	6.6%	3.0%	12.4%
Married a person born or reared here			
Count	1		2
Col %	.9%		1.9%
Friends			
Count	1	1	2
Col %	.9%	1.0%	1.9%
Subsistence opportunities			
Count	3	2	3
Col %	2.8%	2.0%	2.9%
Employment reasons			
Count	65	48	52
Col %	61.3%	48.0%	49.5%
Educational opportunities			
Count	2	2	2
Col %	1.9%	2.0%	1.9%
Environmental qualities			
Count		1	
Col %		1.0%	
Personal freedoms (politics)			
Count	1		
Col %	.9%		
Recreational opportunities			
Count	2	2	
Col %	1.9%	2.0%	
Pace of Life			

(continued)

Table X-50. Significance of Place, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Count	1	3	4
Col %	.9%	3.0%	3.8%
Quality of Life			
Count	10	2	5
Col %	9.4%	2.0%	4.8%
Religious Reasons			
Count	2	1	2
Col %	1.9%	1.0%	1.9%
Location			
Count	2	1	
Col %	1.9%	1.0%	
This is where they established their home			
Count		1	
Col %		1.0%	
Transferred by military, employer, or social service agency			
Count		11	8
Col %		11.0%	7.6%
LIVE HERE: WHERE PERSON IS FROM			
No			
Count	97	85	88
Col %	90.7%	85.0%	83.8%
Yes			
Count	10	15	17
Col %	9.3%	15.0%	16.2%
LIVE HERE: RELATIVES LIVE HERE			
No			
Count	79	77	80
Col %	73.8%	77.0%	76.2%
Yes			
Count	28	23	25
Col %	26.2%	23.0%	23.8%
LIVE HERE: MARRIED PERSON FROM HERE			
No			
Count	91	93	97
Col %	85.0%	93.0%	92.4%

(continued)

Table X-50. Significance of Place, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Yes			
Count	16	7	8
Col %	15.0%	7.0%	7.6%
LIVE HERE: ALWAYS LIVED HERE			
No Response			
Count		2	
Col %		2.0%	
No			
Count	97	88	96
Col %	90.7%	88.0%	91.4%
Yes			
Count	10	10	9
Col %	9.3%	10.0%	8.6%
LIVE HERE: FRIENDS LIVE HERE			
No			
Count	53	50	60
Col %	49.5%	50.0%	57.1%
Yes			
Count	54	50	45
Col %	50.5%	50.0%	42.9%
LIVE HERE: HUNTING & FISHING HERE			
No			
Count	29	32	30
Col %	27.1%	32.0%	28.6%
Yes			
Count	78	68	75
Col %	72.9%	68.0%	71.4%
LIVE HERE: JOB OPPORTUNITIES HERE			
No			
Count	24	16	24
Col %	22.4%	16.0%	22.9%
Yes			
Count	83	84	81
Col %	77.6%	84.0%	77.1%
LIVE HERE: EDUCATIONAL OPPORTUNITIES			
No			

(continued)

Table X-50. Significance of Place, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Count	60	65	60
Col %	56.1%	65.0%	57.1%
Yes			
Count	47	35	45
Col %	43.9%	35.0%	42.9%
LIVE HERE: COST OF LIVING			
No			
Count	98	94	96
Col %	91.6%	94.0%	91.4%
Yes			
Count	9	6	9
Col %	8.4%	6.0%	8.6%
LIVE HERE: HOUSING AVAILABLE			
No			
Count	82	78	73
Col %	76.6%	78.0%	69.5%
Yes			
Count	25	22	32
Col %	23.4%	22.0%	30.5%
LIVE HERE: STORES			
No			
Count	89	90	91
Col %	83.2%	90.0%	86.7%
Yes			
Count	18	10	14
Col %	16.8%	10.0%	13.3%
LIVE HERE: MEDICAL SERVICES			
No Response			
Count			1
Col %			1.0%
No			
Count	82	85	84
Col %	76.6%	85.0%	80.0%
Yes			
Count	25	15	20
Col %	23.4%	15.0%	19.0%

(continued)

Table X-50. Significance of Place, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
LIVE HERE: OTHER SERVICES			
No			
Count	80	85	80
Col %	74.8%	85.0%	76.2%
Yes			
Count	27	15	25
Col %	25.2%	15.0%	23.8%
LIVE HERE: BEAUTY OF AREA			
No			
Count	15	17	13
Col %	14.0%	17.0%	12.4%
Yes			
Count	92	83	92
Col %	86.0%	83.0%	87.6%
LIVE HERE: SIZE OF COMMUNITY			
No Response			
Count	1		
Col %	.9%		
No			
Count	27	26	18
Col %	25.2%	26.0%	17.1%
Yes			
Count	79	74	87
Col %	73.8%	74.0%	82.9%
LIVE HERE: LESS CRIME			
No			
Count	48	40	36
Col %	44.9%	40.0%	34.3%
Yes			
Count	59	60	69
Col %	55.1%	60.0%	65.7%
LIVE HERE: LESS DRINKING/DRUGS			
No			
Count	91	92	86
Col %	85.0%	92.0%	81.9%
Yes			

(continued)

Table X-50. Significance of Place, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Count	16	8	19
Col %	15.0%	8.0%	18.1%
LIVE HERE: NECESSARY PERSONAL FREEDOMS			
No			
Count	29	33	26
Col %	27.1%	33.0%	24.8%
Yes			
Count	78	67	79
Col %	72.9%	67.0%	75.2%
LIVE HERE: RECREATIONAL OPPORTUNITIES			
No			
Count	22	31	27
Col %	20.6%	31.0%	25.7%
Yes			
Count	85	69	78
Col %	79.4%	69.0%	74.3%
OTHER REASONS FOR LIVING IN COMMUNITY			
Pace of Life			
Count	6	5	6
Col %	19.4%	14.7%	21.4%
Quality of Life			
Count	11	17	11
Col %	35.5%	50.0%	39.3%
Cultural Reasons			
Count	3		2
Col %	9.7%		7.1%
Religious Reasons			
Count	1	2	1
Col %	3.2%	5.9%	3.6%
Location			
Count	1		4
Col %	3.2%		14.3%
Not here by choice			
Count	6	4	
Col %	19.4%	11.8%	

(continued)

Table X-50. Significance of Place, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Climate			
Count	6	2	4
Col %	19.4%	5.9%	14.3%
Opportunity to be involved and make a difference			
Count		1	
Col %		2.9%	
This is where they established their home			
Count		5	2
Col %		14.7%	7.1%
Transferred by military, employer, or social service agency			
Count		1	1
Col %		2.9%	3.6%
Retirement opportunities			
Count			1
Col %			3.6%
MAIN REASON REMAINING IN COMMUNITY			
No Response			
Count	3		3
Col %	2.8%		2.9%
Do Not Know			
Count		1	
Col %		1.0%	
Born or reared here			
Count	2	1	4
Col %	1.9%	1.0%	3.8%
Relatives (family)			
Count	8	4	6
Col %	7.5%	4.0%	5.7%
Family has always lived here			
Count	1	1	
Col %	.9%	1.0%	
Friends			
Count	6	4	2
Col %	5.6%	4.0%	1.9%

(continued)

Table X-50. Significance of Place, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Subsistence opportunities			
Count	3	10	6
Col %	2.8%	10.0%	5.7%
Employment reasons			
Count	43	41	38
Col %	40.2%	41.0%	36.2%
Educational opportunities			
Count	2	1	1
Col %	1.9%	1.0%	1.0%
Economic reasons			
Count	1		2
Col %	.9%		1.9%
Housing/property			
Count			3
Col %			2.9%
Medical Services			
Count	2		2
Col %	1.9%		1.9%
Environmental qualities			
Count	6	7	6
Col %	5.6%	7.0%	5.7%
Size of the community			
Count	3	1	3
Col %	2.8%	1.0%	2.9%
Crime levels			
Count	1	2	2
Col %	.9%	2.0%	1.9%
Personal freedoms (politics)			
Count	4	4	
Col %	3.7%	4.0%	
Recreational opportunities			
Count	3	3	3
Col %	2.8%	3.0%	2.9%
Pace of Life			
Count		3	6

(continued)

Table X-50. Significance of Place, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Col %		3.0%	5.7%
Quality of Life			
Count	15	7	10
Col %	14.0%	7.0%	9.5%
Cultural Reasons			
Count		1	
Col %		1.0%	
Religious Reasons			
Count	1	2	1
Col %	.9%	2.0%	1.0%
Location			
Count			1
Col %			1.0%
Not here by choice			
Count	3	2	
Col %	2.8%	2.0%	
Opportunity to be involved and make a difference			
Count		1	
Col %		1.0%	
This is where they established their home			
Count		2	6
Col %		2.0%	5.7%
Transferred by military, employer, or social service agency			
Count		2	
Col %		2.0%	
POST-EVOS: CHANGE IN LIKING COMMUNITY			
No Response			
Count			1
Col %			1.3%
Do Not Know			
Count		1	
Col %		1.4%	
Less			

(continued)

	STUDY YEAR		
	1991*	1992	1993
Count	11	6	10
Col %	11.6%	8.5%	13.2%
Same			
Count	76	61	63
Col %	80.0%	85.9%	82.9%
More			
Count	8	3	2
Col %	8.4%	4.2%	2.6%
POST-EVOS: WHY CHANGE IN LIKING COMMUNITY			
No Response			
Count	2		1
Col %	10.0%		7.1%
Non-specific			
Count	3		2
Col %	15.0%		14.3%
Oil contamination/fear of oil contamination			
Count	2		
Col %	10.0%		
Increased government bureaucracy			
Count		1	
Col %		11.1%	
More stressful			
Count	1	1	3
Col %	5.0%	11.1%	21.4%
Financial situation worse			
Count	1	1	3
Col %	5.0%	11.1%	21.4%
Lived here too long			
Count	1		
Col %	5.0%		
Future of environment uncertain			
Count	1		1
Col %	5.0%		7.1%

(continued)

Table X-50. Significance of Place, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Too many people			
Count		2	3
Col %		22.2%	21.4%
Other reasons			
Count	3		
Col %	15.0%		
Improved financial situation			
Count	2		1
Col %	10.0%		7.1%
Lived here longer			
Count		1	
Col %		11.1%	
Better quality of people			
Count	1		
Col %	5.0%		
Increased appreciation of surroundings			
Count	2	2	
Col %	10.0%	22.2%	
Improved community cohesiveness			
Count	1		
Col %	5.0%		
Increased disillusionment with government agencies			
Count		1	
Col %		11.1%	
RATHER LIVE IN ANOTHER COMMUNITY			
No Response			
Count			1
Col %			1.0%
Do Not Know			
Count	7	10	11
Col %	6.5%	10.0%	10.5%
No			
Count	60	62	55
Col %	56.1%	62.0%	52.4%

(continued)

Table X-50. Significance of Place, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Yes			
Count	40	28	38
Col %	37.4%	28.0%	36.2%
EXPECT TO LIVE IN REGION WHEN OLD			
No Response			
Count			1
Col %			1.0%
Do Not Know			
Count	7	17	18
Col %	6.5%	17.0%	17.1%
No			
Count	50	33	39
Col %	46.7%	33.0%	37.1%
Yes			
Count	50	50	47
Col %	46.7%	50.0%	44.8%
CONFIDENT ABOUT HUNT/FISH/GATHERING			
Do Not Know			
Count	5	12	3
Col %	4.7%	12.0%	2.9%
No			
Count	45	47	63
Col %	42.1%	47.0%	60.0%
Yes			
Count	57	41	39
Col %	53.3%	41.0%	37.1%
WHY UNCONFIDENT ABOUT HUNTING/FISHING/GATHERING			
No Response			
Count	2	2	1
Col %	4.4%	3.8%	1.6%
Increased restrictions			
Count	15	25	19
Col %	33.3%	48.1%	30.2%
Uncertainty about the future			
Count	3	2	1

(continued)

Table X-50. Significance of Place, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Col %	6.7%	3.8%	1.6%
Increased development			
Count	5	4	7
Col %	11.1%	7.7%	11.1%
Timber and logging			
Count	2	7	1
Col %	4.4%	13.5%	1.6%
Uncertainty about food safety			
Count		1	
Col %		1.9%	
Environmental, animal rights, anti-gun interests			
Count	2	1	1
Col %	4.4%	1.9%	1.6%
Native ownership of lands			
Count	6	3	25
Col %	13.3%	5.8%	39.7%
Population pressure			
Count	9	16	27
Col %	20.0%	30.8%	42.9%
Vulnerable to environmental damage			
Count	7	11	2
Col %	15.6%	21.2%	3.2%
Miscellaneous reasons			
Count	2	2	1
Col %	4.4%	3.8%	1.6%
Reduced resource availability			
Count		3	
Col %		5.8%	
Poor resource management			
Count		1	1
Col %		1.9%	1.6%
Non-Native private ownership access restriction			
Count			1

(continued)

Table X-50. Significance of Place, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Col %			1.6%
CONTINUE TO LIVE HERE IF NO WILD FOOD			
Do Not Know			
Count	5	13	14
Col %	4.7%	13.0%	13.3%
No			
Count	35	31	40
Col %	32.7%	31.0%	38.1%
Yes			
Count	67	56	51
Col %	62.6%	56.0%	48.6%

* Includes Kodiak City, Kodiak Coast Guard Base and Road-connected area.

Table X-51. Effectiveness of Oil Spill Responses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
EFFECTIVENESS EVOS: US COAST GUARD			
No Response			
Count	1	2	4
Col %	1.0%	2.4%	5.0%
Do Not Know			
Count	14	22	13
Col %	13.5%	25.9%	16.3%
Not Effective			
Count	14	11	6
Col %	13.5%	12.9%	7.5%
Somewhat			
Count	29	21	24
Col %	27.9%	24.7%	30.0%
Effective			
Count	46	29	33
Col %	44.2%	34.1%	41.3%
EFFECTIVENESS EVOS: ADEC			
No Response			
Count	1		3
Col %	1.0%		3.8%
Do Not Know			
Count	30	41	35
Col %	28.8%	48.2%	44.3%
Not Effective			
Count	15	13	9
Col %	14.4%	15.3%	11.4%
Somewhat			
Count	30	17	16
Col %	28.8%	20.0%	20.3%
Effective			
Count	28	14	16
Col %	26.9%	16.5%	20.3%
EFFECTIVENESS EVOS: INSURANCE COMPANIES			
No Response			
Count	13		
Col %	14.6%		

(continued)

Table X-51. Effectiveness of Oil Spill Responses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Do Not Know			
Count	44		
Col %	49.4%		
Not Effective			
Count	12		
Col %	13.5%		
Somewhat			
Count	9		
Col %	10.1%		
Effective			
Count	11		
Col %	12.4%		
EFFECTIVENESS EVOS: LOCAL NATIVE PROFIT			
No Response			
Count	1		4
Col %	1.0%		5.1%
Do Not Know			
Count	64	54	53
Col %	62.1%	65.1%	67.9%
Not Effective			
Count	14	8	6
Col %	13.6%	9.6%	7.7%
Somewhat			
Count	10	8	7
Col %	9.7%	9.6%	9.0%
Effective			
Count	14	13	8
Col %	13.6%	15.7%	10.3%
EFFECTIVENESS EVOS: NATIVE NON-PROFITS			
No Response			
Count	2		4
Col %	1.9%		5.1%
Do Not Know			
Count	58	55	53
Col %	55.8%	65.5%	67.9%

(continued)

Table X-51. Effectiveness of Oil Spill Responses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Not Effective			
Count	17	9	6
Col %	16.3%	10.7%	7.7%
Somewhat			
Count	13	8	6
Col %	12.5%	9.5%	7.7%
Effective			
Count	14	12	9
Col %	13.5%	14.3%	11.5%
EFFECTIVENESS EVOS: BOROUGH GOVERNMENT			
No Response			
Count	2		5
Col %	1.9%		6.4%
Do Not Know			
Count	28	32	24
Col %	26.9%	37.6%	30.8%
Not Effective			
Count	13	12	11
Col %	12.5%	14.1%	14.1%
Somewhat			
Count	29	26	18
Col %	27.9%	30.6%	23.1%
Effective			
Count	32	15	20
Col %	30.8%	17.6%	25.6%
EFFECTIVENESS EVOS: VILLAGE CORPORATION			
No Response			
Count	1		4
Col %	1.0%		5.1%
Do Not Know			
Count	55	53	47
Col %	53.9%	64.6%	60.3%
Not Effective			
Count	14	9	8
Col %	13.7%	11.0%	10.3%

(continued)

Table X-51. Effectiveness of Oil Spill Responses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Somewhat			
Count	11	8	10
Col %	10.8%	9.8%	12.8%
Effective			
Count	21	12	9
Col %	20.6%	14.6%	11.5%
EFFECTIVENESS EVOS: CITY COUNCIL			
No Response			
Count	1		5
Col %	1.0%		6.4%
Do Not Know			
Count	34	39	29
Col %	33.0%	45.9%	37.2%
Not Effective			
Count	15	16	9
Col %	14.6%	18.8%	11.5%
Somewhat			
Count	27	17	18
Col %	26.2%	20.0%	23.1%
Effective			
Count	26	13	17
Col %	25.2%	15.3%	21.8%
EFFECTIVENESS EVOS: IRA COUNCIL			
No Response			
Count	1		4
Col %	1.3%		6.5%
Do Not Know			
Count	51	68	51
Col %	68.0%	84.0%	82.3%
Not Effective			
Count	11	8	4
Col %	14.7%	9.9%	6.5%
Somewhat			
Count	5	4	3
Col %	6.7%	4.9%	4.8%

(continued)

Table X-51. Effectiveness of Oil Spill Responses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Effective			
Count	7	1	
Col %	9.3%	1.2%	
EFFECTIVENESS EVOS: CHAMBER OF COMMERCE			
No Response			
Count	1		5
Col %	1.0%		6.4%
Do Not Know			
Count	53	55	40
Col %	51.5%	65.5%	51.3%
Not Effective			
Count	15	8	10
Col %	14.6%	9.5%	12.8%
Somewhat			
Count	19	11	15
Col %	18.4%	13.1%	19.2%
Effective			
Count	15	10	8
Col %	14.6%	11.9%	10.3%
EFFECTIVENESS EVOS: COMMERCIAL BUSINESSES			
No Response			
Count	1		4
Col %	1.0%		5.1%
Do Not Know			
Count	27	37	31
Col %	26.2%	44.0%	39.7%
Not Effective			
Count	16	15	11
Col %	15.5%	17.9%	14.1%
Somewhat			
Count	29	15	15
Col %	28.2%	17.9%	19.2%
Effective			
Count	30	17	17
Col %	29.1%	20.2%	21.8%

(continued)

Table X-51. Effectiveness of Oil Spill Responses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
EFFECTIVENESS EVOS: COMMERCIAL FISHING GROUPS			
No Response			
Count	1		5
Col %	1.0%		6.4%
Do Not Know			
Count	18	20	22
Col %	17.3%	23.5%	28.2%
Not Effective			
Count	13	8	2
Col %	12.5%	9.4%	2.6%
Somewhat			
Count	26	19	20
Col %	25.0%	22.4%	25.6%
Effective			
Count	46	38	29
Col %	44.2%	44.7%	37.2%
EFFECTIVENESS EVOS: OTHER BUSINESS GROUPS			
No Response			
Count	3		
Col %	7.3%		
Do Not Know			
Count	16		
Col %	39.0%		
Not Effective			
Count	2		
Col %	4.9%		
Somewhat			
Count	10		
Col %	24.4%		
Effective			
Count	10		
Col %	24.4%		
EFFECTIVENESS EVOS: SCHOOLS			
No Response			

(continued)

Table X-51. Effectiveness of Oil Spill Responses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Count	1		
Col %	1.0%		
Do Not Know			
Count	39		
Col %	38.2%		
Not Effective			
Count	16		
Col %	15.7%		
Somewhat			
Count	19		
Col %	18.6%		
Effective			
Count	27		
Col %	26.5%		
EFFECTIVENESS EVOS: CHURCHES			
No Response			
Count	1		
Col %	1.0%		
Do Not Know			
Count	48		
Col %	47.1%		
Not Effective			
Count	17		
Col %	16.7%		
Somewhat			
Count	15		
Col %	14.7%		
Effective			
Count	21		
Col %	20.6%		
EFFECTIVENESS EVOS: HEALTH SERVICES			
No Response			
Count			4
Col %			5.1%
Do Not Know			

(continued)

Table X-51. Effectiveness of Oil Spill Responses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Count		45	43
Col %		52.9%	55.1%
Not Effective			
Count		6	3
Col %		7.1%	3.8%
Somewhat			
Count		10	13
Col %		11.8%	16.7%
Effective			
Count		24	15
Col %		28.2%	19.2%
EFFECTIVENESS EVOS: MEDICAL PROFESSION			
No Response			
Count	1		
Col %	1.0%		
Do Not Know			
Count	43		
Col %	41.7%		
Not Effective			
Count	19		
Col %	18.4%		
Somewhat			
Count	15		
Col %	14.6%		
Effective			
Count	25		
Col %	24.3%		
EFFECTIVENESS EVOS: HEALTH AIDES			
No Response			
Count	11		
Col %	11.7%		
Do Not Know			
Count	48		
Col %	51.1%		
Not Effective			

(continued)

Table X-51. Effectiveness of Oil Spill Responses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Count	14		
Col %	14.9%		
Somewhat			
Count	6		
Col %	6.4%		
Effective			
Count	15		
Col %	16.0%		
EFFECTIVENESS EVOS: SOCIAL WORKERS			
No Response			
Count	1		4
Col %	1.0%		5.1%
Do Not Know			
Count	55	58	56
Col %	52.9%	69.0%	71.8%
Not Effective			
Count	10	4	
Col %	9.6%	4.8%	
Somewhat			
Count	21	6	4
Col %	20.2%	7.1%	5.1%
Effective			
Count	17	16	14
Col %	16.3%	19.0%	17.9%
EFFECTIVENESS EVOS: LOCAL LAW ENFORCEMENT			
No Response			
Count	1		4
Col %	1.0%		5.2%
Do Not Know			
Count	41	50	37
Col %	39.8%	58.8%	48.1%
Not Effective			
Count	11	6	5
Col %	10.7%	7.1%	6.5%

(continued)

Table X-51. Effectiveness of Oil Spill Responses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Somewhat			
Count	26	9	14
Col %	25.2%	10.6%	18.2%
Effective			
Count	24	20	17
Col %	23.3%	23.5%	22.1%
EFFECTIVENESS EVOS: STATE LAW ENFORCEMENT			
No Response			
Count	1		4
Col %	1.0%		5.2%
Do Not Know			
Count	41	50	38
Col %	39.8%	58.8%	49.4%
Not Effective			
Count	10	9	6
Col %	9.7%	10.6%	7.8%
Somewhat			
Count	24	7	10
Col %	23.3%	8.2%	13.0%
Effective			
Count	27	19	19
Col %	26.2%	22.4%	24.7%
EFFECTIVENESS EVOS: EXXON			
No Response			
Count	1		4
Col %	1.0%		5.0%
Do Not Know			
Count	16	17	13
Col %	15.4%	20.0%	16.3%
Not Effective			
Count	39	40	25
Col %	37.5%	47.1%	31.3%
Somewhat			
Count	32	18	24
Col %	30.8%	21.2%	30.0%

(continued)

Table X-51. Effectiveness of Oil Spill Responses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Effective			
Count	16	10	14
Col %	15.4%	11.8%	17.5%
EFFECTIVENESS EVOS: VECO			
No Response			
Count	1		4
Col %	1.0%		5.1%
Do Not Know			
Count	18	20	13
Col %	17.3%	23.5%	16.5%
Not Effective			
Count	28	25	17
Col %	26.9%	29.4%	21.5%
Somewhat			
Count	34	23	24
Col %	32.7%	27.1%	30.4%
Effective			
Count	23	17	21
Col %	22.1%	20.0%	26.6%
EFFECTIVENESS EVOS: ALYESKA PIPELINE			
No Response			
Count	1		5
Col %	1.0%		6.3%
Do Not Know			
Count	49	46	47
Col %	47.6%	54.1%	58.8%
Not Effective			
Count	29	27	15
Col %	28.2%	31.8%	18.8%
Somewhat			
Count	15	7	9
Col %	14.6%	8.2%	11.3%
Effective			
Count	9	5	4
Col %	8.7%	5.9%	5.0%

(continued)

Table X-51. Effectiveness of Oil Spill Responses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
EFFECTIVENESS EVOS: VOLUNTEER CLEAN-UP GROUPS			
Somewhat			
Count	1	2	
Col %	25.0%	50.0%	
Effective			
Count	3	2	1
Col %	75.0%	50.0%	100.0%
EFFECTIVENESS EVOS: FAMILY SUPPORT GROUPS			
Not Effective			
Count	1		
Col %	50.0%		
Effective			
Count	1		
Col %	50.0%		
EFFECTIVENESS EVOS: ANIMAL RESCUE GROUPS			
Effective			
Count		1	
EFFECTIVENESS EVOS: GENERAL ENVIRONMENTAL GROUPS			
Somewhat			
Col %		100.0%	
Effective			
Col %			100.0%
EFFECTIVENESS EVOS: MEDIA INFORMATION GROUPS			
Not Effective			
Count	1		
Col %	100.0%		
EFFECTIVENESS EVOS: PWS REGIONAL CITIZENS ADVISORY COUNCIL			
Not Effective			
Count			1
Col %			50.0%
Effective			
Count		1	1

(continued)

Table X-51. Effectiveness of Oil Spill Responses, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Col %		100.0%	50.0%
EFFECTIVENESS EVOS: FEDERALLY MANDATED SPILL RESPONSE GROUPS			
Do Not Know			
Count		1	
Col %		100.0%	
Somewhat			
Count	1		
Col %	33.3%		
Effective			
Count	2		
Col %	66.7%		
EFFECTIVENESS EVOS: OTHER UNIDENTIFIED GROUPS			
Effective			
Count	1	2	
Col %	100.0%	100.0%	
EFFECTIVENESS EVOS: OILED MAYORS			
No Response			
Count			4
Col %			5.1%
Do Not Know			
Count	29	42	33
Col %	46.8%	50.0%	41.8%
Not Effective			
Count	7	13	8
Col %	11.3%	15.5%	10.1%
Somewhat			
Count	11	16	21
Col %	17.7%	19.0%	26.6%
Effective			
Count	15	13	13
Col %	24.2%	15.5%	16.5%

* Includes Kodiak City, Kodiak Coast Guard Base and Road-connected area.

Table X-52. Subsistence Food Safety Information, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
ADEQUATELY INFORMED ABOUT FOOD SAFETY?			
No Response			
Count			1
Col %			1.2%
Do Not Know			
Count	3	8	7
Col %	3.0%	10.1%	8.5%
No			
Count	29	23	23
Col %	29.0%	29.1%	28.0%
Somewhat			
Count	14	9	10
Col %	14.0%	11.4%	12.2%
Yes			
Count	54	39	41
Col %	54.0%	49.4%	50.0%
WHY NOT ADEQUATELY INFORMED			
No Response			
Count	16	6	9
Col %	37.2%	17.1%	25.0%
Lack of clear or definitive advice			
Count	7	7	4
Col %	16.3%	20.0%	11.1%
Received incomplete information			
Count	5	11	6
Col %	11.6%	31.4%	16.7%
Received no information			
Count	10	10	8
Col %	23.3%	28.6%	22.2%
Did not trust or believe advice			
Count	7	4	5
Col %	16.3%	11.4%	13.9%
Untimely			
Count	1		
Col %	2.3%		

(continued)

Table X-52. Subsistence Food Safety Information, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Communities were inadequately consulted			
Count	1		
Col %	2.3%		
Personal observations contradicted advice or findings			
Count		3	1
Col %		8.6%	2.8%
Believe information was deliberately withheld			
Count	1	4	1
Col %	2.3%	11.4%	2.8%
There were not enough tests			
Count	1	5	2
Col %	2.3%	14.3%	5.6%
Information was too difficult to understand			
Count		1	
Col %		2.9%	
Personal responsibility to keep informed			
Count			1
Col %			2.8%
Decided themselves not to eat resource out of fear			
Count			3
Col %			8.3%

* Includes Kodiak City, Kodiak Coast Guard Base and Road-connected area.

Table X-53. OCS Development Effects, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
OCS EFFECT: FISH			
Do Not Know			
Count	10	9	21
Col %	9.3%	9.0%	20.0%
Decrease			
Count	50	41	43
Col %	46.7%	41.0%	41.0%
No Change			
Count	45	46	35
Col %	42.1%	46.0%	33.3%
Increase			
Count	2	4	6
Col %	1.9%	4.0%	5.7%
OCS EFFECT: SHELLFISH			
Do Not Know			
Count	10	11	21
Col %	9.3%	11.0%	20.0%
Decrease			
Count	53	44	43
Col %	49.5%	44.0%	41.0%
No Change			
Count	42	43	40
Col %	39.3%	43.0%	38.1%
Increase			
Count	2	2	1
Col %	1.9%	2.0%	1.0%
OCS EFFECT: MARINE MAMMALS			
Do Not Know			
Count	9	15	20
Col %	8.4%	15.0%	19.0%
Decrease			
Count	53	41	47
Col %	49.5%	41.0%	44.8%
No Change			
Count	45	39	38
Col %	42.1%	39.0%	36.2%

(continued)

Table X-53. OCS Development Effects, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Increase			
Count		5	
Col %		5.0%	
OCS EFFECT: LAND MAMMALS			
No Response			
Count			1
Col %			1.0%
Do Not Know			
Count	8	11	17
Col %	7.5%	11.0%	16.2%
Decrease			
Count	29	28	32
Col %	27.1%	28.0%	30.5%
No Change			
Count	70	60	55
Col %	65.4%	60.0%	52.4%
Increase			
Count		1	
Col %		1.0%	
OCS EFFECT: BIRDS			
Do Not Know			
Count	9	12	21
Col %	8.4%	12.0%	20.0%
Decrease			
Count	45	34	39
Col %	42.1%	34.0%	37.1%
No Change			
Count	53	51	44
Col %	49.5%	51.0%	41.9%
Increase			
Count		3	1
Col %		3.0%	1.0%
OCS DEVELOPMENT = MORE JOBS?			
No Response			
Count	1		
Col %	.9%		

(continued)

Table X-53. OCS Development Effects, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Do Not Know			
Count	3	11	14
Col %	2.8%	11.0%	13.3%
No			
Count	32	25	38
Col %	29.9%	25.0%	36.2%
Yes			
Count	71	64	53
Col %	66.4%	64.0%	50.5%
CONTAIN AND CLEANUP SMALL OIL SPILL			
Do Not Know			
Count	4	15	19
Col %	3.7%	15.0%	18.1%
No			
Count	34	38	38
Col %	31.8%	38.0%	36.2%
Maybe			
Count	24	47	48
Col %	22.4%	47.0%	45.7%
Yes			
Count	45		
Col %	42.1%		
CONTAIN AND CLEANUP LARGE OIL SPILL			
Do Not Know			
Count	4	20	24
Col %	3.7%	20.0%	22.9%
No			
Count	67	65	68
Col %	62.6%	65.0%	64.8%
Maybe			
Count	23	15	13
Col %	21.5%	15.0%	12.4%
Yes			
Count	13		
Col %	12.1%		

(continued)

Table X-53. OCS Development Effects, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
ARE YOU IN FAVOR OF THE SEARCH FOR OIL?			
No Response			
Count		2	
Col %		2.0%	
Do Not Know			
Count		12	8
Col %		12.0%	7.6%
No			
Count		33	35
Col %		33.0%	33.3%
Yes			
Count		53	62
Col %		53.0%	59.0%
OPINION ON SEARCH FOR OIL			
No Response			
Count		7	6
Col %		7.0%	5.7%
Do Not Know			
Count		6	6
Col %		6.0%	5.7%
Reduce dependency on foreign oil/enhance national security			
Count		6	7
Col %		6.0%	6.7%
Create more jobs in the community			
Count		10	12
Col %		10.0%	11.4%
We can live in balance with the environment			
Count		11	10
Col %		11.0%	9.5%
Increase state revenues			
Count		1	11
Col %		1.0%	10.5%
Energy needed			
Count		15	10

(continued)

Table X-53. OCS Development Effects, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Col %		15.0%	9.5%
Need to know extent of resource availability and reserves			
Count		6	17
Col %		6.0%	16.2%
Conditions: in favor when necessary			
Count		1	1
Col %		1.0%	1.0%
Generalized: good for everyone			
Count		1	1
Col %		1.0%	1.0%
Beneficial to the economy			
Count		10	17
Col %		10.0%	16.2%
Because it is there			
Count			1
Col %			1.0%
Conditional upon technological advancement			
Count		3	2
Col %		3.0%	1.9%
Not making sufficient use of current resources			
Count		2	4
Col %		2.0%	3.8%
Environmental conditions (non-pollution/non-biological)			
Count		4	2
Col %		4.0%	1.9%
Pollution concerns and impacts			
Count		19	15
Col %		19.0%	14.3%
Aesthetic reasons			
Count		1	3
Col %		1.0%	2.9%

(continued)

Table X-53. OCS Development Effects, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
In favor of on-shore development instead of off-shore			
Count		2	
Col %		2.0%	
Status quo - leave it the way it is			
Count		2	3
Col %		2.0%	2.9%
Should explore alternative energy sources, conservation			
Count		4	6
Col %		4.0%	5.7%
Adverse impact on subsistence and commercial fishing			
Count		12	6
Col %		12.0%	5.7%
Biological (non-pollution) - migration patterns			
Count		1	3
Col %		1.0%	2.9%
Distrust of the oil industry			
Count		2	1
Col %		2.0%	1.0%
Potential damage to renewable resources			
Count		2	1
Col %		2.0%	1.0%
Against any development			
Count		1	1
Col %		1.0%	1.0%
No benefit to local economy			
Count			1
Col %			1.0%
Disastrous - multi-faceted			
Count		2	
Col %		2.0%	
Uncertainties with development			
Count		4	

(continued)

Table X-53. OCS Development Effects, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Col %		4.0%	
Fatalistic - no choice in matter			
Count		1	1
Col %		1.0%	1.0%
Not economically feasible to search/develop off-shore			
Count		2	
Col %		2.0%	
Technology needs improvement			
Count		4	2
Col %		4.0%	1.9%
Do not think there is oil in the area			
Count			1
Col %			1.0%
Unspecified ecological impacts			
Count			11
Col %			10.5%
ARE YOU IN FAVOR OF THE DEVELOPMENT AND PRODUCTION OF OIL?			
No Response			
Count		3	
Col %		3.0%	
Do Not Know			
Count		14	12
Col %		14.0%	11.4%
No			
Count		44	44
Col %		44.0%	41.9%
Yes			
Count		39	49
Col %		39.0%	46.7%
OPINION ON DEVELOPMENT AND PRODUCTION			
No Response			
Count		5	4
Col %		5.0%	3.8%

(continued)

Table X-53. OCS Development Effects, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Do Not Know			
Count		9	7
Col %		9.0%	6.7%
Reduce dependency on foreign oil/enhance national security			
Count		4	6
Col %		4.0%	5.7%
Create more jobs in the community			
Count		11	12
Col %		11.0%	11.4%
We can live in balance with the environment			
Count		6	13
Col %		6.0%	12.4%
Increase state revenues			
Count		3	11
Col %		3.0%	10.5%
Energy needed			
Count		11	8
Col %		11.0%	7.6%
Need to know extent of resource availability and reserves			
Count			2
Col %			1.9%
Conditions: in favor when necessary			
Count		4	2
Col %		4.0%	1.9%
Generalized: good for everyone			
Count			1
Col %			1.0%
Beneficial to the economy			
Count		12	16
Col %		12.0%	15.2%
Conditional: if approved by local government			
Count		1	

(continued)

Table X-53. OCS Development Effects, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Col %		1.0%	
Because it is there			
Count			1
Col %			1.0%
Conditional upon technological advancement			
Count		2	3
Col %		2.0%	2.9%
Not making sufficient use of current resources			
Count		1	6
Col %		1.0%	5.7%
Environmental conditions (non-pollution/non-biological)			
Count		2	4
Col %		2.0%	3.8%
Pollution concerns and impacts			
Count		26	21
Col %		26.0%	20.0%
Aesthetic reasons			
Count		2	2
Col %		2.0%	1.9%
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	3
Col %		1.0%	2.9%
Should explore alternative energy sources, conservation			
Count		6	7
Col %		6.0%	6.7%
Adverse impact on subsistence and commercial fishing			
Count		14	12

(continued)

Table X-53. OCS Development Effects, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Col %		14.0%	11.4%
Biological (non-pollution) - migration patterns			
Count		2	3
Col %		2.0%	2.9%
Reduced national security concerns about domestic production			
Count			1
Col %			1.0%
Distrust of the oil industry			
Count		1	1
Col %		1.0%	1.0%
Potential damage to renewable resources			
Count		3	1
Col %		3.0%	1.0%
Against any development			
Count		1	1
Col %		1.0%	1.0%
No benefit to local economy			
Count		1	1
Col %		1.0%	1.0%
Disastrous - multi-faceted			
Count		3	
Col %		3.0%	
Uncertainties with development			
Count		2	
Col %		2.0%	
Fatalistic - no choice in matter			
Count			1
Col %			1.0%
Not enough research on impacts			
Count		1	1
Col %		1.0%	1.0%
Not economically feasible to search/develop off-shore			

(continued)

Table X-53. OCS Development Effects, Kodiak City

	STUDY YEAR		
	1991*	1992	1993
Count		1	
Col %		1.0%	
Technology needs improvement			
Count		7	3
Col %		7.0%	2.9%
Against population increases			
Count		2	
Col %		2.0%	
Unspecified ecological impacts			
Count			14
Col %			13.3%

* Includes Kodiak City, Kodiak Coast Guard Base and Road-connected area.

CHAPTER XI: OLD HARBOR

by

Craig Mishler

CLIMATE, SETTING, AND GENERAL HISTORY

The name Old Harbor is derived from the early Russian settlement days when the community founded at Three Saints Bay in 1794 was moved to Kodiak, which became the New Harbor for Russian ships. Old Harbor, known in Alutiiq as *Nunyuq*, is located in well-protected waters at the narrows of Sitkalidak Strait, on the treeless southeast end of Kodiak Island at the foot of some spectacular glaciated mountain peaks (Fig. I-1). Old Harbor enjoys a fairly mild climate with less rain than other parts of the island, and its protected location inside Sitkalidak Strait, it is also less windy than some other Kodiak communities.

At least half of the residents are descended from a mixture of Alutiiq and Scandinavian ancestry (Befu 1970:38; Mishler 1993), and today these are the families most heavily involved in commercial fishing. Almost everyone in the community with the exception of the school teachers is a member of the Russian Orthodox Church, and a resident priest is stationed there year-round.

Old Harbor was destroyed by the March 27, 1964, Great Alaskan Earthquake and accompanying tsunami, which forced residents to evacuate to Anchorage for several months until conditions were safe for rebuilding. Only the Russian Orthodox Church survived the tsunami without extensive damage, and local residents took this as a symbolic and prophetic event (Davis 1970).

After the earthquake, Old Harbor absorbed at least two large families from the destroyed village of Kaguyak. Since the earthquake, the population of Old Harbor has grown rapidly and expanded into three distinct neighborhoods -- downtown (the original townsite), midtown, and upper, or new, town. Midtown and new town were built through Housing and Urban Development (HUD) grants between 1979 and 1985, and a road system connects them with the older downtown area. A population history for Old Harbor, based on the U.S. Census, is presented in Figure XI-1.

Today, Old Harbor has a small boat harbor that accommodates about 50 vessels, mostly salmon purse seiners, as well as a large dock which can accommodate one or two larger vessels. There is a clinic, a grade school and high school, two grocery stores, and a locally owned lodge and cafe that serve as a community social center. A new airport with a longer runway, near midtown, was completed in 1993.

PREVIOUS RESEARCH

Information about subsistence uses in Old Harbor in the years before the *Exxon Valdez* oil spill is available from two research efforts collaboratively undertaken by the Division of Subsistence and the

Kodiak Area Native Association (KANA) for 1982/83 (KANA 1983, Schroeder et al. 1987) and 1986 (Fall and Walker 1993). In 1990, the division conducted research in Old Harbor and 14 other Alaska Native communities about subsistence uses during the year of the spill (Fall 1991b; Mishler and Cohen forthcoming).

FIELDWORK AND SAMPLE SIZE

Old Harbor was only included in the first year of the study. Both the harvest survey and the social effects questionnaire were administered. The study year was April 1, 1991, through March 31, 1992. The questionnaire was verbally administered to the heads of 42 randomly selected households. The goal was to interview a random sample of 50 percent of the permanent households. In total, 42 households were interviewed, for a sample of 63.6 percent (Table XI-1). The average length of the harvest survey interviews was 1.09 hours (65 minutes) (Table I-7; Fig. I-2). On average, the social effects questionnaires took an additional 0.84 hours (50 minutes) to complete (Table I-8).

Community approval was solicited and obtained from the president of the tribal council and the mayor on March 13, 1992. The research team arrived in Old Harbor on April 6. Interviews began on April 7 and concluded on April 18, 1992. The field crew consisted of Craig Mishler, Jeff Barnhart, and Rachel Mason from the Alaska Department of Fish and Game, Don Callaway of the U.S. Minerals Management Service, and David Pestrikoff, a local research assistant from Kodiak. George Inga, Sr., a local research assistant and Alutiiq language translator who lives in Old Harbor updated household lists and provided logistical support for the project.

DEMOGRAPHY

The 1990 U.S. Census reported the population of Old Harbor as 284 persons, down 16.5 percent from the 340 persons counted in the 1980 census (Fig. XI-1). Our own estimate, based on the number of permanent households and occupied units, showed that Old Harbor had about 217 permanent residents living there in April 1992 (Table XI-2). This estimate was reached by computing the mean number of residents in the 42 sampled households (3.29) and multiplying this mean by the estimated community total of 66 households. Old Harbor's population has diminished by 40 percent in the decade since the initial household survey for the year 1982/83. The estimate at that time was 94 households with a population of 356 (Scott et al. 1993).

In the study year, the overall Old Harbor population was 49.3 percent male and 50.7 percent female (Table XI-3, Fig. XI-2). The population was relatively young, with 75.4 percent under the age of 40, 34.8 percent under the age of 15, and only 11.1 percent 60 years of age or older. The mean age was 26.6 years. Approximately 88.1 percent of all households in the community were occupied by Alaska Natives

(Table XI-2). Of the total population, 84.1 percent was Alaska Native. This compares to an estimate of 88.7 percent Alaska Native in 1990 (Alaska Department of Labor 1991:93).

MONETARY ECONOMY

Commercial fishing is the lifeblood for cash income in Old Harbor. There are approximately 25 purse seiners in the Old Harbor fleet, and the majority of the able-bodied men in the village either have their own boat or crew on someone else's. The fleet primarily fishes salmon in the summer and Tanner crab in the winter, with fewer numbers rigging up for late winter gray cod, spring herring, and occasional halibut openings.

Due to its size relative to other Kodiak Island villages, Old Harbor has a large modern school which provides employment to a half-dozen school teachers and a substantial number of aides, cooks, maintenance workers, and janitors. The city office, health clinic, two grocery stores, lodge, and post office also employ several individuals.

According to the survey results, in 1991/92, 69.0 percent of the adults in Old Harbor were employed in at least one job, and each employed adult held a mean of 1.6 jobs. Only a small fraction of those with employment, just 15.9 percent, worked year-round. Seasonal employment was the norm, with each employed adult working a mean of 6.5 months (Table XI-4).

Total cash income was $26,537 per household and $8,076 per capita (Table XI-5). Correspondingly, the U.S. Census (1992a:56) reported the 1989 per capita income at Old Harbor at $8,008. This is well below the average cash income in the Kodiak Island Borough overall ($19,979) and for the state ($17,610) (U.S. Bureau of the Census 1992a:53).

In this highly active commercial fishing community it is somewhat surprising to find that the combined per capita income earned from federal, state, and local governments ($2,561 per person; 31.7 percent of all income) actually exceeded the income derived from commercial fishing ($2,215; 27.4 percent) (Table XI-5). Nevertheless, 41.0 percent of the jobs held by adults in the sampled households were in commercial fishing, as compared to just 32.0 percent in local, state, and federal government (Fig. XI-3). This disparity between jobs and income suggests that commercial fishing in Old Harbor pays substantially less than government work. Other income, derived largely from social security payments, Native corporation dividends, and Alaska Permanent Fund dividends, was $8,652 per household and $2,633 per capita (Table XI-6).

The mean monthly expense for food estimated by sampled Old Harbor households in the 1991/92 study year was $524, and the median food expense was $450 per month. The latter represents 20.4 percent of the total median household income in the community, the fourth-largest percentage among communities in the first year of research (Table I-101). This high cost of food illustrates the relatively high cost of living in the community.

Of the 42 surveyed households in Old Harbor, 50 per cent said that their financial situation was worse during the study year than it was before the *Exxon Valdez* oil spill, while 45.2 percent said their financial situation was about the same as before the spill. Just 4.8 percent said that it was better than before the spill (Table I-103).

The average household's replacement cost for equipment used in getting subsistence foods was $20,550 (Table XI-7). Average fuel costs were estimated at $387 per household, and the annual cost of maintenance and supplies was estimated at $962. Some 83.3 percent of the households reported borrowing equipment from other households, and 78.6 percent reported lending equipment to other households. Fish nets, skiffs with outboards, and smoke houses were the items most commonly borrowed, and freezers, smoke houses, and tackle were the items most commonly loaned out.

PARTICIPATION IN RESOURCE HARVEST AND USE ACTIVITIES

Participation in subsistence uses in Old Harbor was extremely high in 1991/92. Every household, (100 percent) used at least one wild resource, and 100 percent harvested at least one wild resource. Sharing was widespread as well, since 95.2 percent gave away at least one resource and 97.6 percent received at least one resource (Table XI-8). In the study year, Old Harbor households used an average of 20.1 different kinds of resources and harvested an average of 12.8 different resources (Table XI-8). This was the third-most diverse range of resources used among first year study communities (see Chapter XXIII). Altogether, Old Harbor residents harvested approximately 84 different kinds of resources, exclusive of kinds of wild plants (Table XI-13).

Individual levels of participation in subsistence activities were also high. Overall, 79.7 percent of the population participated in harvest activities and 72.5 percent helped process wild foods (Table XI-9). About 28.3 percent of those residing in the community hunted, and 42.0 percent processed game, while 59.4 percent fished and 62.3 percent processed fish. The percentage of those hunting or trapping furbearers, by contrast, was quite low, at 0.7 percent, while 1.5 percent processed furbearers. The percentage of those in the community gathering plants and berries was higher than for any other resource category, at 71.7 percent, and the percentage of residents processing plants and berries was also high, at 60.1 percent.

In addition to the residents of Old Harbor itself, Old Harbor households shared resources with at least seven other Alaskan communities (Table XI-10). They gave resources most notably to Anchorage and Kodiak City, but also to Akhiok, Fairbanks, Gambell, Karluk, and South Naknek. Old Harbor households received resources from at least twelve communities, including Akhiok, Barrow, Bethel, Chalkyitsik, Karluk, Kenai, Port Lions, and South Naknek. Resources were also received from remote area residents living in Afognak, Alitak, and Port Hobron.

HARVEST QUANTITIES

The per capita harvest for all resources in Old Harbor for the 1991/92 study year was 391.0 pounds usable weight, and the mean household harvest was 1,284.6 pounds (Tables XI-8, XI-11, XI-13, Fig. XI-4). This was the third highest per capita subsistence harvest of all the 1991 study year communities, and second only to Chignik Lake among communities in oil spill area (see Chapter XXIII).

The largest percentage of Old Harbor households in the sample (38.1 percent) estimated that between 26 percent and 50 percent of their annual use of meat, fish, and poultry consisted of wild foods. As shown in Table I-104, 26.2 percent said they used 1 to 25 percent wild foods, 21.4 percent reported 51 to 75 percent wild foods, and 14.3 percent indicated they used wild foods almost exclusively (76 to 99 percent). All of the sampled households in the community reported at some use of wild resources.

In looking at various resource categories (Tables XI-11, XI-12, XI-13; Figs. XI-5, XI-6), it is important to recognize that the most important subsistence harvest category in Old Harbor, as measured in pounds usable weight, is fish. In 1991/92, Old Harbor residents harvested 280.3 pounds of fish per capita, with the majority of that coming from the five species of salmon at 206.9 pounds (52.9 percent of the total harvest), and the rest from other finfish at 73.4 pounds (18.8 percent of the total) (Table XI-13; Fig. XI-6). This means that 71.7 percent of Old Harbor's 1991/92 overall harvest of wild foods, by usable weight, came from fish.

By gear type, 171.0 pounds of salmon per household or 25.2 percent of all salmon (as measured in usable pounds) were removed from commercial catches for home use, while 55.5 pounds per household (8.2 percent) were taken by subsistence gill nets, 342.4 pounds per household (50.4 percent) were taken by subsistence beach seines, 7.4 pounds per household (1.1 percent) were harvested by other subsistence methods, and 103.6 pounds (15.2 percent) were caught by rod and reel (Tables XI-14, XI-15, XI-16). In the study year, 47.6 percent of all households in Old Harbor caught salmon with subsistence gear, 59.5 percent removed some salmon from commercial catches for home use, and 52.4 percent used rod and reel to harvest salmon (Table XI-17).

Of all salmon harvested for home use by Old Harbor households in 1991/92, the largest percentage by pounds usable weight was coho salmon (56.9 percent). Chums ranked second at 16.4 percent, followed by sockeyes (13.2 percent), pinks (12.8 percent), and chinook (0.7 percent) (Table XI-15).

Seven different methods were used by Old Harbor residents to preserve their salmon harvests (Table I-106). On the average, households used 3.9 methods. These methods included freezing (by 92.9 percent of the households), smoking (83.3 percent), drying (71.4 percent), salting (64.3 percent), pickling (38.1 percent), kippering (18.8 percent), and fermenting (2.4 percent). The local Alutiiq name for salted salmon is *salunaq*; kippered salmon is *sikiaq*; and dried salmon is *tamuq*.

For non-salmon finfish, the largest harvest by volume was represented by halibut, at 61.7 pounds per person, trailed by gray cod at 5.8 pounds per person. Other fish that were utilized include black and red rockfish, herring, black cod, lingcod, flounder, sculpin, Dolly Varden, rainbow trout, and steelhead (Table XI-13). By gear type, 35.3 pounds of non-salmon fish per household (14.6 percent) were removed from commercial catches, 134.2 pounds (55.6 percent) were caught with subsistence gear (either gill nets, seines, or hand lines), and 71.8 pounds (29.8 percent) were harvested with rod and reel (Table XI-18, Table XI-19). As reported in Table XI-20, 38.1 percent of the Old Harbor households used subsistence methods to harvest fish other than salmon, 35.7 percent removed fish from commercial catches, and 50.0 percent used rod and reel.

For land mammals, Old Harbor residents harvested an average of 29.0 pounds per person, 7.4 percent of the total harvest. Of this, most (26.3 pounds per person) was deer, followed by small harvests of elk and goat. Very few small land mammals were taken, only 0.6 pounds per person, consisting of snowshoe hare and beaver .

Marine mammal harvests were substantial in Old Harbor in 1991/92, at 27.7 pounds per person, 7.1 percent of the total harvest. This consisted primarily of harbor seals (11.8 pounds per person) and Steller sea lions (15.9 pounds per person). Some light harvest and use of sea otters was reported, but these were taken for the skins only and were not considered as usable weight.

Marine invertebrates, amounting to 36.4 pounds per person (9.3 percent of the total), also figured strongly, with clams (principally butter clams) being the most important (at 20.3 pounds per person), followed by Tanner, Dungeness, and king crab (at 7.1 pounds per person), and chitons (bidarkies) (at 3.1 pounds per person). Smaller amounts of octopus, cockles, geoducks, mussels, sea urchins, shrimp, snails, sea cucumbers, and limpets were also recorded .

Harvests of birds and bird eggs totaled 7.6 pounds per capita (1.9 percent of the total harvest). Almost all of this came from ducks, with the largest take represented by mallards, scoters, pintails, gadwalls, and goldeneyes. A few snow geese were also taken and there was frequent use of seabird eggs (by 33.3 percent of the households).

Plants and berries were also an important part of the diet, with an estimated harvest of 9.9 pounds per capita (2.5 percent of the total harvest). The bulk of this was made up of various berries (7.4 pounds per person), but other plants and greens were also utilized. Five of the sampled households in Old Harbor used plants for medicine (Table I-109) and 20 different plant species were used. *Taahiks* (known in English as "scrubbers") are a plant named by two households as being good for rubbing on sore muscles, and certain other roots were cited as being good for arthritis when used in the banya or steam bath.

Compared to 1990/91 (the previous study year), 52.4 percent of Old Harbor households reported that overall they used approximately the same quantity of subsistence foods in 1991/92, while 31.0 percent said they used less, and 14.3 percent said they used more (Table I-57). Compared to before the *Exxon Valdez* oil spill, however, only 38.1 percent said they used approximately the same amount, while 47.6

percent said they used less and just 2.4 percent said they used more (Table I-58). The resources which showed the greatest decline in perceived level of use compared to before the spill were salmon (48.6 percent), marine mammals (44.1 percent), and shellfish (51.4 percent) (Tables I-10, I-34, I-46; Fig. XI-7).

At the time of our social effects survey, 83.3 percent said they thought clams from their area were safe to eat (Table XI-22). However, there was a local outbreak of paralytic shellfish poisoning (PSP) in the community during the summer of 1991, just a few months after our survey, and people in Old Harbor suddenly became very afraid to eat butter clams, little neck clams, and other shellfish. Then in 1994, a local woman died from the PSP she ingested from blue mussels, which put another big scare in those who rely heavily on shellfish. The only resource group which two-thirds or more of the respondents said they used in about same quantities as before the spill was plants and berries (Table I-52).

DISCUSSION AND CONCLUSIONS

Comparisons with Previous Years' Subsistence Harvests

Old Harbor subsistence harvest quantities for 1991/92 can best be understood within two comparative frameworks. The first contextual framework is longitudinal, setting 1991/92 along side findings from earlier surveys conducted for 1982/83, 1986, and 1989 (Figs. XI-4, XI-5). In 1982/83, for instance, Old Harbor residents harvested a per capita mean of 491.1 pounds of wild resources (KANA 1983; Schroeder et al. 1987; Scott et al. 1993). For 1986, the community harvest estimate was 423.2 pounds per person (Fall and Walker 1993). Both of these harvest levels are substantial, among the highest estimates for any community in the oil spill area. However, in 1989, the year of the *Exxon Valdez* oil spill, the per capita mean dropped substantially to 272.4 pounds per person (Fall 1991b; Mishler and Cohen forthcoming). The 1991/92 estimate of 391.0 pounds per person therefore shows a substantial recovery since the oil spill but not quite a full return to pre-spill levels. Similar findings have been made for the other Alaska Native communities of the Kodiak Island Borough (see other chapters in this volume).

Figures XI-5 and XI-8, and Tables XI-11 and XI-12, compare harvest estimates for Old Harbor for all study years at the resource category level. It is important to notice that the composition of the harvest in Old Harbor has changed substantially since the early and mid-1980s. In 1982/83, 61.7 percent of the total harvest was fish, and in 1986, 54.1 percent of the harvest was fish; the proportion of fish increased to 69.1 percent of the total harvest in 1989 and to 71.7 percent in 1991/92. At the same time, there has been a corresponding decrease in the percentage of land mammals (principally deer) and marine mammals (harbor seals and sea lions) taken. In 1982/83, for example, 14.9 percent of the total harvest consisted of land mammals, and 16.1 percent was marine mammals; in 1986, 14.2 percent consisted of land mammals and the percentage of marine mammals increased to 25.1 percent. However, in 1991/92 only 7.4 percent of the harvest consisted of land mammals and just 7.1 percent came from of marine mammals. This suggests a significant shift has taken place in Old Harbor's dietary patterns over the past decade.

Part of this dietary shift may be the direct result of marine mammal population declines. Populations of both harbor seals and sea lions have been in decline in Alaska since the 1960s; the causes of these declines are complex and not well understood (Hoover 1988, Hoover-Miller 1994). Assessments by respondents to a question in the harvest survey instrument in Old Harbor support these findings: 50 percent of the responding households said they noticed fewer sea lions, while only 11.9 percent reported more, and just 9.5 percent reported their numbers as stable. The percentage of households reporting fewer sea lions in Old Harbor compared to the previous year was more than twice that of any other Kodiak area community and almost the inverse of Kodiak City (Table I-99). This probably reflects the significance of this subsistence resource in Old Harbor. A similar question was asked on the social effects questionnaire[1] where 61.5 percent of the respondents said that sea lions were down in numbers since 1988 (Table XI-23). This compares to just 19.1 percent of the Kodiak City respondents who noticed less (Table X-46). A number of key respondents in Old Harbor also reported a sharp decrease in the number of harbor seals as well. In the social effects questionnaire, 53.8 percent of the respondents said that harbor seal populations were down compared to 1988 (Table XI-23) (see more discussion, below).

Deer populations on Kodiak Island have also declined since peaking in the mid-1980s. Severe winters accounted at least in part for this decline. In response, state hunting regulations reduced the annual bag limit from five to four deer (Alaska Department of Fish and Game 1992). These factors may at least partially explain the decline in land mammal harvests at Old Harbor. As shown in Table XI-23, the majority of Old harbor respondents to the social effects questionnaire (56.4 percent) said that there were fewer deer in 1991/92 than in 1988.

Comparisons with Other Communities

The second contextual framework is latitudinal and looks at Old Harbor's harvest quantities and participation in subsistence use activities in comparison with other study communities in the same study year, 1991/92, the first in this three-year project. Old Harbor residents' per capita harvest of 391.0 pounds per person in 1991/92 was the third highest among the 16 study communities and first among the five Kodiak communities. Interestingly, Old Harbor reported the highest per capita harvest of salmon in all 16 communities, at 206.9 pounds usable weight per person. It had the second highest per capita harvest of birds and bird eggs and was the third highest in shellfish and marine mammals (see Chapter XXIII). In diet breadth, Old Harbor used 20.1 wild resources, the fourth most among the 16 study communities (see Chapter XXIII). The same high level of involvement in subsistence uses is evidenced in the mean number of resources received, where Old Harbor ranked fourth, and in the mean number of resources given away, where Old Harbor was third. The number of resources received and given away suggests that widespread sharing takes place, but does not directly indicate the volume or frequency of sharing, since these were not

[1] The social effects question on sea lions was only asked in Old Harbor and Kodiak among Kodiak Island Borough communities.

addressed by the survey. For example, a single resource, such as sea lion, is shared widely and frequently, but it only gets listed as one resource given and one received.

SOCIAL EFFECTS FINDINGS

Further evidence of the importance of subsistence uses in Old Harbor appears in Table XI-21. Over half (53.5 percent) of the respondents to the social effects questionnaire (SEQ) said that they had used a subsistence food the day before the interview; for 44.2 percent, this wild food had been part of a main meal. These were the highest percentages among the five Kodiak Island Borough communities for the 1991/92 study year, and sixth highest among all study communities for that year (Fig. I-3). Also, a relatively large percentage of Old Harbor respondents had used a wild food the day before the interview that had been harvested by someone living in another Old Harbor household (16.3 percent) or in another community (14.0 percent) (Table XI-21).

As noted above, subsistence harvests in Old Harbor declined substantially in the year following the *Exxon Valdez* oil spill, and by 1991/92 had rebounded to approach, but not equal, pre-spill averages. Harvests of salmon, other fish, marine invertebrates, and birds in 1991/92 were equal to or greater than pre-spill norms, while harvests of deer and, especially, marine mammals declined.

Findings regarding Old Harbor residents' perceptions of changes in resource populations since the spill are reported in Table XI-23 and illustrated in Figure XI-9. The majority of respondents thought there were fewer sea lions, deer, harbor seals, and salmon in 1991/92 than in 1988. For deer and marine mammals, these perceptions correspond with lower subsistence harvest levels for these resources. As noted above, however, subsistence salmon harvests in Old Harbor in 1991/92 were about the same as pre-spill averages. Also, a relatively large percentage of the social effects respondents in Old Harbor said they thought that populations of sea ducks (40.0 percent) and clams (37.5 percent) were down from 1988 levels. For the remainder of the resources for which an assessment was requested, most respondents who offered an opinion said they thought that populations levels were about the same as the year before the spill.

The widely held community ethic of sharing was amply demonstrated by the 90.7 percent of the Old Harbor respondents who said they share what they have with others (Table XI-25). Of the 10 percent or so who do not share, several said it was because they were physically unable to get out and hunt or fish. A majority of respondents saw no difference in the sharing of wild resources, hunting and fishing gear, money, or labor during the study year as compared to the previous year. A majority also saw no difference in the sharing of hunting and fishing gear and labor in the previous year compared to the year before the oil spill, but opinions were a little more widely split on the question of sharing wild resources and money compared to before the spill. On wild resources, 38.5 percent said they shared less in the past year compared to before the spill, 10.3 percent said they shared more, and 48.7 percent said they shared the same amount. An equal number (25.8 percent) said they shared more money or less money in the

previous year than they did before the spill, with the largest share (45.2 percent) still saying they did about the same amount of sharing.

The importance of sharing to Old Harbor's subsistence-based economy is richly supported by the following comments, each from a different household:

> Love thy neighbor as thyself.
> Have to help others because they help me.
> If you don't share with someone else they won't share with you.
> I don't like to eat alone.
> That's the way my mom taught us.
> That's how I was raised.
> It's the expected thing around here.
> Very important to my people, whoever needs something we like to give it.
> It's just the kind of people we are.
> Sharing gives you respect, creates more friends.
> If people need it, you have to give it.
> We are caring people.
> What you give you get back.
> My family receives more resources when sharing.
> If you don't share you won't have any friends.
> Because older people can't do as much for themselves.
> It's an important part of living in rural Alaska.

One respondent commented that "Youngsters may be a little different with all imported foods." This suggests that the giving away of foods purchased with cash is not nearly as widespread as the giving away of wild foods. The implication here is that as the diet changes, so does the sharing ethic that is a trademark of Alutiiq culture. Elders are clearly at risk in this area because they have traditionally depended on younger people for much of their food.

In the arena of political activity, the largest segment of respondents, 47.5 percent, said they never attended public meetings before the oil spill, but another 42.5 percent said they went sometimes, and just 10 percent confirmed that they went almost always (Table XI-26). In the past year, however, people were considerably more involved. The number going to meetings "sometimes" increased to 60.5 percent, with only 25.6 percent saying they never go, and 14 percent going almost always. An overwhelming majority of those interviewed said they voted in the last city council election (81.4 percent), the last statewide election (79.1 percent), and the last regional corporation election (94.3 percent).

On the series of questions pertaining to the significance of place, the majority of people interviewed said the main reason they moved to the community was because they were born or raised there (Table XI-27). Asked why they continue to live in Old Harbor, a majority of those asked said it was for each of the following reasons: because that is where they are from, because they have friends and relatives there, because there are hunting and fishing opportunities there, because there are housing and medical services there, because there is less crime, because they like the size of the community, because there are recreational opportunities, because they have the necessary personal freedoms, and because of

the beauty of the area. Overall satisfaction with the community was demonstrated by 92.5 percent saying they liked living in Old Harbor just the same as they did before the oil spill, and by 74.4 percent saying they expect to be living there when they are old. Only 5.0 percent of the Old Harbor respondents said they liked living in their community less since the spill (Table XI-27). This was one of the lowest percentages among the 1991 study year communities, and substantially lower than results for the communities of Prince William Sound (Fig. I-8).

Over 65.0 percent said they would rather not move to another community, but approximately a third said they were biding their time and would prefer to be living some place else. A majority of 53.5 percent indicated they would continue to live in Old Harbor even if wild foods were not available, while 39.5 percent would move elsewhere, and 7.0 percent were undecided. A number of comments offered on the topic of place helps illustrate why people are attracted to Old Harbor:

Friendly people.
Clean - not much pollution.
I like the people here.
Winters are better here.
It's a safe place for children to live and grow up.
I feel so much freer. Wouldn't want to live in Kodiak.
Peace and quiet.
I like the remoteness.
I moved here because salmon were available.
It's small and I don't like big cities.
Able to go on skiff rides.

When asked to evaluate the various agencies and organizations who responded to the oil spill, a majority of those who were surveyed rated the Coast Guard, the Old Harbor City Council, commercial fishing groups, village health aides, and the Oiled Mayors as effective (Table XI-28). No agencies or organizations were rated as ineffective by a majority of the respondents.

As discussed in Chapter I, concerns about the safety of eating subsistence foods that might have been contaminated by oil were widespread in Alaska Native communities throughout the spill area in 1989. In Old Harbor, of all communities involved in the first year of this study (1991), the largest percentage of respondents reported that they felt they had been adequately informed about this issue (Fig. I-9). As shown in Table XI-29, 81.4 percent of the respondents to the social effects survey said they were adequately informed, 16.3 percent said they were not adequately informed, and 2.3 percent were not sure.

Correspondingly, a relatively low percentage of respondents in Old Harbor for the first year of the administration of the social effects questionnaire expressed continuing concerns about the safety of using subsistence foods from the oil spill area (Table XI-22). When asked whether chitons (bidarkies) were an important food, 62.8 percent answered in the affirmative, and of those, 77.8 percent were convinced that bidarkies in their area were safe to eat. Another 11.1 percent of the respondents who said that using chitons (bidarkies) was important to them thought this resource was unsafe to eat, and an additional 11.1

percent expressed uncertainty about their safety. Only one respondent expressed oil contamination concerns regarding bidarkies. For clams, a large percentage said they were safe (83.3 percent), while 11.9 percent said they were unsafe and 4.8 percent were not sure. Three respondents cited oil contamination as the cause of their concern; only one mentioned PSP. An even larger percentage of respondents expressed confidence in the safety of using seals, 90.6 percent; none believed seals were unsafe to use, but 9.4 percent were not sure about their safety. No respondent cited oil contamination concerns regarding seals. These relatively low levels of concern about subsistence food safety expressed for the 1991/92 study year in Old Harbor contrasted with the results for communities of Prince William Sound and lower Cook Inlet (Fig. I-4, Fig. I-5).

Eleven Old Harbor households (26.2 percent of those surveyed) reported discarding resources because of perceived abnormalities (Table I-107). Most often, salmon were discarded (nine households; 21.4 percent). Of the salmon discarded, 11.9 percent were said to have an abnormal appearance and another 9.5 percent were perceived to have pathological abnormalities. Of the perceived reasons for these abnormalities in salmon, 11.9 percent of the households named oil contamination while another 9.5 percent said the cause was unknown. Other discarded resources mentioned were non-salmon fish (three households; 7.1 percent of all households), shellfish (three households, 7.1 percent), and game (one household; 2.4 percent).

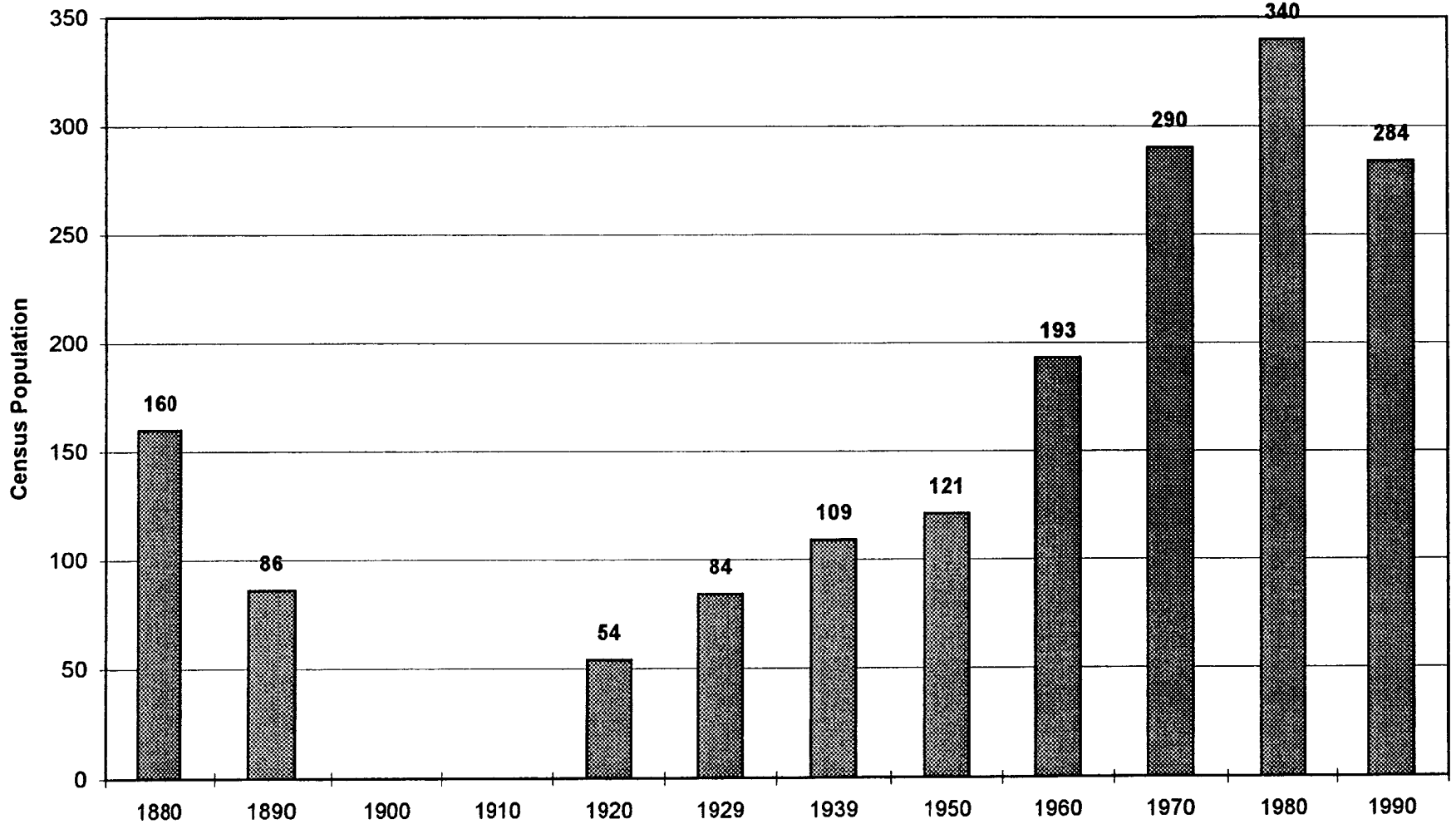
A relatively low percentage of respondents in Old Harbor (19.4 percent) said they believed that the oil spill had affected children's participation in subsistence activities (Table XI-24); this was notably lower than in Ouzinkie (29.6 percent) and in the villages of Prince William Sound and lower Cook Inlet (Fig. I-6). In contrast, a relatively high percentage of Old Harbor respondents said that there was less sharing of subsistence resources in 1991/92 than before the spill, 38.5 percent, the fourth highest among first year study communities and only lower than Chenega Bay, Nanwalek, and Tatitlek (Table XI-25).

Regarding potential effects of future Outer Continental Shelf (OCS) development, a majority of Old Harbor respondents predicted lowered populations of marine mammals (60.5 percent), birds (60.5 percent), marine invertebrates (55.8 percent), and fish (55.8 percent), while 41.9 percent said that lower populations of land mammals would also result. Most Old Harbor respondents, 58.1 percent, also thought that OCS development would create new job opportunities (Table XI-30). This was in the mid-range of the results from the 1991 study year communities, but notably lower than in Valdez (84.0 percent predicting more jobs) and Kenai (88.0 percent), two communities with substantial oil industry sectors already in their economy (Fig. I-15). Opinions varied widely on whether the government and the oil companies would be able to contain and clean up a small oil spill of less than 1,000 barrels, but 65.1 percent were convinced that they would not be able to contain and clean up another large oil spill.

CONCLUSION

In summary, Old Harbor's 1991/92 subsistence harvest was significant and important to the community's economic health. Compared to prior estimates, the 1991/92 harvest compares favorably with harvests reported during the early and mid-1980s and rose considerably from what it was in 1989, when disrupted by the *Exxon Valdez* oil spill. Oil spill-related concerns diminished substantially from 1989, especially in comparison to villages of Prince William Sound and lower Cook Inlet. On the other hand, perceived declines in important resources such as harbor seals, sea lions, deer, and salmon led to frequent assessments of lower subsistence uses in 1991/92 compared to before the spill. Compared to other communities of the oil spill area, Old Harbor must be considered one of the top three or four for the amount of wild foods harvested and consumed per capita, and for the range of resources used. It is also one of the leading communities in the region for the harvest and use of salmon, marine invertebrates, and marine mammals.

Figure XI-1. Old Harbor Census Population, 1880 - 1990



Sources: Rollins 1978; Alaska Department of Labor 1991; no population data reported for 1900 and 1910

Table XI-1. Sample Participation: Old Harbor 1992

VARIABLE	Social Indicators		TOTAL HOUSEHOLDS
	Panel	Non-Panel*	
Estimated Household Structures	18	81	99
Non-Residential Structures	NA	0	0
Estimated Households	18	81	99
Total Panel	24	NA	NA
Interview Goal:	24	42	66
Households Interviewed	14	28	42
Failed to Contact/Unavailable	2	12	14
Refused	2	8	10
Vacant Residential Structures	NA	25	25
Seasonal Households**	0	7	7
Non-Resident Household ***	0	1	1
Invalid Households and Vacancies	0	33	33
Failed to Contact: HH Interviewed	0	NA	NA
Refused: HH Interviewed	0	NA	NA
SI Household Moved	5	NA	NA
SI Respondent Deceased	1	NA	NA
SI Panel Disposition	24	NA	NA
Total Households Attempted:	18	81	99
Refusal Rate:	12.50%	22.22%	19.23%
Non-Perm. HH Rate ("Vacancy Rate"):	0.0%	40.7%	33.3%
Interview Goal (Percentage)	58.3%	66.7%	63.6%
Social Effects Surveys Completed	14	28	42
Total Permanent Households	18	48	66
Percentage Interviewed	77.78%	58.33%	63.64%
Percentage of Total Households	27.27%	72.73%	100.00%
Interview Weighting Factor	1.286	1.714	1.571

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.

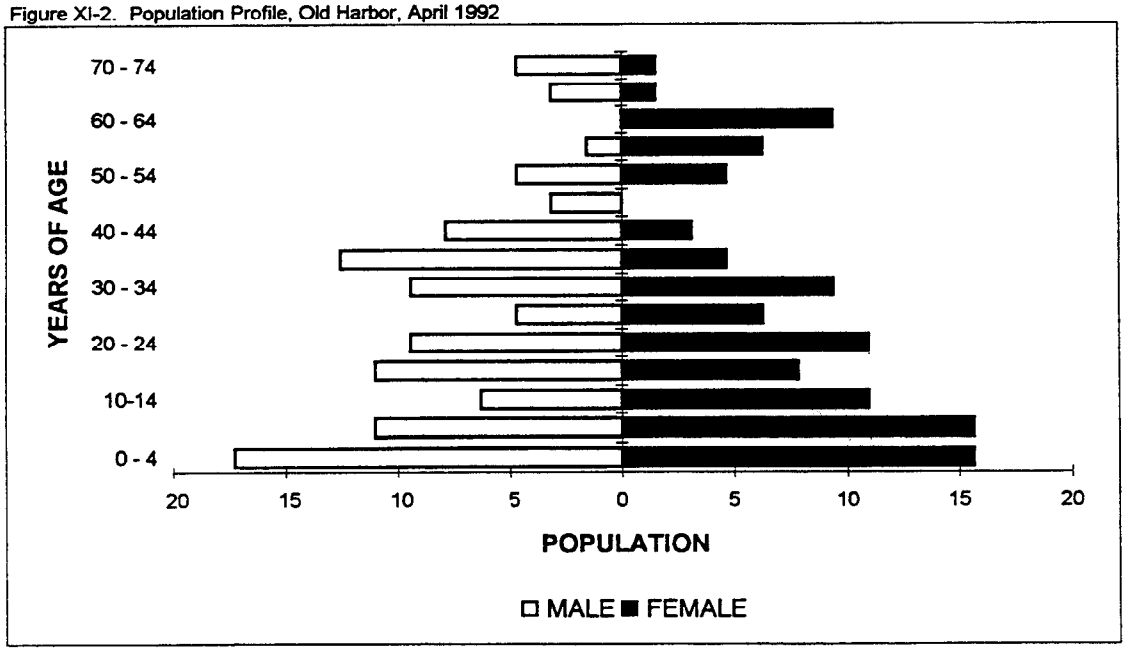
*** Non-resident households are households which were not present during the study year or which were resident less than the required number of months.

Table XI-2. Demographic Characteristics of Households, Old Harbor, April 1992

Characteristics	
Sampled Households	42
Number of Households in the Community	66
Percentage of Households Sampled	63.64
Household Size	
Mean	3.29
Minimum	1.00
Maximum	7.00
Sample Population	138
Estimated Community Population	216.86
Age	
Mean	27.00
Minimum	0.64
Maximum	73.88
Median	23.127
Length of Residency - Population	
Mean	17.31
Minimum	0.13
Maximum	66.91
Length of Residency - Household Heads	
Mean	25.56
Minimum	0.63
Maximum	66.91
Sex	
Males	
Number	106.86
Percentage	49.28
Females	
Number	110.00
Percentage	50.72
Alaska Native	
Households (Either Head)	
Number	58.14
Percentage	88.10
Estimated Population	
Number	182.29
Percentage	84.06

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

Figure XI-2. Population Profile, Old Harbor, April 1992



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

Table XI-3. Population Profile, Old Harbor, April 1992

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	17.29	16.18%	16.18%	15.71	14.29%	14.29%	33.00	15.22%	15.22%
5-9	11.00	10.29%	26.47%	15.71	14.29%	28.57%	26.71	12.32%	27.54%
10-14	6.29	5.88%	32.35%	11.00	10.00%	38.57%	17.29	7.97%	35.51%
15 - 19	11.00	10.29%	42.65%	7.86	7.14%	45.71%	18.86	8.70%	44.20%
20 - 24	9.43	8.82%	51.47%	11.00	10.00%	55.71%	20.43	9.42%	53.62%
25 - 29	4.71	4.41%	55.88%	6.29	5.71%	61.43%	11.00	5.07%	58.70%
30 - 34	9.43	8.82%	64.71%	9.43	8.57%	70.00%	18.86	8.70%	67.39%
35 - 39	12.57	11.76%	76.47%	4.71	4.29%	74.29%	17.29	7.97%	75.36%
40 - 44	7.86	7.35%	83.82%	3.14	2.86%	77.14%	11.00	5.07%	80.43%
45 - 49	3.14	2.94%	86.76%	0.00	0.00%	77.14%	3.14	1.45%	81.88%
50 - 54	4.71	4.41%	91.18%	4.71	4.29%	81.43%	9.43	4.35%	86.23%
55 - 59	1.57	1.47%	92.65%	6.29	5.71%	87.14%	7.86	3.62%	89.86%
60 - 64	0.00	0.00%	92.65%	9.43	8.57%	95.71%	9.43	4.35%	94.20%
65 - 69	3.14	2.94%	95.59%	1.57	1.43%	97.14%	4.71	2.17%	96.38%
70 - 74	4.71	4.41%	100.00%	1.57	1.43%	98.57%	6.29	2.90%	99.28%
75 - 79	0.00	0.00%	100.00%	0.00	0.00%	98.57%	0.00	0.00%	99.28%
80 - 84	0.00	0.00%	100.00%	0.00	0.00%	98.57%	0.00	0.00%	99.28%
85 - 89	0.00	0.00%	100.00%	0.00	0.00%	98.57%	0.00	0.00%	99.28%
90 - 94	0.00	0.00%	100.00%	0.00	0.00%	98.57%	0.00	0.00%	99.28%
95 - 99	0.00	0.00%	100.00%	0.00	0.00%	98.57%	0.00	0.00%	99.28%
100 - 104	0.00	0.00%	100.00%	0.00	0.00%	98.57%	0.00	0.00%	99.28%
Missing	0.00	0.00%	100.00%	1.57	1.43%	100.00%	1.57	0.72%	100.00%
TOTAL	106.86	49.28%		110.00	50.72%		216.86	100.00%	

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

Table XI-4. Employment Characteristics, Old Harbor, 1991/92

Characteristics		
ADULTS		
Total		135.14
Employed		
	Number	99.00
	Percentage	73.26
Jobs		
	Number	152.43
	Mean	1.54
	Minimum	1
	Maximum	6
Months Employed		
	Mean	6.46
	Minimum	1
	Maximum	12
	Year-Round	11.11%
HOUSEHOLDS		
Total		66.00
Employed		
	Number	59.71
	Percentage	90.48
Jobs per Employed Household		
	Mean	2.55
	Minimum	1
	Maximum	6
Employed Adults		
	Mean	1.66
	Minimum	1
	Maximum	3

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

Table XI-5. Community, Household, and Per Capita Incomes, All Sources and by Employer Type, Old Harbor, 1991/92

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$1,751,421.80	$26,536.69	$8,076.39
Earned Income	$1,180,420.44	$17,885.16	$5,443.31
Agriculture, Forestry, and Fishing	481,002.69	7,287.92	2,218.06
Agriculture	0.00	0.00	0.00
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	481,002.69	7,287.92	2,218.06
Hatchery/Enhancement	0.00	0.00	0.00
Commercial Fishing	480,389.83	7,278.63	2,215.24
Hunting/Trapping	612.86	9.29	2.83
Mining	0.00	0.00	0.00
Construction	45,257.14	685.71	208.70
Manufacturing	7,071.43	107.14	32.61
Cannery	7,071.43	107.14	32.61
Other Manufacturing	0.00	0.00	0.00
Logging/Timber	0.00	0.00	0.00
Transportation, Communications, and Utilities	10,371.43	157.14	47.83
Trade	9,271.43	140.48	42.75
Wholesale	0.00	0.00	0.00
Retail	9,271.43	140.48	42.75
Finance, Insurance, and Real Estate	12,571.43	190.48	57.97
Services	59,574.25	902.64	274.72
Government	555,300.64	8,413.65	2,560.67
Federal	39,285.71	595.24	181.16
State	3,557.71	53.90	16.41
Local	512,457.21	7,764.50	2,363.11
Local Government	98,116.07	1,486.61	452.45
Local Education	414,341.14	6,277.90	1,910.66
Unknown	AMT UNK	AMT UNK	AMT UNK
Other Income	$571,001.36	$8,651.54	$2,633.08

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

Table XI-6. Community, Household, and Per Capita Other Income by Source, Old Harbor, 1991/92

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$571,001.36	$8,651.54	$2,633.08
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	11.90	42,862.29	649.43	197.65
Adult Public Assistance	4.76	3,991.43	60.48	18.41
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	2.38	12,747.43	193.14	58.78
Longevity Bonus	11.90	28,285.71	428.57	130.43
Social Security	26.19	146,252.86	2,215.95	674.42
Workman's Comp./Insurance	0.00	0.00	0.00	0.00
Energy Assistance	66.67	22,809.93	345.60	105.18
Supplemental Security Income	7.14	13,860.00	210.00	63.91
Food Stamps	21.43	22,821.86	345.79	105.24
Unemployment	4.76	9,026.29	136.76	41.62
Native Corporation Dividend	78.57	58,084.86	880.07	267.85
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	92.86	182,915.86	2,771.45	843.49
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	4.76	27,342.86	414.29	126.09

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

Figure XI-3. Employment by Industry, Old Harbor, 1991/92

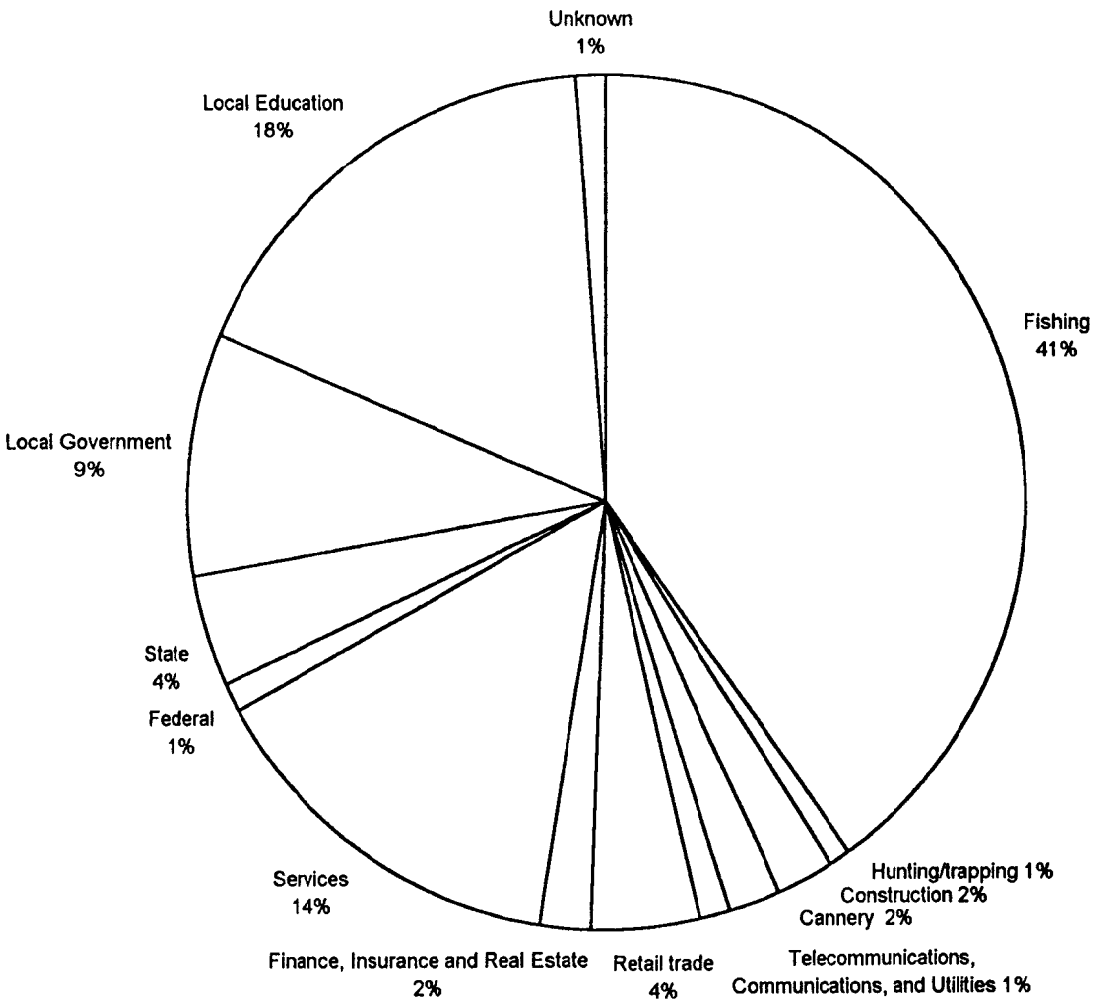


Table XI-7. Subsistence Equipment Expenses and Use, Old Harbor, 1991/92

Sampled Households = 42
Community Households = 66

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			$20,550.38	$387.21	$962.19	24.77	$358,039.71	$5,424.84	83.33	78.57
Skiff with outboard	25.14	0.38	$2,409.52		$204.17	60.22	$105,293.57	$1,595.36	45.24	16.67
Outboard Motor	4.71	0.07	$47.62	$80.95	$0.00	90.00	$7,637.14	$115.71	2.38	0.00
Boats with inboard	11.00	0.17	$12,619.05	$64.13	$242.86	15.04	$128,273.10	$1,943.53	26.19	2.38
Skiff, manually-propelled	4.71	0.07	$207.14		$0.00	42.53	$5,814.29	$88.10	0.00	4.76
ATV/Motorcycle	26.71	0.40	$926.19	$41.24	$73.93	35.99	$24,733.65	$374.75	23.81	21.43
Snowmachine/snowmobile	0.00	0.00	$0.00	$0.00	$0.00	0.00	$0.00	$0.00	2.38	0.00
Airplane	0.00	0.00	$0.00	$0.00	$0.00	0.00	$0.00	$0.00	2.38	0.00
Highway vehicle	25.14	0.38	$1,591.47	$165.18	$147.14	29.65	$37,256.68	$564.50	26.19	14.29
Tackle			$184.47		$14.88	83.52	$10,988.81	$166.50	14.29	33.33
Pots	14.14	0.21	$51.79		$2.86	37.25	$1,343.57	$20.36	28.57	9.52
Fishing Nets	17.29	0.26	$84.13		$4.76	37.79	$2,216.76	$33.59	47.62	14.29
Guns	172.86	2.62	$1,238.66				$81,751.43	$1,238.66	11.90	21.43
Traps	15.71	0.24	$5.95				$392.86	$5.95	0.00	0.00
Ammunition					$144.94		$9,566.23	$144.94	9.52	26.19
Cabins	1.57	0.02	$495.67		$0.00	100.00	$32,714.29	$495.67	9.52	2.38
Miscellaneous Camping Equipment			$51.33				$3,388.00	$51.33	7.14	11.90
Fishing/Hunting Camps	4.71	0.07	$19.64			75.76	$982.14	$14.88	0.00	0.00
Freezer	72.29	1.10	$480.51				$31,713.97	$480.51	16.67	35.71
Miscellaneous freezing supplies					$106.02		$6,997.57	$106.02	4.76	2.38
Canner	9.43	0.14	$11.90				$785.71	$11.90	11.90	7.14
Miscellaneous canning supplies					$5.19		$342.57	$5.19	0.00	0.00
Vacuum sealer/Sealer	18.86	0.29	$71.12				$4,693.71	$71.12	14.29	11.90
Miscellaneous sealer supplies					$14.01		$924.90	$14.01	4.76	0.00
Smoke house/dry rack	28.29	0.43	$54.21				$3,577.55	$54.21	38.10	30.95
Miscellaneous smoker supplies					$1.43		$94.29	$1.43	7.14	2.38

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

Table XI-8. Characteristics of Resource Harvest and Use, Old Harbor, 1991/92

Study Community	Old Harbor
Mean Number Of Resources Used Per Household	20.14
Minimum	6
Maximum	60
95 % Confidence Limit (+/-)	10.63
Median	18
Mean Number Of Resources Attempted To Harvest Per Household	13.00
Minimum	1
Maximum	48
95 % Confidence Limit (+/-)	14.63
Median	11
Mean Number Of Resources Harvested Per Household	12.83
Minimum	1
Maximum	48
95 % Confidence Limit (+/-)	14.85
Median	11
Mean Number Of Resources Received Per Household	12.07
Minimum	0
Maximum	60
95 % Confidence Limit (+/-)	15.61
Median	10
Mean Number Of Resources Given Away Per Household	10.38
Minimum	0
Maximum	59
95 % Confidence Limit (+/-)	20.44
Median	8.5
Mean Household Harvest, Pounds	1,284.56
Minimum	12.00
Maximum	9,925.85
Total Pounds Harvested	84,761.10
Community Per Capita Harvest, Pounds	390.95
Percent Using Any Resource	100.00
Percent Attempting To Harvest Any Resource	100.00
Percent Harvesting Any Resource	100.00
Percent Receiving Any Resource	97.62
Percent Giving Away Any Resource	95.24
Number Of Households In Sample	42
Number of Resources Available	113

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

Table XI-9. Participation in the Harvest and Processing of Wild Resources, Old Harbor, 1991/92

Total Number of People			216.86
GAME	Hunt	Number	61.29
		Percentage	28.26
		Missing	0.00
		Missing %	0.00
	Process	Number	91.14
		Percentage	42.03
		Missing	0.00
		Missing %	0.00
FISH	Fish	Number	128.86
		Percentage	59.42
		Missing	0.00
		Missing %	0.00
	Process	Number	135.14
		Percentage	62.32
		Missing	0.00
		Missing %	0.00
FURBEARERS	Hunt or Trap	Number	1.57
		Percentage	0.72
		Missing	0.00
		Missing %	0.00
	Process	Number	3.14
		Percentage	1.45
		Missing	0.00
		Missing %	0.00
PLANTS	Gather	Number	155.57
		Percentage	71.74
		Missing	0.00
		Missing %	0.00
	Process	Number	130.43
		Percentage	60.14
		Missing	0.00
		Missing %	0.00
ANY RESOURCE			
	Attempt	Number	172.86
		Percent	79.71
	Process	Number	157.14
		Percent	72.46

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

Table XI-10. *Percentage of Households Sharing Resources by Community, Old Harbor, 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	76.19	76.19	76.19	73.81	85.71	71.43	76.19	54.76	54.76	33.33	64.29	47.62	47.62	42.86	97.62	95.24
Akhiok	2.38	2.38	0.00	2.38	2.38	2.38	2.38	2.38	2.38	2.38	4.76	2.38	2.38	2.38	7.14	2.38
Anchorage	0.00	19.05	0.00	11.90	0.00	9.52	0.00	7.14	0.00	7.14	0.00	4.76	0.00	2.38	0.00	26.19
Barrow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.38	0.00	0.00	0.00	0.00	0.00	2.38	0.00
Bethel	0.00	0.00	0.00	0.00	0.00	0.00	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.38	0.00
Chalkyitsik	0.00	0.00	0.00	0.00	0.00	0.00	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.38	0.00
Fairbanks	0.00	2.38	0.00	2.38	0.00	2.38	0.00	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.38
Gambell	0.00	2.38	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	2.38
Karluk	2.38	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.38	2.38
Kenai	0.00	0.00	0.00	0.00	0.00	0.00	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.38	0.00
Kodiak City	0.00	11.90	0.00	4.76	4.76	2.38	0.00	0.00	0.00	2.38	0.00	0.00	0.00	2.38	4.76	11.90
Old Harbor	73.81	66.67	76.19	71.43	85.71	71.43	76.19	50.00	52.38	26.19	64.29	45.24	45.24	40.48	97.62	90.48
Port Lions	0.00	0.00	0.00	0.00	0.00	0.00	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.76	0.00
South Naknek	0.00	0.00	0.00	2.38	0.00	0.00	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.38	2.38
Afognak	0.00	0.00	0.00	0.00	0.00	0.00	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.76	0.00
Alitak	4.76	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	4.76	0.00
Port Hobron	0.00	0.00	0.00	0.00	0.00	0.00	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.38	0.00
Other U.S.	0.00	4.76	0.00	4.76	0.00	2.38	0.00	2.38	0.00	2.38	0.00	0.00	0.00	0.00	0.00	11.90
Community Unknown	0.00	0.00	0.00	2.38	2.38	0.00	2.38	0.00	2.38	2.38	0.00	0.00	2.38	0.00	7.14	2.38

* 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 XI-11. Subsistence Harvests in Pounds Usable Weight per Person by Resource Category, Old Harbor, 1982/83, 1986, 1989, and 1991/92

	Pounds Usable Weight per Person			
	1982/83	1986	1989	1991/92
Salmon	233.8	187.4	148.9	206.9
Other Fish	69.3	41.3	39.2	73.4
Marine Invertebrates	29.6	23.3	27.0	36.4
Land Mammals	73.0	59.9	26.9	29.0
Marine Mammals	79.1	106.3	24.9	27.7
Birds and Eggs	6.4	3.5	4.1	7.6
Wild Plants		1.4	1.3	9.9
All Resources	491.1	423.2	272.4	391.0

No plant data collected for 1982/83

Table XI-12. Composition of Resource Harvests by Resource Category, Old Harbor 1982/83, 1986, 1989, and 1991/92

	Percentage of Total Harvest			
	1982/83	1986	1989	1991/92
Salmon	47.6%	44.3%	54.7%	52.9%
Other Fish	14.1%	9.8%	14.4%	18.8%
Marine Invertebrates	6.0%	5.5%	9.9%	9.3%
Land Mammals	14.9%	14.2%	9.9%	7.4%
Marine Mammals	16.1%	25.1%	9.1%	7.1%
Birds and Eggs	1.3%	0.8%	1.5%	1.9%
Wild Plants		0.3%	0.5%	2.5%

Note: wild plant data not collected for 1982/83

Figure XI-4. Harvests of Wild Resources for Home Use, Pounds Usable Weight per Capita, Old Harbor, 1982/83, 1986, 1989, and 1991/92

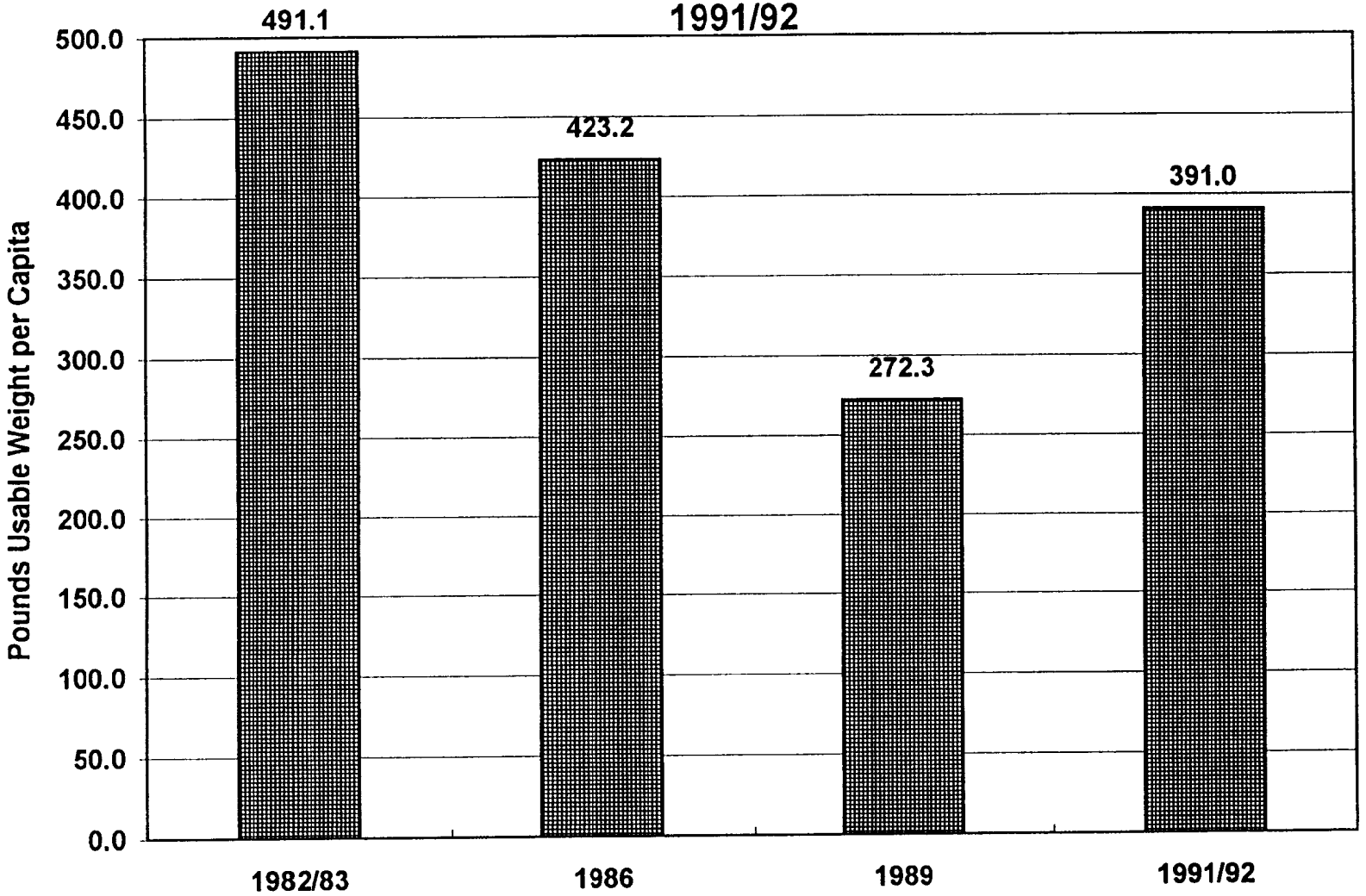


Figure XI-5. Per Capita Harvests of Wild Resources by Resource Category, Old Harbor, 1982/83, 1986, 1989, and 1991/92

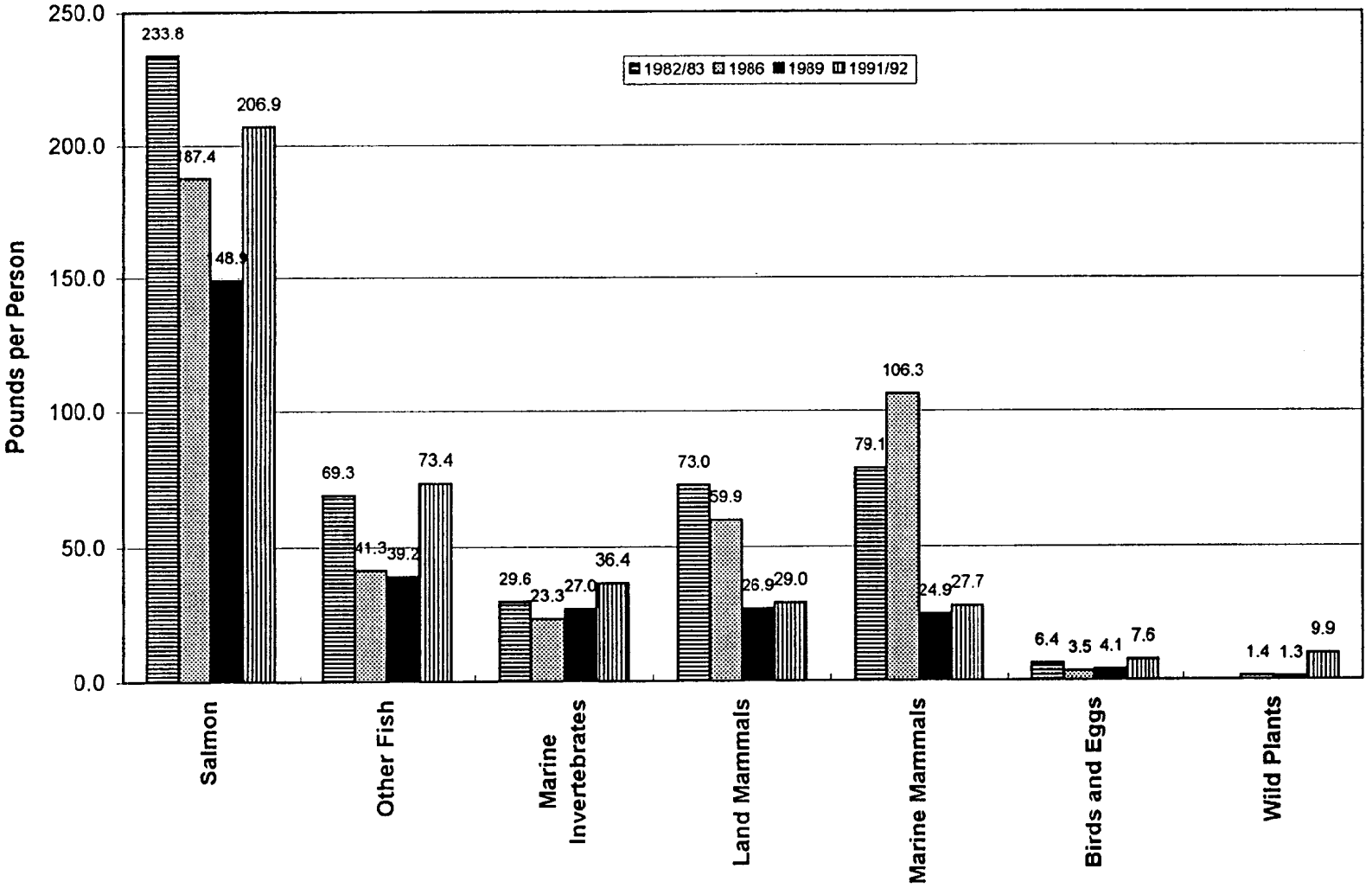


Figure XI-6. Composition of Wild Resource Harvests by Resource Category, Old Harbor, 1991/92

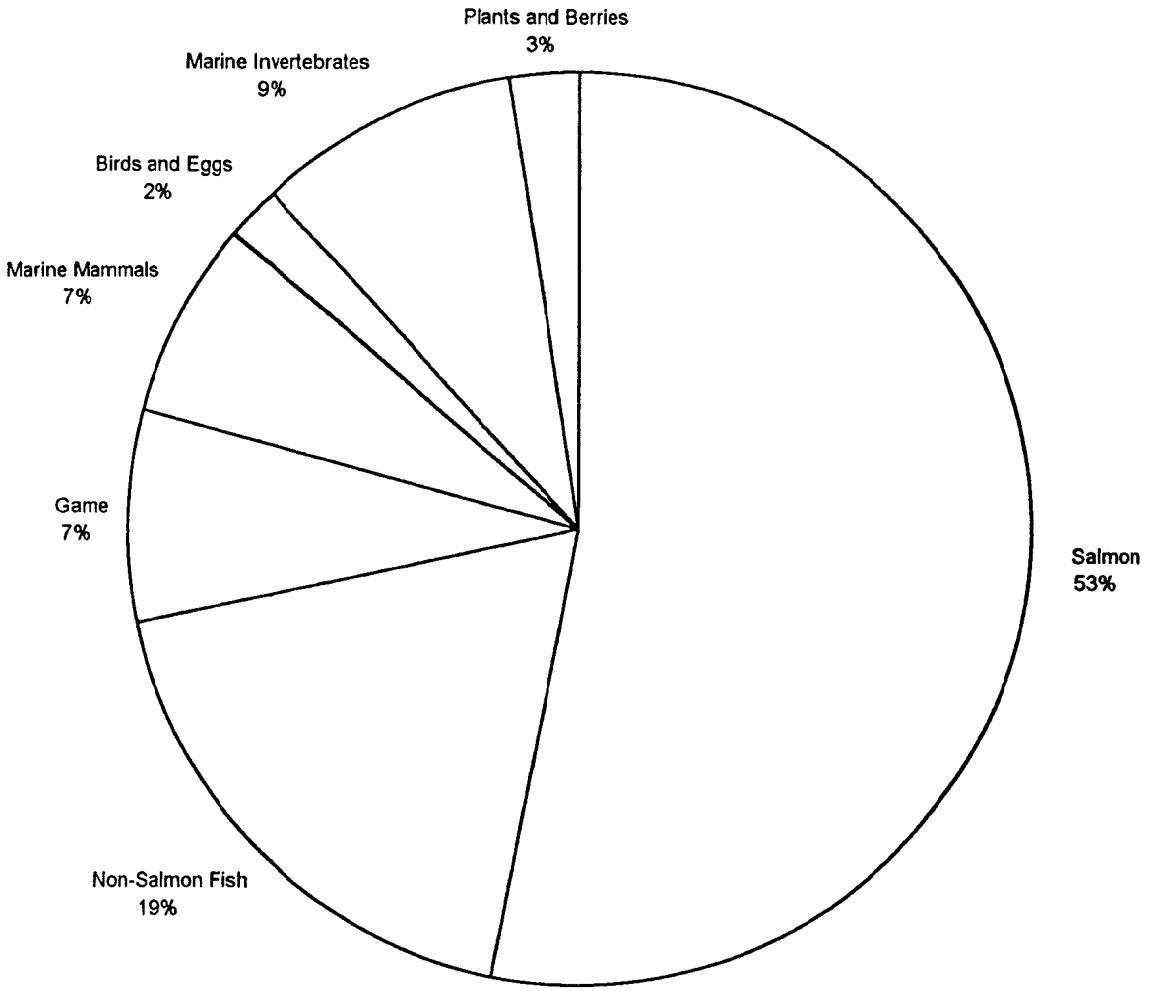


Table XI-13. Estimated Harvest and Use of Fish, Mammal, Bird, and Plant Resources, Old Harbor, 1991/92

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	97.6	95.2	84,781.10	1,284.56	390.95			25.51%	27.01%
Fish	100.0	92.9	92.9	88.1	88.1	60,792.93	921.10	280.34			26.21%	27.51%
Salmon	95.2	90.5	88.1	76.2	76.2	44,868.07	679.82	206.90	10,398.02	157.55	23.41%	24.67%
Chum Salmon	57.1	47.6	45.2	28.6	33.3	7,374.84	111.74	34.01	1,423.71	21.57	35.89%	38.30%
Coho Salmon	88.1	81.0	76.2	54.8	71.4	25,515.66	386.60	117.66	4,656.14	70.55	24.15%	24.95%
Coho Salmon-Fingerling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Chinook Salmon	23.8	16.7	16.7	9.5	7.1	301.12	4.56	1.39	34.57	0.52	47.70%	48.63%
Pink Salmon	83.3	66.7	66.7	45.2	52.4	5,746.71	87.07	26.50	2,710.71	41.07	27.86%	29.94%
Sockeye Salmon	76.2	52.4	52.4	40.5	40.5	5,929.74	89.84	27.34	1,572.87	23.83	36.64%	37.08%
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	97.6	81.0	78.6	76.2	73.8	15,924.86	241.29	73.43			47.31%	47.99%
Cod	50.0	28.6	28.6	26.2	26.2	1,267.20	19.20	5.84	396.00	6.00	59.96%	60.26%
Pacific Cod (Gray)	50.0	28.6	28.6	26.2	26.2	1,267.20	19.20	5.84	396.00	6.00	59.96%	60.26%
Sablefish (Black Cod)	4.8	2.4	2.4	2.4	2.4	48.71	0.74	0.22	15.71	0.24	121.78%	122.48%
Greenling	21.4	11.9	11.9	9.5	11.9	69.14	1.05	0.32	17.29	0.26	59.42%	60.34%
Lingcod	21.4	11.9	11.9	9.5	11.9	69.14	1.05	0.32	17.29	0.26	59.42%	60.34%
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	4.8	2.4	2.4	4.8	4.8	4.71	0.07	0.02	1.57	0.02	121.78%	122.48%
Unknown Flounder	4.8	2.4	2.4	4.8	4.8	4.71	0.07	0.02	1.57	0.02	121.78%	122.48%
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	95.2	71.4	69.0	69.0	66.7	13,370.92	202.59	61.66	370.39	5.61	50.03%	50.70%
Herring	21.4	4.8	4.8	19.0	9.5	70.71	1.07	0.33	11.79 gal	0.18	89.88%	90.42%
Rockfish	33.3	23.8	23.8	19.0	16.7	807.93	12.24	3.73	407.79	6.18	59.07%	60.45%
Black Rockfish (black bass)	28.6	19.0	19.0	14.3	11.9	490.29	7.43	2.26	326.86	4.95	64.85%	63.65%
Red Rockfish	21.4	11.9	11.9	11.9	7.1	311.14	4.71	1.43	77.79	1.18	103.30%	104.22%
Unknown Rockfish	2.4	2.4	2.4	0.0	0.0	6.51	0.10	0.03	3.14	0.05	121.78%	119.75%
Sculpin	4.8	4.8	4.8	0.0	2.4	8.64	0.13	0.04	17.29	0.26	110.99%	112.56%
Irish Lord	2.4	2.4	2.4	0.0	0.0	0.79	0.01	0.00	1.57	0.02	121.78%	121.58%
Unknown Sculpin	2.4	2.4	2.4	0.0	2.4	7.86	0.12	0.04	15.71	0.24	121.78%	123.37%
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	0.0	0.0	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Trout and Char	33.3	28.6	28.6	9.5	9.5	276.87	4.20	1.28	197.76	3.00	40.49%	43.31%
Char (general)	31.0	28.6	28.6	7.1	9.5	234.76	3.56	1.08	167.69	2.54	41.64%	44.23%
Dolly Varden	31.0	28.6	28.6	7.1	9.5	234.76	3.56	1.08	167.69	2.54	41.64%	44.23%
Dolly Varden-Fingerling	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 XI-13. Estimated Harvest and Use of Fish, Mammal, Bird, and Plant Resources, Old Harbor, 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
Trout	11.9	9.5	9.5	7.1	4.8	42.11	0.64	0.19	30.08	0.46	77.35%	79.33%
Rainbow Trout	7.1	4.8	4.8	4.8	2.4	24.20	0.37	0.11	17.29	0.26	110.99%	111.67%
Steelhead	4.8	4.8	4.8	2.4	2.4	17.91	0.27	0.08	12.79	0.19	107.50%	109.94%
Game	92.9	47.6	45.2	76.2	54.8	6,297.97	95.42	29.04	201.14	3.05	40.10%	28.01%
Big Game	92.9	47.6	45.2	76.2	54.8	6,169.90	93.48	28.45	135.14	2.05	29.23%	27.46%
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	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Brown Bear	7.1	0.0	0.0	7.1	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Caribou	2.4	0.0	0.0	2.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Deer	92.9	47.6	45.2	71.4	54.8	5,702.40	86.40	26.30	132.00	2.00	29.64%	28.92%
Deer, Male	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, Sex Unknown	92.9	47.6	45.2	71.4	54.8	5,702.40	86.40	26.30	132.00	2.00	29.64%	28.92%
Elk	21.4	4.8	2.4	19.0	7.1	353.57	5.36	1.63	1.57	0.02	121.78%	119.75%
Goat	4.8	2.4	2.4	2.4	2.4	113.93	1.73	0.53	1.57	0.02	121.78%	121.58%
Moose	9.5	0.0	0.0	9.5	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Small Game/Furbearer	19.0	9.5	9.5	11.9	9.5	128.07	1.94	0.59	66.00	1.00	72.12%	73.64%
Fox	9.5	4.8	4.8	4.8	2.4	0.00	0.00	0.00	9.43	0.14	103.01%	0.00%
Red Fox	9.5	4.8	4.8	4.8	2.4	0.00	0.00	0.00	9.43	0.14	103.01%	0.00%
Beaver	4.8	2.4	2.4	2.4	4.8	27.50	0.42	0.13	3.14	0.05	121.78%	123.37%
Hare	14.3	9.5	9.5	7.1	7.1	100.57	1.52	0.46	50.29	0.76	69.93%	71.38%
Snowshoe Hare	14.3	9.5	9.5	7.1	7.1	100.57	1.52	0.46	50.29	0.76	69.93%	71.38%
Land Otter	2.4	0.0	0.0	2.4	2.4	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	3.14	0.05	121.78%	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%
Tree 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	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%
Marine Mammals	61.9	14.3	14.3	54.8	33.3	6,009.14	91.05	27.71	67.57	1.02	71.31%	69.52%
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	59.5	14.3	14.3	52.4	28.6	2,552.00	38.67	11.77	45.57	0.69	74.71%	76.09%
Harbor Seal	59.5	14.3	14.3	52.4	28.6	2,552.00	38.67	11.77	45.57	0.69	74.71%	76.09%
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	42.9	9.5	9.5	38.1	26.2	3,457.14	52.38	15.94	17.29	0.26	67.34%	69.03%
Sea Otter	2.4	2.4	2.4	0.0	2.4	0.00	0.00	0.00	4.71	0.07	121.78%	0.00%

Table XI-13. Estimated Harvest and Use of Fish, Mammal, Bird, and Plant Resources, Old Harbor, 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
Birds and Eggs	76.2	54.8	54.8	64.3	47.6	1,652.28	25.03	7.62	3,201.00	48.50	33.00%	42.19%
Birds	73.8	35.7	35.7	61.9	40.5	1,404.86	21.29	6.48	1,607.57	24.36	49.77%	48.54%
Upland Game Birds	14.3	4.8	4.8	9.5	4.8	15.40	0.23	0.07	22.00	0.33	92.90%	93.13%
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	14.3	4.8	4.8	9.5	4.8	15.40	0.23	0.07	22.00	0.33	92.90%	93.13%
Migratory Birds	73.8	35.7	35.7	61.9	40.5	1,389.46	21.05	6.41	1,585.57	24.02	49.88%	48.60%
Waterfowl	73.8	35.7	35.7	61.9	40.5	1,389.46	21.05	6.41	1,585.57	24.02	49.88%	48.60%
Ducks	73.8	35.7	35.7	59.5	40.5	1,380.34	20.91	6.37	1,580.86	23.95	49.85%	48.55%
Eider	9.5	7.1	7.1	2.4	9.5	47.77	0.72	0.22	29.86	0.45	74.65%	74.93%
Eider, Unknown	9.5	7.1	7.1	2.4	9.5	47.77	0.72	0.22	29.86	0.45	74.65%	74.93%
Scoter	23.8	14.3	14.3	14.3	14.3	199.41	3.02	0.92	221.57	3.36	60.42%	60.27%
Scoter, White-winged	4.8	4.8	4.8	0.0	2.4	21.21	0.32	0.10	23.57	0.36	89.88%	90.01%
Scoter, Black	2.4	0.0	0.0	2.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Scoter, Surf	2.4	2.4	2.4	0.0	2.4	14.14	0.21	0.07	15.71	0.24	121.78%	120.67%
Scoter, Unknown	19.0	11.9	11.9	11.9	11.9	164.06	2.49	0.76	182.29	2.76	67.25%	67.23%
Harlequin	11.9	9.5	9.5	4.8	7.1	13.36	0.20	0.06	26.71	0.40	77.45%	77.63%
Goldeneye	50.0	21.4	21.4	31.0	21.4	129.49	1.96	0.60	161.86	2.45	51.62%	51.57%
Bufflehead	4.8	2.4	2.4	2.4	2.4	6.29	0.10	0.03	15.71	0.24	121.78%	123.37%
Merganser	7.1	4.8	4.8	2.4	4.8	12.73	0.19	0.06	14.14	0.21	85.60%	85.03%
Scaup	11.9	11.9	11.9	2.4	11.9	173.96	2.64	0.80	193.29	2.93	61.19%	62.65%
Mallard	73.8	35.7	35.7	54.8	40.5	526.43	7.98	2.43	526.43	7.98	56.13%	53.43%
Pintail	23.8	14.3	14.3	9.5	14.3	74.17	1.12	0.34	92.71	1.40	60.98%	58.98%
Wigeon	23.8	14.3	14.3	9.5	14.3	91.30	1.38	0.42	130.43	1.98	56.37%	55.59%
Teal	16.7	9.5	9.5	7.1	11.9	17.44	0.26	0.08	58.14	0.88	74.82%	73.76%
Gadwall	9.5	9.5	9.5	0.0	9.5	88.00	1.33	0.41	110.00	1.67	65.49%	63.15%
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%
Ducks, Unknown	2.4	0.0	0.0	2.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese	19.0	4.8	4.8	16.7	2.4	9.11	0.14	0.04	4.71	0.07	89.88%	99.16%
Black Brant	2.4	0.0	0.0	2.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Snow Geese	2.4	2.4	2.4	0.0	0.0	7.23	0.11	0.03	3.14	0.05	121.78%	122.48%
White-fronted Geese	2.4	0.0	0.0	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Canada Geese (general)	4.8	2.4	2.4	4.8	0.0	1.89	0.03	0.01	1.57	0.02	121.78%	118.83%
Canada Geese, Unknown	4.8	2.4	2.4	4.8	0.0	1.89	0.03	0.01	1.57	0.02	121.78%	118.83%
Geese, Unknown	9.5	0.0	0.0	9.5	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Shorebirds	2.4	0.0	0.0	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Common Snipe	2.4	0.0	0.0	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table XI-13. Estimated Harvest and Use of Fish, Mammal, Bird, and Plant Resources, Old Harbor, 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
Seabirds	2.4	0.0	0.0	2.4	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%
Puffins	2.4	0.0	0.0	2.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Gulls	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
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%
Auklet	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Parakeet Auklet	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	33.3	28.6	28.6	16.7	19.0	247.42	3.75	1.14	1,593.43	24.14	45.58%	41.73%
Seabird Eggs	33.3	28.6	28.6	16.7	19.0	243.65	3.69	1.12	1,565.14	23.71	46.19%	41.79%
Gull Eggs	33.3	28.6	28.6	16.7	19.0	198.47	3.01	0.92	661.57	10.02	39.66%	43.49%
Puffin 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	9.5	9.5	9.5	2.4	0.0	45.18	0.68	0.21	903.57	13.69	66.16%	68.14%
Kittiwake 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	2.4	2.4	2.4	0.0	2.4	0.24	0.00	0.00	4.71	0.07	121.78%	123.37%
Snipe Eggs	2.4	2.4	2.4	0.0	2.4	0.24	0.00	0.00	4.71	0.07	121.78%	123.37%
Black Snipe Eggs (Oystercatcher)	2.4	2.4	2.4	0.0	2.4	0.24	0.00	0.00	4.71	0.07	121.78%	123.37%
Waterfowl Eggs	2.4	2.4	2.4	0.0	2.4	3.54	0.05	0.02	23.57	0.36	121.78%	123.37%
Duck Eggs	2.4	2.4	2.4	0.0	2.4	3.54	0.05	0.02	23.57	0.36	121.78%	123.37%
Eider 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	2.4	2.4	2.4	0.0	2.4	3.54	0.05	0.02	23.57	0.36	121.78%	123.37%
Marine Invertebrates	97.6	78.6	78.6	85.7	71.4	7,885.35	119.48	36.36			26.51%	28.79%
Clams	88.1	69.0	69.0	61.9	57.1	4,403.14	66.71	20.30	1,467.71 gal	22.24	23.76%	25.85%
Butter Clams	85.7	69.0	69.0	54.8	54.8	3,922.29	59.43	18.09	1,307.43 gal	19.81	22.92%	24.92%
Razor Clams	28.6	19.0	19.0	14.3	14.3	240.43	3.64	1.11	80.14 gal	1.21	49.92%	51.55%
Pacific Littleneck Clams (Steamers)	23.8	21.4	21.4	9.5	11.9	240.43	3.64	1.11	80.14 gal	1.21	44.31%	46.19%
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%
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	21.4	21.4	21.4	4.8	7.1	300.11	4.55	1.38	100.04 gal	1.52	86.81%	89.68%
Geoducks	4.8	4.8	4.8	2.4	4.8	212.76	3.22	0.98	70.92 gal	1.07	121.42%	123.91%
Scallops	7.1	0.0	0.0	7.1	2.4	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mussels	9.5	9.5	9.5	4.8	2.4	40.45	0.61	0.19	26.97 gal	0.41	79.34%	81.11%
Crabs	83.3	33.3	33.3	71.4	35.7	1,529.31	23.17	7.05	1,162.86	17.62	46.50%	46.53%
Dungeness Crab	52.4	19.0	19.0	40.5	16.7	320.10	4.85	1.48	457.29	6.93	84.17%	85.30%
King Crab	40.5	14.3	11.9	35.7	7.1	263.84	4.00	1.22	114.71	1.74	75.10%	75.49%
Tanner Crab	76.2	21.4	21.4	66.7	28.6	945.37	14.32	4.36	590.86	8.95	51.79%	51.62%

Table XI-13. Estimated Harvest and Use of Fish, Mammal, Bird, and Plant Resources, Old Harbor, 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
Tanner Crab, Unknown	11.9	11.9	11.9	0.0	11.9	578.29	8.76	2.67	361.43	5.48	57.82%	58.05%
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)	57.1	45.2	45.2	35.7	38.1	672.57	10.19	3.10	168.14 gal	2.55	36.61%	38.77%
Chitons (small)	57.1	45.2	45.2	35.7	38.1	672.57	10.19	3.10	168.14 gal	2.55	36.61%	38.77%
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	47.6	23.8	23.8	33.3	23.8	273.43	4.14	1.26	68.36	1.04	45.71%	46.56%
Sea Cucumber	7.1	7.1	7.1	4.8	4.8	91.14	1.38	0.42	45.57 gal	0.69	79.85%	82.31%
Sea Urchin	61.9	40.5	40.5	47.6	38.1	185.56	2.81	0.86	371.12 gal	5.62	49.64%	52.32%
Shrimp	4.8	2.4	2.4	2.4	2.4	157.14	2.38	0.72	78.57 gal	1.19	121.78%	120.67%
Snails	4.8	4.8	4.8	2.4	2.4	5.59	0.08	0.03	3.72 gal	0.06	98.86%	101.44%
Limpets	4.8	4.8	4.8	2.4	2.4	14.14	0.21	0.07	9.43 gal	0.14	103.01%	105.58%
Plants and Berries	85.7	83.3	83.3	33.3	26.2	2,143.43	32.48	9.88	535.86 gal	8.12	37.39%	40.92%
Berries	85.7	83.3	83.3	31.0	26.2	1,601.29	24.26	7.38	400.32 gal	6.07	21.74%	25.79%
Plants/Greens/Mushrooms	31.0	31.0	31.0	7.1	2.4	466.71	7.07	2.15	116.68 gal	1.77	94.98%	97.69%
Seaweed/Kelp (Food)	4.8	4.8	4.8	4.8	2.4	75.43	1.14	0.35	18.86 gal	0.29	103.01%	105.58%
Fertilizer	7.1	7.1	7.1	2.4	2.4	0.00	0.00	0.00	1,488.93 gal	22.56	115.63%	0.00%
Vegetative Fertilizer	7.1	7.1	7.1	2.4	2.4	0.00	0.00	0.00	1,488.93 gal	22.56	115.63%	0.00%
Seaweed/Kelp (Non-food)	7.1	7.1	7.1	2.4	2.4	0.00	0.00	0.00	1,488.93 gal	22.56	115.63%	0.00%
Wood	69.0	64.3	64.3	21.4	23.8	0.00	0.00	0.00	100.63 crd	1.52	27.03%	0.00%

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

Table XI-14. Estimated Amount of Resources Removed From Commercial Harvest, Old Harbor, 1991/92

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		14392.73	20.96	16.98
Fish		13609.69	22.39	16.05
Salmon	2795.57	11282.70	25.15	13.31
Chum Salmon	443.14	2295.48	31.13	2.71
Coho Salmon	597.14	3272.34	12.82	3.86
Chinook Salmon	23.57	205.31	68.18	0.24
Pink Salmon	617.57	1309.25	22.78	1.54
Sockeye Salmon	1114.14	4200.32	70.83	4.95
Non-Salmon Fish		2326.99	14.61	2.74
Cod	99.00	316.80	25.00	0.37
Pacific Cod (Gray)	99.00	316.80	25.00	0.37
Sablefish (Black Cod)	15.71	48.71	100.00	0.06
Greenling	1.57	6.29	9.09	0.01
Lingcod	1.57	6.29	9.09	0.01
Halibut	46.66	1684.27	12.60	1.99
Rockfish	77.00	268.71	33.26	0.32
Black Rockfish (black bass)	15.71	23.57	4.81	0.03
Red Rockfish	61.29	245.14	78.79	0.29
Trout and Char	1.57	2.20	0.79	0.00
Trout	1.57	2.20	5.22	0.00
Steelhead	1.57	2.20	12.29	0.00
Marine Invertebrates		783.04	9.93	0.92
Crabs	394.43	603.90	39.49	0.71
Dungeness Crab	31.43	22.00	6.87	0.03
King Crab	1.57	3.61	1.37	0.00
Tanner Crab	361.43	578.29	61.17	0.68
Tanner Crab, Unknown	361.43	578.29	100.00	0.68
Octopus	35.36	141.43	51.72	0.17
Sea Cucumber	18.86 gal	37.71	41.38	0.04

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

Table XI-15. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Old Harbor, 1991/92

Resource	Percent Base	Subsistence Methods: Net No.	Net Lbs.	Seine No.	Seine 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	8.55	8.17	49.57	50.36	0.91	1.09	59.03	59.62	26.89	25.15	14.09	15.23		
Chum Salmon	gear type	35.34	44.43	6.80	8.03	100.00	100.00	12.37	14.70	15.85	20.35	15.13	16.79		
	resource	22.08	22.08	24.61	24.61	6.62	6.62	53.31	53.31	31.13	31.13	15.56	15.56		
	total	3.02	3.63	3.37	4.05	0.91	1.09	7.30	8.76	4.26	5.12	2.13	2.56	13.69	16.44
Coho Salmon	gear type	21.20	28.20	58.08	72.60	0.00	0.00	51.84	65.19	21.36	29.00	59.87	70.30		
	resource	4.05	4.05	64.29	64.29	0.00	0.00	68.34	68.34	12.82	12.82	18.83	18.83		
	total	1.81	2.30	28.79	36.56	0.00	0.00	30.60	38.87	5.74	7.29	8.43	10.71	44.78	56.87
Coho Salmon-Fingerling	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
Chinook Salmon	gear type	0.00	0.00	0.06	0.12	0.00	0.00	0.05	0.10	0.84	1.82	0.54	1.00		
	resource	0.00	0.00	9.09	9.09	0.00	0.00	9.09	9.09	68.18	68.18	22.73	22.73		
	total	0.00	0.00	0.03	0.06	0.00	0.00	0.03	0.06	0.23	0.46	0.08	0.15	0.33	0.67
Pink Salmon	gear type	30.92	15.91	28.96	14.01	0.00	0.00	28.80	14.01	22.09	11.60	22.21	10.09		
	resource	10.14	10.14	55.07	55.07	0.00	0.00	65.22	65.22	22.78	22.78	12.00	12.00		
	total	2.64	1.30	14.36	7.05	0.00	0.00	17.00	8.35	5.94	2.92	3.13	1.54	26.07	12.81
Sockeye Salmon	gear type	12.53	11.47	6.10	5.24	0.00	0.00	6.94	6.00	39.85	37.23	2.25	1.82		
	resource	7.09	7.09	19.98	19.98	0.00	0.00	27.07	27.07	70.83	70.83	2.10	2.10		
	total	1.07	0.94	3.02	2.64	0.00	0.00	4.09	3.58	10.71	9.36	0.32	0.28	15.13	13.22
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, 1992

Table XI-16. Estimated Salmon Harvest by Gear Type and Species, Old Harbor, 1991/92

		Subsistence Methods								Removed from Commercial Catch		Rod and Reel		Any Method	
		Net		Seine		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
Salmon	numbers	889.30	13.47	5,154.29	78.10	94.29	1.43	6,137.87	93.00	2,795.57	42.36	1,464.57	22.19	10,398.02	157.55
	pounds	3,664.52	55.52	22,597.08	342.38	488.40	7.40	26,750.00	405.30	11,282.70	170.95	6,835.37	103.57	44,868.07	679.82
Chum Salmon	numbers	314.29	4.76	350.43	5.31	94.29	1.43	759.00	11.50	443.14	6.71	221.57	3.36	1,423.71	21.57
	pounds	1,628.00	24.67	1,815.22	27.50	488.40	7.40	3,931.62	59.57	2,295.48	34.78	1,147.74	17.39	7,374.84	111.74
Coho Salmon	numbers	188.57	2.86	2,993.57	45.36	0.00	0.00	3,182.14	48.21	597.14	9.05	876.86	13.29	4,656.14	70.55
	pounds	1,033.37	15.66	16,404.77	248.56	0.00	0.00	17,438.14	264.21	3,272.34	49.58	4,805.18	72.81	25,515.66	386.60
Coho Salmon-Fingerling	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
Chinook Salmon	numbers	0.00	0.00	3.14	0.05	0.00	0.00	3.14	0.05	23.57	0.36	7.86	0.12	34.57	0.52
	pounds	0.00	0.00	27.37	0.41	0.00	0.00	27.37	0.41	205.31	3.11	68.44	1.04	301.12	4.56
Pink Salmon	numbers	275.00	4.17	1,492.86	22.62	0.00	0.00	1,767.86	26.79	617.57	9.36	325.29	4.93	2,710.71	41.07
	pounds	583.00	8.83	3,164.86	47.95	0.00	0.00	3,747.86	56.79	1,309.25	19.84	689.61	10.45	5,746.71	87.07
Sockeye Salmon	numbers	111.45	1.69	314.29	4.76	0.00	0.00	425.73	6.45	1,114.14	16.88	33.00	0.50	1,572.87	23.83
	pounds	420.15	6.37	1,184.86	17.95	0.00	0.00	1,605.01	24.32	4,200.32	63.64	124.41	1.89	5,929.74	89.84
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, 1992

Table XI-17. Percentage of Households Harvesting Salmon by Gear Type and Species, Old Harbor, 1991/92

Resource	Subsistence Methods				Removed from Commercial Catch	Rod and Reel	Any Method
	Net	Seine	Other	Any Subsistence Gear			
Salmon	14.29	40.48	2.38	47.62	59.52	52.38	88.10
Chum Salmon	4.76	26.19	2.38	33.33	14.29	11.90	45.24
Coho Salmon	4.76	38.10	0.00	42.86	30.95	40.48	76.19
Coho Salmon-Fingerling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chinook Salmon	0.00	2.38	0.00	2.38	14.29	2.38	16.67
Pink Salmon	4.76	30.95	0.00	35.71	30.95	26.19	66.67
Sockeye Salmon	9.52	7.14	0.00	16.67	42.86	7.14	52.38
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, 1992

Table XI-18. Estimated Harvest of Fish Other than Salmon by Gear Type, Old Harbor, 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	8,855.28	134.17	2,326.99	35.26	4,742.60	71.86	0.00	0.00	15,924.86	241.29
Lingcod	pounds	44.00	0.67	6.29	0.10	18.86	0.29	0.00	0.00	69.14	1.05
Pacific Cod (Gray)	pounds	764.34	11.58	316.80	4.80	186.06	2.82	0.00	0.00	1,267.20	19.20
Sablefish (Black Cod)	pounds	0.00	0.00	48.71	0.74	0.00	0.00	0.00	0.00	48.71	0.74
Unknown Flounder	pounds	4.71	0.07	0.00	0.00	0.00	0.00	0.00	0.00	4.71	0.07
Halibut	pounds	7,951.08	120.47	1,684.27	25.52	3,735.58	56.60	0.00	0.00	13,370.92	202.59
Herring	pounds	70.71	1.07	0.00	0.00	0.00	0.00	0.00	0.00	70.71	1.07
Black Rockfish (black bass)	pounds	0.00	0.00	23.57	0.36	466.71	7.07	0.00	0.00	490.29	7.43
Red Rockfish	pounds	12.57	0.19	245.14	3.71	53.43	0.81	0.00	0.00	311.14	4.71
Unknown Rockfish	pounds	0.00	0.00	0.00	0.00	6.51	0.10	0.00	0.00	6.51	0.10
Irish Lord	pounds	0.00	0.00	0.00	0.00	0.79	0.01	0.00	0.00	0.79	0.01
Unknown Sculpin	pounds	7.86	0.12	0.00	0.00	0.00	0.00	0.00	0.00	7.86	0.12
Dolly Varden	pounds	0.00	0.00	0.00	0.00	234.76	3.56	0.00	0.00	234.76	3.56
Rainbow Trout	pounds	0.00	0.00	0.00	0.00	24.20	0.37	0.00	0.00	24.20	0.37
Steelhead	pounds	0.00	0.00	2.20	0.03	15.71	0.24	0.00	0.00	17.91	0.27

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

Table XI-19. Percentage of Fish Other Than Salmon Harvested by Gear Type, Old Harbor, 1991/92

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	55.61	14.61	29.78	0.00
Lingcod	resource	63.64	9.09	27.27	0.00
Pacific Cod (Gray)	resource	60.32	25.00	14.68	0.00
Sablefish (Black Cod)	resource	0.00	100.00	0.00	0.00
Unknown Flounder	resource	100.00	0.00	0.00	0.00
Halibut	resource	59.47	12.60	27.94	0.00
Herring	resource	100.00	0.00	0.00	0.00
Black Rockfish (black bass)	resource	0.00	4.81	95.19	0.00
Red Rockfish	resource	4.04	78.79	17.17	0.00
Unknown Rockfish	resource	0.00	0.00	100.00	0.00
Irish Lord	resource	0.00	0.00	100.00	0.00
Unknown Sculpin	resource	100.00	0.00	0.00	0.00
Dolly Varden	resource	0.00	0.00	100.00	0.00
Rainbow Trout	resource	0.00	0.00	100.00	0.00
Steelhead	resource	0.00	12.29	87.71	0.00

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

Table XI-20. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Old Harbor, 1991/92

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	38.10	35.71	50.00	0.00	78.57
Lingcod	7.14	2.38	2.38	0.00	11.90
Pacific Cod (Gray)	11.90	11.90	9.52	0.00	28.57
Sablefish (Black Cod)	0.00	2.38	0.00	0.00	2.38
Unknown Flounder	2.38	0.00	0.00	0.00	2.38
Halibut	30.95	21.43	26.19	0.00	69.05
Herring	4.76	0.00	0.00	0.00	4.76
Black Rockfish (black bass)	0.00	2.38	19.05	0.00	19.05
Red Rockfish	2.38	2.38	9.52	0.00	11.90
Unknown Rockfish	0.00	0.00	2.38	0.00	2.38
Irish Lord	0.00	0.00	2.38	0.00	2.38
Unknown Sculpin	2.38	0.00	0.00	0.00	2.38
Dolly Varden	0.00	0.00	28.57	0.00	28.57
Rainbow Trout	0.00	0.00	4.76	0.00	4.76
Steelhead	0.00	2.38	2.38	0.00	4.76

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

Figure XI-7. Percentage of Old Harbor Households Reporting Lower Levels of Uses of Wild Resources Compared to 1988, the Year Before the Exxon Valdez Oil Spill

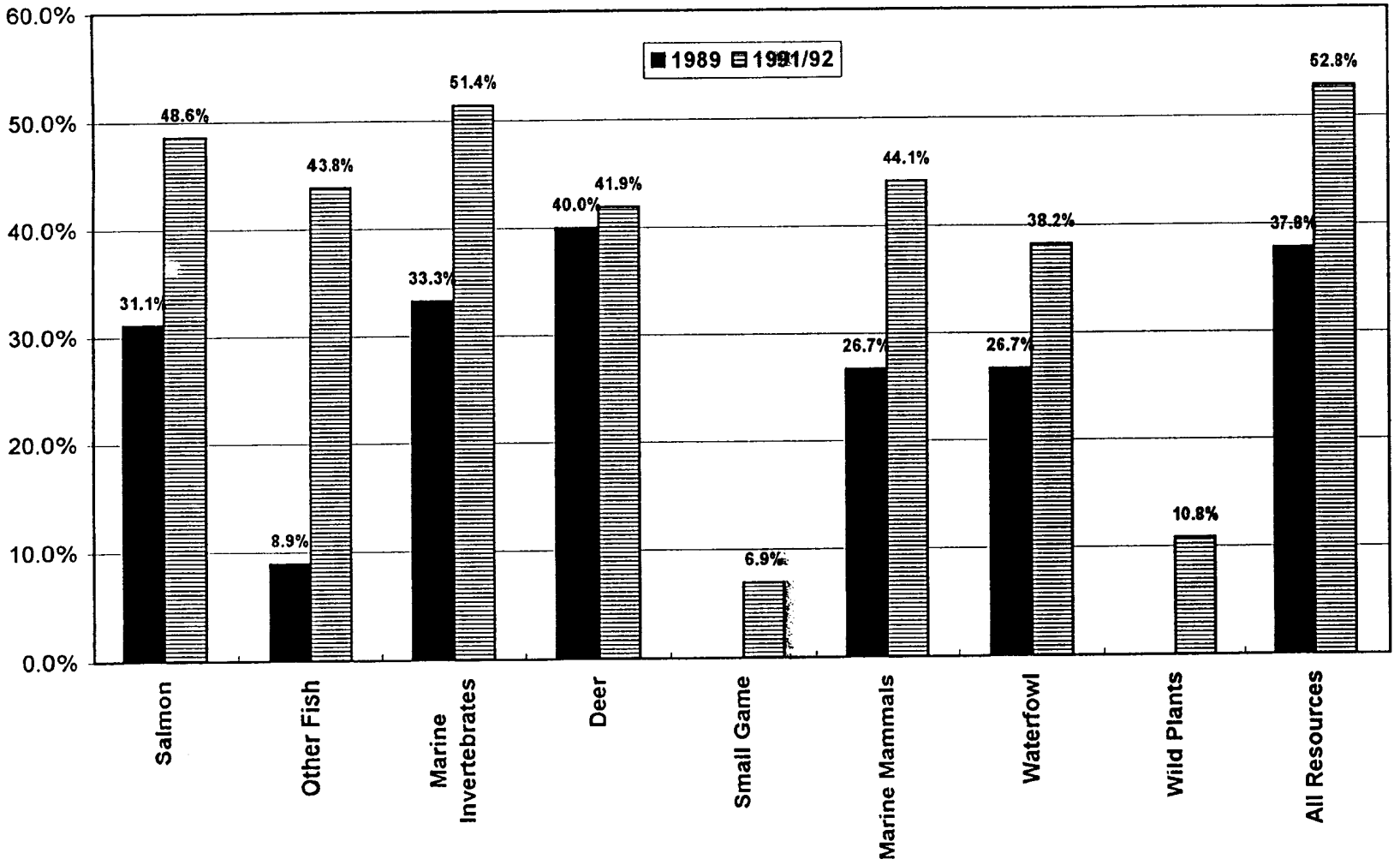


Figure XI-8. Composition of Harvests by Resource Category, Old Harbor, 1982/83, 1986, 1989, and 1991/92

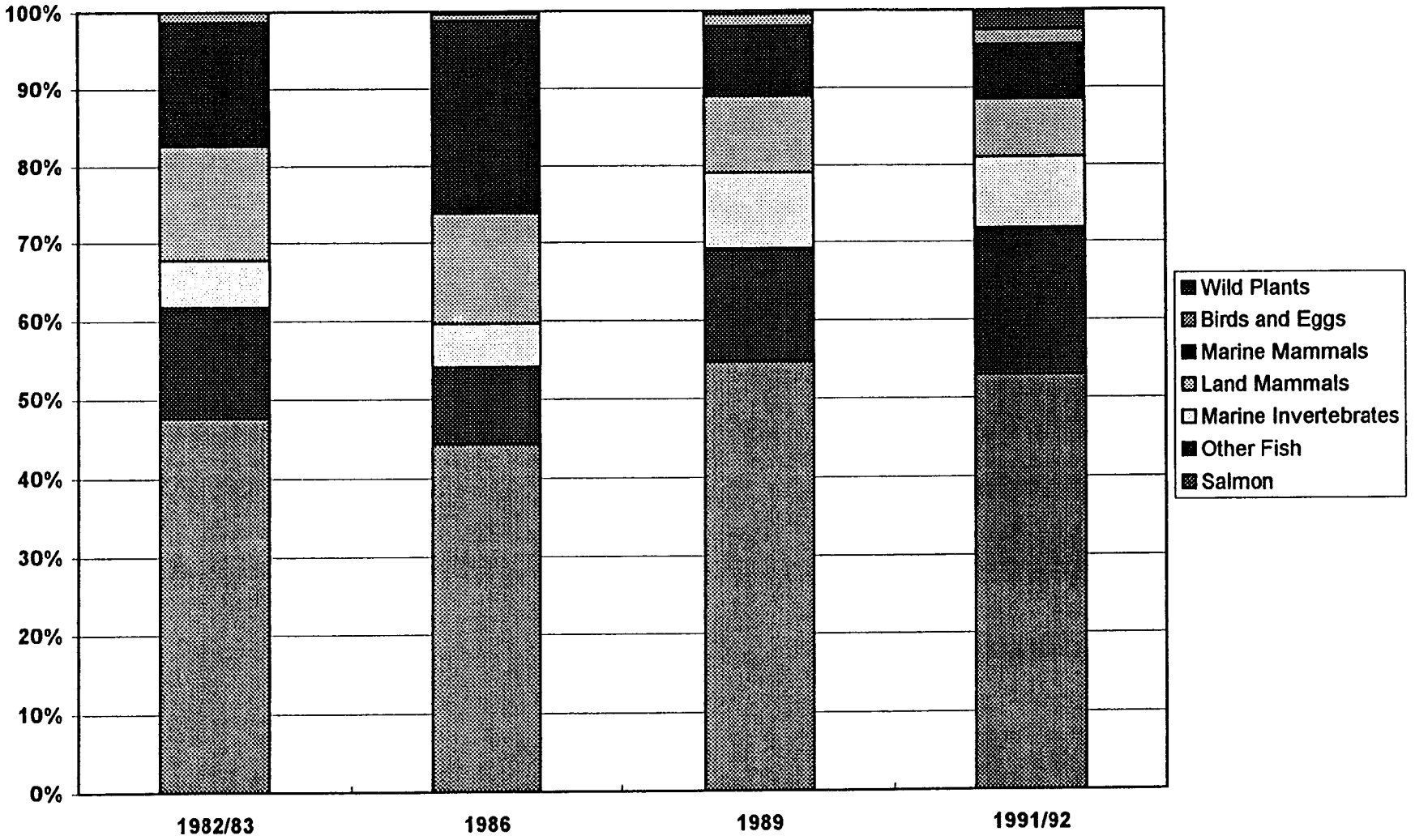


Table XI-21. Uses of Wild Foods, Old Harbor

	STUDY YEAR 1991
ANY WILD FOODS EATEN YESTERDAY?	
No	
Count	20
Col %	46.5%
Yes	
Count	23
Col %	53.5%
WILD FOODS AS MAIN PART OF A MEAL	
No	
Count	24
Col %	55.8%
Yes	
Count	19
Col %	44.2%
HARVEST OF WILD FOODS BY RESPONDENT	
No	
Count	33
Col %	76.7%
Yes	
Count	10
Col %	23.3%
WF HARVESTED BY RELATIVE IN HH	
No	
Count	39
Col %	90.7%
Yes	
Count	4
Col %	9.3%
WF HARVESTED BY RELATIVE IN ANOTHER HH	
No	
Count	36
Col %	83.7%
Yes	
Count	7
Col %	16.3%

(continued)

Table XI-21. Uses of Wild Foods, Old Harbor

	STUDY YEAR 1991
WF HARVESTED BY RELATIVE IN ANOTHER COMM.	
No	
Count	43
Col %	100.0%
WF HARVESTED BY FRIEND IN HH	
No	
Count	43
Col %	100.0%
WF HARVESTED BY FRIEND IN COMMUNITY	
No	
Count	37
Col %	86.0%
Yes	
Count	6
Col %	14.0%
WF HARVESTED BY FRIEND IN ANOTHER COMM.	
No	
Count	42
Col %	97.7%
Yes	
Count	1
Col %	2.3%

Table XI-22. Safety of Using Subsistence Foods, Old Harbor

	STUDY YEAR
	1991
IS EATING BIDARKIES IMPORTANT TO YOU?	
No	
Count	16
Col %	37.2%
Yes	
Count	27
Col %	62.8%
BIDARKIE HARVEST AREAS SAFE?	
Do Not Know	
Count	3
Col %	11.1%
Not Safe	
Count	3
Col %	11.1%
Safe	
Count	21
Col %	77.8%
WHY BIDARKIES NOT SAFE TO EAT	
Do Not Know	
Count	1
Col %	33.3%
Oil pollution or fear of contamination	
Count	1
Col %	33.3%
Safe to eat if you know which ones to take	
Count	1
Col %	33.3%
ARE CLAMS SAFE FOR CHILDREN TO EAT?	
Do Not Know	
Count	2
Col %	4.8%
Not Safe	
Count	5
Col %	11.9%

(continued)

Table XI-22. Safety of Using Subsistence Foods, Old Harbor

	STUDY YEAR
	1991
Safe	
Count	35
Col %	83.3%
WHY CLAMS NOT SAFE TO EAT	
Oil pollution or fear of contamination	
Count	3
Col %	60.0%
Pollution from non-oil spill source	
Count	1
Col %	20.0%
Safe to eat if you know which ones to take	
Count	1
Col %	20.0%
IS EATING SEAL MEAT OR OIL IMPORTANT?	
No	
Count	11
Col %	25.6%
Yes	
Count	32
Col %	74.4%
ARE SEALS FROM HARVEST AREAS SAFE TO EAT?	
Do Not Know	
Count	3
Col %	9.4%
Safe	
Count	29
Col %	90.6%
WHY SEAL NOT SAFE TO EAT	
Safe to eat if you know which ones to take	
Count	1
Col %	100.0%

Table XI-23. Resource Population Statuses, Old Harbor

	STUDY YEAR
	1991
COMPARED TO 1988: DEER	
Do Not Know	
Count	7
Col %	17.9%
Less	
Count	22
Col %	56.4%
Same	
Count	9
Col %	23.1%
More	
Count	1
Col %	2.6%
COMPARED TO 1988: BEAR	
Do Not Know	
Count	10
Col %	25.6%
Less	
Count	5
Col %	12.8%
Same	
Count	15
Col %	38.5%
More	
Count	9
Col %	23.1%
COMPARED TO 1988: HARBOR SEAL	
No Response	
Count	1
Col %	2.6%
Do Not Know	
Count	9
Col %	23.1%
Less	
Count	21

(continued)

Table XI-23. Resource Population Statuses, Old Harbor

	STUDY YEAR
	1991
Col %	53.8%
Same	
Count	7
Col %	17.9%
More	
Count	1
Col %	2.6%
COMPARED TO 1988: SEA LIONS	
Do Not Know	
Count	7
Col %	17.9%
Less	
Count	24
Col %	61.5%
Same	
Count	7
Col %	17.9%
More	
Count	1
Col %	2.6%
COMPARED TO 1988: SEA DUCKS	
Do Not Know	
Count	8
Col %	20.5%
Less	
Count	16
Col %	41.0%
Same	
Count	10
Col %	25.6%
More	
Count	5
Col %	12.8%
COMPARED TO 1988: COMMON MURRE	

(continued)

Table XI-23. Resource Population Statuses, Old Harbor

	STUDY YEAR 1991
Do Not Know	
Count	24
Col %	61.5%
Less	
Count	9
Col %	23.1%
Same	
Count	5
Col %	12.8%
More	
Count	1
Col %	2.6%
COMPARED TO 1988: SALMON	
Do Not Know	
Count	6
Col %	15.4%
Less	
Count	21
Col %	53.8%
Same	
Count	9
Col %	23.1%
More	
Count	3
Col %	7.7%
COMPARED TO 1988: HALIBUT	
Do Not Know	
Count	12
Col %	30.8%
Less	
Count	7
Col %	17.9%
Same	
Count	17
Col %	43.6%

(continued)

Table XI-23. Resource Population Statuses, Old Harbor

	STUDY YEAR 1991
More	
Count	3
Col %	7.7%
COMPARED TO 1988: ROCKFISH	
Do Not Know	
Count	23
Col %	59.0%
Less	
Count	1
Col %	2.6%
Same	
Count	8
Col %	20.5%
More	
Count	7
Col %	17.9%
COMPARED TO 1988: DOLLY VARDEN	
Do Not Know	
Count	15
Col %	38.5%
Less	
Count	7
Col %	17.9%
Same	
Count	12
Col %	30.8%
More	
Count	5
Col %	12.8%
COMPARED TO 1988: CLAMS	
Do Not Know	
Count	9
Col %	23.1%
Less	
Count	15

(continued)

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Table XI-23. Resource Population Statuses, Old Harbor

	STUDY YEAR
	1991
Col %	38.5%
Same	
Count	15
Col %	38.5%
COMPARED TO 1988: BIDARKIES	
Do Not Know	
Count	16
Col %	41.0%
Less	
Count	8
Col %	20.5%
Same	
Count	14
Col %	35.9%
More	
Count	1
Col %	2.6%
COMPARED TO 1988: SEA URCHINS	
Do Not Know	
Count	15
Col %	38.5%
Less	
Count	9
Col %	23.1%
Same	
Count	13
Col %	33.3%
More	
Count	2
Col %	5.1%
COMPARED TO 1988: OCTOPUS	
Do Not Know	
Count	21
Col %	53.8%

(continued)

Table XI-23. Resource Population Statuses, Old Harbor

	STUDY YEAR
	1991
Less	
Count	2
Col %	5.1%
Same	
Count	14
Col %	35.9%
More	
Count	2
Col %	5.1%

Table XI-24. Children's Participation in Subsistence, Old Harbor

	STUDY YEAR
	1991
DO CHILDREN HELP YOUR HH PROCESS WILD FOODS?	
No	
Count	24
Col %	55.8%
Yes	
Count	19
Col %	44.2%
DID EVOS AFFECT PARTICIPATION WITH CHILDREN?	
No	
Count	32
Col %	82.1%
Yes	
Count	7
Col %	17.9%
WHY EVOS AFFECTED PARTICIPATION WITH CHILDREN	
Were too busy with other affairs	
Count	2
Col %	28.6%
Did not trust foods	
Count	2
Col %	28.6%
Afraid to take kids to the beach	
Count	1
Col %	14.3%
Less harvesting activity	
Count	1
Col %	14.3%
Oil pollution threatened everything	
Count	1
Col %	14.3%

Table XI-25. Sharing, Old Harbor

	STUDY YEAR
	1991
DID HOUSEHOLD SHARE?	
No	
Count	4
Col %	9.3%
Yes	
Count	39
Col %	90.7%
PREV. YEAR: SHARING OF WILD RES.	
Less	
Count	9
Col %	22.0%
Same	
Count	29
Col %	70.7%
More	
Count	3
Col %	7.3%
PREV. YEAR: SHARING OF HUNT/FISH GEAR	
Do Not Know	
Count	1
Col %	2.9%
Less	
Count	5
Col %	14.3%
Same	
Count	29
Col %	82.9%
PREV. YEAR: SHARING OF MONEY	
Do Not Know	
Count	1
Col %	3.0%
Less	
Count	10
Col %	30.3%
Same	

(continued)

Table XI-25. Sharing, Old Harbor

	STUDY YEAR
	1991
Count	18
Col %	54.5%
More	
Count	4
Col %	12.1%
PREV. YEAR: SHARING OF LABOR	
Do Not Know	
Count	2
Col %	5.4%
Less	
Count	2
Col %	5.4%
Same	
Count	27
Col %	73.0%
More	
Count	6
Col %	16.2%
PRE-OS: SHARING OF WILD RESOURCES	
No Response	
Count	1
Col %	2.6%
Less	
Count	15
Col %	38.5%
Same	
Count	19
Col %	48.7%
More	
Count	4
Col %	10.3%
PRE-OS: SHARING OF HUNT/FISH GEAR	
No Response	
Count	1
Col %	2.9%

(continued)

Table XI-25. Sharing, Old Harbor

	STUDY YEAR
	1991
Do Not Know	
Count	1
Col %	2.9%
Less	
Count	3
Col %	8.6%
Same	
Count	27
Col %	77.1%
More	
Count	3
Col %	8.6%
PRE-OS: SHARING OF MONEY	
No Response	
Count	1
Col %	3.2%
Less	
Count	8
Col %	25.8%
Same	
Count	14
Col %	45.2%
More	
Count	8
Col %	25.8%
PRE-OS: SHARING OF LABOR	
No Response	
Count	1
Col %	2.9%
Do Not Know	
Count	1
Col %	2.9%
Less	
Count	1
Col %	2.9%

(continued)

Table XI-25. Sharing, Old Harbor

	STUDY YEAR
	1991
Same	
Count	26
Col %	74.3%
More	
Count	6
Col %	17.1%

Table XI-26. Political Activities, Old Harbor

	STUDY YEAR 1991
LAST 3 YRS.: ELDERS INFLUENCE	
Do Not Know	
Count	3
Col %	7.0%
Decreased	
Count	21
Col %	48.8%
Same	
Count	14
Col %	32.6%
Increased	
Count	5
Col %	11.6%
PRE-EVOS: ATTEND PUBLIC MEETINGS	
Never	
Count	19
Col %	47.5%
Sometimes	
Count	17
Col %	42.5%
Almost Always	
Count	4
Col %	10.0%
LAST YEAR: ATTEND PUBLIC MEETINGS	
Never	
Count	11
Col %	25.6%
Sometimes	
Count	26
Col %	60.5%
Almost Always	
Count	6
Col %	14.0%
VOTE IN LAST CITY COUNCIL ELECTION?	
No	

(continued)

Table XI-26. Political Activities, Old Harbor

	STUDY YEAR 1991
Count	8
Col %	18.6%
Yes	
Count	35
Col %	81.4%
VOTE IN LAST STATE-WIDE ELECTION?	
No	
Count	9
Col %	20.9%
Yes	
Count	34
Col %	79.1%
BELONG TO NATIVE CORPORATION?	
No	
Count	8
Col %	18.6%
Yes	
Count	35
Col %	81.4%
REGIONAL NATIVE CORPORATION	
Aleut Corp.	
Count	1
Col %	2.9%
Koniag, Inc.	
Count	34
Col %	97.1%
VOTE IN LAST REG. CORP. ELECTION?	
No	
Count	2
Col %	5.7%
Yes	
Count	33
Col %	94.3%
VILLAGE NATIVE CORPORATION	
None, At Large	

(continued)

Table XI-26. Political Activities, Old Harbor

	STUDY YEAR
	1991
Count	1
Col %	2.9%
Afognak Native Corporation	
Count	2
Col %	5.7%
Akhiok-Kaguyak, Incorporated	
Count	3
Col %	8.6%
Old Harbor Native Corporation	
Count	27
Col %	77.1%
Shuyak, Incorporated	
Count	1
Col %	2.9%
Natives of Kodiak	
Count	1
Col %	2.9%
VOTE IN LAST NATIVE VILLAGE CORP. ELECTION?	
No	
Count	6
Col %	17.6%
Yes	
Count	28
Col %	82.4%
HAS VIEW OF LEADER CHANGED SINCE EVOS?	
Do Not Know	
Count	10
Col %	23.8%
No	
Count	29
Col %	69.0%
Yes	
Count	3
Col %	7.1%

(continued)

Table XI-26. Political Activities, Old Harbor

	STUDY YEAR
	1991
WHY POST EVOS VIEW OF LEADERS	
Do Not Know	
Count	1
Col %	20.0%
Awareness/involvement	
Count	3
Col %	60.0%
Decisive	
Count	1
Col %	20.0%
New leadership	
Count	1
Col %	20.0%

Table XI-27. Significance of Place, Old Harbor

	STUDY YEAR
	1991
MAIN REASON MOVED TO COMMUNITY	
No Response	
Count	1
Col %	2.3%
Born or reared here	
Count	24
Col %	55.8%
Relatives (family)	
Count	1
Col %	2.3%
Married a person born or reared here	
Count	3
Col %	7.0%
Subsistence opportunities	
Count	1
Col %	2.3%
Employment reasons	
Count	8
Col %	18.6%
Economic reasons	
Count	1
Col %	2.3%
Cultural Reasons	
Count	1
Col %	2.3%
Religious Reasons	
Count	1
Col %	2.3%
Not here by choice	
Count	1
Col %	2.3%
Natural disasters forced movement	
Count	1
Col %	2.3%

(continued)

Table XI-27. Significance of Place, Old Harbor

	STUDY YEAR
	1991
LIVE HERE: WHERE PERSON IS FROM	
No	
Count	19
Col %	44.2%
Yes	
Count	24
Col %	55.8%
LIVE HERE: RELATIVES LIVE HERE	
No	
Count	12
Col %	27.9%
Yes	
Count	31
Col %	72.1%
LIVE HERE: MARRIED PERSON FROM HERE	
No	
Count	23
Col %	53.5%
Yes	
Count	20
Col %	46.5%
LIVE HERE: ALWAYS LIVED HERE	
No	
Count	20
Col %	46.5%
Yes	
Count	23
Col %	53.5%
LIVE HERE: FRIENDS LIVE HERE	
No	
Count	10
Col %	23.3%
Yes	
Count	33
Col %	76.7%

(continued)

Table XI-27. Significance of Place, Old Harbor

	STUDY YEAR
	1991
LIVE HERE: HUNTING & FISHING HERE	
No	
Count	5
Col %	11.6%
Yes	
Count	38
Col %	88.4%
LIVE HERE: JOB OPPORTUNITIES HERE	
No	
Count	27
Col %	62.8%
Yes	
Count	16
Col %	37.2%
LIVE HERE: EDUCATIONAL OPPORTUNITIES	
No	
Count	34
Col %	79.1%
Yes	
Count	9
Col %	20.9%
LIVE HERE: COST OF LIVING	
No	
Count	23
Col %	53.5%
Yes	
Count	20
Col %	46.5%
LIVE HERE: HOUSING AVAILABLE	
No	
Count	13
Col %	30.2%
Yes	
Count	30
Col %	69.8%

(continued)

Table XI-27. Significance of Place, Old Harbor

	STUDY YEAR
	1991
LIVE HERE: STORES	
No	
Count	32
Col %	74.4%
Yes	
Count	11
Col %	25.6%
LIVE HERE: MEDICAL SERVICES	
No	
Count	21
Col %	48.8%
Yes	
Count	22
Col %	51.2%
LIVE HERE: OTHER SERVICES	
No	
Count	32
Col %	74.4%
Yes	
Count	11
Col %	25.6%
LIVE HERE: BEAUTY OF AREA	
No	
Count	4
Col %	9.3%
Yes	
Count	39
Col %	90.7%
LIVE HERE: SIZE OF COMMUNITY	
No	
Count	8
Col %	18.6%
Yes	
Count	35
Col %	81.4%

(continued)

Table XI-27. Significance of Place, Old Harbor

	STUDY YEAR
	1991
LIVE HERE: LESS CRIME	
No	
Count	11
Col %	25.6%
Yes	
Count	32
Col %	74.4%
LIVE HERE: LESS DRINKING/DRUGS	
No	
Count	29
Col %	67.4%
Yes	
Count	14
Col %	32.6%
LIVE HERE: NECESSARY PERSONAL FREEDOMS	
No	
Count	11
Col %	25.6%
Yes	
Count	32
Col %	74.4%
LIVE HERE: RECREATIONAL OPPORTUNITIES	
No	
Count	20
Col %	46.5%
Yes	
Count	23
Col %	53.5%
OTHER REASONS FOR LIVING IN COMMUNITY	
Pace of Life	
Count	3
Col %	33.3%
Quality of Life	
Count	2
Col %	22.2%

(continued)

Table XI-27. Significance of Place, Old Harbor

	STUDY YEAR
	1991
Location	
Count	1
Col %	11.1%
Not here by choice	
Count	1
Col %	11.1%
Oil spill forced movement	
Count	1
Col %	11.1%
Climate	
Count	2
Col %	22.2%
MAIN REASON REMAINING IN COMMUNITY	
Do Not Know	
Count	1
Col %	2.3%
Born or reared here	
Count	6
Col %	14.0%
Relatives (family)	
Count	8
Col %	18.6%
Married a person born or reared here	
Count	1
Col %	2.3%
Family has always lived here	
Count	1
Col %	2.3%
Friends	
Count	3
Col %	7.0%
Subsistence opportunities	
Count	2
Col %	4.7%

(continued)

Table XI-27. Significance of Place, Old Harbor

	STUDY YEAR
	1991
Employment reasons	
Count	7
Col %	16.3%
Economic reasons	
Count	2
Col %	4.7%
Housing/property	
Count	2
Col %	4.7%
Other public services	
Count	1
Col %	2.3%
Personal freedoms (politics)	
Count	1
Col %	2.3%
Pace of Life	
Count	3
Col %	7.0%
Quality of Life	
Count	4
Col %	9.3%
Cultural Reasons	
Count	1
Col %	2.3%
POST-EVOS: CHANGE IN LIKING COMMUNITY	
Less	
Count	2
Col %	5.0%
Same	
Count	37
Col %	92.5%
More	
Count	1
Col %	2.5%

(continued)

Table XI-27. Significance of Place, Old Harbor

	STUDY YEAR
	1991
POST-EVOS: WHY CHANGE IN LIKING COMMUNITY	
Non-specific	
Count	1
Col %	25.0%
Animals harvest to find/hunt/fish	
Count	1
Col %	25.0%
Financial situation worse	
Count	1
Col %	25.0%
Less respect for elders	
Count	1
Col %	25.0%
RATHER LIVE IN ANOTHER COMMUNITY	
No Response	
Count	1
Col %	2.3%
No	
Count	28
Col %	65.1%
Yes	
Count	14
Col %	32.6%
EXPECT TO LIVE IN REGION WHEN OLD	
Do Not Know	
Count	5
Col %	11.6%
No	
Count	6
Col %	14.0%
Yes	
Count	32
Col %	74.4%
CONFIDENT ABOUT HUNT/FISH/GATHERING	

(continued)

Table XI-27. Significance of Place, Old Harbor

	STUDY YEAR
	1991
Do Not Know	
Count	1
Col %	2.3%
No	
Count	8
Col %	18.6%
Yes	
Count	34
Col %	79.1%
WHY UNCONFIDENT ABOUT HUNTING/FISHING/GATHERING	
Increased restrictions	
Count	6
Col %	66.7%
Population pressure	
Count	3
Col %	33.3%
Vulnerable to environmental damage	
Count	2
Col %	22.2%
CONTINUE TO LIVE HERE IF NO WILD FOOD	
Do Not Know	
Count	3
Col %	7.0%
No	
Count	17
Col %	39.5%
Yes	
Count	23
Col %	53.5%

Table XI-28. Effectiveness of Oil Spill Responses, Old Harbor

	STUDY YEAR
	1991
EFFECTIVENESS EVOS: US COAST GUARD	
Do Not Know	
Count	7
Col %	17.1%
Not Effective	
Count	3
Col %	7.3%
Somewhat	
Count	6
Col %	14.6%
Effective	
Count	25
Col %	61.0%
EFFECTIVENESS EVOS: ADEC	
Do Not Know	
Count	22
Col %	52.4%
Not Effective	
Count	4
Col %	9.5%
Somewhat	
Count	4
Col %	9.5%
Effective	
Count	12
Col %	28.6%
EFFECTIVENESS EVOS: INSURANCE COMPANIES	
Do Not Know	
Count	22
Col %	75.9%
Not Effective	
Count	3
Col %	10.3%
Somewhat	
Count	3

(continued)

Table XI-28. Effectiveness of Oil Spill Responses, Old Harbor

	STUDY YEAR
	1991
Col %	10.3%
Effective	
Count	1
Col %	3.4%
EFFECTIVENESS EVOS: LOCAL NATIVE PROFIT	
Do Not Know	
Count	24
Col %	58.5%
Not Effective	
Count	4
Col %	9.8%
Somewhat	
Count	4
Col %	9.8%
Effective	
Count	9
Col %	22.0%
EFFECTIVENESS EVOS: NATIVE NON-PROFITS	
Do Not Know	
Count	21
Col %	50.0%
Not Effective	
Count	1
Col %	2.4%
Somewhat	
Count	11
Col %	26.2%
Effective	
Count	9
Col %	21.4%
EFFECTIVENESS EVOS: BOROUGH GOVERNMENT	
Do Not Know	
Count	20
Col %	47.6%

(continued)

Table XI-28. Effectiveness of Oil Spill Responses, Old Harbor

	STUDY YEAR 1991
Not Effective	
Count	2
Col %	4.8%
Somewhat	
Count	6
Col %	14.3%
Effective	
Count	14
Col %	33.3%
EFFECTIVENESS EVOS: VILLAGE CORPORATION	
Do Not Know	
Count	9
Col %	24.3%
Not Effective	
Count	5
Col %	13.5%
Somewhat	
Count	6
Col %	16.2%
Effective	
Count	17
Col %	45.9%
EFFECTIVENESS EVOS: CITY COUNCIL	
Do Not Know	
Count	11
Col %	28.2%
Not Effective	
Count	2
Col %	5.1%
Somewhat	
Count	6
Col %	15.4%
Effective	
Count	20
Col %	51.3%

(continued)

Table XI-28. Effectiveness of Oil Spill Responses, Old Harbor

	STUDY YEAR 1991
EFFECTIVENESS EVOS: IRA COUNCIL	
No Response	
Count	1
Col %	6.3%
Do Not Know	
Count	9
Col %	56.3%
Somewhat	
Count	3
Col %	18.8%
Effective	
Count	3
Col %	18.8%
EFFECTIVENESS EVOS: CHAMBER OF COMMERCE	
No Response	
Count	1
Col %	25.0%
Do Not Know	
Count	2
Col %	50.0%
Somewhat	
Count	1
Col %	25.0%
EFFECTIVENESS EVOS: COMMERCIAL BUSINESSES	
No Response	
Count	1
Col %	6.3%
Do Not Know	
Count	8
Col %	50.0%
Not Effective	
Count	1
Col %	6.3%
Somewhat	

(continued)

Table XI-28. Effectiveness of Oil Spill Responses, Old Harbor

	STUDY YEAR
	1991
Count	3
Col %	18.8%
Effective	
Count	3
Col %	18.8%
EFFECTIVENESS EVOS: COMMERCIAL FISHING GROUPS	
No Response	
Count	1
Col %	2.4%
Do Not Know	
Count	6
Col %	14.3%
Not Effective	
Count	1
Col %	2.4%
Somewhat	
Count	4
Col %	9.5%
Effective	
Count	30
Col %	71.4%
EFFECTIVENESS EVOS: OTHER BUSINESS GROUPS	
No Response	
Count	3
Col %	18.8%
Do Not Know	
Count	10
Col %	62.5%
Somewhat	
Count	2
Col %	12.5%
Effective	
Count	1

(continued)

Table XI-28. Effectiveness of Oil Spill Responses, Old Harbor

	STUDY YEAR
	1991
Col %	6.3%
EFFECTIVENESS EVOS: SCHOOLS	
No Response	
Count	1
Col %	2.5%
Do Not Know	
Count	17
Col %	42.5%
Somewhat	
Count	4
Col %	10.0%
Effective	
Count	18
Col %	45.0%
EFFECTIVENESS EVOS: CHURCHES	
No Response	
Count	1
Col %	2.6%
Do Not Know	
Count	16
Col %	41.0%
Not Effective	
Count	2
Col %	5.1%
Somewhat	
Count	4
Col %	10.3%
Effective	
Count	16
Col %	41.0%
EFFECTIVENESS EVOS: MEDICAL PROFESSION	
No Response	
Count	1
Col %	3.6%

(continued)

Table XI-28. Effectiveness of Oil Spill Responses, Old Harbor

	STUDY YEAR
	1991
Do Not Know	
Count	13
Col %	46.4%
Not Effective	
Count	1
Col %	3.6%
Somewhat	
Count	4
Col %	14.3%
Effective	
Count	9
Col %	32.1%
EFFECTIVENESS EVOS: HEALTH AIDES	
No Response	
Count	1
Col %	2.4%
Do Not Know	
Count	11
Col %	26.8%
Not Effective	
Count	4
Col %	9.8%
Somewhat	
Count	3
Col %	7.3%
Effective	
Count	22
Col %	53.7%
EFFECTIVENESS EVOS: SOCIAL WORKERS	
No Response	
Count	1
Col %	3.2%
Do Not Know	
Count	19
Col %	61.3%

(continued)

Table XI-28. Effectiveness of Oil Spill Responses, Old Harbor

	STUDY YEAR
	1991
Not Effective	
Count	1
Col %	3.2%
Somewhat	
Count	4
Col %	12.9%
Effective	
Count	6
Col %	19.4%
EFFECTIVENESS EVOS: LOCAL LAW ENFORCEMENT	
No Response	
Count	1
Col %	2.6%
Do Not Know	
Count	12
Col %	30.8%
Not Effective	
Count	6
Col %	15.4%
Somewhat	
Count	5
Col %	12.8%
Effective	
Count	15
Col %	38.5%
EFFECTIVENESS EVOS: STATE LAW ENFORCEMENT	
No Response	
Count	1
Col %	2.7%
Do Not Know	
Count	21
Col %	56.8%
Not Effective	

(continued)

Table XI-28. Effectiveness of Oil Spill Responses, Old Harbor

	STUDY YEAR
	1991
Count	2
Col %	5.4%
Somewhat	
Count	5
Col %	13.5%
Effective	
Count	8
Col %	21.6%
EFFECTIVENESS EVOS: EXXON	
Do Not Know	
Count	9
Col %	21.4%
Not Effective	
Count	16
Col %	38.1%
Somewhat	
Count	10
Col %	23.8%
Effective	
Count	7
Col %	16.7%
EFFECTIVENESS EVOS: VECO	
Do Not Know	
Count	8
Col %	19.0%
Not Effective	
Count	4
Col %	9.5%
Somewhat	
Count	14
Col %	33.3%
Effective	
Count	16
Col %	38.1%

(continued)

Table XI-28. Effectiveness of Oil Spill Responses, Old Harbor

	STUDY YEAR
	1991
EFFECTIVENESS EVOS: ALYESKA PIPELINE	
Do Not Know	
Count	25
Col %	61.0%
Not Effective	
Count	10
Col %	24.4%
Somewhat	
Count	4
Col %	9.8%
Effective	
Count	2
Col %	4.9%
EFFECTIVENESS EVOS: OILED MAYORS	
Do Not Know	
Count	3
Col %	17.6%
Somewhat	
Count	4
Col %	23.5%
Effective	
Count	10
Col %	58.8%

Table XI-29. Subsistence Food Safety Information, Old Harbor

	STUDY YEAR
	1991
ADEQUATELY INFORMED ABOUT FOOD SAFETY?	
Do Not Know	
Count	1
Col %	2.3%
No	
Count	7
Col %	16.3%
Yes	
Count	35
Col %	81.4%
WHY NOT ADEQUATELY INFORMED	
No Response	
Count	4
Col %	57.1%
Lack of clear or definitive advice	
Count	1
Col %	14.3%
Received no information	
Count	2
Col %	28.6%
Did not trust or believe advice	
Count	1
Col %	14.3%
Untimely	
Count	1
Col %	14.3%

Table XI-30. OCS Development Effects, Old Harbor

	STUDY YEAR
	1991
OCS EFFECT: FISH	
Do Not Know	
Count	7
Col %	16.3%
Decrease	
Count	24
Col %	55.8%
No Change	
Count	12
Col %	27.9%
OCS EFFECT: SHELLFISH	
Do Not Know	
Count	8
Col %	18.6%
Decrease	
Count	24
Col %	55.8%
No Change	
Count	11
Col %	25.6%
OCS EFFECT: MARINE MAMMALS	
Do Not Know	
Count	8
Col %	18.6%
Decrease	
Count	26
Col %	60.5%
No Change	
Count	9
Col %	20.9%
OCS EFFECT: LAND MAMMALS	
Do Not Know	
Count	10
Col %	23.3%
Decrease	

(continued)

Table XI-30. OCS Development Effects, Old Harbor

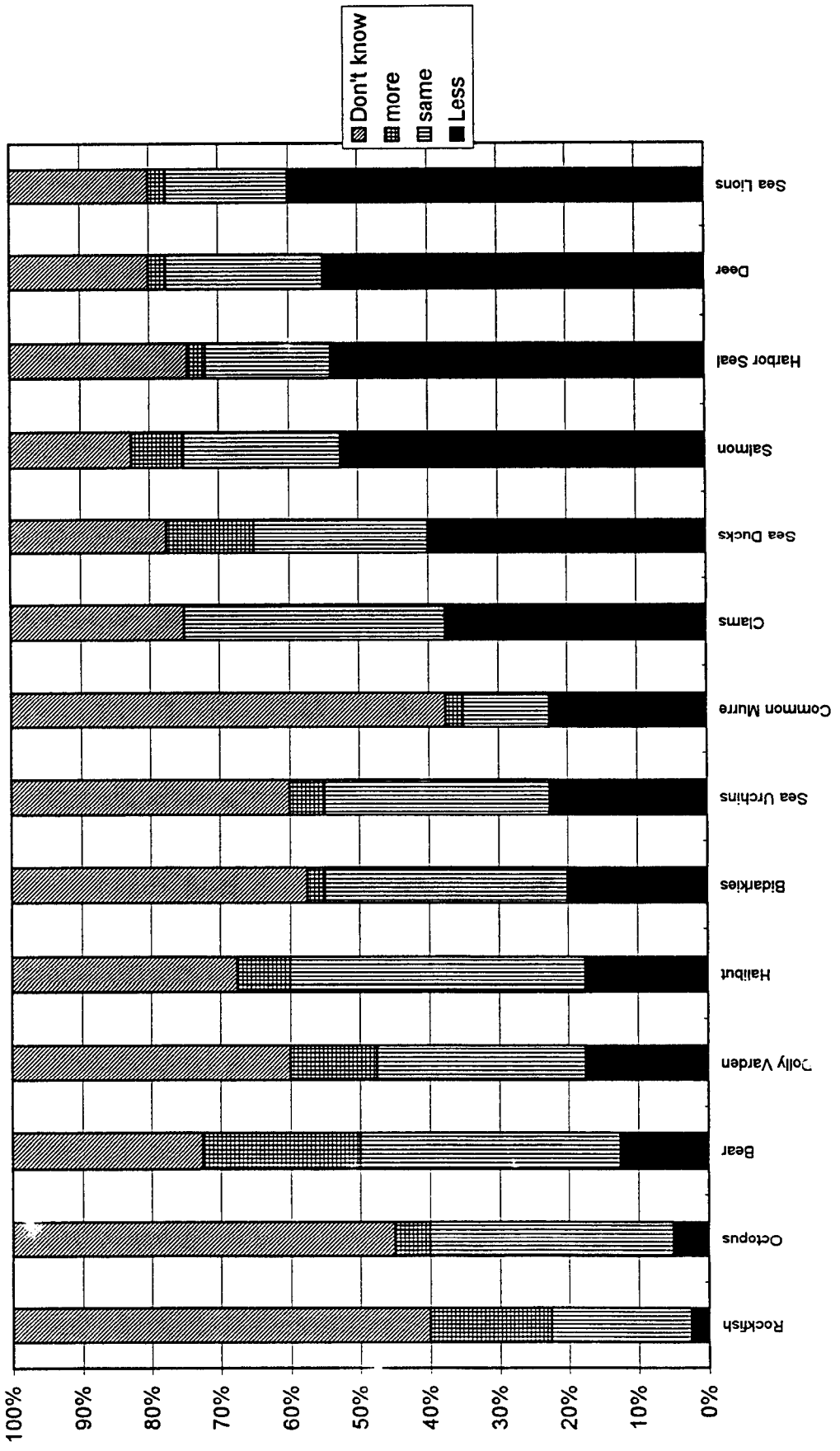
	STUDY YEAR
	1991
Count	18
Col %	41.9%
No Change	
Count	15
Col %	34.9%
OCS EFFECT: BIRDS	
Do Not Know	
Count	7
Col %	16.3%
Decrease	
Count	26
Col %	60.5%
No Change	
Count	10
Col %	23.3%
OCS DEVELOPMENT = MORE JOBS?	
Do Not Know	
Count	4
Col %	9.3%
No	
Count	14
Col %	32.6%
Yes	
Count	25
Col %	58.1%
CONTAIN AND CLEANUP SMALL OIL SPILL	
Do Not Know	
Count	3
Col %	7.0%
No	
Count	14
Col %	32.6%
Maybe	
Count	9
Col %	20.9%

(continued)

Table XI-30. OCS Development Effects, Old Harbor

	STUDY YEAR
	1991
Yes	
Count	17
Col %	39.5%
CONTAIN AND CLEANUP LARGE OIL SPILL	
Do Not Know	
Count	6
Col %	14.0%
No	
Count	28
Col %	65.1%
Maybe	
Count	2
Col %	4.7%
Yes	
Count	7
Col %	16.3%

Figure XI-9. Old Harbor: Respondents' Assessments of Resource Status in 1991 Compared to 1988



CHAPTER XII: OUZINKIE

by

Craig Mishler, Rachel Mason, and Vicki Vanek

CLIMATE, SETTING, AND GENERAL HISTORY

Ouzinkie is located on Spruce Island, just northeast of Kodiak Island (Fig. I-1). "Ouzinkie" is a Russian word meaning "Narrows" and refers to the deep channel between Spruce Island and Kodiak Island near the village. The village is arranged around a picturesque timbered cove adjacent to the narrows between Kodiak Island and Spruce Island. This community shares the relatively mild climate of the Kodiak Archipelago, a climate characterized by substantial amounts of rain and fog during the summer months and frequent high winds during the winter. Of all the Kodiak area villages, Ouzinkie is the closest in distance to Kodiak city, just 10 miles. A plane ride between Ouzinkie and Kodiak takes only a few minutes. Ouzinkie residents also travel back and forth to Kodiak by boat and skiff; some take skiffs to meet cars at Anton Larson Bay or at Monashka Bay at Fort Abercrombie State Park.

Ouzinkie was founded during the Russian colonial period as a retirement community for employees of the Russian-American Company who did not wish to return to Russia. In the late nineteenth century, Ouzinkie's population included a large number of Creoles of mixed Native and Russian descent. As was also true in nearby Afognak, the Russian colonists encouraged Ouzinkie residents to raise cattle and grow crops, and during the early 20th century many families had barns. Some Ouzinkie elders remember herding cattle and tending gardens on small islands near the village when they were growing up, although today there are no cattle and few gardens.

The Katmai Packing Company built the first salmon cannery in Ouzinkie in 1921 and used mostly local Natives to operate it. This plant operated seasonally until it was sold and dismantled in 1933. In 1935 it was replaced by another plant, owned by the Grimes Packing Company, which was sold to the Ouzinkie Packing Company in 1951. This cannery was destroyed in the 1964 earthquake and tsunami and was never rebuilt (Roppel 1986:251-253, 275-282). The community experienced rapid population growth after each of these canneries was established, reaching an historical peak of 253 in 1939 (Fig. XII-1). A long commercial dock, sitting on tall pilings, was built during the 1980s near the site of the old cannery. This dock allows large freighter ships to unload groceries, building supplies, and other cargo, and it provides a convenient tie-up facility for the community's purse seine fleet. A gravel airstrip was also constructed during the 1980s, upgrading the float plane service that the community relied on for many years. At the time of our study, Ouzinkie was served with four scheduled commercial flights per day.

Ouzinkie has one of the largest well-stocked stores of all the Kodiak Island villages; this store was purchased by the Ouzinkie Native Corporation in 1993 and then sold to the Alaska Commercial Company

in 1995. The centrally located Ouzinkie community hall was heavily used for public meetings, senior citizen hot lunches, and bingo.

PREVIOUS RESEARCH

The Division of Subsistence, in cooperation with the Kodiak Area Native Association (KANA) conducted research in Ouzinkie in 1983, pertaining to resource harvest activities that occurred in 1982/83 (KANA 1983; Schroeder et al. 1987). Additional fieldwork occurred again in 1987 for the calendar year 1986 (Fall and Walker 1993) and once more in 1990 immediately after the oil spill for the calendar year 1989 (Mishler and Cohen forthcoming) and again in 1991 for the study year of April 1990 through March 1991 (Fall 1992a). The two earlier surveys did not ask about employment, demographic information, and other socioeconomic variables, and were not always species-specific. For example, during the early and mid-1980s all "ducks" were lumped together without regard to species. Certain kinds of across the board comparisons, therefore, are not possible. Nevertheless, it is still useful to make some basic comparisons to these earlier years, particularly in the pounds harvested per capita for all resources. Data from all of these earlier studies have been entered into the Division's Community Profile Database (Scott et al. 1993).

STUDY GOALS AND RESEARCH METHODS

Ouzinkie was included in all three years of this project. Both the harvest survey instrument and the social effects questionnaire (SEQ) were administered. The first study year (Year One) ran from April 1, 1991 to March 31, 1992. The second study year (Year Two) was from April 1, 1992, to March 31, 1993, while the third year (Year Three) interviews covered the period April 1, 1993, to March 31, 1994.

A new set of questions added in the Year Three interview had to do with the issue of proxy hunting and fishing, an ongoing issue, especially with respect to the federal management of subsistence on federal lands. We asked residents whether during the past year they had hunted deer for those in the community unable to hunt for themselves--whether due to illness, physical handicap, old age, or otherwise. We also asked whether during the past year they caught salmon for those unable to fish for themselves. If the answer to either of these questions was "No," then we inquired about whether or not they had ever done this in the past. Based on earlier key respondent testimony, we knew that this is a fairly widespread practice in Kodiak communities, and the purpose of our questions was to assess just how prevalent it is.

Fieldwork

Harvest survey and social effects interviews in Ouzinkie for Year One commenced on May 19, 1992, and were completed on May 22, 1992. Staff members assigned to work in this community were Jeff Barnhart, Rachel Mason, Vicki Vanek, and Craig Mishler, who supervised the team. The average harvest

survey interview took 0.89 hours (about 53 minutes) to complete and the average social effects questionnaire (SEQ) took 0.75 hours (45 minutes) (Tables I-7, I-8). For Year Two, harvest surveys and social effects questionnaires (SEQ) were conducted in Ouzinkie between March 15 and March 19, 1993. Year Two harvest surveys took just 0.58 hours (about 35 minutes), largely as a result of the survey being shortened. The SEQs took an average of 0.7 hours (42 minutes) (Tables I-7, I-8). Staff members participating in Year Two were Rachel Mason (field supervisor), Jeff Barnhart, and Vicki Vanek. Robert Katelnikoff and Tracie Squartsoff were hired as local research assistants.

Subsistence harvest and social effects surveys were conducted in Ouzinkie once again between April 18 and April 25, 1994. The Year Three research team consisted of Kodiak subsistence staff members Vicki Vanek and Jeff Barnhart, Fairbanks staff member Jim Marcotte, and Ouzinkie resident Robert Katelnikoff. The average length of harvest survey interviews for Year Three was 0.7 hours (about 40 minutes) and SEQs averaged 0.64 hours (38 minutes) (Tables I-7, I-8).

The week before our arrival to do Year Three interviews, an Ouzinkie elder died. His funeral services and burial occurred the day we flew in. Community members we consulted helped us to determine that the effects of accomplishing our work goals in the community at this time would not be detrimental. Out of respect, we did not contact households with family members related to the deceased until the end of our stay. Throughout our stay, there were more people in the community than usual because of family and friends who came in to attend the funeral and stayed to visit. Russian Orthodox Easter was May 1, 1994, and a few were staying for Easter celebrations.

Sample Selection and Achievement

For Year One, Ouzinkie residents were randomly drawn from a list of 55 households developed with the assistance of the city clerk and other knowledgeable residents. Our goal was to interview the heads of 50 percent of the identified households, and we exceeded this target by interviewing 32 households, or 58.2 percent. There were 4 refusals, and 10 no-contacts. The refusal rate was 11.1 percent (Tables I-4, XII-1).

For Year Two, 60 permanent Ouzinkie households were identified, and an attempt was made to interview all of them. We completed a total of 52 interviews, had only 5 refusals and 2 no-contacts, and encountered 1 non-resident (newly arrived) household. Three of the five refusals came from elderly or infirm individuals. Drinking households were treated as "no contacts" for the purposes of sampling outcomes. During the intensive March 15-19 period, we completed 40 of the 52 interviews, while the remaining 12 were done as "mop-ups" by the two local assistants over the 10-day period following our departure.

In Year Three (1993/94), 71 permanent resident households were identified, and a full census was again attempted. The number of identified households increased by 18.3 percent over 1992/93. We completed a total of 61 household interviews, had seven refusals, and three no-contacts. During our stay

in the community between April 18-25, 59 interviews were completed. In the three weeks after our departure, Robert Katelnikoff followed up on the pending households and was able to complete two additional interviews. No non-resident households were identified. For Year Three we changed the residency requirement during the study year from six months to one month to accommodate the many newcomers to the community who announced their intentions of staying on as permanent residents.

Two of the three no-contacts were elderly households occupied by infirm individuals we chose not to contact. One of these more aged elders was one of the seven refusals. There were requests by family and friends to add two more of the more aged elders to our intentional no contact list. A second elder had a younger family member living in her household who did the survey interview instead. Each interviewer had one household that agreed to do a subsistence harvest survey but refused to do a SEQ. This made a total of four such refusals and a total of 57 SEQs being done out of the 61 harvest surveys completed.

DEMOGRAPHY

The most recent official U.S. census, taken in 1990, listed 209 Ouzinkie residents (Table I-1; Fig. XII-1). It is worth noting that Division of Subsistence population estimates, while not official, are based on the number of people living in the community at the time of our surveys, which took place each spring shortly after the end of each study year. With this much in mind, the Division study estimated Ouzinkie's April 1992 population at 196, and our survey sample of 32 out of 55 households showed a mean household size of 3.6. The mean age was 29.4, older than any of the other Kodiak area villages studied. The population was 50.9 percent male and 49.1 percent female (Fig. XII-2; Table XII-3). By a fluke of demography, there were about twice as many girls under the age of four as there were boys, but the sex ratio was slightly skewed towards males elsewhere in the population profile. The sample showed the community to be 87.5 percent Alaska Native. The mean length of residency for all persons was 17.9 years.

The field survey team estimated the population of Ouzinkie in April 1993 to be 186 persons, down slightly from the 196 we estimated in 1992 (Fig. XII-3). The total number of households counted was 59, a slight increase compared to the 55 we counted the previous year (Table XII-4). Our sampling of 52 households showed a mean household size of 3.2, down from the 3.6 we calculated for 1991/92. Yet this is exactly what we would expect if the total number of households increased as the overall population decreased. Overall, compared to 1992, Ouzinkie households got smaller, a trend that continued into 1994.

The mean age of people in the sampled Ouzinkie households in 1992/93 was 30.2, up just a little from 29.1 the year before. Some 36.0 percent of the people were under the age of 20 (Table XII-2). By gender, 52.4 percent of Ouzinkie's residents were male, and 47.6 percent were female. The sample shows that 90.4 percent of all household heads in the sample considered themselves to be Alaska Natives. The mean length of residency for all persons was 20.4 years (Table XII-2).

In April 1994, we estimated the total population of Ouzinkie at 234 persons, a 12 percent increase over what it was in 1991/92, and a 26 percent jump up from what it was in 1992/93 (Fig. XII-4; Table XII-5). Also, there were 71 Ouzinkie households in 1993/94, 16 more than there were in 1991/92, a 29 percent increase. It is not yet clear why so many new people moved to the community, although many are former residents who just moved back after living somewhere else for a few years. What is certain is that this sudden rise in population and the accompanying increase in households created an acute shortage in available housing. The mean household size was estimated at 3.3 persons, and the mean age of all residents was 30.3 years, about one year older than what it was in 1991/92. Males outnumbered females very slightly at 50.3 percent to 49.8 percent. Alaska Natives accounted for 90.2 percent of the 1993/94 Ouzinkie population. The average length of residency for all persons dropped sharply to 14.1 years (Table XII-2).

MONETARY ECONOMY

We learned that Ouzinkie's average household income from all sources in the 1991/92 study year was $49,826 and the mean per capita income was $13,986 (Table XII-7). The most important single source of earned income in Year One was commercial fishing, representing $2,949 per capita, or 21.6 percent of the average person's total income. The village has a small fleet of salmon purse seiners and a number of large skiffs which are used to fish halibut, crab, and salmon. A significant employer in the village was the school district, which provided $2,468 per capita, or 15.5 percent of the total income (Table XII-8). Ouzinkie residents worked at the school as teachers, teachers' aides, cooks, and janitors. Finance, insurance, and real estate (representing employment by the profit-making Ouzinkie Native Corporation) supplied $1,302 or 9.3 percent of the total, and local government contributed significantly at $834 or 6 percent of the total.

The Ouzinkie Village Corporation also provides employment to Ouzinkie residents. A number of the younger men, for example, work as longshoremen for Koncor, a logging company under contract to harvest spruce timber on Ouzinkie Native Corporation lands. The men load logs onto Japanese ships at the logging camps at Danger Bay on Afognak Island. When a ship comes in, they leave Ouzinkie for the camps and work from four to seven days at a stretch. Ships come in sporadically and workers may work up to two such stints in a month. They must leave home on short notice whenever a ship comes in. Residents found additional temporary jobs during the time of our study with the hydroelectric plant water project and pipeline.

As shown in Fig. XII-5, the most jobs at Ouzinkie were in commercial fishing (27 percent), followed by local government (17 percent), local education (16 percent), and services (10 percent). Of the estimated 130.6 adults in the village, 81.5 percent were employed in at least one job, with a mean of 1.5

jobs per adult. Year-round employment was 38.7 percent, and the average number of months employed was 8.4 (Table XII-6).

Ouzinkie residents reported a large amount of other income, 32.7 percent of the total per capita income. The largest component of other income was Native corporation dividends; the average per capita income from this source in 1991/92 was $2,892 (Table XII-8). Through timber sales, the Ouzinkie Native Corporation has been able to pay shareholders several thousand dollars a year in dividends for the past few years .

Ouzinkie has a community freezer and smoker facility which was constructed during the early 1980s under a state grant. Village residents may use the freezer, smoker, and vacuum sealer there for an annual membership fee (Mishler and Cohen forthcoming). In 1992, the Ouzinkie Tribal Council began to market fisheries products (principally smoked salmon) made using the facility, but this business venture lasted only one year after a key staff person resigned.

On average, Ouzinkie residents estimated that they spent $632 per month on food purchases during the 1991/92 study year, one of the highest of all communities studied. Food purchases represented 14.5 percent of household monetary income (Table I-101). Ouzinkie residents' high food expenses occur despite the fact, that due to their proximity to Kodiak City, they are more able to shop for food in the hub town than residents of other villages. In 1993/94 household food purchases dropped to a mean of $565/month, but this may be reflective of slightly smaller household sizes rather than a reduction in the cost of groceries (Table I-102).

Of the 32 interviewed Ouzinkie households, four (12.5 percent) said that their financial situation during the 1991/92 study year was better than before the oil spill, 12 (37.5 percent) reported no change, and 11 (34.4 percent) said their financial situation was worse than before the oil spill. Five households (15.6 percent) provided no assessment of financial change (Table I-103).

During Year Two (1992/93) Ouzinkie's average household income from all sources was $37,478, down dramatically from $49,826 in 1991/92 (Table XII-9). Accordingly, the mean per capita income fell to $11,954, down from $13,986 the year before, suggesting a bad year for commercial fishermen. The most important sources of earned income were local government education, which brought in $1,782 per person, or 23 percent of all earned income, followed closely by commercial fishing, which contributed $1,727 per capita or 22.3 percent of all earned income. This contrasts sharply with 1991/92 per capita incomes of $2,468 from local government education and $2,949 from commercial fishing (Table XII-7). Two other major sources of income in 1992/93 were finance, insurance, and real estate (representing employment by the Ouzinkie Native Corporation) at $1,303 per person, and local government administration at $1,183 per capita, each accounting for about 15 percent of all earned income (Fig. XII-6).

Of the estimated 1993 community adult population of 122, 85.2 percent were employed in at least one job, and the mean number of jobs per capita was 1.7 (Table XII-6). Only 30.4 percent of all adults were employed year-round, and the average employed person worked 8.0 months out of the year.

The average Ouzinkie household received $13,161 in other income in 1992/93 compared to $15,937 in 1991/92 (Table XII-10). The individual per capita for other income was $4,173, with $1,770 of that amount (42.4 percent) coming from the local Ouzinkie Native Corporation dividend. The Native corporation dividend was down by more than $1,000 per person from 1991/92. Other major sources of unearned income were the Alaska Permanent Fund dividend, at $815 per capita (18.5 percent), and social security payments, at $632 per person (15.1 percent). Unemployment benefits increased to $227 per capita in 1992, compared to just $84 per capita in 1991/92.

Overall, Ouzinkie residents experienced a sharp loss in earnings and in total cash income in 1992/93 when compared with 1991/92 but still fared considerably better than those living in other Kodiak area villages such as Larsen Bay and Akhiok.

For Year Three (1993/94) Ouzinkie's average household income from all sources was $39,871, about $2,300 more than it was in 1992/93 but still far short of what it was in 1991/92 (Table XII-11). The statewide average household income for 1993 was $64,652 (Alaska Dept. of Labor 1994). Ouzinkie's mean per capita income from all sources was also up slightly, to $12,100, but still remained way below the 1993 Alaskan statewide average of $23,008 (Alaska Dept. of Labor 1994). The primary sources of earned income were commercial fishing at $1,209 per person (10.0 percent of the total), local government at $1,152 per person (8.5 percent of the total), and finance, insurance, and real estate (essentially the Ouzinkie Native Corporation) at $1,200 per person (another 10.0 percent of the total).

Even though commercial fishing only contributed 17.9 percent of the total income per capita, it still represented 30.0 percent of the jobs held by Ouzinkie residents (Fig. XII-7, Table XII-11). This is in stark contrast to 1991/92, when commercial fishing represented 28.0 percent of the jobs and brought in a proportionate 32.2 percent of the per capita earned income (Fig. XII-5; Table XII-7). Such figures are reflective of the sharp decline in Kodiak area salmon prices (see Table X-14) and tell a sad tale about the plight of families who have been dependent on commercial fisheries for their livelihood. Commercial Fisheries Limited Entry Commission records for 1993 show that Ouzinkie residents held 10 salmon purse seine permits and 3 salmon set gillnet permits.

In 1993/94 Ouzinkie survey respondents again reported a large other income of $5,350 per capita, a remarkable 44.2 percent of their total income from all sources (Table XII-12). Each household in turn received $17,628 from other income. The largest single contributor to this income was the Ouzinkie Native Corporation dividend, which increased to $3,297 per person, nearly double what it was in 1992/93 and $400 per person more than it was in 1991/92. Additional major sources of other income were Alaska Permanent Fund dividends, social security, aid to families with dependent children, and longevity bonuses.

In doing Year Three surveys, we heard from several individuals that there were not enough employment opportunities in the community. Whether this is related to the general decline in fish prices and the commercial fisheries (see above Chapter X, Table X-14) or has more to do with other sectors of the economy is not known to us. It seems very likely that the sudden growth in Ouzinkie's population

experienced between 1992 and 1994 has resulted in this shortage of jobs. Our data support these perceptions. In 1993/94 there were 30 more adults living in Ouzinkie than there were in 1991/92. Of the estimated 1993/94 adult population of 162 persons, 76.3 percent held at least one job, down from 81.6 percent in 1991/92, and the mean number of jobs was 1.5 (Table XII-6). Only 26.4 percent, however, were employed year-round, compared to 38.7 percent in 1991/92, and the average person worked only 7.8 months during the year, compared to 8.4 months in 1991/92.

RESOURCE HARVESTS AND USES: YEAR ONE

Participation Rates

In 1991/92 Ouzinkie participation rates in subsistence were high. One hundred percent of Ouzinkie households used and harvested at least one wild resource, 96.9 percent received at least one resource, and 84.4 percent gave away at least one resource. Households in Ouzinkie used an average of 18.8 different kinds of resources and harvested an average of 13.3 different types (Table XII-13). As reported in Table XII-14, 82.5 percent of the sampled population engaged in subsistence harvest activities and 76.3 percent processed wild resources. Also, 29.8 percent hunted, 53.5 percent fished, and 78.1 percent gathered wild plants.

Sharing of harvests in 1991/92 occurred with residents of nine Alaskan communities in addition to Ouzinkie. Ouzinkie households received wild foods from Anchorage (9.4 percent), Kodiak City (6.3 percent), and five other communities (3.1 percent each). They gave away wild foods to communities in the United States outside Alaska (25.0 percent), Anchorage (18.8 percent), Kodiak City (18.8 percent), and five other communities, including one in a foreign country (3.1 percent each) (Table XII-15).

Harvest Quantities

The mean per capita harvest for all resources in Ouzinkie during 1991/92 was 209.5 pounds edible weight. The mean household harvest was 746.2 pounds (Table XII-18). Eight households (25.0 percent) estimated that wild resource harvests provided 1-25 percent of their annual use of meat, fish, and poultry; fifteen (46.9 percent) estimated the contribution of wild foods at 26-50 percent; five (15.6 percent) estimated 51-75 percent; one (3.1 percent) estimated 76-99 percent. No household reported that its entire supply of meat, fish, and poultry was from wild resources (Table I-104). Three households provided no estimate of the percentage of food consumed from wild resources.

Over two-thirds (68.3 percent) of the harvest of wild resources was fish, 143.0 pounds per capita. Most of the fish was salmon (88.5 pounds per capita, or 42.2 percent of the total harvest). Non-salmon fish, at 54.5 pounds per capita, represented 25.9 percent of the total harvest (Fig. XII-10).

Coho salmon made up the greatest part of the salmon harvest, 48.2 pounds per capita or 54.5 percent of all salmon taken. The sockeye salmon harvest was 25.7 pounds per capita, or 29.0 percent of all salmon (Table XII-20).

By gear type, 24.4 percent of the salmon harvest in pounds were removed from commercial catches, 62.9 percent were taken with subsistence gear (almost entirely by subsistence gill net), and 12.7 percent by rod and reel (Tables XII-19, XII-20; XII-21). As shown in Table XII-22, 56.3 percent of the sampled households harvested salmon with subsistence methods, 40.6 percent removed salmon from commercial catches, and 37.5 percent harvested salmon with rod and reel gear.

Freezing was the salmon preservation method used by the most Ouzinkie households (96.9 percent). This method was followed by canning (53.1 percent), salting (50.0 percent), smoking (46.9 percent), pickling (21.9 percent), kippering (18.8 percent), drying (12.5 percent), and fermenting (3.1 percent). On average, households in Ouzinkie used three different methods for preserving salmon (Table I-106).

For non-salmon fish, the largest per capita harvest by volume was of halibut, at 38.2 pounds. Other species significantly utilized were gray cod (5.8 pounds), red rockfish (2.1 pounds), black rockfish (1.3 pounds), Dolly Varden (2.0 pounds), and Dolly Varden fingerlings (2.2 pounds). Of non-salmon fish, 66.8 percent were removed from commercial catches, 15.3 percent taken with subsistence methods (gill nets, seines, or hand lines), and 17.9 percent with rod and reel (Tables XII-23; XII-24). As reported in Table XII-25, 43.8 percent of the households harvested fish other than salmon with rod and reel, 40.6 removed these fish from commercial catches, and 37.5 percent used subsistence methods.

Ouzinkie residents harvested 12.3 pounds of marine invertebrates per capita, 6.1 percent of the total harvest. The shellfish species of which more than one pound was harvested per capita included butter clams (5.6 pounds), small bidarkies (2.5 pounds), Tanner crab (1.5 pounds), and cockles (1.2 pounds).

For land mammals, the Ouzinkie average harvest was 32.4 pounds per capita, 15.5 percent of the total harvest. Of this total, 29.9 pounds per capita were deer, while 2.0 pounds were elk. Only 0.5 pounds per capita of small game were taken, consisting entirely of snowshoe hare.

Marine mammal harvests were important. They averaged 6.9 pounds per capita (3.3 percent of the total harvest). All these harvests were made up of harbor seals. Regarding local perceptions of Steller sea lion populations, 31.3 percent of the respondents in Ouzinkie felt their numbers were higher, 34.4 percent claimed the population was stable, and 12.5 percent felt they were down (Table I-99).

Birds and eggs were taken at an average of 5.7 pounds per capita, or 2.7 percent of the total harvest. Almost three-fourths of the Ouzinkie bird harvest consisted of ducks (4.2 pounds per capita, 73.2 percent of the bird harvest). The most frequently taken species of ducks were goldeneye, scoter, and mallard. For eggs, 1.5 pounds per capita were taken, most of them gull eggs (1.2 pounds).

Plants and berries were well-represented, at 9.3 pounds per capita (4.4 percent of the total harvest). Per person, 8.2 pounds of berries and 1.0 pounds of greens and mushrooms were harvested. Five Ouzinkie households (15.6 percent) used plants for medicinal purposes (Table I-108). Four households used high bush cranberries for sore throats. One used cottonwood or *ciquq* for hangovers.

One of the questions on the 1991/1992 harvest survey asked residents whether they had discarded any resources during the study year because of perceived abnormalities. Eleven households in Ouzinkie (34.4 percent) discarded subsistence resources during the study year for this reason (Table I-107). In almost all these cases, the respondent said the resource had an abnormal appearance. More than half noted some kind of pathology in the resource. Most of the respondents said they did not know the cause of the condition. Two attributed it to improper handling, one to normal variation, and one to oil contamination. Eight of these eleven respondents had not observed these conditions before the oil spill. Although only one household attributed the abnormalities directly to oil contamination, the high proportion of households which had discarded resources suggests that some Ouzinkie residents continued to be concerned about the safety of eating wild resources following the oil spill.

At the time of the harvest survey, in May 1992, we were asked by Andy Anderson, President of the Ouzinkie Native Corporation, to collect additional samples of butter clams from a reef near Camel's Rock, where he had noticed some black-looking sediments that he thought might be oil. With assistance from Theodore Squartsoff, we collected butter clams and one cockle from Camel's Rock and butter clams and sediment samples from the nearby reef connecting Kodiak Island to Mike's Island. We made additional collections of butter clams and chitons at the Narrows and butter clams and sediments at Sourdough Flats. These samples were not rigorously tested using gas chromatography but were subjected to organoleptic sight and smell testing and to fluorescence testing at the Department of Environmental Conservation laboratories in Palmer. The results were negative for all samples.

In making assessments of change in the uses of subsistence foods, 65.6 percent of the respondents said they used the same amount overall in 1991/92 as they did the year before (Table I-57). This contrasts with 18.8 percent who said they used more and 12.5 percent who said they used less. For each resource group, including salmon, non-salmon fish, large and small game, marine mammals, shellfish, birds, and plants, more than half the respondents claimed they used the same amount of wild foods as they did the year before. But when comparing 1991/92 overall to years before the oil spill, 46.7 percent said they used about the same amount, 33.3 percent said they used less, and just 6.7 percent said they used more (Table I-58).

RESOURCE HARVESTS AND USES: YEAR TWO

Participation Rates

In 1992/93, each Ouzinkie household used an average of 20.2 kinds of resources and harvested an average of 13.6 varieties of resources, a modest increase over 1991/92 (Table XII-13). One hundred percent of the households used at least three resources, and the maximum number used by any one household was 44. As a gauge of effort, 98.1 percent of all households harvested wild resources. As for sharing, 94.2 percent of all Ouzinkie households said they received at least one resource and 88.5 percent

said they gave away at least one resource. Altogether, 87.2 percent of the residents participated in subsistence harvest activities and 3.5 percent processed wild foods. Approximately 37.2 percent of them hunted game, 63.4 percent fished, 82.3 percent gathered wild plants and berries, and 1.8 percent hunted or trapped small furbearers (Table XII-14).

Harvest Quantities

The mean per capita harvest for all resources in Ouzinkie in 1992/93 was 347.2 pounds edible weight, a 66 percent increase over the 209.5 pounds reported the year before (Tables XIII-18, XII-26). The mean household harvest was also up sharply to 1,094.5 pounds, compared to 745.5 pounds in 1991/92.

The great majority of the 1992/93 subsistence harvest (78.3 percent) was made up of fish, at 271.8 pounds per capita, and the great majority of the fish (79 percent) were salmon. At 213.4 pounds per capita, the 1992/93 harvest of salmon was considerably above what it was in 1991/92, when it was 142.4 pounds per capita. Non-salmon fish, at 58.4 pounds per capita, represented 21 percent of the total harvest (Fig. XII-12).

Coho salmon made up the largest part of the salmon harvest at 107.7 pounds per capita, or 50 percent of all salmon taken. Sockeye salmon was harvested by an average of 73.1 pounds per capita, pinks at 17.1 pounds, chums at 10.6 pounds, and chinook (king salmon) at 4.2 pounds.

By weight, 63.6 percent of the total salmon harvest in pounds was caught with subsistence gear, 23.2 percent was removed from the commercial catch, and 13.2 percent was caught with rod and reel. In 1993 we asked respondents for the first time to distinguish between beach seines and purse seines. Subsistence catches were predominantly from set gill nets (averaging 406.2 pounds per household), with much smaller amounts coming from beach seines (13.2 pounds) and dip nets (7.5 pounds). Salmon removed from commercial catches yielded 156.4 pounds per household, and another 88.9 pounds per household were taken by rod and reel (Tables XII-27, XII-28, XII-29).

The percentage of households harvesting salmon by gear type in 1992/93 shows 59.6 percent using subsistence gear (mainly set gill nets), 40.4 percent using rod and reel, and 38.5 percent taking fish out of their commercial catch (Table XII-30). This compares with 56.3 percent using subsistence gear, 37.5 percent using rod and reel, and 40.6 percent taking fish out of their commercial catch in 1991/92.

For non-salmon finfish, Ouzinkie residents harvested 58.4 pounds per capita, compared to 54.5 pounds per capita in 1991/92. The most heavily harvested species was halibut, at 32.9 pounds per capita, with gray cod a distant second at 8.6 pounds, and Dolly Varden third at 4.2 pounds (Tables XII-31, XII-32, XII-33). Other species taken, ranging from one to four pounds per capita were rainbow trout, red rockfish, black rockfish, steelhead, and Dolly Varden fingerlings. Smaller amounts of black cod, greenling, flounder, herring, sculpin, wolf eel, and salmon shark were also recorded.

Among land mammals, the average Ouzinkie resident's harvest was 19.4 pounds, just a little more than half of what was reported the previous year and about 6 percent of the total harvest. Of this total, 18.7

pounds came from deer and 0.7 pounds came from snowshoe hare. No elk harvest was reported, although 32.7 percent of the households reported using elk, which they received.

Marine mammal harvests amounted to 12.1 pounds per capita, nearly double what was taken in 1991/92, adding up to 3 percent of the overall harvest. Sea mammal takes were divided between harbor seals, at 7.2 pounds and Steller sea lions, at 4.9 pounds per person. One seasonal resident who spends most of the year in Barrow brought down some bowhead whale meat, which was received and used by 5.8 percent of the households. Another 3.8 percent harvested and used sea otters for their pelts.

Ouzinkie is a community which is fond of birds and bird eggs, and the harvest of this resource category came to 7.5 pounds per person or 2 percent of the overall harvest, up from 4.2 pounds in 1991/92. Of this amount, 5.5 pounds came from ducks, with very small additional amounts of ptarmigan and seagull.

The increased harvest in ducks is somewhat surprising in view of comments made by several respondents that ducks were in a noticeable decline and were simply not available to harvest around the village. Some people reported observations of dead ducks floating in the ocean; others said the ducks were getting smaller. One respondent blamed the oil spill for the population decline. The most heavily harvested ducks were mallards (one of the freshwater species), followed by goldeneyes, and black, surf, and white-winged scoters, but a wide variety of other species were also harvested, including eiders, mergansers, scaups, buffleheads, widgeons, teals, and oldsquaw. No geese were reported. Egg gathering was popular, averaging 1.9 pounds per person, and consisted largely of seagull eggs.

One of the biggest harvest increases of any category came in shellfish. Ouzinkie residents took 27.6 pounds per person of marine invertebrates, more than double the 12.3 pounds from the previous year, which added up to 8 percent of the overall harvest. The most important shellfish resource was butter clams at 14.1 pounds per person, Tanner crab at 4.7 pounds, Dungeness crab at 1.8 pounds, chitons (small bidarkies) at 3.4 pounds, and octopus at 3.0 pounds. Smaller amounts of razor clams, cockles, mussels, king crab, sea urchins, and china caps (limpets) were also gathered.

Plants and berries were gathered in an amount equal to 8.9 pounds per person or 3 percent of the overall harvest, a slight decrease over 1991/92. For each person 7.9 pounds of berries and 1.0 pound of plants, greens, and mushrooms were picked. A very small amount of saltwater kelp was also taken for food. Firewood was harvested by 55.8 percent of all Ouzinkie households and used by 57.7 percent.

RESOURCE HARVESTS AND USES: YEAR THREE

Participation Rates

In 1993/94, Ouzinkie households used an average of 16.2 kinds of resources and harvested an average of 11 resources, somewhat less than they did in 1992/93. An estimated 98.4 percent of households used at least one resource. As far as sharing is concerned, 95.1 percent said they received at

least one resource, while 85.3 percent gave away at least one resource (Table XII-13). An estimated 81.6 percent of the sampled population engaged in subsistence harvest activities and 76.6 percent processed wild resources. There was no one who hunted or trapped small furbearers. Also, 33.3 percent hunted, 57.7 percent fished, and 79.1 percent gathered wild plants (Table XII-14).

Harvest Quantities

For 1993/94 the mean per capita harvest for all resources was 218.2 pounds usable weight, a 37 percent drop over the previous year, returning to just a little more than what it was in 1991/92 (Tables XII-18, XII-26, XII-34). The mean household harvest was also down sharply, to 719.0 pounds, a little less than what it was in 1991/92. Framed within the context of Years One and Three, 1992/93 illustrates a real spike in harvest quantities. The majority of the total subsistence harvest (63 percent) in 1992/93 came from fish, and the majority of the fish (73.9 percent) were salmon. At 102.4 pounds per capita, the 1993/94 harvest of salmon was considerably less than it was in either 1991/92 or 1992/93. Non-salmon fish, at 36.5 pounds per capita, made up 16.7 percent of the total 1993/94 subsistence harvest (Fig. XII-13).

Cohos were by far the most popular salmon species, at 54.7 pounds per capita, followed by sockeye at 34.4 pounds. Pinks were a distant third at 6.9 pounds, and chums followed at 4.4 pounds. Chinooks accounted for only 0.5 pounds per capita.

By weight, 65.5 percent of the total salmon harvest in pounds was caught with subsistence gear, 16.6 percent was removed from commercial catches, and 17.9 percent was caught with rod and reel. Subsistence salmon catches came predominately from set gill nets (averaging 209.6 pounds per household), with lesser amounts coming from beach seines (10.3 pounds) and other methods (1 pound). Salmon removed from commercial catches yielded 56 pounds per household, and 60.3 pounds per household were taken by rod and reel (Tables XII-35, XII-36, XII-37).

The percentage of households harvesting salmon by gear type in 1993/94 (Table XII-38) illustrates that 49.2 percent used subsistence gear, and nearly all of that was with set gill nets (47.5 percent). This was about 10 percent less than 1991/93 and about 7 percent less than 1991/92. Only 1.6 percent used a beach seine and 1.6 percent used other gear. Approximately 34.4 percent of the households took salmon from their commercial catch and 42.6 percent used rod and reel. A large portion of the fish taken with rod and reel are coho salmon which school up at the mouth of Katmai Creek right in front of the village.

As for non-salmon finfish, Ouzinkie residents harvested 36.5 pounds per capita, compared to 58.4 pounds per capita in 1992/93 and 54.1 pounds in 1991/92. This sharp decline is not easily explained, even though halibut continued to lead the harvest in this group at 23.3 pounds per capita. Gray cod followed at 5.9 pounds, rockfish at 2.5 pounds, Dolly Varden and Dolly Varden fingerlings at 1.5 pounds, and herring at 1.5 pounds. Fractional amounts of steelhead, lingcod, flounder, sculpin, skate, and rainbow trout were also taken (Tables XII-39, XII-40, XII-41).

In the category of land mammals, Ouzinkie residents averaged 24.2 pounds per capita, a modest increase over the previous year and 11.1 percent of the total harvest. Of this, 22.6 pounds came from deer, 1.1 pounds from elk, and 0.5 pounds from snowshoe hare. No other game harvests were reported.

Marine mammal harvests totaled 15.0 pounds per capita, a small increase over the previous two years, and 6.8 percent of the overall harvest. Sea mammal takes were split between harbor seals at 10.0 pounds per capita, and Steller sea lions at 5.0 pounds. Seal hunting effort was substantial, with 24.6 percent of the households harvesting and 37.7 percent using the resource. Once again, 3.3 percent of the households used whale, which was apparently received from family connections in Barrow, while another 4.9 percent of the households harvested and used sea otters.

Ouzinkie's bird and bird egg harvest in 1993/94 came to 6.6 pounds per capita, for 3.0 percent of the overall harvest. This was about a pound per capita less than the previous year but about two pounds more than 1991/92. Of this amount, 4.8 pounds came from ducks (principally scoters, mallards, and goldeneyes), and 1.7 pounds came from herring gull eggs, which are gathered in the months of May and June. There were also trace amounts of harlequin, bufflehead, scaup, pintail, oldsquaw, widgeon, teal, pintail, and merganser ducks, along with a few geese.

On the Ouzinkie harvest surveys for all three study years, both pintail and oldsquaw ducks are both listed. The northern pintail, a puddle duck, and the oldsquaw, a sea duck, both occur in the Kodiak Island area. However, "pintail" is also a very localized common name for oldsquaw due to the sea duck's elongated, thin, pointed tail. When pintails were reported as being used or harvested, we further questioned respondents and a majority of the time found the actual species indicated was oldsquaw. It is possible the numbers recorded for pintails for all three years is still a combination of the two species and that the recorded numbers for oldsquaw may be underestimated. Past years' reports of pintails harvested or used may be even more a mix of pintail and oldsquaw. This does not have any effect on harvest quantities, however, since the conversion factor for both species is the same at 0.8 pounds edible weight.

Shellfish harvests remained strong at 21.9 pounds per person, for 10.0 percent of the overall harvest, even though they were down just a little from Year Two. The most popular shellfish species were butter clams, at 13.3 pounds per person, chitons (bidarkis) at 3.0 pounds, Tanner crab at 2.6 pounds, and octopus at 2.2 pounds. Small amounts of sea urchin, limpets (china caps), sea cucumber, king crab, Dungeness crab, razor clams, littleneck clams (steamers), horse clams, and cockles were also collected.

The fall of 1993 produced a very abundant crop of plants and berries, which were taken at 11.6 pounds per capita or 5.3 percent of the overall harvest, the highest amount for this category in all three study years. For each person, 10.7 pounds of berries and 0.9 pounds of other plants, greens, and mushrooms were picked. An estimated 55.7 percent of the households in Ouzinkie used firewood, and 49.2 percent harvested wood.

In 1989, 77.4 percent of the Ouzinkie respondents (24 out of 31 sampled households) said their overall uses of wild resources were less than they were in 1988, the year before the spill, and 75.0 percent

cited the oil spill as a reason for this reduction (Fig. XIII-11, Table I-58). However, by 1993/94, the number of households reporting lower overall uses of wild resources compared to before the spill had dropped down to 54.5 percent, with only 10 of the 24 households citing lower harvests still pointing towards the spill as a reason.

DISCUSSION

Harvest Trends

The per capita harvest estimate for Ouzinkie in 1982/83 was a very substantial 369.1 pounds. This number climbed to 402.8 pounds in 1986 and fell dramatically in 1989, the year of the oil spill, to a meager 88.9 pounds (Fig. XII-8). Of all the villages affected by the 1989 *Exxon Valdez* oil spill, Ouzinkie showed the most dramatic decline in subsistence harvests; Ouzinkie's harvest in 1989 was 76.6 percent less than its average in previous study years (Fall 1991). The spill clearly devastated Ouzinkie's subsistence-based economy for that year. In 1990/91 there was a hopeful sign of recovery when per capita harvests of wild resources climbed up to 205.2 pounds, but in 1991/92 the harvest remained nearly static and averaged 209.3 pounds per capita. Figure XII-9 and Table XII-17 depict per capita harvests in pounds for the five years for which survey data for Ouzinkie are available at the resource category level. While harvests of most categories have shown a recovery since the very low spill year, some remain well below pre-spill averages. This is especially the case for salmon, marine invertebrates, and marine mammals (Fig. XII-14; Table XII-17).

In 1991/92 Ouzinkie's harvests were much lower than the other Kodiak area villages surveyed by the Division of Subsistence. However, its per capita harvest was still 51.2 percent higher than the Kodiak road-connected area's 138.4 pounds per capita. Compared to other villages and to Kodiak, Ouzinkie has a high harvest of ducks and eggs. There is good access to halibut and crab for both commercial and subsistence purposes in the adjoining Marmot Bay (Langdon 1986:128-129). Ouzinkie residents have a number of favorite subsistence fishing and gathering areas in close proximity to the village. Particular species and particular harvesting areas, including several on Afognak Island, have a high symbolic value to this community.

In 1992/93 Ouzinkie's per capita harvest rose steeply to 347.1, approaching the pre-spill estimates for 1982/83 and 1986. In reviewing the overall harvest amounts, we see that salmon harvests increased by 50 percent, other finfish went up slightly, marine mammal harvests almost doubled, birds and eggs increased, and shellfish harvests more than doubled. These increases more than offset the sharp decrease in the amount of game taken (a little more than half of the previous year's total) and the slightly smaller amount from plants and berries. Several participants in the survey blamed the decline in deer harvests on sport hunters and winter kill. There is a strong sentiment that outsiders, especially non-residents, should be regulated so they have a lower bag limit than locals, giving a subsistence preference.

Although we did not directly ask the question in the second year survey, it seems likely that the doubling of the shellfish harvest and the sharp increase in salmon and marine mammal harvests reflects a significant restoration of confidence in the safety of ocean-caught foods following the *Exxon Valdez* oil spill. Although one respondent said her husband has not dug any clams since the spill, he is now in the minority since 90.4 percent of all Ouzinkie households used butter clams in 1992/93 and 73.1 percent harvested them. This is a very important change for a community which seemed devastated by the effects of the oil spill for over three years. Indeed, the overall harvest per capita in Ouzinkie for 1992/93 of 347.1 pounds per capita compares very favorably with the pre-spill level of 369.1 pounds per capita reported for 1982-83, though it is still less than the 402.8 pounds registered for 1986 (Table XII-16; Scott et al. 1993).

Another observation is that this surge or spike in Ouzinkie's subsistence harvests was accompanied by a sharp drop in per capita and household incomes, and there would seem to be a correlation. One individual said he paid the construction crew that worked on his house partly through subsistence harvests of fish and game because it was such a poor year for commercial fishing. Speaking of subsistence, the head of another household said: "We are really dependent on it, and as [commercial] fishing goes down, we are [even] more. Crewmen--they borrow money and the only way they can pay it is through subsistence." Another person told us, "Subsistence doesn't have to do with income--it's more of a tradition, no matter if you make money or not."

In 1993/94 Ouzinkie per capita harvests fell back to 218.2 pounds, virtually the same as what they were estimated to be back in 1990/91 and 1991/92 and much less than what they were estimated to be in 1982/83 and 1986. It may be speculated that Ouzinkie's recovery from the spill was only partial and very short-lived and that the community's subsistence harvests have now undergone a permanent transformation, so much so that much lower levels have now become the norm. This reduced harvest seems to have more to do with reduced populations of animals and a shift in diet to store-bought foods than it does with lack of confidence in food safety.

During the spill and afterwards, cleanup crews received large quantities of free groceries from Exxon and VECO to sustain them, and there were so many extra groceries that workers took home the surplus. In this way, they and their families were introduced to a variety of new foods they had never tried before and may have cultivated a taste for these foods which did not exist prior to the spill. For three years after the spill, cleanup wages produced higher cash incomes than many households had seen before the spill, and certainly some of this extra cash was spent on food. In recent years the extra cash income which came from spill cleanup wages has been replaced by large dividends from the Ouzinkie Native Corporation, and some of this has undoubtedly been spent on store-bought food. Thus in Year Three an estimated 46.7 percent of all Ouzinkie households said they got only 1-25 percent of all their meat, fish, and poultry from wild foods, while 36.7 percent said they got 26-50 percent, and 11.7 percent said they got 51-75 percent of their protein from wild foods. This is a dramatic downshift from Year One, when 25 percent of the households said they got 1-25 percent of their meat, fish, and poultry from wild foods, 46.9 percent that

said they got 26-50 percent, and 15.6 percent said they got 51-75 percent of all their protein from wild foods (Tables I-103, I-105).

Ongoing Issues

We received several complaints about Kodiak City residents coming over to Ouzinkie waters to sport fish for coho salmon, which are abundant in late summer and early fall when they school up at the mouth of Katmai Creek. Some individuals perceive these to be subsistence fish, even though Ouzinkie residents also take many of them with rod and reel. Their particular complaint is against members of the Unification Church, labeled as "Moonies," who have a fleet of distinctive Boston whaler fishing boats.

In Year Three interviews, there were no reports of finding unusually large numbers of dead sea ducks and murres on the beaches as there were in our visit the previous year. However, it was reported by quite a few hunters that this past winter no parakeet auklets (locally known as "sea quail") were seen on the surrounding waters. There were comments on the inability of fishermen to get crab with subsistence pots and fewer clams. Some speculated this to be partly due to sea otters eating them, in addition to unknown factors and oil spill-related effects. There were still a few households wary of eating shellfish because of the oil spill and paralytic shellfish poisoning (PSP).

It was mentioned by a few of the younger single adults that there is a lack of housing in the community, which makes sense in light of the rapid population growth which started in 1993 and appears to be continuing. In one household, a daughter and her husband were living with her parents while waiting for their own house. There is a waiting list for low rent Housing and Urban Development (HUD) housing and currently very little land is available for sale. These working single adults and young couples are forced to live with family members but would like to establish their own households. If this rapid growth continues, there could be more competition for resources and more conflicts.

There is an increasing interest in developing ecological and sport tourism. The Ouzinkie Native Corporation is building remote cabins on its lands and is negotiating a contract with a Kodiak-based air charter service to schedule use and service the cabins. There will be five on Afognak Island and one on Kodiak Island at Sheratine Bay. They were to be ready for use July 1, 1994. One of the top commercial fishermen in Ouzinkie is selling his fishing permits, gear, and boat and plans on going into the charter boat business.

The elk herd on nearby Afognak Island is managed by a state permit system awarded through a lottery draw. The close proximity of Ouzinkie to the herd has raised some complaints that they can no longer harvest elk as much as in the past and that there is no preference given for local hunters. We were told that in 1993 only one permit had been awarded by the random draw to a person living in the community. There is now talk of having a private Native-only hunt on Ouzinkie Native Corporation owned land located on Afognak Island. This would be a direct challenge to the state's management authority.

SOCIAL EFFECTS SURVEY FINDINGS

From the social effects questionnaires (SEQs) administered to respondents in Ouzinkie in Year One, it was learned that 46.9 percent, nearly half of all the households, consumed wild foods on the day before the survey, and 37.5 percent consumed these wild foods as a main part of a meal. These percentages increased in Year Two to 51.9 percent, reflecting the higher per capita harvests that year, and dropped down below what they were in Year One during Year Three at 42.1 percent (Table XII-42).

More than half, or 53.1 percent of those surveyed in Year One said that bidarkies (chitons) were important food, and of those who said they were important, 88.2 percent felt bidarkies from local harvest areas were safe for children to eat. In Years Two and Three over 75.4 percent of the respondents said they ate bidarkies and over 84.1 percent said they were safe for children to eat.

As far as clams are concerned, 78.1 percent interviewed in Year One said clams were important to them, and 56 percent felt they were safe for children to eat. Of the 40 percent (10 households) who felt they were not safe, two households (22.2 percent) said they were worried about oil pollution or contamination, and four households (44.4 percent) were fearful of paralytic shellfish poisoning. In Years Two and Three, over 93.0 percent of those surveyed said they ate clams and over 69.4 percent felt they were safe for children to eat. The number of households that felt clams were not safe to eat remained about the same as it did in Year One, and those who felt they were unsafe cited either fear of PSP poisoning or oil pollution, or both.

In Year One, opinion was deeply divided over whether seal meat and seal oil are important foods. A slight majority of 53.1 percent said "no," but another 46.9 percent said "yes." At the same time, an overwhelming plurality of 90.6 percent of those who said it was important food felt that seals were safe to eat. In Year Two 67.3 percent of the households said they normally eat seal oil or seal meat and 88.6 percent of those said they felt seal was safe to eat. In Year Three the results were comparable (Table XII-43).

Ouzinkie opinions on the health of various game populations in the area during Year One showed that 42.9 percent were convinced that there were fewer deer around compared to before the oil spill, while 17.9 percent said they were about the same, 35.7 percent said they didn't know, and only 3.6 percent said there were more deer. In Year Two, the percentage of those who perceived a decline in deer numbers since the oil spill increased to 72.9 percent, but this dropped to 30.6 percent in Year Three.

In Year One, only 12.5 percent of the harvest survey respondents in Ouzinkie felt there were fewer sea lions around than they had seen the year before, with 34.4 percent noticing that numbers were nearly the same, and 31.3 percent citing an increase (Table I-99). However, by Year Two 40.4 percent of those interviewed for social effects said they noticed fewer sea lions than there were before the spill, with 27.7 percent estimating the same number, and only 17 percent claiming there were more. In Year Three the

results were nearly identical with those in Year Two. A majority of Ouzinkie respondents during all three study years estimated that there were fewer harbor seals than before the spill, making this point quite emphatic.

A majority of 57.1 percent of SEQ respondents were strongly convinced there were fewer salmon in Year One than there were before the spill, and this percentage stayed nearly the same in Year Two, but in Year Three people changed their assessment and only 12.2 percent said there were fewer. The majority said that either salmon populations were unchanged or else they did not know. In Year One, there was a general lack of consensus on the status of brown bears, sea ducks, halibut, clams, bidarkies, Dolly Varden, rockfish, sea urchins, and octopus, with many respondents saying they did not know . However, in Year Two 56.3 percent confirmed that there were fewer sea ducks and fewer common murres, 47.9 percent claimed halibut were unchanged, and 52.1 percent said the numbers of Dolly Varden were the same. In Year Three a majority agreed that bidarkies were unchanged compared to the year before the spill, 46.9 percent felt that the numbers of Dolly Varden were the same, and 49 percent felt observed fewer sea urchins. In both Years Two and Three a substantial majority, approximately 60 percent of those surveyed, noticed fewer clams than they had before the spill (Table XII-44).

In sum, the primary biological concerns of Ouzinkie residents during the three study years were agreed-upon declines in the abundance of harbor seals and certain species of shellfish such as sea urchins and butter clams.

In Years Two and Three over 94 percent of the households participated in the processing of wild foods, but in all three study years, only about 28 percent of the households affirmed that children from other households help them process wild foods, while about 72 percent said no. A solid majority for all three years said that the *Exxon Valdez* oil spill did not affect their participation with children in subsistence activities (Table XII-45).

Over 96 percent of the households polled in all three years said they share wild resources with others. The majority of respondents all three years indicated that their sharing of wild resources was about the same as it was the year before. In Years One and Three at least half of the respondents also said their sharing of wild foods was about the same as the year before the spill (1988), but in Year Two more people said they shared less than before the spill (42.9 percent) than those who said their sharing was the same as it was before the spill (33.3 percent) (Table XII-46). Questions about the sharing of fishing and hunting gear, labor, and money were not asked for Year One, but in Years Two and Three most people said their sharing compared to the previous year and compared to the year before the oil spill had not changed. When asked an open-ended question about the importance of sharing, many people waxed eloquent. Each of the following statements came from a different respondent:

> We always share with our friends and family.
> It's our way of life. I'll help anybody.
> Everybody does it here. It's the thing to do in this community.

That's what friends and relatives are for, brings you closer together.
We were raised that way.
When we have extra we share, when we don't have extra we don't share.
I share with them, they share with me.
I was raised to believe in sharing, especially on the first catch.
Sharing helps cement your friendships.
First fish still shared with elders.
It's part of our heritage.
Because there are some people who just can't go out and get the things, and I like the feeling that it spreads all over the village.
We must provide for the elders who can't get out.
Sharing an experience and sharing what we got.

When asked about the influence of elders over the previous three, four, and five years, more respondents seemed to think it had decreased in Years One and Two, but in Year Three more people thought it had remained the same.

Little seems to have changed in Ouzinkie due to the oil spill as far as political involvement is concerned. Approximately 36.7 percent in Year One said they sometimes attended public meetings before the oil spill, while 43.8 percent said they sometimes attended meetings the previous year. About the same percentage (36.7 percent and 34.4 percent) said they always attended public meetings before the oil spill and during the past year, and approximately the same number (23.3 percent and 21.9 percent) said they never attended public meetings before the spill or in the past year. A solid majority of the heads of households, however, said they voted in the last city council election, in the last statewide election, in the last regional corporation (Koniag Inc.) election, and in the last village corporation (Ouzinkie Native Corporation) election. This response was virtually unchanged in Years Two and Three. The overwhelming majority declared themselves to be members of the Koniag Regional Corporation and the Ouzinkie Native Corporation. A majority in all three years said their view of what makes a good leader has not changed since the oil spill (Table XII-47).

As for reasons why people moved to Ouzinkie, a majority of 58.1 percent in Year One said it was because they were born or reared there, and this was confirmed by even larger majorities in Years Two and Three. In Year One some 9.4 percent said they moved to the community for the purpose of employment, and an equal percentage said they moved there because they married a person born or raised there or because they had relatives there. In Year Three the number who moved to the community for employment reasons increased to 12.3 percent, and the number who moved to Ouzinkie because they married a person who was from there increased to 10.5 percent.

A majority of people interviewed in all three study years said they continued to live in Ouzinkie because that is where they are from, because they have relatives or friends there, because of fishing and hunting opportunities, because they like the size of the community, because there is housing available, because there is less crime, because they have the necessary personal freedoms, and because there are recreational opportunities. The largest majority of all, ranging from 93.8 percent in Year One to 98.1

percent in Year Two, said they lived in Ouzinkie because of the beauty of the area. In Year Two an additional majority said they lived in Ouzinkie because they had always lived there and because the cost of living was affordable. An important additional reason for remaining in the community that was heavily cited in all three years was that residents liked the quality of life there. A strong majority said they did not live in Ouzinkie either because there was less drinking and drugs compared to other communities or because of educational or job opportunities, medical services, or stores.

A very strong majority in all three years said they liked living in Ouzinkie just as much as they did before the oil spill. During Year One, satisfaction was fairly high in that 78.1 percent said they would rather be living in Ouzinkie than any place else, with only 21.9 percent saying they wanted to move. By Year Three the percentage wanting to move increased slightly to 26.3 percent. Indeed, over 80 percent in all three years said they expect to be living in the region when they are old (Table XII-48).

When asked about how another oil spill would affect their household if they were prevented from harvesting wild resources for six months, a year, or even three years, people were quite emotional and said such things as:

> My cravings would be wild.
> Oh, wow, that'd be terrible. Every year I can't wait for my next salmon; we'd miss all that.
> We would have to move.
> Would have to buy more. Would be too expensive.
> Devastating.
> Inconceivable.
> I'd have to eat store food all the time.
> It would ruin our lifestyle. Children would not learn how to harvest resources. Lose tradition.
> We'd need replacement fish again.
> It would nearly total us.
> I'd shoot every goddamn oil tanker skipper in the world.
> Go ring that guy's neck.
> It would be the end of Kodiak Island as it's known. The whole economy would collapse.
> I'd manage somehow, get wild foods elsewhere.
> It would be hard on people that depend on subsistence lifestyles.
> We'd be on welfare, become dependent on the State.

In Year One, a solid majority of 75.0 percent said they felt confident about hunting, fishing, and gathering opportunities in the future. Of the 18.8 percent that said they did not feel confident, most said it was because of increased restrictions and regulations and their fear of additional environmental damage. In Years Two and Three, fewer and fewer people felt optimistic about hunting and fishing opportunities until by Year Three only 50.9 percent felt confident and 37.8 percent said they did not feel confident, primarily citing increased restrictions as the primary reason. A majority of about 60 percent in all three years said they would continue to live in Ouzinkie even if no wild foods were available, with 25 to 30 percent saying they would move.

In evaluating the various agencies and organizations that responded to the oil spill, a majority of respondents in Year One rated the Ouzinkie Village Corporation, Ouzinkie City Council, and Ouzinkie IRA

Council, local law enforcement (i.e. the Village Public Safety Officer or VPSO who served as the community's oil spill coordinator), commercial fishermen, and commercial businesses as "effective." A fairly large segment responded with "don't know" to the long series of questions in this category (Table XII-49). Approximately the same results were obtained in Year Two, with an additional majority saying health services were effective. More people thought Exxon's efforts were not effective than the combination of those who thought they were effective or somewhat effective. In Year Three less than a majority rated the City Council, the IRA Council, commercial businesses, and local law enforcement as "effective," but support was still very strong for these three groups as well as for the Village Corporation and commercial fishermen.

There was no clear consensus on whether people felt adequately informed about the safety of eating subsistence foods after the spill. In Year One an estimated 37.9 percent (the heads of 11 households) said they were, but a much larger number, 48.3 percent (representing 14 households) said they were not, with an additional 6.9 percent saying they were somewhat informed. Of those who did not feel adequately informed, 33.3 percent cited the lack of clear or definitive advice, 26.7 percent said they received no information, 26.7 percent said they did not trust or believe the advice that was given, 20 percent said the information was untimely, and 13.3 percent said the information provided was too difficult to understand (Table XII-50). In Year Two 39.6 percent said they were adequately informed, 22.9 percent said they were somewhat informed, and the percentage that said they were not informed dropped to 33.3 percent. By Year Three, however, only 25 percent said they were adequately informed, but those who were "somewhat informed" surged up to 30.8 percent, and a steadfast 38.5 percent contended that they were inadequately informed. Individual comments on this topic from Year One and Year Two surveys are instructive of the community's distrust and dissatisfaction:

> Newsletters were not understandable. Too technical.
> Results were slow coming back.
> We didn't know if we should eat the fish or clams and we didn't get no information about nothing. I sent samples in on clams and their KANA person said they were OK way after the oil spill.
> They were trying to send things out, but it took them too damn long -- 3 or 4 months after taking the sample.
> It took too long to come up with anything.
> We felt they were trying to hide information from the community.
> I don't think they did enough testing.
> I was scared to eat the stuff. Guys here dug clams for testing and we shipped them out. But we never heard if they were bad or not.
> I did not believe them.
> We never could get a straight answer from DEC or NOAA. They said one thing one day, another later.
> Explanations at public meetings were too hard to understand, especially the Health Task Force panel.
> We didn't know if it was good. We had to use our own judgment.
> I don't believe smell, see, and taste tests are good enough as ways of telling whether foods

are safe to eat.
Didn't get any information except hearsay.
They wouldn't tell us anyway if they found something.
Data from France's spill not provided (cancer rates etc.).
They were not precise on their answers and knew what they were going to say before they said anything.
I don't believe the people who gave us information were interested in the truth.
No one believed shit.
Nobody even knew the people that were testing them.
No choice but to eat them.
Tested and had public presentation in Ouzinkie but had lost credibility by then. No one believed.
If they had explained everything instead of testing and not saying anything, it would have been better.
I don't think they told us the honest truth.

Regarding the proposed outer continental shelf (OCS) oil development via offshore leases in Shelikof Strait, 50 percent or more of those surveyed in Ouzinkie in all three years perceived that it would result in a decrease in the number of shellfish and marine mammals available for harvest. In Year One, 46.9 percent thought it would have a negative affect on bird populations, and this percentage climbed to just over 50 percent in Years Two and Three. In Year One 40.6 percent thought oil development would reduce the number of fish, but this percentage increased to around 50 percent in Years Two and Three. Only 31.3 percent of the respondents in Year One thought such oil development would seriously reduce the number of land mammals, but surprisingly, this group increased in strength to 42.1 percent in Year Three, outweighing both those groups who believed there would be no change (21.1 percent) and those who didn't know (36.8 percent).

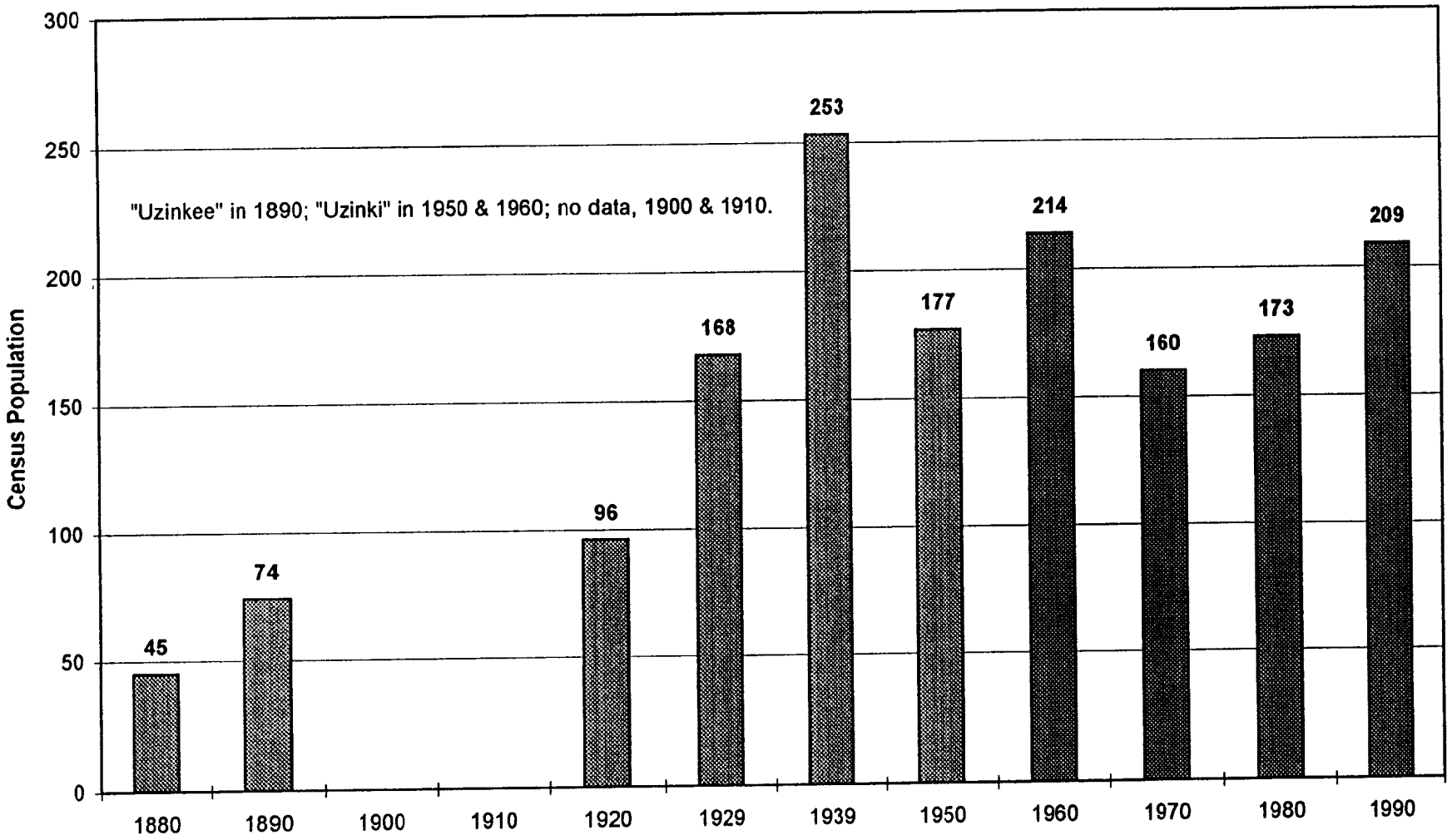
Respondents from Years One, Two, and Three were about evenly divided over whether a small oil spill of less than 1,000 barrels could be effectively cleaned up today, but the number who believed that a large oil spill could not be, climbed from 59.4 percent in Year One to a landslide of 84.2 percent by Year Three (Table XII-51).

In Years Two and Three 50 percent or more of Ouzinkie's household heads said they were not in favor of the search for offshore oil in their region, while 37-40 percent declared that they were. An even stronger segment of Ouzinkie (59.6 percent in Year Two and 68.4 percent in Year Three) spoke against the development and production of offshore oil, citing a wide variety of reasons but emphasizing harmful impacts on subsistence and commercial fishing and the dangers of oil pollution. Only 32.7 percent in Year Two and 21.1 percent in Year Three actually supported oil development. A majority of 56.3 percent in Year One were convinced that OCS development would provide more job opportunities for local people, but in Year Two only 42.3 percent felt that way, and by Year Three only 31.6 percent held that opinion.

This inquiry became somewhat academic because late in 1993 shortly before completion of the Year Three social effects questionnaires, the U.S. Minerals Management Service withdrew the Shelikof Strait area to the north and west of Spruce Island from offshore lease consideration. The proposed oil lease sale was withdrawn or deferred in response to strong protests filed by commercial fishing and

environmental groups. The publicity surrounding the proposed leasing and the cancellation of the sale may have had some influence on the responses people gave to these questions.

Figure XII-1. Ouzinkie Census Population, 1880 - 1990



Sources: Rollins 1978; Alaska Department of Labor 1991

Table XII-1. Sample Participation: Ouzinkie 1992, 1993, and 1994

VARIABLE	1992 HOUSEHOLDS	1993 HOUSEHOLDS	1994 HOUSEHOLDS
Estimated Household Structures	64	60	71
Non-Residential Structures	0	0	0
Estimated Households	64	60	71
Interview Goal:	32	60	71
Households Interviewed	32	52	61
Failed to Contact/Unavailable	10	2	3
Refused	4	5	7
Vacant Residential Structures	2	0	0
Seasonal Households*	6	0	0
Non-Resident Household **	0	1	0
Invalid Households and Vacancies	8	1	0
Total Households Attempted:	54	60	71
Refusal Rate:	11.11%	8.77%	10.29%
Non-Perm. HH Rate ("Vacancy Rate"):	14.8%	1.7%	0.0%
Interview Goal (Percentage)	100.0%	86.7%	85.9%
Social Effects Surveys Completed	32	52	57
Total Permanent Households	55	59	71
Percentage Interviewed	58.18%	88.14%	85.92%
Interview Weighting Factor	1.719	1.135	1.164

NOTES:

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

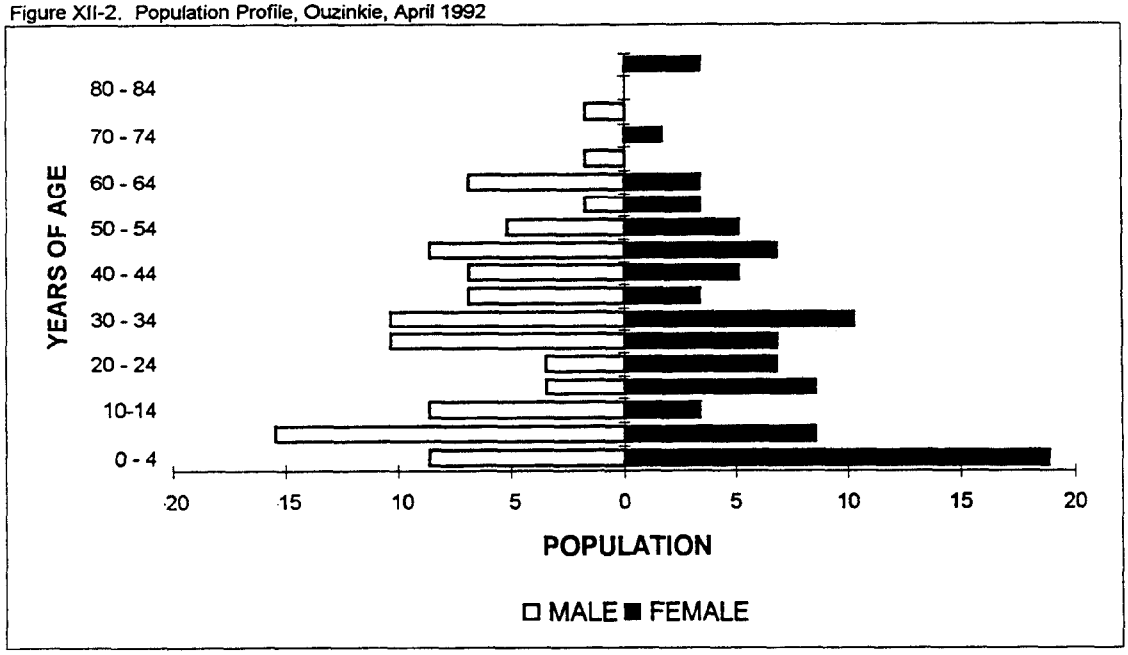
** Non-resident households are households which were not present during the study year or which were resident less than the required number of months.

Table XII-2 . Demographic Characteristics of Households, Ouzinkie, April 1992, April 1993, and April 1994

Characteristics	1991/92	1992/93	1993/94
Sampled Households	32	52	61
Number of Households in the Community	55	59	71
Percentage of Households Sampled	58.18	88.14	85.92
Household Size			
Mean	3.56	3.15	3.30
Minimum	1	1	1
Maximum	7	6	8
Sample Population	114	164	201
Estimated Community Population	195.94	186.08	233.95
Age			
Mean	29.36	30.24	30.28
Minimum	0.16	0.66	0.30
Maximum	89.33	77.78	78.78
Median	28.446	31.232	29.273
Length of Residency - Population			
Mean	17.89	20.42	14.12
Minimum	0.158795	0.625	0.125
Maximum	73.13	72.20	65.04
Length of Residency - Household Heads			
Mean	26.21	27.65	19.93
Minimum	0.625	0.625	0.125
Maximum	73.125	66.22587	65.04
Sex			
Males			
Number	99.69	97.58	117.56
Percentage	50.88	52.44	50.25
Females			
Number	96.25	88.50	116.39
Percentage	49.12	47.56	49.75
Alaska Native			
Households (Either Head)			
Number	48.13	53.33	64.02
Percentage	87.50	90.38	90.16
Estimated Population			
Number	154.69	149.77	197.87
Percentage	78.95	80.49	84.58

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

Figure XII-2. Population Profile, Ouzinkie, April 1992



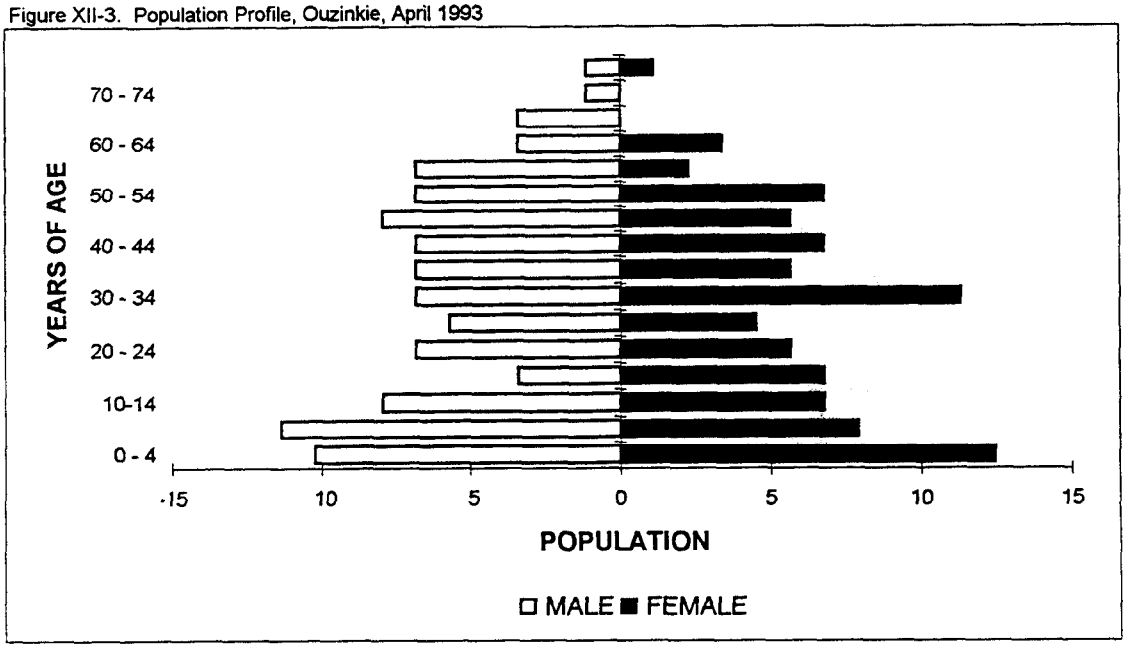
SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table XII-3. Population Profile, Ouzinkie, April 1992

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	8.59	8.62%	8.62%	18.91	19.64%	19.64%	27.50	14.04%	14.04%
5-9	15.47	15.52%	24.14%	8.59	8.93%	28.57%	24.06	12.28%	26.32%
10-14	8.59	8.62%	32.76%	3.44	3.57%	32.14%	12.03	6.14%	32.46%
15 - 19	3.44	3.45%	36.21%	8.59	8.93%	41.07%	12.03	6.14%	38.60%
20 - 24	3.44	3.45%	39.66%	6.88	7.14%	48.21%	10.31	5.26%	43.86%
25 - 29	10.31	10.34%	50.00%	6.88	7.14%	55.36%	17.19	8.77%	52.63%
30 - 34	10.31	10.34%	60.34%	10.31	10.71%	66.07%	20.63	10.53%	63.16%
35 - 39	6.88	6.90%	67.24%	3.44	3.57%	69.64%	10.31	5.26%	68.42%
40 - 44	6.88	6.90%	74.14%	5.16	5.36%	75.00%	12.03	6.14%	74.56%
45 - 49	8.59	8.62%	82.76%	6.88	7.14%	82.14%	15.47	7.89%	82.46%
50 - 54	5.16	5.17%	87.93%	5.16	5.36%	87.50%	10.31	5.26%	87.72%
55 - 59	1.72	1.72%	89.66%	3.44	3.57%	91.07%	5.16	2.63%	90.35%
60 - 64	6.88	6.90%	96.55%	3.44	3.57%	94.64%	10.31	5.26%	95.61%
65 - 69	1.72	1.72%	98.28%	0.00	0.00%	94.64%	1.72	0.88%	96.49%
70 - 74	0.00	0.00%	98.28%	1.72	1.79%	96.43%	1.72	0.88%	97.37%
75 - 79	1.72	1.72%	100.00%	0.00	0.00%	96.43%	1.72	0.88%	98.25%
80 - 84	0.00	0.00%	100.00%	0.00	0.00%	96.43%	0.00	0.00%	98.25%
85 - 89	0.00	0.00%	100.00%	3.44	3.57%	100.00%	3.44	1.75%	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	99.69	50.88%		96.25	49.12%		195.94	100.00%	

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

Figure XII-3. Population Profile, Ouzinkie, April 1993



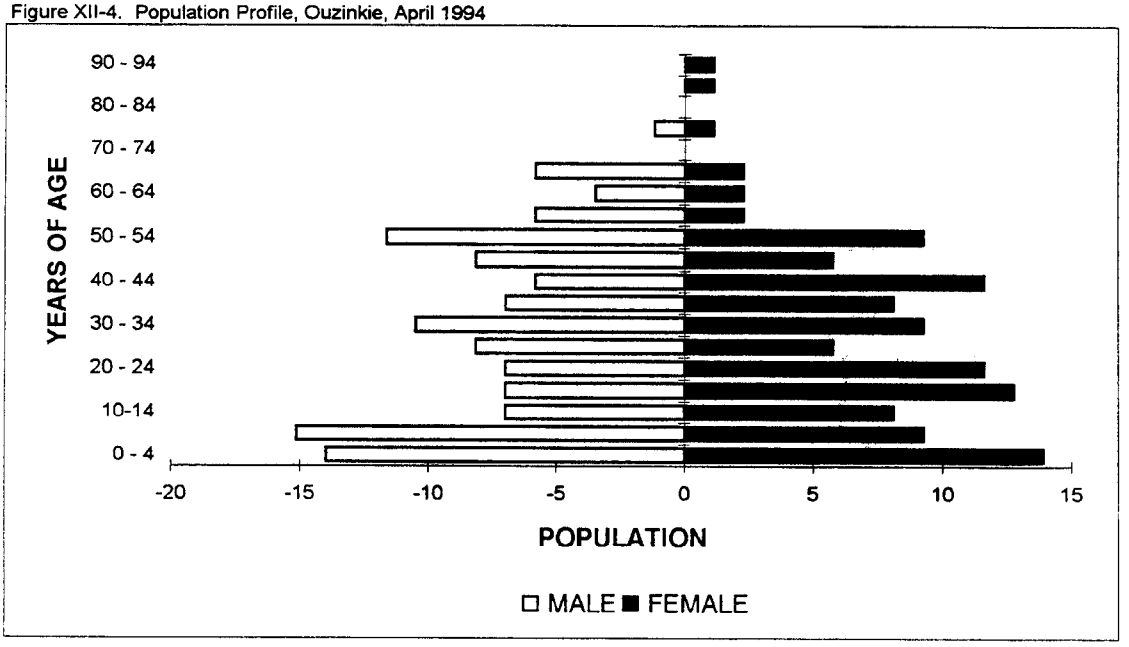
SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table XII-4. Population Profile, Ouzinkie, April 1993

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	10.21	10.47%	10.47%	12.48	14.10%	14.10%	22.69	12.20%	12.20%
5-9	11.35	11.63%	22.09%	7.94	8.97%	23.08%	19.29	10.37%	22.56%
10-14	7.94	8.14%	30.23%	6.81	7.69%	30.77%	14.75	7.93%	30.49%
15 - 19	3.40	3.49%	33.72%	6.81	7.69%	38.46%	10.21	5.49%	35.98%
20 - 24	6.81	6.98%	40.70%	5.67	6.41%	44.87%	12.48	6.71%	42.68%
25 - 29	5.67	5.81%	46.51%	4.54	5.13%	50.00%	10.21	5.49%	48.17%
30 - 34	6.81	6.98%	53.49%	11.35	12.82%	62.82%	18.15	9.76%	57.93%
35 - 39	6.81	6.98%	60.47%	5.67	6.41%	69.23%	12.48	6.71%	64.63%
40 - 44	6.81	6.98%	67.44%	6.81	7.69%	76.92%	13.62	7.32%	71.95%
45 - 49	7.94	8.14%	75.58%	5.67	6.41%	83.33%	13.62	7.32%	79.27%
50 - 54	6.81	6.98%	82.56%	6.81	7.69%	91.03%	13.62	7.32%	86.59%
55 - 59	6.81	6.98%	89.53%	2.27	2.56%	93.59%	9.08	4.88%	91.46%
60 - 64	3.40	3.49%	93.02%	3.40	3.85%	97.44%	6.81	3.66%	95.12%
65 - 69	3.40	3.49%	96.51%	0.00	0.00%	97.44%	3.40	1.83%	96.95%
70 - 74	1.13	1.16%	97.67%	0.00	0.00%	97.44%	1.13	0.61%	97.56%
75 - 79	1.13	1.16%	98.84%	1.13	1.28%	98.72%	2.27	1.22%	98.78%
80 - 84	0.00	0.00%	98.84%	0.00	0.00%	98.72%	0.00	0.00%	98.78%
85 - 89	0.00	0.00%	98.84%	0.00	0.00%	98.72%	0.00	0.00%	98.78%
90 - 94	0.00	0.00%	98.84%	0.00	0.00%	98.72%	0.00	0.00%	98.78%
95 - 99	0.00	0.00%	98.84%	0.00	0.00%	98.72%	0.00	0.00%	98.78%
100 - 104	0.00	0.00%	98.84%	0.00	0.00%	98.72%	0.00	0.00%	98.78%
Missing	1.13	1.16%	100.00%	1.13	1.28%	100.00%	2.27	1.22%	100.00%
TOTAL	97.58	52.44%		88.50	47.56%		186.08	100.00%	

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

Figure XII-4. Population Profile, Ouzinkie, April 1994



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

Table XII-5. Population Profile, Ouzinkie, April 1994

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	13.97	11.88%	11.88%	13.97	12.00%	12.00%	27.93	11.94%	11.94%
5-9	15.13	12.87%	24.75%	9.31	8.00%	20.00%	24.44	10.45%	22.39%
10-14	6.98	5.94%	30.69%	8.15	7.00%	27.00%	15.13	6.47%	28.86%
15 - 19	6.98	5.94%	36.63%	12.80	11.00%	38.00%	19.79	8.46%	37.31%
20 - 24	6.98	5.94%	42.57%	11.64	10.00%	48.00%	18.62	7.96%	45.27%
25 - 29	8.15	6.93%	49.50%	5.82	5.00%	53.00%	13.97	5.97%	51.24%
30 - 34	10.48	8.91%	58.42%	9.31	8.00%	61.00%	19.79	8.46%	59.70%
35 - 39	6.98	5.94%	64.36%	8.15	7.00%	68.00%	15.13	6.47%	66.17%
40 - 44	5.82	4.95%	69.31%	11.64	10.00%	78.00%	17.46	7.46%	73.63%
45 - 49	8.15	6.93%	76.24%	5.82	5.00%	83.00%	13.97	5.97%	79.60%
50 - 54	11.64	9.90%	86.14%	9.31	8.00%	91.00%	20.95	8.96%	88.56%
55 - 59	5.82	4.95%	91.09%	2.33	2.00%	93.00%	8.15	3.48%	92.04%
60 - 64	3.49	2.97%	94.06%	2.33	2.00%	95.00%	5.82	2.49%	94.53%
65 - 69	5.82	4.95%	99.01%	2.33	2.00%	97.00%	8.15	3.48%	98.01%
70 - 74	0.00	0.00%	99.01%	0.00	0.00%	97.00%	0.00	0.00%	98.01%
75 - 79	1.16	0.99%	100.00%	1.16	1.00%	98.00%	2.33	1.00%	99.00%
80 - 84	0.00	0.00%	100.00%	0.00	0.00%	98.00%	0.00	0.00%	99.00%
85 - 89	0.00	0.00%	100.00%	1.16	1.00%	99.00%	1.16	0.50%	99.50%
90 - 94	0.00	0.00%	100.00%	1.16	1.00%	100.00%	1.16	0.50%	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	117.56	50.25%		116.39	49.75%		233.95	100.00%	

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

Table XII-6. Employment Characteristics, Ouzinkie, 1991/92, 1992/93, and 1993/94

Characteristics		1991/92	1992/93	1993/94
ADULTS				
Total		130.63	122.54	161.79
Employed				
	Number	106.56	104.38	123.38
	Percentage	81.58	85.19	76.26
Jobs				
	Number	159.84	179.27	187.39
	Mean	1.50	1.72	1.52
	Minimum	1	1	1
	Maximum	4	6	4
Months Employed				
	Mean	8.40	7.97	7.75
	Minimum	1	1	1
	Maximum	12	12	12
	Year-Round	38.71	30.43	26.42
HOUSEHOLDS				
Total		55.00	59.00	71.00
Employed				
	Number	49.84	55.60	66.34
	Percentage	90.63	94.23	93.44
Jobs per Employed Household				
	Mean	3.21	3.22	2.82
	Minimum	1	1	1
	Maximum	6	8	10
Employed Adults				
	Mean	2.14	1.88	1.86
	Minimum	1	1	1
	Maximum	4	4	5

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

Table XII-7. Community, Household, and Per Capita Income, All Sources and by Employer Type, Ouzinkie, 1991/92

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$2,740,455.75	$49,826.47	$13,986.38
Earned Income	$1,863,946.79	$33,889.94	$9,512.97
Agriculture, Forestry, and Fishing	577,852.00	10,506.40	2,949.16
Agriculture	0.00	0.00	0.00
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	577,852.00	10,506.40	2,949.16
Hatchery/Enhancemen	0.00	0.00	0.00
Commercial Fishing	577,852.00	10,506.40	2,949.16
Hunting/Trapping	0.00	0.00	0.00
Mining	0.00	0.00	0.00
Construction	859.38	15.63	4.39
Manufacturing	0.00	0.00	0.00
Cannery	0.00	0.00	0.00
Other Manufacturing	0.00	0.00	0.00
Logging/Timber	AMT UNK	AMT UNK	AMT UNK
Transportation, Communications, and Utilities	123,996.35	2,254.48	632.84
Trade	106,562.50	1,937.50	543.86
Wholesale	0.00	0.00	0.00
Retail	106,562.50	1,937.50	543.86
Finance, Insurance, and Real Estate	255,234.38	4,640.63	1,302.63
Services	93,431.25	1,698.75	476.84
Government	706,010.94	12,836.56	3,603.25
Federal	51,562.50	937.50	263.16
State	7,390.63	134.38	37.72
Local	647,057.81	11,764.69	3,302.37
Local Government	163,401.56	2,970.94	833.95
Local Education	483,656.25	8,793.75	2,468.42
Unknown	AMT UNK	AMT UNK	AMT UNK
Other Income	$876,508.96	$15,936.53	$4,473.41

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

Table XII-8. Community, Household, and Per Capita Other Income by Source, Ouzinkie, 1991/92

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$876,508.96	$15,936.53	$4,473.41
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	6.25	26,468.75	481.25	135.09
Adult Public Assistance	0.00	0.00	0.00	0.00
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	6.25	6,063.75	110.25	30.95
Longevity Bonus	12.50	20,625.00	375.00	105.26
Social Security	18.75	58,306.88	1,060.13	297.58
Workman's Comp./Insurance	0.00	0.00	0.00	0.00
Energy Assistance	37.50	12,238.13	222.51	62.46
Supplemental Security Income	0.00	0.00	0.00	0.00
Food Stamps	6.25	14,437.50	262.50	73.68
Unemployment	15.63	16,540.10	300.73	84.42
Native Corporation Dividend	87.50	566,579.33	10,301.44	2,891.63
Dividend/Interest	6.25	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	90.63	155,249.53	2,822.72	792.34
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, 1992

Figure XII-5. Employment by Industry, Ouzinkie, 1991/92

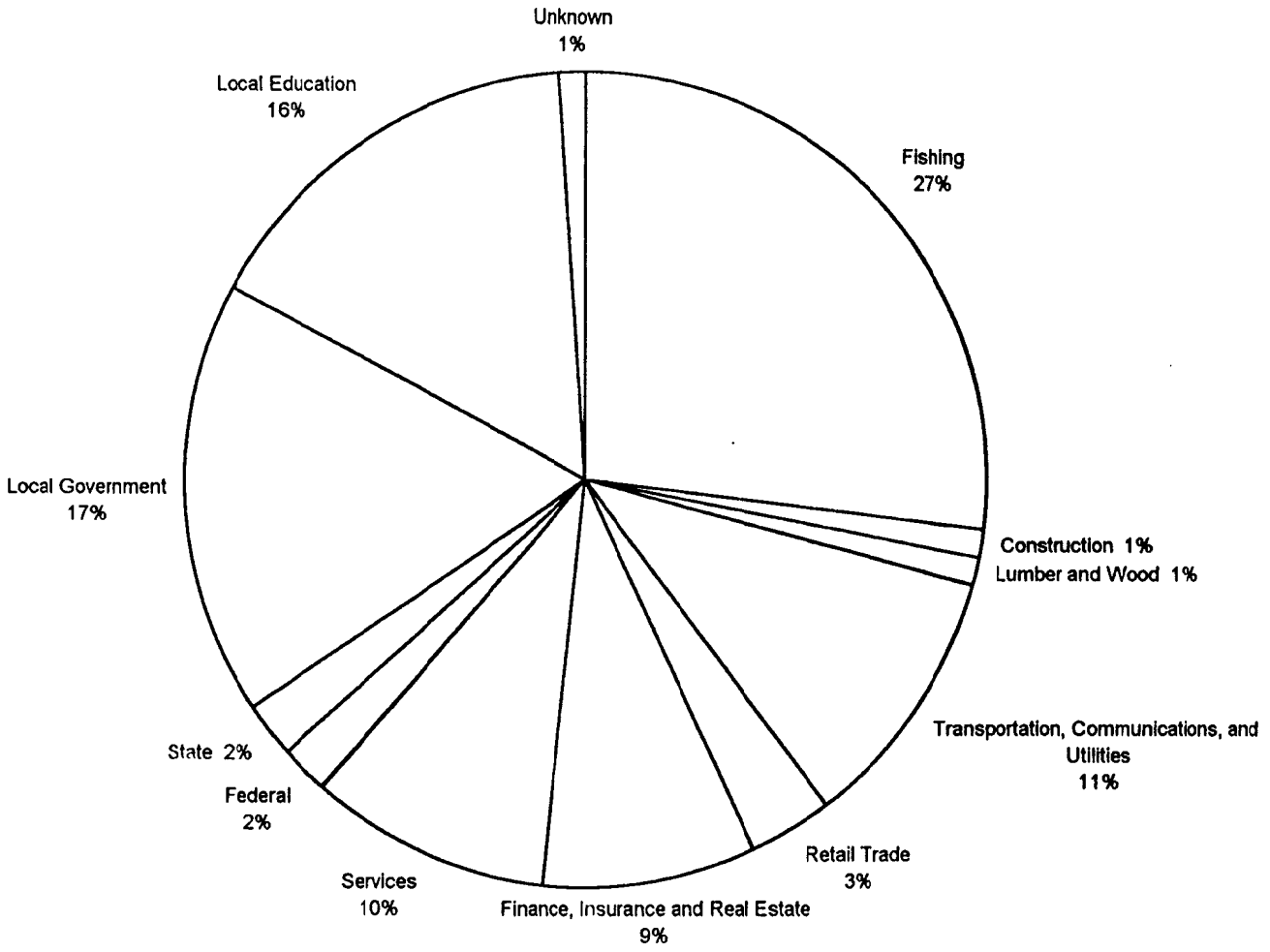


Table XII-9. Community, Household, and Per Capita Income, All Sources and by Employer Type, Ouzinkie, 1992/93

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$2,211,218.22	$37,478.27	$11,883.36
Earned Income	$1,434,723.64	$24,317.35	$7,710.38
Agriculture, Forestry, and Fishing	321,289.71	5,445.59	1,726.65
Agriculture	0.00	0.00	0.00
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	321,289.71	5,445.59	1,726.65
Hatchery/Enhancemen	0.00	0.00	0.00
Commercial Fishing	321,289.71	5,445.59	1,726.65
Hunting/Trapping	0.00	0.00	0.00
Mining	0.00	0.00	0.00
Construction	7,034.62	119.23	37.80
Manufacturing	0.00	0.00	0.00
Cannery	AMT UNK	AMT UNK	AMT UNK
Other Manufacturing	0.00	0.00	0.00
Logging/Timber	AMT UNK	AMT UNK	AMT UNK
Transportation, Communications, and Utilities	123,983.14	2,101.41	666.30
Trade	25,112.82	425.64	134.96
Wholesale	0.00	0.00	0.00
Retail	25,112.82	425.64	134.96
Finance, Insurance, and Real Estate	242,535.38	4,110.77	1,303.41
Services	120,666.35	2,045.19	648.48
Government	594,101.63	10,069.52	3,192.77
Federal	37,442.31	634.62	201.22
State	4,992.31	84.62	26.83
Local	551,667.02	9,350.29	2,964.73
Local Government	220,075.67	3,730.10	1,182.71
Local Education	331,591.35	5,620.19	1,782.01
Unknown	AMT UNK	AMT UNK	AMT UNK
Other Income	$776,494.58	$13,160.93	$4,172.98

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

Table XII-10. Community, Household, and Per Capita Other Income by Source, Ouzinkie, 1992/93

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$776,494.58	$13,160.93	$4,172.98
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	5.77	29,931.15	507.31	160.85
Adult Public Assistance	1.92	AMT UNK	AMT UNK	AMT UNK
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	1.92	2,001.46	33.92	10.76
Longevity Bonus	7.69	19,288.46	326.92	103.66
Social Security	15.38	117,671.42	1,994.43	632.38
Workman's Comp./Insurance	1.92	155.44	2.63	0.84
Energy Assistance	38.46	10,293.23	174.46	55.32
Supplemental Security Income	5.77	33,330.46	564.92	179.12
Food Stamps	11.54	37,246.25	631.29	200.17
Unemployment	13.46	42,173.65	714.81	226.65
Native Corporation Dividend	86.54	329,317.01	5,581.64	1,769.79
Dividend/Interest	7.69	1,134.62	19.23	6.10
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	3.85	2,212.50	37.50	11.89
Disability	0.00	0.00	0.00	0.00
Alaska Permanent Fund Dividend	96.15	151,738.92	2,571.85	815.46
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 XII-6. Employment by Industry, Ouzinkie, 1992/93

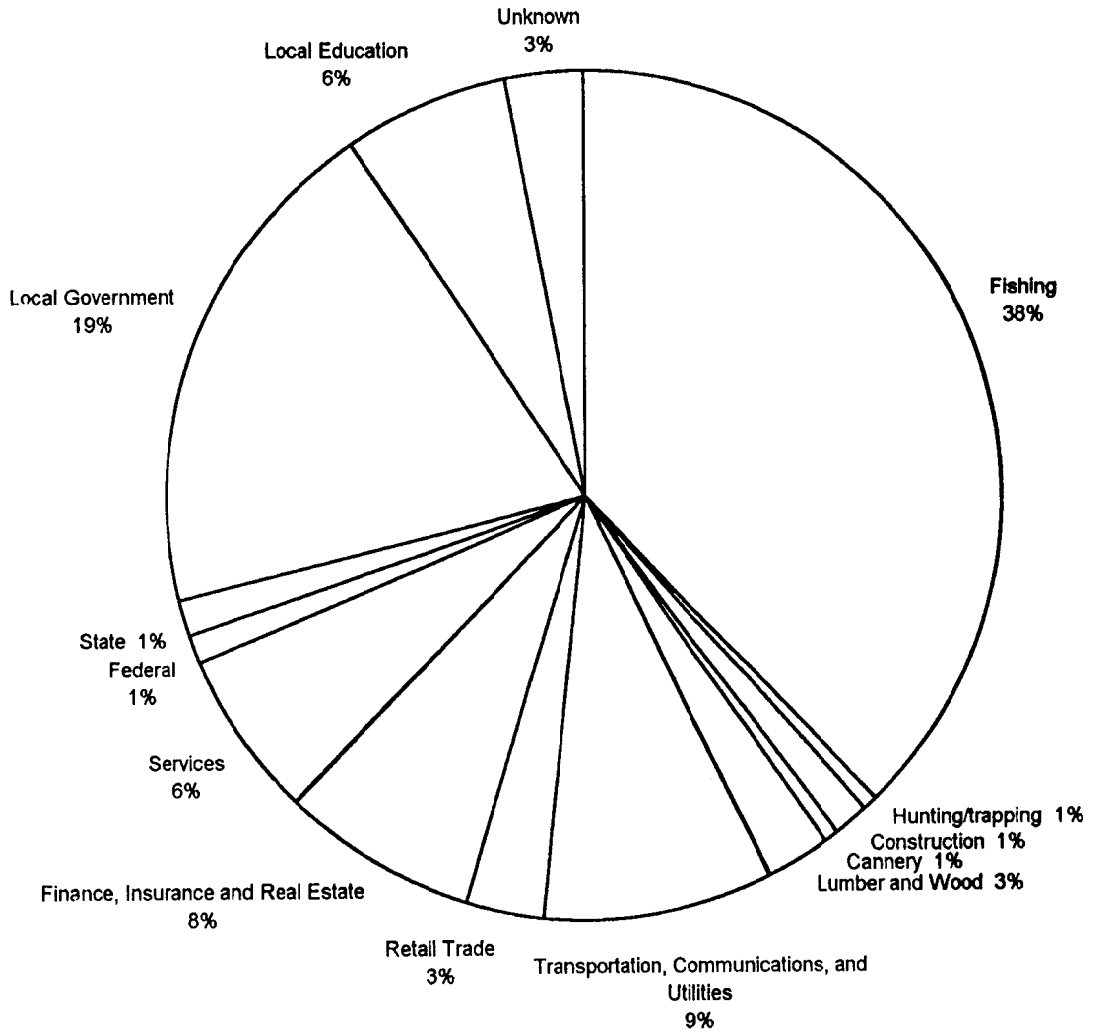


Table XII-11. Community, Household, and Per Capita Income, All Sources and by Employer Type, Ouzinkie, 1993/94

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$2,830,832.17	$39,870.88	$12,100.12
Earned Income	$1,579,258.69	$22,243.08	$6,750.39
Agriculture, Forestry, and Fishing	282,952.46	3,985.25	1,209.45
Agriculture	0.00	0.00	0.00
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	282,952.46	3,985.25	1,209.45
Hatchery/Enhancemen	0.00	0.00	0.00
Commercial Fishing	282,952.46	3,985.25	1,209.45
Hunting/Trapping	0.00	0.00	0.00
Mining	0.00	0.00	0.00
Construction	20,562.84	289.62	87.89
Manufacturing	69,319.28	976.33	296.30
Cannery	22,761.90	320.59	97.29
Other Manufacturing	0.00	0.00	0.00
Logging/Timber	46,557.38	655.74	199.00
Transportation, Communications, and Utilities	200,229.98	2,820.14	855.86
Trade	66,251.15	933.11	283.18
Wholesale	0.00	0.00	0.00
Retail	66,251.15	933.11	283.18
Finance, Insurance, and Real Estate	280,674.47	3,953.16	1,199.72
Services	57,560.88	810.72	246.04
Government	601,707.63	8,474.76	2,571.94
Federal	48,725.20	686.27	208.27
State	57,614.75	811.48	246.27
Local	495,367.67	6,977.01	2,117.40
Local Government	269,548.10	3,796.45	1,152.16
Local Education	225,819.57	3,180.56	965.24
Unknown	AMT UNK	AMT UNK	AMT UNK
Other Income	$1,251,573.48	$17,627.80	$5,349.73

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

Table XII-12. Community, Household, and Per Capita Other Income by Source, Ouzinkie, 1993/94

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$1,251,573.48	$17,627.80	$5,349.73
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	13.11	67,792.86	954.83	289.77
Adult Public Assistance	1.64	5,098.03	71.80	21.79
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	1.64	2,053.18	28.92	8.78
Longevity Bonus	9.84	31,635.74	445.57	135.22
Social Security	13.11	121,794.10	1,715.41	520.60
Workman's Comp./Insurance	0.00	0.00	0.00	0.00
Energy Assistance	14.75	10,174.62	143.30	43.49
Supplemental Security Income	4.92	921.84	12.98	3.94
Food Stamps	11.48	15,353.23	216.24	65.63
Unemployment	11.48	13,715.03	193.17	58.62
Native Corporation Dividend	88.52	771,317.52	10,863.63	3,296.92
Dividend/Interest	4.92	1,745.90	24.59	7.46
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	3.28	13,268.85	186.89	56.72
Disability	0.00	0.00	0.00	0.00
Alaska Permanent Fund Dividend	95.08	196,702.59	2,770.46	840.79
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
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 XII-7. Employment by Industry, Ouzinkie, 1993/94

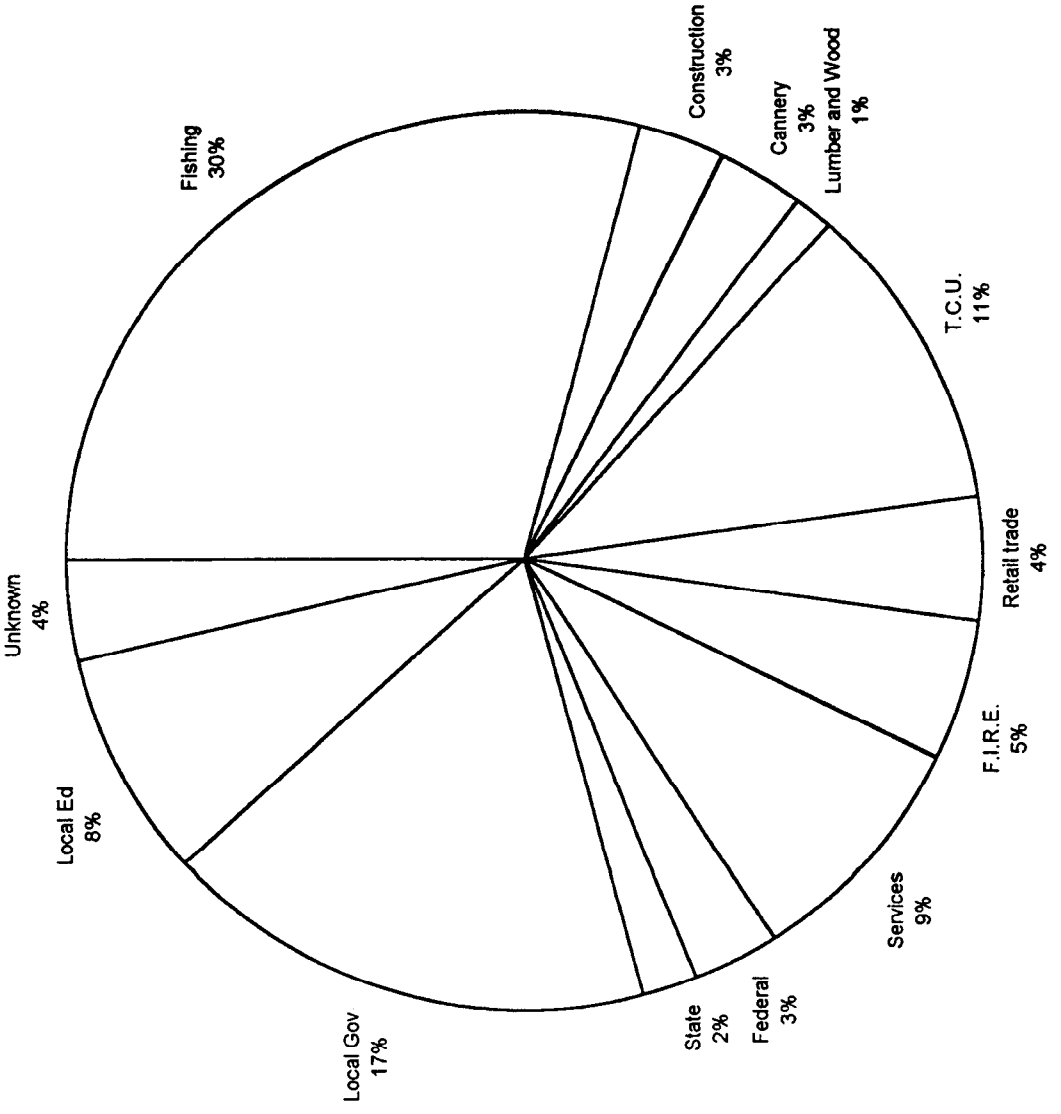


Table XII-13. Characteristics of Resource Harvest and Use, Ouzinkie, 1991/92, 1992/93, and 1993/94

Study Year	1991/92	1992/93	1993/94
Mean Number Of Resources Used Per Household	18.81	20.25	16.20
Minimum	6	3	0
Maximum	47	44	43
95 % Confidence Limit (+/-)	12.09	4.37	5.41
Median	16.5	18	15
Mean Number Of Resources Attempted To Harvest Per Household	13.97	14.15	11.21
Minimum	1	0	0
Maximum	41	35	37
95 % Confidence Limit (+/-)	16.93	5.89	7.08
Median	11.5	13.5	10
Mean Number Of Resources Harvested Per Household	13.25	13.69	10.98
Minimum	1	0	0
Maximum	39	34	36
95 % Confidence Limit (+/-)	17.05	5.93	7.11
Median	11.5	13	10
Mean Number Of Resources Received Per Household	8.28	9.42	8.07
Minimum	0	0	0
Maximum	29	41	37
95 % Confidence Limit (+/-)	17.20	8.93	7.62
Median	6.5	7	7
Mean Number Of Resources Given Away Per Household	5.88	8.75	7.95
Minimum	0	0	0
Maximum	19	34	38
95 % Confidence Limit (+/-)	22.96	9.16	9.81
Median	4.5	6	5
Mean Household Harvest, Pounds	746.22	1,095.03	719.03
Minimum	8.00	0.00	0.00
Maximum	2,966.68	4,959.23	3,771.20
Total Pounds Harvested	41,041.97	64,606.88	51,051.28
Community Per Capita Harvest, Pounds	209.46	347.21	218.21
Percent Using Any Resource	100.00	100.00	98.36
Percent Attempting To Harvest Any Resource	100.00	98.08	91.80
Percent Harvesting Any Resource	100.00	98.08	91.80
Percent Receiving Any Resource	96.88	94.23	95.08
Percent Giving Away Any Resource	84.38	88.46	85.25
Number Of Households In Sample	32	52	61
Number of Resources Available	113	124	138

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

Table XII-14. Participation in the Harvest and Processing of Wild Resources, Ouzinkie, 1991/92, 1992/93, and 1993/94

Study Year			1991/92	1992/93	1993/94
Total Number of People			195.94	186.08	233.95
GAME	Hunt	Number	61.88	69.21	77.98
		Percentage	31.58	37.20	33.33
		Missing	0.00	0.00	1.16
		Missing %	0.00	0.00	0.50
	Process	Number	73.91	103.25	111.74
		Percentage	37.72	55.49	47.76
		Missing	0.00	1.13	1.16
		Missing %	0.00	0.61	0.50
FISH	Fish	Number	108.28	118.00	135.02
		Percentage	55.26	63.41	57.71
		Missing	0.00	1.13	1.16
		Missing %	0.00	0.61	0.50
	Process	Number	110.00	124.81	151.31
		Percentage	56.14	67.07	64.68
		Missing	0.00	1.13	1.16
		Missing %	0.00	0.61	0.50
FURBEARERS	Hunt or Trap	Number	0.00	3.40	0.00
		Percentage	0.00	1.83	0.00
		Missing	0.00	1.13	1.16
		Missing %	0.00	0.61	0.50
	Process	Number	0.00	3.40	0.00
		Percentage	0.00	1.83	0.00
		Missing	0.00	1.13	1.16
		Missing %	0.00	0.61	0.50
PLANTS	Gather	Number	152.97	153.17	185.07
		Percentage	78.07	82.32	79.10
		Missing	0.00	1.13	1.16
		Missing %	0.00	0.61	0.50
	Process	Number	127.19	141.83	168.77
		Percentage	64.91	76.22	72.14
		Missing	0.00	1.13	1.16
		Missing %	0.00	0.61	0.50
ANY RESOURCE					
	Attempt	Number	163.28	162.25	190.89
		Percent	83.33	87.20	81.59
	Process	Number	151.25	155.44	179.25
		Percent	77.19	83.54	76.62

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

Table XII-15. Percentage of Households Sharing Resources by Community, Ouzinkie, 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	68.75	65.63	75.00	50.00	71.88	31.25	65.63	43.75	34.38	25.00	40.63	25.00	43.75	43.75	96.88	84.38
Anchorage	0.00	9.38	0.00	9.38	3.13	0.00	6.25	12.50	3.13	3.13	0.00	6.25	0.00	6.25	9.38	18.75
Barrow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.13	0.00	0.00	0.00	0.00	0.00	3.13	0.00
Chuathbaluk	0.00	0.00	0.00	3.13	0.00	0.00	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.13	3.13
Karluk	3.13	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	3.13	0.00
Kodiak City	0.00	12.50	0.00	3.13	6.25	0.00	0.00	6.25	0.00	3.13	0.00	3.13	0.00	6.25	6.25	18.75
Old Harbor	0.00	3.13	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	3.13
Ouzinkie	68.75	59.38	75.00	46.88	68.75	31.25	56.25	34.38	31.25	21.88	40.63	25.00	43.75	40.63	93.75	81.25
Port Lions	0.00	3.13	0.00	0.00	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.13	3.13
Sitka	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	3.13	0.00	3.13
Other U.S.	0.00	21.88	0.00	0.00	0.00	0.00	0.00	3.13	0.00	0.00	0.00	3.13	0.00	3.13	0.00	25.00
Foreign	0.00	3.13	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	3.13
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	3.13	0.00	3.13	0.00
Community Unknown	0.00	0.00	0.00	0.00	0.00	0.00	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.13	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 XII-16. Subsistence Harvests in Pounds Usable Weight per Person by Resource Category, Ouzinkie 1982/83, 1986, 1989, 1990/91, 1991/92, 1992/93, and 1993/94

	Pounds Usable Weight per Person						
	1982/83	1986	1989	1990/91	1991/92	1992/93	1993/4
Salmon	172.7	192.7	29.4	75.5	88.5	213.4	102.4
Other Fish	62.1	68.4	14.6	68.2	54.5	58.4	36.5
Marine Invertebrates	50.6	28.2	7.8	13.9	12.3	27.6	21.9
Land Mammals	39.4	70.0	18.5	23.3	32.4	19.4	24.2
Marine Mammals	32.4	30.0	8.6	10.4	6.9	12.1	15.0
Birds and Eggs	12.1	8.8	6.6	7.5	5.7	7.5	6.6
Wild Plants	*	4.8	3.5	6.5	9.3	8.9	11.6
All Resources	369.1	402.8	88.9	205.2	209.5	347.2	218.2

* No Plant data collected for 1982/83

Table XII-17. Composition of Resource Harvests by Resource Category, Ouzinkie 1982/83, 1986, 1989, 1990/91, 1991/92, 1992/93, and 1993/94

	Percentage of Total Harvest						
	1982/83	1986	1989	1990/91	1991/92	1992/93	1993/4
Salmon	46.8%	47.8%	33.0%	36.8%	42.2%	61.5%	46.9%
Other Fish	16.8%	17.0%	16.4%	33.2%	26.0%	16.8%	16.7%
Marine Invertebrates	13.7%	7.0%	8.8%	6.8%	5.9%	7.9%	10.0%
Land Mammals	10.7%	17.4%	20.8%	11.3%	15.5%	5.6%	11.1%
Marine Mammals	8.8%	7.5%	9.7%	5.1%	3.3%	3.5%	6.9%
Birds and Eggs	3.3%	2.2%	7.4%	3.6%	2.7%	2.2%	3.0%
Wild Plants	*	1.2%	3.9%	3.2%	4.4%	2.6%	5.3%

* Note: wild plant data not collected for 1982/83

Figure XII-8. Harvests of Wild Resources for Home Use, Pounds Usable Weight per Capita, Ouzinkie, 1982/83, 1986, 1989, 1990/91, 1991/92, 1992/93, and 1993/94

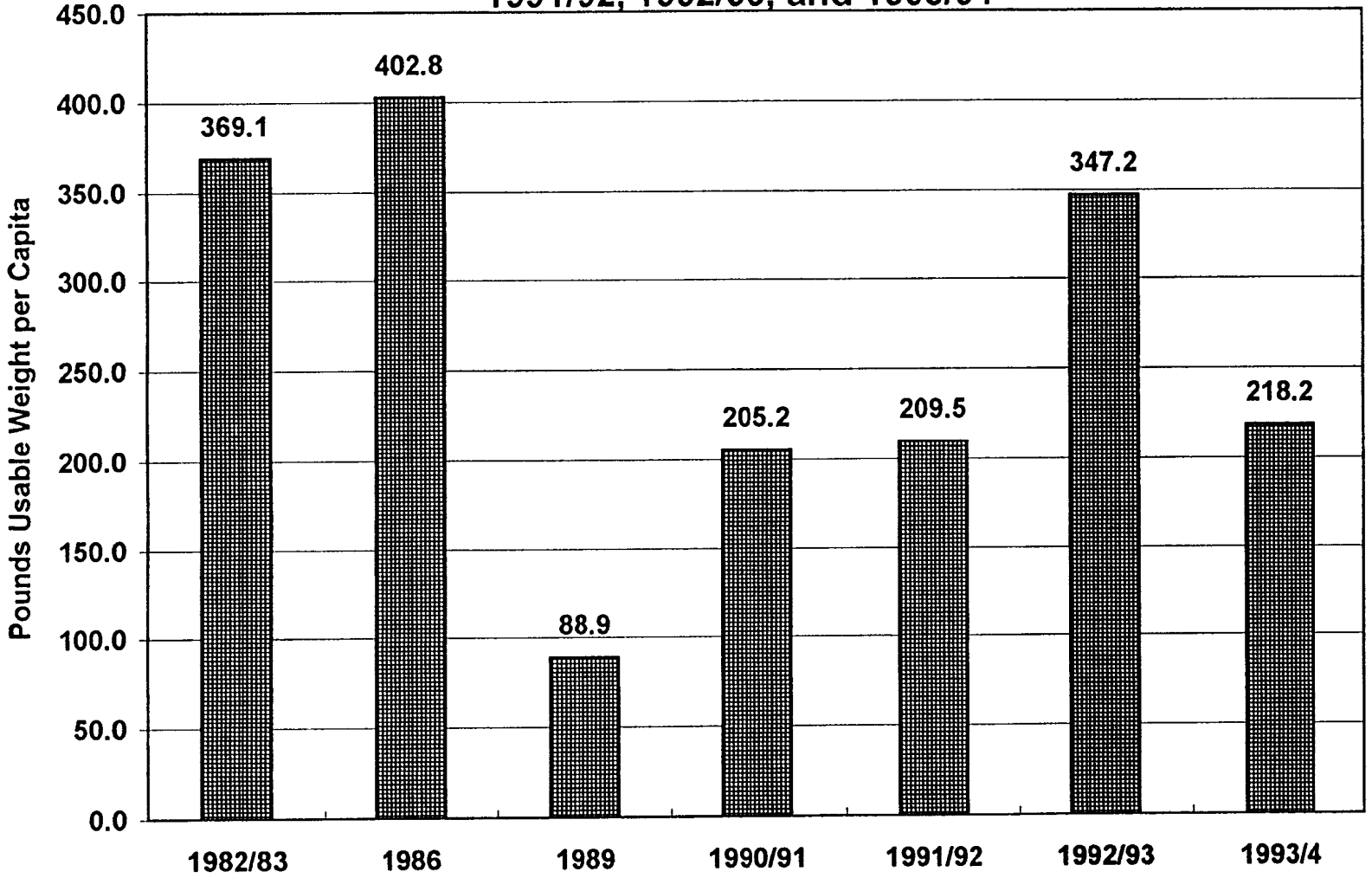


Figure XII-9. Per Capita Harvests of Wild Resources by Resource Category, Ouzinkie, 1982/83, 1986, 1989, 1990/91, 1991/92, 1992/93, and 1993/94

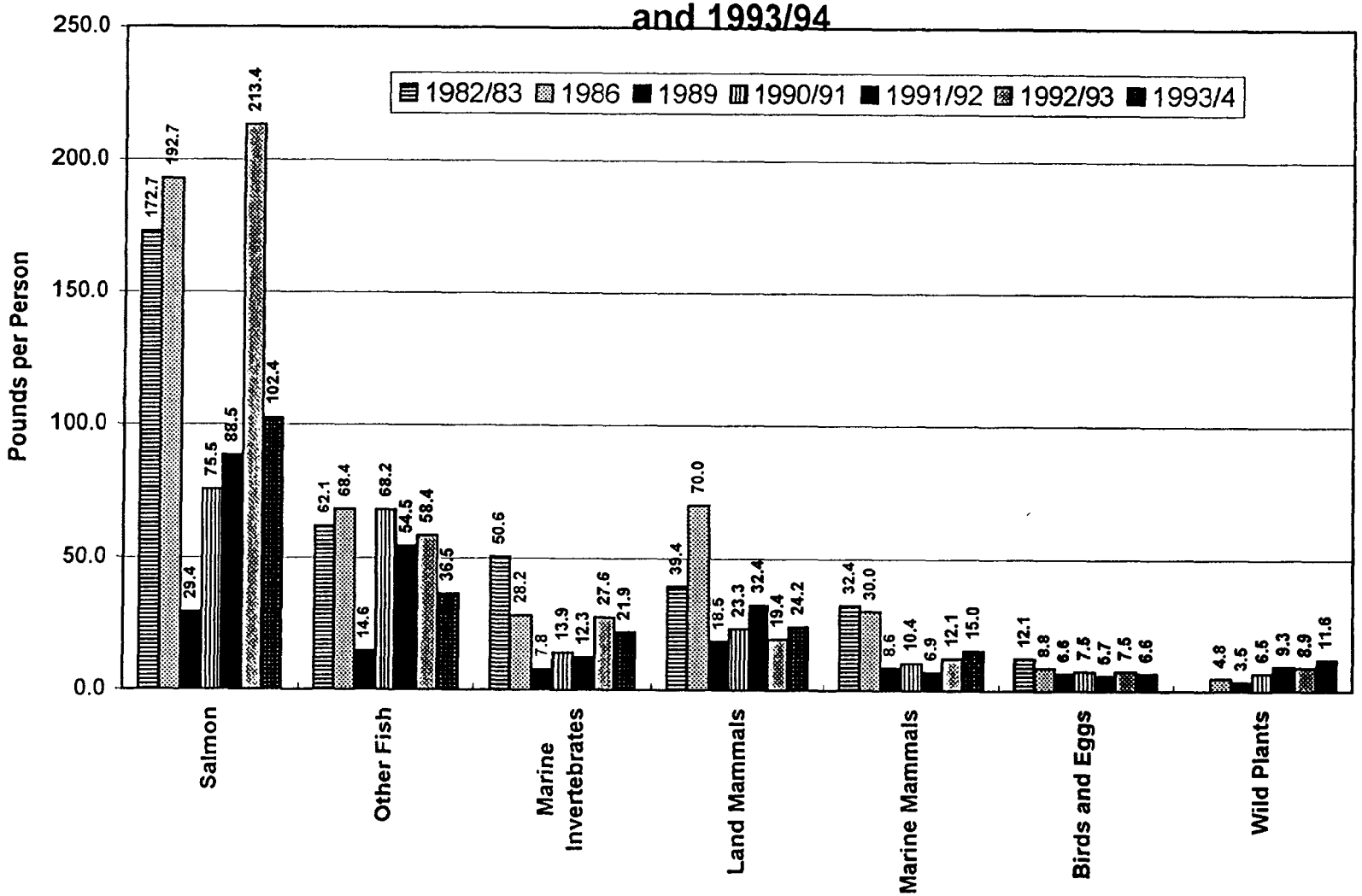


Figure XII-10. Composition of Wild Resource Harvests by Resource Category, Ouzinkie, 1991/92

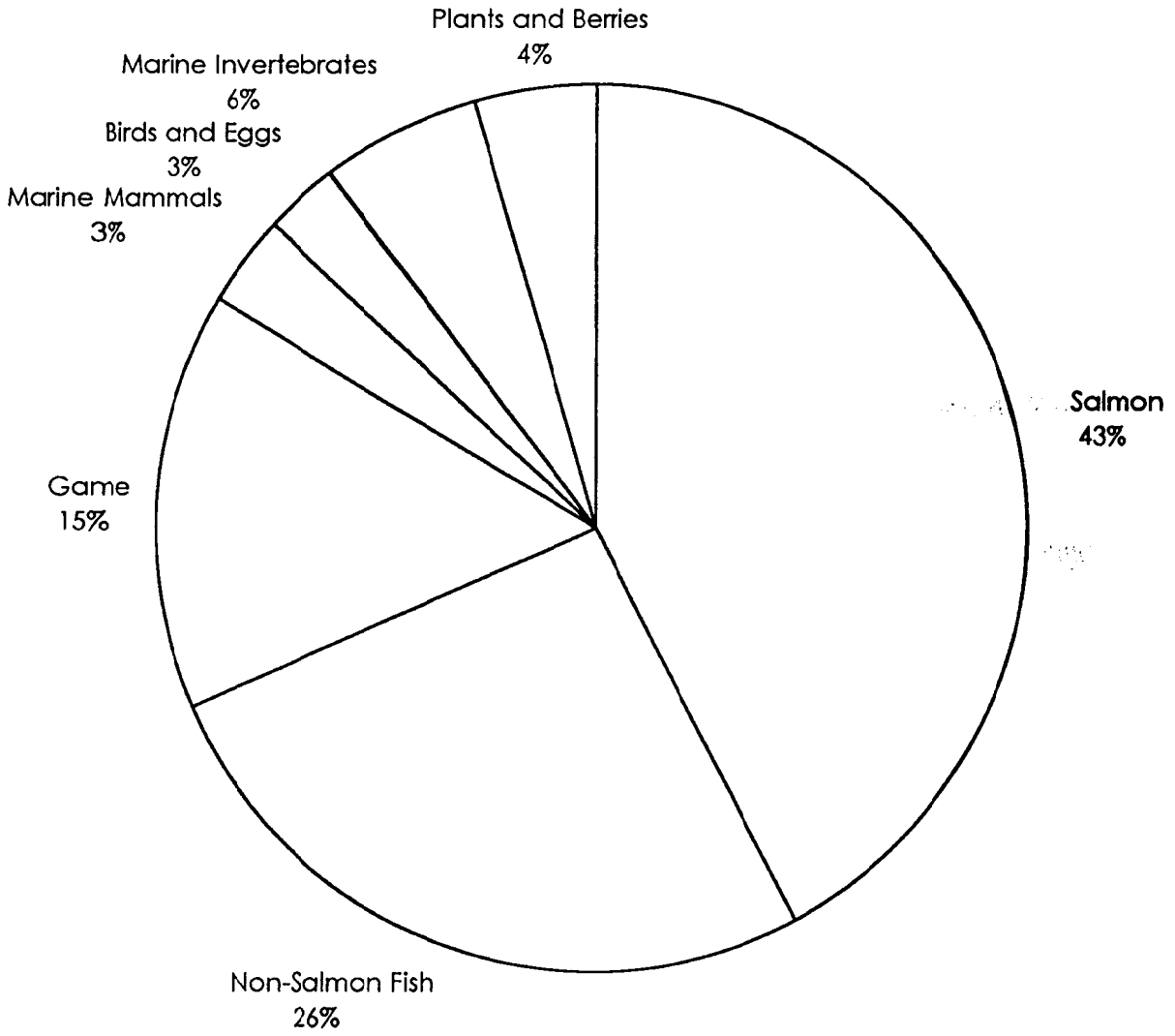


Figure XII-11. Percentage of Ouzinkie Households Reporting Lower Levels of Uses of Wild Resources Compared to 1988, the Year Before the Exxon Valdez Oil Spill

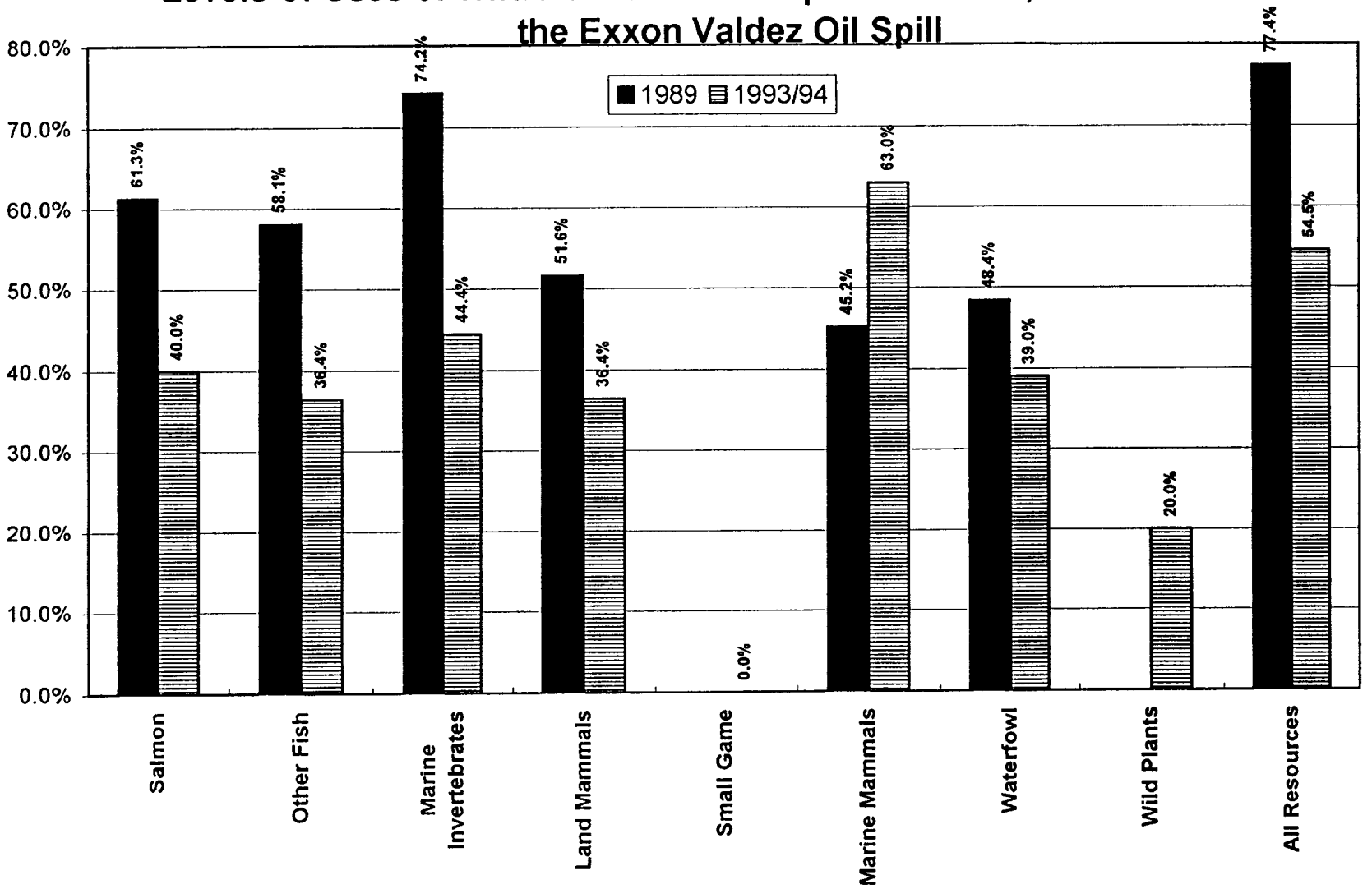


Table XII-18. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Ouzinkie, 1991/92

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	96.9	84.4	41,041.97	746.22	209.46			24.13%	23.74%
Fish	100.0	81.3	81.3	84.4	68.8	28,022.76	509.50	143.02			28.59%	28.68%
Salmon	100.0	81.3	81.3	68.8	65.6	17,337.65	315.23	88.49	3,856.88	70.13	24.17%	24.37%
Chum Salmon	46.9	37.5	37.5	18.8	34.4	1,887.46	34.32	9.63	364.38	6.63	40.30%	38.88%
Coho Salmon	100.0	81.3	78.1	59.4	59.4	9,447.01	171.76	48.21	1,723.91	31.34	26.04%	26.21%
Coho Salmon-Fingerling	3.1	3.1	3.1	0.0	0.0	6.19	0.11	0.03	20.63	0.38	131.89%	134.11%
Chinook Salmon	18.8	15.6	9.4	9.4	6.3	119.76	2.18	0.61	13.75	0.25	82.06%	81.10%
Pink Salmon	62.5	50.0	50.0	21.9	34.4	848.99	15.44	4.33	400.47	7.28	33.06%	32.76%
Sockeye Salmon	84.4	68.8	65.6	50.0	50.0	5,028.24	91.42	25.66	1,333.75	24.25	25.31%	24.99%
Unknown Salmon	3.1	0.0	0.0	3.1	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Non-Salmon Fish	96.9	71.9	71.9	75.0	50.0	10,685.11	194.27	54.53			51.38%	51.74%
Cod	65.6	40.6	40.6	37.5	21.9	1,144.00	20.80	5.84	357.50	6.50	65.40%	67.13%
Pacific Cod (Gray)	65.6	40.6	40.6	37.5	21.9	1,144.00	20.80	5.84	357.50	6.50	65.40%	67.13%
Sablefish (Black Cod)	6.3	3.1	3.1	3.1	0.0	26.64	0.48	0.14	8.59	0.16	131.89%	130.54%
Greenling	31.3	12.5	12.5	21.9	0.0	42.97	0.78	0.22	37.81	0.69	73.82%	67.91%
Lingcod	12.5	3.1	3.1	12.5	0.0	6.88	0.13	0.04	1.72	0.03	131.89%	131.74%
Unknown Greenling	18.8	9.4	9.4	9.4	0.0	36.09	0.66	0.18	36.09	0.66	77.42%	78.14%
Flounder	6.3	6.3	6.3	0.0	0.0	91.11	1.66	0.47	30.37	0.55	94.64%	92.75%
Unknown Flounder	6.3	6.3	6.3	0.0	0.0	91.11	1.66	0.47	30.37	0.55	94.64%	92.75%
Sole	3.1	3.1	3.1	0.0	0.0	17.19	0.31	0.09	17.19	0.31	131.89%	130.54%
Sole, Unknown	3.1	3.1	3.1	0.0	0.0	17.19	0.31	0.09	17.19	0.31	131.89%	130.54%
Halibut	93.8	62.5	53.1	65.6	40.6	7,485.34	136.10	38.20	207.35	3.77	67.99%	67.86%
Herring	12.5	12.5	12.5	3.1	0.0	183.87	3.34	0.94	30.65 gal	0.56	80.38%	82.66%
Rockfish	71.9	50.0	50.0	37.5	25.0	661.72	12.03	3.38	268.55	4.88	39.49%	35.44%
Black Rockfish (black bass)	34.4	31.3	31.3	6.3	12.5	247.50	4.50	1.26	165.00	3.00	53.73%	54.08%
Red Rockfish	62.5	34.4	34.4	34.4	18.8	414.22	7.53	2.11	103.55	1.88	41.32%	40.46%
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	6.3	3.1	3.1	3.1	0.0	8.59	0.16	0.04	17.19	0.31	131.89%	130.54%
Irish Lord	6.3	3.1	3.1	3.1	0.0	4.30	0.08	0.02	8.59	0.16	131.89%	130.54%
Unknown Sculpin	3.1	3.1	3.1	0.0	0.0	4.30	0.08	0.02	8.59	0.16	131.89%	130.54%
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	3.1	0.0	0.0	3.1	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Trout and Char	37.5	34.4	34.4	9.4	12.5	1,023.68	18.61	5.22	2,063.63	37.52	86.22%	64.00%
Char	31.3	31.3	31.3	3.1	12.5	900.97	16.38	4.60	1,975.98	35.93	90.01%	71.13%
Dolly Varden	25.0	25.0	25.0	3.1	6.3	392.22	7.13	2.00	280.16	5.09	53.42%	52.16%
Dolly Varden-Fingerling	12.5	12.5	12.5	0.0	6.3	508.75	9.25	2.60	1,695.82	30.83	101.19%	103.77%

Table XII-18. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Ouzinkie, 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
Trout	15.6	12.5	12.5	6.3	0.0	122.72	2.23	0.63	87.66	1.59	81.90%	84.35%
Rainbow Trout	12.5	9.4	9.4	3.1	0.0	108.28	1.97	0.55	77.34	1.41	91.96%	94.46%
Steelhead	6.3	3.1	3.1	3.1	0.0	14.44	0.26	0.07	10.31	0.19	131.89%	131.74%
Game	90.6	65.6	59.4	65.6	43.8	6,341.84	115.31	32.37	182.19	3.31	30.99%	25.41%
Big Game	90.6	65.6	59.4	65.6	43.8	6,252.47	113.68	31.91	137.50	2.50	28.23%	25.54%
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	0.0	0.0	0.0	0.0	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	3.1	0.0	0.0	3.1	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Deer	90.6	65.6	59.4	37.5	40.6	5,865.75	106.65	29.94	135.78	2.47	28.58%	26.28%
Deer, Male	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, Sex Unknown	90.6	65.6	59.4	37.5	40.6	5,865.75	106.65	29.94	135.78	2.47	28.58%	26.28%
Elk	43.8	12.5	3.1	40.6	12.5	386.72	7.03	1.97	1.72	0.03	131.89%	131.74%
Goat	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Moose	9.4	0.0	0.0	9.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Small Game/Furbearer	15.6	18.8	12.5	3.1	6.3	89.38	1.63	0.46	44.69	0.81	68.15%	66.61%
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%
Red 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	3.1	0.0	0.0	3.1	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Hare	12.5	18.8	12.5	0.0	6.3	89.38	1.63	0.46	44.69	0.81	68.15%	66.61%
Snowshoe Hare	12.5	18.8	12.5	0.0	6.3	89.38	1.63	0.46	44.69	0.81	68.15%	66.61%
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%
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%
Squirrel	0.0	3.1	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Tree Squirrel	0.0	3.1	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%
Marine Mammals	37.5	21.9	18.8	34.4	25.0	1,347.50	24.50	6.88	24.06	0.44	63.40%	65.37%
Whale	6.3	0.0	0.0	6.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Bowhead	3.1	0.0	0.0	3.1	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Unknown Whale	3.1	0.0	0.0	3.1	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	34.4	21.9	18.8	28.1	25.0	1,347.50	24.50	6.88	24.06	0.44	63.40%	65.37%
Harbor Seal	34.4	21.9	18.8	28.1	25.0	1,347.50	24.50	6.88	24.06	0.44	63.40%	65.37%
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	3.1	3.1	0.0	3.1	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%

Table XII-18. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Ouzinkie, 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
Birds and Eggs	75.0	59.4	59.4	40.6	25.0	1,110.42	20.19	5.67	2,120.94	38.56	37.63%	36.84%
Birds	75.0	53.1	53.1	40.6	21.9	826.13	15.02	4.22	1,032.97	18.78	37.66%	38.41%
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	75.0	53.1	53.1	40.6	21.9	826.13	15.02	4.22	1,032.97	18.78	37.66%	38.41%
Waterfowl	75.0	53.1	53.1	40.6	18.8	812.21	14.77	4.15	986.56	17.94	37.37%	38.43%
Ducks	75.0	53.1	53.1	40.6	18.8	812.21	14.77	4.15	986.56	17.94	37.37%	38.43%
Eider	12.5	12.5	12.5	3.1	3.1	77.00	1.40	0.39	48.13	0.88	69.27%	68.42%
Eider, Unknown	12.5	12.5	12.5	3.1	3.1	77.00	1.40	0.39	48.13	0.88	69.27%	68.42%
Scoter	31.3	25.0	25.0	12.5	3.1	146.95	2.67	0.75	163.28	2.97	57.31%	58.70%
Scoter, White-winged	9.4	9.4	9.4	3.1	0.0	35.58	0.65	0.18	39.53	0.72	79.98%	81.78%
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	28.1	21.9	21.9	12.5	3.1	111.38	2.03	0.57	123.75	2.25	56.63%	57.67%
Harlequin	25.0	21.9	21.9	6.3	6.3	47.27	0.86	0.24	94.53	1.72	50.90%	49.72%
Goldeneye	46.9	34.4	34.4	18.8	6.3	162.25	2.95	0.83	202.81	3.69	39.78%	40.56%
Bufflehead	21.9	18.8	18.8	6.3	6.3	30.25	0.55	0.15	75.63	1.38	65.71%	67.09%
Merganser	18.8	9.4	9.4	9.4	0.0	29.39	0.53	0.15	32.66	0.59	88.57%	89.19%
Scaup	6.3	6.3	6.3	0.0	0.0	18.56	0.34	0.09	20.63	0.38	93.09%	91.17%
Mallard	43.8	34.4	34.4	9.4	6.3	135.78	2.47	0.69	135.78	2.47	42.03%	42.89%
Pintail	25.0	18.8	18.8	9.4	9.4	61.88	1.13	0.32	77.34	1.41	65.08%	63.81%
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	6.3	6.3	6.3	0.0	0.0	4.13	0.08	0.02	13.75	0.25	91.74%	89.80%
Gadwall	3.1	3.1	3.1	0.0	0.0	6.88	0.13	0.04	8.59	0.16	131.89%	132.93%
Oldsquaw	18.8	12.5	12.5	9.4	3.1	60.50	1.10	0.31	75.63	1.38	77.61%	80.14%
Ducks, Unknown	18.8	15.6	15.6	6.3	9.4	31.38	0.57	0.16	37.81	0.69	60.56%	58.56%
Geese	3.1	3.1	0.0	3.1	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black 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, 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, Unknown	3.1	3.1	0.0	3.1	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%

Table XII-18. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Ouzinkie, 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
Seabirds	6.3	6.3	6.3	0.0	3.1	13.92	0.25	0.07	46.41	0.84	102.46%	101.93%
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%
Puffins	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Gulls	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
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%
Auklet	6.3	6.3	6.3	0.0	3.1	13.92	0.25	0.07	46.41	0.84	102.46%	101.93%
Parakeet Auklet	6.3	6.3	6.3	0.0	3.1	13.92	0.25	0.07	46.41	0.84	102.46%	101.93%
Eggs	43.8	37.5	37.5	12.5	9.4	284.28	5.17	1.45	1,087.97	19.78	43.11%	41.49%
Seabird Eggs	43.8	37.5	37.5	12.5	6.3	270.70	4.92	1.38	1,019.22	18.53	42.46%	41.03%
Gull Eggs	43.8	37.5	37.5	12.5	3.1	233.58	4.25	1.19	778.59	14.16	42.83%	41.92%
Puffin Eggs	3.1	3.1	3.1	0.0	0.0	12.38	0.23	0.06	41.25	0.75	131.89%	130.54%
Tern Eggs	3.1	3.1	3.1	0.0	0.0	2.58	0.05	0.01	51.56	0.94	131.89%	130.54%
Kittiwake Eggs	15.6	15.6	15.6	0.0	3.1	22.17	0.40	0.11	147.81	2.69	68.50%	67.25%
Shorebird Eggs	3.1	3.1	3.1	0.0	0.0	0.17	0.00	0.00	3.44	0.06	131.89%	131.74%
Snipe Eggs	3.1	3.1	3.1	0.0	0.0	0.17	0.00	0.00	3.44	0.06	131.89%	131.74%
Black Snipe Eggs (Oystercatcher)	3.1	3.1	3.1	0.0	0.0	0.17	0.00	0.00	3.44	0.06	131.89%	131.74%
Waterfowl Eggs	6.3	6.3	6.3	0.0	6.3	13.41	0.24	0.07	65.31	1.19	95.07%	90.09%
Duck Eggs	6.3	6.3	6.3	0.0	6.3	13.41	0.24	0.07	65.31	1.19	95.07%	90.09%
Eider Eggs	3.1	3.1	3.1	0.0	3.1	7.22	0.13	0.04	24.06	0.44	131.89%	130.54%
Duck Eggs, Unknown	3.1	3.1	3.1	0.0	3.1	6.19	0.11	0.03	41.25	0.75	131.89%	130.54%
Marine Invertebrates	96.9	78.1	71.9	71.9	31.3	2,406.99	43.76	12.28			30.65%	27.56%
Clams	93.8	65.6	65.6	43.8	21.9	1,172.74	21.32	5.99	390.91 gal	7.11	35.06%	31.86%
Butter Clams	90.6	62.5	62.5	40.6	21.9	1,093.13	19.88	5.58	364.38 gal	6.63	35.77%	32.63%
Razor 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%
Pacific Littleneck Clams (Steamers)	18.8	12.5	12.5	6.3	0.0	74.77	1.36	0.38	24.92 gal	0.45	75.18%	73.53%
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%
Unknown Clams	3.1	3.1	3.1	3.1	0.0	4.85	0.09	0.02	1.62 gal	0.03	131.89%	132.93%
Cockles	25.0	25.0	21.9	3.1	3.1	225.84	4.11	1.15	75.28 gal	1.37	77.23%	76.52%
Geoducks	6.3	6.3	6.3	0.0	0.0	34.39	0.63	0.18	11.46 gal	0.21	103.22%	100.72%
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	3.1	0.0	0.0	3.1	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Crabs	65.6	18.8	18.8	53.1	15.6	322.61	5.87	1.65	211.41	3.84	58.93%	59.82%
Dungeness Crab	31.3	9.4	6.3	28.1	6.3	16.84	0.31	0.09	24.06	0.44	95.65%	95.45%
King Crab	25.0	6.3	3.1	21.9	0.0	19.77	0.36	0.10	8.59	0.16	131.89%	132.93%
Tanner Crab	53.1	12.5	12.5	40.6	12.5	286.00	5.20	1.46	178.75	3.25	67.79%	66.83%

Table XII-18. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Ouzinkie, 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
Tanner Crab, Unknown	3.1	3.1	3.1	0.0	3.1	96.25	1.75	0.49	60.16	1.09	131.89%	131.74%
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)	71.9	62.5	62.5	18.8	15.6	486.41	8.84	2.48	121.60 gal	2.21	45.46%	42.79%
Chitons (small)	71.9	62.5	62.5	18.8	15.6	486.41	8.84	2.48	121.60 gal	2.21	45.46%	42.79%
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	25.0	21.9	15.6	12.5	9.4	137.50	2.50	0.70	34.38	0.63	81.92%	82.36%
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	25.0	21.9	21.9	6.3	3.1	25.78	0.47	0.13	51.56 gal	0.94	88.48%	87.69%
Shrimp	3.1	3.1	3.1	0.0	0.0	1.72	0.03	0.01	0.86 gal	0.02	131.89%	131.74%
Snails	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%
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%
Plants and Berries	96.9	96.9	96.9	34.4	43.8	1,812.46	32.95	9.25	453.11 gal	8.24	15.38%	14.43%
Berries	96.9	96.9	96.9	31.3	40.6	1,613.91	29.34	8.24	403.48 gal	7.34	16.24%	14.99%
Plants/Greens/Mushrooms	43.8	40.6	40.6	3.1	6.3	198.55	3.61	1.01	49.64 gal	0.90	44.42%	45.08%
Seaweed/Kelp (Food)	3.1	0.0	0.0	3.1	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Fertilizer	15.6	12.5	12.5	3.1	3.1	0.00	0.00	0.00	730.47 gal	13.28	63.04%	0.00%
Vegetative Fertilizer	15.6	12.5	12.5	3.1	3.1	0.00	0.00	0.00	730.47 gal	13.28	63.04%	0.00%
Seaweed/Kelp (Non-food)	15.6	12.5	12.5	3.1	3.1	0.00	0.00	0.00	730.47 gal	13.28	63.04%	0.00%
Wood	62.5	53.1	53.1	12.5	21.9	0.00	0.00	0.00	99.91 crd	1.82	34.84%	0.00%

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

Table XII-19. Estimated Amount of Resources Removed From Commercial Harvest, Ouzinkie, 1991/92

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		11,545.43	37.94	28.13
Fish		11,325.43	40.42	27.59
Salmon	948.75	4,241.34	24.46	10.33
Chum Salmon	96.25	498.58	26.42	1.21
Coho Salmon	402.19	2,203.99	23.33	5.37
Chinook Salmon	8.59	74.85	62.50	0.18
Pink Salmon	122.03	258.71	30.47	0.63
Sockeye Salmon	319.69	1,205.22	23.97	2.94
Non-Salmon Fish		7,084.09	66.30	17.26
Cod	302.50	968.00	84.62	2.36
Pacific Cod (Gray)	302.50	968.00	84.62	2.36
Sablefish (Black Cod)	8.59	26.64	100.00	0.06
Flounder	11.46	34.39	37.75	0.08
Unknown Flounder	11.46	34.39	37.75	0.08
Sole	17.19	17.19	100.00	0.04
Sole, Unknown	17.19	17.19	100.00	0.04
Halibut	152.64	5,510.38	73.62	13.43
Herring	6.02 gal	36.09	19.63	0.09
Rockfish	154.69	468.36	70.78	1.14
Black Rockfish (black bass)	60.16	90.23	36.46	0.22
Red Rockfish	94.53	378.13	91.29	0.92
Sculpin	17.19	8.59	100.00	0.02
Irish Lord	8.59	4.30	100.00	0.01
Unknown Sculpin	8.59	4.30	100.00	0.01
Trout and Char	10.31	14.44	1.41	0.04
Trout	10.31	14.44	11.76	0.04
Steelhead	10.31	14.44	100.00	0.04
Marine Invertebrates		220.00	9.14	0.54
Crabs	60.16	96.25	29.83	0.23
Tanner Crab	60.16	96.25	33.65	0.23
Tanner Crab, Unknown	60.16	96.25	100.00	0.23
Octopus	30.94	123.75	90.00	0.30

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

Table XII-20. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Ouzinkie, 1991/92

Resource	Percent Base	Subsistence Methods: Net No.	Net Lbs.	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	61.36	61.80	0.53	0.65	0.53	0.29	62.43	62.74	24.60	24.46	12.97	12.80		
Chum Salmon	gear type	8.06	9.22	0.00	0.00	0.00	0.00	7.92	9.09	10.14	11.76	15.46	18.05		
	resource	52.36	52.36	0.00	0.00	0.00	0.00	52.36	52.36	26.42	26.42	21.23	21.23		
	total	4.95	5.70	0.00	0.00	0.00	0.00	4.95	5.70	2.50	2.88	2.01	2.31	9.45	10.89
Coho Salmon	gear type	43.94	53.18	100.00	100.00	8.33	19.03	44.11	53.52	42.39	51.96	51.89	64.08		
	resource	60.32	60.32	1.20	1.20	0.10	0.10	61.62	61.62	23.33	23.33	15.05	15.05		
	total	26.96	32.87	0.53	0.65	0.04	0.05	27.54	33.57	10.43	12.71	6.73	8.20	44.70	54.49
Coho Salmon-Fingerling	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.12	0.28		
	resource	0.00	0.00	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	0.00	0.00	0.53	0.04	0.53	0.04
Chinook Salmon	gear type	0.22	0.42	0.00	0.00	0.00	0.00	0.21	0.41	0.91	1.76	0.00	0.00		
	resource	37.50	37.50	0.00	0.00	0.00	0.00	37.50	37.50	62.50	62.50	0.00	0.00		
	total	0.13	0.26	0.00	0.00	0.00	0.00	0.13	0.26	0.22	0.43	0.00	0.00	0.36	0.69
Pink Salmon	gear type	7.19	3.37	0.00	0.00	91.67	80.97	7.85	3.68	12.86	6.10	17.87	8.54		
	resource	42.49	42.49	0.00	0.00	4.72	4.72	47.21	47.21	30.47	30.47	22.32	22.32		
	total	4.41	2.08	0.00	0.00	0.49	0.23	4.90	2.31	3.16	1.49	2.32	1.09	10.38	4.90
Sockeye Salmon	gear type	40.60	33.81	0.00	0.00	0.00	0.00	39.90	33.30	33.70	28.42	10.65	9.05		
	resource	72.04	72.04	0.00	0.00	0.00	0.00	72.04	72.04	23.97	23.97	3.99	3.99		
	total	24.91	20.89	0.00	0.00	0.00	0.00	24.91	20.89	8.29	6.95	1.38	1.16	34.58	29.00
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, 1992

Table XII-21. Estimated Salmon Harvest by Gear Type and Species, Ouzinkie, 1991/92

		Subsistence Methods								Removed from Commercial Catch		Rod and Reel		Any Method	
		Net		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
Salmon	numbers	2,366.72	43.03	20.63	0.38	20.63	0.38	2,407.97	43.78	948.75	17.25	500.16	9.09	3,856.88	70.13
	pounds	10,714.38	194.81	113.03	2.06	49.50	0.90	10,876.90	197.76	4,241.34	77.12	2,219.40	40.35	17,337.65	315.23
Chum Salmon	numbers	190.78	3.47	0.00	0.00	0.00	0.00	190.78	3.47	96.25	1.75	77.34	1.41	364.38	6.63
	pounds	988.25	17.97	0.00	0.00	0.00	0.00	988.25	17.97	498.58	9.07	400.64	7.28	1,887.46	34.32
Coho Salmon	numbers	1,039.84	18.91	20.63	0.38	1.72	0.03	1,062.19	19.31	402.19	7.31	259.53	4.72	1,723.91	31.34
	pounds	5,698.34	103.61	113.03	2.06	9.42	0.17	5,820.79	105.83	2,203.99	40.07	1,422.23	25.86	9,447.01	171.76
Coho Salmon-Fingerling	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.63	0.38	20.63	0.38
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.19	0.11	6.19	0.11
Chinook Salmon	numbers	5.16	0.09	0.00	0.00	0.00	0.00	5.16	0.09	8.59	0.16	0.00	0.00	13.75	0.25
	pounds	44.91	0.82	0.00	0.00	0.00	0.00	44.91	0.82	74.85	1.36	0.00	0.00	119.76	2.18
Pink Salmon	numbers	170.16	3.09	0.00	0.00	18.91	0.34	189.06	3.44	122.03	2.22	89.38	1.63	400.47	7.28
	pounds	360.73	6.56	0.00	0.00	40.08	0.73	400.81	7.29	258.71	4.70	189.48	3.45	848.99	15.44
Sockeye Salmon	numbers	960.78	17.47	0.00	0.00	0.00	0.00	960.78	17.47	319.69	5.81	53.28	0.97	1,333.75	24.25
	pounds	3,622.15	65.86	0.00	0.00	0.00	0.00	3,622.15	65.86	1,205.22	21.91	200.87	3.65	5,028.24	91.42
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, 1992

Table XII-22. Percentage of Households Harvesting Salmon by Gear Type and Species, Ouzinkie, 1991/92

Resource	Subsistence Methods				Removed from Commercial Catch	Rod and Reel	Any Method
	Net	Dip Net	Other	Any Subsistence Gear			
Salmon	53.13	3.13	3.13	56.25	40.63	37.50	81.25
Chum Salmon	25.00	0.00	0.00	25.00	15.63	12.50	37.50
Coho Salmon	50.00	3.13	3.13	53.13	37.50	34.38	78.13
Coho Salmon-Fingerling	0.00	0.00	0.00	0.00	0.00	3.13	3.13
Chinook Salmon	3.13	0.00	0.00	3.13	6.25	0.00	9.38
Pink Salmon	18.75	0.00	3.13	21.88	15.63	21.88	50.00
Sockeye Salmon	53.13	0.00	0.00	53.13	37.50	12.50	65.63
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, 1992

Table XII-23. Estimated Harvest of Fish Other than Salmon by Gear Type, Ouzinkie, 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	1,621.25	29.48	7,084.09	128.80	1,979.77	36.00	0.00	0.00	10,685.11	194.27
Lingcod	pounds	0.00	0.00	0.00	0.00	6.88	0.13	0.00	0.00	6.88	0.13
Pacific Cod (Gray)	pounds	16.50	0.30	968.00	17.60	159.50	2.90	0.00	0.00	1,144.00	20.80
Sablefish (Black Cod)	pounds	0.00	0.00	26.64	0.48	0.00	0.00	0.00	0.00	26.64	0.48
Unknown Flounder	pounds	0.00	0.00	34.39	0.63	56.72	1.03	0.00	0.00	91.11	1.66
Sole, Unknown	pounds	0.00	0.00	17.19	0.31	0.00	0.00	0.00	0.00	17.19	0.31
Halibut	pounds	1,249.00	22.71	5,510.38	100.19	725.95	13.20	0.00	0.00	7,485.34	136.10
Herring	pounds	147.78	2.69	36.09	0.66	0.00	0.00	0.00	0.00	183.87	3.34
Black Rockfish (black bass)	pounds	0.00	0.00	90.23	1.64	157.27	2.86	0.00	0.00	247.50	4.50
Red Rockfish	pounds	22.34	0.41	378.13	6.88	13.75	0.25	0.00	0.00	414.22	7.53
Irish Lord	pounds	0.00	0.00	4.30	0.08	0.00	0.00	0.00	0.00	4.30	0.08
Unknown Sculpin	pounds	0.00	0.00	4.30	0.08	0.00	0.00	0.00	0.00	4.30	0.08
Unknown Greenling	pounds	17.19	0.31	0.00	0.00	18.91	0.34	0.00	0.00	36.09	0.66
Dolly Varden	pounds	168.44	3.06	0.00	0.00	223.78	4.07	0.00	0.00	392.22	7.13
Dolly Varden-Fingerling	pounds	0.00	0.00	0.00	0.00	508.75	9.25	0.00	0.00	508.75	9.25
Rainbow Trout	pounds	0.00	0.00	0.00	0.00	108.28	1.97	0.00	0.00	108.28	1.97
Steelhead	pounds	0.00	0.00	14.44	0.26	0.00	0.00	0.00	0.00	14.44	0.26

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

Table XII-24. Percentage of Fish Other Than Salmon Harvested by Gear Type, Ouzinkie, 1991/92

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	15.17	66.30	18.53	0.00
Lingcod	resource	0.00	0.00	100.00	0.00
Pacific Cod (Gray)	resource	1.44	84.62	13.94	0.00
Sablefish (Black Cod)	resource	0.00	100.00	0.00	0.00
Unknown Flounder	resource	0.00	37.75	62.25	0.00
Sole, Unknown	resource	0.00	100.00	0.00	0.00
Halibut	resource	16.69	73.62	9.70	0.00
Herring	resource	80.37	19.63	0.00	0.00
Black Rockfish (black bass)	resource	0.00	36.46	63.54	0.00
Red Rockfish	resource	5.39	91.29	3.32	0.00
Irish Lord	resource	0.00	100.00	0.00	0.00
Unknown Sculpin	resource	0.00	100.00	0.00	0.00
Unknown Greenling	resource	47.62	0.00	52.38	0.00
Dolly Varden	resource	42.94	0.00	57.06	0.00
Dolly Varden-Fingerling	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, 1992

Table XII-25. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Ouzinkie, 1991/92

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	37.50	40.63	43.75	0.00	71.88
Lingcod	0.00	0.00	3.13	0.00	3.13
Pacific Cod (Gray)	3.13	25.00	12.50	0.00	40.63
Sablefish (Black Cod)	0.00	3.13	0.00	0.00	3.13
Unknown Flounder	0.00	3.13	3.13	0.00	6.25
Sole, Unknown	0.00	3.13	0.00	0.00	3.13
Halibut	25.00	25.00	9.38	0.00	53.13
Herring	9.38	3.13	0.00	0.00	12.50
Black Rockfish (black bass)	0.00	12.50	18.75	0.00	31.25
Red Rockfish	3.13	31.25	3.13	0.00	34.38
Irish Lord	0.00	3.13	0.00	0.00	3.13
Unknown Sculpin	0.00	3.13	0.00	0.00	3.13
Unknown Greenling	3.13	0.00	6.25	0.00	9.38
Dolly Varden	6.25	0.00	21.88	0.00	25.00
Dolly Varden-Fingerling	0.00	0.00	12.50	0.00	12.50
Rainbow Trout	0.00	0.00	9.38	0.00	9.38
Steelhead	0.00	3.13	0.00	0.00	3.13

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

Figure XII-12. Composition of Wild Resource Harvests by Resource Category, Ouzinkie, 1992/93

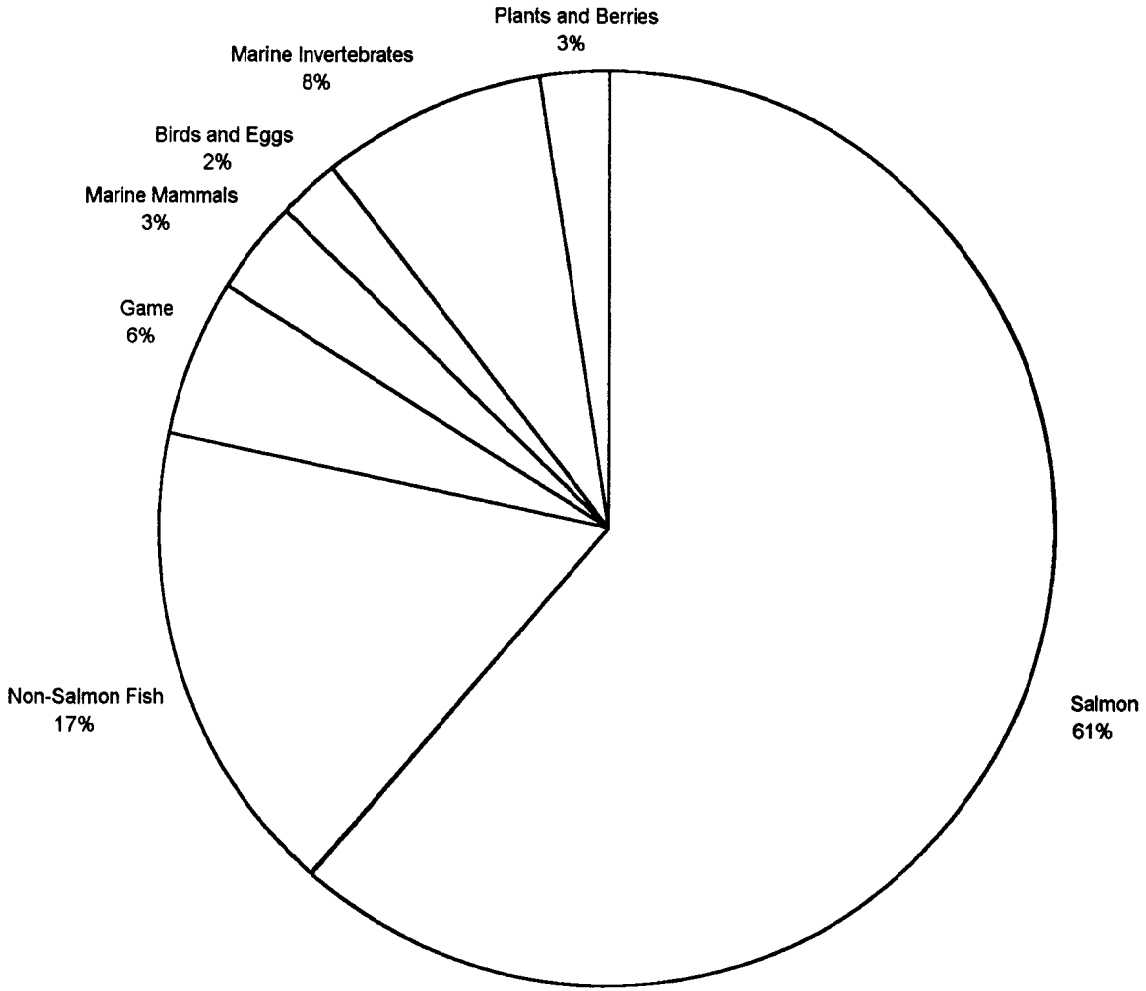


Table XII-26. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Ouzinkie, 1992/93

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	98.1	98.1	94.2	88.5	64,606.88	1,095.03	347.21			9.56%	8.84%
Fish	98.1	86.5	86.5	82.7	78.8	50,577.31	857.24	271.81			9.99%	9.36%
Salmon	98.1	86.5	86.5	57.7	67.3	39,706.05	672.98	213.39	6,041.26	102.39	10.31%	10.07%
Chum Salmon	55.8	46.2	46.2	13.5	26.9	1,966.00	33.32	10.57	271.17	4.60	15.38%	14.56%
Coho Salmon	92.3	84.6	82.7	30.8	59.6	20,042.65	339.71	107.71	2,450.20	41.53	12.63%	12.52%
Chinook Salmon	42.3	28.8	25.0	17.3	15.4	778.80	13.20	4.19	54.46	0.92	40.04%	39.00%
Pink Salmon	76.9	59.6	59.6	28.8	36.5	3,188.98	54.05	17.14	850.39	14.41	17.70%	17.35%
Sockeye Salmon	86.5	69.2	69.2	34.6	61.5	13,601.36	230.53	73.10	2,394.61	40.59	12.57%	11.97%
Unknown Salmon	5.8	1.9	1.9	3.8	1.9	128.26	2.17	0.69	20.42	0.35	69.15%	68.91%
Non-Salmon Fish	94.2	75.0	75.0	73.1	65.4	10,871.26	184.26	58.42			13.37%	12.66%
Cod	57.7	36.5	36.5	26.9	26.9	1,604.36	27.19	8.62	501.36	8.50	30.50%	31.11%
Pacific Cod (Gray)	57.7	36.5	36.5	26.9	26.9	1,604.36	27.19	8.62	501.36	8.50	30.50%	31.11%
Sablefish (Black Cod)	5.8	1.9	1.9	3.8	0.0	17.59	0.30	0.09	5.67	0.10	69.15%	68.91%
Greenling	21.2	13.5	11.5	15.4	3.8	162.27	2.75	0.87	50.29	0.85	34.33%	31.91%
Lingcod	15.4	9.6	7.7	13.5	3.8	122.56	2.08	0.66	10.57	0.18	38.20%	37.76%
Unknown Greenling	9.6	5.8	5.8	3.8	0.0	39.71	0.67	0.21	39.71	0.67	39.97%	39.13%
Flounder	7.7	3.8	3.8	7.7	3.8	56.74	0.96	0.30	18.91	0.32	49.41%	48.35%
Arrow Tooth Flounder (Turbot)	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	7.7	3.8	3.8	7.7	3.8	56.74	0.96	0.30	18.91	0.32	49.41%	48.35%
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	84.6	57.7	53.8	59.6	59.6	6,112.86	103.61	32.85	180.85	3.07	14.96%	13.44%
Herring	19.2	9.6	9.6	13.5	5.8	173.60	2.94	0.93	28.93 gal	0.49	38.14%	38.13%
Herring Roe	3.8	1.9	1.9	1.9	0.0	5.64	0.10	0.03	0.81 gal	0.01	69.15%	68.05%
Rockfish	44.2	30.8	30.8	21.2	19.2	1,132.35	19.19	6.09	480.23	8.14	23.75%	20.24%
Black Rockfish (black bass)	26.9	17.3	17.3	13.5	9.6	473.13	8.02	2.54	315.42	5.35	31.79%	31.10%
Red Rockfish	30.8	21.2	21.2	13.5	13.5	659.21	11.17	3.54	164.80	2.79	23.32%	23.25%
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%
Sea Perch	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	7.7	3.8	3.8	5.8	3.8	30.63	0.52	0.16	61.27	1.04	49.27%	47.71%
Irish Lord	5.8	1.9	1.9	5.8	1.9	6.81	0.12	0.04	13.62	0.23	69.15%	68.05%
Unknown Sculpin	3.8	3.8	3.8	0.0	3.8	23.83	0.40	0.13	47.65	0.81	48.47%	46.88%
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%
Wolf Eel (Wolffish)	1.9	1.9	1.9	0.0	0.0	1.70	0.03	0.01	3.40	0.06	69.15%	69.34%
Shark	1.9	1.9	1.9	0.0	1.9	1.13	0.02	0.01			69.15%	69.77%

Table XII-26. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Ouzinkie, 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
Salmon Shark	1.9	1.9	1.9	0.0	1.9	1.13	0.02	0.01			69.15%	69.77%
Walleye Pollock (Whiting)	3.8	0.0	0.0	3.8	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%
Trout and Char	55.8	46.2	46.2	17.3	21.2	1,572.38	26.65	8.45	1,596.56	27.06	25.93%	20.71%
Char	46.2	40.4	40.4	11.5	17.3	1,075.27	18.22	5.78	1,378.72	23.37	28.71%	26.87%
Dolly Varden	36.5	28.8	28.8	11.5	13.5	783.11	13.27	4.21	559.37	9.48	31.64%	31.23%
Dolly Varden-Fingerling	9.6	9.6	9.6	0.0	3.8	233.16	3.95	1.25	777.21	13.17	36.74%	36.06%
Brook Trout	1.9	1.9	1.9	0.0	0.0	4.54	0.08	0.02	3.25	0.06	69.15%	69.77%
Unknown Char	7.7	5.8	5.8	5.8	3.8	54.45	0.92	0.29	38.89	0.66	44.60%	44.37%
Trout	21.2	17.3	15.4	7.7	9.6	497.11	8.43	2.67	217.85	3.69	32.23%	27.96%
Rainbow Trout	5.8	7.7	5.8	0.0	3.8	81.01	1.37	0.44	57.87	0.98	45.64%	44.65%
Steelhead	17.3	11.5	9.6	7.7	7.7	257.25	4.36	1.38	46.52	0.79	37.95%	37.29%
Unknown Trout	3.8	3.8	3.8	0.0	1.9	158.85	2.69	0.85	113.46	1.92	54.35%	54.73%
Game	90.4	55.8	53.8	67.3	34.6	3,610.57	61.20	19.40	146.93	2.49	16.98%	11.61%
Big Game	90.4	55.8	51.9	65.4	34.6	3,480.09	58.98	18.70	80.56	1.37	12.21%	11.60%
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	0.0	0.0	0.0	0.0	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	15.4	0.0	0.0	15.4	1.9	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Deer	84.6	55.8	51.9	51.9	34.6	3,480.09	58.98	18.70	80.56	1.37	12.21%	11.60%
Deer, Male	50.0	42.3	40.4	21.2	26.9	1,764.55	29.91	9.48	40.85	0.69	13.31%	12.49%
Deer, Female	25.0	25.0	25.0	9.6	21.2	1,274.40	21.60	6.85	29.50	0.50	25.05%	24.81%
Deer, Sex Unknown	32.7	9.6	7.7	26.9	5.8	441.14	7.48	2.37	10.21	0.17	34.21%	34.31%
Elk	32.7	9.6	0.0	32.7	5.8	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goat	1.9	0.0	0.0	1.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Moose	17.3	0.0	0.0	17.3	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	21.2	21.2	19.2	3.8	5.8	130.48	2.21	0.70	66.38	1.13	27.93%	27.08%
Fox	1.9	1.9	1.9	0.0	0.0	0.00	0.00	0.00	1.13	0.02	69.15%	0.00%
Red Fox	1.9	1.9	1.9	0.0	0.0	0.00	0.00	0.00	1.13	0.02	69.15%	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%
Hare	19.2	19.2	17.3	3.8	5.8	130.48	2.21	0.70	65.24	1.11	28.44%	27.08%
Snowshoe Hare	19.2	19.2	17.3	3.8	5.8	130.48	2.21	0.70	65.24	1.11	28.44%	27.08%
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%
Weasel	0.0	1.9	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table XII-26. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Ouzinkie, 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
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%
Marine Mammals	48.1	19.2	17.3	38.5	25.0	2,242.00	38.00	12.05	48.79	0.83	36.65%	33.75%
Whale	5.8	0.0	0.0	5.8	1.9	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Bowhead	1.9	0.0	0.0	1.9	1.9	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Humpback 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	3.8	0.0	0.0	3.8	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	48.1	19.2	17.3	38.5	25.0	1,334.31	22.62	7.17	23.83	0.40	27.52%	26.71%
Harbor Seal	48.1	19.2	17.3	38.5	25.0	1,334.31	22.62	7.17	23.83	0.40	27.52%	26.71%
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	5.8	3.8	3.8	1.9	3.8	907.69	15.38	4.88	4.54	0.08	48.42%	48.38%
Sea Otter	3.8	3.8	3.8	0.0	0.0	0.00	0.00	0.00	20.42	0.35	58.55%	0.00%
Birds and Eggs	84.6	71.2	71.2	51.9	48.1	1,394.50	23.64	7.49	2,688.47	45.57	13.69%	13.32%
Birds	76.9	53.8	51.9	40.4	36.5	1,040.50	17.64	5.59	1,320.13	22.38	17.70%	16.32%
Upland Game Birds	1.9	1.9	1.9	0.0	0.0	4.77	0.08	0.03	6.81	0.12	69.15%	68.05%
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	1.9	1.9	1.9	0.0	0.0	4.77	0.08	0.03	6.81	0.12	69.15%	68.05%
Migratory Birds	76.9	53.8	51.9	40.4	36.5	1,035.73	17.55	5.57	1,313.32	22.26	17.75%	16.39%
Waterfowl	76.9	53.8	51.9	38.5	36.5	1,022.12	17.32	5.49	1,299.70	22.03	17.89%	16.53%
Ducks	76.9	53.8	51.9	38.5	36.5	1,022.12	17.32	5.49	1,299.70	22.03	17.89%	16.53%
Eider	17.3	7.7	7.7	9.6	3.8	34.49	0.58	0.19	21.56	0.37	40.60%	40.51%
Eider, Unknown	17.3	7.7	7.7	9.6	3.8	34.49	0.58	0.19	21.56	0.37	40.60%	40.51%
Scoter	46.2	30.8	30.8	17.3	19.2	210.36	3.57	1.13	233.73	3.96	21.02%	20.23%
Scoter, White-winged	30.8	21.2	21.2	11.5	11.5	70.97	1.20	0.38	78.86	1.34	22.43%	22.31%
Scoter, Black	30.8	19.2	19.2	13.5	13.5	105.69	1.79	0.57	117.43	1.99	24.55%	23.41%
Scoter, Surf	5.8	3.8	3.8	1.9	3.8	22.47	0.38	0.12	24.96	0.42	48.62%	48.45%
Scoter, Unknown	7.7	3.8	3.8	3.8	1.9	11.23	0.19	0.06	12.48	0.21	48.62%	48.29%
Harlequin	36.5	26.9	26.9	9.6	17.3	57.58	0.98	0.31	115.16	1.95	20.54%	21.14%
Goldeneye	57.7	34.6	34.6	25.0	17.3	195.15	3.31	1.05	243.94	4.13	21.51%	20.08%
Bufflehead	30.8	21.2	21.2	11.5	11.5	69.67	1.18	0.37	174.16	2.95	33.93%	32.73%
Merganser	13.5	9.6	9.6	3.8	3.8	14.30	0.24	0.08	15.88	0.27	31.64%	31.79%
Scaup	13.5	5.8	3.8	9.6	5.8	20.42	0.35	0.11	22.69	0.38	48.42%	48.38%
Mallard	57.7	36.5	36.5	25.0	21.2	233.16	3.95	1.25	233.16	3.95	19.36%	17.81%
Pintail	11.5	5.8	5.8	5.8	5.8	22.69	0.38	0.12	28.37	0.48	40.76%	41.52%
Wigeon	3.8	3.8	3.8	0.0	1.9	6.35	0.11	0.03	9.08	0.15	48.42%	48.99%
Teal	3.8	1.9	1.9	1.9	1.9	2.04	0.03	0.01	6.81	0.12	69.15%	70.20%

Table XII-26. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Ouzinkie, 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
Oldsquaw	26.9	19.2	19.2	7.7	19.2	137.97	2.34	0.74	172.46	2.92	28.48%	27.79%
Redhead Duck	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	3.8	3.8	1.9	1.9	1.9	17.93	0.30	0.10	22.69	0.38	69.15%	68.48%
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%
Black 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%
Emperor 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%
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, 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, 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%
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	3.8	1.9	1.9	3.8	0.0	13.62	0.23	0.07	13.62	0.23	69.15%	69.77%
Gulls	1.9	1.9	1.9	1.9	0.0	13.62	0.23	0.07	13.62	0.23	69.15%	69.77%
Auklet	1.9	0.0	0.0	1.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Parakeet Auklet	1.9	0.0	0.0	1.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Eggs	53.8	44.2	44.2	25.0	28.8	354.00	6.00	1.90	1,368.35	23.19	18.87%	16.99%
Seabird Eggs	53.8	44.2	44.2	25.0	28.8	350.60	5.94	1.88	1,345.65	22.81	18.74%	17.01%
Gull Eggs	53.8	44.2	44.2	25.0	28.8	324.73	5.50	1.75	1,082.42	18.35	18.04%	17.22%
Puffin 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	3.8	3.8	3.8	0.0	1.9	6.81	0.12	0.04	136.15	2.31	58.55%	58.69%
Kittiwake Eggs	7.7	7.7	7.7	0.0	5.8	19.06	0.32	0.10	127.08	2.15	36.90%	36.16%
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	3.8	3.8	3.8	0.0	1.9	3.40	0.06	0.02	22.69	0.38	48.42%	48.38%
Duck Eggs	3.8	3.8	3.8	0.0	1.9	3.40	0.06	0.02	22.69	0.38	48.42%	48.38%
Eider 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	3.8	3.8	3.8	0.0	1.9	3.40	0.06	0.02	22.69	0.38	48.42%	48.38%
Marine Invertebrates	96.2	84.6	84.6	76.9	55.8	5,135.04	87.03	27.60			12.31%	11.67%
Clams	90.4	73.1	73.1	50.0	44.2	2,651.53	44.94	14.25	883.84 gal	14.98	14.72%	14.28%
Butter Clams	90.4	73.1	73.1	50.0	44.2	2,630.32	44.58	14.14	876.77 gal	14.86	14.73%	14.28%
Razor Clams	3.8	3.8	3.8	0.0	0.0	9.09	0.15	0.05	3.03 gal	0.05	49.98%	50.24%
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%

Table XII-26. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Ouzinkie, 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
Horse Clams (Gaper)	3.8	3.8	3.8	1.9	1.9	12.12	0.21	0.07	4.04 gal	0.07	54.35%	54.59%
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	7.7	7.7	7.7	0.0	3.8	36.83	0.62	0.20	12.28 gal	0.21	44.86%	45.44%
Scallops	1.9	0.0	0.0	1.9	1.9	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Jingles	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	9.6	9.6	9.6	0.0	5.8	19.57	0.33	0.11	13.05 gal	0.22	36.22%	36.78%
Crabs	76.9	25.0	23.1	63.5	25.0	1,213.82	20.57	6.52			27.01%	27.06%
Dungeness Crab	36.5	7.7	7.7	30.8	9.6	327.00	5.54	1.76	467.14	7.92	52.14%	52.17%
King Crab	32.7	5.8	3.8	30.8	9.6	20.88	0.35	0.11			49.96%	49.11%
King Crab Eggs, Red	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
King Crab, Unknown	32.7	5.8	3.8	30.8	9.6	20.88	0.35	0.11	9.08	0.15	49.96%	49.11%
Tanner Crab	61.5	17.3	15.4	53.8	21.2	865.94	14.68	4.65	541.21	9.17	32.98%	33.04%
Tanner Crab, Bairdi	7.7	7.7	7.7	0.0	5.8	277.75	4.71	1.49	173.60	2.94	41.97%	41.54%
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	55.8	11.5	9.6	53.8	17.3	588.18	9.97	3.16	367.62	6.23	44.90%	45.16%
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)	73.1	63.5	63.5	30.8	40.4	629.94	10.68	3.39	157.48 gal	2.67	12.46%	10.83%
Chitons (small)	73.1	63.5	63.5	30.8	40.4	629.94	10.68	3.39	157.48 gal	2.67	12.46%	10.83%
Octopus	51.9	28.8	28.8	25.0	13.5	557.10	9.44	2.99	139.27	2.36	29.81%	29.05%
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	26.9	28.8	26.9	1.9	11.5	24.49	0.42	0.13	48.98 gal	0.83	23.07%	21.68%
Shrimp	1.9	1.9	0.0	1.9	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Snails	1.9	1.9	1.9	0.0	0.0	0.07	0.00	0.00	0.05 gal	0.00	69.15%	69.77%
Limpets	1.9	1.9	1.9	0.0	0.0	1.70	0.03	0.01	1.13 gal	0.02	69.15%	69.77%
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%
Plants and Berries	96.2	92.3	92.3	32.7	46.2	1,647.46	27.92	8.85	411.87 gal	6.98	8.52%	8.80%
Berries	96.2	92.3	92.3	30.8	46.2	1,465.92	24.85	7.88	366.48 gal	6.21	9.18%	9.56%
Plants/Greens/Mushrooms	36.5	36.5	36.5	3.8	5.8	175.87	2.98	0.95	43.97 gal	0.75	18.88%	18.45%
Seaweed/Kelp (Food)	5.8	1.9	1.9	3.8	0.0	5.67	0.10	0.03	1.42 gal	0.02	69.15%	69.77%
Fertilizer	11.5	11.5	11.5	0.0	1.9	0.00	0.00	0.00	380.10 gal	6.44	36.02%	0.00%
Vegetative Fertilizer	11.5	11.5	11.5	0.0	1.9	0.00	0.00	0.00	380.10 gal	6.44	36.02%	0.00%
Seaweed/Kelp (Non-food)	11.5	11.5	11.5	0.0	1.9	0.00	0.00	0.00	380.10 gal	6.44	36.02%	0.00%
Wood	57.7	55.8	55.8	5.8	9.6	0.00	0.00	0.00	116.87 crd	1.98	13.61%	0.00%

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

Table XII-27. Estimated Amount of Resources Removed From Commercial Harvest, Ouzinkie, 1992/93

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		14,195.03	25.48	21.97
Fish		13,782.02	27.25	21.33
Salmon	1,429.05	9,228.44	23.24	14.28
Chum Salmon	93.04	674.53	34.31	1.04
Coho Salmon	551.42	4,510.64	22.51	6.98
Chinook Salmon	43.12	616.55	79.17	0.95
Pink Salmon	413.00	1,548.75	48.57	2.40
Sockeye Salmon	308.05	1,749.71	12.86	2.71
Unknown Salmon	20.42	128.26	100.00	0.20
Non-Salmon Fish		4,553.58	41.89	7.05
Cod	343.79	1,100.12	68.57	1.70
Pacific Cod (Gray)	343.79	1,100.12	68.57	1.70
Sablefish (Black Cod)	5.67	17.59	100.00	0.03
Greenling	8.31	96.26	59.32	0.15
Lingcod	8.31	96.26	78.54	0.15
Halibut	84.84	2,646.86	43.30	4.10
Herring	13.62 gal	81.69	47.06	0.13
Rockfish	197.33	588.87	52.00	0.91
Black Rockfish (black bass)	80.18	120.27	25.42	0.19
Red Rockfish	117.15	468.60	71.08	0.73
Sculpin	13.62	6.81	22.22	0.01
Unknown Sculpin	13.62	6.81	28.57	0.01
Wolf Eel (Wolffish)	3.40	1.70	100.00	0.00
Shark		1.13	100.00	0.00
Salmon Shark		1.13	100.00	0.00
Trout and Char	2.27	12.55	0.80	0.02
Trout	2.27	12.55	2.52	0.02
Steelhead	2.27	12.55	4.88	0.02
Marine Invertebrates		413.00	8.04	0.64
Crabs		350.60	28.88	0.54
Dungeness Crab	104.07	72.85	22.28	0.11
Tanner Crab	173.60	277.75	32.08	0.43
Tanner Crab, Bairdi	173.60	277.75	100.00	0.43
Octopus	15.60	62.40	11.20	0.10

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

Table XII-28. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Ouzinkie, 1992/93

		Subsistence Methods										Removed from Commercial Catch		Rod and Reel		Any Method	
		Setnet		Beach 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	61.37	60.35	2.25	1.96	1.20	1.11	0.13	0.12	64.95	63.54	23.65	23.24	11.39	13.22		
Chum Salmon	gear type	4.71	5.29	0.00	0.00	0.00	0.00	0.00	0.00	4.45	5.02	6.51	7.31	0.49	0.47		
	resource	64.44	64.44	0.00	0.00	0.00	0.00	0.00	0.00	64.44	64.44	34.31	34.31	1.26	1.26		
	total	2.89	3.19	0.00	0.00	0.00	0.00	0.00	0.00	2.89	3.19	1.54	1.70	0.06	0.06	4.49	4.95
Coho Salmon	gear type	34.17	43.24	33.33	47.76	15.63	21.05	50.00	68.57	33.83	43.04	38.59	48.88	83.02	89.05		
	resource	51.70	51.70	1.85	1.85	0.46	0.46	0.16	0.16	54.18	54.18	22.51	22.51	23.32	23.32		
	total	20.97	26.10	0.75	0.93	0.19	0.23	0.07	0.08	21.97	27.35	9.13	11.36	9.46	11.77	40.56	50.48
Chinook Salmon	gear type	0.18	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.39	3.02	6.68	0.66	1.24		
	resource	12.50	12.50	0.00	0.00	0.00	0.00	0.00	0.00	12.50	12.50	79.17	79.17	8.33	8.33		
	total	0.11	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.25	0.71	1.55	0.08	0.16	0.90	1.96
Pink Salmon	gear type	8.29	4.81	41.67	27.37	0.00	0.00	50.00	31.43	9.38	5.47	28.90	16.78	10.06	4.95		
	resource	36.16	36.16	6.67	6.67	0.00	0.00	0.47	0.47	43.30	43.30	48.57	48.57	8.14	8.14		
	total	5.09	2.90	0.94	0.54	0.00	0.00	0.07	0.04	6.09	3.48	6.84	3.90	1.15	0.65	14.08	8.03
Sockeye Salmon	gear type	52.64	46.26	25.00	24.87	84.38	78.95	0.00	0.00	52.16	46.08	21.56	18.96	5.77	4.30		
	resource	81.50	81.50	1.42	1.42	2.56	2.56	0.00	0.00	85.48	85.48	12.86	12.86	1.66	1.66		
	total	32.30	27.92	0.56	0.49	1.01	0.88	0.00	0.00	33.88	29.28	5.10	4.41	0.66	0.57	39.64	34.26
Unknown Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43	1.39	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	100.00	100.00	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	0.34	0.32	0.00	0.00	0.34	0.32

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

Table XII-29. Estimated Salmon Harvest by Gear Type and Species, Ouzinkie, 1992/93

		Subsistence Methods										Removed from Commercial Catch		Rod and Reel		Any Method	
		Setnet		Beach 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	3,707.36	62.84	136.15	2.31	72.62	1.23	7.94	0.13	3,924.07	66.51	1,429.05	24.22	688.14	11.66	6,041.26	102.39
	pounds	23,964.35	406.18	777.33	13.18	440.82	7.47	47.38	0.80	25,229.87	427.62	9,228.44	156.41	5,247.74	88.94	39,706.05	672.98
Chum Salmon	numbers	174.73	2.96	0.00	0.00	0.00	0.00	0.00	0.00	174.73	2.96	93.04	1.58	3.40	0.06	271.17	4.60
	pounds	1,266.80	21.47	0.00	0.00	0.00	0.00	0.00	0.00	1,266.80	21.47	674.53	11.43	24.68	0.42	1,966.00	33.32
Coho Salmon	numbers	1,266.80	21.47	45.38	0.77	11.35	0.19	3.97	0.07	1,327.50	22.50	551.42	9.35	571.28	9.68	2,450.20	41.53
	pounds	10,362.41	175.63	371.25	6.29	92.81	1.57	32.48	0.55	10,858.95	184.05	4,510.64	76.45	4,673.06	79.20	20,042.65	339.71
Chinook Salmon	numbers	6.81	0.12	0.00	0.00	0.00	0.00	0.00	0.00	6.81	0.12	43.12	0.73	4.54	0.08	54.46	0.92
	pounds	97.35	1.65	0.00	0.00	0.00	0.00	0.00	0.00	97.35	1.65	616.55	10.45	64.90	1.10	778.80	13.20
Pink Salmon	numbers	307.48	5.21	56.73	0.96	0.00	0.00	3.97	0.07	368.18	6.24	413.00	7.00	69.21	1.17	850.39	14.41
	pounds	1,153.05	19.54	212.74	3.61	0.00	0.00	14.89	0.25	1,380.69	23.40	1,548.75	26.25	259.54	4.40	3,188.98	54.05
Sockeye Salmon	numbers	1,951.54	33.08	34.04	0.58	61.27	1.04	0.00	0.00	2,046.85	34.69	308.05	5.22	39.71	0.67	2,394.61	40.59
	pounds	11,084.74	187.88	193.34	3.28	348.01	5.90	0.00	0.00	11,626.09	197.05	1,749.71	29.66	225.56	3.82	13,601.36	230.53
Unknown Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.42	0.35	0.00	0.00	20.42	0.35
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	128.26	2.17	0.00	0.00	128.26	2.17

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

Table XII-30. Percentage of Households Harvesting Salmon by Gear Type and Species, Ouzinkie, 1992/93

Resource	Setnet	Beach Seine	Dip Net	Other	Any Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Any Method
Salmon	53.85	3.85	3.85	1.92	59.62	40.38	40.38	86.54
Chum Salmon	26.92	0.00	0.00	0.00	26.92	23.08	1.92	46.15
Coho Salmon	46.15	1.92	1.92	1.92	50.00	36.54	36.54	82.69
Chinook Salmon	7.69	0.00	0.00	0.00	7.69	17.31	3.85	25.00
Pink Salmon	28.85	1.92	0.00	1.92	32.69	28.85	13.46	59.62
Sockeye Salmon	51.92	1.92	1.92	0.00	53.85	38.46	3.85	69.23
Unknown Salmon	0.00	0.00	0.00	0.00	0.00	1.92	0.00	1.92

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

Table XII-31. Estimated Harvest of Fish Other than Salmon by Gear Type, Ouzinkie, 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	2,539.70	43.05	4,553.58	77.18	3,777.97	64.03	0.00	0.00	10,871.26	184.26
Lingcod	pounds	0.00	0.00	96.26	1.63	26.30	0.45	0.00	0.00	122.56	2.08
Pacific Cod (Gray)	pounds	101.66	1.72	1,100.12	18.65	402.58	6.82	0.00	0.00	1,604.36	27.19
Sablefish (Black Cod)	pounds	0.00	0.00	17.59	0.30	0.00	0.00	0.00	0.00	17.59	0.30
Unknown Flounder	pounds	0.00	0.00	0.00	0.00	56.74	0.96	0.00	0.00	56.74	0.96
Halibut	pounds	1,903.39	32.26	2,646.86	44.86	1,562.61	26.48	0.00	0.00	6,112.86	103.61
Herring	pounds	91.90	1.56	81.69	1.38	0.00	0.00	0.00	0.00	173.60	2.94
Herring Roe	pounds	5.64	0.10	0.00	0.00	0.00	0.00	0.00	0.00	5.64	0.10
Black Rockfish (black bass)	pounds	51.06	0.87	120.27	2.04	301.80	5.12	0.00	0.00	473.13	8.02
Red Rockfish	pounds	0.00	0.00	468.60	7.94	190.62	3.23	0.00	0.00	659.21	11.17
Irish Lord	pounds	0.00	0.00	0.00	0.00	6.81	0.12	0.00	0.00	6.81	0.12
Unknown Sculpin	pounds	0.00	0.00	6.81	0.12	17.02	0.29	0.00	0.00	23.83	0.40
Unknown Greenling	pounds	0.00	0.00	0.00	0.00	39.71	0.67	0.00	0.00	39.71	0.67
Wolf Eel (Wolffish)	pounds	0.00	0.00	1.70	0.03	0.00	0.00	0.00	0.00	1.70	0.03
Salmon Shark	pounds	0.00	0.00	1.13	0.02	0.00	0.00	0.00	0.00	1.13	0.02
Dolly Varden	pounds	331.99	5.63	0.00	0.00	451.12	7.65	0.00	0.00	783.11	13.27
Dolly Varden-Fingerling	pounds	0.00	0.00	0.00	0.00	233.16	3.95	0.00	0.00	233.16	3.95
Brook Trout	pounds	0.00	0.00	0.00	0.00	4.54	0.08	0.00	0.00	4.54	0.08
Unknown Char	pounds	22.68	0.38	0.00	0.00	31.77	0.54	0.00	0.00	54.45	0.92
Rainbow Trout	pounds	0.00	0.00	0.00	0.00	81.01	1.37	0.00	0.00	81.01	1.37
Steelhead	pounds	31.37	0.53	12.55	0.21	213.33	3.62	0.00	0.00	257.25	4.36
Unknown Trout	pounds	0.00	0.00	0.00	0.00	158.85	2.69	0.00	0.00	158.85	2.69

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

Table XII-32. Percentage of Fish Other Than Salmon Harvested by Gear Type, Ouzinkie, 1992/93

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	23.36	41.89	34.75	0.00
Lingcod	resource	0.00	78.54	21.46	0.00
Pacific Cod (Gray)	resource	6.34	68.57	25.09	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	31.14	43.30	25.56	0.00
Herring	resource	52.94	47.06	0.00	0.00
Herring Roe	resource	100.00	0.00	0.00	0.00
Black Rockfish (black bass)	resource	10.79	25.42	63.79	0.00
Red Rockfish	resource	0.00	71.08	28.92	0.00
Irish Lord	resource	0.00	0.00	100.00	0.00
Unknown Sculpin	resource	0.00	28.57	71.43	0.00
Unknown Greenling	resource	0.00	0.00	100.00	0.00
Wolf Eel (Wolffish)	resource	0.00	100.00	0.00	0.00
Salmon Shark	resource	0.00	100.00	0.00	0.00
Dolly Varden	resource	42.39	0.00	57.61	0.00
Dolly Varden-Fingerling	resource	0.00	0.00	100.00	0.00
Brook Trout	resource	0.00	0.00	100.00	0.00
Unknown Char	resource	41.66	0.00	58.34	0.00
Rainbow Trout	resource	0.00	0.00	100.00	0.00
Steelhead	resource	12.20	4.88	82.93	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, 1993

Table XII-33. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Ouzinkie, 1992/93

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	34.62	42.31	46.15	0.00	75.00
Lingcod	0.00	5.77	1.92	0.00	7.69
Pacific Cod (Gray)	9.62	23.08	11.54	0.00	36.54
Sablefish (Black Cod)	0.00	1.92	0.00	0.00	1.92
Unknown Flounder	0.00	0.00	3.85	0.00	3.85
Halibut	23.08	26.92	11.54	0.00	53.85
Herring	7.69	1.92	0.00	0.00	9.62
Herring Roe	1.92	0.00	0.00	0.00	1.92
Black Rockfish (black bass)	1.92	1.92	13.46	0.00	17.31
Red Rockfish	0.00	17.31	5.77	0.00	21.15
Irish Lord	0.00	0.00	1.92	0.00	1.92
Unknown Sculpin	0.00	1.92	3.85	0.00	3.85
Unknown Greenling	0.00	0.00	5.77	0.00	5.77
Wolf Eel (Wolffish)	0.00	1.92	0.00	0.00	1.92
Salmon Shark	0.00	1.92	0.00	0.00	1.92
Dolly Varden	3.85	0.00	25.00	0.00	28.85
Dolly Varden-Fingerling	0.00	0.00	9.62	0.00	9.62
Brook Trout	0.00	0.00	1.92	0.00	1.92
Unknown Char	3.85	0.00	1.92	0.00	5.77
Rainbow Trout	0.00	0.00	5.77	0.00	5.77
Steelhead	1.92	1.92	5.77	0.00	9.62
Unknown Trout	0.00	0.00	3.85	0.00	3.85

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

Figure XII-13. Composition of Wild Resource Harvests by Resource Category, Ouzinkie, 1993/94

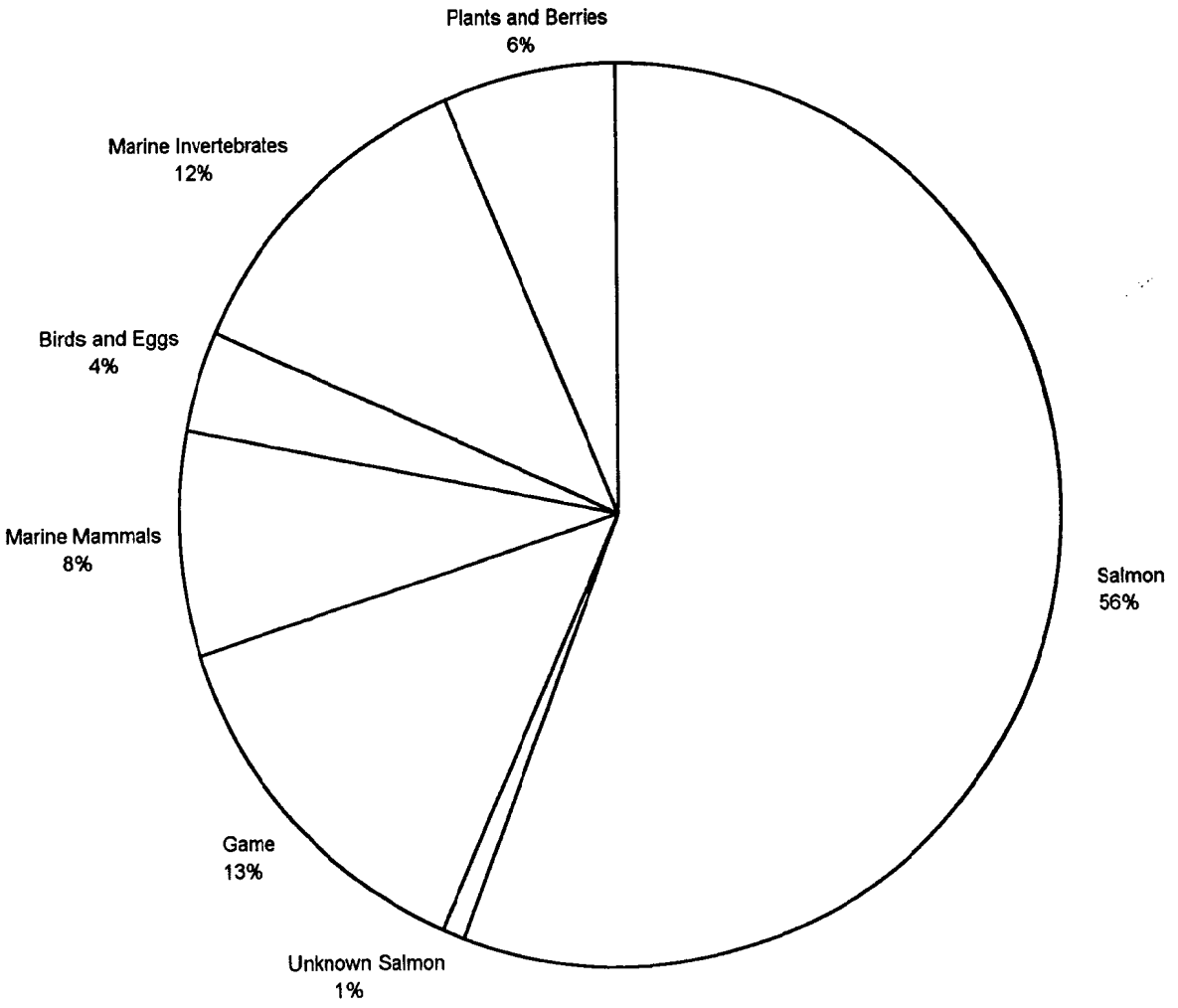


Figure XII-14. Composition of Harvests by Resource Category, Ouzinkie, 1982/83, 1986, 1989, 1990/91, 1991/92, 1992/93, and 1993/94

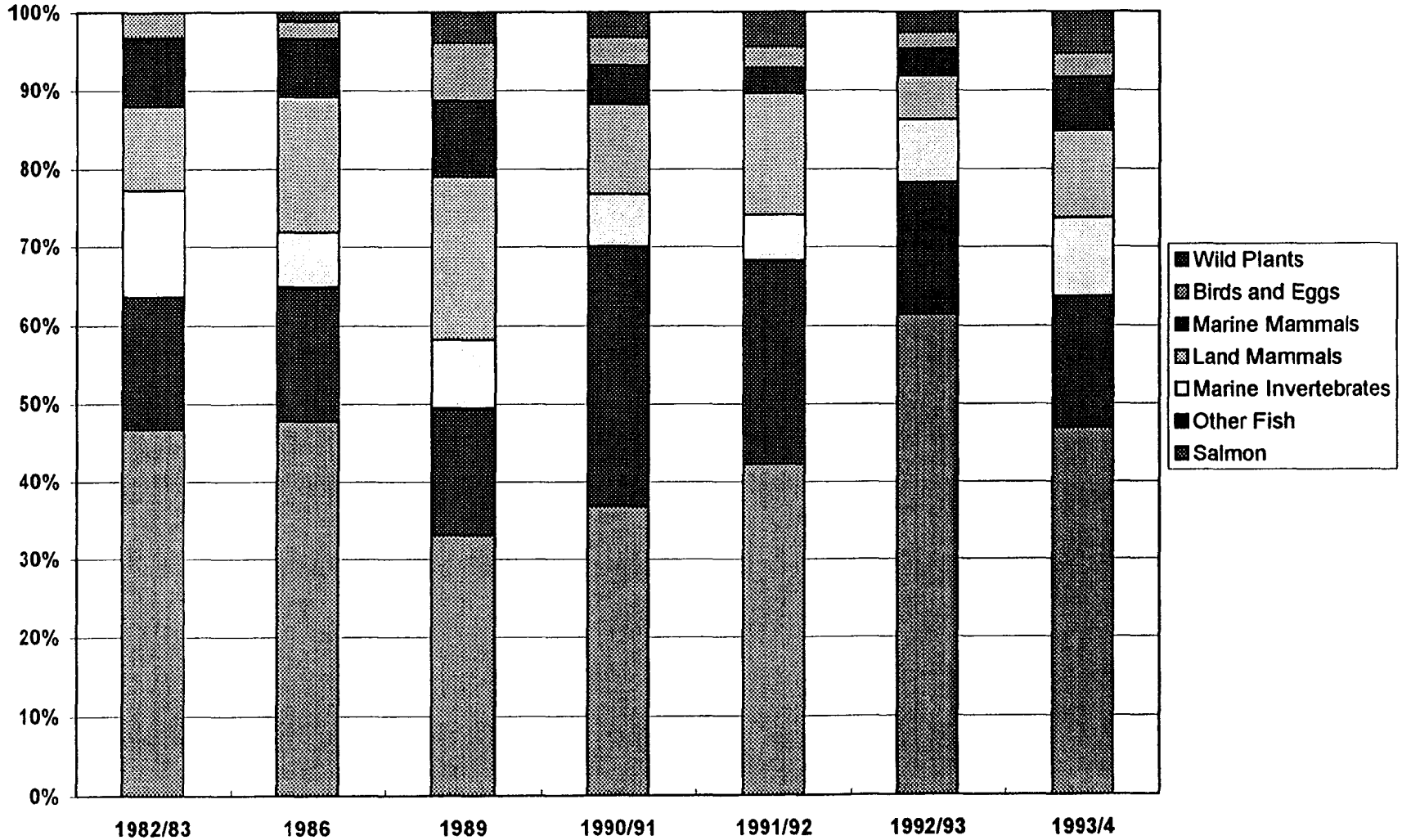


Table XII-34. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Ouzinkie, 1993/94

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	98.4	91.8	91.8	95.1	85.2	51,051.28	719.03	218.21			11.20%	9.34%
Fish	98.4	78.7	78.7	80.3	65.6	32,482.13	457.49	138.84			12.17%	10.70%
Salmon	93.4	75.4	75.4	63.9	62.3	23,947.81	337.29	102.36	5,694.55	80.20	13.33%	11.86%
Chum Salmon	39.3	32.8	32.8	9.8	18.0	1,023.51	14.42	4.37	231.04	3.25	21.95%	21.08%
Coho Salmon	90.2	70.5	70.5	50.8	50.8	12,805.98	180.37	54.74	2,540.87	35.79	12.21%	10.49%
Chinook Salmon	27.9	11.5	11.5	19.7	8.2	119.84	1.69	0.51	13.97	0.20	29.34%	27.37%
Pink Salmon	60.7	45.9	45.9	26.2	29.5	1,613.49	22.73	6.90	707.67	9.97	16.29%	15.59%
Sockeye Salmon	80.3	54.1	54.1	47.5	42.6	8,054.19	113.44	34.43	2,119.52	29.85	18.35%	17.42%
Unknown Salmon	3.3	3.3	3.3	1.6	1.6	330.79	4.66	1.41	81.48	1.15	57.42%	56.91%
Non-Salmon Fish	88.5	62.3	60.7	68.9	52.5	8,534.33	120.20	36.48			15.61%	14.78%
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%
Cod	50.8	32.8	32.8	29.5	24.6	1,385.08	19.51	5.92	432.84	6.10	25.34%	24.62%
Pacific Cod (Gray)	50.8	32.8	32.8	29.5	24.6	1,385.08	19.51	5.92	432.84	6.10	25.34%	24.62%
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	16.4	8.2	6.6	9.8	4.9	110.54	1.56	0.47	14.86	0.21	43.69%	50.81%
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	13.1	6.6	4.9	8.2	3.3	104.73	1.48	0.45	9.04	0.13	54.25%	53.62%
Unknown Greenling	3.3	1.6	1.6	1.6	1.6	5.82	0.08	0.02	5.82	0.08	75.07%	74.96%
Flounder	4.9	3.3	3.3	3.3	0.0	66.34	0.93	0.28	22.11	0.31	61.08%	60.37%
Arrow Tooth Flounder (Turbot)	3.3	1.6	1.6	3.3	0.0	52.38	0.74	0.22	17.46	0.25	75.07%	74.57%
Starry 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%
Greenland Halibut (Greenland Turbot)	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	1.6	1.6	1.6	0.0	0.0	13.97	0.20	0.06	4.66	0.07	75.07%	74.19%
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%
Yellowfin 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	83.6	54.1	50.8	60.7	47.5	5,443.60	76.67	23.27	150.79	2.12	16.89%	16.42%
Herring	18.0	8.2	8.2	9.8	8.2	351.51	4.95	1.50	58.58 gal	0.83	52.02%	51.37%
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%
Rockfish	26.2	18.0	18.0	13.1	13.1	586.16	8.26	2.51	346.70	4.88	33.14%	31.40%
Black Rockfish (black bass)	16.4	13.1	13.1	4.9	8.2	470.93	6.63	2.01	313.95	4.42	35.52%	34.82%
Red Rockfish	16.4	6.6	6.6	9.8	4.9	103.59	1.46	0.44	25.90	0.36	52.53%	53.55%
Unknown Rockfish	1.6	1.6	1.6	0.0	0.0	11.64	0.16	0.05	6.85	0.10	75.07%	75.71%
Sea Perch	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	6.6	3.3	3.3	3.3	4.9	9.89	0.14	0.04	19.79	0.28	66.68%	66.17%
Irish Lord	4.9	1.6	1.6	3.3	4.9	1.16	0.02	0.00	2.33	0.03	75.07%	74.96%

Table XII-34. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Ouzinkie, 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
Unknown Sculpin	3.3	1.6	1.6	1.6	1.6	8.73	0.12	0.04	17.46	0.25	75.07%	74.57%
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%
Capelin (Grunion)	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%
Wolf Eel (Wolffish)	1.6	1.6	1.6	0.0	1.6	1.16	0.02	0.00	2.33	0.03	75.07%	74.96%
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%
Unknown 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)	1.6	0.0	0.0	1.6	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Skates	3.3	1.6	1.6	1.6	0.0	5.82	0.08	0.02	1.16	0.02	75.07%	74.96%
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%
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	31.1	24.6	24.6	9.8	13.1	574.21	8.09	2.45	1,103.41	15.54	33.06%	26.58%
Char	23.0	19.7	19.7	3.3	11.5	341.92	4.82	1.46	1,037.07	14.61	34.70%	28.03%
Dolly Varden	16.4	13.1	13.1	3.3	9.8	290.05	4.09	1.24	207.18	2.92	30.67%	29.80%
Dolly Varden-Fingerling	8.2	8.2	8.2	0.0	3.3	51.87	0.73	0.22	829.89	11.69	39.98%	40.07%
Brook 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 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%
Trout	18.0	11.5	11.5	8.2	8.2	232.29	3.27	0.99	66.34	0.93	38.07%	43.73%
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	4.9	4.9	4.9	0.0	3.3	44.00	0.62	0.19	31.43	0.44	57.25%	56.39%
Steelhead	9.8	4.9	4.9	6.6	4.9	186.66	2.63	0.80	33.75	0.48	54.20%	53.57%
Unknown Trout	4.9	1.6	1.6	3.3	1.6	1.63	0.02	0.01	1.16	0.02	75.07%	75.71%
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	88.5	59.0	57.4	68.9	54.1	5,660.21	79.72	24.19	182.74	2.57	19.80%	10.76%
Big Game	88.5	59.0	55.7	68.9	54.1	5,541.49	78.05	23.69	123.38	1.74	11.55%	10.92%
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	0.0	0.0	0.0	0.0	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	6.6	0.0	0.0	6.6	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Deer	88.5	59.0	55.7	59.0	54.1	5,279.61	74.36	22.57	122.21	1.72	11.45%	10.13%
Elk	9.8	3.3	1.6	8.2	1.6	261.89	3.69	1.12	1.16	0.02	75.07%	74.19%
Goat	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Moose	9.8	0.0	0.0	9.8	1.6	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Muskox	4.9	0.0	0.0	4.9	3.3	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table XII-34. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Ouzinkie, 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
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	18.0	11.5	9.8	9.8	6.6	118.72	1.67	0.51	59.36	0.84	52.27%	51.00%
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%
Red 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%
Hare	18.0	11.5	9.8	9.8	6.6	118.72	1.67	0.51	59.36	0.84	52.27%	51.00%
Snowshoe Hare	18.0	11.5	9.8	9.8	6.6	118.72	1.67	0.51	59.36	0.84	52.27%	51.00%
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%
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%
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%
Marine Mammals	41.0	26.2	26.2	26.2	26.2	3,510.43	49.44	15.00	54.70	0.77	25.40%	31.51%
Whale	3.3	0.0	0.0	3.3	1.6	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Bowhead	1.6	0.0	0.0	1.6	1.6	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Humpback 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	1.6	0.0	0.0	1.6	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	37.7	24.6	24.6	23.0	24.6	2,346.49	33.05	10.03	41.90	0.59	24.59%	23.07%
Harbor Seal	37.7	24.6	24.6	23.0	24.6	2,346.49	33.05	10.03	41.90	0.59	24.59%	23.07%
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	4.9	3.3	3.3	1.6	4.9	1,163.93	16.39	4.98	5.82	0.08	53.72%	52.15%
Sea Otter	4.9	4.9	4.9	0.0	1.6	0.00	0.00	0.00	6.98	0.10	52.64%	0.00%
Birds and Eggs	73.8	55.7	55.7	44.3	39.3	1,552.03	21.86	6.63	2,862.11	40.31	17.33%	14.98%
Birds	68.9	44.3	44.3	37.7	32.8	1,147.85	16.17	4.91	1,435.13	20.21	18.16%	16.29%
Upland Game Birds	3.3	1.6	1.6	1.6	0.0	6.52	0.09	0.03	9.31	0.13	75.07%	73.81%
Ptarmigan	3.3	1.6	1.6	1.6	0.0	6.52	0.09	0.03	9.31	0.13	75.07%	73.81%
Migratory Birds	68.9	44.3	44.3	36.1	32.8	1,141.33	16.08	4.88	1,425.82	20.08	18.07%	16.20%
Waterfowl	68.9	44.3	44.3	36.1	32.8	1,141.33	16.08	4.88	1,425.82	20.08	18.07%	16.20%
Ducks	68.9	44.3	44.3	36.1	32.8	1,127.85	15.89	4.82	1,418.84	19.98	17.93%	15.95%
Eider	1.6	0.0	0.0	1.6	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	1.6	0.0	0.0	1.6	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table XII-34. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Ouzinkie, 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
Scoter	42.6	27.9	27.9	18.0	24.6	251.41	3.54	1.07	279.34	3.93	21.35%	19.94%
Scoter, White-winged	18.0	13.1	13.1	6.6	13.1	62.85	0.89	0.27	69.84	0.98	29.83%	28.42%
Scoter, Black	32.8	23.0	23.0	13.1	18.0	174.94	2.46	0.75	194.38	2.74	23.42%	22.32%
Scoter, Surf	6.6	4.9	4.9	3.3	4.9	13.62	0.19	0.06	15.13	0.21	45.93%	45.41%
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	27.9	21.3	21.3	9.8	18.0	69.25	0.98	0.30	138.51	1.95	22.78%	22.74%
Goldeneye	50.8	32.8	32.8	19.7	24.6	234.65	3.30	1.00	293.31	4.13	21.66%	20.14%
Bufflehead	9.8	9.8	9.8	0.0	6.6	47.02	0.66	0.20	117.56	1.66	40.92%	39.86%
Merganser	6.6	3.3	3.3	3.3	1.6	3.14	0.04	0.01	3.49	0.05	55.58%	55.43%
Scaup	9.8	9.8	9.8	0.0	8.2	54.47	0.77	0.23	60.52	0.85	35.23%	34.84%
Mallard	45.9	34.4	34.4	18.0	27.9	273.52	3.85	1.17	273.52	3.85	18.82%	17.09%
Pintail	9.8	4.9	4.9	6.6	3.3	38.18	0.54	0.16	47.72	0.67	46.46%	45.57%
Wigeon	1.6	1.6	1.6	0.0	1.6	4.89	0.07	0.02	6.98	0.10	75.07%	74.19%
Teal	1.6	1.6	1.6	0.0	1.6	4.19	0.06	0.02	13.97	0.20	75.07%	74.19%
Oldsquaw	26.2	21.3	21.3	6.6	14.8	147.12	2.07	0.63	183.90	2.59	23.58%	23.09%
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%
Redhead Duck	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 Ducks	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	3.3	0.0	0.0	3.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese	1.6	1.6	1.6	0.0	0.0	13.48	0.19	0.06	6.98	0.10	75.07%	74.19%
Black 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, 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, Unknown	1.6	1.6	1.6	0.0	0.0	13.48	0.19	0.06	6.98	0.10	75.07%	74.19%
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%
Auklet	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Parakeet Auklet	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	44.3	34.4	34.4	21.3	18.0	404.18	5.69	1.73	1,426.98	20.10	20.79%	18.17%
Seabird Eggs	44.3	34.4	34.4	21.3	18.0	397.48	5.60	1.70	1,379.26	19.43	20.30%	17.98%
Gull Eggs	44.3	34.4	34.4	21.3	18.0	390.73	5.50	1.67	1,302.44	18.34	20.18%	18.01%
Herring Gull Eggs	44.3	34.4	34.4	21.3	18.0	390.73	5.50	1.67	1,302.44	18.34	20.18%	18.01%
Puffin Eggs	1.6	1.6	1.6	0.0	1.6	3.49	0.05	0.01	11.64	0.16	75.07%	74.57%

Table XII-34. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Ouzinkie, 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
Tern Eggs	3.3	3.3	3.3	0.0	1.6	3.26	0.05	0.01	65.18	0.92	67.37%	66.87%
Kittiwake 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	3.3	3.3	3.3	0.0	1.6	1.11	0.02	0.00	22.11	0.31	54.49%	53.33%
Snipe Eggs	3.3	3.3	3.3	0.0	1.6	1.11	0.02	0.00	22.11	0.31	54.49%	53.33%
Black Snipe Eggs (Oystercatcher)	3.3	3.3	3.3	0.0	1.6	1.11	0.02	0.00	22.11	0.31	54.49%	53.33%
Waterfowl Eggs	3.3	3.3	3.3	0.0	3.3	5.59	0.08	0.02	25.61	0.36	52.86%	53.23%
Duck Eggs	3.3	3.3	3.3	0.0	3.3	5.59	0.08	0.02	25.61	0.36	52.86%	53.23%
Eider Eggs	1.6	1.6	1.6	0.0	1.6	3.49	0.05	0.01	11.64	0.16	75.07%	74.57%
Duck Eggs, Unknown	1.6	1.6	1.6	0.0	1.6	2.10	0.03	0.01	13.97	0.20	75.07%	73.81%
Marine Invertebrates	93.4	72.1	68.9	77.0	54.1	5,122.30	72.15	21.89			18.20%	17.07%
Clams	78.7	62.3	62.3	39.3	45.9	3,174.34	44.71	13.57	1,058.11 gal	14.90	19.26%	17.92%
Butter Clams	78.7	62.3	62.3	39.3	45.9	3,121.96	43.97	13.34	1,040.65 gal	14.66	19.22%	17.88%
Razor Clams	1.6	1.6	1.6	0.0	1.6	17.46	0.25	0.07	5.82 gal	0.08	75.07%	75.34%
Pacific Littleneck Clams (Steamers)	1.6	1.6	1.6	0.0	1.6	17.46	0.25	0.07	5.82 gal	0.08	75.07%	74.57%
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)	1.6	1.6	1.6	1.6	1.6	17.46	0.25	0.07	5.82 gal	0.08	75.07%	74.19%
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	4.9	4.9	3.3	3.3	4.9	10.48	0.15	0.04	3.49 gal	0.05	55.58%	55.43%
Scallops	1.6	0.0	0.0	1.6	1.6	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Jingles	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	4.9	4.9	4.9	0.0	1.6	7.86	0.11	0.03	5.24 gal	0.07	47.33%	47.49%
Crabs	57.4	9.8	8.2	54.1	18.0	684.16	9.64	2.92			45.49%	45.79%
Dungeness Crab	23.0	4.9	4.9	19.7	9.8	48.89	0.69	0.21	69.84	0.98	52.64%	52.29%
King Crab	39.3	6.6	4.9	37.7	11.5	37.48	0.53	0.16			48.60%	47.91%
King Crab, Blue	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 Eggs, Red	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%
King Crab, Unknown	39.3	6.6	4.9	37.7	11.5	37.48	0.53	0.16	16.30	0.23	48.60%	47.91%
Tanner Crab	49.2	8.2	8.2	42.6	16.4	597.80	8.42	2.56	373.62	5.26	48.94%	49.33%
Tanner Crab, Bairdi	3.3	3.3	3.3	0.0	3.3	316.59	4.46	1.35	197.87	2.79	57.07%	57.62%
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	49.2	8.2	8.2	42.6	16.4	281.21	3.96	1.20	175.75	2.48	43.95%	44.08%
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)	59.0	52.5	52.5	18.0	32.8	710.58	10.01	3.04	177.65 gal	2.50	17.45%	16.27%
Chitons (small)	59.0	52.5	52.5	18.0	32.8	710.58	10.01	3.04	177.65 gal	2.50	17.45%	16.27%
Octopus	45.9	24.6	23.0	29.5	18.0	503.40	7.09	2.15	125.85	1.77	37.75%	36.85%
Sea Cucumber	3.3	3.3	3.3	0.0	0.0	12.34	0.17	0.05	6.17 gal	0.09	70.88%	70.35%

Table XII-34. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Ouzinkie, 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
Sea Urchin	23.0	23.0	18.0	9.8	8.2	17.12	0.24	0.07	34.24 gal	0.48	28.87%	27.58%
Shrimp	3.3	0.0	0.0	3.3	1.6	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Snails	0.0	1.6	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Limpets	3.3	3.3	3.3	0.0	0.0	2.03	0.03	0.01	1.35 gal	0.02	65.37%	64.86%
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%
Plants and Berries	95.1	91.8	91.8	37.7	57.4	2,724.19	38.37	11.64	681.05 gal	9.59	9.08%	9.20%
Berries	95.1	91.8	91.8	37.7	55.7	2,505.37	35.29	10.71	626.34 gal	8.82	8.75%	8.68%
Plants/Greens/Mushrooms	41.0	41.0	41.0	3.3	13.1	218.24	3.07	0.93	54.56 gal	0.77	25.39%	26.19%
Seaweed/Kelp (Food)	3.3	1.6	1.6	1.6	0.0	0.58	0.01	0.00	0.15 gal	0.00	75.07%	75.71%
Fertilizer	6.6	6.6	6.6	0.0	3.3	0.00	0.00	0.00			0.00%	0.00%
Vegetative Fertilizer	6.6	6.6	6.6	0.0	3.3	0.00	0.00	0.00	1,120.87 gal	15.79	56.11%	0.00%
Seaweed/Kelp (Non-food)	6.6	6.6	6.6	0.0	3.3	0.00	0.00	0.00	1,120.87 gal	15.79	56.11%	0.00%
Fish Fertilizer	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Herring [Fertilizer]	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Invertebrate Fertilizer	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Starfish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Wood	55.7	49.2	49.2	11.5	11.5	0.00	0.00	0.00	141.13 crd	1.99	13.68%	0.00%

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

Table XII-35. Estimated Amount of Resources Removed From Commercial Harvest, Ouzinkie, 1993/94

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		7,546.49	20.07	14.78
Fish		7,149.24	22.01	14.00
Salmon	1,018.44	3,979.19	16.62	7.79
Chum Salmon	62.85	278.44	27.20	0.55
Coho Salmon	345.69	1,742.27	13.61	3.41
Chinook Salmon	5.82	49.93	41.67	0.10
Pink Salmon	259.56	591.79	36.68	1.16
Sockeye Salmon	315.43	1,198.62	14.88	2.35
Unknown Salmon	29.10	118.14	35.71	0.23
Non-Salmon Fish		3,170.05	37.14	6.21
Cod	293.17	938.13	67.73	1.84
Pacific Cod (Gray)	293.17	938.13	67.73	1.84
Greenling	9.04	104.73	94.74	0.21
Lingcod	9.04	104.73	100.00	0.21
Halibut	49.47	1,785.94	32.81	3.50
Rockfish	169.00	319.62	54.53	0.63
Black Rockfish (black bass)	136.26	204.39	43.40	0.40
Red Rockfish	25.90	103.59	100.00	0.20
Unknown Rockfish	6.85	11.64	100.00	0.02
Sculpin	2.33	1.16	11.76	0.00
Irish Lord	2.33	1.16	100.00	0.00
Wolf Eel (Wolffish)	2.33	1.16	100.00	0.00
Trout and Char	3.49	19.31	3.36	0.04
Trout	3.49	19.31	8.31	0.04
Steelhead	3.49	19.31	10.34	0.04
Marine Invertebrates		397.25	7.76	0.78
Crabs		327.41	47.86	0.64
Dungeness Crab	11.64	8.15	16.67	0.02
King Crab		2.68	7.14	0.01
King Crab, Unknown	1.16	2.68	7.14	0.01
Tanner Crab	197.87	316.59	52.96	0.62
Tanner Crab, Bairdi	197.87	316.59	100.00	0.62
Octopus	17.46	69.84	13.87	0.14

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

Table XII-36. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Ouzinkie, 1993/94

Resource	Percent Base	Subsistence Methods: Setnet No.	Setnet Lbs.	Beach Seine No.	Beach Seine 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	61.06	62.15	2.55	3.06	0.31	0.30	63.92	65.50	17.88	16.62	18.19	17.88		
Chum Salmon	gear type	4.23	4.38	0.00	0.00	0.00	0.00	4.04	4.16	6.17	7.00	2.02	2.17		
	resource	63.73	63.73	0.00	0.00	0.00	0.00	63.73	63.73	27.20	27.20	9.07	9.07		
	total	2.59	2.72	0.00	0.00	0.00	0.00	2.59	2.72	1.10	1.16	0.37	0.39	4.06	4.27
Coho Salmon	gear type	43.05	50.69	100.00	100.00	0.00	0.00	45.12	52.77	33.94	43.78	53.37	65.08		
	resource	58.91	58.91	5.73	5.73	0.00	0.00	64.64	64.64	13.61	13.61	21.76	21.76		
	total	26.29	31.50	2.55	3.06	0.00	0.00	28.84	34.56	6.07	7.28	9.71	11.64	44.62	53.47
Chinook Salmon	gear type	0.20	0.40	0.00	0.00	0.00	0.00	0.19	0.38	0.57	1.25	0.11	0.23		
	resource	50.00	50.00	0.00	0.00	0.00	0.00	50.00	50.00	41.67	41.67	8.33	8.33		
	total	0.12	0.25	0.00	0.00	0.00	0.00	0.12	0.25	0.10	0.21	0.02	0.04	0.25	0.50
Pink Salmon	gear type	5.92	3.16	0.00	0.00	0.00	0.00	5.66	2.99	25.49	14.87	23.37	12.89		
	resource	29.11	29.11	0.00	0.00	0.00	0.00	29.11	29.11	36.68	36.68	34.21	34.21		
	total	3.62	1.96	0.00	0.00	0.00	0.00	3.62	1.96	4.56	2.47	4.25	2.30	12.43	6.74
Sockeye Salmon	gear type	46.59	41.37	0.00	0.00	0.00	0.00	44.51	39.25	30.97	30.12	17.75	16.32		
	resource	76.44	76.44	0.00	0.00	0.00	0.00	76.44	76.44	14.88	14.88	8.68	8.68		
	total	28.45	25.71	0.00	0.00	0.00	0.00	28.45	25.71	5.54	5.01	3.23	2.92	37.22	33.63
Unknown Salmon	gear type	0.00	0.00	0.00	0.00	100.00	####	0.48	0.45	2.86	2.97	3.37	3.31		
	resource	0.00	0.00	0.00	0.00	21.43	21.43	21.43	21.43	35.71	35.71	42.86	42.86		
	total	0.00	0.00	0.00	0.00	0.31	0.30	0.31	0.30	0.51	0.49	0.61	0.59	1.43	1.38

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

Table XII-37. Estimated Salmon Harvest by Gear Type and Species, Ouzinkie, 1993/94

		Subsistence Methods								Removed from Commercial Catch		Rod and Reel		Any Method	
		Setnet		Beach Seine		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
Salmon	numbers	3,477.25	48.98	145.49	2.05	17.46	0.25	3,640.20	51.27	1,018.44	14.34	1,035.90	14.59	5,694.55	80.20
	pounds	14,882.62	209.61	733.28	10.33	70.88	1.00	15,686.78	220.94	3,979.19	56.04	4,281.84	60.31	23,947.81	337.29
Chum Salmon	numbers	147.24	2.07	0.00	0.00	0.00	0.00	147.24	2.07	62.85	0.89	20.95	0.30	231.04	3.25
	pounds	652.26	9.19	0.00	0.00	0.00	0.00	652.26	9.19	278.44	3.92	92.81	1.31	1,023.51	14.42
Coho Salmon	numbers	1,496.82	21.08	145.49	2.05	0.00	0.00	1,642.31	23.13	345.69	4.87	552.87	7.79	2,540.87	35.79
	pounds	7,543.97	106.25	733.28	10.33	0.00	0.00	8,277.25	116.58	1,742.27	24.54	2,786.46	39.25	12,805.98	180.37
Chinook Salmon	numbers	6.98	0.10	0.00	0.00	0.00	0.00	6.98	0.10	5.82	0.08	1.16	0.02	13.97	0.20
	pounds	59.92	0.84	0.00	0.00	0.00	0.00	59.92	0.84	49.93	0.70	9.99	0.14	119.84	1.69
Pink Salmon	numbers	206.02	2.90	0.00	0.00	0.00	0.00	206.02	2.90	259.56	3.66	242.10	3.41	707.67	9.97
	pounds	469.72	6.62	0.00	0.00	0.00	0.00	469.72	6.62	591.79	8.34	551.98	7.77	1,613.49	22.73
Sockeye Salmon	numbers	1,620.20	22.82	0.00	0.00	0.00	0.00	1,620.20	22.82	315.43	4.44	183.90	2.59	2,119.52	29.85
	pounds	6,156.75	86.71	0.00	0.00	0.00	0.00	6,156.75	86.71	1,198.62	16.88	698.83	9.84	8,054.19	113.44
Unknown Salmon	numbers	0.00	0.00	0.00	0.00	17.46	0.25	17.46	0.25	29.10	0.41	34.92	0.49	81.48	1.15
	pounds	0.00	0.00	0.00	0.00	70.88	1.00	70.88	1.00	118.14	1.66	141.77	2.00	330.79	4.66

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

Table XII-38. Percentage of Households Harvesting Salmon by Gear Type and Species, Ouzinkie, 1993/94

Resource	Subsistence Methods				Removed from Commercial Catch	Rod and Reel	Any Method
	Setnet	Beach Seine	Other	Any Subsistence Gear			
Salmon	47.54	1.64	1.64	49.18	34.43	42.62	75.41
Chum Salmon	19.67	0.00	0.00	19.67	13.11	3.28	32.79
Coho Salmon	40.98	1.64	0.00	40.98	26.23	32.79	70.49
Chinook Salmon	4.92	0.00	0.00	4.92	4.92	1.64	11.48
Pink Salmon	18.03	0.00	0.00	18.03	19.67	21.31	45.90
Sockeye Salmon	36.07	0.00	0.00	36.07	27.87	8.20	54.10
Unknown Salmon	0.00	0.00	1.64	1.64	1.64	3.28	3.28

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

Table XII-39. Estimated Harvest of Fish Other than Salmon by Gear Type, Ouzinkie, 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	3,370.75	47.48	3,170.05	44.65	1,993.52	28.08	0.00	0.00	8,534.33	120.20
Lingcod	pounds	0.00	0.00	104.73	1.48	0.00	0.00	0.00	0.00	104.73	1.48
Pacific Cod (Gray)	pounds	335.21	4.72	938.13	13.21	111.74	1.57	0.00	0.00	1,385.08	19.51
Arrow Tooth Flounder (Turbot)	pounds	52.38	0.74	0.00	0.00	0.00	0.00	0.00	0.00	52.38	0.74
Unknown Flounder	pounds	0.00	0.00	0.00	0.00	13.97	0.20	0.00	0.00	13.97	0.20
Halibut	pounds	2,568.80	36.18	1,785.94	25.15	1,088.86	15.34	0.00	0.00	5,443.60	76.67
Herring	pounds	351.51	4.95	0.00	0.00	0.00	0.00	0.00	0.00	351.51	4.95
Black Rockfish (black bass)	pounds	39.57	0.56	204.39	2.88	226.97	3.20	0.00	0.00	470.93	6.63
Red Rockfish	pounds	0.00	0.00	103.59	1.46	0.00	0.00	0.00	0.00	103.59	1.46
Unknown Rockfish	pounds	0.00	0.00	11.64	0.16	0.00	0.00	0.00	0.00	11.64	0.16
Irish Lord	pounds	0.00	0.00	1.16	0.02	0.00	0.00	0.00	0.00	1.16	0.02
Unknown Sculpin	pounds	8.73	0.12	0.00	0.00	0.00	0.00	0.00	0.00	8.73	0.12
Unknown Greenling	pounds	0.00	0.00	0.00	0.00	5.82	0.08	0.00	0.00	5.82	0.08
Wolf Eel (Wolffish)	pounds	0.00	0.00	1.16	0.02	0.00	0.00	0.00	0.00	1.16	0.02
Skates	pounds	0.00	0.00	0.00	0.00	5.82	0.08	0.00	0.00	5.82	0.08
Dolly Varden	pounds	0.00	0.00	0.00	0.00	290.05	4.09	0.00	0.00	290.05	4.09
Dolly Varden-Fingerling	pounds	14.55	0.20	0.00	0.00	37.32	0.53	0.00	0.00	51.87	0.73
Rainbow Trout	pounds	0.00	0.00	0.00	0.00	44.00	0.62	0.00	0.00	44.00	0.62
Steelhead	pounds	0.00	0.00	19.31	0.27	167.35	2.36	0.00	0.00	186.66	2.63
Unknown Trout	pounds	0.00	0.00	0.00	0.00	1.63	0.02	0.00	0.00	1.63	0.02

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

Table XII-40. Percentage of Fish Other Than Salmon Harvested by Gear Type, Ouzinkie, 1993/94

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	39.50	37.14	23.36	0.00
Lingcod	resource	0.00	100.00	0.00	0.00
Pacific Cod (Gray)	resource	24.20	67.73	8.07	0.00
Arrow Tooth Flounder (Turbot)	resource	100.00	0.00	0.00	0.00
Unknown Flounder	resource	0.00	0.00	100.00	0.00
Halibut	resource	47.19	32.81	20.00	0.00
Herring	resource	100.00	0.00	0.00	0.00
Black Rockfish (black bass)	resource	8.40	43.40	48.20	0.00
Red Rockfish	resource	0.00	100.00	0.00	0.00
Unknown Rockfish	resource	0.00	100.00	0.00	0.00
Irish Lord	resource	0.00	100.00	0.00	0.00
Unknown Sculpin	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	100.00	0.00	0.00
Skates	resource	0.00	0.00	100.00	0.00
Dolly Varden	resource	0.00	0.00	100.00	0.00
Dolly Varden-Fingerling	resource	28.05	0.00	71.95	0.00
Rainbow Trout	resource	0.00	0.00	100.00	0.00
Steelhead	resource	0.00	10.34	89.66	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 XII-41. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Ouzinkie, 1993/94

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	29.51	32.79	34.43	0.00	60.66
Lingcod	0.00	4.92	0.00	0.00	4.92
Pacific Cod (Gray)	11.48	19.67	6.56	0.00	32.79
Arrow Tooth Flounder (Turbot)	1.64	0.00	0.00	0.00	1.64
Unknown Flounder	0.00	0.00	1.64	0.00	1.64
Halibut	26.23	31.15	11.48	0.00	50.82
Herring	8.20	0.00	0.00	0.00	8.20
Black Rockfish (black bass)	3.28	4.92	6.56	0.00	13.11
Red Rockfish	0.00	6.56	0.00	0.00	6.56
Unknown Rockfish	0.00	1.64	0.00	0.00	1.64
Irish Lord	0.00	1.64	0.00	0.00	1.64
Unknown Sculpin	1.64	0.00	0.00	0.00	1.64
Unknown Greenling	0.00	0.00	1.64	0.00	1.64
Wolf Eel (Wolffish)	0.00	1.64	0.00	0.00	1.64
Skates	0.00	0.00	1.64	0.00	1.64
Dolly Varden	0.00	0.00	13.11	0.00	13.11
Dolly Varden-Fingerling	3.28	0.00	4.92	0.00	8.20
Rainbow Trout	0.00	0.00	4.92	0.00	4.92
Steelhead	0.00	1.64	3.28	0.00	4.92
Unknown Trout	0.00	0.00	1.64	0.00	1.64

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

Table XII-42. Uses of Wild Foods, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
ANY WILD FOODS EATEN YESTERDAY?			
No			
Count	17	25	33
Col %	53.1%	48.1%	57.9%
Yes			
Count	15	27	24
Col %	46.9%	51.9%	42.1%
WILD FOODS AS MAIN PART OF A MEAL			
No			
Count	20	27	37
Col %	62.5%	51.9%	64.9%
Yes			
Count	12	25	20
Col %	37.5%	48.1%	35.1%
HARVEST OF WILD FOODS BY RESPONDENT			
No			
Count	29	37	46
Col %	90.6%	71.2%	80.7%
Yes			
Count	3	15	11
Col %	9.4%	28.8%	19.3%
WF HARVESTED BY RELATIVE IN HH			
No			
Count	28	48	53
Col %	87.5%	92.3%	93.0%
Yes			
Count	4	4	4
Col %	12.5%	7.7%	7.0%
WF HARVESTED BY RELATIVE IN ANOTHER HH			
No			
Count	30	42	50
Col %	93.8%	80.8%	87.7%
Yes			
Count	2	10	7
Col %	6.3%	19.2%	12.3%
WF HARVESTED BY RELATIVE IN ANOTHER COMM.			

(continued)

Table XII-42. Uses of Wild Foods, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
No			
Count	32	52	55
Col %	100.0%	100.0%	96.5%
Yes			
Count			2
Col %			3.5%
WF HARVESTED BY FRIEND IN HH			
No			
Count	29	51	57
Col %	90.6%	98.1%	100.0%
Yes			
Count	3	1	
Col %	9.4%	1.9%	
WF HARVESTED BY FRIEND IN COMMUNITY			
No			
Count	28	44	49
Col %	87.5%	84.6%	86.0%
Yes			
Count	4	8	8
Col %	12.5%	15.4%	14.0%
WF HARVESTED BY FRIEND IN ANOTHER COMM.			
No			
Count	32	51	54
Col %	100.0%	98.1%	94.7%
Yes			
Count		1	3
Col %		1.9%	5.3%

Table XII-43. Safety of Using Subsistence Foods, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
DO YOU EAT BIDARKIES?			
No			
Count		8	14
Col %		15.4%	24.6%
Yes			
Count		44	43
Col %		84.6%	75.4%
IS EATING BIDARKIES IMPORTANT TO YOU?			
No			
Count	15		
Col %	46.9%		
Yes			
Count	17		
Col %	53.1%		
BIDARKIE HARVEST AREAS SAFE?			
No Response			
Count			1
Col %			2.3%
Do Not Know			
Count	1	1	
Col %	5.9%	2.3%	
Not Safe			
Count	1	6	5
Col %	5.9%	13.6%	11.6%
Safe			
Count	15	37	37
Col %	88.2%	84.1%	86.0%
WHY BIDARKIES NOT SAFE TO EAT			
No Response			
Count			2
Col %			33.3%
Oil pollution or fear of contamination			
Count	1	4	1
Col %	100.0%	66.7%	16.7%
Pollution from non-oil spill source			
Count		1	1
Col %		16.7%	16.7%
Unsure about safety			
Count		1	2
Col %		16.7%	33.3%
DO YOU EAT CLAMS?			
No			
Count		3	4
Col %		5.8%	7.0%
Yes			
Count		49	53
Col %		94.2%	93.0%
IS EATING CLAMS IMPORTANT?			
No			
Count	7		
Col %	21.9%		
Yes			
Count	25		
Col %	78.1%		
ARE CLAMS SAFE FOR CHILDREN TO EAT?			
No Response			
Count			1
Col %			1.9%
Do Not Know			
Count	1	1	3
Col %	4.0%	2.0%	5.7%
Not Safe			
Count	10	14	12
Col %	40.0%	28.6%	22.6%
Safe			
Count	14	34	37
Col %	56.0%	69.4%	69.8%
WHY CLAMS NOT SAFE TO EAT			
No Response			
Count			2
Col %			14.3%

(continued)

Table XII-43. Safety of Using Subsistence Foods, Ouzinkie

(continued)

Table XII-43. Safety of Using Subsistence Foods, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Do Not Know			
Count			1
Col %			7.1%
Fearful of PSP poisoning			
Count	4	3	1
Col %	44.4%	21.4%	7.1%
Oil pollution or fear of contamination			
Count	2	4	2
Col %	22.2%	28.6%	14.3%
Resource looks bad			
Count		2	
Col %		14.3%	
Do not like eating them			
Count	1		
Col %	11.1%		
Pollution from non-oil spill source			
Count			1
Col %			7.1%
Unsure about safety			
Count	2	1	6
Col %	22.2%	7.1%	42.9%
Safe to eat if you know which ones to take			
Count		2	
Col %		14.3%	
Both PSP and pollution			
Count		2	
Col %		14.3%	
Nonspecific concern			
Count			1
Col %			7.1%
DO YOU EAT SEAL OIL OR SEAL MEAT?			
No			
Count		17	23
Col %		32.7%	40.4%

(continued)

Table XII-43. Safety of Using Subsistence Foods, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Yes			
Count		35	34
Col %		67.3%	59.6%
IS EATING SEAL MEAT OR OIL IMPORTANT?			
No			
Count	17		
Col %	53.1%		
Yes			
Count	15		
Col %	46.9%		
ARE SEALS FROM HARVEST AREAS SAFE TO EAT?			
Do Not Know			
Count	2	2	4
Col %	13.3%	5.7%	11.8%
Not Safe			
Count	1	2	4
Col %	6.7%	5.7%	11.8%
Safe			
Count	12	31	26
Col %	80.0%	88.6%	76.5%
WHY SEAL NOT SAFE TO EAT			
Do Not Know			
Count			1
Col %			20.0%
Oil pollution or fear of contamination			
Count		2	2
Col %		100.0%	40.0%
Resource has been destroyed or depleted			
Count	1		
Col %	100.0%		
Unsure about safety			
Count			2
Col %			40.0%

Table XII-44. Resource Population Statuses, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
COMPARED TO 1988: DEER			
Do Not Know			
Count	10	6	21
Col %	35.7%	12.5%	42.9%
Less			
Count	12	35	15
Col %	42.9%	72.9%	30.6%
Same			
Count	5	5	11
Col %	17.9%	10.4%	22.4%
More			
Count	1	2	2
Col %	3.6%	4.2%	4.1%
COMPARED TO 1988: BEAR			
No Response			
Count	1		
Col %	3.7%		
Do Not Know			
Count	17	24	30
Col %	63.0%	51.1%	61.2%
Less			
Count	1	7	5
Col %	3.7%	14.9%	10.2%
Same			
Count	6	11	12
Col %	22.2%	23.4%	24.5%
More			
Count	2	5	2
Col %	7.4%	10.6%	4.1%
COMPARED TO 1988: HARBOR SEAL			
No Response			
Count	2		
Col %	7.1%		
Do Not Know			
Count	9	7	13
Col %	32.1%	14.6%	26.5%

(continued)

Table XII-44. Resource Population Statuses, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Less			
Count	15	29	28
Col %	53.6%	60.4%	57.1%
Same			
Count	2	9	6
Col %	7.1%	18.8%	12.2%
More			
Count		3	2
Col %		6.3%	4.1%
COMPARED TO 1988: SEA LIONS			
Do Not Know			
Count		7	15
Col %		14.9%	30.6%
Less			
Count		19	17
Col %		40.4%	34.7%
Same			
Count		13	8
Col %		27.7%	16.3%
More			
Count		8	9
Col %		17.0%	18.4%
COMPARED TO 1988: SEA DUCKS			
No Response			
Count	1		
Col %	3.6%		
Do Not Know			
Count	10	6	14
Col %	35.7%	12.5%	28.6%
Less			
Count	10	27	22
Col %	35.7%	56.3%	44.9%
Same			
Count	7	14	12
Col %	25.0%	29.2%	24.5%

(continued)

Table XII-44. Resource Population Statuses, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
More			
Count		1	1
Col %		2.1%	2.0%
COMPARED TO 1988: COMMON MURRE			
Do Not Know			
Count		11	20
Col %		22.9%	40.8%
Less			
Count		27	21
Col %		56.3%	42.9%
Same			
Count		10	8
Col %		20.8%	16.3%
COMPARED TO 1988: SALMON			
No Response			
Count	1		
Col %	3.6%		
Do Not Know			
Count	5	10	19
Col %	17.9%	20.8%	38.8%
Less			
Count	16	26	6
Col %	57.1%	54.2%	12.2%
Same			
Count	5	12	19
Col %	17.9%	25.0%	38.8%
More			
Count	1		5
Col %	3.6%		10.2%
COMPARED TO 1988: HALIBUT			
No Response			
Count	3		
Col %	10.7%		
Do Not Know			
Count	8	9	17
Col %	28.6%	18.8%	34.7%

(continued)

Table XII-44. Resource Population Statuses, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Less			
Count	7	16	11
Col %	25.0%	33.3%	22.4%
Same			
Count	9	23	21
Col %	32.1%	47.9%	42.9%
More			
Count	1		
Col %	3.6%		
COMPARED TO 1988: ROCKFISH			
No Response			
Count	3		
Col %	10.7%		
Do Not Know			
Count	16	16	21
Col %	57.1%	33.3%	42.9%
Less			
Count	3	14	9
Col %	10.7%	29.2%	18.4%
Same			
Count	5	17	19
Col %	17.9%	35.4%	38.8%
More			
Count	1	1	
Col %	3.6%	2.1%	
COMPARED TO 1988: DOLLY VARDEN			
No Response			
Count	1		
Col %	3.6%		
Do Not Know			
Count	15	10	20
Col %	53.6%	20.8%	40.8%
Less			
Count	5	11	5
Col %	17.9%	22.9%	10.2%

(continued)

Table XII-44. Resource Population Statuses, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Same			
Count	7	25	23
Col %	25.0%	52.1%	46.9%
More			
Count		2	1
Col %		4.2%	2.0%
COMPARED TO 1988: CLAMS			
No Response			
Count	1		
Col %	3.6%		
Do Not Know			
Count	8	2	9
Col %	28.6%	4.2%	18.4%
Less			
Count	7	29	29
Col %	25.0%	60.4%	59.2%
Same			
Count	10	17	10
Col %	35.7%	35.4%	20.4%
More			
Count	2		1
Col %	7.1%		2.0%
COMPARED TO 1988: BIDARKIES			
No Response			
Count	1	1	
Col %	3.6%	2.1%	
Do Not Know			
Count	8	9	13
Col %	28.6%	18.8%	26.5%
Less			
Count	7	11	10
Col %	25.0%	22.9%	20.4%
Same			
Count	11	26	26
Col %	39.3%	54.2%	53.1%

(continued)

Table XII-44. Resource Population Statuses, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
More			
Count	1	1	
Col %	3.6%	2.1%	
COMPARED TO 1988: SEA URCHINS			
No Response			
Count	1		
Col %	3.6%		
Do Not Know			
Count	14	17	17
Col %	50.0%	35.4%	34.7%
Less			
Count	11	19	24
Col %	39.3%	39.6%	49.0%
Same			
Count	2	10	8
Col %	7.1%	20.8%	16.3%
More			
Count		2	
Col %		4.2%	
COMPARED TO 1988: OCTOPUS			
No Response			
Count	1		
Col %	3.6%		
Do Not Know			
Count	14	16	25
Col %	50.0%	33.3%	51.0%
Less			
Count	6	10	7
Col %	21.4%	20.8%	14.3%
Same			
Count	7	20	17
Col %	25.0%	41.7%	34.7%
More			
Count		2	
Col %		4.2%	

Table XII-45. Children's Participation in Subsistence, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
DOES YOUR HOUSEHOLD PROCESS WILD FOODS?			
No Response			
Count			1
Col %			1.8%
No			
Count		3	1
Col %		5.8%	1.8%
Yes			
Count		49	55
Col %		94.2%	96.5%
DO CHILDREN HELP YOUR HH PROCESS WILD FOODS?			
No			
Count	23	38	41
Col %	71.9%	73.1%	71.9%
Yes			
Count	9	14	16
Col %	28.1%	26.9%	28.1%
DID EVOS AFFECT PARTICIPATION WITH CHILDREN?			
No			
Count	21	30	32
Col %	72.4%	63.8%	64.0%
Yes			
Count	8	17	18
Col %	27.6%	36.2%	36.0%
WHY EVOS AFFECTED PARTICIPATION WITH CHILDREN			
Do Not Know			
Count	1		
Col %	12.5%		
Resources were not available			
Count			1
Col %			5.6%
Were too busy with other affairs			
Count	5	9	5
Col %	62.5%	52.9%	27.8%

(continued)

Table XII-45. Children's Participation in Subsistence, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Did not trust foods			
Count		2	
Col %		11.8%	
Afraid to take kids to the beach			
Count		1	5
Col %		5.9%	27.8%
Less harvesting activity			
Count	1	4	5
Col %	12.5%	23.5%	27.8%
Areas were no longer available for harvesting			
Count		1	
Col %		5.9%	
Oil pollution threatened everything			
Count	1		1
Col %	12.5%		5.6%
Older children had to watch younger children			
Count			1
Col %			5.6%

Table XII-46. Sharing, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
DID HOUSEHOLD SHARE?			
No Response			
Count	1		
Col %	3.2%		
No			
Count		1	2
Col %		1.9%	3.5%
Yes			
Count	30	51	55
Col %	96.8%	98.1%	96.5%
PREV. YEAR: SHARING OF WILD RES.			
No Response			
Count	1		
Col %	3.6%		
Do Not Know			
Count		1	1
Col %		2.0%	1.9%
Less			
Count	4	6	6
Col %	14.3%	12.2%	11.3%
Same			
Count	17	34	35
Col %	60.7%	69.4%	66.0%
More			
Count	6	8	11
Col %	21.4%	16.3%	20.8%
PREV. YEAR: SHARING OF HUNT/FISH GEAR			
Do Not Know			
Count		1	1
Col %		2.4%	2.2%
Less			
Count		6	1
Col %		14.3%	2.2%
Same			
Count		26	38
Col %		61.9%	84.4%

(continued)

Table XII-46. Sharing, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
More			
Count		9	5
Col %		21.4%	11.1%
PREV. YEAR: SHARING OF MONEY			
No Response			
Count			2
Col %			4.1%
Do Not Know			
Count		2	2
Col %		4.3%	4.1%
Less			
Count		14	5
Col %		30.4%	10.2%
Same			
Count		22	34
Col %		47.8%	69.4%
More			
Count		8	6
Col %		17.4%	12.2%
PREV. YEAR: SHARING OF LABOR			
Do Not Know			
Count		2	1
Col %		4.1%	1.9%
Less			
Count	1	4	4
Col %	100.0%	8.2%	7.7%
Same			
Count		27	40
Col %		55.1%	76.9%
More			
Count		16	7
Col %		32.7%	13.5%
PRE-OS: SHARING OF WILD RESOURCES			
No Response			
Count	1		
Col %	4.2%		

(continued)

Table XII-46. Sharing, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Do Not Know			
Count	1	3	9
Col %	4.2%	7.1%	19.1%
Less			
Count	9	18	11
Col %	37.5%	42.9%	23.4%
Same			
Count	12	14	25
Col %	50.0%	33.3%	53.2%
More			
Count	1	7	2
Col %	4.2%	16.7%	4.3%
PRE-OS: SHARING OF HUNT/FISH GEAR			
Do Not Know			
Count		2	5
Col %		5.4%	12.5%
Less			
Count		11	5
Col %		29.7%	12.5%
Same			
Count		17	27
Col %		45.9%	67.5%
More			
Count		7	3
Col %		18.9%	7.5%
PRE-OS: SHARING OF MONEY			
No Response			
Count			2
Col %			4.5%
Do Not Know			
Count		2	8
Col %		5.0%	18.2%
Less			
Count		13	3
Col %		32.5%	6.8%

(continued)

Table XII-46. Sharing, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Same			
Count		16	28
Col %		40.0%	63.6%
More			
Count		9	3
Col %		22.5%	6.8%
PRE-OS: SHARING OF LABOR			
Do Not Know			
Count		4	7
Col %		9.5%	15.2%
Less			
Count		8	8
Col %		19.0%	17.4%
Same			
Count		19	27
Col %		45.2%	58.7%
More			
Count		11	4
Col %		26.2%	8.7%

Table XII-47. Political Activities, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
LAST 3 YRS.: ELDERS INFLUENCE			
Do Not Know			
Count	3		
Col %	9.4%		
Decreased			
Count	17		
Col %	53.1%		
Same			
Count	10		
Col %	31.3%		
Increased			
Count	2		
Col %	6.3%		
LAST 4 YRS.: ELDERS INFLUENCE			
Do Not Know			
Count		2	
Col %		4.3%	
Decreased			
Count		21	
Col %		45.7%	
Same			
Count		17	
Col %		37.0%	
Increased			
Count		6	
Col %		13.0%	
LAST 5 YRS.: ELDERS INFLUENCE			
Do Not Know			
Count			3
Col %			6.5%
Decreased			
Count			16
Col %			34.8%
Same			
Count			22
Col %			47.8%

(continued)

Table XII-47. Political Activities, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Increased			
Count			5
Col %			10.9%
LAST 5 YRS.: ELDERS INFLUENCE: WHY			
Do Not Know			
Count			3
Col %			13.6%
Fewer elders, traditional people passed away			
Count			7
Col %			31.8%
Elders not as active			
Count			3
Col %			13.6%
Elders dissatisfied, frustrated, bitter			
Count			1
Col %			4.5%
Trying to maintain culture			
Count			1
Col %			4.5%
Elders more aware of the power they hold			
Count			2
Col %			9.1%
Elders knowledge is not appreciated or recognized			
Count			2
Col %			9.1%
Elders are not listened to			
Count			2
Col %			9.1%
Elders knowledge increases with time			
Count			1
Col %			4.5%
PRE-EVOS: ATTEND PUBLIC MEETINGS			
No Response			
Count	1		

(continued)

Table XII-47. Political Activities, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Col %	3.3%		
Never			
Count	7		
Col %	23.3%		
Sometimes			
Count	11		
Col %	36.7%		
Almost Always			
Count	11		
Col %	36.7%		
PRE-EVOS: ATTEND PUBLIC MEETINGS			
Do Not Know			
Count		1	2
Col %		2.4%	4.8%
Less			
Count		10	8
Col %		24.4%	19.0%
Same			
Count		24	23
Col %		58.5%	54.8%
More			
Count		6	9
Col %		14.6%	21.4%
LAST YEAR: ATTEND PUBLIC MEETINGS			
Never			
Count	7		
Col %	21.9%		
Sometimes			
Count	14		
Col %	43.8%		
Almost Always			
Count	11		
Col %	34.4%		
LAST YEAR: ATTEND PUBLIC MEETINGS			
Do Not Know			

(continued)

Table XII-47. Political Activities, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Count			1
Col %			1.8%
Never			
Count		7	14
Col %		13.5%	24.6%
1.00			
Count		6	4
Col %		11.5%	7.0%
2.00			
Count		9	9
Col %		17.3%	15.8%
3.00			
Count		7	7
Col %		13.5%	12.3%
4.00			
Count		10	3
Col %		19.2%	5.3%
5.00			
Count		1	3
Col %		1.9%	5.3%
6.00			
Count		2	2
Col %		3.8%	3.5%
7.00			
Count			1
Col %			1.8%
8.00			
Count		2	
Col %		3.8%	
10.00			
Count		1	3
Col %		1.9%	5.3%
12.00			
Count		3	5
Col %		5.8%	8.8%

(continued)

Table XII-47. Political Activities, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
14.00			
Count		1	
Col %		1.9%	
15.00			
Count		1	1
Col %		1.9%	1.8%
20.00			
Count			1
Col %			1.8%
24.00			
Count		1	
Col %		1.9%	
30.00			
Count		1	2
Col %		1.9%	3.5%
36.00			
Count			1
Col %			1.8%
VOTE IN LAST CITY COUNCIL ELECTION?			
No			
Count	14		
Col %	43.8%		
Yes			
Count	18		
Col %	56.3%		
VOTE IN LAST STATE-WIDE ELECTION?			
No			
Count	10	12	22
Col %	31.3%	23.1%	38.6%
Yes			
Count	22	40	35
Col %	68.8%	76.9%	61.4%
BELONG TO NATIVE CORPORATION?			
No			
Count	8	12	12
Col %	25.0%	23.1%	21.1%

(continued)

Table XII-47. Political Activities, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Yes			
Count	24	40	45
Col %	75.0%	76.9%	78.9%
REGIONAL NATIVE CORPORATION			
No Response			
Count			1
Col %			2.2%
None			
Count	1		
Col %	4.2%		
Calista Corp.			
Count	1		
Col %	4.2%		
Chugach Alaska Corp.			
Count		1	1
Col %		2.5%	2.2%
Cook Inlet Region, Inc.			
Count	1		1
Col %	4.2%		2.2%
Doyon, Ltd.			
Count	1	1	2
Col %	4.2%	2.5%	4.4%
Koniag, Inc.			
Count	20	38	40
Col %	83.3%	95.0%	88.9%
VOTE IN LAST REG. CORP. ELECTION?			
Do Not Know			
Count		2	
Col %		5.0%	
No			
Count	6	5	7
Col %	26.1%	12.5%	15.6%
Yes			
Count	17	33	38
Col %	73.9%	82.5%	84.4%

(continued)

Table XII-47. Political Activities, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
VILLAGE NATIVE CORPORATION			
No Response			
Count			2
Col %			4.3%
None, At Large			
Count	2		1
Col %	8.7%		2.2%
Afognak Native Corporation			
Count			1
Col %			2.2%
Ayakulik, Incorporated (Akhiok)			
Count			1
Col %			2.2%
Deloycheet, Inc. (Holy Cross)			
Count		1	
Col %		2.6%	
Litnik, Incorporated (Kodiak)			
Count			1
Col %			2.2%
Nu-Nachk Pit, Inc. (Larsen Bay)			
Count		1	1
Col %		2.6%	2.2%
Ouzinkie Native Corporation			
Count	20	36	35
Col %	87.0%	92.3%	76.1%
Zho-Tse, Incorporated (Shageluk)			
Count	1		1
Col %	4.3%		2.2%
Tatitlek Corporation			
Count		1	1
Col %		2.6%	2.2%
Natives of Kodiak			
Count			1
Col %			2.2%
Tozitna Limited (Tanana)			

(continued)

Table XII-47. Political Activities, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Count			1
Col %			2.2%
VOTE IN LAST NATIVE VILLAGE CORP. ELECTION?			
No			
Count	3	4	2
Col %	15.0%	10.3%	4.5%
Yes			
Count	17	35	42
Col %	85.0%	89.7%	95.5%
HAS VIEW OF LEADER CHANGED SINCE EVOS?			
Do Not Know			
Count	4	2	5
Col %	13.3%	4.3%	10.9%
No			
Count	19	34	34
Col %	63.3%	72.3%	73.9%
Yes			
Count	7	11	7
Col %	23.3%	23.4%	15.2%
WHY POST EVOS VIEW OF LEADERS			
Do Not Know			
Count		1	
Col %		9.1%	
Trust			
Count	1		2
Col %	14.3%		33.3%
Awareness/involvement			
Count	1	4	2
Col %	14.3%	36.4%	33.3%
Education			
Count		1	1
Col %		9.1%	16.7%
Level headed/reasonable			
Count	1		
Col %	14.3%		

(continued)

Table XII-47. Political Activities, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Represents concerns Count Col %			1 16.7%
Decisive Count Col %	1 14.3%	2 18.2%	1 16.7%
Aware of Animosity Count Col %	1 14.3%	2 18.2%	
Sobriety/maturity Count Col %		2 18.2%	
Issue specific reasons Count Col %	2 28.6%		
Ineffectual Count Col %			1 16.7%

Table XII-48. Significance of Place, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
MAIN REASON MOVED TO COMMUNITY			
No Response			
Count		1	
Col %		1.9%	
Do Not Know			
Count			1
Col %			1.8%
Born or reared here			
Count	17	35	34
Col %	53.1%	67.3%	59.6%
Relatives (family)			
Count	3	1	3
Col %	9.4%	1.9%	5.3%
Married a person born or reared here			
Count	3	4	6
Col %	9.4%	7.7%	10.5%
Employment reasons			
Count	3	6	7
Col %	9.4%	11.5%	12.3%
Economic reasons			
Count	2		1
Col %	6.3%		1.8%
Housing/property			
Count	1	1	
Col %	3.1%	1.9%	
Environmental qualities			
Count	1		1
Col %	3.1%		1.8%
Recreational opportunities			
Count		1	
Col %		1.9%	
Pace of Life			
Count	2		2
Col %	6.3%		3.5%
Quality of Life			

(continued)

Table XII-48. Significance of Place, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Count		1	1
Col %		1.9%	1.8%
Religious Reasons			
Count		1	
Col %		1.9%	
Location			
Count		1	
Col %		1.9%	
Transferred by military, employer, or social service agency			
Count			1
Col %			1.8%
LIVE HERE: WHERE PERSON IS FROM			
No			
Count	14	17	25
Col %	43.8%	32.7%	43.9%
Yes			
Count	18	35	32
Col %	56.3%	67.3%	56.1%
LIVE HERE: RELATIVES LIVE HERE			
No			
Count	10	16	18
Col %	31.3%	30.8%	31.6%
Yes			
Count	22	36	39
Col %	68.8%	69.2%	68.4%
LIVE HERE: MARRIED PERSON FROM HERE			
No			
Count	23	34	39
Col %	71.9%	65.4%	68.4%
Yes			
Count	9	18	18
Col %	28.1%	34.6%	31.6%
LIVE HERE: ALWAYS LIVED HERE			
No			
Count	16	21	29

(continued)

Table XII-48. Significance of Place, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Col %	50.0%	40.4%	50.9%
Yes			
Count	16	31	28
Col %	50.0%	59.6%	49.1%
LIVE HERE: FRIENDS LIVE HERE			
No			
Count	6	14	13
Col %	18.8%	26.9%	22.8%
Yes			
Count	26	38	44
Col %	81.3%	73.1%	77.2%
LIVE HERE: HUNTING & FISHING HERE			
No			
Count	6	6	6
Col %	18.8%	11.5%	10.5%
Yes			
Count	26	46	51
Col %	81.3%	88.5%	89.5%
LIVE HERE: JOB OPPORTUNITIES HERE			
No			
Count	19	33	32
Col %	59.4%	63.5%	56.1%
Yes			
Count	13	19	25
Col %	40.6%	36.5%	43.9%
LIVE HERE: EDUCATIONAL OPPORTUNITIES			
No			
Count	19	31	31
Col %	59.4%	59.6%	54.4%
Yes			
Count	13	21	26
Col %	40.6%	40.4%	45.6%
LIVE HERE: COST OF LIVING			
No Response			
Count	1		
Col %	3.1%		

(continued)

Table XII-48. Significance of Place, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
No			
Count	16	25	33
Col %	50.0%	48.1%	57.9%
Yes			
Count	15	27	24
Col %	46.9%	51.9%	42.1%
LIVE HERE: HOUSING AVAILABLE			
No			
Count	10	21	22
Col %	31.3%	40.4%	38.6%
Yes			
Count	22	31	35
Col %	68.8%	59.6%	61.4%
LIVE HERE: STORES			
No			
Count	21	40	38
Col %	65.6%	76.9%	66.7%
Yes			
Count	11	12	19
Col %	34.4%	23.1%	33.3%
LIVE HERE: MEDICAL SERVICES			
No			
Count	18	30	37
Col %	56.3%	57.7%	64.9%
Yes			
Count	14	22	20
Col %	43.8%	42.3%	35.1%
LIVE HERE: OTHER SERVICES			
No			
Count	20	32	36
Col %	62.5%	61.5%	63.2%
Yes			
Count	12	20	21
Col %	37.5%	38.5%	36.8%
LIVE HERE: BEAUTY OF AREA			
No			

(continued)

Table XII-48. Significance of Place, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Count	2	1	2
Col %	6.3%	1.9%	3.5%
Yes			
Count	30	51	55
Col %	93.8%	98.1%	96.5%
LIVE HERE: SIZE OF COMMUNITY			
No			
Count	5	6	8
Col %	15.6%	11.5%	14.0%
Yes			
Count	27	46	49
Col %	84.4%	88.5%	86.0%
LIVE HERE: LESS CRIME			
No			
Count	8	5	10
Col %	25.0%	9.6%	17.5%
Yes			
Count	24	47	47
Col %	75.0%	90.4%	82.5%
LIVE HERE: LESS DRINKING/DRUGS			
No			
Count	26	44	40
Col %	81.3%	84.6%	70.2%
Yes			
Count	6	8	17
Col %	18.8%	15.4%	29.8%
LIVE HERE: NECESSARY PERSONAL FREEDOMS			
No			
Count	6	3	6
Col %	18.8%	5.8%	10.5%
Yes			
Count	26	49	51
Col %	81.3%	94.2%	89.5%
LIVE HERE: RECREATIONAL OPPORTUNITIES			
No			
Count	9	10	11

(continued)

Table XII-48. Significance of Place, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Col %	28.1%	19.2%	19.3%
Yes			
Count	23	42	46
Col %	71.9%	80.8%	80.7%
OTHER REASONS FOR LIVING IN COMMUNITY			
Pace of Life			
Count	1	5	8
Col %	12.5%	19.2%	34.8%
Quality of Life			
Count	7	20	13
Col %	87.5%	76.9%	56.5%
Cultural Reasons			
Count		1	1
Col %		3.8%	4.3%
Religious Reasons			
Count		1	
Col %		3.8%	
Location			
Count		1	2
Col %		3.8%	8.7%
Climate			
Count			2
Col %			8.7%
Opportunity to be involved and make a difference			
Count		1	
Col %		3.8%	
This is where they established their home			
Count		3	3
Col %		11.5%	13.0%
MAIN REASON REMAINING IN COMMUNITY			
No Response			
Count			1
Col %			1.8%
Born or reared here			

(continued)

Table XII-48. Significance of Place, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Count	2	6	5
Col %	6.3%	11.5%	8.8%
Relatives (family)			
Count	6	1	6
Col %	18.8%	1.9%	10.5%
Married a person born or reared here			
Count	1	2	2
Col %	3.1%	3.8%	3.5%
Family has always lived here			
Count	1		
Col %	3.1%		
Friends			
Count	1		1
Col %	3.1%		1.8%
Subsistence opportunities			
Count	1	4	2
Col %	3.1%	7.7%	3.5%
Employment reasons			
Count	3	3	2
Col %	9.4%	5.8%	3.5%
Educational opportunities			
Count	1	1	
Col %	3.1%	1.9%	
Housing/property			
Count	2	3	3
Col %	6.3%	5.8%	5.3%
Environmental qualities			
Count		3	5
Col %		5.8%	8.8%
Size of the community			
Count		2	3
Col %		3.8%	5.3%
Crime levels			
Count	1	1	1
Col %	3.1%	1.9%	1.8%

(continued)

Table XII-48. Significance of Place, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Less drinking or drugs			
Count			1
Col %			1.8%
Personal freedoms (politics)			
Count	2	8	5
Col %	6.3%	15.4%	8.8%
Recreational opportunities			
Count			1
Col %			1.8%
Pace of Life			
Count	1	2	6
Col %	3.1%	3.8%	10.5%
Quality of Life			
Count	8	13	10
Col %	25.0%	25.0%	17.5%
Cultural Reasons			
Count	1		1
Col %	3.1%		1.8%
Location			
Count	1		
Col %	3.1%		
Opportunity to be involved and make a difference			
Count		1	1
Col %		1.9%	1.8%
This is where they established their home			
Count		2	1
Col %		3.8%	1.8%
POST-EVOS: CHANGE IN LIKING COMMUNITY			
No Response			
Count	1		2
Col %	3.6%		4.3%
Less			
Count	1	4	1
Col %	3.6%	8.7%	2.1%

(continued)

Table XII-48. Significance of Place, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Same			
Count	21	39	42
Col %	75.0%	84.8%	89.4%
More			
Count	5	3	2
Col %	17.9%	6.5%	4.3%
POST-EVOS: WHY CHANGE IN LIKING COMMUNITY			
No Response			
Count		1	2
Col %		14.3%	40.0%
Increased dissension/conflict/violence			
Count		1	
Col %		14.3%	
More stressful			
Count	1		
Col %	20.0%		
Financial situation worse			
Count		1	1
Col %		14.3%	20.0%
Too many people			
Count		1	
Col %		14.3%	
Other reasons			
Count	1		
Col %	20.0%		
Increased appreciation of surroundings			
Count	3	2	2
Col %	60.0%	28.6%	40.0%
Improved community cohesiveness			
Count		1	
Col %		14.3%	
RATHER LIVE IN ANOTHER COMMUNITY			
Do Not Know			
Count		3	2
Col %		5.8%	3.5%

(continued)

Table XII-48. Significance of Place, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
No			
Count	25	45	40
Col %	78.1%	86.5%	70.2%
Yes			
Count	7	4	15
Col %	21.9%	7.7%	26.3%
EXPECT TO LIVE IN REGION WHEN OLD			
Do Not Know			
Count	1	4	5
Col %	3.1%	7.7%	8.8%
No			
Count	5	5	6
Col %	15.6%	9.6%	10.5%
Yes			
Count	26	43	46
Col %	81.3%	82.7%	80.7%
CONFIDENT ABOUT HUNT/FISH/GATHERING			
No Response			
Count			2
Col %			3.5%
Do Not Know			
Count	2	4	5
Col %	6.3%	7.7%	8.8%
No			
Count	6	13	21
Col %	18.8%	25.0%	36.8%
Yes			
Count	24	35	29
Col %	75.0%	67.3%	50.9%
WHY UNCONFIDENT ABOUT HUNTING/FISHING/GATHERING			
Increased restrictions			
Count	6	8	10
Col %	85.7%	53.3%	47.6%
Uncertainty about the future			
Count	1	2	3

(continued)

Table XII-48. Significance of Place, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Col %	14.3%	13.3%	14.3%
Increased development			
Count		1	3
Col %		6.7%	14.3%
Timber and logging			
Count		2	1
Col %		13.3%	4.8%
Uncertainty about food safety			
Count		1	
Col %		6.7%	
Native ownership of lands			
Count	1	2	1
Col %	14.3%	13.3%	4.8%
Population pressure			
Count		3	5
Col %		20.0%	23.8%
Vulnerable to environmental damage			
Count	2	2	
Col %	28.6%	13.3%	
Miscellaneous reasons			
Count	1		
Col %	14.3%		
Reduced resource availability			
Count		2	3
Col %		13.3%	14.3%
CONTINUE TO LIVE HERE IF NO WILD FOOD			
Do Not Know			
Count	3	5	8
Col %	9.4%	9.6%	14.0%
No			
Count	9	16	14
Col %	28.1%	30.8%	24.6%
Yes			
Count	20	31	35
Col %	62.5%	59.6%	61.4%

Table XII-49. Effectiveness of Oil Spill Responses, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
EFFECTIVENESS EVOS: US COAST GUARD			
No Response			
Count		1	1
Col %		2.0%	2.0%
Do Not Know			
Count	6	7	12
Col %	19.4%	14.3%	23.5%
Not Effective			
Count	3	10	15
Col %	9.7%	20.4%	29.4%
Somewhat			
Count	13	13	15
Col %	41.9%	26.5%	29.4%
Effective			
Count	9	18	8
Col %	29.0%	36.7%	15.7%
EFFECTIVENESS EVOS: ADEC			
No Response			
Count	1		1
Col %	3.2%		2.0%
Do Not Know			
Count	10	14	26
Col %	32.3%	28.6%	51.0%
Not Effective			
Count	9	9	10
Col %	29.0%	18.4%	19.6%
Somewhat			
Count	7	15	7
Col %	22.6%	30.6%	13.7%
Effective			
Count	4	11	7
Col %	12.9%	22.4%	13.7%
EFFECTIVENESS EVOS: LOCAL NATIVE PROFIT			
No Response			
Count			1
Col %			2.2%

(continued)

Table XII-49. Effectiveness of Oil Spill Responses, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Do Not Know			
Count	20	18	20
Col %	76.9%	40.0%	43.5%
Not Effective			
Count	5	12	12
Col %	19.2%	26.7%	26.1%
Somewhat			
Count	1	10	9
Col %	3.8%	22.2%	19.6%
Effective			
Count		5	4
Col %		11.1%	8.7%
EFFECTIVENESS EVOS: NATIVE NON-PROFITS			
No Response			
Count	1		1
Col %	3.2%		2.0%
Do Not Know			
Count	13	18	22
Col %	41.9%	37.5%	44.0%
Not Effective			
Count	4	6	8
Col %	12.9%	12.5%	16.0%
Somewhat			
Count	2	8	10
Col %	6.5%	16.7%	20.0%
Effective			
Count	11	16	9
Col %	35.5%	33.3%	18.0%
EFFECTIVENESS EVOS: BOROUGH GOVERNMENT			
No Response			
Count	1		1
Col %	3.2%		2.0%
Do Not Know			
Count	12	13	20
Col %	38.7%	26.5%	39.2%

(continued)

Table XII-49. Effectiveness of Oil Spill Responses, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Not Effective			
Count	1	7	10
Col %	3.2%	14.3%	19.6%
Somewhat			
Count	4	17	16
Col %	12.9%	34.7%	31.4%
Effective			
Count	13	12	4
Col %	41.9%	24.5%	7.8%
EFFECTIVENESS EVOS: VILLAGE CORPORATION			
No Response			
Count	1		1
Col %	3.2%		2.0%
Do Not Know			
Count	4	1	5
Col %	12.9%	2.0%	9.8%
Not Effective			
Count	1	1	3
Col %	3.2%	2.0%	5.9%
Somewhat			
Count	2	5	8
Col %	6.5%	10.2%	15.7%
Effective			
Count	23	42	34
Col %	74.2%	85.7%	66.7%
EFFECTIVENESS EVOS: CITY COUNCIL			
No Response			
Count	1		1
Col %	3.3%		2.0%
Do Not Know			
Count	5	4	8
Col %	16.7%	8.2%	15.7%
Not Effective			
Count		4	6
Col %		8.2%	11.8%

(continued)

Table XII-49. Effectiveness of Oil Spill Responses, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Somewhat			
Count	3	16	17
Col %	10.0%	32.7%	33.3%
Effective			
Count	21	25	19
Col %	70.0%	51.0%	37.3%
EFFECTIVENESS EVOS: IRA COUNCIL			
No Response			
Count	1		3
Col %	4.2%		10.3%
Do Not Know			
Count	5	4	9
Col %	20.8%	16.7%	31.0%
Not Effective			
Count	1	2	1
Col %	4.2%	8.3%	3.4%
Somewhat			
Count		4	4
Col %		16.7%	13.8%
Effective			
Count	17	14	12
Col %	70.8%	58.3%	41.4%
EFFECTIVENESS EVOS: CHAMBER OF COMMERCE			
No Response			
Count	1		2
Col %	100.0%		40.0%
Do Not Know			
Count			1
Col %			20.0%
Not Effective			
Count		1	
Col %		33.3%	
Somewhat			
Count		2	2
Col %		66.7%	40.0%

(continued)

Table XII-49. Effectiveness of Oil Spill Responses, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
EFFECTIVENESS EVOS: COMMERCIAL BUSINESSES			
No Response			
Count	1		1
Col %	5.9%		2.4%
Do Not Know			
Count	3	7	12
Col %	17.6%	16.7%	28.6%
Not Effective			
Count	1	4	2
Col %	5.9%	9.5%	4.8%
Somewhat			
Count	3	8	10
Col %	17.6%	19.0%	23.8%
Effective			
Count	9	23	17
Col %	52.9%	54.8%	40.5%
EFFECTIVENESS EVOS: COMMERCIAL FISHING GROUPS			
No Response			
Count	1		1
Col %	5.3%		2.0%
Do Not Know			
Count	3	3	10
Col %	15.8%	6.1%	20.4%
Not Effective			
Count	2	3	1
Col %	10.5%	6.1%	2.0%
Somewhat			
Count	1	9	11
Col %	5.3%	18.4%	22.4%
Effective			
Count	12	34	26
Col %	63.2%	69.4%	53.1%
EFFECTIVENESS EVOS: SCHOOLS			
No Response			

(continued)

Table XII-49. Effectiveness of Oil Spill Responses, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Count	1		
Col %	3.3%		
Do Not Know			
Count	15		
Col %	50.0%		
Not Effective			
Count	5		
Col %	16.7%		
Somewhat			
Count	2		
Col %	6.7%		
Effective			
Count	7		
Col %	23.3%		
EFFECTIVENESS EVOS: CHURCHES			
No Response			
Count	1		
Col %	3.2%		
Do Not Know			
Count	14		
Col %	45.2%		
Not Effective			
Count	6		
Col %	19.4%		
Somewhat			
Count	4		
Col %	12.9%		
Effective			
Count	6		
Col %	19.4%		
EFFECTIVENESS EVOS: HEALTH SERVICES			
No Response			
Count			1
Col %			2.0%
Do Not Know			

(continued)

Table XII-49. Effectiveness of Oil Spill Responses, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Count		4	16
Col %		8.2%	32.0%
Not Effective			
Count		4	2
Col %		8.2%	4.0%
Somewhat			
Count		9	12
Col %		18.4%	24.0%
Effective			
Count		32	19
Col %		65.3%	38.0%
EFFECTIVENESS EVOS: HEALTH AIDES			
No Response			
Count	1		
Col %	3.2%		
Do Not Know			
Count	13		
Col %	41.9%		
Not Effective			
Count	2		
Col %	6.5%		
Somewhat			
Count	2		
Col %	6.5%		
Effective			
Count	13		
Col %	41.9%		
EFFECTIVENESS EVOS: SOCIAL WORKERS			
No Response			
Count	1		1
Col %	4.3%		2.3%
Do Not Know			
Count	12	13	20
Col %	52.2%	27.1%	46.5%
Not Effective			

(continued)

Table XII-49. Effectiveness of Oil Spill Responses, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Count	3	7	6
Col %	13.0%	14.6%	14.0%
Somewhat			
Count	2	10	7
Col %	8.7%	20.8%	16.3%
Effective			
Count	5	18	9
Col %	21.7%	37.5%	20.9%
EFFECTIVENESS EVOS: LOCAL LAW ENFORCEMENT			
No Response			
Count	1		1
Col %	3.2%		2.0%
Do Not Know			
Count	6	2	8
Col %	19.4%	4.2%	15.7%
Not Effective			
Count	2	4	5
Col %	6.5%	8.3%	9.8%
Somewhat			
Count	1	3	12
Col %	3.2%	6.3%	23.5%
Effective			
Count	21	39	25
Col %	67.7%	81.3%	49.0%
EFFECTIVENESS EVOS: STATE LAW ENFORCEMENT			
No Response			
Count			2
Col %			5.9%
Do Not Know			
Count		7	19
Col %		25.0%	55.9%
Not Effective			
Count		8	6
Col %		28.6%	17.6%

(continued)

Table XII-49. Effectiveness of Oil Spill Responses, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Somewhat			
Count		5	6
Col %		17.9%	17.6%
Effective			
Count		8	1
Col %		28.6%	2.9%
EFFECTIVENESS EVOS: EXXON			
No Response			
Count			2
Col %			3.9%
Do Not Know			
Count	4	6	11
Col %	12.9%	12.2%	21.6%
Not Effective			
Count	15	24	22
Col %	48.4%	49.0%	43.1%
Somewhat			
Count	8	10	13
Col %	25.8%	20.4%	25.5%
Effective			
Count	4	9	3
Col %	12.9%	18.4%	5.9%
EFFECTIVENESS EVOS: VECO			
No Response			
Count	1		2
Col %	3.2%		3.9%
Do Not Know			
Count	6		8
Col %	19.4%		15.7%
Not Effective			
Count	6	15	11
Col %	19.4%	30.6%	21.6%
Somewhat			
Count	8	13	20
Col %	25.8%	26.5%	39.2%

(continued)

Table XII-49. Effectiveness of Oil Spill Responses, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Effective			
Count	10	21	10
Col %	32.3%	42.9%	19.6%
EFFECTIVENESS EVOS: ALYESKA PIPELINE			
No Response			
Count	1		2
Col %	3.2%		4.1%
Do Not Know			
Count	21	23	26
Col %	67.7%	47.9%	53.1%
Not Effective			
Count	6	19	15
Col %	19.4%	39.6%	30.6%
Somewhat			
Count	2	2	6
Col %	6.5%	4.2%	12.2%
Effective			
Count	1	4	
Col %	3.2%	8.3%	
EFFECTIVENESS EVOS: VOLUNTEER CLEAN-UP GROUPS			
Effective			
Count	3	1	
Col %	100.0%	100.0%	
EFFECTIVENESS EVOS: ANIMAL RESCUE GROUPS			
Effective			
Count	1		
Col %	100.0%		
EFFECTIVENESS EVOS: PWS REGIONAL CITIZENS ADVISORY COUNCIL			
Effective			
Count	1		
Col %	100.0%		
EFFECTIVENESS EVOS: OTHER UNIDENTIFIED GROUPS			
Not Effective			
Count	1		

(continued)

Table XII-49. Effectiveness of Oil Spill Responses, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Col %	100.0%		
EFFECTIVENESS EVOS: OILED MAYORS			
No Response			
Count	1		1
Col %	3.2%		2.0%
Do Not Know			
Count	14	14	28
Col %	45.2%	28.6%	54.9%
Not Effective			
Count	2	9	5
Col %	6.5%	18.4%	9.8%
Somewhat			
Count	2	8	10
Col %	6.5%	16.3%	19.6%
Effective			
Count	12	18	7
Col %	38.7%	36.7%	13.7%

Table XII-50. Subsistence Food Safety Information, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
ADEQUATELY INFORMED ABOUT FOOD SAFETY?			
No Response			
Count	1		
Col %	3.4%		
Do Not Know			
Count	1	2	3
Col %	3.4%	4.2%	5.8%
No			
Count	14	16	20
Col %	48.3%	33.3%	38.5%
Somewhat			
Count	2	11	16
Col %	6.9%	22.9%	30.8%
Yes			
Count	11	19	13
Col %	37.9%	39.6%	25.0%
WHY NOT ADEQUATELY INFORMED			
No Response			
Count	1	8	12
Col %	6.3%	29.6%	33.3%
Lack of clear or definitive advice			
Count	5	1	2
Col %	31.3%	3.7%	5.6%
Received incomplete information			
Count		2	4
Col %		7.4%	11.1%
Received no information			
Count	4	9	5
Col %	25.0%	33.3%	13.9%
Did not trust or believe advice			
Count	4	6	8
Col %	25.0%	22.2%	22.2%
Untimely			
Count	3		5
Col %	18.8%		13.9%

(continued)

Table XII-50. Subsistence Food Safety Information, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Did not trust results because of Exxon involvement			
Count			2
Col %			5.6%
Personal observations contradicted advice or findings			
Count		1	1
Col %		3.7%	2.8%
Heard about damaged resources which contradicted advice			
Count			1
Col %			2.8%
Believe information was deliberately withheld			
Count	1		4
Col %	6.3%		11.1%
There were not enough tests			
Count	1	3	1
Col %	6.3%	11.1%	2.8%
Information was too difficult to understand			
Count	2	1	
Col %	12.5%	3.7%	
Personal responsibility to keep informed			
Count			1
Col %			2.8%
Decided themselves not to eat resource out of fear			
Count			2
Col %			5.6%
Dispersants used could be dangerous			
Count			1
Col %			2.8%

Table XII-51. OCS Development Effects, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
OCS EFFECT: FISH			
No Response			
Count	1		
Col %	3.1%		
Do Not Know			
Count	9	12	16
Col %	28.1%	23.1%	28.1%
Decrease			
Count	13	26	28
Col %	40.6%	50.0%	49.1%
No Change			
Count	9	14	12
Col %	28.1%	26.9%	21.1%
Increase			
Count			1
Col %			1.8%
OCS EFFECT: SHELLFISH			
No Response			
Count	1		
Col %	3.1%		
Do Not Know			
Count	9	9	15
Col %	28.1%	17.3%	26.3%
Decrease			
Count	16	33	31
Col %	50.0%	63.5%	54.4%
No Change			
Count	6	10	11
Col %	18.8%	19.2%	19.3%
OCS EFFECT: MARINE MAMMALS			
No Response			
Count	1		
Col %	3.1%		
Do Not Know			
Count	8	9	16
Col %	25.0%	17.3%	28.1%

(continued)

Table XII-51. OCS Development Effects, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Decrease			
Count	16	30	31
Col %	50.0%	57.7%	54.4%
No Change			
Count	7	12	10
Col %	21.9%	23.1%	17.5%
Increase			
Count		1	
Col %		1.9%	
OCS EFFECT: LAND MAMMALS			
No Response			
Count	1		
Col %	3.1%		
Do Not Know			
Count	10	11	21
Col %	31.3%	21.2%	36.8%
Decrease			
Count	10	17	24
Col %	31.3%	32.7%	42.1%
No Change			
Count	11	24	12
Col %	34.4%	46.2%	21.1%
OCS EFFECT: BIRDS			
No Response			
Count	1		
Col %	3.1%		
Do Not Know			
Count	7	7	16
Col %	21.9%	13.5%	28.1%
Decrease			
Count	15	27	29
Col %	46.9%	51.9%	50.9%
No Change			
Count	9	18	12
Col %	28.1%	34.6%	21.1%

(continued)

Table XII-51. OCS Development Effects, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
OCS DEVELOPMENT = MORE JOBS?			
No Response			
Count	1		
Col %	3.1%		
Do Not Know			
Count	3	8	11
Col %	9.4%	15.4%	19.3%
No			
Count	10	22	28
Col %	31.3%	42.3%	49.1%
Yes			
Count	18	22	18
Col %	56.3%	42.3%	31.6%
CONTAIN AND CLEANUP SMALL OIL SPILL			
Do Not Know			
Count	1	4	15
Col %	3.1%	7.7%	26.3%
No			
Count	11	24	24
Col %	34.4%	46.2%	42.1%
Maybe			
Count	8	24	18
Col %	25.0%	46.2%	31.6%
Yes			
Count	12		
Col %	37.5%		
CONTAIN AND CLEANUP LARGE OIL SPILL			
Do Not Know			
Count	3	7	5
Col %	9.4%	13.5%	8.8%
No			
Count	19	39	48
Col %	59.4%	75.0%	84.2%
Maybe			
Count	6	6	4
Col %	18.8%	11.5%	7.0%

(continued)

Table XII-51. OCS Development Effects, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Yes			
Count	4		
Col %	12.5%		
ARE YOU IN FAVOR OF THE SEARCH FOR OIL?			
No Response			
Count		1	1
Col %		1.9%	1.8%
Do Not Know			
Count		4	5
Col %		7.7%	8.8%
No			
Count		26	30
Col %		50.0%	52.6%
Yes			
Count		21	21
Col %		40.4%	36.8%
OPINION ON SEARCH FOR OIL			
No Response			
Count		5	7
Col %		9.6%	12.3%
Do Not Know			
Count		2	5
Col %		3.8%	8.8%
Reduce dependency on foreign oil/enhance national security			
Count		3	
Col %		5.8%	
Create more jobs in the community			
Count		4	3
Col %		7.7%	5.3%
We can live in balance with the environment			
Count		6	
Col %		11.5%	
Increase state revenues			
Count		4	3

(continued)

Table XII-51. OCS Development Effects, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Col %		7.7%	5.3%
Energy needed			
Count		1	4
Col %		1.9%	7.0%
Conditional: in favor of search/development but not locally			
Count			1
Col %			1.8%
Need to know extent of resource availability and reserves			
Count		5	6
Col %		9.6%	10.5%
Conditions: in favor when necessary			
Count			1
Col %			1.8%
Generalized: good for everyone			
Count		1	
Col %		1.9%	
Beneficial to the economy			
Count		2	2
Col %		3.8%	3.5%
Positive experiences with development			
Count			1
Col %			1.8%
Conditional upon technological advancement			
Count			1
Col %			1.8%
Environmental conditions (non-pollution/non-biological)			
Count		1	1
Col %		1.9%	1.8%
Adverse experiences with other development			
Count		1	
Col %		1.9%	

(continued)

Table XII-51. OCS Development Effects, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Pollution concerns and impacts			
Count		10	11
Col %		19.2%	19.3%
Adverse impact of security zones and traffic zones			
Count		2	
Col %		3.8%	
In favor of on-shore development instead of off-shore			
Count		1	
Col %		1.9%	
Status quo - leave it the way it is			
Count		3	4
Col %		5.8%	7.0%
Should explore alternative energy sources, conservation			
Count			1
Col %			1.8%
Adverse impact on subsistence and commercial fishing			
Count		3	5
Col %		5.8%	8.8%
Biological (non-pollution) - migration patterns			
Count			2
Col %			3.5%
Distrust of the oil industry			
Count		3	
Col %		5.8%	
Potential damage to renewable resources			
Count			1
Col %			1.8%
Against any development			
Count		2	1
Col %		3.8%	1.8%
No benefit to local economy			

(continued)

Table XII-51. OCS Development Effects, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Count		3	2
Col %		5.8%	3.5%
Disastrous - multi-faceted			
Count		2	1
Col %		3.8%	1.8%
Uncertainties with development			
Count		1	2
Col %		1.9%	3.5%
Fatalistic - no choice in matter			
Count		1	3
Col %		1.9%	5.3%
Adverse impact on Native traditions			
Count		1	
Col %		1.9%	
Technology needs improvement			
Count			2
Col %			3.5%
Do not think there is oil in the area			
Count			1
Col %			1.8%
Unspecified ecological impacts			
Count			4
Col %			7.0%
ARE YOU IN FAVOR OF THE DEVELOPMENT AND PRODUCTION OF OIL?			
No Response			
Count		1	
Col %		1.9%	
Do Not Know			
Count		3	6
Col %		5.8%	10.5%
No			
Count		31	39
Col %		59.6%	68.4%
Yes			

(continued)

Table XII-51. OCS Development Effects, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Count		17	12
Col %		32.7%	21.1%
OPINION ON DEVELOPMENT AND PRODUCTION			
No Response			
Count		3	1
Col %		5.8%	1.8%
Do Not Know			
Count			6
Col %			10.5%
Reduce dependency on foreign oil/enhance national security			
Count		2	
Col %		3.8%	
Create more jobs in the community			
Count		8	4
Col %		15.4%	7.0%
We can live in balance with the environment			
Count		3	
Col %		5.8%	
Increase state revenues			
Count		3	4
Col %		5.8%	7.0%
Energy needed			
Count		1	3
Col %		1.9%	5.3%
Conditional: in favor of search/development but not locally			
Count		2	1
Col %		3.8%	1.8%
Need to know extent of resource availability and reserves			
Count			1
Col %			1.8%
Conditions: in favor when necessary			
Count			1

(continued)

Table XII-51. OCS Development Effects, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Col %			1.8%
Beneficial to the economy			
Count		2	2
Col %		3.8%	3.5%
Conditional upon technological advancement			
Count		1	
Col %		1.9%	
Not making sufficient use of current resources			
Count			1
Col %			1.8%
Environmental conditions (non-pollution/non-biological)			
Count		3	1
Col %		5.8%	1.8%
Adverse experiences with other development			
Count		2	
Col %		3.8%	
Pollution concerns and impacts			
Count		19	18
Col %		36.5%	31.6%
Adverse impact of security zones and traffic zones			
Count			1
Col %			1.8%
In favor of on-shore development instead of off-shore			
Count		1	
Col %		1.9%	
Status quo - leave it the way it is			
Count		3	4
Col %		5.8%	7.0%
Should explore alternative energy sources, conservation			

(continued)

Table XII-51. OCS Development Effects, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Count		1	3
Col %		1.9%	5.3%
Adverse impact on subsistence and commercial fishing			
Count		8	8
Col %		15.4%	14.0%
Biological (non-pollution) - migration patterns			
Count		1	1
Col %		1.9%	1.8%
Distrust of the oil industry			
Count		1	
Col %		1.9%	
Potential damage to renewable resources			
Count			2
Col %			3.5%
Against any development			
Count		2	
Col %		3.8%	
No benefit to local economy			
Count		1	8
Col %		1.9%	14.0%
Disastrous - multi-faceted			
Count		2	1
Col %		3.8%	1.8%
Uncertainties with development			
Count		1	1
Col %		1.9%	1.8%
Fatalistic - no choice in matter			
Count		1	2
Col %		1.9%	3.5%
Adverse impact on Native traditions			
Count		1	
Col %		1.9%	

(continued)

Table XII-51. OCS Development Effects, Ouzinkie

	STUDY YEAR		
	1991	1992	1993
Not economically feasible to search/develop off-shore			
Count			1
Col %			1.8%
Technology needs improvement			
Count			1
Col %			1.8%
Against population increases			
Count			1
Col %			1.8%
Unspecified ecological impacts			
Count			9
Col %			15.8%

CHAPTER XIII: LARSEN BAY

by

Craig Mishler, Rachel Mason, and Jeffrey Barnhart

CLIMATE, SETTING, AND GENERAL HISTORY

Larsen Bay is located on the west side of Kodiak Island in Uyak Bay (Fig. I-1). Average temperatures in Larsen Bay are slightly higher than they are in Kodiak City, and there is less rain and fog during the summer months. Otherwise, this community shares the relatively mild climate of the Kodiak Archipelago. The community is off of the Kodiak Island road system and may be reached only by water or by air.

Larsen Bay is the site of an ancient Koniag settlement. Archaeologists have made rich finds in the area, beginning with Ales Hrdlicka's controversial digs in the 1930s (Hrdlicka 1944), and shell middens are found almost everywhere around the east end of the village. By the mid-1980s at least seven archaeological sites had been identified in Larsen Bay along with many more in adjoining Uyak Bay (Jordan 1986; Crowell 1986). Following the oil spill, many additional sites in the area were recorded. In 1991, the human remains from Larsen Bay which had been held in the Smithsonian Institution were returned to the village and buried there. To justify the repatriation, anthropologists had to establish that the human remains from Larsen Bay were from a population ancestral to the people now living there.

Although the first cannery was established in Uyak Bay in 1881 (Davis 1986:138), the modern village of Larsen Bay was founded in 1911 when the decline of Karluk's canneries prompted some residents of Karluk to migrate to a new cannery on Uyak Bay. For some reason, official population estimates for the community are missing after 1890, when just 20 residents were enumerated, until 1939, when the count was 38. After that, Larsen Bay experienced a period of steady growth until 1980, when it reached a historic peak of 168 residents (Fig. XIII-1). Today the modernized cannery is operated by Kodiak Salmon Packers, which hires seasonal college students rather than local residents to perform most of the labor. Nevertheless, the pattern of immigration from Karluk has continued; a large number of adults living in Larsen Bay were born in Karluk. There are many kinship connections between the two villages, and traditional sharing and a substantial trading of resources occurs between Larsen Bay and Karluk, but the migration is one-way. No Karluk residents that we know of were born in Larsen Bay.

In 1991 there were two food stores in Larsen Bay, both operated by Kraft's of Kodiak city (Mishler and Cohen 1991:8), but one of these closed down in 1992, leaving only the summer-operated cannery store. In 1993 a new private grocery store, owned and managed by a local couple working out of their home, opened on a year-round basis.

PREVIOUS RESEARCH

The Division of Subsistence in collaboration with the Kodiak Area Native Association (KANA) conducted research in Larsen Bay in 1983, pertaining to resource harvest activities that occurred over a 12-month period in 1982/83 (KANA 1983). Additional fieldwork occurred again in 1987 for the calendar year 1986 (Fall and Walker 1993), in 1990 immediately after the oil spill for the calendar year 1989 (Mishler and Cohen forthcoming), and in 1991 for the study year 1990/91 (Fall 1992a). These earlier surveys, except for the ones completed in 1990 and 1991, did not ask about employment, demographic information, and other socioeconomic variables, and were not always species-specific. For example, during the early and mid-1980s all "ducks" were lumped together without regard to species. Certain kinds of across the board comparisons, therefore, are not possible. Nevertheless, it is still useful to make some basic comparisons to these earlier years, particularly in the pounds harvested per capita for all resources. Data from all of these earlier studies have been entered into the Division's Community Profile Database (Scott et al. 1993).

STUDY GOALS AND RESEARCH METHODS

A comprehensive subsistence harvest survey of Larsen Bay was conducted by the Alaska Department of Fish and Game, Division of Subsistence, to determine levels of non-commercial takes of wild resources and use areas by local residents over a three-year period. Another major study goal was to monitor change in the community's subsistence and cash economy and identify long-term trends in subsistence before and after the *Exxon Valdez* oil spill. Year One began on April 1, 1991, and ended March 31, 1992. The study period for Year Two was from April 1, 1992, through March 31, 1993, and the Year Three was from April 1, 1993, through March 31, 1994.

In Year Two only, as an experiment unique to Larsen Bay, we attempted to gather more detailed information on sharing patterns at the household level. In order to grasp how the sharing of subsistence harvests occurs between households, we asked some new experimental questions on the survey, not only about what resources people received and gave away, but which households they gave them to and who they received them from. Larsen Bay is the only community where these questions were asked. The intent was to get a handle on community sharing networks and kinship obligations, but this line of questioning did not go altogether smoothly. Many respondents had a difficult time identifying the households they gave to or received from. Some said they gave to "everyone" or to "all the elders" or simply did not remember with whom they shared.

The responses to our "household-to-household" sharing questions were coded and entered into the data base, but due to the recording problems, they were not analyzed. During the study year, subsistence staff members visiting Larsen Bay elicited genealogical information for each of the Larsen Bay families. It was hypothesized that harvest sharing patterns between households for each resource group

were made on the basis of kinship ties, and our analysis should show us which kinship relations are most important in the exchange network and which resources are most heavily exchanged to satisfy kinship obligations.

One set of questions added in the third year had to do with the issue of proxy hunting and fishing, an ongoing issue, especially with respect to the management of subsistence on federal lands by the Federal Subsistence Board. We asked residents whether during the past year they had hunted deer for those in the community unable to hunt for themselves--whether due to illness, physical handicap, old age, or otherwise. We also asked whether during the past year they caught salmon for those unable to fish for themselves. If the answers to either of these questions was "No", then we inquired about whether or not they had ever done this in the past. Based on key respondent testimony, we expected that this is a fairly widespread practice in Kodiak communities, and the purpose of our questions was to assess just how prevalent it is.

Another new question for Year Three asked if respondents fished steelhead in the Karluk River system and how many steelhead they harvested. The addition of this question was in response to a request from Sport Fish Division of the Alaska Department of Fish and Game (ADF&G) for this information to assist them with the ongoing Karluk River steelhead population project.

In order to understand if resource harvests have stabilized or returned to prespill levels we added two comparison questions for each resource category. The first compares the 1993/94 harvest year with the previous year. The second compares the 1993/94 harvest year with the year before the *Exxon Valdez* oil spill. For each we asked if the harvest increased, decreased, or stayed the same and why. This line of questioning went very well, providing an insight into harvest changes between the years.

Fieldwork

Interviews in Larsen Bay for Year One commenced on May 1, 1992, and were completed on May 5, 1992. Staff members assigned to work in this community were Jeff Barnhart, Rachel Mason, Vicki Vanek, and Craig Mishler, who supervised the team. Sheila Theriault, a longtime resident of Larsen Bay, was employed as a local research assistant. The average harvest survey took 1.07 hours (about 64 minutes) to complete and the average social effects survey took 0.80 hours (48 minutes), for a combined total that was just a little under two hours (Tables I-7, I-8).

Staff members going to Larsen Bay in Year Two included Rachel Mason (field supervisor), Jeff Barnhart, and Vicki Vanek. Sheila Theriault also worked on the survey again. The average harvest survey for Year Two took 0.74 hours (44 minutes), and the average social effects survey lasted 0.66 hours (40 minutes) (Tables I-7, I-8). Community approvals were obtained orally over the phone from Frank Carlson, President of the Larsen Bay Tribal Council, and from Charles Christensen, Mayor, several weeks prior to our visit. Fieldwork for Year Two was conducted from April 19-23, 1993. The field work was completed, except for a few "mop-ups", by April 22, but howling winds and driving rain delayed our departure a full

extra day, until April 23. The extra time was spent pursuing reluctant interviewees, editing surveys, and visiting.

Staff members going to Larsen Bay in Year Three were Craig Mishler (field supervisor) and Jeff Barnhart. Sheila Theriault, our local assistant, again did interviews as part of the team. In Year Three the harvest surveys took an average of 0.90 hours (54 minutes) and each social effects survey required 0.81 hours (48.6 minutes) (Tables I-7, I-8). Community approvals for the project were obtained orally over the phone from Frank Carlson, President of the Larsen Bay Tribal Council, and from Jimmy Johnson, mayor, several weeks prior to our visit. Fieldwork commenced on April 5 and was completed on April 11, 1994.

Sample Selection and Achievement

Our goal for all three study years as part of the Division's research in the community was to interview all Larsen Bay households. Names were taken from a master list of households developed with the assistance of knowledgeable residents. Forty-three households were identified in Year One, and we divided the interviews among the researchers. There were three refusals and two no-contacts (Table XIII-1). We succeeded in completing 35 interviews during the research period of May 1-5. In the following two weeks, Sheila Theriault was able to conduct three more surveys. Thus, a total of 38 interviews were completed (88.4 percent of the identified households).

A full census was attempted again in Year Two. We identified 48 permanent households. Altogether 37 interviews were completed, 4 were no contacts, and only 1 was a refusal (Table XIII-1). Five non-resident households (new arrivals) and one seasonal household were also identified. Sheila Theriault managed to do some mop-up work after the field team returned to Kodiak, reducing the number of no-contacts and refusals.

Another full census was attempted in Year Three. This time we identified 49 permanent households, a 13.9 percent increase over Year One. Altogether, 40 interviews were completed, four were no-contacts, and five were refusals (Table XIII-1). Four seasonal households and one vacant structure were also identified. Sheila Theriault managed to do some mop-up work after the field team returned to Kodiak, reducing the number of no-contacts and refusals. For Year Three we changed the residency requirement during the study year from six months to one month to accommodate those newcomers to the community who announced their intentions of staying on as permanent residents.

DEMOGRAPHY

It is worth noting that Division of Subsistence population estimates, while not official, are based on the number of people living in the community at the time of our surveys, which took place each spring shortly after the end of each study year. In April 1992, the ADF&G Subsistence Division study team counted 156 permanent residents living in the community, nine more than what was counted in the 1990

U.S. Census (Fig. XIII-1). Our survey of 38 households found a mean household size of 3.63. The mean age was 25.9 years (Table XIII-2). Larsen Bay has a young population; in 1992, 44.9 percent of the people were under the age of 20 (Fig. XIII-2, Table XIII-3). In gender, the population was evenly balanced with 50.0 percent male and 50.0 percent female. The sample showed the community to be 83.3 percent Alaska Native. The mean length of residency for household heads was 16.8 years (Table XIII-2).

In April 1993, the Division's field study team counted 136 people living in Larsen Bay during the 1992/93 study year. This was down 12.8 percent from the 156 we estimated in 1991/92. The number of households also was down slightly, from 43 in 1991/92 to 42 in 1992/93, along with the mean household size of 3.24 persons, compared to 3.63 persons in 1991/92. The mean age in 1992/93 was 26.3 years compared to 25.9 in 1991/92. Overall then, in comparison to 1991/92, Larsen Bay's population and average household size were getting smaller (Table XIII-2).

In the second study year approximately 43.3 percent of the people in Larsen Bay were under the age of 20, and 14.2 percent were between the ages of 20-24 (Fig. XIII-3, Table XIII-4). By gender, 51.7 percent of the community's residents were male and 48.3 percent were female, which is comparable to other Kodiak study communities. The sample shows 89.2 percent of the heads of households who were interviewed considered themselves to be Alaska Natives. The mean length of residency for household heads was 19.7 years (Table XIII-2), but this apparent stability belies the fact that 30 percent of the interviewed households were new to the community since 1989, the year of the oil spill.

In April, 1994, at the close of Year Three, the Division of Subsistence study team estimated 130 permanent residents in the community. This was down 16.6 percent since Year One, and down another 4.4 percent since Year Two of the study. Our sample of 40 Larsen Bay households produced a mean household size of 2.65. The mean age was 28.5 years (Table XIII-5). Approximately 35.9 percent of the population was under the age of 20. By gender, the population was 57.6 percent male and 42.5 percent female, and the community as a whole was 84.0 percent Alaska Native (Fig. XIII-4). While the number of males and females in Year One was roughly equal, in Year Two the balance moved slightly toward more males, and in Year Three it has tipped much more heavily toward males. The population pyramids (Figs. XIII-2, XIII-3, XIII-4) reveal that most of this growing imbalance can be attributed to male newborns. The mean length of residency for household heads dropped down to 12.7 years (Table XIII-2).

MONETARY INCOME

Larsen Bay's average household income from all sources in 1991/92 was $29,536.58. The mean per capita income was $8,133.26 (Table XIII-7). The most important single source of earned income in Larsen Bay was commercial fishing, representing 21.0 percent of the average total income per capita. However, income from local, state, and federal government jobs constituted one-third of the per capita income, or 33.3 percent. Most of the government payroll came from local government administration, at

16.3 percent of all income, and the school district, at 12.9 percent of the per capita income. As shown in Fig. XIII-5, the largest number of jobs was in commercial fishing (29 percent), followed by local government administration (28 percent), and services (11 percent). Of the estimated 96.2 permanent resident adults in Larsen Bay, 85.8 percent had at least one wage job. However, only 30.1 percent of those adults were employed year-round. The mean number of months worked during the year was 8.1 (Table XIII-6).

The cannery located in Larsen Bay provides a local market for commercial fishermen in the village but does not provide much employment to members of the community. Most of the processing workers are college students from other states. Among Larsen Bay's seasonal residents are a number of non-Native commercial salmon setnetters, locally stereotyped as "teachers," who live in Kodiak in the winter months but are frequently seen in and around the village during the summer.

The average other income per capita in 1991/92 was $2,149, which was 26.4 percent of the total per capita income. The most important components of unearned income were Alaska Permanent Fund dividends, social security payments, and Aid to Families with Dependent Children (Table XIII-8).

On average, Larsen Bay residents estimated that they spent $607 per month on food purchases during the first study year, which was among the highest averages of the villages studied (Table I-101). There was a median monthly expense of $525, representing 21.3 percent of household income. Of the 38 interviewed households, 9 (23.7 percent) said that their financial situation during the study year was better than before the *Exxon Valdez* oil spill, 13 (34.2 percent) reported no change, and 12 (31.6 percent) said their financial situation was worse than before the spill. Four households (10.5 percent) provided no assessment of change in their finances (Table I-103).

Larsen Bay's average household income from all sources in 1992/93 was $29,451, down very slightly from $29,537 in 1991/92 (Table XIII-9). The mean 1992/93 per capita income, however, was $9,081, a notable increase over the $8,133 reported for the previous year, suggesting that individuals are earning more but families are earning less. This disparity can be readily attributed to smaller household sizes. The most important single source of earned income was commercial fishing, representing 24 percent of the average earned income per capita (Fig. XIII-6). Income generated by government jobs also figured strongly, at 20 percent of all earned income. Of this group, local government and education represented 18 percent of the earned income, with only two percent coming from state employment. By number, one percent of all Larsen Bay jobs were with the federal government, but the income from those jobs was not reported (Fig. XIII-6).

Of the estimated 86 permanent resident adults in 1992/93, 70 of them (81.6 percent) had some kind of wage employment, with a mean of 1.8 jobs per person. The average person was employed for 8.5 months, which was up slightly from the year before, but only 27.4 percent were employed year round, down slightly from the year before. Every household reported someone working in at least one job (Table XIII-6).

The average household in Larsen Bay received $7,089 in other income in 1992/93, compared to $7,805 in 1991/92. The average other income for the community was $2,186 per capita, coming largely from the Alaska Permanent Fund Dividend, Native Corporation dividends, and government transfer payments such as social security, longevity bonuses, energy assistance, and food stamps (Table XIII-10). Overall, it appears that Larsen Bay's cash economy was fairly stable in 1992/93 compared with 1991/92, with slight dips in both earned and unearned household income.

The average household income in Larsen Bay from all sources in 1993/94 was $33,334 (Table XIII-11). This is a sharp increase over household incomes of $29,537 in 1991/92 and $29,451 in 1992/93, but still just a little more than half of the 1993 statewide average of $64,652. The mean total per capita income in Larsen Bay during 1993/94 was $12,579, up sharply compared to $8,133 in 1991/92 and $9,081 in 1992/93 but considerably below the 1993 Alaskan statewide average of $23,008 (Alaska Dept. of Labor 1994). The average other income per capita in 1993/94 was $2,670, which was 21.2 percent of the total per capita income. The three largest components of other income were Alaska Permanent Fund dividends, social security, and unemployment, but longevity bonuses, food stamps, aid to families with dependent children, and Native corporation dividends also added substantially (Table XIII-12). On the average, each household received $7,074 in other income, which is extremely close to the $7,089 received in 1992/93 but still substantially less than the $7,805 received in 1991/92.

As in the two previous years, the most important single source of earned income in the community in 1993/94 was commercial fishing, representing 29.7 percent of the average total income per capita and 30 percent of all jobs (Fig. XIII-7, Table XIII-11). Limited entry salmon permit holders with Larsen Bay residences in 1993 included 6 with purse seine permits, 3 with beach seine permits, and 10 with set gillnet permits (Alaska Dept. of Fish and Game 1993:59). However, income from local, state, and federal government jobs ran a close second, constituting 26.6 percent of the per capita income. Most of the government payroll came from local government education (i.e., the Kodiak Island Borough) at 15.2 percent of all income, local government administration (i.e., the City of Larsen Bay) at 10 percent. Services accounted for 11 percent of the total (Fig. XIII-7). Of the estimated 82.1 permanent resident adults in Larsen Bay (age 16 or older), 71.1 percent had at least one wage-paying job. However, only 20.7 percent of those adults were employed year-round. The mean number of months worked during the year was 8.3 (Table XIII-6).

It can be said again that Larsen Bay's cash economy was quite stable across all three years. Although per capita income and household income continued to go up sharply again in Year Three, perhaps the most dramatic statistic is that the mean household size in the village has dropped from 3.63 persons in 1991/92 to 3.24 persons in 1992/93 to 2.65 persons in 1993/94. This means that the community not only has a somewhat smaller population and a significantly smaller average household size, but with the concurrent addition of more households and more total income, individual residents appear better off financially than they were two years earlier.

RESOURCE HARVESTS AND USES: YEAR ONE

Participation Rates

Larsen Bay's participation rates in wild resource uses and harvesting activities for all three years were consistently high. In 1991/1992 one hundred percent of Larsen Bay households used at least one wild resource, 92.1 percent harvested at least one resource, 97.4 percent received resources, and 92.1 percent gave away resources. During 1991/92, households in Larsen Bay used an average of 17.5 different resources and harvested an average of 11.1 different resources (Table XIII-13).

As shown in Table XIII-14, 68.8 percent of Larsen Bay's population engaged in subsistence harvest activities during the first study year, and 65.2 percent processed wild resources. Also, 26.8 percent hunted, 53.6 percent fished, 2.2 percent trapped, and 60.1 percent gathered wild plants.

In 1991/92 sharing of harvests occurred with residents of 14 Alaskan communities in addition to Larsen Bay. Larsen Bay households received resources from Kodiak City (18.4 percent), Karluk (15.8 percent), Anchorage (5.3 percent), and six other communities (2.6 percent each). They gave resources to Kodiak City (36.8 percent), U.S. communities outside Alaska (23.7 percent), Karluk (18.4 percent), Anchorage (10.5 percent), Kenai (5.3 percent), and six other Alaskan communities, along with a community in a foreign country (2.6 percent each) (Table XIII-15).

Harvest Quantities and Composition

The mean per capita harvest for all resources in Larsen Bay in 1991/1992 was 294.6 pounds edible weight. The mean household harvest was 1,069.9 pounds (Table XIII-18). Only one household (2.6 percent) claimed that none of the meat, fish, and poultry it used were wild resources. Twelve households (31.6 percent) estimated that wild resource harvests provided 1-25 percent of their annual use of meat, fish, and poultry; eleven (28.9 percent) estimated the contribution of wild foods at 25-50 percent; eight (21.1 percent) estimated 51-75 percent; and five (13.2 percent) estimated 76-99 percent. One household (2.6 percent) reported that its entire supply of meat, fish and poultry was from wild resources.

More than half (51.9 percent) of the per capita harvest of wild resources was fish, at 153.0 pounds, and most of the fish was salmon (108.8 pounds per capita, or 36.9 percent of the total harvest). Other finfish, at 44.2 pounds per capita, represented 15.0 percent of the total harvest .

Sockeye salmon made up two-thirds (66.7 percent) of the salmon harvest, at 72.6 pounds per capita. The coho salmon harvest was 22.0 pounds per capita, or 20.2 percent of all salmon taken. By gear type, 14.8 percent of the salmon harvest in pounds were removed from commercial catches, 43.9 percent by subsistence seine, 15.9 percent by subsistence gill net, and 25.4 percent by rod and reel (Tables XIII-19, XIII-20, XIII-21, XIII-22). Other subsistence methods, including dipnetting, accounted for less than 0.1 percent of the salmon harvest . As shown in Table XIII-22, 47.4 percent of the households in Larsen Bay

acquired their non-commercial salmon with rod and reel gear, 44.7 percent used subsistence methods, and 23.7 percent removed salmon from their commercial catches.

Freezing was the salmon preservation method used by most Larsen Bay households (89.5 percent). It was followed by smoking (55.3 percent), drying (44.7 percent), salting (34.2 percent), pickling (23.7 percent), and canning (10.5 percent). On average, households in Larsen Bay used 2.58 different methods of preserving salmon (Table I-106).

For non-salmon fish, the largest per capita harvest by volume was halibut, at 26.8 pounds. Other species significantly utilized were gray cod (9.4 pounds), steelhead (2.2 pounds), black rockfish (1.5 pounds), and herring (1.1 pounds) (Table XIII-18). Of non-salmon fish, 12.3 percent were removed from commercial catches, 22.2 percent taken with subsistence gill nets or seines, and 65.5 percent with rod and reel (Tables XIII-23, XIII-24). As reported in Table XIII-25, 47.4 percent of the sampled households used rod and reel to harvest fish other than salmon, 31.6 percent used subsistence methods, and 18.4 percent removed these fish from commercial catches.

Larsen Bay residents had a large harvest of marine invertebrates, 52.2 pounds per capita or 17.7 percent of the total harvest (Table XIII-18). The most significant species harvests were butter clams (22.4 pounds per capita), Tanner crab (11.1 pounds), octopus (7.1 pounds), littleneck clams (5.3 pounds), and small bidarkies (2.8 pounds).

For land mammals, the Larsen Bay harvest was also considerable. The average per capita take was 66.8 pounds, 22.7 percent of all resources. Of the game harvest, 64.5 pounds per capita were deer, while 1.4 pounds were reindeer. Only 0.9 pounds per capita of small game were taken, consisting entirely of snowshoe hare.

Marine mammal harvests averaged 9.4 pounds per capita (3.2 percent of the total harvest). These harvests were made up of harbor seals (6.1 pounds), sea lion (2.9 pounds), and porpoise (0.4 pounds). One porpoise was incidentally caught in a salmon gill net and was shared among three households, but in recent times porpoise has not been strategically targeted by Larsen Bay hunters. Respondents in Larsen Bay had mixed perceptions with respect to the population of Steller sea lions--some 18.4 percent thought the population was increasing, 31.6 percent thought it was stable, and 10.5 percent thought there were fewer sea lions (Tables I-99, I-100). The largest group of 39.5 percent, however, were those who had no response or said they did not know.

Birds and eggs were taken at an average of 4.8 pounds per capita, or 1.6 percent of the total harvest. Almost all the bird harvest consisted of ducks (4.3 pounds per capita, 90.8 percent of the bird harvest). Goldeneye dominated the harvest of ducks, at 2.7 pounds per capita. The next most frequently taken species of ducks were mallard (0.7 pounds) and scoter (0.5). For eggs, 0.3 pounds per capita were taken, all of them gull eggs.

Plants and berries, at 8.4 pounds per capita, represented 2.9 percent of the total harvest. Per person, 7.1 pounds of berries and 1.3 pounds of greens and mushrooms were harvested. Six Larsen Bay

households (15.8 percent) used plants for medicinal purposes (Table I-108). Two used alder as a treatment for sore throats, or during steam baths, and one household used high bush cranberries for sore throats. One household used "pineapple weed," and another used roots, for unspecified medicinal purposes.

One of the questions on the 1991/1992 harvest survey asked residents whether they had discarded any resources during the study year because of perceived abnormalities. Nine households in Larsen Bay (23.7 percent) did so (Table I-107). In all these cases, which included non-salmon fish, game, and shellfish, the respondent said the resource had an abnormal appearance or appeared to be diseased. Almost all the respondents said they did not know the cause of the abnormality, although one who discarded shellfish claimed oil contamination and another thought that it was due to normal variation. Seven of the nine respondents who discarded resources had not observed these conditions before the oil spill.

In making self-assessments of change in subsistence uses, 50 percent of the households surveyed in Larsen Bay said they used about the same amount of wild foods in 1991/92 as they had the previous year, 34.2 percent said they used more, and 15.8 percent said they used less (Table I-57). For each resource group, including salmon, non-salmon fish, large and small game, marine mammals, shellfish, birds, and plants, more residents claimed to be using about the same amount of wild foods in 1991 as they did the year before than did those saying they used more or less. However, compared to before the oil spill, only 39.5 percent said their uses of wild resources in 1991/92 were about the same, while 18.4 percent reported using more and a like percentage reported using less.

RESOURCE HARVESTS AND USES: YEAR TWO

Participation Rates

Again in Year Two, participation rates were high. In 1992/93, one hundred percent of Larsen Bay households used at least three wild resources, 89.2 percent harvested at least one resource, 89.2 percent received at least one resource, and 94.6 percent gave away at least one resource. Larsen Bay households used an average of 16.2 resources and harvested an average of 11.5 different resources (Table XIII-13). The average number of resources used declined slightly from 1991/92, but the average number of resources harvested stayed about the same. Approximately 75.0 percent of Larsen Bay's population engaged in subsistence harvest activities during the second year, and 60.8 percent processed wild resources. This represents a small increase from the first year in the percentage harvesting, and a small decrease in the percentage processing (Table XIII-14). In 1992/93, 27.5 percent of the people hunted, 55.8 percent fished, 1.7 percent trapped, and 59.2 percent gathered berries and other wild plants.

Harvest Quantities and Composition

The mean per capita harvest for all resources in Larsen Bay in 1992/93 was 353.3 pounds, and the mean household harvest was 1,145.7 pounds (Table XIII-26). Compared to 1991/92, when the per capita harvest was 294.6 pounds and the mean household harvest was 1,069.9 pounds, this represents a substantial 20 percent increase in the average per capita subsistence production and a 7.1 percent increase in average household production.

Approximately 70.6 percent of this subsistence harvest by weight was fish, and more than half of the total, 182.1 pounds or 51.6 percent, was salmon. Other finfish, at 67.2 pounds per capita, represented 19 percent of the total. Within the various resource categories, we observed that Larsen Bay residents harvested five species of salmon. Sockeye salmon was the most heavily taken, at 131.8 pounds per capita or 72.4 percent of the total salmon harvest. Sockeyes were followed by coho (silver) salmon, at 36.5 pounds per capita or 20 percent of the total salmon harvest. Much smaller amounts of chum, chinook (king), and pink salmon were caught.

In contrast to the previous year, 1992/93 sockeye salmon harvests were sharply higher. In 1991/92 sockeyes were just 72.6 pounds per capita and made up 66.7 percent of the total harvest, but the 1992/93 total of 131.8 pounds per capita points to an 81.5 percent increase and by weight totals more than all salmon species taken together in 1991/92. In fact, the dramatic increase in the number of pounds of sockeye taken accounts for virtually all of the increase in per capita subsistence production for all resource groups between the two study years (Tables XIII-18, XIII-26).

In 1993 we asked respondents for the first time to distinguish between beach seines and purse seines. By gear type and by weight, 57.4 percent of the salmon was taken in beach seines, 14.8 percent was taken by set gill net, 20.9 percent were removed from commercial catch, and 6.8 percent came from rod and reel. Other subsistence methods, including dipnets, accounted for less than 0.2 percent of the salmon harvest (Tables XIII-27, XIII-28, XIII-29).

The percentage of households harvesting salmon by gear type in 1992/93 shows 40.5 percent using subsistence gear, 32.4 percent using rod and reel, and 51.4 percent taking fish out of their commercial catch (Table XIII-30). This compares with 44.7 percent using subsistence gear, 47.3 percent using rod and reel, and 23.7 percent taking salmon out of their commercial catch in 1991/92.

For non-salmon finfish, the per capita average was 67.2 pounds per person, compared to 44.2 pounds in 1991/92, a 52 percent increase. The largest per capita harvest by volume was steelhead, at 28.3 pounds, followed by halibut, at 22.6 pounds. Other significant species in the harvest were gray cod (5.5 pounds), red rockfish (2.0 pounds), black rockfish 2.0 pounds), herring (1.9 pounds), greenling (1.6 pounds), and flounder (1.5 pounds). The sharpest change from the previous year was in the amount of steelhead taken. In 1992/93 about 13 percent of the steelhead by weight were removed from commercial catches, while 85 percent were caught with rod and reel, and two percent were taken using subsistence gear types. Virtually all of the rod and reel caught steelhead were taken from the Karluk River portage area,

and one household reported 76.5 percent of the community's rod and reel steelhead catch (Tables XIII-31, XIII-32, XIII-33). At least two household heads expressed concern that too many steelhead were being taken in from the portage area by Larsen Bay households and that the resource was in danger of being depleted.

Much of the community of Larsen Bay is built on a historic and prehistoric shell midden, so it is not surprising that marine invertebrates continued to figure strongly in the 1992/93 harvest, with 56.8 pounds harvested per person. This was about an eight percent increase over 1991/92. Approximately 42.4 percent of the overall shellfish harvest was comprised of butter clams (24.1 pounds per capita), with smaller amounts of littlenecks, steamers, and a few cockles. Crabs were also important, at 18.4 pounds per capita (32.4 percent of the total shellfish harvest), with the majority of the crab harvest coming from tanners (15.5 pounds). Octopus was another favorite, at 5.5 pounds per capita, along with sea cucumbers at 1.7 pounds, small chitons (bidarkis) at 1.8 pounds, and sea urchins at 0.7 pounds. Eight percent of the households reported using shrimp, five percent used china caps (limpets), and 2.7 percent used snails, but the harvest of these resources by weight was extremely low.

As for land mammals, Larsen Bay residents reported harvests that were only half of the previous year. In 1991/92 the heads of households reported 66.8 pounds per capita (Table XIII-18), but in 1992/93 they reported 33.0 pounds per capita, or 9.3 percent of all the resources (Table XIII-26). Of the game animal harvest, 29.5 pounds were deer, while 3.1 pounds were reindeer. Only 0.3 pounds of small game were taken for food, all from snowshoe hare, but 13.5 percent of the households used red fox and 10.8 percent harvested fox. One hunter tans his own fox skins and gives them to his wife to sew into fur garments.

Marine mammal harvests averaged 4.5 pounds per person, also a 50 percent reduction from the year before. The marine mammal harvest was split about equally between harbor seals at 2.8 pounds per capita, and Steller sea lions, at 1.7 pounds per capita. Approximately 10.8 percent of the households said they received whale meat and blubber which came from Barrow, and 2.7 percent gave some of this away. No sea otters were taken for subsistence. Marine mammals comprised only 1.3 percent of the total subsistence harvest for the community.

Birds and bird eggs were also down, coming in at 3.5 pounds per person compared to 4.8 pounds per person the previous year and representing just 1 percent of the total harvest. Almost all of the bird harvest came from ducks, and goldeneyes were the most heavily targeted (2.3 pounds). Other ducks represented in fractional amounts were white-winged and black scoters, harlequins, buffleheads, mergansers, scaups, mallards, teals, and redheads. Seagulls, seagull eggs, and parakeet auklets were also mentioned in small amounts.

Plants and berries were another resource group which showed a decline from 8.4 pounds per capita in 1991/92 to 6.3 pounds in 1992/93. For each person, an average of 5.6 pounds of berries and 0.7 pounds of other plants, greens, and mushrooms were harvested. Banyas (steam baths) are very popular

family activities in Larsen Bay, and many people gather alder switches to slap the skin and *tahiks* or "Aleut scrubbers" to wash with. Cottonwood was gathered for use in smoking salmon. Petrushkies, goose tongues, putchkies, nettles, and birch berries (birch tree buds) were also mentioned. Plants and berries represented 1.8 percent of the total harvest for all resources.

RESOURCE HARVESTS AND USES: YEAR THREE

Participation Rates

Participation rates were solid across the board again for the third year. In 1993/94, 100 percent of the households used at least two wild resources. Also, 92.5 percent of Larsen Bay households harvested at least one wild resource, and the same percentage attempted to harvest at least one resource. In 1993, 100 percent of the households received resources and 87.5 percent gave away resources. Larsen Bay households used an average of 16.8 different kinds of resources and harvested an average of 10.6 kinds of resources (Table XIII-13). This was roughly consistent with Years One and Two. As shown in Table XIII-14, 76.4 percent of the population engaged in subsistence harvest activities during the study year, and 66.0 percent processed wild resources, up slightly from the previous year. Also, 60.4 percent fished, 32.1 percent hunted, 3.8 percent trapped, and 65.1 percent gathered wild plants.

Harvest Quantities and Composition

The usable mean per capita harvest for all resources in Larsen Bay in 1993/94 was 451.0 pounds, and the mean household harvest was 1,195.2 pounds (Table XIII-34). Compared to 1992/93 when the per capita harvest was 353.3 pounds, this represents a substantial 27.6 percent increase--the highest per capita amount ever recorded for this community. The only closely comparable year was 1982/83, when the estimated per capita harvest was 403.5 pounds. Compared to 1991/92, average per capita subsistence production was up a dramatic 53 percent, and average household production was up 11.7 percent. Increases in household production lagged behind increases in per capita production due to an increase in the number of households and a trend towards substantially smaller household sizes.

Approximately 64.4 percent of the subsistence harvest by weight consisted of fish, and 44.9 percent of the harvest consisted of salmon. Other finfish, at 87.6 pounds, represented 19.4 percent of the total. Larsen Bay residents harvested five species of salmon. Sockeyes were by far the most popular, at 152.6 pounds per capita or 75.3 percent of the total salmon harvest. This was 20.8 pounds per capita more than the previous year. Cohos were a distant second at 36.5 pounds per capita or 18 percent of the total salmon harvest. Only small amounts of chinook, pink, and chum salmon were taken. In comparison with Years One and Two, 1993/94 total salmon harvests were again up sharply.

By gear type and by weight, 2.7 percent of the salmon harvest was taken in set gill nets, while 78.3 percent came from beach seines, 12 percent came out of commercial catches, and 7 percent came from rod and reel (Tables XIII-35, XIII-36, XIII-37). The percentage of households harvesting salmon by gear type in 1993/94 shows 42.5 percent using subsistence gear, 32.5 percent operating with rod and reel, and 35 percent taking fish out of their commercial catch (Table XIII-38). This compares with 40.5 percent using subsistence gear, 32.4 percent operating with rod and reel, and 51.4 percent taking fish out of their commercial catch in 1992/93.

For non-salmon finfish, the per capita average was 87.6 pounds per person compared to 67.2 pounds per person in 1992/93, a 30.4 percent increase. The largest per capita harvest by volume was halibut, at 36.9 pounds per capita, followed by Dolly Varden, at 19.2 pounds, and steelhead, at 17 pounds. Virtually all of the steelhead were taken from the Karluk River portage area. Other significant species represented in the non-salmon fish harvest were gray cod (6.0 pounds per person), flounders at 2.5 pounds, greenling at 2.3 pounds, lingcod at 2.3 pounds, and various species of rockfish, aggregated at 1.6 pounds (Tables XIII-38, XIII-39, XIII-40, XIII-41).

Shellfish continued to figure strongly in the 1993/94 harvest at 62.3 pounds per person, a 9.7 percent increase from the previous year and a 17 percent increase over 1991/92. Approximately 37.3 percent of the shellfish harvest came from butter clams (23.3 pounds per capita), followed by littlenecks (8.9 pounds per capita), and much smaller amounts of pinkneck clams and razor clams. Crabs were almost as prominent as clams, with 21.1 pounds harvested per person, making up 33.8 percent of the total shellfish harvest, an increase of 14.7 percent over 1992/93 levels. The vast majority of these crabs were Tanners, along with a few king crab. Octopus was significant, at 5.9 pounds per capita, along with chitons (1.2 pounds), sea urchins (0.4 pounds), and sea cucumbers (0.2 pounds). Approximately 90 percent of the sea cucumber harvest was removed from the commercial catch of local divers (Table XIII-27). Octopus is widely shared in the community, with 40 percent of the households harvesting and 80 percent of them using the resource. A similar sharing pattern is evident for crab, with 37.5 percent harvesting and 90 percent using.

For land mammals, Larsen Bay residents reported 76.6 pounds harvested per capita. This was a 14.7 percent increase over Year One and more than double over Year Two. This large increase was largely due to the taking of two moose on the Alaska Peninsula. In the past, moose has been an uncommon food in Larsen Bay because the species is not indigenous to Kodiak Island. Of the land mammals harvested, 64.8 pounds (84.6 percent) were deer, 10.2 pounds (13.3 percent) was moose, and 1.4 pounds (2 percent) was caribou. Hares were the only edible small game reported, at 0.2 pounds per person, but 7.5 percent of the households harvested and used red fox, and 2.5 percent harvested and used land otter.

Marine mammals made up two percent of the overall harvest by weight, totaling 9.6 pounds per person. This amount was twice what was reported in 1992/93 but about the same as Year One. The marine mammal harvest was split between harbor seals at 5.8 pounds per capita, and Steller sea lions, at

3.8 pounds per capita. In contrast to 1992/93, no whale meat or whale blubber came from community connections with Barrow. Also by contrast, an estimated 63.7 sea otters were taken for their pelts, compared to none the year before. However, because sea otters are not considered edible, they are not counted in the mean per capita harvest.

Birds and bird eggs were the only resource category where the per capita harvest was down compared to Years One and Two. The total per capita harvest was only 1.7 pounds, representing less than one percent of the total per capita harvest. This amount was also down about 51 percent from Year One and down about 64.6 percent from Year Two. Approximately half of the 1992/93 amount, 0.9 pounds, came from goldeneye ducks. Other species reported taken for subsistence were white-winged scoters, black scoters, bufflehead, merganser, scaup, oldsquaw, and canvasback ducks. Small numbers of parakeet auklets, ptarmigan, and herring gull eggs complete the picture.

Plants and berries bounced back from a low of 6.3 pounds per capita in Year Two to 10.6 pounds per capita in 1992/93. As such, plants and berries accounted for 2.3 percent of the overall harvest. For each person, an average of 9.6 pounds of berries, 0.9 pounds of plants, greens, and mushrooms, and 0.1 pounds of seaweed (kelp) were harvested. Each household reported using 1.8 cords of firewood; this wood was mostly for heating banyas.

In making self-assessments of change in subsistence uses, 51.0 percent of the household heads surveyed in Larsen Bay said that overall they used about the same amount of wild foods in 1993/94 as they had the previous year, 22.9 percent said they used more, and 25.7 percent said they used less (Table I-95). For each resource group, including salmon, non-salmon fish, large land mammals, shellfish, and plants, more residents claimed to be using about the same amount of wild foods in 1993/94 as they did the year before than did those saying they used more or less. However, a larger percentage said they were using fewer birds, fewer marine mammals, and fewer small land mammals.

Compared to before the oil spill, 35.7 percent said their overall uses of wild resources in 1993/94 were about the same, but 50 percent reported using less, and 14.3 percent reported using more (Fig. XIII-13). However, only three of the 14 sampled households who said their uses were down pointed to the spill as the reason for the decline (Table I-98). By resource group, more Larsen Bay residents claimed to be using about the same amount of non-salmon fish, large land mammals, shellfish, and wild plants as they did before the oil spill than did those claiming to use either more or less. However, a larger percentage of respondents reported using fewer salmon, fewer small mammals, marine mammals, and birds than before the spill compared to those respondents claiming to use the same or more of these resources than they did before the spill.

DISCUSSION AND CONCLUSIONS

Harvest Trends

The per capita harvest estimate for Larsen Bay in 1982/83 was a very impressive 403.5 pounds. This number plunged to 209 pounds in 1986 and increased slightly to 212 pounds in 1989, the year of the oil spill (Fig. XIII-8). In 1990/91 there were signs of a very strong recovery when per capita harvests soared back up to 344.5 pounds. In 1991/92 Larsen Bay residents harvested 294.6 pounds per capita of wild resources, and each household harvested an average of 11.1 different kinds of resources. Unlike other Kodiak villages studied following the 1989 *Exxon Valdez* oil spill, Larsen Bay had a slightly larger harvest in 1989 than in 1986. However, Larsen Bay's harvest in 1989 was 28.5 percent less than the average of surveys done in the 1980s (Fall 1991a; Fig. XIII-9). Also, unlike the other villages, Larsen Bay's harvest levels in 1991/1992 were well above the 1986 averages. Figure XIII-9 and Table XIII-16 report comparative harvests in pounds per person for each resource category for all the years for which data from the community are available. Figures XIII-10, XIII-11, and XIII-12 show the composition of wild resource harvests by resource category for each of the three study years. Figure XIII-14 and Table XIII-17 depict the composition of wild harvests by resource category for all the years for which data on Larsen Bay are available.

Compared to 1991/92 there was a notable rise and net increase in the pounds of wild food harvested per capita during 1992/93, but this was only true for certain resource groups and did not reflect a generalized trend. Salmon showed the strongest increases, along with non-salmon fish and shellfish, while land mammals, marine mammals, birds and eggs, and plants and berries all declined. It is difficult to determine the reasons for these changes, except that the 1992 salmon runs were stronger than they were in 1991 and the increased salmon harvest was largely responsible for the overall net increase in pounds per capita. While the number of deer taken decreased, there seemed to be widespread agreement that deer populations in Uyak Bay and Larsen Bay were still quite high.

Although the overall 1982/83 estimate of 403.5 pounds per person was not equaled or exceeded until 1993/94, both the 1990/91 and 1992/93 harvests were nevertheless very substantial, at 344.5 and 353.4 pounds respectively, and 1992/93 posted the highest amount ever recorded in the community for salmon (Fig. XIII-8). It is difficult to understand why the 1991/92 estimate of 294.6 pounds per capita was over 50 pounds less than what we estimated for 1990/91 or 1992/93. Were it not for the large decline in the harvest of marine mammals, particularly harbor seals and Steller sea lions, 1992/93 would probably have equaled or bettered the 1982 benchmark. The reduction in marine mammal harvests seems at least partly related to the sharp population decline experienced by these same animals throughout the Gulf of Alaska during the last decade (see Calkins and Goodwin 1988; Hoover 1988).

The study period 1993/94 was clearly a record year for subsistence harvests in Larsen Bay. Increases over Year One and Year Two were reported in every resource category except birds. Indeed,

Year Three seems to re-establish pre-spill harvest levels of the kind not seen since 1982/83, and it continuing a trend of steadily increasing harvests since 1991/92. Larsen Bay harvests are also high among Kodiak area villages. In the 1991/1992 study year, for example, this community's harvests were under those of Old Harbor but above those of Karluk and Ouzinkie. Indeed, Larsen Bay's per capita harvest of 294.6 pounds in 1991/92 was more than double the Kodiak road-connected area's 138.4 pounds per capita. Compared to other villages and to Kodiak, Larsen Bay has a particularly high harvest of deer and clams.

Although we were cognizant that the taking of two moose in 1993/94 was rather unusual, the overall increase in Larsen Bay's subsistence harvest was not apparent while we were in the field doing interviews and came to our attention only after the data had been compiled. One plausible explanation is that 1993/94 simply represents the high end of a normal subsistence harvest pattern that fluctuates widely over each decade depending on resource abundance, weather conditions, community employment levels, and other variables. Of all the Kodiak Island communities in our study, Larsen Bay's subsistence economy seems to be one of the healthiest in that post-spill harvest levels match and even exceed those estimated for pre-spill years. There is little doubt that Larsen Bay's subsistence economy suffered from the oil spill, a fact well-documented by key respondents but clouded by the 1986 pre-spill estimates. Nevertheless, harvest amounts over the past two years support our interpretation that the subsistence sector of the community's economy has made a strong recovery.

A curious feature accompanying the dramatic rise in harvest levels in Larsen Bay over the past three years is the rather sharp 16 percent decrease in the number of permanent residents and the simultaneous 14 percent increase in households. What this basically means is that fewer people are taking more wild food. At the same time, household sizes have decreased by nearly one person over the three study years and personal income has gone up. Such data have profound implications on the community's social structure, which historically has been composed of several large extended families living in separate households. In the past, many younger people living in separate residences would still eat one or more meals at the homes of their parents and would take weekly baths at their parents' banyas. The data certainly raise the question of whether this proliferation of smaller households and a steadily shrinking population are indicative of a breakdown in traditionally large closely-knit families.

Ongoing Local Issues

Even though only one Larsen Bay household linked perceived abnormalities in wild resources directly to oil contamination (Table I-90), the somewhat high level of concern about abnormalities in resources in the community could be taken as an indicator of continued apprehension about oil contamination of subsistence foods. At the same time, however, one key respondent who is noted for her heavy reliance on subsistence foods and whose opinions are widely respected on many issues, displayed no concern at all about oil contamination from the *Exxon Valdez*. She said this is because she had already

lived through another major oil spill that took place during the 1930s when a large vessel named The Aleutian was shipwrecked in Uyak Bay. Neither she nor her family ever suffered any ill effects from that spill, and she said she did not expect any from this one.

One continuing socioeconomic issue is that an increasing number of people in Larsen Bay are deriving an income from the commercial outfitting/guiding of both sport hunters and fishermen as well as brown bear viewers. In 1989 there was only one sports lodge operation, while in 1994 there were three locally owned and operated lodges that provide meals, lodging, transportation, and guiding for sport hunters, sport fishermen, and bear viewers. One person is a licensed transporter who is in the process of obtaining the remainder of the necessary licenses required to open his outfitting business. In addition to the local operators, at least one non-local commercial sport fishing guide/air transporter operates out of Larsen Bay during the summer. This business leases space at one of the lodges providing services to sport fishermen desiring to fish at the Karluk, Ayakulik, Dog Salmon and other river systems located on the south end of Kodiak Island. The revenue brought into the community by sport fishermen, hunters, and brown bear viewers has a positive economic impact on the community and adds substantially to the per capita income.

Consequently, more and more people in Larsen Bay are making a living guiding or outfitting deer sport hunters, and there are frequent complaints that these non-resident hunters are taking out too many local deer out of Uyak Bay, leaving only a few for subsistence. Larsen Bay residents, charter boat operators, local guides and lodges, and Kodiak air charter services all participate in the deer harvest. At the same time, an increasing number of non-local hunters and fishermen are competing with local subsistence users for such popular resources as deer, salmon, steelhead, and halibut. While there were complaints about non-local sport hunters harvesting too many deer, there were also some complaints from local residents about local hunters taking too many deer and not utilizing them. The same complaints were voiced during Year Two. There is a strong unhappiness about hunting parties that come in to the area on charter boats and legally take out 25 or 30 deer at a time--a complaint also voiced and heard repeatedly in Akhiok. Some Larsen Bay respondents were unhappy that commercial scuba divers "cleaned out" the area's sea urchins several years ago.

On another front, it is well-documented that Larsen Bay has a chronic problem with brown bears feeding at the open garbage dump and marauding the community, breaking into smokehouses, storage sheds, and private homes. Over the years a number of bears have been shot in defense of life and property. A garbage incinerator was scheduled to be put into operation in 1994. Many people fear the closing of the dump will result in all the "garbage bears" moving farther into the community in search of food. If this occurs, the encounters between brown bears and humans will increase, resulting in the destruction of personal property and perhaps attacks on humans. Most surely it will result in the death of the bears. Plastic bullets supplied to the community have not proven to be a sufficient deterrent. The Kodiak National Wildlife Refuge has no authority or responsibility for the movement of bears onto village

lands, but Larsen Bay residents see a concerted need for federal or state authorities to intervene and control what they perceive to be a dangerous situation.

SOCIAL EFFECTS FINDINGS

Results of the social effects questionnaire (SEQ) administered to respondents in Larsen Bay during Year One show that 34.2 percent of the households ate wild foods the day before the interview, and 23.7 percent said that wild foods were a main part of a meal (Table XIII-42). Results from Year Two are very similar, but in Year Three the percentage eating wild foods the day before dropped to 27.5, and the percentage that at wild foods as the main part of a meal was 22.5. In Year One some 50 percent of the households said that eating bidarkies (chitons) was important to them, and 89.5 percent of this group felt that bidarkies were safe for children to eat. In Years Two and Three, at least 69.4 percent of those surveyed said they eat bidarkies, and at least 90.0 percent felt that bidarkies in their harvest area were safe . Also, 71.1 percent of the households in Year One said that clams were important food, and 81.5 percent of this group said they felt clams were safe for children to eat. One person said, "The kids are still alive after eating them," suggesting a lack of serious concern. The great importance of clams in the diet of Larsen Bay residents is reflected in the fact over 97.2 percent of those surveyed in Years Two and Three said they eat clams, and over 85.7 percent felt they were safe for children to eat. This sentiment is no doubt radically different today as a result of several deaths on Kodiak Island from paralytic shellfish poisoning in the summer of 1994.

In Year One, 44.4 percent of the Larsen Bay households said eating harbor seal was important, and a full 100 percent of these households felt that seal was safe for children to eat . By Year Two, 52.8 percent said that they eat seal oil or seal meat, and 73.7 percent thought seals from their harvest areas were safe to consume. In Year Three 40 percent said they eat seal meat or seal oil and 93.8 percent of those felt that seals from local harvest areas were safe (Table XIII-43).

Opinions over the health of various animal populations used for subsistence were largely split, with no consensus on most species over the three study years. It was felt by a majority of the households in all three years, however, that clam populations were largely undiminished since 1988, the year before the oil spill. People in Larsen Bay were fairly divided over the health of deer populations, although in Year Two, a sizable 69 percent of the respondents insisted there were fewer deer. In Years One and Two over 54.8 percent felt that the number of bidarkis was essentially unchanged, but in Year Three this response dropped off to 44.8 percent. It was perceived by more than 41.9 percent of the respondents in Years One and Two that salmon were less abundant than they were in 1988, but by Year Three only 31 percent thought there were less. A majority of Larsen Bay respondents in Years One and Three thought halibut populations were about the same. In Year Two, however, only 34.5 percent held that opinion, while 20.7 percent thought there were less, and 41.4 percent indicated they did not know. A solid majority of over

61.3 percent in Years One and Two said octopus were just as abundant as before the spill, but this diminished to 48.3 percent in Year Three (Table XIII-44).

About 65 percent of the Larsen Bay households contacted in all three years said they did not have children from other households help them process wild foods, but less than 19.4 percent and as few as 9.7 percent felt that the oil spill negatively affected their participation with children in subsistence activities (Table XIII-45).

A majority of the households responded that sharing patterns for wild resources were about the same in 1991/92 as the previous year and about the same as the year before the oil spill (Table XIII-46). Thus, there was no perceived change in the community's willingness to share wild foods. The sharing of hunting and fishing gear, money, and labor was also about the same as the previous year and the year before the spill. Indeed there were a lot of statements about why sharing is still such an important part of village ethics. Some examples, each one taken from a different household, are:

> Some people can't harvest, so it makes them happy.
> We share with those who can't get out to harvest.
> I like to help out the old folks.
> Everything I harvest I give to others in the community.
> Share with people who don't have the ability to get their own.
> We only harvest what we can use. If we get more, we share.
> Everybody gets something when you share.
> We like to help out the older people.
> God says if you share it comes back to you.
> We can't get what people in Karluk get, and people in Karluk can't get what we have in Larsen Bay.
> Because if you share with others, they will share with you.
> A favor for a favor. It always comes back to you.
> If I get too much for myself, I just give it around.

The only negative statement we recorded came from one respondent who said:

> The spill split people, there's no sharing like there used to be.

As to elders living in the community, people were about evenly divided over whether the influence of elders had decreased or stayed the same. Very few believed that it had increased. About 40.5 percent interviewed in Year One, for example, felt elders' influence had decreased over the past three years, 45.9 percent felt their influence was the same, and just 8.1 percent felt it had increased. In Years Two and Three, these percentages varied only a little.

As far as voter participation is concerned, the community was engaged and quite active politically. In Year One approximately 71.1 percent said they voted in the last city council election, 81.6 percent said they voted in the last statewide election, and of those belonging to Native regional corporations, 76.7 percent said they voted in their last corporation election. The results from these questions was approximately the same in Years Two and Three. Voting in village corporation elections was not a relevant question for this community since the Larsen Bay village corporation merged with the Koniag Regional

Corporation some years ago. As to leadership, 63.9 percent said their view of what makes a good leader had not changed since the *Exxon Valdez* oil spill (Table XIII-47). Year Two and Year Three responses were highly similar.

On significance of place, a majority of Year One respondents said they lived in Larsen Bay because they have relatives who live there (73.7 percent), because they have friends who live there (71.1 percent), because there are hunting and fishing opportunities (86.8 percent), because there is affordable housing (73.7 percent), because they like the size of the community (73.7 percent), because there is less crime (60.5 percent), because of the beauty of the area (92.1 percent), because they have the necessary personal freedoms there (89.5 percent), and because of recreational opportunities (65.8 percent). In Year Two we found largely similar reasons for deciding to live in the community, but with somewhat different percentages: only 55.6 percent said it was because they have relatives who live there, only 44.4 percent because they have friends there, and only 55.6 percent because housing is available. Year Three was also comparable to Year One except that 70 percent said they lived in the community because the cost of living was affordable. A surprising 100 percent of those surveyed in Year Two said they lived in Larsen Bay because of the beauty of the area, and Year Three respondents were not far behind at 95 percent. Another significant reason mentioned in all three years was the quality of life.

There was no major single reason why people chose to stay in the community, and over 90 percent of the residents interviewed in all three years said they liked living there just as much now as they did before the oil spill occurred. The majority of respondents in Year One (60.5 percent) said they would rather not live somewhere else if given a choice, although a significant minority (36.8 percent) said they would. In Years Two and Three satisfaction with the community increased to 75 percent or more. A fairly large majority of 64 percent or more in all three study years expressed their happiness with the community by saying that they expect to stay put and still be living in the region when they are old, but in Year Three 55 percent declared that they would move away if wild foods were no longer available (Table XIII-48).

An extremely large majority (81.6 percent) in Year One said they felt confident that they will be able to hunt, fish, and gather wild resources in the future, while a minority (15.8 percent) did not. However, the heads of households were about evenly split between "yes" and "no" when asked whether they would continue to live in Larsen Bay even if wild resources were not available. In Years Two and Three those expressing confidence in future hunting, fishing, and gathering opportunities slipped to about 65 percent, while those lacking such confidence increased to as high as 35 percent.

Concerning the effectiveness of various agencies and groups in responding to the oil spill, those regarded as "effective" by a majority of the respondents in Year One include the U.S. Coast Guard, the IRA Council, commercial fishing groups, health aides, and local law enforcement. In Year Two, the majority of respondents rated only commercial fishing groups as being effective and doing a good job (Table XIII-49), but by Year Three none of the agencies and groups were rated as effective by a majority of those interviewed.

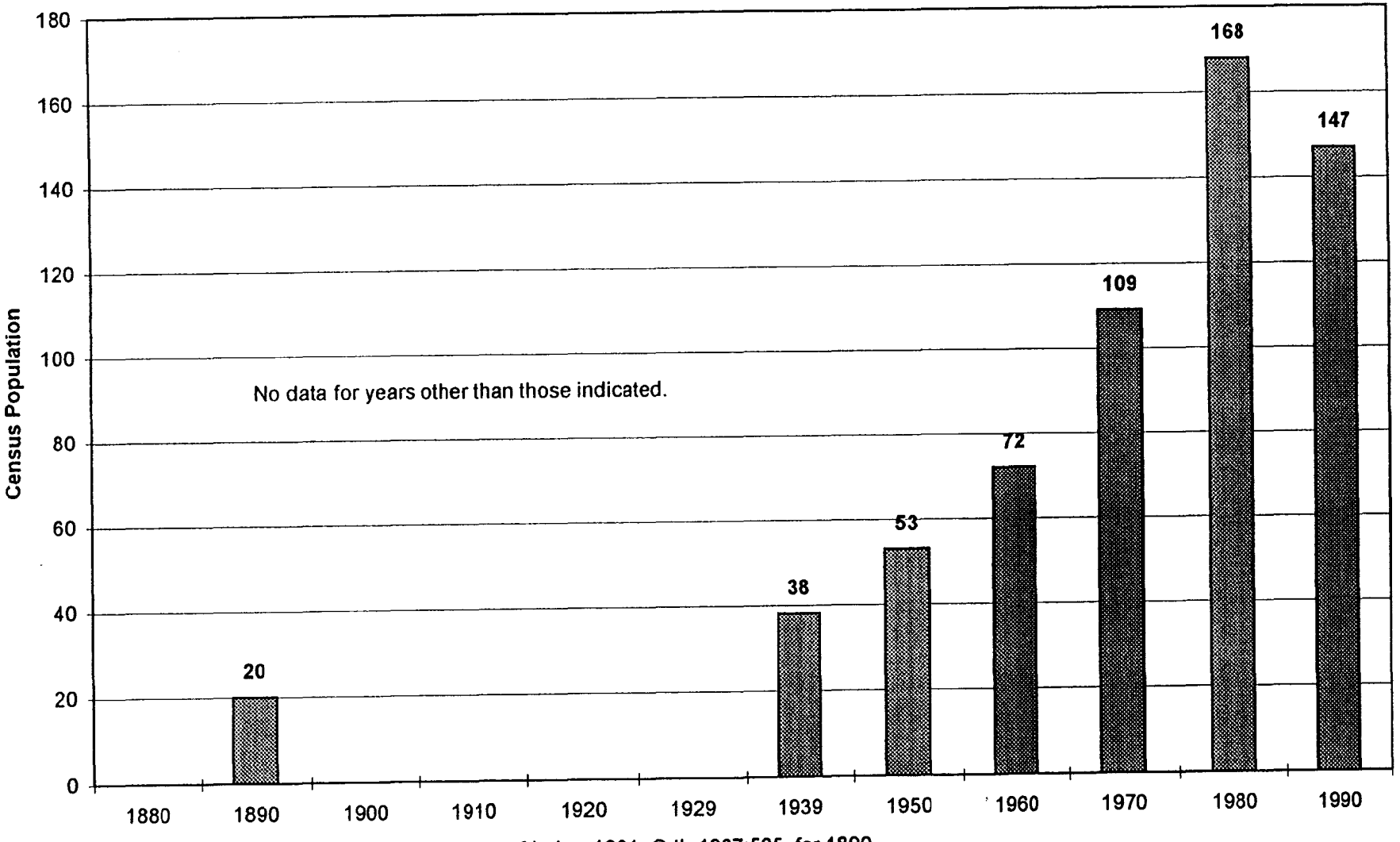
A solid majority of 66.7 percent of those surveyed in Year One said they were adequately informed about the safety of eating subsistence foods following the spill, 11.1 percent said they were somewhat informed, and 22.2 percent said they were not informed. In Year Two 57.1 percent said they were informed, while 10.7 percent said they were somewhat informed, and 25.0 percent said they were not . However, by Year Three only 40.6 percent said they were informed, while 31.3 percent said they were somewhat informed, and 21.9 percent said they were not. From this, we can see that the percentage of respondents claiming to be uninformed stayed about the same over the three study years, but the percentage claiming to be adequately informed eroded away (Table XIII-50). There was a wide variety of comments from both groups about the flow of information from the Oil Spill Health Task Force:

> Early on in spill heard about test results, have not heard any thing since then.
> Didn't hear any information from officials.
> Exxon was saying it's fine. It wasn't until I read those newsletters you guys sent out that I realized that some resources were contaminated.
> They sent out a report that said it was OK.
> Nobody came around to tell us or to check on it.
> They lied. No one tells you the truth. Especially if it's bad.

The majority of Year One respondents felt that Outer Continental Shelf (OCS) oil development, which has been proposed for Shelikof Strait, would result in a net decrease in fish, shellfish, marine mammals, but have a somewhat less adverse impact on populations of land mammals and birds. In Year Two, opinions about such decreases weakened somewhat except for shellfish, although 52.8 percent claimed that OCS development would reduce bird populations. By Year Three there was no majority agreement that any of the resources would decline as a result of oil development. The majority of those interviewed in both Years One and Two (52.8 percent) felt pessimistic that there would not be any more job opportunities created for local people if OCS development took place, but in Year Three only 35 percent shared this view. Most of the respondents in Years One, Two, and Three were very pessimistic about the ability of the oil companies and the government to clean up a large oil spill, although they were fairly divided about their readiness and ability to clean up a small spill of less than 1000 barrels (Table XIII-51).

Respondents in Year Two who were inclined to favor the search for offshore oil in their area (47.2 percent) slightly outnumbered those against the search for oil (44.4 percent), and in Year Three they were exactly equal (42.5 percent for and 42.5 percent against). However, when asked whether or not they were in favor of the development and production of offshore oil, there were actually a few more respondents in Years Two and Three who said "no" (47.2 and 45 percent, respectively) than "yes" (38.9 and 32.5 percent).

Figure XIII-1. Larsen Bay Census Population, 1880 - 1990



Sources: Rollins 1978; Alaska Department of Labor 1991; Orth 1967:565, for 1890

Table XIII-1. Sample Participation: Larsen Bay, 1992, 1993 and 1994

VARIABLE	1992 HOUSEHOLDS	1993 HOUSEHOLDS	1994 HOUSEHOLDS
Estimated Household Structures	60	48	54
Non-Residential Structures	0	0	0
Estimated Households	60	48	54
Interview Goal:	43	48	49
Households Interviewed	38	37	40
Failed to Contact/Unavailable	2	4	4
Refused	3	1	5
Vacant Residential Structures	2	0	1
Seasonal Households*	14	1	4
Non-Resident Household **	1	5	0
Invalid Households and Vacancies	17	6	5
Total Households Attempted:	60	48	54
Refusal Rate:	0	2.63%	11.11%
Non-Perm. HH Rate ("Vacancy Rate"):	0	12.5%	9.3%
Interview Goal (Percentage)	1	77.1%	81.6%
Social Effects Surveys Completed	38	36	0
Total Permanent Households	43	42	49
Percentage Interviewed	88.37%	88.10%	81.63%
Percentage of Total Households	100.00%	100.00%	100.00%
Interview Weighting Factor	1	1.135135135	1.225

NOTES:

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

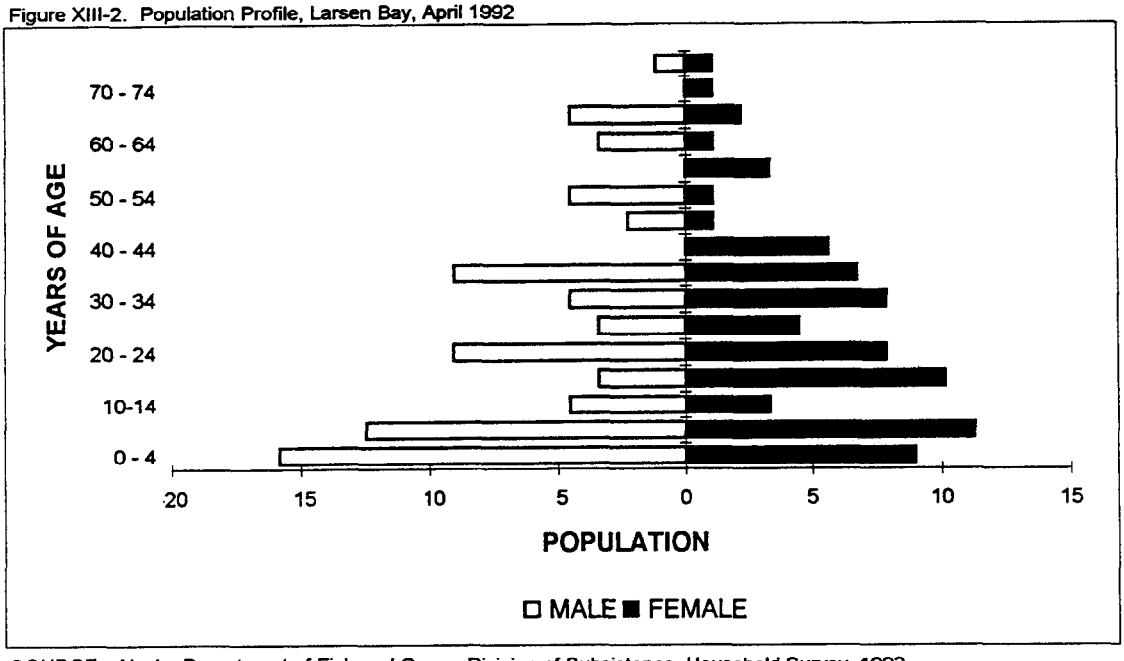
** Non-resident households are households which were not present during the study year or which were resident less than the required number of months.

Table XIII-2 . Demographic Characteristics of Households, Larsen Bay, April 1992, April 1993, and April 1994

Characteristics	1991/92	1992/93	1993/94
Sampled Households	38	37	40
Number of Households in the Community	43	42	49
Percentage of Households Sampled	88.37	88.10	81.63
Household Size			
Mean	3.63	3.24	2.65
Minimum	1	1	1
Maximum	7	7	6
Sample Population	138	120	106
Estimated Community Population	156.16	136.22	129.85
Age			
Mean	25.88	26.30	28.45
Minimum	0.11	0.05	0.70
Maximum	76.74	80.70	81.70
Median	21.999	22.871	26.207
Length of Residency - Population			
Mean	11.00	13.64	12.71
Minimum	0.11499	0.054757	0.625
Maximum	67.92	85.13	69.91
Length of Residency - Household Heads			
Mean	16.79	19.68	15.90
Minimum	0.625	0.625	0.625
Maximum	67.91513	85.125	69.91
Sex			
Males			
Number	78.08	70.38	74.73
Percentage	50.00	51.67	57.55
Females			
Number	78.08	65.84	55.13
Percentage	50.00	48.33	42.45
Alaska Native			
Households (Either Head)			
Number	39.61	37.46	41.65
Percentage	92.11	89.19	85.00
Estimated Population			
Number	130.13	113.51	109.03
Percentage	83.33	83.33	83.96

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

Figure XIII-2. Population Profile, Larsen Bay, April 1992



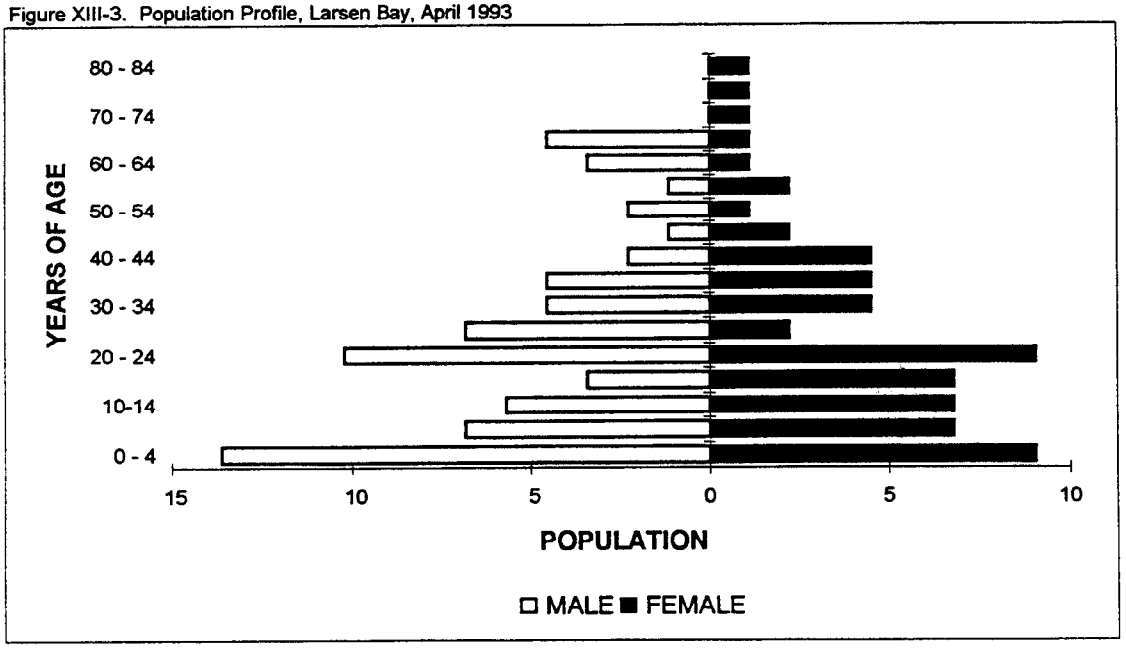
SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1992

Table XIII-3. Population Profile, Larsen Bay, April 1992

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	15.84	20.29%	20.29%	9.05	11.59%	11.59%	24.89	15.94%	15.94%
5-9	12.45	15.94%	36.23%	11.32	14.49%	26.09%	23.76	15.22%	31.16%
10-14	4.53	5.80%	42.03%	3.39	4.35%	30.43%	7.92	5.07%	36.23%
15 - 19	3.39	4.35%	46.38%	10.18	13.04%	43.48%	13.58	8.70%	44.93%
20 - 24	9.05	11.59%	57.97%	7.92	10.14%	53.62%	16.97	10.87%	55.80%
25 - 29	3.39	4.35%	62.32%	4.53	5.80%	59.42%	7.92	5.07%	60.87%
30 - 34	4.53	5.80%	68.12%	7.92	10.14%	69.57%	12.45	7.97%	68.84%
35 - 39	9.05	11.59%	79.71%	6.79	8.70%	78.26%	15.84	10.14%	78.99%
40 - 44	0.00	0.00%	79.71%	5.66	7.25%	85.51%	5.66	3.62%	82.61%
45 - 49	2.26	2.90%	82.61%	1.13	1.45%	86.96%	3.39	2.17%	84.78%
50 - 54	4.53	5.80%	88.41%	1.13	1.45%	88.41%	5.66	3.62%	88.41%
55 - 59	0.00	0.00%	88.41%	3.39	4.35%	92.75%	3.39	2.17%	90.58%
60 - 64	3.39	4.35%	92.75%	1.13	1.45%	94.20%	4.53	2.90%	93.48%
65 - 69	4.53	5.80%	98.55%	2.26	2.90%	97.10%	6.79	4.35%	97.83%
70 - 74	0.00	0.00%	98.55%	1.13	1.45%	98.55%	1.13	0.72%	98.55%
75 - 79	1.13	1.45%	100.00%	1.13	1.45%	100.00%	2.26	1.45%	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	78.08	50.00%		78.08	50.00%		156.16	100.00%	

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

Figure XIII-3. Population Profile, Larsen Bay, April 1993



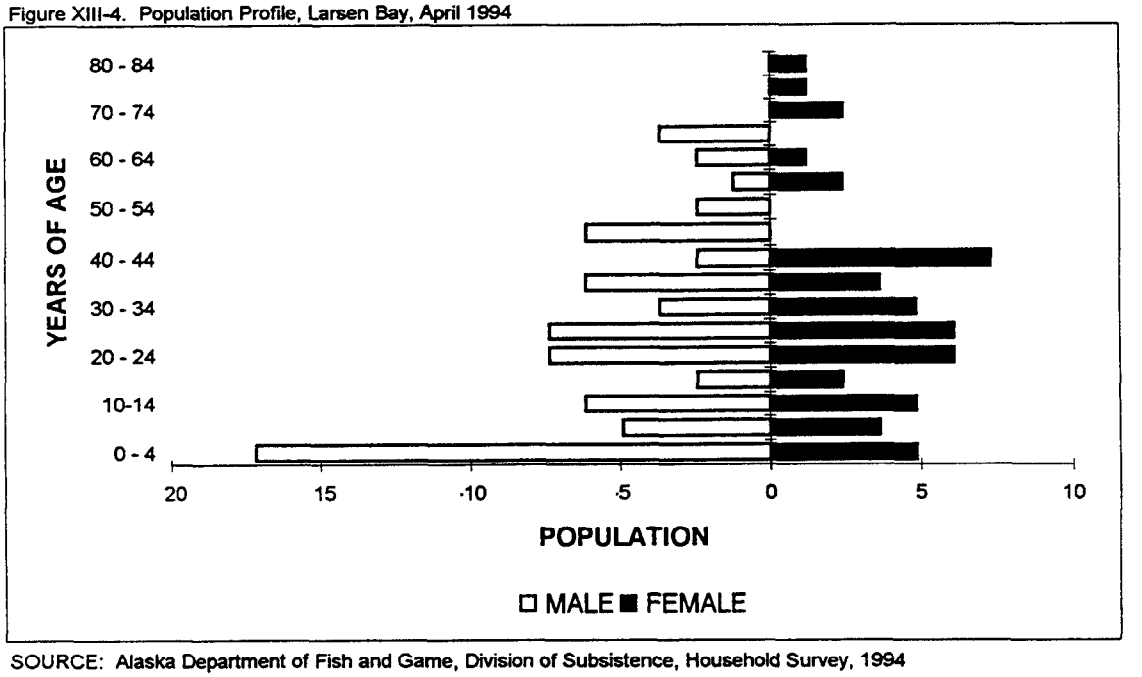
SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table XIII-4. Population Profile, Larsen Bay, April 1993

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	13.62	19.35%	19.35%	9.08	13.79%	13.79%	22.70	16.67%	16.67%
5-9	6.81	9.68%	29.03%	6.81	10.34%	24.14%	13.62	10.00%	26.67%
10-14	5.68	8.06%	37.10%	6.81	10.34%	34.48%	12.49	9.17%	35.83%
15 - 19	3.41	4.84%	41.94%	6.81	10.34%	44.83%	10.22	7.50%	43.33%
20 - 24	10.22	14.52%	56.45%	9.08	13.79%	58.62%	19.30	14.17%	57.50%
25 - 29	6.81	9.68%	66.13%	2.27	3.45%	62.07%	9.08	6.67%	64.17%
30 - 34	4.54	6.45%	72.58%	4.54	6.90%	68.97%	9.08	6.67%	70.83%
35 - 39	4.54	6.45%	79.03%	4.54	6.90%	75.86%	9.08	6.67%	77.50%
40 - 44	2.27	3.23%	82.26%	4.54	6.90%	82.76%	6.81	5.00%	82.50%
45 - 49	1.14	1.61%	83.87%	2.27	3.45%	86.21%	3.41	2.50%	85.00%
50 - 54	2.27	3.23%	87.10%	1.14	1.72%	87.93%	3.41	2.50%	87.50%
55 - 59	1.14	1.61%	88.71%	2.27	3.45%	91.38%	3.41	2.50%	90.00%
60 - 64	3.41	4.84%	93.55%	1.14	1.72%	93.10%	4.54	3.33%	93.33%
65 - 69	4.54	6.45%	100.00%	1.14	1.72%	94.83%	5.68	4.17%	97.50%
70 - 74	0.00	0.00%	100.00%	1.14	1.72%	96.55%	1.14	0.83%	98.33%
75 - 79	0.00	0.00%	100.00%	1.14	1.72%	98.28%	1.14	0.83%	99.17%
80 - 84	0.00	0.00%	100.00%	1.14	1.72%	100.00%	1.14	0.83%	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	70.38	51.67%		65.84	48.33%		136.22	100.00%	

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

Figure XIII-4. Population Profile, Larsen Bay, April 1994



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

Table XIII-5. Population Profile, Larsen Bay, April 1994

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	17.15	22.95%	22.95%	4.90	8.89%	8.89%	22.05	16.98%	16.98%
5-9	4.90	6.56%	29.51%	3.68	6.67%	15.56%	8.58	6.60%	23.58%
10-14	6.13	8.20%	37.70%	4.90	8.89%	24.44%	11.03	8.49%	32.08%
15 - 19	2.45	3.28%	40.98%	2.45	4.44%	28.89%	4.90	3.77%	35.85%
20 - 24	7.35	9.84%	50.82%	6.13	11.11%	40.00%	13.48	10.38%	46.23%
25 - 29	7.35	9.84%	60.66%	6.13	11.11%	51.11%	13.48	10.38%	56.60%
30 - 34	3.68	4.92%	65.57%	4.90	8.89%	60.00%	8.58	6.60%	63.21%
35 - 39	6.13	8.20%	73.77%	3.68	6.67%	66.67%	9.80	7.55%	70.75%
40 - 44	2.45	3.28%	77.05%	7.35	13.33%	80.00%	9.80	7.55%	78.30%
45 - 49	6.13	8.20%	85.25%	0.00	0.00%	80.00%	6.13	4.72%	83.02%
50 - 54	2.45	3.28%	88.52%	0.00	0.00%	80.00%	2.45	1.89%	84.91%
55 - 59	1.23	1.64%	90.16%	2.45	4.44%	84.44%	3.68	2.83%	87.74%
60 - 64	2.45	3.28%	93.44%	1.23	2.22%	86.67%	3.68	2.83%	90.57%
65 - 69	3.68	4.92%	98.36%	0.00	0.00%	86.67%	3.68	2.83%	93.40%
70 - 74	0.00	0.00%	98.36%	2.45	4.44%	91.11%	2.45	1.89%	95.28%
75 - 79	0.00	0.00%	98.36%	1.23	2.22%	93.33%	1.23	0.94%	96.23%
80 - 84	0.00	0.00%	98.36%	1.23	2.22%	95.56%	1.23	0.94%	97.17%
85 - 89	0.00	0.00%	98.36%	0.00	0.00%	95.56%	0.00	0.00%	97.17%
90 - 94	0.00	0.00%	98.36%	0.00	0.00%	95.56%	0.00	0.00%	97.17%
95 - 99	0.00	0.00%	98.36%	0.00	0.00%	95.56%	0.00	0.00%	97.17%
100 - 104	0.00	0.00%	98.36%	0.00	0.00%	95.56%	0.00	0.00%	97.17%
Missing	1.23	1.64%	100.00%	2.45	4.44%	100.00%	3.68	2.83%	100.00%
TOTAL	74.73	57.55%		55.13	42.45%		129.85	100.00%	

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

Table XIII-6. Employment Characteristics, Larsen Bay, 1991/92, 1992/93, and 1993/94

Characteristics		1991/92	1992/93	1993/94
ADULTS				
Total		96.18	86.27	82.08
Employed				
	Number	82.61	70.38	71.05
	Percentage	85.88	81.58	86.57
Jobs				
	Number	135.79	129.41	126.18
	Mean	1.64	1.84	1.78
	Minimum	1	1	1
	Maximum	4	5	4
Months Employed				
	Mean	8.11	8.50	8.31
	Minimum	1	1	1
	Maximum	12	12	12
	Year-Round	30.14	27.42	20.69
HOUSEHOLDS				
Total		43.00	42.00	49.00
Employed				
	Number	41.87	40.86	45.33
	Percentage	97.37	97.30	92.50
Jobs per Employed Household				
	Mean	3.24	3.17	2.78
	Minimum	1	1	1
	Maximum	6	8	7
Employed Adults				
	Mean	1.97	1.72	1.57
	Minimum	1	1	1
	Maximum	4	6	3

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

Table XIII-7. Community, Household, and Per Capita Income, All Sources and by Employer Type, Larsen Bay, 1991/92

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$1,270,073.00	$29,536.58	$8,133.26
Earned Income	$934,453.71	$21,731.48	$5,984.03
Agriculture, Forestry, and Fishing	270,309.06	6,286.26	1,731.00
Agriculture	3,621.05	84.21	23.19
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	266,688.01	6,202.05	1,707.81
Hatchery/Enhancement	0.00	0.00	0.00
Commercial Fishing	266,688.01	6,202.05	1,707.81
Hunting/Trapping	0.00	0.00	0.00
Mining	0.00	0.00	0.00
Construction	20,368.42	473.68	130.43
Manufacturing	5,657.89	131.58	36.23
Cannery	AMT UNK	AMT UNK	AMT UNK
Other Manufacturing	5,657.89	131.58	36.23
Logging/Timber	0.00	0.00	0.00
Transportation, Communications, and Utilities	30,213.16	702.63	193.48
Trade	47,384.87	1,101.97	303.44
Wholesale	0.00	0.00	0.00
Retail	47,384.87	1,101.97	303.44
Finance, Insurance, and Real Estate	452.63	10.53	2.90
Services	136,468.42	3,173.68	873.91
Government	423,599.25	9,851.15	2,712.63
Federal	37,907.89	881.58	242.75
State	3,734.21	86.84	23.91
Local	381,957.15	8,882.72	2,445.97
Local Government	217,991.36	5,069.57	1,395.97
Local Education	163,965.79	3,813.16	1,050.00
Unknown	AMT UNK	AMT UNK	AMT UNK
Other Income	$335,619.29	$7,805.10	$2,149.23

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

Table XIII-8. Community, Household, and Per Capita Other Income by Source, Larsen Bay, 1991/92

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$335,619.29	$7,805.10	$2,149.23
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	13.16	34,035.07	791.51	217.95
Adult Public Assistance	0.00	0.00	0.00	0.00
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	2.63	AMT UNK	AMT UNK	AMT UNK
Longevity Bonus	13.16	23,763.16	552.63	152.17
Social Security	15.79	40,292.81	937.04	258.03
Workman's Comp./Insurance	2.63	AMT UNK	AMT UNK	AMT UNK
Energy Assistance	63.16	13,950.89	324.44	89.34
Supplemental Security Income	2.63	4,073.68	94.74	26.09
Food Stamps	18.42	29,346.37	682.47	187.93
Unemployment	42.11	26,145.21	608.03	167.43
Native Corporation Dividend	81.58	39,346.05	915.02	251.96
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	92.11	115,907.63	2,695.53	742.25
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	8,758.42	203.68	56.09

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

Figure XIII-5. Employment by Industry, Larsen Bay, 1991/92

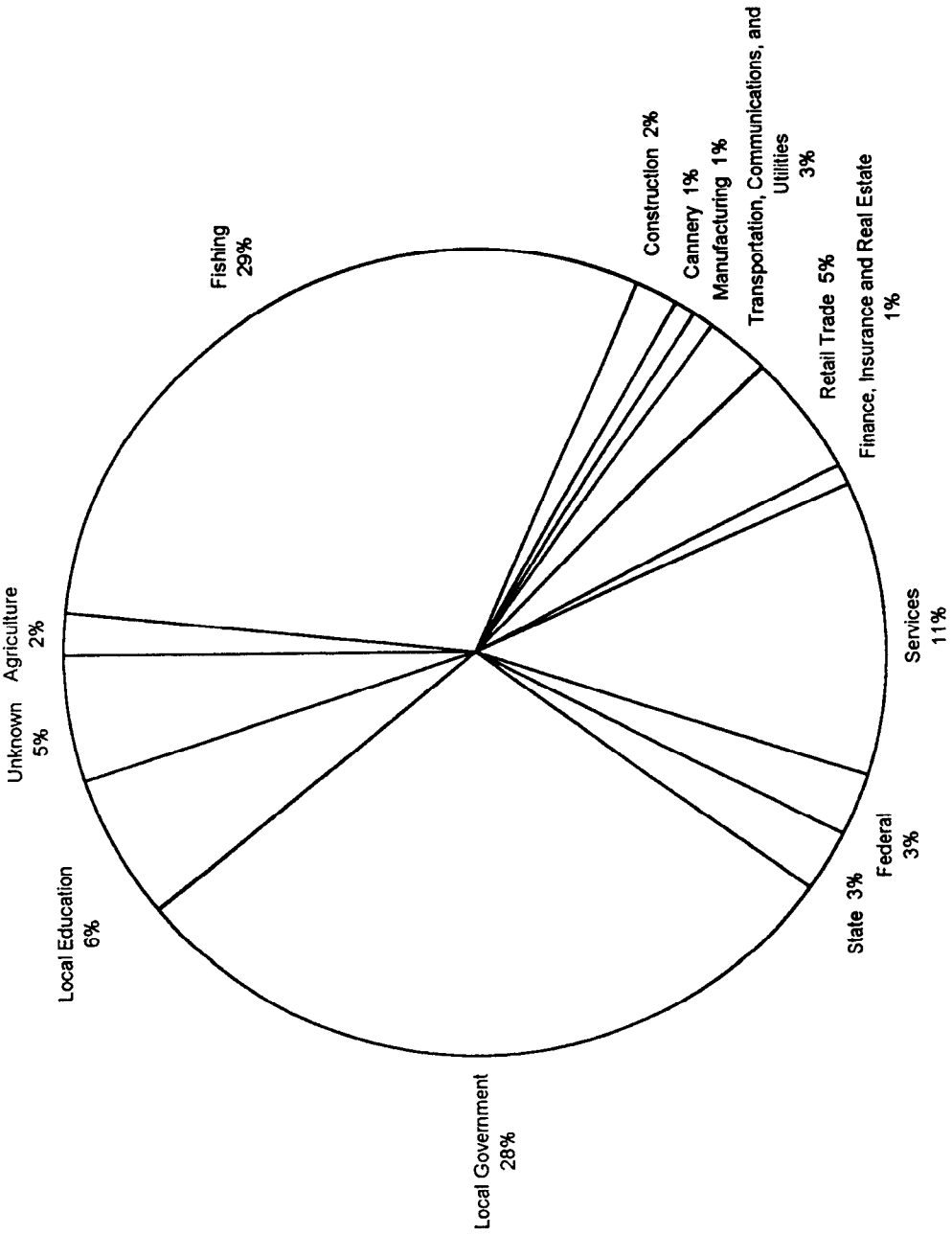


Table XIII-9. Community, Household, and Per Capita Income, All Sources and by Employer Type, Larsen Bay, 1992/93

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$1,236,959.97	$29,451.43	$9,080.86
Earned Income	$939,226.48	$22,362.54	$6,895.12
Agriculture, Forestry, and Fishing	293,631.08	6,991.22	2,155.63
Agriculture	0.00	0.00	0.00
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	293,631.08	6,991.22	2,155.63
Hatchery/Enhancement	0.00	0.00	0.00
Commercial Fishing	293,631.08	6,991.22	2,155.63
Hunting/Trapping	0.00	0.00	0.00
Mining	0.00	0.00	0.00
Construction	40,864.86	972.97	300.00
Manufacturing	13,621.62	324.32	100.00
Cannery	13,621.62	324.32	100.00
Other Manufacturing	0.00	0.00	0.00
Logging/Timber	0.00	0.00	0.00
Transportation, Communications, and Utilities	54,486.49	1,297.30	400.00
Trade	13,621.62	324.32	100.00
Wholesale	0.00	0.00	0.00
Retail	13,621.62	324.32	100.00
Finance, Insurance, and Real Estate	AMT UNK	AMT UNK	AMT UNK
Services	269,299.46	6,411.89	1,977.00
Government	253,701.34	6,040.51	1,862.49
Federal	AMT UNK	AMT UNK	AMT UNK
State	15,891.89	378.38	116.67
Local	237,809.45	5,662.13	1,745.82
Local Government	139,328.76	3,317.35	1,022.85
Local Education	98,480.69	2,344.78	722.97
Unknown	0.00	0.00	0.00
Other Income	$297,733.49	$7,088.89	$2,185.74

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

Table XIII-10. Community, Household, and Per Capita Other Income by Source, Larsen Bay, 1992/93

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$297,733.49	$7,088.89	$2,185.74
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	8.11	24,476.35	582.77	179.69
Adult Public Assistance	5.41	AMT UNK	AMT UNK	AMT UNK
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	8.11	18,389.19	437.84	135.00
Longevity Bonus	13.51	23,554.05	560.81	172.92
Social Security	16.22	52,579.46	1,251.89	386.00
Workman's Comp./Insurance	0.00	0.00	0.00	0.00
Energy Assistance	59.46	12,857.14	306.12	94.39
Supplemental Security Income	2.70	4,127.35	98.27	30.30
Food Stamps	27.03	34,891.22	830.74	256.15
Unemployment	24.32	20,437.54	486.61	150.04
Native Corporation Dividend	72.97	18,137.19	431.84	133.15
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	91.89	87,682.38	2,087.68	643.70
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	2.70	601.62	14.32	4.42
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 XIII-6. Employment by Industry, Larsen Bay, 1992/93

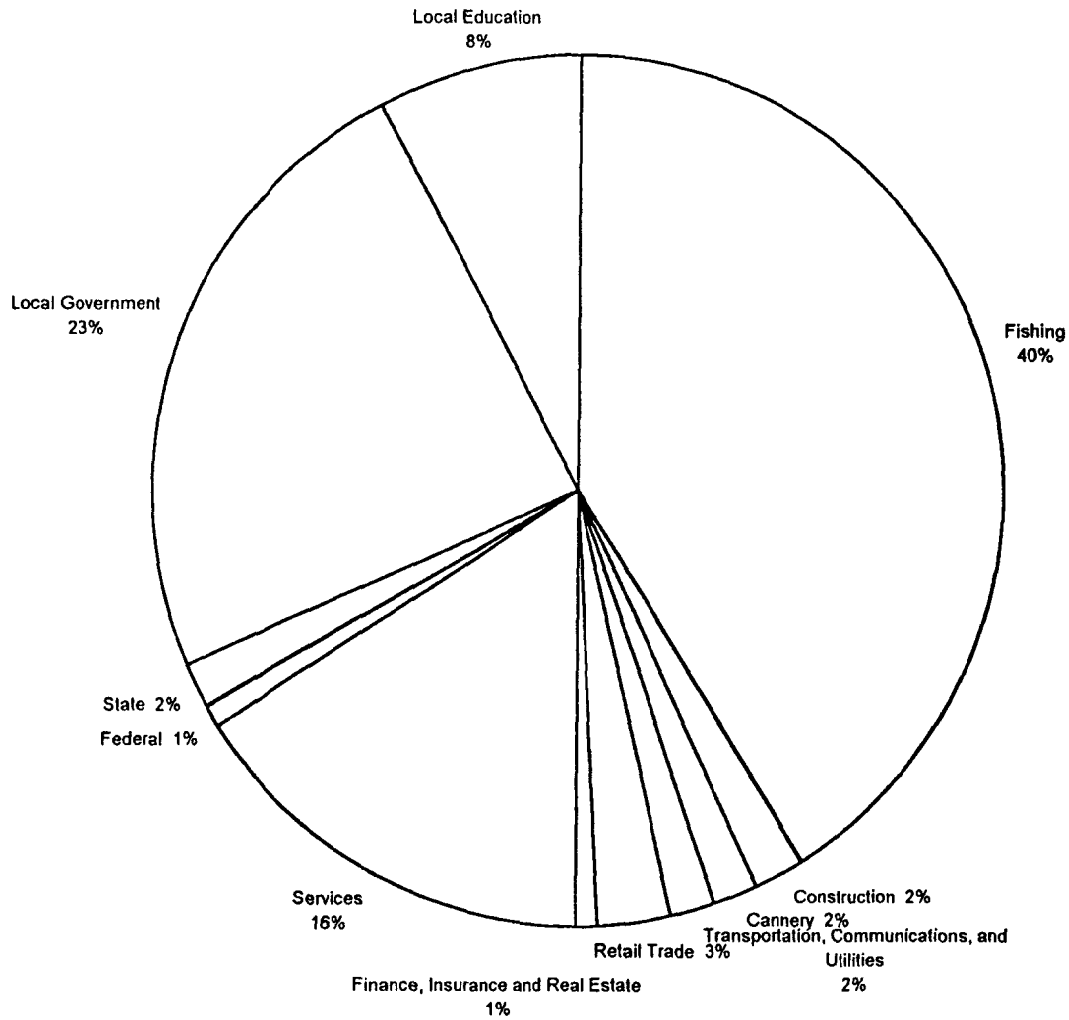


Table XIII-11. Community, Household, and Per Capita Income, All Sources and by Employer Type, Larsen Bay, 1993/94

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$1,633,367.45	$33,334.03	$12,578.88
Earned Income	$1,286,729.20	$26,259.78	$9,909.35
Agriculture, Forestry, and Fishing	485,088.50	9,899.77	3,735.76
Agriculture	0.00	0.00	0.00
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	485,088.50	9,899.77	3,735.76
Hatchery/Enhancement	0.00	0.00	0.00
Commercial Fishing	485,088.50	9,899.77	3,735.76
Hunting/Trapping	0.00	0.00	0.00
Mining	0.00	0.00	0.00
Construction	110,371.28	2,252.48	849.99
Manufacturing	26,337.50	537.50	202.83
Cannery	26,337.50	537.50	202.83
Other Manufacturing	0.00	0.00	0.00
Logging/Timber	0.00	0.00	0.00
Transportation, Communications, and Utilities	39,108.13	798.13	301.18
Trade	9,800.00	200.00	75.47
Wholesale	0.00	0.00	0.00
Retail	9,800.00	200.00	75.47
Finance, Insurance, and Real Estate	0.00	0.00	0.00
Services	165,900.00	3,385.71	1,277.63
Government	450,123.80	9,186.20	3,466.49
Federal	0.00	0.00	0.00
State	22,907.50	467.50	176.42
Local	427,216.30	8,718.70	3,290.08
Local Government	178,639.30	3,645.70	1,375.74
Local Education	248,577.00	5,073.00	1,914.34
Unknown	AMT UNK	AMT UNK	AMT UNK
Other Income	$346,638.25	$7,074.25	$2,669.53

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

Table XIII-12. Community, Household, and Per Capita Other Income by Source, Larsen Bay, 1993/94

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$346,638.25	$7,074.25	$2,669.53
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	10.00	24,872.40	507.60	191.55
Adult Public Assistance	0.00	0.00	0.00	0.00
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	5.00	5,439.00	111.00	41.89
Longevity Bonus	15.00	25,725.00	525.00	198.11
Social Security	17.50	80,511.90	1,643.10	620.04
Workman's Comp./Insurance	2.50	1,837.50	37.50	14.15
Energy Assistance	42.50	10,680.78	217.98	82.25
Supplemental Security Income	0.00	0.00	0.00	0.00
Food Stamps	27.50	25,830.35	527.15	198.92
Unemployment	35.00	30,257.50	617.50	233.02
Native Corporation Dividend	67.50	20,331.33	414.93	156.58
Dividend/Interest	0.00	0.00	0.00	0.00
Child Support	2.50	7,350.00	150.00	56.60
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	87.50	109,323.90	2,231.10	841.92
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	5.00	4,478.60	91.40	34.49
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
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 XIII-7. Employment by Industry, Larsen Bay, 1993/94

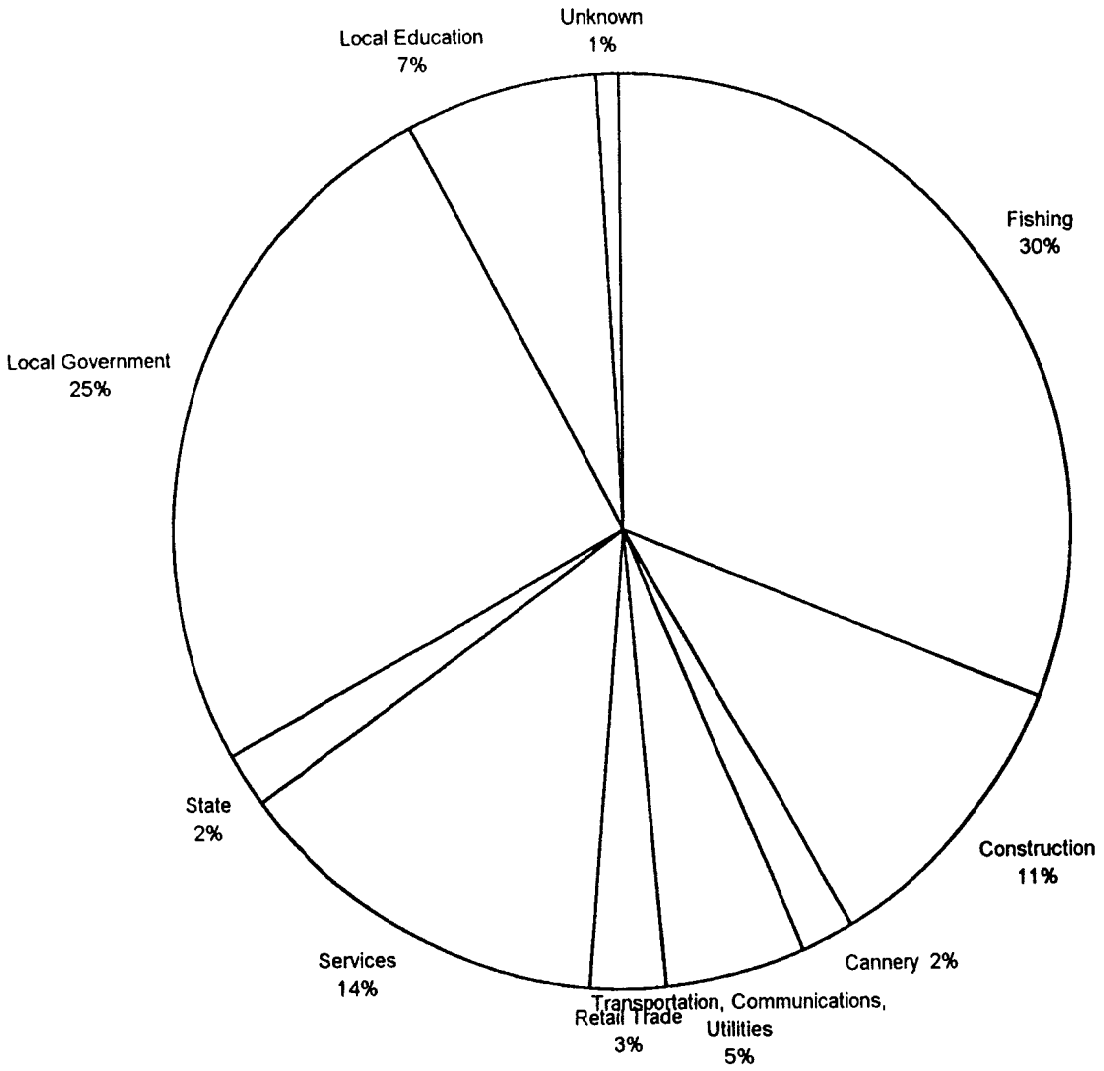


Table XIII-13. Characteristics of Resource Harvest and Use, Larsen Bay, 1991/92, 1992/93, and 1993/94

Study Year	1991/92	1992/93	1993/94
Mean Number Of Resources Used Per Household	17.50	16.16	16.80
Minimum	4	3	2
Maximum	42	36	41
95 % Confidence Limit (+/-)	4.99	6.17	6.84
Median	16.5	13	16
Mean Number Of Resources Attempted To Harvest Per Household	11.39	11.84	10.93
Minimum	0	0	0
Maximum	26	33	30
95 % Confidence Limit (+/-)	7.91	8.88	10.34
Median	10	10	9.5
Mean Number Of Resources Harvested Per Household	11.13	11.46	10.60
Minimum	0	0	0
Maximum	26	33	30
95 % Confidence Limit (+/-)	7.81	9.09	10.58
Median	10	10	9.5
Mean Number Of Resources Received Per Household	9.66	7.46	9.50
Minimum	0	0	1
Maximum	36	26	29
95 % Confidence Limit (+/-)	8.95	9.77	9.25
Median	8	6	8
Mean Number Of Resources Given Away Per Household	7.63	7.30	8.05
Minimum	0	0	0
Maximum	24	26	18
95 % Confidence Limit (+/-)	9.67	9.41	10.97
Median	6.5	6	8
Mean Household Harvest, Pounds	1,069.92	1,145.72	1,195.17
Minimum	0.00	0.00	0.00
Maximum	6,564.13	6,092.74	8,072.73
Total Pounds Harvested	46,006.51	48,120.10	58,563.26
Community Per Capita Harvest, Pounds	294.62	353.26	451.01
Percent Using Any Resource	100.00	100.00	100.00
Percent Attempting To Harvest Any Resource	92.11	89.19	92.50
Percent Harvesting Any Resource	92.11	89.19	92.50
Percent Receiving Any Resource	97.37	89.19	100.00
Percent Giving Away Any Resource	92.11	94.59	87.50
Number Of Households In Sample	38	37	40
Number of Resources Available	113	124	138

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

Table XIII-14. Participation in the Harvest and Processing of Wild Resources, Larsen Bay, 1991/92, 1992/93, and 1993/94

Study Year			1991/92	1992/93	1993/94
Total Number of People			156.16	136.22	129.85
GAME	Hunt	Number	41.87	37.46	41.65
		Percentage	26.81	27.50	32.08
		Missing	3.39	0.00	0.00
		Missing %	2.17	0.00	0.00
	Process	Number	62.24	53.35	51.45
		Percentage	39.86	39.17	39.62
		Missing	3.39	0.00	0.00
		Missing %	2.17	0.00	0.00
FISH	Fish	Number	83.74	76.05	78.40
		Percentage	53.62	55.83	60.38
		Missing	3.39	1.14	0.00
		Missing %	2.17	0.83	0.00
	Process	Number	86.00	68.11	73.50
		Percentage	55.07	50.00	56.60
		Missing	3.39	0.00	0.00
		Missing %	2.17	0.00	0.00
FURBEARERS	Hunt or Trap	Number	3.39	2.27	4.90
		Percentage	2.17	1.67	3.77
		Missing	3.39	0.00	0.00
		Missing %	2.17	0.00	0.00
	Process	Number	5.66	6.81	4.90
		Percentage	3.62	5.00	3.77
		Missing	3.39	0.00	0.00
		Missing %	2.17	0.00	0.00
PLANTS	Gather	Number	93.92	80.59	84.53
		Percentage	60.14	59.17	65.09
		Missing	3.39	1.14	0.00
		Missing %	2.17	0.83	0.00
	Process	Number	81.47	60.16	74.73
		Percentage	52.17	44.17	57.55
		Missing	3.39	0.00	0.00
		Missing %	2.17	0.00	0.00
ANY RESOURCE					
	Attempt	Number	107.50	102.16	99.23
		Percent	68.84	75.00	76.42
	Process	Number	101.84	82.86	85.75
		Percent	65.22	60.83	66.04

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

Table XIII-15. Percentage of Households Sharing Resources by Community, Larsen 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	73.68	60.53	73.68	57.89	78.95	78.95	71.05	52.63	34.21	15.79	34.21	36.84	63.16	55.26	97.37	92.11
Anchorage	0.00	2.63	0.00	2.63	0.00	5.26	5.26	7.89	0.00	0.00	0.00	0.00	0.00	0.00	5.26	10.53
Barrow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63	0.00	0.00	0.00	0.00	0.00	2.63	0.00
Fairbanks	0.00	2.63	0.00	2.63	0.00	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63
Fort Yukon	0.00	0.00	0.00	0.00	0.00	0.00	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63	0.00
Gakona	0.00	0.00	0.00	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63
Karluk	13.16	2.63	7.89	7.89	0.00	7.89	0.00	5.26	0.00	2.63	0.00	5.26	5.26	5.26	15.79	18.42
Kenai	0.00	2.63	0.00	0.00	0.00	2.63	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63	5.26
Kodiak City	2.63	13.16	7.89	10.53	5.26	26.32	7.89	7.89	0.00	0.00	0.00	5.26	5.26	2.63	18.42	36.84
Larsen Bay	65.79	50.00	71.05	52.63	76.32	73.68	55.26	44.74	34.21	15.79	34.21	34.21	63.16	52.63	94.74	78.95
Old Harbor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63	0.00	0.00	0.00	0.00	0.00	2.63
Ouzinkie	0.00	0.00	0.00	0.00	0.00	0.00	2.63	0.00	0.00	0.00	0.00	0.00	2.63	0.00	2.63	0.00
Palmer	0.00	2.63	0.00	2.63	0.00	2.63	2.63	0.00	0.00	0.00	0.00	0.00	0.00	2.63	2.63	2.63
Port Lions	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63
Seward	0.00	0.00	0.00	0.00	0.00	0.00	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63	0.00
Wasilla	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63
Other U.S.	0.00	18.42	0.00	2.63	0.00	2.63	0.00	7.89	0.00	0.00	0.00	2.63	0.00	2.63	0.00	23.68
Foreign	0.00	0.00	0.00	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63
Community Unknown	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	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 XIII-16. Subsistence Harvests in Pounds Usable Weight per Person by Resource Category, Larsen Bay, 1982/83, 1986, 1989, 1990/91, 1991/92, 1992/93, and 1993/94

	Pounds Usable Weight per Person						
	1982/83	1986	1989	1990/91	1991/92	1992/93	1993/94
Salmon	168.5	101.8	68.4	104.9	108.8	182.1	202.7
Other Fish	73.6	35.7	37.9	105.2	44.2	67.2	87.6
Marine Invertebrates	35.7	24.1	34.7	54.9	52.2	56.8	62.3
Land Mammals	62.4	39.5	40.3	42.6	66.8	33.0	76.6
Marine Mammals	58.3	3.3	20.9	23.2	9.4	4.5	9.6
Birds and Eggs	5.1	0.9	4.4	4.7	4.8	3.5	1.7
Wild Plants	*	3.6	5.5	9.1	8.4	6.3	10.6
All Resources	403.5	209.0	212.0	344.5	294.6	353.3	451.0

* Note: no wild plant data collected for 1992/83.

Table XIII-17. Composition of Resource Harvests by Resource Category, Larsen Bay, 1982/83, 1986, 1989, 1990/91, 1991/92, 1992/93, and 1993/94

	Percentage of Total Harvest						
	1982/83	1986	1989	1990/91	1991/92	1992/93	1993/94
Salmon	41.8%	48.7%	32.3%	30.4%	36.9%	51.5%	44.9%
Other Fish	18.2%	17.1%	17.9%	30.5%	15.0%	19.0%	19.4%
Marine Invertebrates	8.9%	11.5%	16.3%	15.9%	17.7%	16.1%	13.8%
Land Mammals	15.5%	18.9%	19.0%	12.4%	22.7%	9.3%	17.0%
Marine Mammals	14.4%	1.6%	9.9%	6.7%	3.2%	1.3%	2.1%
Birds and Eggs	1.3%	0.4%	2.1%	1.4%	1.6%	1.0%	0.4%
Wild Plants	*	1.7%	2.6%	2.6%	2.9%	1.8%	2.4%

* Note: wild plant data not collected for 1982/83

Figure XIII-8. Harvests of Wild Resources for Home Use, Pounds Usable Weight per Capita, Larsen Bay, 1982/83, 1986, 1989, 1990/91, 1991/92, 1992/93, and 1993/94

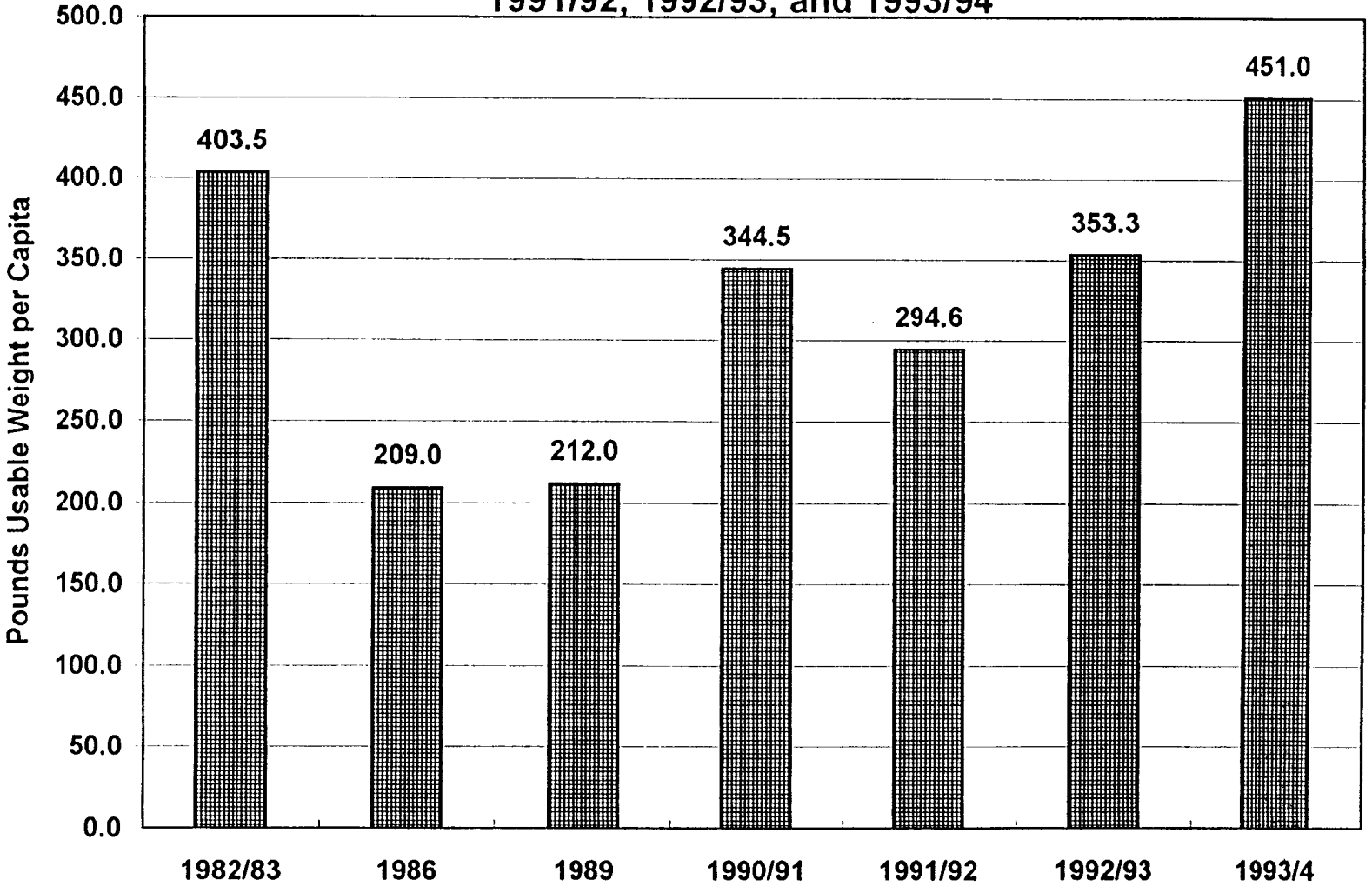


Figure XIII-9. Per Capita Harvests of Wild Resources by Resource Category, Larsen Bay, 1982/83, 1986, 1989, 1990/91, 1991/92, 1992/93, and 1993/94

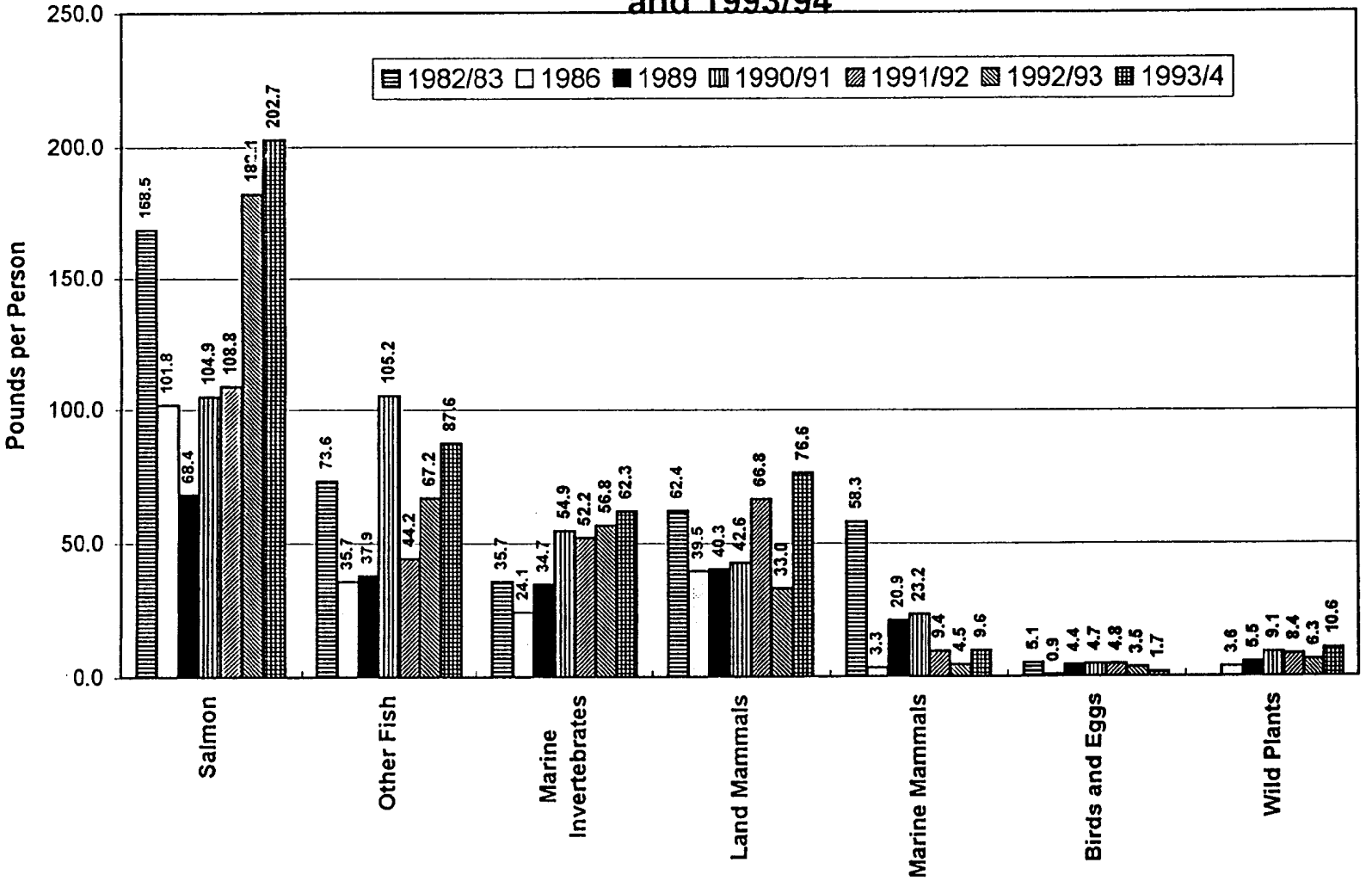


Figure XIII-10. Composition of Wild Resource Harvests by Resource Category, Larsen Bay, 1991/92

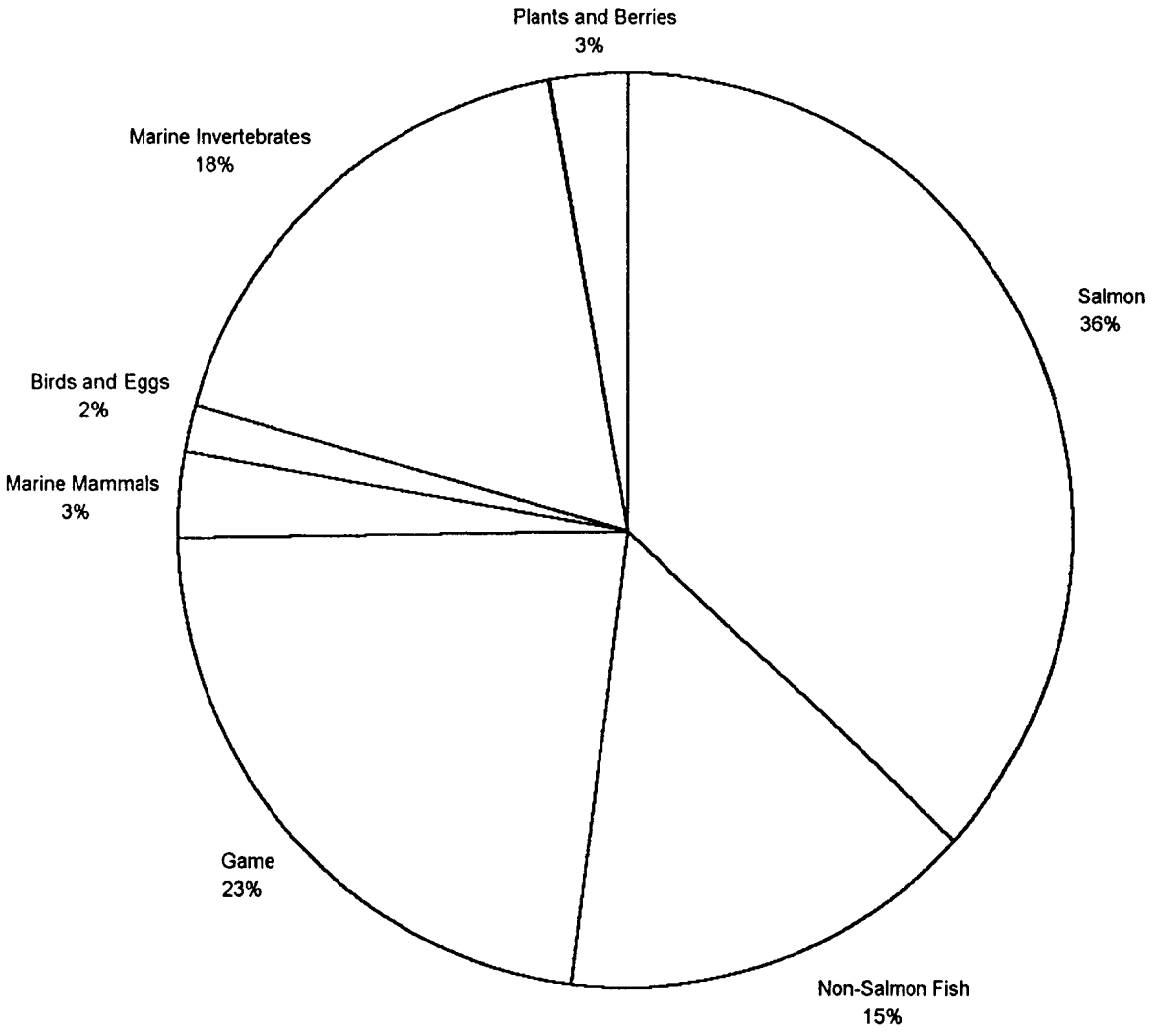


Table XIII-18. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Larsen Bay, 1991/92

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	92.1	92.1	97.4	92.1	46,006.51	1,069.92	294.62			14.01%	13.09%
Fish	100.0	76.3	76.3	86.8	71.1	23,894.71	555.69	153.02			14.28%	13.46%
Salmon	100.0	68.4	68.4	73.7	60.5	16,995.52	395.24	108.84	4,272.84	99.37	16.04%	15.59%
Chum Salmon	7.9	5.3	5.3	2.6	5.3	117.23	2.73	0.75	22.63	0.53	48.19%	47.84%
Coho Salmon	78.9	52.6	50.0	44.7	36.8	3,435.38	79.89	22.00	626.89	14.58	23.01%	22.56%
Coho Salmon-Fingerling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Chinook Salmon	39.5	15.8	15.8	28.9	7.9	749.06	17.42	4.80	86.00	2.00	46.27%	45.92%
Pink Salmon	42.1	26.3	26.3	21.1	7.9	882.81	20.53	5.65	416.42	9.68	36.36%	37.18%
Sockeye Salmon	97.4	60.5	60.5	57.9	47.4	11,339.17	263.70	72.61	3,007.74	69.95	19.60%	18.79%
Unknown Salmon	13.2	2.6	2.6	7.9	7.9	471.87	10.97	3.02	113.16	2.63	69.09%	68.07%
Non-Salmon Fish	97.4	68.4	68.4	73.7	57.9	6,899.19	160.45	44.18			17.28%	16.95%
Cod	50.0	31.6	31.6	26.3	31.6	1,473.77	34.27	9.44	460.55	10.71	27.25%	26.79%
Pacific Cod (Gray)	50.0	31.6	31.6	26.3	31.6	1,473.77	34.27	9.44	460.55	10.71	27.25%	26.79%
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	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	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 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	2.6	2.6	2.6	0.0	6.79	0.16	0.04	2.26	0.05	69.09%	68.07%
Unknown Flounder	5.3	2.6	2.6	2.6	0.0	6.79	0.16	0.04	2.26	0.05	69.09%	68.07%
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	89.5	55.3	55.3	60.5	47.4	4,190.80	97.46	26.84	116.09	2.70	20.68%	20.40%
Herring	13.2	5.3	5.3	10.5	5.3	169.74	3.95	1.09	28.29 gal	0.66	56.61%	58.24%
Rockfish	34.2	21.1	21.1	15.8	13.2	333.43	7.75	2.14	180.63	4.20	45.57%	39.46%
Black Rockfish (black bass)	23.7	13.2	13.2	13.2	7.9	230.84	5.37	1.48	153.89	3.58	51.97%	51.85%
Red Rockfish	26.3	15.8	15.8	10.5	7.9	97.90	2.28	0.63	24.48	0.57	29.86%	30.72%
Unknown Rockfish	5.3	2.6	2.6	2.6	0.0	4.68	0.11	0.03	2.26	0.05	69.09%	69.62%
Sculpin	5.3	2.6	2.6	2.6	0.0	2.26	0.05	0.01	4.53	0.11	69.09%	67.55%
Irish Lord	2.6	2.6	2.6	0.0	0.0	2.26	0.05	0.01	4.53	0.11	69.09%	67.55%
Unknown Sculpin	2.6	0.0	0.0	2.6	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Walleye Pollock (Whiting)	5.3	2.6	2.6	2.6	0.0	4.75	0.11	0.03	3.39	0.08	69.09%	69.62%
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%
Trout and Char	78.9	44.7	44.7	47.4	31.6	717.65	16.69	4.60	512.61	11.92	24.70%	24.01%
Char	50.0	34.2	34.2	23.7	21.1	291.49	6.78	1.87	208.21	4.84	25.86%	24.94%
Dolly Varden	50.0	34.2	34.2	23.7	21.1	291.49	6.78	1.87	208.21	4.84	25.86%	24.94%
Dolly Varden-Fingerling	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 XIII-18. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Larsen 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
Trout	63.2	31.6	28.9	39.5	21.1	426.15	9.91	2.73	304.39	7.08	33.27%	32.89%
Rainbow Trout	15.8	10.5	10.5	7.9	7.9	85.55	1.99	0.55	61.11	1.42	41.48%	40.44%
Steelhead	60.5	26.3	23.7	39.5	15.8	340.61	7.92	2.18	243.29	5.66	38.10%	37.97%
Game	89.5	55.3	55.3	71.1	52.6	10,427.16	242.49	66.77	334.95	7.79	27.29%	22.47%
Big Game	89.5	55.3	55.3	65.8	52.6	10,070.15	234.19	64.49	233.11	5.42	22.58%	21.60%
Bison	2.6	0.0	0.0	2.6	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black Bear	2.6	0.0	0.0	2.6	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	7.9	0.0	0.0	7.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Deer	86.8	55.3	55.3	60.5	52.6	10,070.15	234.19	64.49	233.11	5.42	22.58%	21.60%
Deer, Male	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, Sex Unknown	86.8	55.3	55.3	60.5	52.6	10,070.15	234.19	64.49	233.11	5.42	22.58%	21.60%
Elk	13.2	2.6	0.0	13.2	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goat	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Moose	7.9	0.0	0.0	7.9	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Small Game/Furbearer	28.9	15.8	15.8	15.8	7.9	144.84	3.37	0.93	98.45	2.29	41.68%	37.15%
Fox	2.6	2.6	2.6	0.0	0.0	0.00	0.00	0.00	1.13	0.03	69.09%	0.00%
Red Fox	2.6	2.6	2.6	0.0	0.0	0.00	0.00	0.00	1.13	0.03	69.09%	0.00%
Beaver	2.6	2.6	2.6	0.0	0.0	0.00	0.00	0.00	1.13	0.03	69.09%	0.00%
Hare	26.3	13.2	13.2	15.8	7.9	144.84	3.37	0.93	72.42	1.68	37.33%	37.15%
Snowshoe Hare	26.3	13.2	13.2	15.8	7.9	144.84	3.37	0.93	72.42	1.68	37.33%	37.15%
Land Otter	5.3	5.3	5.3	0.0	0.0	0.00	0.00	0.00	23.76	0.55	65.80%	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%
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%
Tree 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	10.5	2.6	2.6	7.9	2.6	212.17	4.93	1.36	3.39	0.08	69.09%	69.11%
Reindeer - Feral	10.5	2.6	2.6	7.9	2.6	212.17	4.93	1.36	3.39	0.08	69.09%	69.11%
Marine Mammals	44.7	23.7	21.1	34.2	15.8	1,471.05	34.21	9.42	57.71	1.34	44.54%	51.28%
Whale	2.6	0.0	0.0	2.6	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	2.6	0.0	0.0	2.6	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	39.5	18.4	13.2	31.6	10.5	950.53	22.11	6.09	16.97	0.39	46.93%	47.20%
Harbor Seal	39.5	18.4	13.2	31.6	10.5	950.53	22.11	6.09	16.97	0.39	46.93%	47.20%
Porpoise/Dolphin	7.9	2.6	2.6	5.3	2.6	67.89	1.58	0.43	1.13	0.03	69.09%	68.07%
Steller Sea Lion	5.3	5.3	2.6	5.3	2.6	452.63	10.53	2.90	2.26	0.05	69.09%	69.11%
Sea Otter	7.9	7.9	7.9	2.6	2.6	0.00	0.00	0.00	37.34	0.87	45.53%	0.00%

Table XIII-18. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Larsen 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
Birds and Eggs	63.2	39.5	39.5	34.2	36.8	747.07	17.37	4.78	1,027.47	23.89	29.63%	29.91%
Birds	63.2	39.5	39.5	34.2	36.8	708.37	16.47	4.54	898.47	20.89	29.46%	29.87%
Upland Game Birds	10.5	10.5	7.9	7.9	2.6	19.01	0.44	0.12	27.16	0.63	41.55%	40.46%
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	10.5	10.5	7.9	7.9	2.6	19.01	0.44	0.12	27.16	0.63	41.55%	40.46%
Migratory Birds	60.5	36.8	36.8	31.6	34.2	689.36	16.03	4.41	871.32	20.26	30.02%	30.43%
Waterfowl	60.5	34.2	34.2	31.6	31.6	677.48	15.76	4.34	854.34	19.87	30.59%	31.05%
Ducks	60.5	34.2	34.2	31.6	31.6	677.48	15.76	4.34	854.34	19.87	30.59%	31.05%
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	15.8	10.5	10.5	5.3	10.5	70.27	1.63	0.45	78.08	1.82	51.30%	51.07%
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	15.8	10.5	10.5	5.3	10.5	70.27	1.63	0.45	78.08	1.82	51.30%	51.07%
Harlequin	5.3	5.3	5.3	0.0	5.3	12.45	0.29	0.08	24.89	0.58	62.96%	61.47%
Goldeneye	52.6	34.2	34.2	23.7	28.9	425.47	9.89	2.72	531.84	12.37	33.10%	32.67%
Bufflehead	10.5	10.5	10.5	0.0	7.9	12.22	0.28	0.08	30.55	0.71	37.56%	38.18%
Merganser	7.9	5.3	5.3	2.6	2.6	18.33	0.43	0.12	20.37	0.47	48.50%	47.37%
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	28.9	21.1	21.1	13.2	18.4	109.76	2.55	0.70	109.76	2.55	27.61%	27.67%
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	7.9	7.9	7.9	5.3	5.3	10.86	0.25	0.07	36.21	0.84	38.96%	38.87%
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	2.6	2.6	2.6	0.0	2.6	18.11	0.42	0.12	22.63	0.53	69.09%	69.11%
Ducks, Unknown	5.3	0.0	0.0	5.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
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%
Black 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, 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, 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%
Shorebirds	2.6	2.6	2.6	0.0	2.6	0.57	0.01	0.00	5.66	0.13	69.09%	67.55%
Common Snipe	2.6	2.6	2.6	0.0	2.6	0.57	0.01	0.00	5.66	0.13	69.09%	67.55%

Table XIII-18. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Larsen 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
Seabirds	5.3	2.6	2.6	2.6	2.6	11.32	0.26	0.07	11.32	0.26	69.09%	68.07%
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%
Puffins	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Gulls	5.3	2.6	2.6	2.6	2.6	11.32	0.26	0.07	11.32	0.26	69.09%	68.07%
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%
Auklet	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Parakeet Auklet	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	18.4	10.5	7.9	10.5	7.9	38.70	0.90	0.25	129.00	3.00	42.90%	43.05%
Seabird Eggs	18.4	10.5	7.9	10.5	7.9	38.70	0.90	0.25	129.00	3.00	42.90%	43.05%
Gull Eggs	18.4	10.5	7.9	10.5	7.9	38.70	0.90	0.25	129.00	3.00	42.90%	43.05%
Puffin 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%
Kittiwake 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%
Eider 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%
Marine Invertebrates	97.4	78.9	78.9	78.9	78.9	8,151.57	189.57	52.20			13.72%	13.13%
Clams	89.5	76.3	76.3	47.4	60.5	4,481.05	104.21	28.70	1,493.68 gal	34.74	12.41%	11.21%
Butter Clams	84.2	71.1	71.1	42.1	55.3	3,489.79	81.16	22.35	1,163.26 gal	27.05	13.12%	12.11%
Razor Clams	5.3	2.6	2.6	2.6	2.6	16.97	0.39	0.11	5.66 gal	0.13	69.09%	69.11%
Pacific Littleneck Clams (Steamers)	52.6	44.7	44.7	21.1	31.6	821.53	19.11	5.26	273.84 gal	6.37	19.56%	18.32%
Pinkneck Clams	2.6	2.6	2.6	0.0	0.0	16.97	0.39	0.11	5.66 gal	0.13	69.09%	68.07%
Unknown Clams	5.3	5.3	5.3	2.6	5.3	135.79	3.16	0.87	45.26 gal	1.05	54.18%	54.36%
Cockles	5.3	2.6	2.6	2.6	0.0	10.18	0.24	0.07	3.39 gal	0.08	69.09%	68.59%
Geoducks	7.9	5.3	5.3	2.6	2.6	15.72	0.37	0.10	5.24 gal	0.12	65.37%	66.40%
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	10.5	7.9	7.9	5.3	0.0	11.03	0.26	0.07	7.36 gal	0.17	39.05%	39.14%
Crabs	84.2	39.5	39.5	68.4	26.3	1,941.45	45.15	12.43	1,263.97	29.39	28.00%	29.07%
Dungeness Crab	42.1	18.4	15.8	31.6	7.9	91.88	2.14	0.59	131.26	3.05	33.53%	34.28%
King Crab	28.9	7.9	7.9	21.1	5.3	122.32	2.84	0.78	53.18	1.24	41.90%	42.04%
Tanner Crab	68.4	39.5	39.5	50.0	26.3	1,727.24	40.17	11.06	1,079.53	25.11	30.31%	30.05%

Table XIII-18. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Larsen 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
Tanner Crab, Unknown	5.3	5.3	5.3	0.0	2.6	81.47	1.89	0.52	50.92	1.18	61.69%	63.22%
Unknown Crabs	2.6	0.0	0.0	2.6	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Chitons (bidarkis)	55.3	44.7	44.7	13.2	31.6	442.67	10.29	2.83	110.67 gal	2.57	24.89%	25.97%
Chitons (small)	55.3	44.7	44.7	13.2	31.6	442.67	10.29	2.83	110.67 gal	2.57	24.89%	25.97%
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	76.3	55.3	55.3	47.4	47.4	1,108.95	25.79	7.10	277.24	6.45	18.39%	18.19%
Sea Cucumber	7.9	7.9	7.9	0.0	5.3	22.41	0.52	0.14	11.20 gal	0.26	44.30%	45.62%
Sea Urchin	50.0	39.5	39.5	18.4	26.3	113.87	2.65	0.73	227.73 gal	5.30	22.87%	22.52%
Shrimp	0.0	2.6	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Snails	2.6	0.0	0.0	2.6	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Limpets	5.3	5.3	5.3	0.0	2.6	4.24	0.10	0.03	2.83 gal	0.07	49.20%	48.20%
Plants and Berries	73.7	65.8	65.8	39.5	34.2	1,314.94	30.58	8.42	328.74 gal	7.65	16.07%	15.44%
Berries	73.7	57.9	57.9	39.5	34.2	1,108.95	25.79	7.10	277.24 gal	6.45	17.32%	17.08%
Plants/Greens/Mushrooms	28.9	28.9	28.9	7.9	0.0	201.47	4.69	1.29	50.37 gal	1.17	31.94%	30.63%
Seaweed/Kelp (Food)	2.6	2.6	2.6	2.6	0.0	4.53	0.11	0.03	1.13 gal	0.03	69.09%	68.07%
Fertilizer	5.3	5.3	5.3	0.0	0.0	0.00	0.00	0.00	87.70 gal	2.04	56.95%	0.00%
Vegetative Fertilizer	5.3	5.3	5.3	0.0	0.0	0.00	0.00	0.00	87.70 gal	2.04	56.95%	0.00%
Seaweed/Kelp (Non-food)	5.3	5.3	5.3	0.0	0.0	0.00	0.00	0.00	87.70 gal	2.04	56.95%	0.00%
Wood	86.8	68.4	68.4	42.1	39.5	0.00	0.00	0.00	185.58 crd	4.32	23.40%	0.00%

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

Table XIII-19. Estimated Amount of Resources Removed From Commercial Harvest, Larsen Bay, 1991/92

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		3,463.45	10.81	7.53
Fish		3,359.35	14.06	7.30
Salmon	622.37	2,510.72	14.77	5.46
Coho Salmon	65.63	359.66	10.47	0.78
Chinook Salmon	11.32	98.56	13.16	0.21
Pink Salmon	2.26	4.80	0.54	0.01
Sockeye Salmon	543.16	2,047.71	18.06	4.45
Non-Salmon Fish		848.62	12.30	1.84
Cod	140.32	449.01	30.47	0.98
Pacific Cod (Gray)	140.32	449.01	30.47	0.98
Halibut	8.65	312.09	7.45	0.68
Rockfish	26.03	82.76	24.82	0.18
Black Rockfish (black bass)	6.79	10.18	4.41	0.02
Red Rockfish	16.97	67.89	69.35	0.15
Unknown Rockfish	2.26	4.68	100.00	0.01
Walleye Pollock (Whiting)	3.39	4.75	100.00	0.01
Marine Invertebrates		104.11	1.28	0.23
Crabs	50.92	81.47	4.20	0.18
Tanner Crab	50.92	81.47	4.72	0.18
Tanner Crab, Unknown	50.92	81.47	100.00	0.18
Octopus	5.66	22.63	2.04	0.05

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

Table XIII-20. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Larsen Bay, 1991/92

Resource	Percent Base	Subsistence Methods: Net No.	Net Lbs.	Seine No.	Seine Lbs.	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	16.53	15.86	44.20	43.91	0.03	0.03	0.03	0.03	60.78	59.81	14.57	14.77	24.66	25.41		
Chum Salmon	gear type	1.60	2.18	0.60	0.79	0.00	0.00	0.00	0.00	0.87	1.15	0.00	0.00	0.00	0.00		
	resource	50.00	50.00	50.00	50.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	0.00		
	total	0.26	0.34	0.26	0.34	0.00	0.00	0.00	0.00	0.53	0.69	0.00	0.00	0.00	0.00	0.53	0.69
Coho Salmon	gear type	0.00	0.00	16.30	22.60	0.00	0.00	0.00	0.00	11.85	16.59	10.55	14.32	24.06	32.16		
	resource	0.00	0.00	49.10	49.10	0.00	0.00	0.00	0.00	49.10	49.10	10.47	10.47	40.43	40.43		
	total	0.00	0.00	7.20	9.92	0.00	0.00	0.00	0.00	7.20	9.92	1.54	2.12	5.93	8.17	14.67	20.21
Coho Salmon-Fingerling	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
Chinook Salmon	gear type	0.48	1.10	0.66	1.45	0.00	0.00	0.00	0.00	0.61	1.36	1.82	3.93	5.59	11.87		
	resource	3.95	3.95	14.47	14.47	0.00	0.00	0.00	0.00	18.42	18.42	13.16	13.16	68.42	68.42		
	total	0.08	0.17	0.29	0.64	0.00	0.00	0.00	0.00	0.37	0.81	0.26	0.58	1.38	3.02	2.01	4.41
Pink Salmon	gear type	0.00	0.00	8.39	4.50	0.00	0.00	0.00	0.00	6.10	3.30	0.36	0.19	24.27	12.55		
	resource	0.00	0.00	38.04	38.04	0.00	0.00	0.00	0.00	38.04	38.04	0.54	0.54	61.41	61.41		
	total	0.00	0.00	3.71	1.98	0.00	0.00	0.00	0.00	3.71	1.98	0.05	0.03	5.99	3.19	9.75	5.19
Sockeye Salmon	gear type	97.92	96.73	74.06	70.66	100.00	100.00	100.00	100.00	80.57	77.59	87.27	81.56	35.34	32.50		
	resource	22.99	22.99	46.50	46.50	0.04	0.04	0.04	0.04	69.56	69.56	18.06	18.06	12.38	12.38		
	total	16.18	15.34	32.73	31.02	0.03	0.03	0.03	0.03	48.97	46.41	12.71	12.05	8.71	8.26	70.39	66.72
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	10.74	10.93		
	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	100.00	100.00		
	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	2.65	2.78	2.65	2.78

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

Table XIII-21. Estimated Salmon Harvest by Gear Type and Species, Larsen Bay, 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	706.11	16.42	1,888.61	43.92	1.13	0.03	1.13	0.03	2,596.97	60.39	622.37	14.47	1,053.50	24.50	4,272.84	99.37
	pounds	2,694.74	62.67	7,462.41	173.54	4.27	0.10	4.27	0.10	10,165.69	236.41	2,510.72	58.39	4,319.11	100.44	16,995.52	395.24
Chum Salmon	numbers	11.32	0.26	11.32	0.26	0.00	0.00	0.00	0.00	22.63	0.53	0.00	0.00	0.00	0.00	22.63	0.53
	pounds	58.62	1.36	58.62	1.36	0.00	0.00	0.00	0.00	117.23	2.73	0.00	0.00	0.00	0.00	117.23	2.73
Coho Salmon	numbers	0.00	0.00	307.79	7.16	0.00	0.00	0.00	0.00	307.79	7.16	65.63	1.53	253.47	5.89	626.89	14.58
	pounds	0.00	0.00	1,686.69	39.23	0.00	0.00	0.00	0.00	1,686.69	39.23	359.66	8.36	1,389.04	32.30	3,435.38	79.89
Coho Salmon-Fingerling	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
Chinook Salmon	numbers	3.39	0.08	12.45	0.29	0.00	0.00	0.00	0.00	15.84	0.37	11.32	0.26	58.84	1.37	86.00	2.00
	pounds	29.57	0.69	108.42	2.52	0.00	0.00	0.00	0.00	137.98	3.21	98.56	2.29	512.51	11.92	749.06	17.42
Pink Salmon	numbers	0.00	0.00	158.42	3.68	0.00	0.00	0.00	0.00	158.42	3.68	2.26	0.05	255.74	5.95	416.42	9.68
	pounds	0.00	0.00	335.85	7.81	0.00	0.00	0.00	0.00	335.85	7.81	4.80	0.11	542.16	12.61	882.81	20.53
Sockeye Salmon	numbers	691.39	16.08	1,398.63	32.53	1.13	0.03	1.13	0.03	2,092.29	48.66	543.16	12.63	372.29	8.66	3,007.74	69.95
	pounds	2,606.56	60.62	5,272.84	122.62	4.27	0.10	4.27	0.10	7,887.93	183.44	2,047.71	47.62	1,403.53	32.64	11,339.17	263.70
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	113.16	2.63	113.16	2.63
	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	471.87	10.97	471.87	10.97

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

Table XXIII-22. Percentage of Households Harvesting Salmon by Gear Type and Species, Larsen Bay, 1991/92

Resource	Subsistence Methods					Removed from Commercial Catch	Rod and Reel	Any Method
	Net	Seine	Dip Net	Other	Any Subsistence Gear			
Salmon	18.42	34.21	2.63	2.63	44.74	23.68	47.37	68.42
Chum Salmon	2.63	2.63	0.00	0.00	5.26	0.00	0.00	5.26
Coho Salmon	0.00	13.16	0.00	0.00	13.16	13.16	34.21	50.00
Coho Salmon-Fingerling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chinook Salmon	2.63	5.26	0.00	0.00	7.89	2.63	5.26	15.79
Pink Salmon	0.00	10.53	0.00	0.00	10.53	2.63	13.16	26.32
Sockeye Salmon	18.42	28.95	2.63	2.63	42.11	23.68	15.79	60.53
Unknown Salmon	0.00	0.00	0.00	0.00	0.00	0.00	2.63	2.63

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

Table XIII-23. Estimated Harvest of Fish Other than Salmon by Gear Type, Larsen 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	1,534.20	35.68	848.62	19.74	4,516.37	105.03	0.00	0.00	6,899.19	160.45
Pacific Cod (Gray)	pounds	325.89	7.58	449.01	10.44	698.86	16.25	0.00	0.00	1,473.77	34.27
Unknown Flounder	pounds	6.79	0.16	0.00	0.00	0.00	0.00	0.00	0.00	6.79	0.16
Halibut	pounds	834.97	19.42	312.09	7.26	3,043.73	70.78	0.00	0.00	4,190.80	97.46
Herring	pounds	169.74	3.95	0.00	0.00	0.00	0.00	0.00	0.00	169.74	3.95
Black Rockfish (black bass)	pounds	0.00	0.00	10.18	0.24	220.66	5.13	0.00	0.00	230.84	5.37
Red Rockfish	pounds	2.85	0.07	67.89	1.58	27.16	0.63	0.00	0.00	97.90	2.28
Unknown Rockfish	pounds	0.00	0.00	4.68	0.11	0.00	0.00	0.00	0.00	4.68	0.11
Irish Lord	pounds	2.26	0.05	0.00	0.00	0.00	0.00	0.00	0.00	2.26	0.05
Walleye Pollock (Whiting)	pounds	0.00	0.00	4.75	0.11	0.00	0.00	0.00	0.00	4.75	0.11
Dolly Varden	pounds	158.42	3.68	0.00	0.00	133.07	3.09	0.00	0.00	291.49	6.78
Rainbow Trout	pounds	0.00	0.00	0.00	0.00	85.55	1.99	0.00	0.00	85.55	1.99
Steelhead	pounds	33.27	0.77	0.00	0.00	307.34	7.15	0.00	0.00	340.61	7.92

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

Table XIII-24. Percentage of Fish Other Than Salmon Harvested by Gear Type, Larsen 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	22.24	12.30	65.46	0.00
Pacific Cod (Gray)	resource	22.11	30.47	47.42	0.00
Unknown Flounder	resource	100.00	0.00	0.00	0.00
Halibut	resource	19.92	7.45	72.63	0.00
Herring	resource	100.00	0.00	0.00	0.00
Black Rockfish (black bass)	resource	0.00	4.41	95.59	0.00
Red Rockfish	resource	2.91	69.35	27.74	0.00
Unknown Rockfish	resource	0.00	100.00	0.00	0.00
Irish Lord	resource	100.00	0.00	0.00	0.00
Walleye Pollock (Whiting)	resource	0.00	100.00	0.00	0.00
Dolly Varden	resource	54.35	0.00	45.65	0.00
Rainbow Trout	resource	0.00	0.00	100.00	0.00
Steelhead	resource	9.77	0.00	90.23	0.00

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

Table XIII-25. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Larsen Bay, 1991/92

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	31.58	18.42	47.37	0.00	68.42
Pacific Cod (Gray)	13.16	2.63	15.79	0.00	31.58
Unknown Flounder	2.63	0.00	0.00	0.00	2.63
Halibut	21.05	15.79	23.68	0.00	55.26
Herring	5.26	0.00	0.00	0.00	5.26
Black Rockfish (black bass)	0.00	2.63	10.53	0.00	13.16
Red Rockfish	2.63	7.89	5.26	0.00	15.79
Unknown Rockfish	0.00	2.63	0.00	0.00	2.63
Irish Lord	2.63	0.00	0.00	0.00	2.63
Walleye Pollock (Whiting)	0.00	2.63	0.00	0.00	2.63
Dolly Varden	7.89	0.00	26.32	0.00	34.21
Rainbow Trout	0.00	0.00	10.53	0.00	10.53
Steelhead	7.89	0.00	15.79	0.00	23.68

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

Figure XIII-11, Composition of Wild Resource Harvests by Resource Category, Larsen Bay, 1992/93

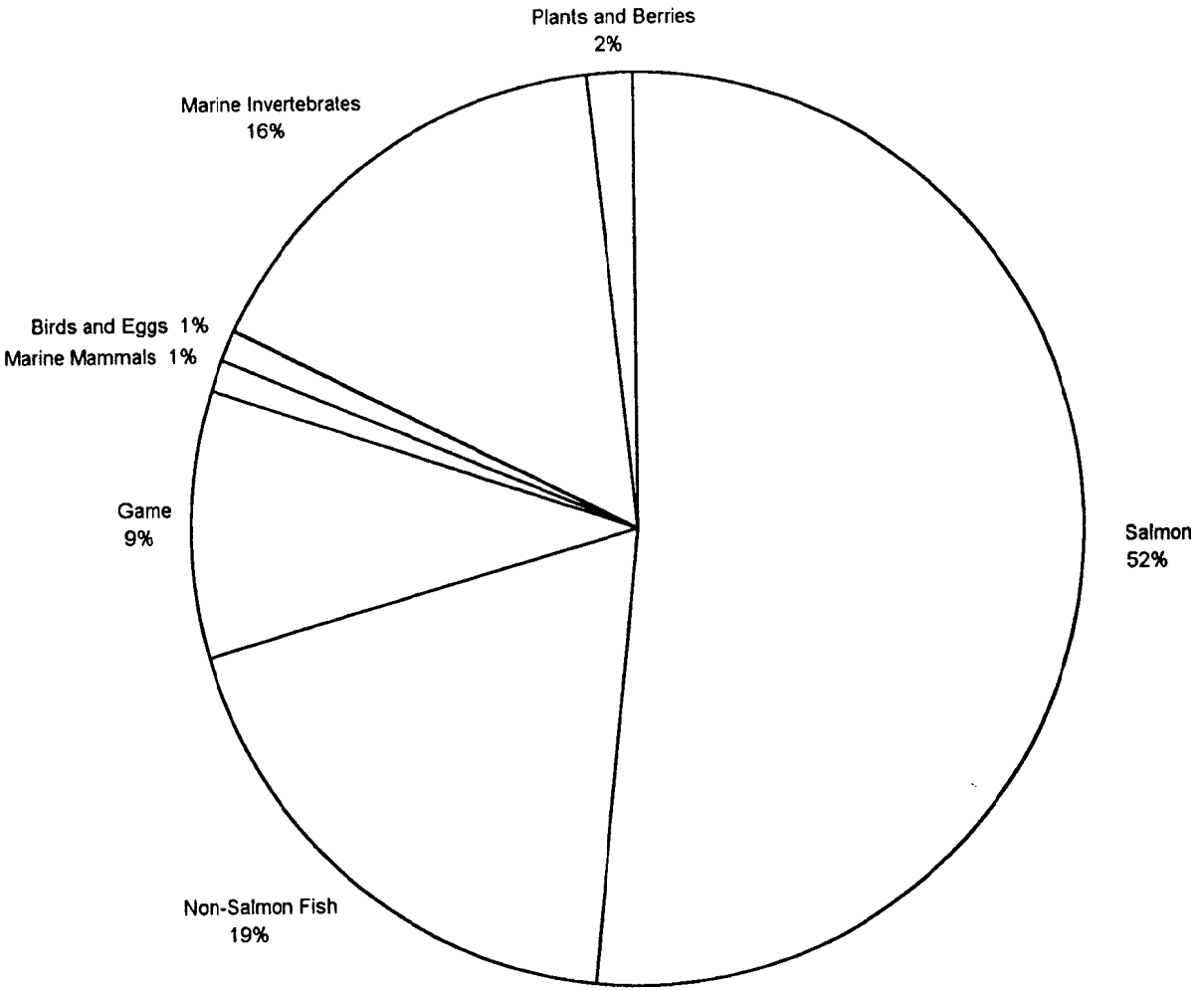


Table XIII-26. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Larsen Bay, 1992/93

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	89.2	89.2	89.2	94.6	48,120.10	1,145.72	353.26			14.55%	13.63%
Fish	100.0	78.4	78.4	78.4	86.5	33,958.78	808.54	249.30			16.70%	15.69%
Salmon	94.6	70.3	70.3	64.9	70.3	24,809.35	590.70	182.13	4,070.59	96.92	18.11%	16.70%
Chum Salmon	24.3	18.9	18.9	5.4	5.4	271.58	6.47	1.99	37.46	0.89	32.57%	31.89%
Coho Salmon	78.4	59.5	59.5	35.1	40.5	4,976.98	118.50	36.54	608.43	14.49	17.08%	16.57%
Chinook Salmon	45.9	29.7	29.7	21.6	10.8	835.97	19.90	6.14	58.46	1.39	27.91%	25.62%
Pink Salmon	37.8	32.4	32.4	10.8	16.2	768.34	18.29	5.64	204.89	4.88	32.32%	32.91%
Sockeye Salmon	94.6	62.2	62.2	59.5	67.6	17,956.48	427.54	131.82	3,161.35	75.27	21.24%	20.31%
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	94.6	75.7	73.0	73.0	67.6	9,149.43	217.84	67.17			21.26%	20.62%
Cod	48.6	29.7	27.0	29.7	27.0	744.65	17.73	5.47	232.70	5.54	28.89%	29.46%
Pacific Cod (Gray)	48.6	29.7	27.0	29.7	27.0	744.65	17.73	5.47	232.70	5.54	28.89%	29.46%
Sablefish (Black Cod)	2.7	2.7	2.7	0.0	2.7	10.56	0.25	0.08	3.41	0.08	69.98%	69.81%
Greenling	5.4	5.4	5.4	0.0	2.7	223.66	5.33	1.64	19.30	0.46	62.06%	62.90%
Lingcod	5.4	5.4	5.4	0.0	2.7	223.66	5.33	1.64	19.30	0.46	62.06%	62.90%
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	8.1	8.1	8.1	0.0	5.4	197.51	4.70	1.45	65.84	1.57	43.64%	43.84%
Arrow Tooth Flounder (Turbot)	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	8.1	8.1	8.1	0.0	5.4	197.51	4.70	1.45	65.84	1.57	43.64%	43.84%
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	83.8	62.2	56.8	56.8	54.1	3,071.71	73.14	22.55	89.49	2.13	17.67%	16.95%
Herring	13.5	8.1	8.1	5.4	0.0	252.00	6.00	1.85	42.00 gal	1.00	57.26%	57.18%
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%
Rockfish	35.1	27.0	27.0	13.5	24.3	676.99	16.12	4.97	313.30	7.46	30.05%	30.38%
Black Rockfish (black bass)	18.9	18.9	18.9	2.7	10.8	275.84	6.57	2.03	183.89	4.38	32.25%	33.54%
Red Rockfish	29.7	18.9	18.9	13.5	16.2	272.43	6.49	2.00	68.11	1.62	33.54%	34.79%
Unknown Rockfish	2.7	2.7	2.7	0.0	2.7	128.72	3.06	0.95	61.30	1.46	69.98%	71.00%
Sea Perch	2.7	2.7	2.7	0.0	0.0	6.81	0.16	0.05	6.81	0.16	69.98%	68.60%
Sculpin	2.7	2.7	2.7	0.0	0.0	1.70	0.04	0.01	3.41	0.08	69.98%	67.98%
Irish Lord	2.7	2.7	2.7	0.0	0.0	1.70	0.04	0.01	3.41	0.08	69.98%	67.98%
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%
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%

Table XIII-26. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Larsen 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
Salmon Shark	0.0	0.0	0.0	0.0	0.0	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%
Trout and Char	78.4	54.1	54.1	48.6	37.8	3,963.84	94.38	29.10	771.89	18.38	40.92%	43.25%
Char	21.6	18.9	18.9	8.1	0.0	103.30	2.46	0.76	73.78	1.76	31.46%	29.71%
Dolly Varden	21.6	18.9	18.9	8.1	0.0	103.30	2.46	0.76	73.78	1.76	31.46%	29.71%
Dolly Varden-Fingerling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Brook 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 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%
Trout	75.7	48.6	48.6	45.9	37.8	3,860.54	91.92	28.34	698.11	16.62	45.32%	44.51%
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	75.7	48.6	48.6	45.9	37.8	3,860.54	91.92	28.34	698.11	16.62	45.32%	44.51%
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%
Game	83.8	54.1	51.4	54.1	45.9	4,487.64	106.85	32.95	147.57	3.51	17.93%	16.67%
Big Game	81.1	54.1	51.4	43.2	45.9	4,021.10	95.74	29.52	93.08	2.22	15.53%	15.60%
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	0.0	0.0	0.0	0.0	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	2.7	0.0	0.0	2.7	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Deer	81.1	54.1	51.4	43.2	45.9	4,021.10	95.74	29.52	93.08	2.22	15.53%	15.60%
Deer, Male	45.9	43.2	40.5	10.8	40.5	2,500.93	59.55	18.36	57.89	1.38	19.71%	20.23%
Deer, Female	35.1	32.4	29.7	10.8	24.3	1,373.06	32.69	10.08	31.78	0.76	22.78%	22.32%
Deer, Sex Unknown	32.4	5.4	5.4	29.7	8.1	147.11	3.50	1.08	3.41	0.08	51.57%	50.52%
Elk	2.7	0.0	0.0	2.7	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goat	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
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	24.3	18.9	16.2	10.8	5.4	40.86	0.97	0.30	47.68	1.14	37.17%	49.40%
Fox	13.5	10.8	10.8	5.4	0.0	0.00	0.00	0.00	26.11	0.62	55.06%	0.00%
Red Fox	13.5	10.8	10.8	5.4	0.0	0.00	0.00	0.00	26.11	0.62	55.06%	0.00%
Beaver	5.4	2.7	2.7	2.7	2.7	0.00	0.00	0.00	1.14	0.03	69.98%	0.00%
Hare	10.8	8.1	5.4	5.4	2.7	40.86	0.97	0.30	20.43	0.49	48.79%	49.40%
Snowshoe Hare	10.8	8.1	5.4	5.4	2.7	40.86	0.97	0.30	20.43	0.49	48.79%	49.40%
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%
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%

Table XIII-26. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Larsen 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
Feral Animals	21.6	8.1	8.1	13.5	8.1	425.68	10.14	3.13	6.81	0.16	48.79%	47.97%
Reindeer - Feral	21.6	8.1	8.1	13.5	8.1	425.68	10.14	3.13	6.81	0.16	48.79%	47.97%
Marine Mammals	27.0	18.9	18.9	13.5	16.2	608.43	14.49	4.47	24.97	0.59	34.87%	46.55%
Whale	10.8	0.0	0.0	10.8	2.7	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Bowhead	2.7	0.0	0.0	2.7	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Humpback 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	8.1	0.0	0.0	8.1	2.7	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Seal	13.5	10.8	8.1	8.1	13.5	381.41	9.08	2.80	6.81	0.16	42.67%	42.56%
Harbor Seal	13.5	10.8	8.1	8.1	13.5	381.41	9.08	2.80	6.81	0.16	42.67%	42.56%
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	2.7	2.7	2.7	0.0	2.7	227.03	5.41	1.67	1.14	0.03	69.98%	71.00%
Sea Otter	10.8	10.8	10.8	0.0	2.7	0.00	0.00	0.00	17.03	0.41	48.44%	0.00%
Birds and Eggs	48.6	35.1	29.7	32.4	24.3	470.68	11.21	3.46	607.86	14.47	32.44%	33.37%
Birds	40.5	32.4	27.0	27.0	24.3	466.26	11.10	3.42	593.11	14.12	33.30%	33.70%
Upland Game Birds	8.1	10.8	8.1	0.0	2.7	24.63	0.59	0.18	35.19	0.84	47.73%	48.11%
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	8.1	10.8	8.1	0.0	2.7	24.63	0.59	0.18	35.19	0.84	47.73%	48.11%
Migratory Birds	37.8	27.0	24.3	27.0	24.3	441.62	10.51	3.24	557.92	13.28	34.10%	34.44%
Waterfowl	37.8	24.3	21.6	27.0	21.6	435.38	10.37	3.20	547.70	13.04	34.53%	34.91%
Ducks	37.8	24.3	21.6	27.0	21.6	435.38	10.37	3.20	547.70	13.04	34.53%	34.91%
Elder	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Elder, 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	18.9	10.8	10.8	8.1	8.1	34.74	0.83	0.26	38.59	0.92	39.96%	40.83%
Scoter, White-winged	5.4	5.4	5.4	0.0	0.0	5.11	0.12	0.04	5.68	0.14	49.81%	51.24%
Scoter, Black	16.2	8.1	8.1	8.1	8.1	26.56	0.63	0.20	29.51	0.70	45.14%	45.88%
Scoter, Surf	2.7	5.4	2.7	0.0	0.0	3.06	0.07	0.02	3.41	0.08	69.98%	69.81%
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	5.4	5.4	5.4	0.0	0.0	1.14	0.03	0.01	2.27	0.05	48.79%	50.25%
Goldeneye	27.0	21.6	18.9	18.9	16.2	316.93	7.55	2.33	396.16	9.43	41.98%	41.86%
Bufflehead	10.8	10.8	8.1	2.7	8.1	8.63	0.21	0.06	21.57	0.51	46.52%	46.93%
Merganser	10.8	8.1	8.1	2.7	5.4	39.33	0.94	0.29	43.70	1.04	55.19%	55.32%
Scaup	5.4	2.7	2.7	2.7	5.4	2.04	0.05	0.02	2.27	0.05	69.98%	71.00%
Mallard	16.2	8.1	5.4	10.8	5.4	20.43	0.49	0.15	20.43	0.49	59.15%	60.13%
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	8.1	2.7	2.7	5.4	0.0	4.09	0.10	0.03	13.62	0.32	69.98%	69.81%

Table XIII-26. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Larsen 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
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%
Redhead Duck	2.7	2.7	2.7	0.0	0.0	6.27	0.15	0.05	6.81	0.16	69.98%	69.81%
Ducks, Unknown	8.1	5.4	5.4	2.7	2.7	1.79	0.04	0.01	2.27	0.05	48.79%	47.68%
Geese	2.7	0.0	0.0	2.7	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black 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%
Emperor 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%
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, 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, Unknown	2.7	0.0	0.0	2.7	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	5.4	5.4	5.4	2.7	2.7	6.24	0.15	0.05	10.22	0.24	49.11%	52.49%
Gulls	2.7	2.7	2.7	2.7	2.7	4.54	0.11	0.03	4.54	0.11	69.98%	68.60%
Auklet	5.4	2.7	2.7	2.7	0.0	1.70	0.04	0.01	5.68	0.14	69.98%	69.81%
Parakeet Auklet	5.4	2.7	2.7	2.7	0.0	1.70	0.04	0.01	5.68	0.14	69.98%	69.81%
Eggs	16.2	2.7	2.7	13.5	2.7	4.43	0.11	0.03	14.76	0.35	69.98%	71.00%
Seabird Eggs	16.2	2.7	2.7	13.5	2.7	4.43	0.11	0.03	14.76	0.35	69.98%	71.00%
Gull Eggs	16.2	2.7	2.7	13.5	2.7	4.43	0.11	0.03	14.76	0.35	69.98%	71.00%
Puffin 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%
Kittiwake 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%
Eider 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%
Marine Invertebrates	97.3	81.1	81.1	67.6	67.6	7,737.49	184.23	56.80			14.05%	13.54%
Clams	89.2	78.4	78.4	43.2	54.1	3,859.11	91.88	28.33	1,286.37 gal	30.63	13.40%	12.34%
Butter Clams	89.2	78.4	78.4	40.5	54.1	3,284.45	78.20	24.11	1,094.82 gal	26.07	14.19%	13.64%
Razor Clams	16.2	13.5	13.5	2.7	0.0	85.14	2.03	0.63	28.38 gal	0.68	39.48%	39.97%
Pacific Littleneck Clams (Steamers)	35.1	29.7	29.7	16.2	13.5	489.53	11.66	3.59	163.18 gal	3.89	27.69%	25.40%
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%

Table XIII-26. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Larsen 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
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	2.7	2.7	2.7	0.0	0.0	3.41	0.08	0.03	1.14 gal	0.03	69.98%	68.60%
Scallops	2.7	2.7	2.7	0.0	0.0	0.07	0.00	0.00	1.14	0.03	69.98%	69.81%
Jingles	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	8.1	8.1	8.1	0.0	2.7	39.16	0.93	0.29	26.11 gal	0.62	60.97%	59.65%
Crabs	78.4	43.2	43.2	51.4	35.1	2,509.50	59.75	18.42			21.20%	21.06%
Dungeness Crab	27.0	13.5	13.5	16.2	8.1	43.31	1.03	0.32	61.86	1.47	31.96%	32.58%
King Crab	35.1	24.3	24.3	16.2	10.8	360.29	8.58	2.65			27.00%	26.98%
King Crab Eggs, Red	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
King Crab, Unknown	35.1	24.3	24.3	16.2	10.8	360.29	8.58	2.65	156.65	3.73	27.00%	26.98%
Tanner Crab	70.3	40.5	40.5	37.8	35.1	2,105.90	50.14	15.46	1,316.19	31.34	21.95%	21.77%
Tanner Crab, Bairdi	8.1	8.1	8.1	0.0	0.0	257.90	6.14	1.89	161.19	3.84	59.32%	59.17%
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	70.3	40.5	40.5	37.8	35.1	1,848.00	44.00	13.57	1,155.00	27.50	21.15%	21.00%
Unknown Crabs	2.7	0.0	0.0	2.7	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Chitons (bidarkis)	40.5	32.4	32.4	18.9	10.8	241.22	5.74	1.77	60.30 gal	1.44	35.83%	34.95%
Chitons (small)	40.5	32.4	32.4	18.9	10.8	241.22	5.74	1.77	60.30 gal	1.44	35.83%	34.95%
Octopus	70.3	51.4	48.6	37.8	37.8	744.65	17.73	5.47	186.16	4.43	19.73%	20.38%
Sea Cucumber	13.5	10.8	10.8	5.4	5.4	233.84	5.57	1.72	116.92 gal	2.78	39.16%	39.93%
Sea Urchin	43.2	27.0	27.0	27.0	13.5	92.04	2.19	0.68	184.08 gal	4.38	35.74%	35.71%
Shrimp	8.1	10.8	8.1	0.0	2.7	13.46	0.32	0.10	6.73 gal	0.16	59.46%	59.31%
Snails	2.7	2.7	2.7	0.0	0.0	0.12	0.00	0.00	0.08 gal	0.00	69.98%	71.00%
Limpets	5.4	5.4	5.4	0.0	2.7	0.92	0.02	0.01	0.61 gal	0.01	64.86%	62.75%
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%
Plants and Berries	81.1	62.2	62.2	40.5	32.4	857.07	20.41	6.29	214.27 gal	5.10	22.28%	21.16%
Berries	81.1	59.5	59.5	37.8	24.3	761.68	18.14	5.59	190.42 gal	4.53	23.89%	22.97%
Plants/Greens/Mushrooms	29.7	29.7	29.7	2.7	10.8	95.40	2.27	0.70	23.85 gal	0.57	29.47%	27.86%
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%
Fertilizer	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%
Vegetative Fertilizer	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%
Seaweed/Kelp (Non-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	64.9	59.5	59.5	10.8	29.7	0.00	0.00	0.00	112.09 crd	2.67	22.61%	0.00%

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

Table XIII-27. Estimated Amount of Resources Removed From Commercial Harvest, Larsen Bay, 1992/93

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		8,713.41	20.90	18.11
Fish		8,140.44	23.97	16.92
Salmon	832.05	5,193.02	20.93	10.79
Chum Salmon	20.43	148.14	54.55	0.31
Coho Salmon	175.95	1,439.24	28.92	2.99
Chinook Salmon	34.62	495.09	59.22	1.03
Pink Salmon	157.22	589.56	76.73	1.23
Sockeye Salmon	443.84	2,521.00	14.04	5.24
Non-Salmon Fish		2,947.42	32.21	6.13
Cod	141.89	454.05	60.98	0.94
Pacific Cod (Gray)	141.89	454.05	60.98	0.94
Sablefish (Black Cod)	3.41	10.56	100.00	0.02
Greenling	19.30	223.66	100.00	0.46
Lingcod	19.30	223.66	100.00	0.46
Flounder	22.70	68.11	34.48	0.14
Unknown Flounder	22.70	68.11	34.48	0.14
Halibut	32.45	1,012.55	32.96	2.10
Herring	42.00 gal	252.00	100.00	0.52
Rockfish	156.65	407.97	60.26	0.85
Black Rockfish (black bass)	40.86	61.30	22.22	0.13
Red Rockfish	54.49	217.95	80.00	0.45
Unknown Rockfish	61.30	128.72	100.00	0.27
Sea Perch	6.81	6.81	100.00	0.01
Trout and Char	97.62	511.72	12.91	1.06
Char	6.81	9.54	9.23	0.02
Dolly Varden	6.81	9.54	9.23	0.02
Trout	90.81	502.18	13.01	1.04
Steelhead	90.81	502.18	13.01	1.04
Marine Invertebrates		572.97	7.41	1.19
Scallops	1.14	0.07	100.00	0.00
Crabs		359.95	14.34	0.75
King Crab		33.94	9.42	0.07
King Crab, Unknown	14.76	33.94	9.42	0.07
Tanner Crab	203.76	326.01	15.48	0.68
Tanner Crab, Bairdi	161.19	257.90	100.00	0.54
Tanner Crab, Unknown	42.57	68.11	3.69	0.14
Octopus	38.59	154.38	20.73	0.32
Sea Cucumber	28.38 gal	56.76	24.27	0.12
Shrimp	0.91 gal	1.82	13.49	0.00

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

Table XIII-28. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Larsen Bay, 1992/93

		Subsistence Methods								Removed from Commercial Catch		Rod and Reel		Any Method	
		Setnet		Beach Seine		Dip Net		Subsistence Gear Any Method							
Resource	Percent Base	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.
Salmon	total	14.08	14.76	59.79	57.39	0.28	0.17	74.15	72.32	20.44	20.93	5.41	6.75		
Chum Salmon	gear type	2.57	2.92	0.09	0.12	0.00	0.00	0.56	0.69	2.46	2.85	0.00	0.00		
	resource	39.39	39.39	6.06	6.06	0.00	0.00	45.45	45.45	54.55	54.55	0.00	0.00		
	total	0.36	0.43	0.06	0.07	0.00	0.00	0.42	0.50	0.50	0.60	0.00	0.00	0.92	1.09
Coho Salmon	gear type	22.57	28.91	6.76	9.46	0.00	0.00	9.74	13.40	21.15	27.71	62.89	67.67		
	resource	21.27	21.27	27.05	27.05	0.00	0.00	48.32	48.32	28.92	28.92	22.76	22.76		
	total	3.18	4.27	4.04	5.43	0.00	0.00	7.22	9.69	4.32	5.80	3.40	4.57	14.95	20.06
Chinook Salmon	gear type	1.98	4.43	0.00	0.00	0.00	0.00	0.38	0.90	4.16	9.53	5.67	10.67		
	resource	19.42	19.42	0.00	0.00	0.00	0.00	19.42	19.42	59.22	59.22	21.36	21.36		
	total	0.28	0.65	0.00	0.00	0.00	0.00	0.28	0.65	0.85	2.00	0.31	0.72	1.44	3.37
Pink Salmon	gear type	3.56	2.09	0.00	0.00	100.00	100.00	1.05	0.66	18.89	11.35	7.22	3.56		
	resource	9.97	9.97	0.00	0.00	5.54	5.54	15.51	15.51	76.73	76.73	7.76	7.76		
	total	0.50	0.31	0.00	0.00	0.28	0.17	0.78	0.48	3.86	2.38	0.39	0.24	5.03	3.10
Sockeye Salmon	gear type	69.31	61.64	93.14	90.43	0.00	0.00	88.27	84.34	53.34	48.55	24.23	18.10		
	resource	12.57	12.57	71.71	71.71	0.00	0.00	84.27	84.27	14.04	14.04	1.69	1.69		
	total	9.76	9.10	55.69	51.90	0.00	0.00	65.45	60.99	10.90	10.16	1.31	1.22	77.66	72.38
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, 1993

Table XIII-29. Estimated Salmon Harvest by Gear Type and Species, Larsen Bay, 1992/93

		Subsistence Methods								Removed from Commercial Catch		Rod and Reel		Any Method	
		Setnet		Beach Seine		Dip 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	Total	HH Mean
Salmon	numbers	573.24	13.65	2,433.73	57.95	11.35	0.27	3,018.32	71.86	832.05	19.81	220.22	5.24	4,070.59	96.92
	pounds	3,661.12	87.17	14,238.64	339.02	42.57	1.01	17,942.32	427.20	5,193.02	123.64	1,674.01	39.86	24,809.35	590.70
Chum Salmon	numbers	14.76	0.35	2.27	0.05	0.00	0.00	17.03	0.41	20.43	0.49	0.00	0.00	37.46	0.89
	pounds	106.99	2.55	16.46	0.39	0.00	0.00	123.45	2.94	148.14	3.53	0.00	0.00	271.58	6.47
Coho Salmon	numbers	129.41	3.08	164.59	3.92	0.00	0.00	294.00	7.00	175.95	4.19	138.49	3.30	608.43	14.49
	pounds	1,058.54	25.20	1,346.38	32.06	0.00	0.00	2,404.92	57.26	1,439.24	34.27	1,132.82	26.97	4,976.98	118.50
Chinook Salmon	numbers	11.35	0.27	0.00	0.00	0.00	0.00	11.35	0.27	34.62	0.82	12.49	0.30	58.46	1.39
	pounds	162.32	3.86	0.00	0.00	0.00	0.00	162.32	3.86	495.09	11.79	178.56	4.25	835.97	19.90
Pink Salmon	numbers	20.43	0.49	0.00	0.00	11.35	0.27	31.78	0.76	157.22	3.74	15.89	0.38	204.89	4.88
	pounds	76.62	1.82	0.00	0.00	42.57	1.01	119.19	2.84	589.56	14.04	59.59	1.42	768.34	18.29
Sockeye Salmon	numbers	397.30	9.46	2,266.86	53.97	0.00	0.00	2,664.16	63.43	443.84	10.57	53.35	1.27	3,161.35	75.27
	pounds	2,256.65	53.73	12,875.79	306.57	0.00	0.00	15,132.44	360.30	2,521.00	60.02	303.04	7.22	17,956.48	427.54
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

Table XIII-30. Percentage of Households Harvesting Salmon by Gear Type and Species, Larsen Bay, 1992/93

Resource	Setnet	Beach Seine	Dip Net	Any Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Any Method
Salmon	16.22	27.03	2.70	40.54	51.35	32.43	70.27
Chum Salmon	5.41	5.41	0.00	10.81	13.51	0.00	18.92
Coho Salmon	13.51	8.11	0.00	21.62	40.54	21.62	59.46
Chinook Salmon	2.70	0.00	0.00	2.70	18.92	8.11	29.73
Pink Salmon	8.11	0.00	2.70	10.81	21.62	5.41	32.43
Sockeye Salmon	5.41	27.03	0.00	32.43	45.95	10.81	62.16
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, 1993

Table XIII-31. Estimated Harvest of Fish Other than Salmon by Gear Type, Larsen 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	2,251.94	53.62	2,947.42	70.18	3,950.07	94.05	0.00	0.00	9,149.43	217.84
Lingcod	pounds	0.00	0.00	223.66	5.33	0.00	0.00	0.00	0.00	223.66	5.33
Pacific Cod (Gray)	pounds	232.48	5.54	454.05	10.81	58.12	1.38	0.00	0.00	744.65	17.73
Sablefish (Black Cod)	pounds	0.00	0.00	10.56	0.25	0.00	0.00	0.00	0.00	10.56	0.25
Unknown Flounder	pounds	129.41	3.08	68.11	1.62	0.00	0.00	0.00	0.00	197.51	4.70
Halibut	pounds	1,596.11	38.00	1,012.55	24.11	463.06	11.03	0.00	0.00	3,071.71	73.14
Herring	pounds	0.00	0.00	252.00	6.00	0.00	0.00	0.00	0.00	252.00	6.00
Black Rockfish (black bass)	pounds	124.30	2.96	61.30	1.46	90.24	2.15	0.00	0.00	275.84	6.57
Red Rockfish	pounds	54.49	1.30	217.95	5.19	0.00	0.00	0.00	0.00	272.43	6.49
Sea Perch	pounds	0.00	0.00	6.81	0.16	0.00	0.00	0.00	0.00	6.81	0.16
Unknown Rockfish	pounds	0.00	0.00	128.72	3.06	0.00	0.00	0.00	0.00	128.72	3.06
Irish Lord	pounds	1.70	0.04	0.00	0.00	0.00	0.00	0.00	0.00	1.70	0.04
Dolly Varden	pounds	38.14	0.91	9.54	0.23	55.62	1.32	0.00	0.00	103.30	2.46
Steelhead	pounds	75.33	1.79	502.18	11.96	3,283.03	78.17	0.00	0.00	3,860.54	91.92

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

Table XIII-32. Percentage of Fish Other Than Salmon Harvested by Gear Type, Larsen 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	24.61	32.21	43.17	0.00
Lingcod	resource	0.00	100.00	0.00	0.00
Pacific Cod (Gray)	resource	31.22	60.98	7.80	0.00
Sablefish (Black Cod)	resource	0.00	100.00	0.00	0.00
Unknown Flounder	resource	65.52	34.48	0.00	0.00
Halibut	resource	51.96	32.96	15.07	0.00
Herring	resource	0.00	100.00	0.00	0.00
Black Rockfish (black bass)	resource	45.06	22.22	32.72	0.00
Red Rockfish	resource	20.00	80.00	0.00	0.00
Sea Perch	resource	0.00	100.00	0.00	0.00
Unknown Rockfish	resource	0.00	100.00	0.00	0.00
Irish Lord	resource	100.00	0.00	0.00	0.00
Dolly Varden	resource	36.92	9.23	53.85	0.00
Steelhead	resource	1.95	13.01	85.04	0.00

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

Table XIII-33. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Larsen Bay, 1992/93

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	37.84	37.84	48.65	0.00	72.97
Lingcod	0.00	5.41	0.00	0.00	5.41
Pacific Cod (Gray)	10.81	13.51	5.41	0.00	27.03
Sablefish (Black Cod)	0.00	2.70	0.00	0.00	2.70
Unknown Flounder	5.41	2.70	0.00	0.00	8.11
Halibut	29.73	27.03	8.11	0.00	56.76
Herring	0.00	8.11	0.00	0.00	8.11
Black Rockfish (black bass)	8.11	5.41	8.11	0.00	18.92
Red Rockfish	5.41	13.51	0.00	0.00	18.92
Sea Perch	0.00	2.70	0.00	0.00	2.70
Unknown Rockfish	0.00	2.70	0.00	0.00	2.70
Irish Lord	2.70	0.00	0.00	0.00	2.70
Dolly Varden	2.70	2.70	16.22	0.00	18.92
Steelhead	5.41	21.62	32.43	0.00	48.65

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

Figure XIII-12. Composition of Wild Resource Harvests by Resource Category, Larsen Bay, 1993/94

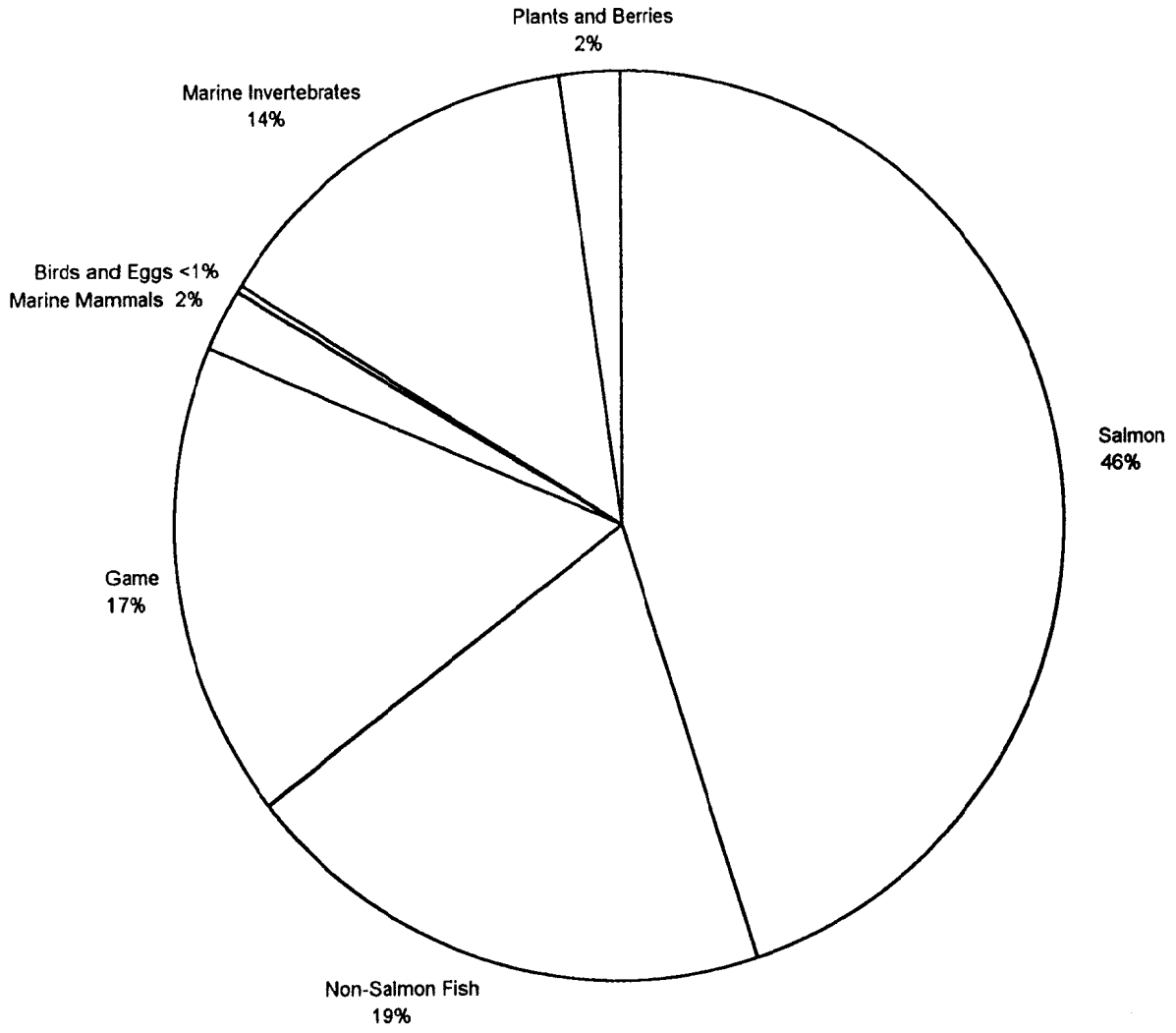


Figure XIII-13. Larsen Bay Households' Assessments of Their Subsistence Uses Compared to Before the Exxon Valdez Oil Spill

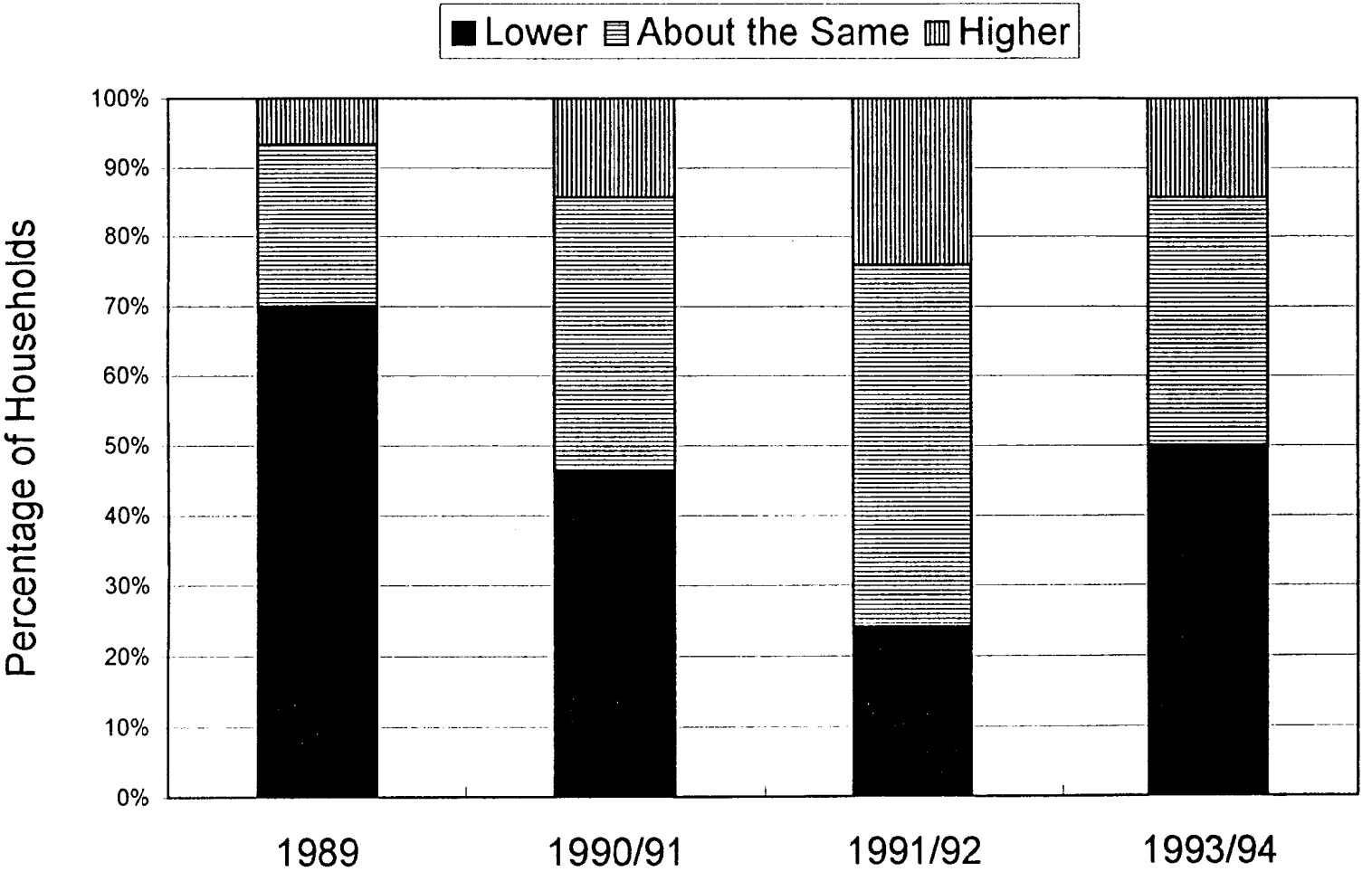


Figure XIII-14. Composition of Harvests by Resource Category, Larsen Bay, 1982/83, 1986, 1989, 1990/91, 1991/92, 1992/93, and 1993/94

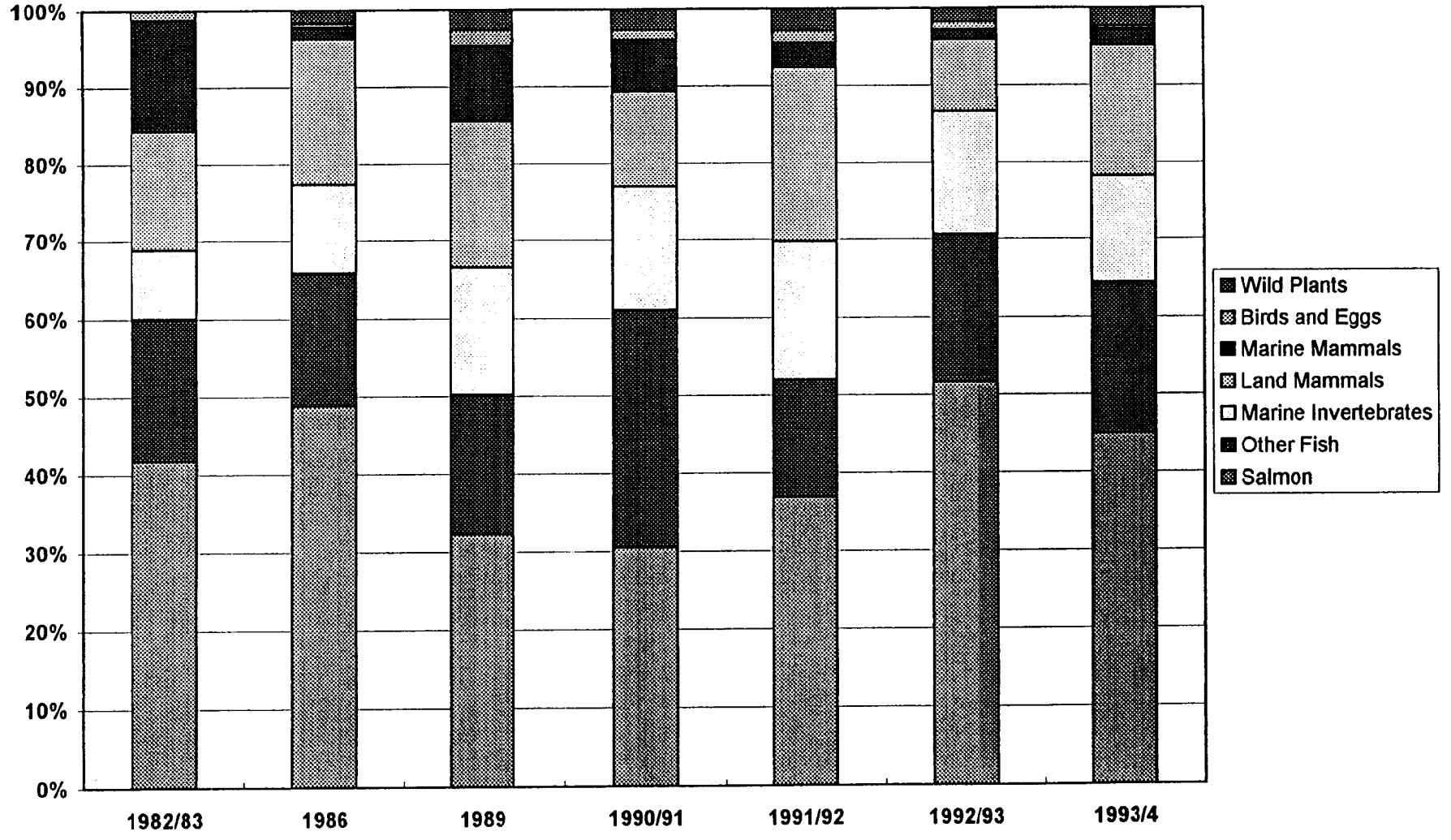


Table XIII-34. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Larsen Bay, 1993/94

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	92.5	92.5	100.0	87.5	58,563.26	1,195.17	451.01			18.92%	16.83%
Fish	97.5	67.5	67.5	90.0	65.0	37,695.20	769.29	290.30			23.70%	21.65%
Salmon	90.0	60.0	60.0	65.0	60.0	26,321.48	537.17	202.71	6,450.85	131.65	24.39%	22.43%
Chum Salmon	20.0	17.5	17.5	2.5	5.0	206.22	4.21	1.59	46.55	0.95	38.65%	39.66%
Coho Salmon	80.0	52.5	52.5	45.0	42.5	4,735.46	96.64	36.47	939.58	19.18	27.53%	26.06%
Chinook Salmon	55.0	37.5	37.5	25.0	40.0	1,355.85	27.67	10.44	158.03	3.23	25.01%	23.35%
Pink Salmon	27.5	20.0	20.0	15.0	15.0	212.27	4.33	1.63	93.10	1.90	31.12%	31.21%
Sockeye Salmon	87.5	57.5	57.5	55.0	55.0	19,811.68	404.32	152.57	5,213.60	106.40	24.78%	22.67%
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	90.0	55.0	55.0	82.5	52.5	11,373.72	232.12	87.59			24.14%	22.12%
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%
Cod	50.0	32.5	32.5	27.5	35.0	773.96	15.80	5.96	241.86	4.94	25.47%	23.83%
Pacific Cod (Gray)	50.0	32.5	32.5	27.5	35.0	773.96	15.80	5.96	241.86	4.94	25.47%	23.83%
Sablefish (Black Cod)	2.5	0.0	0.0	2.5	2.5	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Greenling	5.0	5.0	5.0	0.0	5.0	298.15	6.08	2.30	25.73	0.53	82.56%	82.59%
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	5.0	5.0	0.0	5.0	298.15	6.08	2.30	25.73	0.53	82.56%	82.59%
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	10.0	7.5	7.5	2.5	5.0	327.08	6.68	2.52	109.03	2.23	62.41%	63.79%
Arrow Tooth Flounder (Turbot)	5.0	5.0	5.0	0.0	2.5	106.58	2.18	0.82	35.53	0.73	72.91%	74.41%
Starry Flounder	2.5	2.5	2.5	0.0	2.5	220.50	4.50	1.70	73.50	1.50	86.69%	87.56%
Greenland Halibut (Greenland Turbot)	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	2.5	0.0	0.0	2.5	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Sole	2.5	2.5	2.5	0.0	0.0	61.25	1.25	0.47	61.25	1.25	86.69%	85.88%
Yellowfin 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	2.5	2.5	2.5	0.0	0.0	61.25	1.25	0.47	61.25	1.25	86.69%	85.88%
Halibut	82.5	50.0	50.0	62.5	47.5	4,790.98	97.78	36.90	132.71	2.71	19.55%	17.76%
Herring	10.0	5.0	5.0	7.5	0.0	95.55	1.95	0.74	15.93 gal	0.33	62.18%	61.78%
Herring Roe	2.5	0.0	0.0	2.5	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Rockfish	27.5	15.0	15.0	12.5	12.5	202.74	4.14	1.56	100.45	2.05	66.96%	55.71%
Black Rockfish (black bass)	10.0	5.0	5.0	5.0	5.0	119.44	2.44	0.92	79.63	1.63	80.13%	80.93%
Red Rockfish	25.0	15.0	15.0	10.0	10.0	83.30	1.70	0.64	20.83	0.43	39.25%	38.45%
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%
Sea Perch	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	5.0	2.5	2.5	2.5	0.0	18.38	0.38	0.14	36.75	0.75	86.69%	85.88%
Irish Lord	5.0	2.5	2.5	2.5	0.0	18.38	0.38	0.14	36.75	0.75	86.69%	85.88%

Table XIII-34. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Larsen 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
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%
Capelin (Grunion)	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%
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	2.5	2.5	2.5	0.0	2.5	11.03	0.23	0.08	1.23	0.03	86.69%	86.72%
Salmon Shark	2.5	2.5	2.5	0.0	2.5	11.03	0.23	0.08	1.23	0.03	86.69%	86.72%
Unknown 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)	2.5	2.5	2.5	0.0	0.0	51.45	1.05	0.40	36.75	0.75	86.69%	85.88%
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%
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	70.0	45.0	42.5	52.5	35.0	4,743.18	96.80	36.53	2,209.90	45.10	60.86%	44.65%
Char	25.0	17.5	17.5	7.5	10.0	2,493.61	50.89	19.20	1,781.15	36.35	71.65%	70.02%
Dolly Varden	25.0	17.5	17.5	7.5	10.0	2,493.61	50.89	19.20	1,781.15	36.35	71.65%	70.02%
Dolly Varden-Fingerling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Brook 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 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%
Trout	70.0	42.5	40.0	50.0	35.0	2,249.57	45.91	17.32	428.75	8.75	29.27%	28.62%
Cutthroat Trout	2.5	0.0	0.0	2.5	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Rainbow Trout	15.0	10.0	10.0	5.0	0.0	41.16	0.84	0.32	29.40	0.60	49.83%	48.42%
Steelhead	67.5	40.0	37.5	45.0	35.0	2,208.41	45.07	17.01	399.35	8.15	29.96%	28.87%
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	92.5	67.5	57.5	75.0	62.5	9,945.53	202.97	76.59	231.53	4.73	19.34%	19.33%
Big Game	92.5	67.5	57.5	72.5	62.5	9,921.03	202.47	76.40	198.45	4.05	20.07%	19.34%
Bison	2.5	0.0	0.0	2.5	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black Bear	2.5	0.0	0.0	2.5	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Brown Bear	2.5	0.0	0.0	2.5	2.5	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Caribou	12.5	2.5	2.5	10.0	5.0	183.75	3.75	1.42	1.23	0.03	86.69%	85.88%
Deer	90.0	65.0	57.5	62.5	57.5	8,414.28	171.72	64.80	194.78	3.98	20.35%	19.98%
Elk	7.5	0.0	0.0	7.5	2.5	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goat	2.5	0.0	0.0	2.5	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Moose	32.5	10.0	5.0	27.5	10.0	1,323.00	27.00	10.19	2.45	0.05	60.51%	59.95%
Muskox	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 XIII-34. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Larsen 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
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	22.5	22.5	15.0	10.0	10.0	24.50	0.50	0.19	33.08	0.68	43.72%	55.10%
Fox	7.5	7.5	7.5	0.0	0.0	0.00	0.00	0.00	18.38	0.38	60.65%	0.00%
Red Fox	7.5	7.5	7.5	0.0	0.0	0.00	0.00	0.00	18.38	0.38	60.65%	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%
Hare	15.0	15.0	7.5	10.0	10.0	24.50	0.50	0.19	12.25	0.25	55.18%	55.10%
Snowshoe Hare	15.0	15.0	7.5	10.0	10.0	24.50	0.50	0.19	12.25	0.25	55.18%	55.10%
Land Otter	2.5	2.5	2.5	0.0	0.0	0.00	0.00	0.00	2.45	0.05	86.69%	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%
Feral Animals	7.5	0.0	0.0	7.5	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Reindeer - Feral	7.5	0.0	0.0	7.5	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Marine Mammals	37.5	17.5	17.5	22.5	15.0	1,244.60	25.40	9.58	79.63	1.63	56.97%	51.52%
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%
Humpback 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	32.5	15.0	15.0	20.0	15.0	754.60	15.40	5.81	13.48	0.28	37.41%	37.49%
Harbor Seal	32.5	15.0	15.0	20.0	15.0	754.60	15.40	5.81	13.48	0.28	37.41%	37.49%
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	2.5	5.0	2.5	0.0	2.5	490.00	10.00	3.77	2.45	0.05	86.69%	87.56%
Sea Otter	10.0	7.5	7.5	2.5	2.5	0.00	0.00	0.00	63.70	1.30	68.30%	0.00%
Birds and Eggs	52.5	30.0	27.5	30.0	22.5	219.03	4.47	1.69	300.13	6.13	40.33%	41.49%
Birds	45.0	27.5	25.0	25.0	20.0	209.48	4.28	1.61	268.28	5.48	44.57%	43.27%
Upland Game Birds	10.0	7.5	5.0	5.0	2.5	12.01	0.25	0.09	17.15	0.35	75.01%	74.36%
Ptarmigan	10.0	7.5	5.0	5.0	2.5	12.01	0.25	0.09	17.15	0.35	75.01%	74.36%
Migratory Birds	42.5	25.0	25.0	22.5	20.0	197.47	4.03	1.52	251.13	5.13	43.40%	42.34%
Waterfowl	42.5	25.0	25.0	22.5	20.0	195.63	3.99	1.51	245.00	5.00	42.76%	42.12%
Ducks	42.5	25.0	25.0	22.5	20.0	195.63	3.99	1.51	245.00	5.00	42.76%	42.12%
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%

Table XIII-34. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Larsen 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
Scoter	12.5	12.5	12.5	2.5	10.0	38.59	0.79	0.30	42.88	0.88	52.52%	51.46%
Scoter, White-winged	7.5	7.5	7.5	2.5	5.0	18.74	0.38	0.14	20.83	0.43	58.83%	58.22%
Scoter, Black	10.0	10.0	10.0	2.5	7.5	19.85	0.41	0.15	22.05	0.45	53.85%	52.46%
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	27.5	17.5	17.5	15.0	7.5	110.74	2.26	0.85	138.43	2.83	46.14%	45.99%
Bufflehead	7.5	7.5	7.5	0.0	5.0	10.78	0.22	0.08	26.95	0.55	61.55%	61.17%
Merganser	2.5	2.5	2.5	0.0	2.5	11.03	0.23	0.08	12.25	0.25	86.69%	85.88%
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	10.0	5.0	5.0	5.0	7.5	17.15	0.35	0.13	17.15	0.35	75.01%	76.83%
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	2.5	0.0	0.0	2.5	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Oldsquaw	2.5	2.5	2.5	0.0	2.5	1.96	0.04	0.02	2.45	0.05	86.69%	85.88%
Canvasback	2.5	2.5	2.5	0.0	2.5	5.39	0.11	0.04	4.90	0.10	86.69%	85.88%
Redhead Duck	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 Ducks	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	0.0	0.0	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Geese	2.5	0.0	0.0	2.5	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Black 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, 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, Unknown	2.5	0.0	0.0	2.5	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	2.5	2.5	2.5	0.0	2.5	1.84	0.04	0.01	6.13	0.13	86.69%	85.88%
Auklet	2.5	2.5	2.5	0.0	2.5	1.84	0.04	0.01	6.13	0.13	86.69%	85.88%
Parakeet Auklet	2.5	2.5	2.5	0.0	2.5	1.84	0.04	0.01	6.13	0.13	86.69%	85.88%
Eggs	15.0	5.0	5.0	10.0	2.5	9.56	0.20	0.07	31.85	0.65	80.13%	81.89%
Seabird Eggs	15.0	5.0	5.0	10.0	2.5	9.56	0.20	0.07	31.85	0.65	80.13%	81.89%
Gull Eggs	15.0	5.0	5.0	10.0	2.5	9.56	0.20	0.07	31.85	0.65	80.13%	81.89%
Herring Gull Eggs	15.0	5.0	5.0	10.0	2.5	9.56	0.20	0.07	31.85	0.65	80.13%	81.89%
Puffin 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 XIII-34. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Larsen 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
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%
Kittiwake 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%
Eider 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%
Marine Invertebrates	100.0	77.5	77.5	85.0	67.5	8,084.45	164.99	62.26			19.42%	17.03%
Clams	87.5	75.0	75.0	55.0	60.0	4,311.69	87.99	33.21	1,437.23 gal	29.33	19.40%	17.64%
Butter Clams	82.5	70.0	70.0	50.0	55.0	3,023.91	61.71	23.29	1,007.97 gal	20.57	19.33%	17.64%
Razor Clams	15.0	15.0	15.0	2.5	0.0	47.47	0.97	0.37	15.82 gal	0.32	47.21%	45.57%
Pacific Littleneck Clams (Steamers)	47.5	40.0	40.0	27.5	27.5	1,155.79	23.59	8.90	385.26 gal	7.86	33.27%	32.49%
Pinkneck Clams	5.0	2.5	2.5	2.5	0.0	84.53	1.73	0.65	28.18 gal	0.58	86.69%	85.03%
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	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	2.5	0.0	0.0	2.5	2.5	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Scallops	15.0	2.5	2.5	12.5	2.5	0.23	0.00	0.00	3.68	0.08	86.69%	85.88%
Jingles	2.5	2.5	2.5	0.0	0.0	0.29	0.01	0.00	0.10 gal	0.00	86.69%	85.88%
Mussels	5.0	5.0	5.0	0.0	0.0	21.56	0.44	0.17	14.37 gal	0.29	74.66%	75.24%
Crabs	90.0	37.5	37.5	75.0	42.5	2,744.12	56.00	21.13			36.94%	34.52%
Dungeness Crab	47.5	17.5	17.5	32.5	12.5	76.32	1.56	0.59	109.03	2.23	34.72%	31.53%
King Crab	45.0	25.0	22.5	30.0	15.0	445.17	9.09	3.43			34.44%	32.43%
King Crab, Blue	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 Eggs, Red	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%
King Crab, Unknown	45.0	25.0	22.5	30.0	15.0	445.17	9.09	3.43	193.55	3.95	34.44%	32.43%
Tanner Crab	80.0	35.0	35.0	62.5	40.0	2,222.64	45.36	17.12	1,389.15	28.35	41.20%	38.97%
Tanner Crab, Bairdi	2.5	2.5	2.5	0.0	0.0	11.76	0.24	0.09	7.35	0.15	86.69%	85.88%
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	80.0	35.0	35.0	62.5	40.0	2,210.88	45.12	17.03	1,381.80	28.20	41.27%	39.04%
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)	52.5	40.0	40.0	17.5	27.5	160.95	3.28	1.24	40.24 gal	0.82	24.22%	25.36%
Chitons (small)	52.5	40.0	40.0	17.5	27.5	160.95	3.28	1.24	40.24 gal	0.82	24.22%	25.36%
Octopus	80.0	42.5	40.0	52.5	35.0	759.50	15.50	5.85	189.88	3.88	25.92%	26.96%
Sea Cucumber	15.0	5.0	5.0	10.0	5.0	26.95	0.55	0.21	13.48 gal	0.28	79.00%	78.28%

Table XIII-34. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Larsen 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
Sea Urchin	50.0	37.5	37.5	25.0	25.0	53.64	1.09	0.41	107.29 gal	2.19	27.47%	28.37%
Shrimp	5.0	2.5	2.5	2.5	0.0	3.68	0.08	0.03	1.84 gal	0.04	86.69%	85.88%
Snails	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%
Limpets	7.5	2.5	2.5	5.0	2.5	1.84	0.04	0.01	1.23 gal	0.03	86.69%	86.72%
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%
Plants and Berries	85.0	70.0	70.0	57.5	42.5	1,374.45	28.05	10.58	343.61 gal	7.01	20.83%	20.92%
Berries	85.0	67.5	67.5	57.5	42.5	1,247.05	25.45	9.60	311.76 gal	6.36	22.43%	22.59%
Plants/Greens/Mushrooms	30.0	27.5	27.5	10.0	10.0	120.05	2.45	0.92	30.01 gal	0.61	37.68%	37.55%
Seaweed/Kelp (Food)	2.5	2.5	2.5	0.0	0.0	7.35	0.15	0.06	1.84 gal	0.04	86.69%	85.03%
Fertilizer	5.0	5.0	5.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Vegetative Fertilizer	5.0	5.0	5.0	0.0	0.0	0.00	0.00	0.00	275.63 gal	5.63	63.95%	0.00%
Seaweed/Kelp (Non-food)	5.0	5.0	5.0	0.0	0.0	0.00	0.00	0.00	275.63 gal	5.63	63.95%	0.00%
Fish Fertilizer	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Herring [Fertilizer]	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Invertebrate Fertilizer	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Starfish	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Wood	70.0	60.0	60.0	15.0	32.5	0.00	0.00	0.00	90.04 crd	1.84	17.15%	0.00%

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

Table XIII-35. Estimated Amount of Resources Removed From Commercial Harvest, Larsen Bay, 1993/94

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		5,536.94	12.09	9.45
Fish		5,453.27	14.47	9.31
Salmon	715.40	3,156.13	11.99	5.39
Chum Salmon	42.88	189.94	92.11	0.32
Coho Salmon	115.15	580.36	12.26	0.99
Chinook Salmon	74.73	641.14	47.29	1.09
Pink Salmon	58.80	134.06	63.16	0.23
Sockeye Salmon	423.85	1,610.63	8.13	2.75
Non-Salmon Fish		2,297.14	20.20	3.92
Cod	73.50	235.20	30.39	0.40
Pacific Cod (Gray)	73.50	235.20	30.39	0.40
Greenling	1.23	14.20	4.76	0.02
Lingcod	1.23	14.20	4.76	0.02
Flounder	6.13	18.38	5.62	0.03
Arrow Tooth Flounder (Turbot)	6.13	18.38	17.24	0.03
Sole	61.25	61.25	100.00	0.10
Sole, Unknown	61.25	61.25	100.00	0.10
Halibut	39.02	1,408.51	29.40	2.41
Herring	9.80 gal	58.80	61.54	0.10
Rockfish	89.43	173.95	85.80	0.30
Black Rockfish (black bass)	73.50	110.25	92.31	0.19
Red Rockfish	15.93	63.70	76.47	0.11
Sculpin	36.75	18.38	100.00	0.03
Irish Lord	36.75	18.38	100.00	0.03
Shark	1.23	11.03	100.00	0.02
Salmon Shark	1.23	11.03	100.00	0.02
Walleye Pollock (Whiting)	36.75	51.45	100.00	0.09
Trout and Char	135.98	246.02	5.19	0.42
Char	122.50	171.50	6.88	0.29
Dolly Varden	122.50	171.50	6.88	0.29
Trout	13.48	74.52	3.31	0.13
Steelhead	13.48	74.52	3.37	0.13
Marine Invertebrates		83.67	1.03	0.14
Crabs		16.91	0.62	0.03
Dungeness Crab	7.35	5.15	6.74	0.01
Tanner Crab	7.35	11.76	0.53	0.02
Tanner Crab, Bairdi	7.35	11.76	100.00	0.02
Octopus	9.80	39.20	5.16	0.07
Sea Cucumber	12.25 gal	24.50	90.91	0.04
Sea Urchin (Neet)	6.13 gal	3.06	5.71	0.01

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

Table XIII-36. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Larsen Bay, 1993/94

		Subsistence Methods								Removed from Commercial Catch		Rod and Reel		Any Method	
		Setnet		Beach Seine		Handpick		Subsistence Gear Any Method							
Resource	Percent Base	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.
Salmon	total	2.45	2.74	80.84	78.26	0.11	0.06	83.40	81.06	11.09	11.99	5.51	6.95		
Chum Salmon	gear type	1.55	1.51	0.00	0.00	0.00	0.00	0.05	0.05	5.99	6.02	0.34	0.30		
	resource	5.26	5.26	0.00	0.00	0.00	0.00	5.26	5.26	92.11	92.11	2.63	2.63		
	total	0.04	0.04	0.00	0.00	0.00	0.00	0.04	0.04	0.66	0.72	0.02	0.02	0.72	0.78
Coho Salmon	gear type	60.47	66.84	8.93	11.39	0.00	0.00	10.43	13.25	16.10	18.39	74.14	72.55		
	resource	10.17	10.17	49.54	49.54	0.00	0.00	59.71	59.71	12.26	12.26	28.03	28.03		
	total	1.48	1.83	7.22	8.91	0.00	0.00	8.70	10.74	1.79	2.20	4.08	5.04	14.57	17.99
Chinook Salmon	gear type	0.00	0.00	0.82	1.79	0.00	0.00	0.80	1.72	10.45	20.31	11.38	18.96		
	resource	0.00	0.00	27.13	27.13	0.00	0.00	27.13	27.13	47.29	47.29	25.58	25.58		
	total	0.00	0.00	0.66	1.40	0.00	0.00	0.66	1.40	1.16	2.44	0.63	1.32	2.45	5.15
Pink Salmon	gear type	0.00	0.00	0.00	0.00	100.00	100.00	0.14	0.08	8.22	4.25	7.59	3.36		
	resource	0.00	0.00	0.00	0.00	7.89	7.89	7.89	7.89	63.16	63.16	28.95	28.95		
	total	0.00	0.00	0.00	0.00	0.11	0.06	0.11	0.06	0.91	0.51	0.42	0.23	1.44	0.81
Sockeye Salmon	gear type	37.98	31.66	90.25	86.82	0.00	0.00	88.59	84.89	59.25	51.03	6.55	4.83		
	resource	1.15	1.15	90.27	90.27	0.00	0.00	91.42	91.42	8.13	8.13	0.45	0.45		
	total	0.93	0.87	72.96	67.95	0.00	0.00	73.89	68.81	6.57	6.12	0.36	0.34	80.82	75.27
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 XIII-37. Estimated Salmon Harvest by Gear Type and Species, Larsen Bay, 1993/94

		Subsistence Methods								Removed from Commercial Catch		Rod and Reel		Any Method	
		Setnet		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	158.03	3.23	5,214.83	106.43	7.35	0.15	5,380.20	109.80	715.40	14.60	355.25	7.25	6,450.85	131.65
	pounds	720.52	14.70	20,598.50	420.38	16.76	0.34	21,335.78	435.42	3,156.13	64.41	1,829.57	37.34	26,321.48	537.17
Chum Salmon	numbers	2.45	0.05	0.00	0.00	0.00	0.00	2.45	0.05	42.88	0.88	1.23	0.03	46.55	0.95
	pounds	10.85	0.22	0.00	0.00	0.00	0.00	10.85	0.22	189.94	3.88	5.43	0.11	206.22	4.21
Coho Salmon	numbers	95.55	1.95	465.50	9.50	0.00	0.00	561.05	11.45	115.15	2.35	263.38	5.38	939.58	19.18
	pounds	481.57	9.83	2,346.12	47.88	0.00	0.00	2,827.69	57.71	580.36	11.84	1,327.41	27.09	4,735.46	96.64
Chinook Salmon	numbers	0.00	0.00	42.88	0.88	0.00	0.00	42.88	0.88	74.73	1.53	40.43	0.83	158.03	3.23
	pounds	0.00	0.00	367.87	7.51	0.00	0.00	367.87	7.51	641.14	13.08	346.85	7.08	1,355.85	27.67
Pink Salmon	numbers	0.00	0.00	0.00	0.00	7.35	0.15	7.35	0.15	58.80	1.20	26.95	0.55	93.10	1.90
	pounds	0.00	0.00	0.00	0.00	16.76	0.34	16.76	0.34	134.06	2.74	61.45	1.25	212.27	4.33
Sockeye Salmon	numbers	60.03	1.23	4,706.45	96.05	0.00	0.00	4,766.48	97.28	423.85	8.65	23.28	0.48	5,213.60	106.40
	pounds	228.10	4.66	17,884.51	364.99	0.00	0.00	18,112.61	369.65	1,610.63	32.87	88.45	1.81	19,811.68	404.32
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 XIII-38. Percentage of Households Harvesting Salmon by Gear Type and Species, Larsen Bay, 1993/94

Resource	Subsistence Methods				Removed from Commercial Catch	Rod and Reel	Any Method
	Setnet	Beach Seine	Handpick	Any Subsistence Gear			
Salmon	7.50	37.50	2.50	42.50	35.00	32.50	60.00
Chum Salmon	2.50	0.00	0.00	2.50	12.50	2.50	17.50
Coho Salmon	5.00	17.50	0.00	22.50	22.50	27.50	52.50
Chinook Salmon	0.00	10.00	0.00	10.00	25.00	12.50	37.50
Pink Salmon	0.00	0.00	2.50	2.50	15.00	7.50	20.00
Sockeye Salmon	7.50	37.50	0.00	42.50	30.00	7.50	57.50
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 XIII-39. Estimated Harvest of Fish Other than Salmon by Gear Type, Larsen 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	5,030.61	102.67	2,297.14	46.88	4,045.97	82.57	0.00	0.00	11,373.72	232.12
Lingcod	pounds	0.00	0.00	14.20	0.29	283.96	5.80	0.00	0.00	298.15	6.08
Pacific Cod (Gray)	pounds	402.78	8.22	235.20	4.80	135.98	2.78	0.00	0.00	773.96	15.80
Arrow Tooth Flounder (Turbot)	pounds	88.20	1.80	18.38	0.38	0.00	0.00	0.00	0.00	106.58	2.18
Starry Flounder	pounds	220.50	4.50	0.00	0.00	0.00	0.00	0.00	0.00	220.50	4.50
Sole, Unknown	pounds	0.00	0.00	61.25	1.25	0.00	0.00	0.00	0.00	61.25	1.25
Halibut	pounds	1,962.70	40.06	1,408.51	28.75	1,419.78	28.98	0.00	0.00	4,790.98	97.78
Herring	pounds	36.75	0.75	58.80	1.20	0.00	0.00	0.00	0.00	95.55	1.95
Black Rockfish (black bass)	pounds	9.19	0.19	110.25	2.25	0.00	0.00	0.00	0.00	119.44	2.44
Red Rockfish	pounds	19.60	0.40	63.70	1.30	0.00	0.00	0.00	0.00	83.30	1.70
Irish Lord	pounds	0.00	0.00	18.38	0.38	0.00	0.00	0.00	0.00	18.38	0.38
Salmon Shark	pounds	0.00	0.00	11.03	0.23	0.00	0.00	0.00	0.00	11.03	0.23
Walleye Pollock (Whiting)	pounds	0.00	0.00	51.45	1.05	0.00	0.00	0.00	0.00	51.45	1.05
Dolly Varden	pounds	2,263.80	46.20	171.50	3.50	58.31	1.19	0.00	0.00	2,493.61	50.89
Rainbow Trout	pounds	0.00	0.00	0.00	0.00	41.16	0.84	0.00	0.00	41.16	0.84
Steelhead	pounds	27.10	0.55	74.52	1.52	2,106.79	43.00	0.00	0.00	2,208.41	45.07

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

Table XIII-40. Percentage of Fish Other Than Salmon Harvested by Gear Type, Larsen 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	44.23	20.20	35.57	0.00
Lingcod	resource	0.00	4.76	95.24	0.00
Pacific Cod (Gray)	resource	52.04	30.39	17.57	0.00
Arrow Tooth Flounder (Turbot)	resource	82.76	17.24	0.00	0.00
Starry Flounder	resource	100.00	0.00	0.00	0.00
Sole, Unknown	resource	0.00	100.00	0.00	0.00
Halibut	resource	40.97	29.40	29.63	0.00
Herring	resource	38.46	61.54	0.00	0.00
Black Rockfish (black bass)	resource	7.69	92.31	0.00	0.00
Red Rockfish	resource	23.53	76.47	0.00	0.00
Irish Lord	resource	0.00	100.00	0.00	0.00
Salmon Shark	resource	0.00	100.00	0.00	0.00
Walleye Pollock (Whiting)	resource	0.00	100.00	0.00	0.00
Dolly Varden	resource	90.78	6.88	2.34	0.00
Rainbow Trout	resource	0.00	0.00	100.00	0.00
Steelhead	resource	1.23	3.37	95.40	0.00

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

Table XIII-41. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Larsen Bay, 1993/94

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	35.00	20.00	42.50	0.00	55.00
Lingcod	0.00	2.50	2.50	0.00	5.00
Pacific Cod (Gray)	17.50	15.00	5.00	0.00	32.50
Arrow Tooth Flounder (Turbot)	2.50	2.50	0.00	0.00	5.00
Starry Flounder	2.50	0.00	0.00	0.00	2.50
Sole, Unknown	0.00	2.50	0.00	0.00	2.50
Halibut	27.50	15.00	17.50	0.00	50.00
Herring	2.50	2.50	0.00	0.00	5.00
Black Rockfish (black bass)	2.50	2.50	0.00	0.00	5.00
Red Rockfish	5.00	10.00	0.00	0.00	15.00
Irish Lord	0.00	2.50	0.00	0.00	2.50
Salmon Shark	0.00	2.50	0.00	0.00	2.50
Walleye Pollock (Whiting)	0.00	2.50	0.00	0.00	2.50
Dolly Varden	7.50	2.50	10.00	0.00	17.50
Rainbow Trout	0.00	0.00	10.00	0.00	10.00
Steelhead	5.00	7.50	32.50	0.00	37.50

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

Table XIII-42. Uses of Wild Foods, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
ANY WILD FOODS EATEN YESTERDAY?			
No			
Count	25	23	29
Col %	65.8%	63.9%	72.5%
Yes			
Count	13	13	11
Col %	34.2%	36.1%	27.5%
WILD FOODS AS MAIN PART OF A MEAL			
No			
Count	29	27	31
Col %	76.3%	75.0%	77.5%
Yes			
Count	9	9	9
Col %	23.7%	25.0%	22.5%
HARVEST OF WILD FOODS BY RESPONDENT			
No			
Count	34	29	34
Col %	89.5%	80.6%	85.0%
Yes			
Count	4	7	6
Col %	10.5%	19.4%	15.0%
WF HARVESTED BY RELATIVE IN HH			
No			
Count	37	33	39
Col %	97.4%	91.7%	97.5%
Yes			
Count	1	3	1
Col %	2.6%	8.3%	2.5%
WF HARVESTED BY RELATIVE IN ANOTHER HH			
No			
Count	36	34	38
Col %	94.7%	94.4%	95.0%
Yes			
Count	2	2	2
Col %	5.3%	5.6%	5.0%
WF HARVESTED BY RELATIVE IN ANOTHER COMM.			

(continued)

Table XIII-42. Uses of Wild Foods, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
No			
Count	36	36	40
Col %	94.7%	100.0%	100.0%
Yes			
Count	2		
Col %	5.3%		
WF HARVESTED BY FRIEND IN HH			
No			
Count	38	36	40
Col %	100.0%	100.0%	100.0%
WF HARVESTED BY FRIEND IN COMMUNITY			
No			
Count	36	34	40
Col %	94.7%	94.4%	100.0%
Yes			
Count	2	2	
Col %	5.3%	5.6%	
WF HARVESTED BY FRIEND IN ANOTHER COMM.			
No			
Count	36	35	39
Col %	94.7%	97.2%	97.5%
Yes			
Count	2	1	1
Col %	5.3%	2.8%	2.5%

Table XIII-43. Safety of Using Subsistence Foods, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
DO YOU EAT BIDARKIES?			
No			
Count		11	10
Col %		30.6%	25.0%
Yes			
Count		25	30
Col %		69.4%	75.0%
IS EATING BIDARKIES IMPORTANT TO YOU?			
No			
Count	19		
Col %	50.0%		
Yes			
Count	19		
Col %	50.0%		
BIDARKIE HARVEST AREAS SAFE?			
Do Not Know			
Count	1	1	1
Col %	5.3%	4.0%	3.3%
Not Safe			
Count	1	1	2
Col %	5.3%	4.0%	6.7%
Safe			
Count	17	23	27
Col %	89.5%	92.0%	90.0%
WHY BIDARKIES NOT SAFE TO EAT			
Oil pollution or fear of contamination			
Count	1	1	2
Col %	100.0%	100.0%	100.0%
DO YOU EAT CLAMS?			
No			
Count		1	1
Col %		2.8%	2.5%
Yes			
Count		35	39
Col %		97.2%	97.5%
IS EATING CLAMS IMPORTANT?			

(continued)

Table XIII-43. Safety of Using Subsistence Foods, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
No			
Count	11		
Col %	28.9%		
Yes			
Count	27		
Col %	71.1%		
ARE CLAMS SAFE FOR CHILDREN TO EAT?			
Do Not Know			
Count		4	
Col %		11.4%	
Not Safe			
Count	5	1	2
Col %	18.5%	2.9%	5.1%
Safe			
Count	22	30	37
Col %	81.5%	85.7%	94.9%
WHY CLAMS NOT SAFE TO EAT			
Oil pollution or fear of contamination			
Count	2	1	1
Col %	50.0%	100.0%	50.0%
Pollution from non-oil spill source			
Count			1
Col %			50.0%
Safe to eat if you know which ones to take			
Count	2		
Col %	50.0%		
DO YOU EAT SEAL OIL OR SEAL MEAT?			
No			
Count		17	24
Col %		47.2%	60.0%
Yes			
Count		19	16
Col %		52.8%	40.0%
IS EATING SEAL MEAT OR OIL IMPORTANT?			
No			

(continued)

Table XIII-43. Safety of Using Subsistence Foods, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Count	21		
Col %	55.3%		
Yes			
Count	17		
Col %	44.7%		
ARE SEALS FROM HARVEST AREAS SAFE TO EAT?			
Do Not Know			
Count		4	1
Col %		21.1%	6.3%
Not Safe			
Count		1	
Col %		5.3%	
Safe			
Count	17	14	15
Col %	100.0%	73.7%	93.8%
WHY SEAL NOT SAFE TO EAT			
Do Not Know			
Count			1
Col %			100.0%
Got sick after eating			
Count		1	
Col %		100.0%	

Table XIII-44. Resource Population Statuses, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
COMPARED TO 1988: DEER			
Do Not Know			
Count	6	4	4
Col %	19.4%	13.8%	13.8%
Less			
Count	10	20	8
Col %	32.3%	69.0%	27.6%
Same			
Count	9	4	13
Col %	29.0%	13.8%	44.8%
More			
Count	6	1	4
Col %	19.4%	3.4%	13.8%
COMPARED TO 1988: BEAR			
Do Not Know			
Count	3	6	4
Col %	9.7%	20.7%	13.8%
Less			
Count	1		2
Col %	3.2%		6.9%
Same			
Count	13	11	12
Col %	41.9%	37.9%	41.4%
More			
Count	14	12	11
Col %	45.2%	41.4%	37.9%
COMPARED TO 1988: HARBOR SEAL			
Do Not Know			
Count	11	14	9
Col %	35.5%	48.3%	31.0%
Less			
Count	7	5	12
Col %	22.6%	17.2%	41.4%
Same			
Count	11	9	7
Col %	35.5%	31.0%	24.1%

(continued)

Table XIII-44. Resource Population Statuses, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
More			
Count	2	1	1
Col %	6.5%	3.4%	3.4%
COMPARED TO 1988: SEA LIONS			
Do Not Know			
Count		17	13
Col %		58.6%	44.8%
Less			
Count		5	11
Col %		17.2%	37.9%
Same			
Count		4	5
Col %		13.8%	17.2%
More			
Count		3	
Col %		10.3%	
COMPARED TO 1988: SEA DUCKS			
Do Not Know			
Count	14	12	11
Col %	45.2%	41.4%	37.9%
Less			
Count	5	7	8
Col %	16.1%	24.1%	27.6%
Same			
Count	9	9	10
Col %	29.0%	31.0%	34.5%
More			
Count	3	1	
Col %	9.7%	3.4%	
COMPARED TO 1988: COMMON MURRE			
Do Not Know			
Count		13	18
Col %		44.8%	62.1%
Less			
Count		6	5
Col %		20.7%	17.2%

(continued)

Table XIII-44. Resource Population Statuses, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Same			
Count		8	6
Col %		27.6%	20.7%
More			
Count		2	
Col %		6.9%	
COMPARED TO 1988: SALMON			
Do Not Know			
Count	8	6	10
Col %	25.8%	20.7%	34.5%
Less			
Count	13	13	9
Col %	41.9%	44.8%	31.0%
Same			
Count	9	8	7
Col %	29.0%	27.6%	24.1%
More			
Count	1	2	3
Col %	3.2%	6.9%	10.3%
COMPARED TO 1988: HALIBUT			
Do Not Know			
Count	9	12	9
Col %	29.0%	41.4%	31.0%
Less			
Count	5	6	4
Col %	16.1%	20.7%	13.8%
Same			
Count	17	10	15
Col %	54.8%	34.5%	51.7%
More			
Count		1	1
Col %		3.4%	3.4%
COMPARED TO 1988: ROCKFISH			
Do Not Know			
Count	22	16	19
Col %	71.0%	55.2%	65.5%

(continued)

Table XIII-44. Resource Population Statuses, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Less			
Count		2	1
Col %		6.9%	3.4%
Same			
Count	8	9	9
Col %	25.8%	31.0%	31.0%
More			
Count	1	2	
Col %	3.2%	6.9%	
COMPARED TO 1988: DOLLY VARDEN			
Do Not Know			
Count	16	10	12
Col %	51.6%	34.5%	41.4%
Less			
Count	1	2	1
Col %	3.2%	6.9%	3.4%
Same			
Count	11	8	14
Col %	35.5%	27.6%	48.3%
More			
Count	3	9	2
Col %	9.7%	31.0%	6.9%
COMPARED TO 1988: CLAMS			
Do Not Know			
Count	4	6	3
Col %	12.9%	20.7%	10.3%
Less			
Count	5	7	10
Col %	16.1%	24.1%	34.5%
Same			
Count	21	16	16
Col %	67.7%	55.2%	55.2%
More			
Count	1		
Col %	3.2%		

(continued)

Table XIII-44. Resource Population Statuses, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
COMPARED TO 1988: BIDARKIES			
Do Not Know			
Count	9	8	6
Col %	29.0%	27.6%	20.7%
Less			
Count	5	3	10
Col %	16.1%	10.3%	34.5%
Same			
Count	17	17	13
Col %	54.8%	58.6%	44.8%
More			
Count		1	
Col %		3.4%	
COMPARED TO 1988: SEA URCHINS			
Do Not Know			
Count	12	11	8
Col %	38.7%	37.9%	27.6%
Less			
Count	6	6	14
Col %	19.4%	20.7%	48.3%
Same			
Count	12	10	5
Col %	38.7%	34.5%	17.2%
More			
Count	1	2	2
Col %	3.2%	6.9%	6.9%
COMPARED TO 1988: OCTOPUS			
Do Not Know			
Count	6	6	9
Col %	19.4%	20.7%	31.0%
Less			
Count	4	5	6
Col %	12.9%	17.2%	20.7%
Same			
Count	19	18	14
Col %	61.3%	62.1%	48.3%

(continued)

Table XIII-44. Resource Population Statuses, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
More			
Count	2		
Col %	6.5%		

Table XIII-45. Children's Participation in Subsistence, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
DOES YOUR HOUSEHOLD PROCESS WILD FOODS?			
No Response			
Count		1	
Col %		2.8%	
No			
Count		3	5
Col %		8.3%	12.5%
Yes			
Count		32	35
Col %		88.9%	87.5%
DO CHILDREN HELP YOUR HH PROCESS WILD FOODS?			
No			
Count	25	25	26
Col %	65.8%	69.4%	65.0%
Yes			
Count	13	11	14
Col %	34.2%	30.6%	35.0%
DID EVOS AFFECT PARTICIPATION WITH CHILDREN?			
No			
Count	29	25	28
Col %	80.6%	86.2%	90.3%
Yes			
Count	7	4	3
Col %	19.4%	13.8%	9.7%
WHY EVOS AFFECTED PARTICIPATION WITH CHILDREN			
Resources were not available			
Count	1		
Col %	14.3%		
Were too busy with other affairs			
Count	2		
Col %	28.6%		
Did not trust foods			
Count	3	2	1
Col %	42.9%	50.0%	33.3%

(continued)

Table XIII-45. Children's Participation in Subsistence, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Less harvesting activity			
Count		1	2
Col %		25.0%	66.7%
Oil pollution threatened everything			
Count		1	
Col %		25.0%	
Told not to eat wild food during the spill			
Count	1		
Col %	14.3%		

Table XIII-46. Sharing, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
DID HOUSEHOLD SHARE?			
No			
Count	13	3	2
Col %	36.1%	8.3%	5.0%
Yes			
Count	23	33	38
Col %	63.9%	91.7%	95.0%
PREV. YEAR: SHARING OF WILD RES.			
Do Not Know			
Count		1	
Col %		3.0%	
Less			
Count	6	3	5
Col %	16.2%	9.1%	13.9%
Same			
Count	21	22	27
Col %	56.8%	66.7%	75.0%
More			
Count	10	7	4
Col %	27.0%	21.2%	11.1%
PREV. YEAR: SHARING OF HUNT/FISH GEAR			
Less			
Count		6	2
Col %		24.0%	5.9%
Same			
Count		16	29
Col %		64.0%	85.3%
More			
Count		3	3
Col %		12.0%	8.8%
PREV. YEAR: SHARING OF MONEY			
Less			
Count		6	2
Col %		24.0%	5.9%
Same			
Count		12	26

(continued)

Table XIII-46. Sharing, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Col %		48.0%	76.5%
More			
Count		7	6
Col %		28.0%	17.6%
PREV. YEAR: SHARING OF LABOR			
Less			
Count		3	3
Col %		9.7%	8.1%
Same			
Count		19	27
Col %		61.3%	73.0%
More			
Count		9	7
Col %		29.0%	18.9%
PRE-OS: SHARING OF WILD RESOURCES			
Do Not Know			
Count		1	
Col %		3.7%	
Less			
Count	13	4	4
Col %	39.4%	14.8%	14.8%
Same			
Count	16	16	21
Col %	48.5%	59.3%	77.8%
More			
Count	4	6	2
Col %	12.1%	22.2%	7.4%
PRE-OS: SHARING OF HUNT/FISH GEAR			
Less			
Count		5	5
Col %		23.8%	19.2%
Same			
Count		14	19
Col %		66.7%	73.1%
More			

(continued)

Table XIII-47. Political Activities, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
LAST 3 YRS.: ELDERS INFLUENCE			
Do Not Know			
Count	2		
Col %	5.4%		
Decreased			
Count	15		
Col %	40.5%		
Same			
Count	17		
Col %	45.9%		
Increased			
Count	3		
Col %	8.1%		
LAST 4 YRS.: ELDERS INFLUENCE			
Do Not Know			
Count		1	
Col %		3.6%	
Decreased			
Count		14	
Col %		50.0%	
Same			
Count		13	
Col %		46.4%	
LAST 5 YRS.: ELDERS INFLUENCE			
Do Not Know			
Count			1
Col %			3.6%
Decreased			
Count			12
Col %			42.9%
Same			
Count			14
Col %			50.0%
Increased			
Count			1
Col %			3.6%

(continued)

Table XIII-47. Political Activities, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
LAST 5 YRS.: ELDERS INFLUENCE: WHY			
No Response			
Count			1
Col %			7.1%
Fewer elders, traditional people passed away			
Count			2
Col %			14.3%
Elders not as active			
Count			2
Col %			14.3%
Younger individuals playing more of a role			
Count			2
Col %			14.3%
More voters, more involved			
Count			1
Col %			7.1%
Elders knowledge is not appreciated or recognized			
Count			3
Col %			21.4%
Elders are not listened to			
Count			3
Col %			21.4%
PRE-EVOS: ATTEND PUBLIC MEETINGS			
Never			
Count	14		
Col %	38.9%		
Sometimes			
Count	12		
Col %	33.3%		
Almost Always			
Count	10		
Col %	27.8%		
PRE-EVOS: ATTEND PUBLIC MEETINGS			

(continued)

Table XIII-47. Political Activities, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Do Not Know			
Count			1
Col %			3.4%
Less			
Count		8	3
Col %		36.4%	10.3%
Same			
Count		9	16
Col %		40.9%	55.2%
More			
Count		5	9
Col %		22.7%	31.0%
LAST YEAR: ATTEND PUBLIC MEETINGS			
Never			
Count	15		
Col %	39.5%		
Sometimes			
Count	16		
Col %	42.1%		
Almost Always			
Count	7		
Col %	18.4%		
LAST YEAR: ATTEND PUBLIC MEETINGS			
Never			
Count		13	18
Col %		36.1%	45.0%
1.00			
Count		3	1
Col %		8.3%	2.5%
2.00			
Count		3	2
Col %		8.3%	5.0%
3.00			
Count		2	1
Col %		5.6%	2.5%

(continued)

Table XIII-47. Political Activities, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
4.00			
Count		2	2
Col %		5.6%	5.0%
5.00			
Count		1	4
Col %		2.8%	10.0%
6.00			
Count		2	1
Col %		5.6%	2.5%
8.00			
Count			2
Col %			5.0%
10.00			
Count		1	1
Col %		2.8%	2.5%
12.00			
Count		5	4
Col %		13.9%	10.0%
15.00			
Count		1	1
Col %		2.8%	2.5%
18.00			
Count		1	
Col %		2.8%	
20.00			
Count			1
Col %			2.5%
24.00			
Count		1	2
Col %		2.8%	5.0%
40.00			
Count		1	
Col %		2.8%	
VOTE IN LAST CITY COUNCIL ELECTION?			
No			

(continued)

Table XIII-47. Political Activities, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Count	11		
Col %	28.9%		
Yes			
Count	27		
Col %	71.1%		
VOTE IN LAST STATE-WIDE ELECTION?			
No			
Count	7	7	9
Col %	18.4%	19.4%	22.5%
Yes			
Count	31	29	31
Col %	81.6%	80.6%	77.5%
BELONG TO NATIVE CORPORATION?			
No			
Count	9	10	11
Col %	23.7%	27.8%	27.5%
Yes			
Count	29	26	29
Col %	76.3%	72.2%	72.5%
REGIONAL NATIVE CORPORATION			
Koniag, Inc.			
Count	28	24	28
Col %	96.6%	92.3%	96.6%
13th Regional Corp.			
Count	1	2	1
Col %	3.4%	7.7%	3.4%
VOTE IN LAST REG. CORP. ELECTION?			
No			
Count	6	5	6
Col %	20.7%	19.2%	20.7%
Yes			
Count	23	21	23
Col %	79.3%	80.8%	79.3%
VILLAGE NATIVE CORPORATION			
None, At Large			
Count	1		

(continued)

	STUDY YEAR		
	1991	1992	1993
Col %	50.0%		
Afognak Native Corporation			
Count			1
Col %			20.0%
Karluk Inc.			
Count	1		1
Col %	50.0%		20.0%
Nu-Nachk Pit, Inc. (Larsen Bay)			
Count		5	1
Col %		83.3%	20.0%
Natives of Kodiak			
Count		1	2
Col %		16.7%	40.0%
VOTE IN LAST NATIVE VILLAGE CORP. ELECTION?			
No			
Count	1	3	1
Col %	50.0%	50.0%	20.0%
Yes			
Count	1	3	4
Col %	50.0%	50.0%	80.0%
HAS VIEW OF LEADER CHANGED SINCE EVOS?			
No Response			
Count			1
Col %			3.2%
Do Not Know			
Count	3	2	6
Col %	8.3%	7.1%	19.4%
No			
Count	23	21	21
Col %	63.9%	75.0%	67.7%
Yes			
Count	10	5	3
Col %	27.8%	17.9%	9.7%
WHY POST EVOS VIEW OF LEADERS			

(continued)

Table XIII-47. Political Activities, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
No Response			
Count			5
Col %			55.6%
Do Not Know			
Count	1	1	2
Col %	12.5%	20.0%	22.2%
Trust			
Count	6		
Col %	75.0%		
Awareness/involvement			
Count	1	2	1
Col %	12.5%	40.0%	11.1%
Level headed/reasonable			
Count			1
Col %			11.1%
Decisive			
Count	1		
Col %	12.5%		
Aware of Animosity			
Count	1	1	
Col %	12.5%	20.0%	
New leadership			
Count		1	
Col %		20.0%	
Ineffectual			
Count			1
Col %			11.1%

Table XIII-48. Significance of Place, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
MAIN REASON MOVED TO COMMUNITY			
No Response			
Count	1	1	
Col %	2.6%	2.8%	
Do Not Know			
Count	1		
Col %	2.6%		
Born or reared here			
Count	10	14	11
Col %	26.3%	38.9%	27.5%
Relatives (family)			
Count	11	5	5
Col %	28.9%	13.9%	12.5%
Married a person born or reared here			
Count		6	6
Col %		16.7%	15.0%
Family has always lived here			
Count		1	2
Col %		2.8%	5.0%
Subsistence opportunities			
Count		1	
Col %		2.8%	
Employment reasons			
Count	6	5	8
Col %	15.8%	13.9%	20.0%
Educational opportunities			
Count	1		1
Col %	2.6%		2.5%
Economic reasons			
Count	1		1
Col %	2.6%		2.5%
Stores			
Count			1
Col %			2.5%
Other public services			

(continued)

Table XIII-48. Significance of Place, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Count	1		
Col %	2.6%		
Environmental qualities			
Count	2		1
Col %	5.3%		2.5%
Less drinking or drugs			
Count			2
Col %			5.0%
Recreational opportunities			
Count	1		
Col %	2.6%		
Pace of Life			
Count	3	1	
Col %	7.9%	2.8%	
Quality of Life			
Count		2	
Col %		5.6%	
Location			
Count			1
Col %			2.5%
Safety (non-criminal)			
Count			1
Col %			2.5%
LIVE HERE: WHERE PERSON IS FROM			
No			
Count	21	19	28
Col %	55.3%	52.8%	70.0%
Yes			
Count	17	17	12
Col %	44.7%	47.2%	30.0%
LIVE HERE: RELATIVES LIVE HERE			
No			
Count	10	16	15
Col %	26.3%	44.4%	37.5%
Yes			

(continued)

Table XIII-48. Significance of Place, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Count	28	20	25
Col %	73.7%	55.6%	62.5%
LIVE HERE: MARRIED PERSON FROM HERE			
No			
Count	29	24	26
Col %	76.3%	66.7%	65.0%
Yes			
Count	9	12	14
Col %	23.7%	33.3%	35.0%
LIVE HERE: ALWAYS LIVED HERE			
No			
Count	21	23	28
Col %	55.3%	63.9%	70.0%
Yes			
Count	17	13	12
Col %	44.7%	36.1%	30.0%
LIVE HERE: FRIENDS LIVE HERE			
No			
Count	11	20	18
Col %	28.9%	55.6%	45.0%
Yes			
Count	27	16	22
Col %	71.1%	44.4%	55.0%
LIVE HERE: HUNTING & FISHING HERE			
No			
Count	5	12	9
Col %	13.2%	33.3%	22.5%
Yes			
Count	33	24	31
Col %	86.8%	66.7%	77.5%
LIVE HERE: JOB OPPORTUNITIES HERE			
No			
Count	20	22	25
Col %	52.6%	61.1%	62.5%
Yes			
Count	18	14	15

(continued)

Table XIII-48. Significance of Place, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Col %	47.4%	38.9%	37.5%
LIVE HERE: EDUCATIONAL OPPORTUNITIES			
No			
Count	29	28	29
Col %	76.3%	77.8%	72.5%
Yes			
Count	9	8	11
Col %	23.7%	22.2%	27.5%
LIVE HERE: COST OF LIVING			
No			
Count	19	19	12
Col %	50.0%	52.8%	30.0%
Yes			
Count	19	17	28
Col %	50.0%	47.2%	70.0%
LIVE HERE: HOUSING AVAILABLE			
No			
Count	10	16	10
Col %	26.3%	44.4%	25.0%
Yes			
Count	28	20	30
Col %	73.7%	55.6%	75.0%
LIVE HERE: STORES			
No			
Count	31	30	32
Col %	81.6%	83.3%	80.0%
Yes			
Count	7	6	8
Col %	18.4%	16.7%	20.0%
LIVE HERE: MEDICAL SERVICES			
No			
Count	24	28	28
Col %	63.2%	77.8%	70.0%
Yes			
Count	14	8	12
Col %	36.8%	22.2%	30.0%

(continued)

Table XIII-48. Significance of Place, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
LIVE HERE: OTHER SERVICES			
No			
Count	29	30	34
Col %	76.3%	83.3%	85.0%
Yes			
Count	9	6	6
Col %	23.7%	16.7%	15.0%
LIVE HERE: BEAUTY OF AREA			
No			
Count	3		2
Col %	7.9%		5.0%
Yes			
Count	35	36	38
Col %	92.1%	100.0%	95.0%
LIVE HERE: SIZE OF COMMUNITY			
No			
Count	10	8	6
Col %	26.3%	22.2%	15.0%
Yes			
Count	28	28	34
Col %	73.7%	77.8%	85.0%
LIVE HERE: LESS CRIME			
No			
Count	15	12	9
Col %	39.5%	33.3%	22.5%
Yes			
Count	23	24	31
Col %	60.5%	66.7%	77.5%
LIVE HERE: LESS DRINKING/DRUGS			
No Response			
Count		1	
Col %		2.8%	
No			
Count	34	32	35
Col %	89.5%	88.9%	87.5%
Yes			

(continued)

Table XIII-48. Significance of Place, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Count	4	3	5
Col %	10.5%	8.3%	12.5%
LIVE HERE: NECESSARY PERSONAL FREEDOMS			
No			
Count	4	4	4
Col %	10.5%	11.1%	10.0%
Yes			
Count	34	32	36
Col %	89.5%	88.9%	90.0%
LIVE HERE: RECREATIONAL OPPORTUNITIES			
No			
Count	13	14	14
Col %	34.2%	38.9%	35.0%
Yes			
Count	25	22	26
Col %	65.8%	61.1%	65.0%
OTHER REASONS FOR LIVING IN COMMUNITY			
Pace of Life			
Count	1	4	3
Col %	25.0%	26.7%	23.1%
Quality of Life			
Count	3	10	3
Col %	75.0%	66.7%	23.1%
Religious Reasons			
Count		1	1
Col %		6.7%	7.7%
Location			
Count	1	1	3
Col %	25.0%	6.7%	23.1%
Not here by choice			
Count			2
Col %			15.4%
Climate			
Count			1
Col %			7.7%

(continued)

Table XIII-48. Significance of Place, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
This is where they established their home			
Count			1
Col %			7.7%
MAIN REASON REMAINING IN COMMUNITY			
No Response			
Count			1
Col %			2.5%
Do Not Know			
Count	1		1
Col %	2.6%		2.5%
Born or reared here			
Count	1	1	
Col %	2.6%	2.8%	
Relatives (family)			
Count	10	5	6
Col %	26.3%	13.9%	15.0%
Married a person born or reared here			
Count	1	2	1
Col %	2.6%	5.6%	2.5%
Family has always lived here			
Count	1	1	
Col %	2.6%	2.8%	
Friends			
Count	1		
Col %	2.6%		
Subsistence opportunities			
Count	5	4	6
Col %	13.2%	11.1%	15.0%
Employment reasons			
Count	4	6	1
Col %	10.5%	16.7%	2.5%
Educational opportunities			
Count	2		
Col %	5.3%		
Housing/property			

(continued)

Table XIII-48. Significance of Place, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Count	1	3	3
Col %	2.6%	8.3%	7.5%
Environmental qualities			
Count	2	2	5
Col %	5.3%	5.6%	12.5%
Size of the community			
Count		2	1
Col %		5.6%	2.5%
Crime levels			
Count	1		
Col %	2.6%		
Personal freedoms (politics)			
Count	2	3	4
Col %	5.3%	8.3%	10.0%
Recreational opportunities			
Count		1	
Col %		2.8%	
Pace of Life			
Count	1	1	1
Col %	2.6%	2.8%	2.5%
Quality of Life			
Count	3	4	4
Col %	7.9%	11.1%	10.0%
Cultural Reasons			
Count			1
Col %			2.5%
Religious Reasons			
Count			1
Col %			2.5%
Location			
Count	1		1
Col %	2.6%		2.5%
Not here by choice			
Count	1		2
Col %	2.6%		5.0%

(continued)

Table XIII-48. Significance of Place, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
This is where they established their home			
Count		1	1
Col %		2.8%	2.5%
POST-EVOS: CHANGE IN LIKING COMMUNITY			
Less			
Count	1	2	2
Col %	3.3%	7.1%	6.7%
Same			
Count	28	23	27
Col %	93.3%	82.1%	90.0%
More			
Count	1	3	1
Col %	3.3%	10.7%	3.3%
POST-EVOS: WHY CHANGE IN LIKING COMMUNITY			
No Response			
Count		1	
Col %		20.0%	
Non-specific			
Count	1		1
Col %	33.3%		33.3%
Oil contamination/fear of oil contamination			
Count	1		
Col %	33.3%		
More stressful			
Count		1	
Col %		20.0%	
Financial situation worse			
Count			1
Col %			33.3%
Better quality of people			
Count		1	
Col %		20.0%	
Increased appreciation of surroundings			
Count	1	2	

(continued)

Table XIII-48. Significance of Place, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Col %	33.3%	40.0%	
This is where they have established their home			
Count			1
Col %			33.3%
RATHER LIVE IN ANOTHER COMMUNITY			
Do Not Know			
Count	1	1	1
Col %	2.6%	2.8%	2.5%
No			
Count	23	28	30
Col %	60.5%	77.8%	75.0%
Yes			
Count	14	7	9
Col %	36.8%	19.4%	22.5%
EXPECT TO LIVE IN REGION WHEN OLD			
Do Not Know			
Count	4	4	5
Col %	10.5%	11.1%	12.8%
No			
Count	9	8	9
Col %	23.7%	22.2%	23.1%
Yes			
Count	25	24	25
Col %	65.8%	66.7%	64.1%
CONFIDENT ABOUT HUNT/FISH/GATHERING			
Do Not Know			
Count		4	
Col %		11.1%	
No			
Count	7	8	14
Col %	18.4%	22.2%	35.0%
Yes			
Count	31	24	26
Col %	81.6%	66.7%	65.0%

(continued)

Table XIII-48. Significance of Place, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
WHY UNCONFIDENT ABOUT HUNTING/FISHING/GATHERING			
Increased restrictions			
Count	4	3	9
Col %	57.1%	30.0%	64.3%
Uncertainty about the future			
Count		1	
Col %		10.0%	
Increased development			
Count		4	3
Col %		40.0%	21.4%
Uncertainty about food safety			
Count		1	
Col %		10.0%	
Environmental, animal rights, anti-gun interests			
Count	1		
Col %	14.3%		
Native ownership of lands			
Count	1	2	2
Col %	14.3%	20.0%	14.3%
Population pressure			
Count	2	2	2
Col %	28.6%	20.0%	14.3%
Vulnerable to environmental damage			
Count	2	1	1
Col %	28.6%	10.0%	7.1%
Reduced resource availability			
Count		1	
Col %		10.0%	
Poor resource management			
Count			1
Col %			7.1%
CONTINUE TO LIVE HERE IF NO WILD FOOD			
Do Not Know			
Count	4	3	3

(continued)

Table XIII-48. Significance of Place, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Col %	10.5%	8.3%	7.5%
No			
Count	17	13	22
Col %	44.7%	36.1%	55.0%
Yes			
Count	17	20	15
Col %	44.7%	55.6%	37.5%

Table XIII-49. Effectiveness of Oil Spill Responses, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
EFFECTIVENESS EVOS: US COAST GUARD			
No Response			
Count		1	
Col %		3.3%	
Do Not Know			
Count	7	7	13
Col %	18.9%	23.3%	39.4%
Not Effective			
Count	4	5	4
Col %	10.8%	16.7%	12.1%
Somewhat			
Count	7	6	6
Col %	18.9%	20.0%	18.2%
Effective			
Count	19	11	10
Col %	51.4%	36.7%	30.3%
EFFECTIVENESS EVOS: ADEC			
No Response			
Count		1	
Col %		3.3%	
Do Not Know			
Count	10	10	18
Col %	27.0%	33.3%	54.5%
Not Effective			
Count	4	5	6
Col %	10.8%	16.7%	18.2%
Somewhat			
Count	8	8	5
Col %	21.6%	26.7%	15.2%
Effective			
Count	15	6	4
Col %	40.5%	20.0%	12.1%
EFFECTIVENESS EVOS: LOCAL NATIVE PROFIT			
Do Not Know			
Count	16	14	20
Col %	48.5%	50.0%	64.5%

(continued)

Table XIII-49. Effectiveness of Oil Spill Responses, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Not Effective			
Count	10	9	7
Col %	30.3%	32.1%	22.6%
Somewhat			
Count	2	4	2
Col %	6.1%	14.3%	6.5%
Effective			
Count	5	1	2
Col %	15.2%	3.6%	6.5%
EFFECTIVENESS EVOS: NATIVE NON-PROFITS			
Do Not Know			
Count	12	9	16
Col %	32.4%	31.0%	50.0%
Not Effective			
Count	11	11	4
Col %	29.7%	37.9%	12.5%
Somewhat			
Count	2	5	7
Col %	5.4%	17.2%	21.9%
Effective			
Count	12	4	5
Col %	32.4%	13.8%	15.6%
EFFECTIVENESS EVOS: BOROUGH GOVERNMENT			
Do Not Know			
Count	13	15	18
Col %	35.1%	50.0%	54.5%
Not Effective			
Count	6	2	5
Col %	16.2%	6.7%	15.2%
Somewhat			
Count	10	7	4
Col %	27.0%	23.3%	12.1%
Effective			
Count	8	6	6
Col %	21.6%	20.0%	18.2%

(continued)

Table XIII-49. Effectiveness of Oil Spill Responses, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
EFFECTIVENESS EVOS: VILLAGE CORPORATION			
Do Not Know			
Count	6	4	5
Col %	30.0%	36.4%	55.6%
Not Effective			
Count	7	4	1
Col %	35.0%	36.4%	11.1%
Somewhat			
Count	1	2	2
Col %	5.0%	18.2%	22.2%
Effective			
Count	6	1	1
Col %	30.0%	9.1%	11.1%
EFFECTIVENESS EVOS: CITY COUNCIL			
Do Not Know			
Count	4	9	9
Col %	11.1%	30.0%	27.3%
Not Effective			
Count	9	5	7
Col %	25.0%	16.7%	21.2%
Somewhat			
Count	8	10	4
Col %	22.2%	33.3%	12.1%
Effective			
Count	15	6	13
Col %	41.7%	20.0%	39.4%
EFFECTIVENESS EVOS: IRA COUNCIL			
Do Not Know			
Count	3	4	4
Col %	15.8%	20.0%	80.0%
Not Effective			
Count	3	4	1
Col %	15.8%	20.0%	20.0%
Somewhat			
Count	3	6	
Col %	15.8%	30.0%	

(continued)

Table XIII-49. Effectiveness of Oil Spill Responses, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Effective			
Count	10	6	
Col %	52.6%	30.0%	
EFFECTIVENESS EVOS: CHAMBER OF COMMERCE			
Do Not Know			
Count	2	2	2
Col %	100.0%	50.0%	100.0%
Not Effective			
Count		2	
Col %		50.0%	
EFFECTIVENESS EVOS: COMMERCIAL BUSINESSES			
No Response			
Count			1
Col %			11.1%
Do Not Know			
Count	5	8	5
Col %	45.5%	36.4%	55.6%
Not Effective			
Count	2	8	2
Col %	18.2%	36.4%	22.2%
Somewhat			
Count	1	2	1
Col %	9.1%	9.1%	11.1%
Effective			
Count	3	4	
Col %	27.3%	18.2%	
EFFECTIVENESS EVOS: COMMERCIAL FISHING GROUPS			
Do Not Know			
Count	5	2	8
Col %	20.0%	6.7%	26.7%
Not Effective			
Count	2	2	3
Col %	8.0%	6.7%	10.0%
Somewhat			

(continued)

Table XIII-49. Effectiveness of Oil Spill Responses, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Count	2	6	5
Col %	8.0%	20.0%	16.7%
Effective			
Count	16	20	14
Col %	64.0%	66.7%	46.7%
EFFECTIVENESS EVOS: SCHOOLS			
Do Not Know			
Count	13		
Col %	59.1%		
Not Effective			
Count	4		
Col %	18.2%		
Effective			
Count	5		
Col %	22.7%		
EFFECTIVENESS EVOS: CHURCHES			
Do Not Know			
Count	13		
Col %	61.9%		
Not Effective			
Count	3		
Col %	14.3%		
Effective			
Count	5		
Col %	23.8%		
EFFECTIVENESS EVOS: HEALTH SERVICES			
Do Not Know			
Count		5	11
Col %		17.2%	34.4%
Not Effective			
Count		4	2
Col %		13.8%	6.3%
Somewhat			
Count		8	6
Col %		27.6%	18.8%

(continued)

Table XIII-49. Effectiveness of Oil Spill Responses, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Effective			
Count		12	13
Col %		41.4%	40.6%
EFFECTIVENESS EVOS: HEALTH AIDES			
Do Not Know			
Count	7		
Col %	18.9%		
Not Effective			
Count	3		
Col %	8.1%		
Somewhat			
Count	4		
Col %	10.8%		
Effective			
Count	23		
Col %	62.2%		
EFFECTIVENESS EVOS: SOCIAL WORKERS			
Do Not Know			
Count	10	7	14
Col %	55.6%	33.3%	63.6%
Not Effective			
Count	3	3	4
Col %	16.7%	14.3%	18.2%
Somewhat			
Count	2	7	2
Col %	11.1%	33.3%	9.1%
Effective			
Count	3	4	2
Col %	16.7%	19.0%	9.1%
EFFECTIVENESS EVOS: LOCAL LAW ENFORCEMENT			
Do Not Know			
Count	7	5	9
Col %	20.0%	16.7%	27.3%
Not Effective			
Count	2	5	3

(continued)

Table XIII-49. Effectiveness of Oil Spill Responses, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Col %	5.7%	16.7%	9.1%
Somewhat			
Count	5	6	6
Col %	14.3%	20.0%	18.2%
Effective			
Count	21	14	15
Col %	60.0%	46.7%	45.5%
EFFECTIVENESS EVOS: STATE LAW ENFORCEMENT			
Do Not Know			
Count		9	22
Col %		39.1%	78.6%
Not Effective			
Count		5	1
Col %		21.7%	3.6%
Somewhat			
Count		5	3
Col %		21.7%	10.7%
Effective			
Count		4	2
Col %		17.4%	7.1%
EFFECTIVENESS EVOS: EXXON			
Do Not Know			
Count	5	6	12
Col %	13.5%	20.0%	36.4%
Not Effective			
Count	11	6	9
Col %	29.7%	20.0%	27.3%
Somewhat			
Count	13	9	7
Col %	35.1%	30.0%	21.2%
Effective			
Count	8	9	5
Col %	21.6%	30.0%	15.2%
EFFECTIVENESS EVOS: VECO			

(continued)

Table XIII-49. Effectiveness of Oil Spill Responses, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Do Not Know			
Count	4	4	6
Col %	10.8%	13.3%	18.2%
Not Effective			
Count	4	4	8
Col %	10.8%	13.3%	24.2%
Somewhat			
Count	17	11	8
Col %	45.9%	36.7%	24.2%
Effective			
Count	12	11	11
Col %	32.4%	36.7%	33.3%
EFFECTIVENESS EVOS: ALYESKA PIPELINE			
No Response			
Count	1		
Col %	2.7%		
Do Not Know			
Count	27	19	24
Col %	73.0%	63.3%	72.7%
Not Effective			
Count	5	6	8
Col %	13.5%	20.0%	24.2%
Somewhat			
Count	2	3	1
Col %	5.4%	10.0%	3.0%
Effective			
Count	2	2	
Col %	5.4%	6.7%	
EFFECTIVENESS EVOS: VOLUNTEER CLEAN-UP GROUPS			
Effective			
Count	3	2	
Col %	100.0%	100.0%	
EFFECTIVENESS EVOS: FAMILY SUPPORT GROUPS			
Effective			

(continued)

Table XIII-49. Effectiveness of Oil Spill Responses, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Count			1
Col %			100.0%
EFFECTIVENESS EVOS: PWS REGIONAL CITIZENS ADVISORY COUNCIL			
Effective			
Count	1		
Col %	100.0%		
EFFECTIVENESS EVOS: OTHER UNIDENTIFIED GROUPS			
Effective			
Count	2		
Col %	100.0%		
EFFECTIVENESS EVOS: OILED MAYORS			
No Response			
Count	1		
Col %	2.7%		
Do Not Know			
Count	15	10	15
Col %	40.5%	33.3%	45.5%
Not Effective			
Count	4	4	2
Col %	10.8%	13.3%	6.1%
Somewhat			
Count	3	10	4
Col %	8.1%	33.3%	12.1%
Effective			
Count	14	6	12
Col %	37.8%	20.0%	36.4%

Table XIII-50. Subsistence Food Safety Information, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
ADEQUATELY INFORMED ABOUT FOOD SAFETY?			
Do Not Know			
Count		2	2
Col %		7.1%	6.3%
No			
Count	8	7	7
Col %	22.2%	25.0%	21.9%
Somewhat			
Count	4	3	10
Col %	11.1%	10.7%	31.3%
Yes			
Count	24	16	13
Col %	66.7%	57.1%	40.6%
WHY NOT ADEQUATELY INFORMED			
No Response			
Count	5	2	7
Col %	41.7%	18.2%	41.2%
Lack of clear or definitive advice			
Count	1	1	4
Col %	8.3%	9.1%	23.5%
Received incomplete information			
Count	4	1	
Col %	33.3%	9.1%	
Received no information			
Count	1	4	4
Col %	8.3%	36.4%	23.5%
Did not trust or believe advice			
Count		3	1
Col %		27.3%	5.9%
Untimely			
Count	1		
Col %	8.3%		
Did not trust results because of Exxon involvement			
Count		1	
Col %		9.1%	

(continued)

Table XIII-50. Subsistence Food Safety Information, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Believe information was deliberately withheld			
Count		2	
Col %		18.2%	
There were not enough tests			
Count	2		1
Col %	16.7%		5.9%

Table XIII-51. OCS Development Effects, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
OCS EFFECT: FISH			
Do Not Know			
Count	3	8	13
Col %	7.9%	22.2%	32.5%
Decrease			
Count	22	19	15
Col %	57.9%	52.8%	37.5%
No Change			
Count	13	8	11
Col %	34.2%	22.2%	27.5%
Increase			
Count		1	1
Col %		2.8%	2.5%
OCS EFFECT: SHELLFISH			
Do Not Know			
Count	5	7	14
Col %	13.2%	19.4%	35.0%
Decrease			
Count	19	20	8
Col %	50.0%	55.6%	20.0%
No Change			
Count	14	9	18
Col %	36.8%	25.0%	45.0%
OCS EFFECT: MARINE MAMMALS			
Do Not Know			
Count	4	7	13
Col %	10.5%	19.4%	32.5%
Decrease			
Count	21	19	15
Col %	55.3%	52.8%	37.5%
No Change			
Count	13	10	12
Col %	34.2%	27.8%	30.0%
OCS EFFECT: LAND MAMMALS			
Do Not Know			
Count	2	6	8

(continued)

Table XIII-51. OCS Development Effects, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Col %	5.3%	16.7%	20.0%
Decrease			
Count	14	11	6
Col %	36.8%	30.6%	15.0%
No Change			
Count	22	19	26
Col %	57.9%	52.8%	65.0%
OCS EFFECT: BIRDS			
Do Not Know			
Count	3	6	11
Col %	7.9%	16.7%	27.5%
Decrease			
Count	18	19	14
Col %	47.4%	52.8%	35.0%
No Change			
Count	16	11	15
Col %	42.1%	30.6%	37.5%
Increase			
Count	1		
Col %	2.6%		
OCS DEVELOPMENT = MORE JOBS?			
Do Not Know			
Count	3	6	11
Col %	7.9%	16.7%	27.5%
No			
Count	20	19	14
Col %	52.6%	52.8%	35.0%
Yes			
Count	15	11	15
Col %	39.5%	30.6%	37.5%
CONTAIN AND CLEANUP SMALL OIL SPILL			
Do Not Know			
Count	1	5	6
Col %	2.6%	13.9%	15.0%
No			

(continued)

Table XIII-51. OCS Development Effects, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Count	12	18	17
Col %	31.6%	50.0%	42.5%
Maybe			
Count	7	13	17
Col %	18.4%	36.1%	42.5%
Yes			
Count	18		
Col %	47.4%		
CONTAIN AND CLEANUP LARGE OIL SPILL			
Do Not Know			
Count	1	9	5
Col %	2.6%	25.0%	12.5%
No			
Count	22	26	30
Col %	57.9%	72.2%	75.0%
Maybe			
Count	10	1	5
Col %	26.3%	2.8%	12.5%
Yes			
Count	5		
Col %	13.2%		
ARE YOU IN FAVOR OF THE SEARCH FOR OIL?			
Do Not Know			
Count		3	6
Col %		8.3%	15.0%
No			
Count		16	17
Col %		44.4%	42.5%
Yes			
Count		17	17
Col %		47.2%	42.5%
OPINION ON SEARCH FOR OIL			
No Response			
Count		2	7
Col %		5.6%	17.5%

(continued)

Table XIII-51. OCS Development Effects, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Do Not Know			
Count		1	1
Col %		2.8%	2.5%
Reduce dependency on foreign oil/enhance national security			
Count		2	1
Col %		5.6%	2.5%
Create more jobs in the community			
Count		6	5
Col %		16.7%	12.5%
We can live in balance with the environment			
Count		1	
Col %		2.8%	
Increase state revenues			
Count		3	1
Col %		8.3%	2.5%
Energy needed			
Count		9	5
Col %		25.0%	12.5%
Conditional: in favor of search/development but not locally			
Count			1
Col %			2.5%
Need to know extent of resource availability and reserves			
Count		1	1
Col %		2.8%	2.5%
Beneficial to the economy			
Count		1	2
Col %		2.8%	5.0%
Not making sufficient use of current resources			
Count		1	
Col %		2.8%	

(continued)

Table XIII-51. OCS Development Effects, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Environmental conditions (non-pollution/non-biological)			
Count		1	2
Col %		2.8%	5.0%
Adverse experiences with other development			
Count		2	
Col %		5.6%	
Pollution concerns and impacts			
Count		6	3
Col %		16.7%	7.5%
Aesthetic reasons			
Count			2
Col %			5.0%
In favor of on-shore development instead of off-shore			
Count			1
Col %			2.5%
Status quo - leave it the way it is			
Count		1	
Col %		2.8%	
Should explore alternative energy sources, conservation			
Count			2
Col %			5.0%
Adverse impact on subsistence and commercial fishing			
Count		5	4
Col %		13.9%	10.0%
Potential damage to renewable resources			
Count		1	1
Col %		2.8%	2.5%
Against any development			
Count		2	
Col %		5.6%	
No benefit to local economy			

(continued)

Table XIII-51. OCS Development Effects, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Count		2	
Col %		5.6%	
Disastrous - multi-faceted			
Count		1	1
Col %		2.8%	2.5%
Technology needs improvement			
Count			1
Col %			2.5%
Against population increases			
Count		1	1
Col %		2.8%	2.5%
Unspecified ecological impacts			
Count			2
Col %			5.0%
Conditional: in favor if done carefully			
Count			4
Col %			10.0%
ARE YOU IN FAVOR OF THE DEVELOPMENT AND PRODUCTION OF OIL?			
Do Not Know			
Count		5	9
Col %		13.9%	22.5%
No			
Count		17	18
Col %		47.2%	45.0%
Yes			
Count		14	13
Col %		38.9%	32.5%
OPINION ON DEVELOPMENT AND PRODUCTION			
No Response			
Count		1	6
Col %		2.8%	15.0%
Do Not Know			
Count		1	1
Col %		2.8%	2.5%

(continued)

Table XIII-51. OCS Development Effects, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Reduce dependency on foreign oil/enhance national security			
Count		1	1
Col %		2.8%	2.5%
Create more jobs in the community			
Count		4	5
Col %		11.1%	12.5%
We can live in balance with the environment			
Count		3	
Col %		8.3%	
Increase state revenues			
Count		3	3
Col %		8.3%	7.5%
Less habitat destruction with off-shore			
Count		1	
Col %		2.8%	
Energy needed			
Count		3	4
Col %		8.3%	10.0%
Conditional: in favor of search/development but not locally			
Count		1	
Col %		2.8%	
Conditions: in favor when necessary			
Count		1	
Col %		2.8%	
Beneficial to the economy			
Count		3	3
Col %		8.3%	7.5%
Not making sufficient use of current resources			
Count		1	
Col %		2.8%	
Environmental conditions (non-pollution/non-biological)			

(continued)

Table XIII-51. OCS Development Effects, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Count		2	1
Col %		5.6%	2.5%
Adverse experiences with other development			
Count		1	
Col %		2.8%	
Pollution concerns and impacts			
Count		6	3
Col %		16.7%	7.5%
Aesthetic reasons			
Count		1	4
Col %		2.8%	10.0%
Status quo - leave it the way it is			
Count		2	
Col %		5.6%	
Should explore alternative energy sources, conservation			
Count			2
Col %			5.0%
Adverse impact on subsistence and commercial fishing			
Count		6	5
Col %		16.7%	12.5%
Biological (non-pollution) - migration patterns			
Count		2	1
Col %		5.6%	2.5%
Potential damage to renewable resources			
Count		2	1
Col %		5.6%	2.5%
Against any development			
Count		1	1
Col %		2.8%	2.5%
No benefit to local economy			
Count		4	2
Col %		11.1%	5.0%

(continued)

Table XIII-51. OCS Development Effects, Larsen Bay

	STUDY YEAR		
	1991	1992	1993
Disastrous - multi-faceted			
Count		1	1
Col %		2.8%	2.5%
Uncertainties with development			
Count		1	
Col %		2.8%	
Fatalistic - no choice in matter			
Count		1	
Col %		2.8%	
Adverse impact on Native traditions			
Count		1	
Col %		2.8%	
Not economically feasible to search/develop off-shore			
Count			1
Col %			2.5%
Technology needs improvement			
Count			1
Col %			2.5%
Against population increases			
Count		1	2
Col %		2.8%	5.0%
Unspecified ecological impacts			
Count			3
Col %			7.5%
Would have to know more about potential damages			
Count			2
Col %			5.0%
Conditional: in favor if done carefully			
Count			1
Col %			2.5%

CHAPTER XIV: KARLUK

by

Rachel Mason and James A. Fall

SETTING AND GENERAL HISTORY

Karluk is a small, remote community located along the Shelikof Strait on the west side of Kodiak Island (Fig. I-1). The village is on the banks of a shallow lagoon at the mouth of the Karluk River. Its exposure to the rough waters and high winds of the Shelikof Strait makes it vulnerable to frequent storms and frequent airline flight cancellations.

Archaeological research near the outlet of the Karluk River has shown that there have been settlements around this very productive salmon stream for thousands of years. During the Russian colonial period, the location was used as a fort and trading post. The Russians built weirs across the Karluk River to catch sockeye salmon, and each year large amounts of salmon were dried to supply sea otter hunting parties (Knecht and Jordan 1985:20-21). The Russian settlement, established in 1786, was on the east side of the lagoon, where today a major commercial sport fishing lodge is located. The Karluk River is not only recognized as a world-class sockeye and silver salmon stream but also attracts many king salmon and steelhead sport fishermen.

Beginning in 1878, several canneries were established and Karluk became a seasonal hub of commercial activity, with hundreds of cannery workers and fishermen arriving each summer. This is the primary reason for the large census estimates for Karluk between 1880 and 1910 (Fig. XIV-1). The processors were on the west side of the mouth of the river, and most of the local Native population also moved to this side of the lagoon. By 1911, the salmon runs had declined and Karluk residents began moving to Larsen Bay. Since the 1930s, Karluk's population has been in continuous decline, reaching its lowest point in history, 71 people, in 1990 (Fig. XIV-1). This trend has continued into the mid-1990s.

In the twentieth century, Karluk houses were situated on both sides of the Karluk River, with a foot bridge between the "old" and "new" villages (Davis 1986:118). In January 1978, a severe storm changed the estuary of the Karluk River, flooding the houses on the west side of the lagoon. It destroyed the foot bridge, which has never been rebuilt. With government disaster aid, new housing was built on higher ground during the next year. During the study period, all the village residents lived in the new housing; the last two occupied homes in the old village at the mouth of the river were vacated in 1990.

FIELDWORK AND SAMPLE SIZE

Karluk was only included in the first year of the study. The study year was as defined April 1, 1991, through March 31, 1992, as in the other small Kodiak Island Borough communities. The questionnaires

(harvest survey and social effects) were administered in face-to-face interviews with the heads of 13 households, or 86.7 percent of Karluk's total of 15 households (Table XIV-1). Two households declined to participate in the surveys. Interviews commenced on May 8, 1992, and were completed on May 11. Staff members were Rachel Mason and Vicki Vanek of the Alaska Department of Fish and Game, and local assistant Sheila Theriault (of Larsen Bay). The average harvest survey interview took 1.01 hours (61 minutes) to complete (Table I-7) and the social effects questionnaires required an additional 0.8 hours (48 minutes) (Table I-8).

DEMOGRAPHY

According to the U.S. Census figures, the population in Karluk was 71 in 1990. This study estimated a population of 69 residents at the time of the research in 1992. The mean household size was 4.6 persons and the mean age was 22.7 years. The community was 95.0 percent Alaska Native. The mean length of residency for household heads was 28.5 years, one of the longest recorded for any study community. The population was 65.0 percent male and 35.0 percent female (Table XIV-2). The young population of Karluk is heavily weighted toward males; 51.3 percent of males in the village are under 15, compared to only 14.3 percent of females (Table XIV-3 and Fig. XIV-2).

In 1962, 148 Karluk residents were counted (Taylor 1966:219-220). A household survey jointly sponsored by the Kodiak Area Native Association and the Division of Subsistence in 1983 estimated Karluk's population at 103; a second survey found 107 residents in the village in 1986. However, by 1989, the year of the oil spill, we estimated that it had dropped off sharply to 74; and in 1991 we estimated only 65 residents.

The reasons for Karluk's gradual but steady population decline over the last seven years seem attributable to deeply rooted factors present before the oil spill (see especially Taylor 1966). One long-standing family feud directly led to the outmigration of the last representatives of one large family of lifelong Karluk residents to Larsen Bay in 1990. Additional political dissension and internal conflict have surfaced several times within the village since the *Exxon Valdez* oil spill. For example, during the study year and the following spring of 1992 when our field work took place, there were two important elections which resulted in the unseating of incumbents on the community's principal governing body, the IRA Council. These changes in the council's leadership were attributed to fiscal crises over fuel oil shortages and to the breakdown of the community's sewage treatment facilities. In the writing of this report, we became aware that in December 1994 another large household had left Karluk for Larsen Bay. With sharply curtailed enrollment, the continuance of the Karluk school is now in question. If the school, a mainstay in the village economy, is forced to close, the village itself may not survive.

MONETARY ECONOMY

Of the estimated 37 adults in Karluk, 65.6 percent were employed in at least one job in 1991/92. Almost all the work was seasonal. Only 14.3 percent of the employed adults worked year-round, and the average number of months employed was 5.6 (Table XIV-4).

The average household income in Karluk in the 1991/92 study year from all sources was $31,955. The mean per capita income was $6,924, one of the lowest of any community in the study. This is roughly consistent with findings from the U.S. Census, which reported a per capita income in Karluk of $8,052 in 1989, compared to $19,979 for the Kodiak Island Borough overall and $17,610 for the state (U.S. Bureau of the Census 1992a:48-49).

The most important single source of earned income in Karluk in 1991/92 was service jobs, at $1,863.75 per capita representing 26.9 percent of the average total income (Table XIV-5). The service jobs available included employment in the sports hunting and fishing guide business, especially work outfitting fly fishermen and brown bear hunters (Mishler and Cohen forthcoming). Two households in Karluk have their own guiding business, and some individuals are employed by sports lodges and guiding services. Currently there is an effort to establish a community-owned lodge which would compete with the non-Native-owned sports fishing lodge across the lagoon from Karluk. While the private lodge generates a large cash income from this prestigious fishery, the community of Karluk, which is not incorporated as a city, provides no services and receives nothing in the way of taxes or revenue sharing.

Income from local education was the next largest portion of the per capita income, at $1,559.30 (22.5 percent) (Table XIV-5). In addition to the two teachers, several other people worked at the school as teacher's aides and janitors. In contrast to other Kodiak villages, local government was not an important employer in Karluk.

Commercial fishing, which provided an average annual income of $90 per capita, was not a viable source of income for Karluk residents in 1991/92. There are several reasons for this. Unlike most other Kodiak area villages, Karluk lacks a small boat harbor. In the study year, only one person in the community owned a commercial limited entry salmon fishing permit. A few of the younger men worked as crewmen on fishing vessels based in Larsen Bay or Kodiak (Table XIV-5).

Figure XIV-3 illustrates the percentage of jobs in Karluk in 1991/92 by industry. Services provided the highest number at 33 percent, followed by education with 20 percent, and commercial fishing and transportation, communications, and utilities with 10 percent each.

Karluk residents reported $3,206.18 per capita of other income (46.3 percent of the total per capita income), of which the largest components were Alaska Permanent Fund dividends ($868.87 per capita), Aid to Families with Dependent Children ($527.17), food stamps ($497.67), and social security ($367.60) (Table XIV-6).

The mean monthly expense for food estimated from sampled Karluk households was $815, the highest of all 18 communities included in the study in 1991/92, and the median monthly expense for food was even higher, at $900. The latter represents 33.8 percent of the total average household income in the community (Table I-101). Stores operated by local families have been opened and closed somewhat sporadically in Karluk in the late 1980s and early 1990s. A store was open at the time of our visit in May 1992. Merchandise included frozen meat, canned goods, candy, and video rentals. This store is a convenience the community did not have at the time of the oil spill, but food prices nevertheless remain extremely high.

Of the 13 sampled households in Karluk, 38.5 percent said that their financial situation was about the same as before the *Exxon Valdez* oil spill (March, 1989), 38.5 percent said that their financial situation was worse than before the spill, and 23.1 percent said it was better than before the spill (Table I-103). Karluk's high food costs, high unemployment rate, declining population, and low per capita income all point to a significantly stressed economy.

RESOURCE USES AND HARVESTS

Participation in noncommercial uses of wild resources in Karluk in 1991/92 was high. One hundred percent of Karluk households used and harvested at least one wild resource. Every household in the community also received at least one resource and gave away at least one resource. Households in Karluk used an average of 15.5 different kinds of resources, attempted to harvest 12.3 kinds, harvested an average of 11.5 types, received 9.8 kinds, and gave away 10.2 varieties (Table XIV-7). Despite this high level of participation and diversity of uses, just 23.1 percent of the households (3 of 13) had used wild foods the day before the interview; just two households (15.4 percent) had used subsistence foods the day before as part of a main meal (Table XIV-19). This was the lowest percentage among Alaska Native communities in the first study year (Fig. I-3). It should be noted, however, that responses to this question were greatly influenced by the timing of the interviews. In Karluk, a village heavily dependent upon salmon, the interviews were administered in April before salmon runs resumed and when supplies of subsistence foods had probably run low.

As shown in Table XIV-8, 83.3 percent of the residents of Karluk engaged in at least one subsistence harvest activity during the 1991/92 study year, and 65.0 percent processed wild resources. Also, 31.7 percent hunted, 68.3 percent fished, 1.7 percent trapped small furbearers, and 70.0 percent gathered wild plants.

In addition to residents of Karluk itself, Karluk households shared resources with at least four other Alaska communities during the study year (Table XIV-9). They gave away salmon to Kodiak City, Larsen Bay, and Ouzinkie, salmon and game to Anchorage, and berries to Kodiak City. In return they received shellfish, finfish, and marine mammals from Larsen Bay, game and berries from Kodiak City, and game

from Chignik Lagoon. Most frequently, resource exchanges occurred with households in Larsen Bay, and secondly, with households in Kodiak city.

The estimated per capita harvest for all resources in Karluk in 1991/92 was 268.7 pounds, usable weight. The mean household harvest was 1,240.2 pounds (Table XIV-7, Table XIV-10, Fig. XIV-4). By far, the largest portion of the harvest was fish, 222.2 pounds per person (82.7 percent). Most of the fish was salmon (192.2 pounds per capita; 71.5 percent of the total harvest). Other finfish, at 30.0 pounds per capita, represented 11.2 percent of the total harvest. Ranking third were land mammals, with a harvest of 29.8 pounds per person (11.1 percent), followed by wild plants (10.3 pounds; 3.8 percent), marine invertebrates (4.3 pounds; 1.6 percent), birds and eggs (1.1 pounds; 0.4 percent), and marine mammals (0.9 pounds; 0.3 percent) (Table XIV-10, Table XIV-11, Table XIV-12, Fig. XIV-5, Fig. XIV-6).

The largest percentage of Karluk households in the sample (46.2 percent) estimated that between 26 percent and 50 percent of their annual use of meat, fish, and poultry consisted of wild foods. As shown in Table I-104, 23.1 percent said they used 51 to 75 percent wild foods, 15.4 percent reported 76 to 99 percent wild foods, and 15.4 percent indicated 1 to 25 percent.

Sockeye salmon made up the greatest part of Karluk's salmon harvests in 1991/92, 133.8 pounds per capita, 69.6 percent of all salmon taken (as measured in usable pounds). The coho salmon harvest, at 34.4 pounds per capita, was 17.9 percent of all salmon, and chinook salmon, at 18.0 pounds per capita, was 9.4 percent of all salmon (Table XIV-13, Table XIV-14). None of the salmon harvests, or harvests of any other resources, were removed from commercial catches. By gear type, 91.5 percent of the salmon (as measured in number of fish) were taken with subsistence beach seines, and 8.5 percent with rod and reel. As shown in Table XIV-15, all of the Karluk households harvested salmon using subsistence methods (all with beach seines), and 53.9 percent also harvested salmon with rod and reel gear.

Six different methods were used by Karluk households to preserve their salmon (Table I-106). On average, households used 2.92 methods. These methods included freezing (92.3 percent), salting (61.5 percent), drying (61.5 percent), pickling (7.7 percent), and canning (7.7 percent).

For non-salmon fish, the largest per capita harvests by volume were of Dolly Varden (13.4 pounds) and halibut (12.2 pounds) (Table XIV-12). No non-salmon fish were removed from commercial catches, either as targeted species or as by-catch. Subsistence gear (seine, gillnet, or hook and line) was used to catch 69.8 percent of non-salmon fish, and rod and reel to catch 30.2 percent (Table XIV-16, Table XIV-17). As reported in Table XIV-18, 69.2 percent of the Karluk households used subsistence methods to harvest fish other than salmon and 53.9 percent used rod and reel. Flounders were taken during the winter with spears thrown through holes in the river ice. This is a method not found in other Kodiak villages.

Karluk residents harvested an estimated 4.3 pounds of marine invertebrates per capita in 1991/92, 1.6 percent of the total harvest. Butter clams (1.6 pounds) and chitons (1.5 pounds) made up most of this harvest (Table XIV-12). Not many marine invertebrates are available in Karluk's immediate environs, and

some Karluk residents depend on relatives and friends in Larsen Bay for clams and other shellfish. Larsen Bay residents in turn depend on Karluk for much of their sockeye salmon.

For land mammals, the Karluk estimated harvest was 29.8 pounds per capita, 11.1 percent of the total harvest. Of this total, 25.2 pounds per capita were deer, 2.5 pounds were caribou (from the Alaska Peninsula), and 2.1 pounds were reindeer (Table XIV-12). The latter were taken from a herd introduced for commercial development near Akhiok. This herd, now feral, has moved to a location south of Karluk.

Marine mammal harvests in Karluk in 1991/92 were quite low, with an estimated harvest of 0.9 pounds per capita (0.3 percent of the total harvest). All of this harvest was harbor seals (Table XIV-12). Karluk residents gave a mixed response to their perception of change in the population of sea lions. One fraction, 15.4 percent, reported more sea lions in the area, 23.1 percent said there were the same number, 23.1 percent said there were fewer sea lions, and 38.5 percent had no response or did not know (Table I-99).

For birds and eggs, the estimated harvest of 1.1 pounds per capita was 0.4 percent of the total harvest. Almost all of the bird harvest consisted of ducks, with mallards and goldeneyes the most frequently taken species (Table XIV-12).

Plants and berries were well-represented, at 10.3 pounds per capita (3.8 percent of the total harvest). Per person, 4.5 pounds of berries and 5.8 pounds of greens and mushrooms were harvested (Table XIV-12). Only one household in Karluk (7.7 percent) reported using plants for medicine, citing alder as a remedy for sore throats (Table I-109).

Compared to 1990, the previous year, 76.9 percent of the surveyed households in Karluk said they used about the same quantity of subsistence foods in 1991/92, while 23.1 percent said they used more, and none said they used less (Table I-57). More than half of the households in Karluk reported using the same amount of salmon (Table I-9), small game (Table I-27), marine mammals (Table I-33), birds (Table I-39), and shellfish (Table I-45) compared to the previous year, while sharp increases were reported in the uses of plants and berries (Table I-51) and large land mammals (principally deer) (Table I-21). Of resources used less in 1991/92 than in 1990, 23.1 percent cited marine mammals (Table I-33) and another 23.1 percent cited other non-salmon fish (Table I-15).

Compared to before the oil spill, 66.7 percent of the Karluk respondents said they used about the same amount in 1991/92, while 25.0 percent said they used less, and 8.3 percent (one household) said they used more (Table I-58, Fig. XIV-7). Assessments of resource category uses in 1991/92 compared to before the spill were not elicited in Karluk.

DISCUSSION AND CONCLUSIONS

Karluk and the *Exxon Valdez* Oil Spill

In 1989, the oil spill impacted Karluk in several ways (Impact Assessment Inc. 1990c:65-71). Many adults worked on cleanup activities. Consequently, a few other jobs, primarily related to tribal government, went unfilled. Some animosities arose between residents over alleged favoritism in cleanup hiring and some were jealous when cleanup workers were able to purchase new equipment with their earnings.

Like most of the other Kodiak area villages, Karluk showed a substantial decrease in subsistence harvests in the year immediately following the *Exxon Valdez* oil spill in comparison to pre-spill averages reported in other subsistence studies in the 1980s. Karluk's 1989 subsistence harvest of 254.9 pounds per person was 58.7 percent less than the pre-spill average of 618.1 pounds (Fall 1991b). The latter is based on harvest estimates of 863.2 pounds per person for 1982/83 and 385.2 pounds per person for 1986 (Fig. XIV-4). Household assessments of subsistence uses in the spill year were consistent with this drop in harvest levels: about 64 percent (nine households) reported that their overall subsistence uses were lower in 1989 compared to pre-spill norms (Fig. XIV-7). Of these, 77.8 percent (seven households; 50 percent of all households) cited oil-spill reasons for this diminished subsistence use, with four expressing concerns about contamination of resources and five reporting that their work on oil spill cleanup had prevented them from engaging in their normal subsistence activities in 1989 (Mishler and Cohen forthcoming).

In 1990/91, subsistence harvests in Karluk rebounded to 401.6 pounds per person, notably higher than in 1989 and about the same as the 1986 pre-spill estimate but still below the pre-spill average (Fig. XIV-4). Of 13 households who provided assessments of their levels of use in 1990/91 compared to the first post-spill year, four (30.8 percent) said their uses had increased, another four (30.8 percent) said their uses were about the same in the two years after the spill, and five (38.5 percent) said their uses were lower in the second post-spill year than the first (Fall 1992a:23). Despite the increased overall community harvest in the second post-spill year, as in 1989, in 1990/91 most Karluk households (66.7 percent; 10 of 15 which gave responses and had been present before the spill) said that their subsistence uses remained below pre-spill levels, the rest said their uses were about the same as before the spill (Fig. XIV-7).

The 1991/1992 estimate of 268.7 pounds per person was a notable drop from the preceding year, and was just slightly above the spill year estimate (Table XIV-10, Fig. XIV-4), thus failing to conform to the pattern of several years of rebounding harvests documented in several other spill area communities such as Ouzinkie, Nanwalek, Port Graham, and Chenega Bay. On the other hand, by the 1991/92 study year, a large majority of Karluk households either reported that, in their assessment, their subsistence uses were similar to before the spill (66.7 percent) or that they were higher (8.3 percent; one household); just three households (25.0 percent) said their uses were lower than before 1989 (Fig. XIV-7, Table I-58). Of these three, just one mentioned a spill-related reason for the lower than normal uses, speculating that there were less finfish (other than salmon) available to harvest, possibly because of the spill. On the other hand,

several Karluk respondents cited renewed confidence in the safety of subsistence foods as a reason for use levels that had increased over the two prior years. For example, one said that their uses of shellfish had increased in 1991/92 because, "We didn't, [we] wouldn't, eat any the year before, after the oil spill. Another said, "We used more [shellfish]. We got back confidence since the spill is over." And, regarding salmon, a respondent said they used "more this year. [We] feel they are safe to eat again."

Social Effects Questionnaire

Findings from the social effects questionnaire (SEQ) also illustrated a relatively low and reduced level of contamination concern among Karluk respondents. No Karluk respondents said that they thought bidarkies or seals were unsafe to eat, and just one expressed concerns about the safety of using clams (no specific reason for this concern was recorded) (Table XIV-20). A large majority of these respondents (61.5 percent) said they felt that they had been adequately informed on subsistence food safety issues (Table XIV-27; Fig. I-9).

Likewise, none of the sampled Karluk households reported discarding any resources because of perceived abnormalities during the 1991/92 study year (Table I-107). Karluk was unique among all the 1991 study year communities in this respect. On the other hand, in 1993 Karluk residents were still concerned about the food safety of marine invertebrates in the Sturgeon River, where a considerable oil spill cleanup effort occurred. They recommended that samples be collected there and tested for oil contamination as part of an *Exxon Valdez* Oil Spill Trustee Council subsistence restoration project.

As shown in Figure I-6 and Table XIV-22, only 15.4 percent of Karluk respondents felt that the oil spill had affected children's participation in subsistence activities. A much higher percentage of households reported such effects in Prince William Sound and lower Cook Inlet villages, as well as in Ouzinkie. Similarly, few Karluk respondents (15.4 percent) said their sharing of subsistence foods was lower in 1991 than before the spill. This was the third lowest percentage among 1991 study communities, and notably lower than the other Kodiak Island Borough villages and the smaller communities of Cook Inlet and Prince William Sound (all 30 percent or more) (Table XIV-23, Fig. I-7). Just two of the 12 social effects respondents in Karluk (16.7 percent) said they liked living in the community less in 1991 than in 1988, the year before the spill (Table XIV-25).

Table XIV-21 and Figure XIV-9 report Karluk respondents' assessments of natural resource populations in 1991/92 in comparison with 1988, the year before the *Exxon Valdez* spill. For only one resource, sea urchins, did as many as 50 percent of the respondents believe that populations were lower in 1991 than in 1988. However, for those who gave an opinion, the most respondents said that deer and harbor seals were down (41.7 percent of all respondents). A relatively large percentage of respondents in Karluk had also observed lowered populations of bidarkies (41.7 percent) and octopus (41.7 percent). Only for brown bears did the most respondents (50.0 percent) believe that population numbers had gone up since 1988.

Generally, Karluk respondents to the social effects questionnaire expressed fewer concerns about the possible effects of outer continental shelf (OCS) development on resource populations than did residents of other study communities. For example, less than half the respondents predicted lowered populations of marine mammals (46.2 percent; third lowest percentage among all study communities in 1991); birds (30.8 percent; second lowest); marine invertebrates (30.8 percent; second lowest); and land mammals (30.8 percent; fourth lowest). Only for fish did a slim majority of Karluk respondents (53.8 percent) predict lowered populations, about the mid-point among 1991 study communities. Just over half the social effects respondents in Karluk (53.8 percent) believed that OCS development would bring more jobs, about the same as in other Kodiak Island Borough communities (Table XIV-21; Figs. I-10 to I-15).

Comparisons with Other Communities

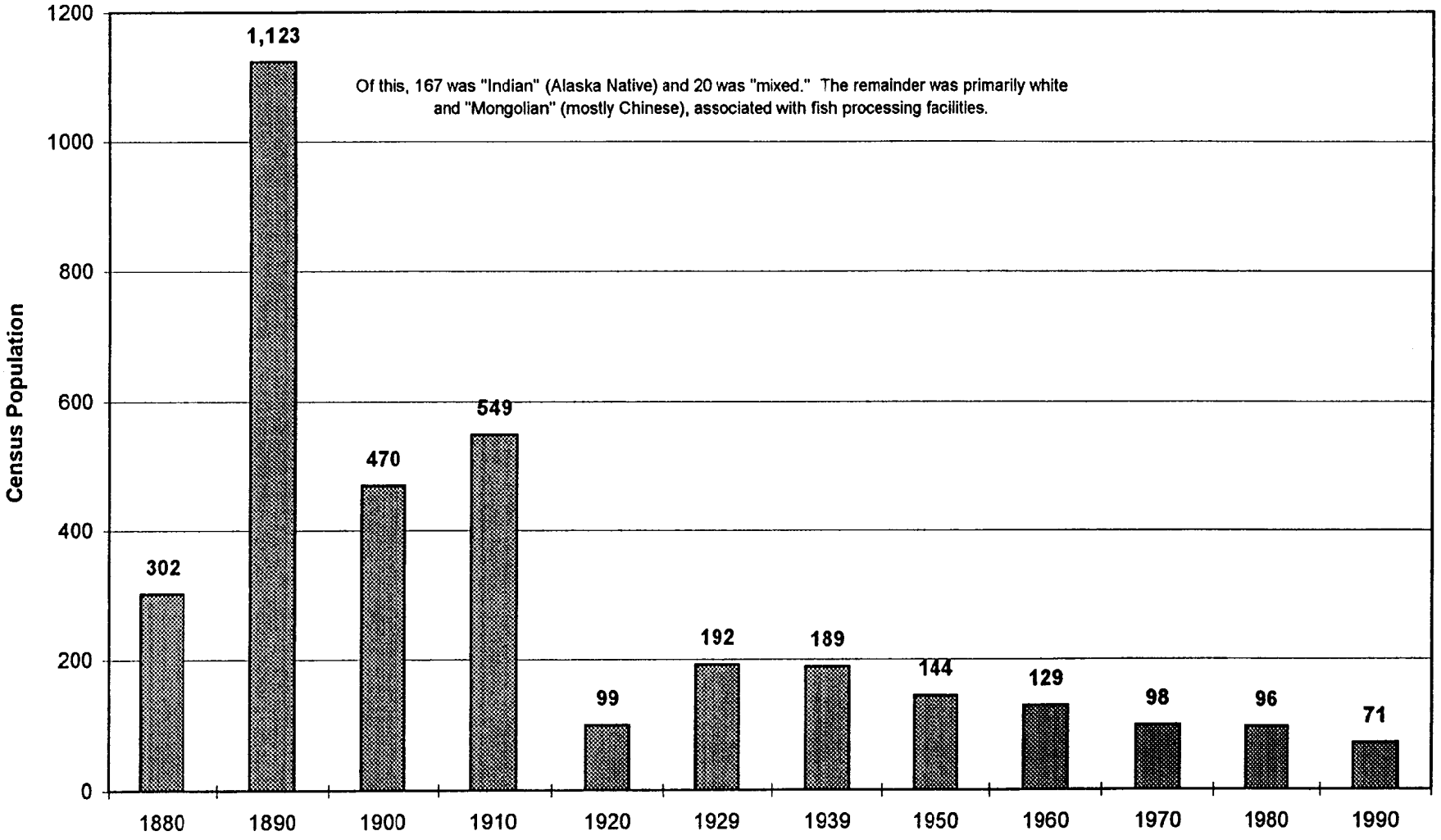
Karluk's harvests in 1991/92 were higher than Ouzinkie's, but lower than Old Harbor's or Larsen Bay's. Its per capita harvest was almost twice as high as the Kodiak road-connected area's 139.8 pounds per capita.

Karluk's average number of resources harvested per capita was 11.5, which was considerably higher than the Kodiak city average of 7.6 different kinds of resources (see Chapter X). However, Karluk residents used the lowest mean number of resources of any of the four Kodiak villages studied in 1992, and harvested fewer types of resources, on the average, than people in Old Harbor or Ouzinkie. Karluk residents seem to concentrate on harvesting the species that are particularly abundant in their area.

Compared to other villages and to Kodiak, Karluk has a particularly high harvest of salmon (Fig. XIV-8). Karluk residents have access to the famous sockeye run of the Karluk River, and their harvesting is concentrated on this species. For butter clams and other species of marine invertebrates, and perhaps for other species as well, they are dependent upon sharing or trading with Larsen Bay residents who in turn rely on Karluk for salmon. Karluk's major resource, and its drawing card in exchange relationships with other communities, is sockeye salmon.

In Karluk, more than in other Kodiak area villages, recreational uses of natural resources compete heavily with subsistence uses, and this results in substantial stress within the community. The village is in prime brown bear habitat, and many resident and non-resident hunters from outside the region visit Karluk to find trophy animals. In addition, sportsmen from all over the world come to fish the Karluk River and lagoon for king, sockeye, and coho salmon, and for steelhead trout (Mishler and Cohen 1992:4). Much of this sport fishery is for catch and release or for trophies, concepts quite foreign to Karluk subsistence users.

Figure XIV-1. Karluk Census Population, 1880 - 1990



Sources: Rollins 1978; Alaska Department of Labor 1991

Table XIV-1. Sample Participation: Karluk 1992

VARIABLE	Social Indicators		TOTAL
	Panel	Non-Panel*	HOUSEHOLDS
Estimated Household Structures	12	6	18
Non-Residential Structures	NA	0	0
Estimated Households	12	6	18
Total Panel	17	NA	NA
Interview Goal:	17	17	34
Households Interviewed	10	15	25
Failed to Contact	0	0	0
Refused	2	2	4
Vacant Households	0	1	1
Seasonal Households**	0	1	1
Non-Resident Household ***	0	0	0
Vacant and Invalid Households:	0	2	2
SI Household Moved	4	NA	NA
SI Respondent Deceased	1	NA	NA
Total Households Attempted:	12	19	31
Refusal Rate:	16.67%	10.53%	12.90%
Non-Perm. HH Rate ("Vacancy Rate"):	0.0%	10.5%	6.5%
Interview Goal (Percentage)	58.8%	88.2%	73.5%
Social Effects Surveys Completed	10	15	25
Total Permanent Households	12	5	17
Percentage Interviewed	83.33%	300.00%	147.06%
Percentage of Total Households	70.59%	29.41%	100.00%
Interview Weighting Factor	1.200	0.333	0.680

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.

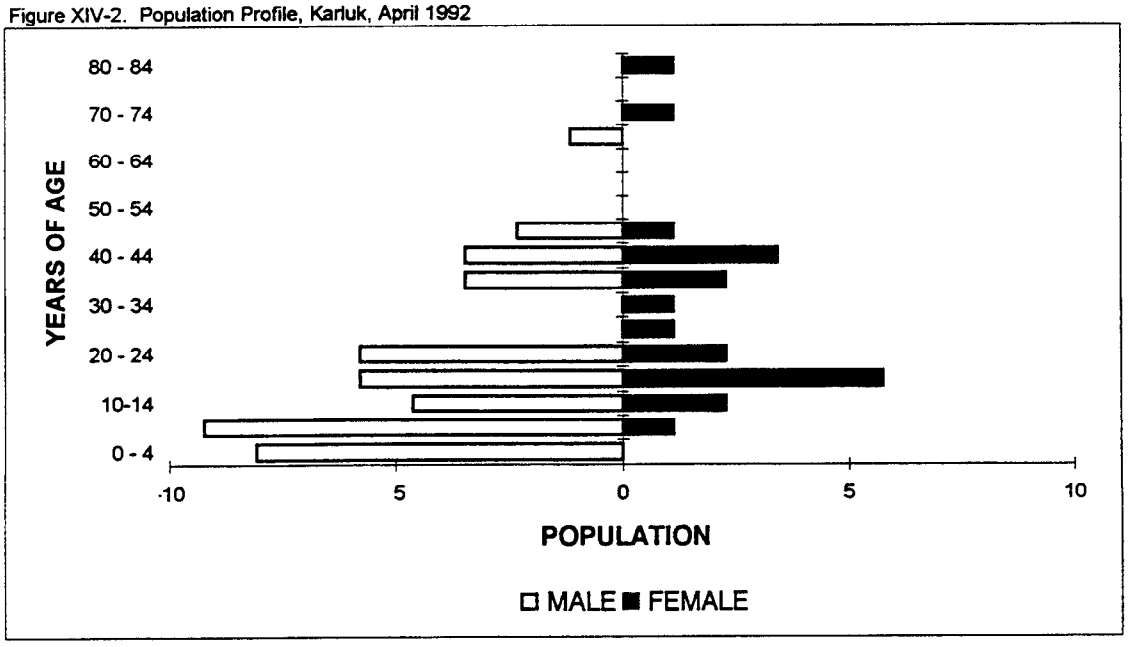
*** Non-resident households are households which were not present during the study year or which were resident less than the required number of months.

Table XIV-2. Demographic Characteristics of Households, Karluk, April 1992

Characteristics	
Sampled Households	13
Number of Households in the Community	15
Percentage of Households Sampled	86.67
Household Size	
Mean	4.62
Minimum	1.00
Maximum	10.00
Sample Population	60
Estimated Community Population	69.23
Age	
Mean	23.45
Minimum	0.99
Maximum	83.85
Median	18.04
Length of Residency - Population	
Mean	18.28
Minimum	0.99
Maximum	72.19
Length of Residency - Household Heads	
Mean	28.45
Minimum	2.13
Maximum	72.19
Sex	
Males	
Number	45.00
Percentage	65.00
Females	
Number	24.23
Percentage	35.00
Alaska Native	
Households (Either Head)	
Number	13.85
Percentage	92.31
Estimated Population	
Number	65.77
Percentage	95.00

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

Figure XIV-2. Population Profile, Karluk, April 1992



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

Table XIV-3. Population Profile, Karluk, April 1992

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	8.08	17.95%	17.95%	0.00	0.00%	0.00%	8.08	11.67%	11.67%
5-9	9.23	20.51%	38.46%	1.15	4.76%	4.76%	10.38	15.00%	26.67%
10-14	4.62	10.26%	48.72%	2.31	9.52%	14.29%	6.92	10.00%	36.67%
15 - 19	5.77	12.82%	61.54%	5.77	23.81%	38.10%	11.54	16.67%	53.33%
20 - 24	5.77	12.82%	74.36%	2.31	9.52%	47.62%	8.08	11.67%	65.00%
25 - 29	0.00	0.00%	74.36%	1.15	4.76%	52.38%	1.15	1.67%	66.67%
30 - 34	0.00	0.00%	74.36%	1.15	4.76%	57.14%	1.15	1.67%	68.33%
35 - 39	3.46	7.69%	82.05%	2.31	9.52%	66.67%	5.77	8.33%	76.67%
40 - 44	3.46	7.69%	89.74%	3.46	14.29%	80.95%	6.92	10.00%	86.67%
45 - 49	2.31	5.13%	94.87%	1.15	4.76%	85.71%	3.46	5.00%	91.67%
50 - 54	0.00	0.00%	94.87%	0.00	0.00%	85.71%	0.00	0.00%	91.67%
55 - 59	0.00	0.00%	94.87%	0.00	0.00%	85.71%	0.00	0.00%	91.67%
60 - 64	0.00	0.00%	94.87%	0.00	0.00%	85.71%	0.00	0.00%	91.67%
65 - 69	1.15	2.56%	97.44%	0.00	0.00%	85.71%	1.15	1.67%	93.33%
70 - 74	0.00	0.00%	97.44%	1.15	4.76%	90.48%	1.15	1.67%	95.00%
75 - 79	0.00	0.00%	97.44%	0.00	0.00%	90.48%	0.00	0.00%	95.00%
80 - 84	0.00	0.00%	97.44%	1.15	4.76%	95.24%	1.15	1.67%	96.67%
85 - 89	0.00	0.00%	97.44%	0.00	0.00%	95.24%	0.00	0.00%	96.67%
90 - 94	0.00	0.00%	97.44%	0.00	0.00%	95.24%	0.00	0.00%	96.67%
95 - 99	0.00	0.00%	97.44%	0.00	0.00%	95.24%	0.00	0.00%	96.67%
100 - 104	0.00	0.00%	97.44%	0.00	0.00%	95.24%	0.00	0.00%	96.67%
Missing	1.15	2.56%	100.00%	1.15	4.76%	100.00%	2.31	3.33%	100.00%
TOTAL	45.00	65.00%		24.23	35.00%		69.23	100.00%	

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

Table XIV-4. Employment Characteristics, Karluk, 1991/92

Characteristics	
ADULTS	
Total	36.92
Employed	
Number	24.23
Percentage	65.63
Jobs	
Number	35.77
Mean	1.48
Minimum	1
Maximum	3
Months Employed	
Mean	5.62
Minimum	1
Maximum	12
Year-Round	14.29%
HOUSEHOLDS	
Total	15.00
Employed	
Number	12.69
Percentage	84.62
Jobs per Employed Household	
Mean	2.82
Minimum	1
Maximum	5
Employed Adults	
Mean	1.91
Minimum	1
Maximum	3

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

Figure XIV-3. Employment by Industry, Karluk, 1991/92

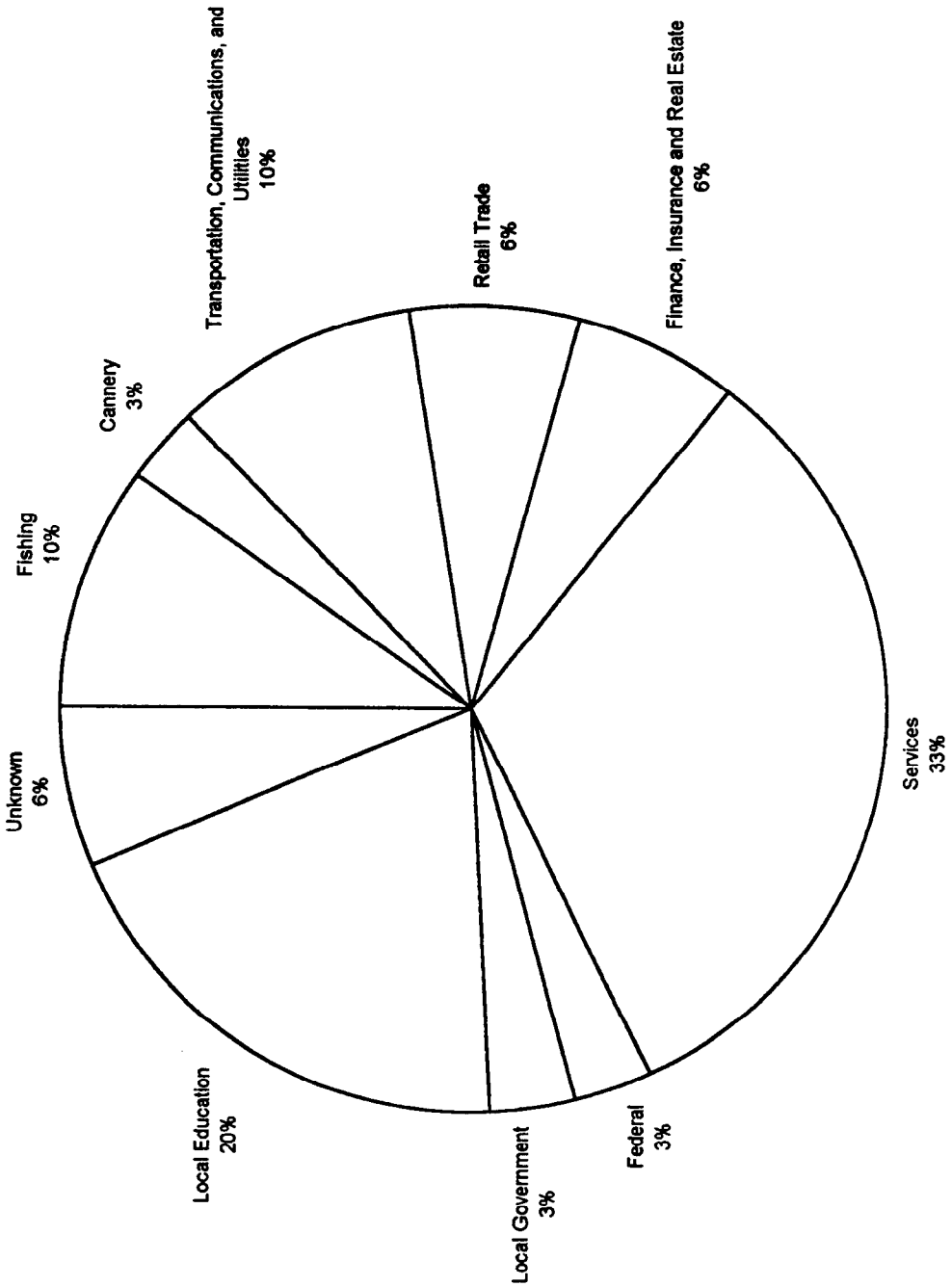


Table XIV-5. Community, Household, and Per Capita Incomes, All Sources and by Employer Type, Karluk, 1991/92

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$479,323.46	$31,954.90	$6,923.56
Earned Income	$257,357.31	$17,157.15	$3,717.38
Agriculture, Forestry, and Fishing	6,230.77	415.38	90.00
Agriculture	0.00	0.00	0.00
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	6,230.77	415.38	90.00
Hatchery/Enhancement	0.00	0.00	0.00
Commercial Fishing	6,230.77	415.38	90.00
Hunting/Trapping	0.00	0.00	0.00
Mining	0.00	0.00	0.00
Construction	0.00	0.00	0.00
Manufacturing	0.00	0.00	0.00
Cannery	AMT UNK	AMT UNK	AMT UNK
Other Manufacturing	0.00	0.00	0.00
Logging/Timber	0.00	0.00	0.00
Transportation, Communications, and Utilities	6,415.38	427.69	92.67
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	1,384.62	92.31	20.00
Services	129,028.85	8,601.92	1,863.75
Government	114,297.69	7,619.85	1,650.97
Federal	4,038.46	269.23	58.33
State	0.00	0.00	0.00
Local	110,259.23	7,350.62	1,592.63
Local Government	2,307.69	153.85	33.33
Local Education	107,951.54	7,196.77	1,559.30
Unknown	AMT UNK	AMT UNK	AMT UNK
Other Income	$221,966.15	$14,797.74	$3,206.18

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

Table XIV-6. Community, Household, and Per Capita Other Income by Source, Karluk, 1991/92

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$221,966.15	$14,797.74	$3,206.18
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	30.77	36,496.15	2,433.08	527.17
Adult Public Assistance	7.69	3,849.23	256.62	55.60
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	7.69	14,840.77	989.38	214.37
Longevity Bonus	23.08	10,384.62	692.31	150.00
Social Security	23.08	25,449.23	1,696.62	367.60
Workman's Comp./Insurance	0.00	0.00	0.00	0.00
Energy Assistance	61.54	4,989.23	332.62	72.07
Supplemental Security Income	7.69	3,184.62	212.31	46.00
Food Stamps	38.46	34,453.85	2,296.92	497.67
Unemployment	30.77	15,520.00	1,034.67	224.18
Native Corporation Dividend	92.31	12,646.15	843.08	182.67
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	100.00	60,152.31	4,010.15	868.87
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, 1992

Table XIV-7. Characteristics of Resource Harvest and Use, Karluk, 1991/92

Study Community	Karluk
Mean Number Of Resources Used Per Household	15.54
Minimum	6
Maximum	27
95 % Confidence Limit (+/-)	10.57
Median	17
Mean Number Of Resources Attempted To Harvest Per Household	12.31
Minimum	2
Maximum	26
95 % Confidence Limit (+/-)	11.99
Median	12
Mean Number Of Resources Harvested Per Household	11.54
Minimum	2
Maximum	23
95 % Confidence Limit (+/-)	12.33
Median	12
Mean Number Of Resources Received Per Household	9.77
Minimum	1
Maximum	21
95 % Confidence Limit (+/-)	14.17
Median	8
Mean Number Of Resources Given Away Per Household	10.23
Minimum	1
Maximum	18
95 % Confidence Limit (+/-)	13.56
Median	9
Mean Household Harvest, Pounds	1,240.17
Minimum	97.32
Maximum	2,657.82
Total Pounds Harvested	18,602.54
Community Per Capita Harvest, Pounds	268.70
Percent Using Any Resource	100.00
Percent Attempting To Harvest Any Resource	100.00
Percent Harvesting Any Resource	100.00
Percent Receiving Any Resource	100.00
Percent Giving Away Any Resource	100.00
Number Of Households In Sample	13
Number of Resources Available	113

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

Table XIV-8. Participation in the Harvest and Processing of Wild Resources, Karluk, 1991/92

Total Number of People			69.23
GAME	Hunt	Number	21.92
		Percentage	31.67
		Missing	0.00
		Missing %	0.00
	Process	Number	21.92
		Percentage	31.67
		Missing	0.00
		Missing %	0.00
FISH	Fish	Number	47.31
		Percentage	68.33
		Missing	0.00
		Missing %	0.00
	Process	Number	33.46
		Percentage	48.33
		Missing	0.00
		Missing %	0.00
FURBEARERS	Hunt or Trap	Number	1.15
		Percentage	1.67
		Missing	0.00
		Missing %	0.00
	Process	Number	0.00
		Percentage	0.00
		Missing	0.00
		Missing %	0.00
PLANTS	Gather	Number	48.46
		Percentage	70.00
		Missing	0.00
		Missing %	0.00
	Process	Number	38.08
		Percentage	55.00
		Missing	0.00
		Missing %	0.00
ANY RESOURCE			
	Attempt	Number	57.69
		Percent	83.33
	Process	Number	45.00
		Percent	65.00

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

Table XIV-9. Percentage of Households Sharing Resources by Community, Karluk, 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	69.23	100.00	84.62	69.23	76.92	76.92	92.31	76.92	30.77	15.38	38.46	38.46	69.23	76.92	100.00	100.00
Anchorage	0.00	7.69	0.00	0.00	0.00	0.00	0.00	7.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69
Chignik Lagoon	0.00	0.00	0.00	0.00	0.00	0.00	7.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69	0.00
Karluk	69.23	84.62	76.92	69.23	53.85	76.92	84.62	76.92	30.77	15.38	38.46	38.46	61.54	69.23	100.00	92.31
Kodiak City	0.00	53.85	0.00	0.00	0.00	0.00	15.38	0.00	0.00	0.00	0.00	0.00	23.08	7.69	30.77	53.85
Larsen Bay	0.00	38.46	30.77	0.00	76.92	0.00	0.00	0.00	7.69	0.00	0.00	0.00	23.08	0.00	76.92	38.46
Ouzinkie	0.00	7.69	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	7.69
Other U.S.	0.00	15.38	0.00	0.00	0.00	0.00	0.00	7.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.38

Plants and Berrines 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 XIV-10. Subsistence Harvests in Pounds Usable Weight per Person by Resource Category, Karluk, 1982/93, 1986, 1989, 1990/91, and 1991/92

	Pounds Usable Weight per Person				
	1982/83	1986	1989	1990/91	1991/92
Salmon	582.5	254.9	196.7	293.1	192.2
Other Fish	100.7	42.4	14.1	50.8	30.0
Marine Invertebrates	12.9	12.5	5.2	12.9	4.3
Land Mammals	66.6	45.2	27.4	30.5	29.8
Marine Mammals	89.3	25.4	5.6	5.3	0.9
Birds and Eggs	11.2	2.9	3.7	3.0	1.1
Wild Plants	*	1.9	2.2	6.0	10.3
All Resources	863.2	385.2	254.9	401.6	268.7

* No plant data collected for 1982/83

Table XIV-11. Composition of Resource Harvests by Resource Category, Karluk, 1982/83, 1986, 1989, 1990/91, and 1991/92

	Percentage of Total Harvest				
	1982/83	1986	1989	1990/91	1991/92
Salmon	67.5%	66.2%	77.1%	73.0%	71.5%
Other Fish	11.7%	11.0%	5.5%	12.7%	11.2%
Marine Invertebrates	1.5%	3.2%	2.0%	3.2%	1.6%
Land Mammals	7.7%	11.7%	10.8%	7.6%	11.1%
Marine Mammals	10.3%	6.6%	2.2%	1.3%	0.3%
Birds and Eggs	1.3%	0.7%	1.5%	0.7%	0.4%
Wild Plants	*	0.5%	0.9%	1.5%	3.8%

* Note: wild plant data not collected for 1982/83

Figure XIV-4. Harvests of Wild Resources for Home Use, Pounds Usable Weight per Capita, Karluk, 1982/83, 1986, 1989, 1990/91, and 1991/92

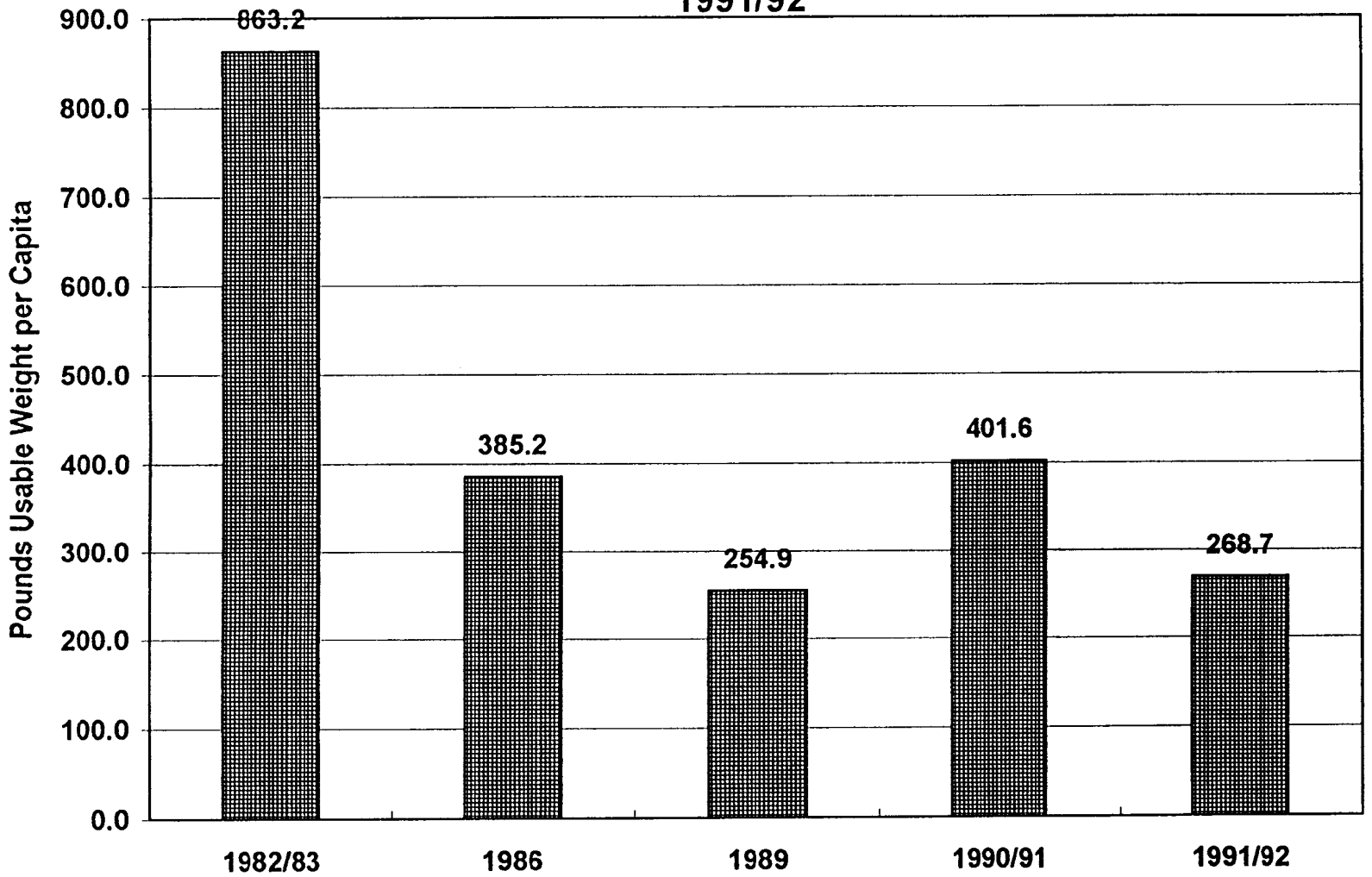


Figure XIV-5. Per Capita Harvests of Wild Resources by Resource Category, Karluk, 1982/83, 1986, 1989, 1990/91, and 1991/92

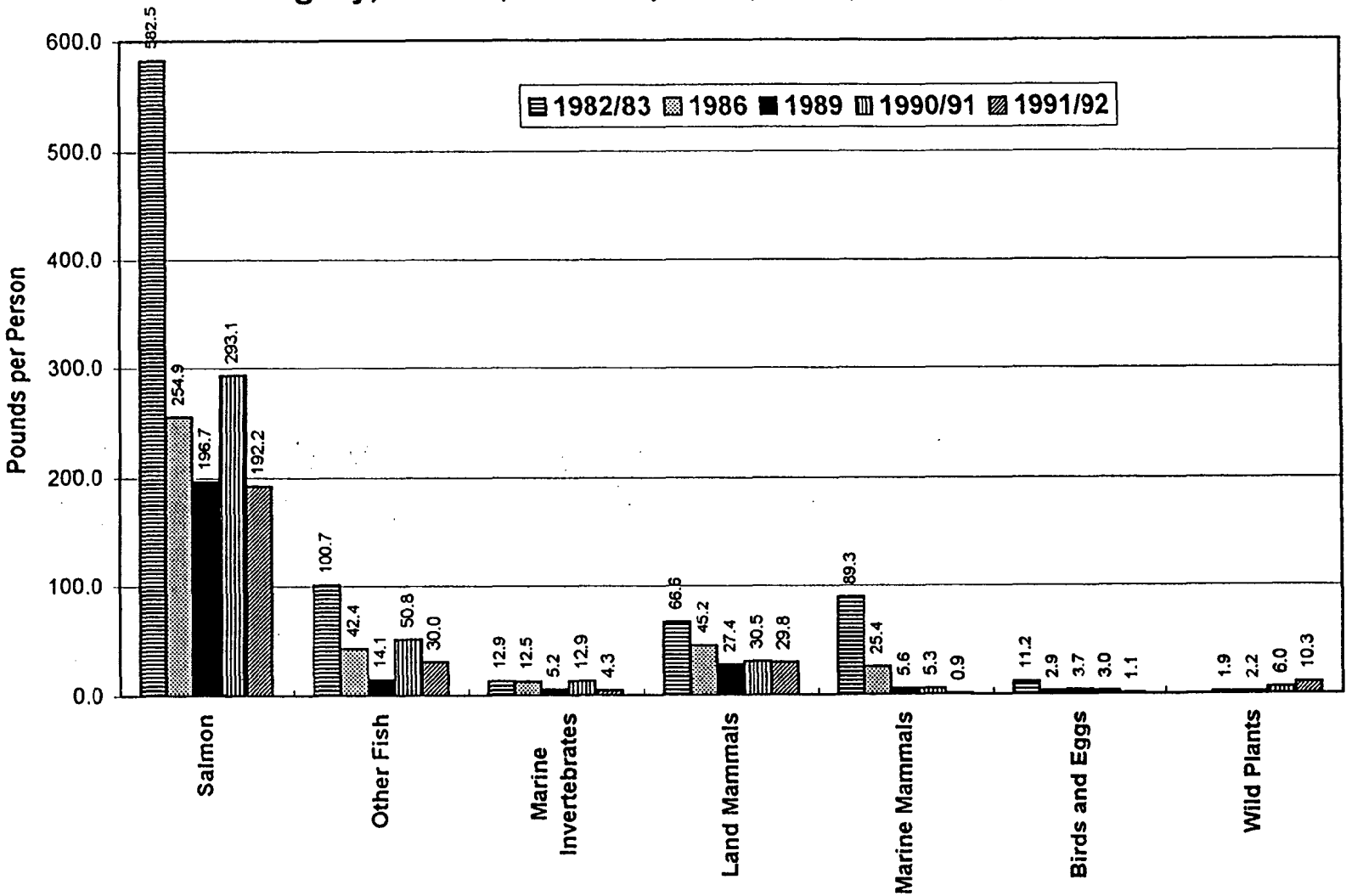


Figure XIV-6. Composition of Wild Resource Harvests by Resource Category, Karluk, 1991/92

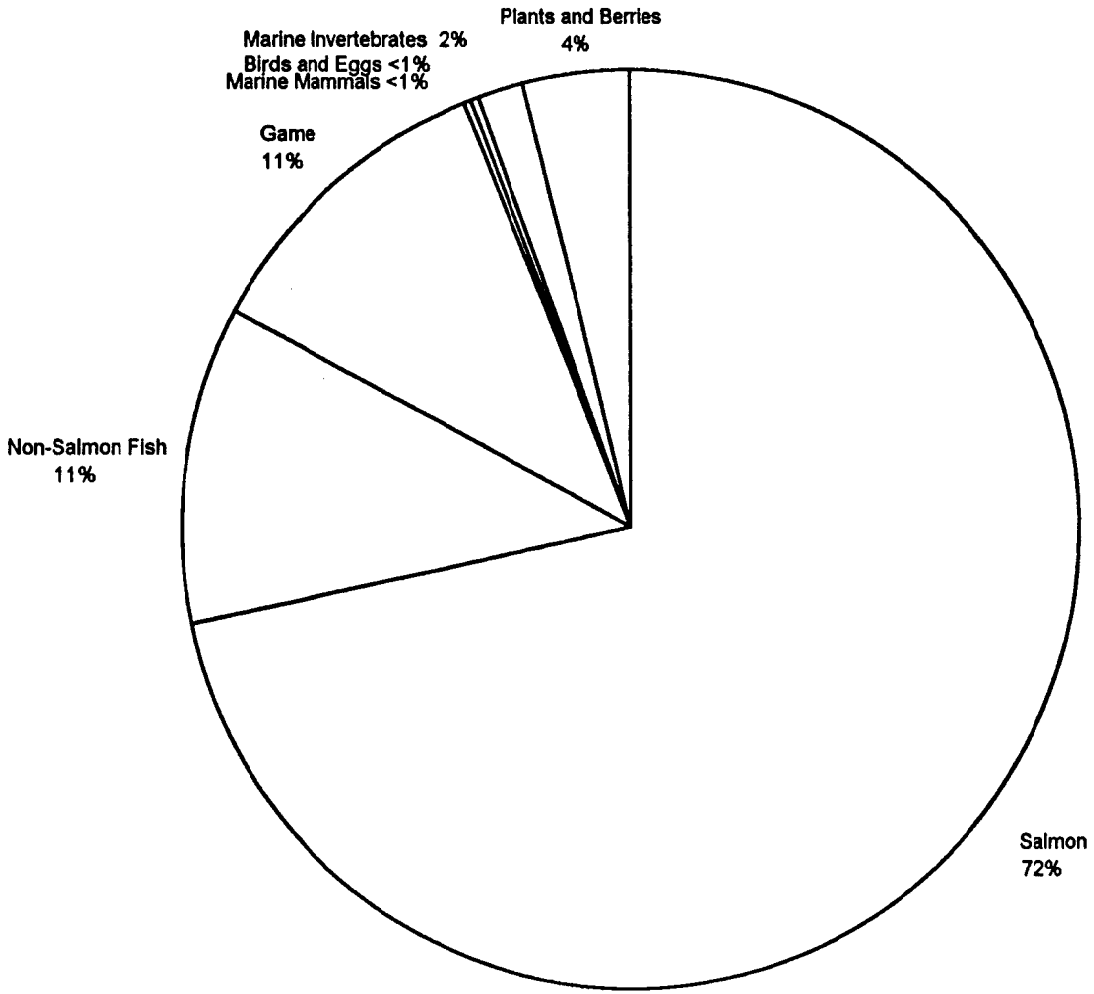


Table XIV-12. Estimated Harvest and Use of Fish, Mammal, Bird, and Plant Resources, Karluk, 1991/92

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	100.0	100.0	18,602.54	1,240.17	268.70			15.18%	19.70%
Fish	100.0	100.0	100.0	84.6	100.0	15,385.16	1,025.68	222.23			17.60%	22.23%
Salmon	100.0	100.0	100.0	69.2	100.0	13,306.92	887.13	192.21	3,176.54	211.77	17.77%	21.84%
Chum Salmon	23.1	23.1	23.1	7.7	7.7	191.26	12.75	2.76	36.92	2.46	47.10%	50.35%
Coho Salmon	92.3	100.0	92.3	46.2	76.9	2,383.80	158.92	34.43	435.00	29.00	31.14%	36.16%
Coho Salmon-Fingerling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Chinook Salmon	76.9	76.9	76.9	30.8	69.2	1,246.20	83.08	18.00	143.08	9.54	26.15%	30.73%
Pink Salmon	30.8	38.5	30.8	23.1	15.4	220.15	14.68	3.18	103.85	6.92	37.68%	41.21%
Sockeye Salmon	92.3	92.3	92.3	61.5	84.6	9,265.50	617.70	133.84	2,457.69	163.85	20.42%	22.96%
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	76.9	76.9	84.6	69.2	2,078.24	138.55	30.02			28.32%	32.80%
Cod	23.1	7.7	0.0	23.1	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Pacific Cod (Gray)	23.1	7.7	0.0	23.1	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
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	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	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 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	38.5	23.1	23.1	15.4	23.1	166.15	11.08	2.40	55.38	3.69	65.98%	63.45%
Unknown Flounder	38.5	23.1	23.1	15.4	23.1	166.15	11.08	2.40	55.38	3.69	65.98%	63.45%
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	92.3	69.2	61.5	76.9	46.2	842.24	56.15	12.17	23.33	1.56	35.05%	40.64%
Herring	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	23.1	7.7	7.7	15.4	7.7	6.92	0.46	0.10	4.62	0.31	79.56%	81.13%
Black Rockfish (black bass)	15.4	7.7	7.7	7.7	7.7	6.92	0.46	0.10	4.62	0.31	79.56%	81.13%
Red Rockfish	7.7	0.0	0.0	7.7	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%
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%
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%
Trout and Char	76.9	69.2	69.2	46.2	61.5	1,062.92	70.86	15.35	759.23	50.62	29.67%	33.61%
Char	76.9	69.2	69.2	46.2	53.8	925.62	61.71	13.37	661.15	44.08	31.52%	35.07%
Dolly Varden	76.9	69.2	69.2	46.2	53.8	925.62	61.71	13.37	661.15	44.08	31.52%	35.07%
Dolly Varden-Fingerling	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 XIV-12. Estimated Harvest and Use of Fish, Mammal, Bird, and Plant Resources, Karluk, 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
Trout	53.8	46.2	46.2	30.8	38.5	137.31	9.15	1.98	98.08	6.54	44.68%	48.30%
Rainbow Trout	15.4	15.4	15.4	7.7	7.7	22.62	1.51	0.33	16.15	1.08	68.19%	71.18%
Steelhead	53.8	46.2	46.2	30.8	38.5	114.69	7.65	1.66	81.92	5.46	40.99%	44.73%
Game	100.0	69.2	61.5	92.3	76.9	2,064.23	137.62	29.82	46.15	3.08	30.21%	30.76%
Big Game	100.0	69.2	61.5	92.3	76.9	1,917.69	127.85	27.70	41.54	2.77	27.82%	28.50%
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	0.0	0.0	0.0	0.0	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	30.8	7.7	7.7	23.1	7.7	173.08	11.54	2.50	1.15	0.08	79.56%	81.13%
Deer	100.0	69.2	61.5	76.9	76.9	1,744.62	116.31	25.20	40.38	2.69	28.27%	28.93%
Deer, Male	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, Sex Unknown	100.0	69.2	61.5	76.9	76.9	1,744.62	116.31	25.20	40.38	2.69	28.27%	28.93%
Elk	7.7	0.0	0.0	7.7	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Goat	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Moose	7.7	0.0	0.0	7.7	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Small Game/Furbearer	15.4	23.1	15.4	0.0	15.4	2.31	0.15	0.03	2.31	0.15	53.86%	76.79%
Fox	7.7	7.7	7.7	0.0	7.7	0.00	0.00	0.00	1.15	0.08	79.56%	0.00%
Red Fox	7.7	7.7	7.7	0.0	7.7	0.00	0.00	0.00	1.15	0.08	79.56%	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%
Hare	7.7	15.4	7.7	0.0	7.7	2.31	0.15	0.03	1.15	0.08	79.56%	76.79%
Snowshoe Hare	7.7	15.4	7.7	0.0	7.7	2.31	0.15	0.03	1.15	0.08	79.56%	76.79%
Land Otter	0.0	7.7	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%
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%
Tree 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	15.4	7.7	7.7	7.7	7.7	144.23	9.62	2.08	2.31	0.15	79.56%	79.71%
Reindeer - Feral	15.4	7.7	7.7	7.7	7.7	144.23	9.62	2.08	2.31	0.15	79.56%	79.71%
Marine Mammals	38.5	23.1	7.7	30.8	15.4	64.62	4.31	0.93	1.15	0.08	79.56%	76.79%
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	38.5	15.4	7.7	30.8	15.4	64.62	4.31	0.93	1.15	0.08	79.56%	76.79%
Harbor Seal	38.5	15.4	7.7	30.8	15.4	64.62	4.31	0.93	1.15	0.08	79.56%	76.79%
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	7.7	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%

Table XIV-12. Estimated Harvest and Use of Fish, Mammal, Bird, and Plant Resources, Karluk, 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
Birds and Eggs	53.8	38.5	30.8	38.5	38.5	78.35	5.22	1.13	111.92	7.46	39.39%	38.63%
Birds	53.8	38.5	30.8	38.5	38.5	78.35	5.22	1.13	111.92	7.46	39.39%	38.63%
Upland Game Birds	15.4	15.4	15.4	0.0	7.7	5.65	0.38	0.08	8.08	0.54	59.42%	60.17%
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	15.4	15.4	15.4	0.0	7.7	5.65	0.38	0.08	8.08	0.54	59.42%	60.17%
Migratory Birds	53.8	38.5	30.8	38.5	38.5	72.69	4.85	1.05	103.85	6.92	38.83%	38.01%
Waterfowl	53.8	38.5	30.8	38.5	38.5	72.69	4.85	1.05	103.85	6.92	38.83%	38.01%
Ducks	53.8	38.5	30.8	38.5	38.5	72.69	4.85	1.05	103.85	6.92	38.83%	38.01%
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, 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	7.7	7.7	7.7	7.7	7.7	2.31	0.15	0.03	4.62	0.31	79.56%	79.71%
Goldeneye	30.8	23.1	23.1	15.4	30.8	16.62	1.11	0.24	20.77	1.38	43.90%	42.72%
Bufflehead	38.5	30.8	30.8	15.4	23.1	10.15	0.68	0.15	25.38	1.69	41.02%	39.52%
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	46.2	38.5	30.8	30.8	38.5	34.62	2.31	0.50	34.62	2.31	38.92%	38.05%
Pintail	7.7	7.7	7.7	7.7	7.7	5.54	0.37	0.08	6.92	0.46	79.56%	79.71%
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	7.7	7.7	7.7	7.7	7.7	3.46	0.23	0.05	11.54	0.77	79.56%	79.71%
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%
Ducks, 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	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 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, 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, 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%
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%

Table XIV-12. Estimated Harvest and Use of Fish, Mammal, Bird, and Plant Resources, Karluk, 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
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%
Puffins	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Gulls	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
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%
Auklet	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Parakeet Auklet	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%
Puffin 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%
Kittiwake 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%
Eider 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%
Marine Invertebrates	84.6	76.9	76.9	76.9	76.9	299.42	19.96	4.32			20.32%	25.35%
Clams	69.2	30.8	30.8	69.2	53.8	140.19	9.35	2.03	46.73 gal	3.12	35.06%	39.05%
Butter Clams	69.2	30.8	30.8	69.2	53.8	112.50	7.50	1.63	37.50 gal	2.50	38.22%	41.61%
Razor 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%
Pacific Littleneck Clams (Steamers)	38.5	15.4	15.4	38.5	30.8	27.69	1.85	0.40	9.23 gal	0.62	55.82%	59.26%
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%
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	7.7	7.7	7.7	0.0	7.7	12.98	0.87	0.19	4.33 gal	0.29	79.56%	82.53%
Scallops	7.7	0.0	0.0	7.7	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Mussels	38.5	38.5	38.5	23.1	30.8	36.05	2.40	0.52	24.03 gal	1.60	32.21%	34.81%
Crabs	15.4	0.0	0.0	15.4	7.7	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Dungeness Crab	7.7	0.0	0.0	7.7	7.7	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%
Tanner Crab	7.7	0.0	0.0	7.7	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%

Table XIV-12. Estimated Harvest and Use of Fish, Mammal, Bird, and Plant Resources, Karluk, 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
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)	61.5	53.8	53.8	38.5	53.8	101.54	6.77	1.47	25.38 gal	1.69	27.34%	29.95%
Chitons (small)	61.5	53.8	53.8	38.5	53.8	101.54	6.77	1.47	25.38 gal	1.69	27.34%	29.95%
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	61.5	7.7	7.7	61.5	23.1	4.62	0.31	0.07	1.15	0.08	79.56%	79.71%
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	23.1	23.1	23.1	7.7	7.7	4.04	0.27	0.06	8.08 gal	0.54	57.02%	56.08%
Shrimp	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%
Snails	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%
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%
Plants and Berries	92.3	84.6	84.6	46.2	61.5	710.77	47.38	10.27	177.69 gal	11.85	26.68%	25.21%
Berries	92.3	84.6	84.6	46.2	61.5	311.54	20.77	4.50	77.88 gal	5.19	23.14%	23.56%
Plants/Greens/Mushrooms	38.5	38.5	38.5	0.0	15.4	399.23	26.62	5.77	99.81 gal	6.65	45.14%	43.43%
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%
Fertilizer	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%
Vegetative Fertilizer	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%
Seaweed/Kelp (Non-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	92.3	92.3	92.3	46.2	53.8	0.00	0.00	0.00	96.35 crd	6.42	21.69%	0.00%

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

Table XIV-13. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Karluk, 1991/92

Resource	Percent Base	Subsistence Methods: Seine No.	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	91.50	89.76	91.50	89.76	0.00	0.00	8.50	10.24		
Chum Salmon	gear type	1.27	1.60	1.27	1.60	0.00	0.00	0.00	0.00		
	resource	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00		
	total	1.16	1.44	1.16	1.44	0.00	0.00	0.00	0.00	1.16	1.44
Coho Salmon	gear type	11.12	14.82	11.12	14.82	0.00	0.00	41.45	45.00		
	resource	74.27	74.27	74.27	74.27	0.00	0.00	25.73	25.73		
	total	10.17	13.30	10.17	13.30	0.00	0.00	3.52	4.61	13.69	17.91
Coho Salmon-Fingerling	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
Chinook Salmon	gear type	3.45	7.32	3.45	7.32	0.00	0.00	15.81	27.28		
	resource	70.16	70.16	70.16	70.16	0.00	0.00	29.84	29.84		
	total	3.16	6.57	3.16	6.57	0.00	0.00	1.34	2.79	4.50	9.37
Pink Salmon	gear type	2.38	1.23	2.38	1.23	0.00	0.00	12.82	5.38		
	resource	66.67	66.67	66.67	66.67	0.00	0.00	33.33	33.33		
	total	2.18	1.10	2.18	1.10	0.00	0.00	1.09	0.55	3.27	1.65
Sockeye Salmon	gear type	81.78	75.03	81.78	75.03	0.00	0.00	29.91	22.34		
	resource	96.71	96.71	96.71	96.71	0.00	0.00	3.29	3.29		
	total	74.83	67.34	74.83	67.34	0.00	0.00	2.54	2.29	77.37	69.63
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, 1992

Table XIV-14. Estimated Salmon Harvest by Gear Type and Species, Karluk, 1991/92

		Subsistence Methods				Removed from Commercial Catch		Rod and Reel		Any Method	
		Seine		Subsistence Gear Any Method							
	Harvest Units	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean	Total	HH Mean
Salmon	numbers	2,906.54	193.77	2,906.54	193.77	0.00	0.00	270.00	18.00	3,176.54	211.77
	pounds	11,943.84	796.26	11,943.84	796.26	0.00	0.00	1,363.07	90.87	13,306.92	887.13
Chum Salmon	numbers	36.92	2.46	36.92	2.46	0.00	0.00	0.00	0.00	36.92	2.46
	pounds	191.26	12.75	191.26	12.75	0.00	0.00	0.00	0.00	191.26	12.75
Coho Salmon	numbers	323.08	21.54	323.08	21.54	0.00	0.00	111.92	7.46	435.00	29.00
	pounds	1,770.46	118.03	1,770.46	118.03	0.00	0.00	613.34	40.89	2,383.80	158.92
Coho Salmon-Fingerling	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
Chinook Salmon	numbers	100.38	6.69	100.38	6.69	0.00	0.00	42.69	2.85	143.08	9.54
	pounds	874.35	58.29	874.35	58.29	0.00	0.00	371.85	24.79	1,246.20	83.08
Pink Salmon	numbers	69.23	4.62	69.23	4.62	0.00	0.00	34.62	2.31	103.85	6.92
	pounds	146.77	9.78	146.77	9.78	0.00	0.00	73.38	4.89	220.15	14.68
Sockeye Salmon	numbers	2,376.92	158.46	2,376.92	158.46	0.00	0.00	80.77	5.38	2,457.69	163.85
	pounds	8,961.00	597.40	8,961.00	597.40	0.00	0.00	304.50	20.30	9,265.50	617.70
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, 1992

Table XIV-15. Percentage of Households Harvesting Salmon by Gear Type and Species, Karluk, 1991/92

Resource	Subsistence Methods		Removed from Commercial Catch	Rod and Reel	Any Method
	Seine	Any Subsistence Gear			
Salmon	100.00	100.00	0.00	53.85	100.00
Chum Salmon	23.08	23.08	0.00	0.00	23.08
Coho Salmon	84.62	84.62	0.00	53.85	92.31
Coho Salmon-Fingerling	0.00	0.00	0.00	0.00	0.00
Chinook Salmon	53.85	53.85	0.00	38.46	76.92
Pink Salmon	23.08	23.08	0.00	7.69	30.77
Sockeye Salmon	92.31	92.31	0.00	23.08	92.31
Unknown Salmon	0.00	0.00	0.00	0.00	0.00

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

Table XIV-16. Estimated Harvest of Fish Other than Salmon by Gear Type, Karluk, 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	1,450.27	96.68	0.00	0.00	627.97	41.86	0.00	0.00	2,078.24	138.55
Unknown Flounder	pounds	166.15	11.08	0.00	0.00	0.00	0.00	0.00	0.00	166.15	11.08
Halibut	pounds	391.96	26.13	0.00	0.00	450.28	30.02	0.00	0.00	842.24	56.15
Black Rockfish (black bass)	pounds	6.92	0.46	0.00	0.00	0.00	0.00	0.00	0.00	6.92	0.46
Dolly Varden	pounds	773.77	51.58	0.00	0.00	151.85	10.12	0.00	0.00	925.62	61.71
Rainbow Trout	pounds	19.38	1.29	0.00	0.00	3.23	0.22	0.00	0.00	22.62	1.51
Steelhead	pounds	92.08	6.14	0.00	0.00	22.62	1.51	0.00	0.00	114.69	7.65

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

Table XIV-17. Percentage of Fish Other Than Salmon Harvested by Gear Type, Karluk, 1991/92

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	69.78	0.00	30.22	0.00
Unknown Flounder	resource	100.00	0.00	0.00	0.00
Halibut	resource	46.54	0.00	53.46	0.00
Black Rockfish (black bass)	resource	100.00	0.00	0.00	0.00
Dolly Varden	resource	83.60	0.00	16.40	0.00
Rainbow Trout	resource	85.71	0.00	14.29	0.00
Steelhead	resource	80.28	0.00	19.72	0.00

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

Table XIV-18. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Karluk, 1991/92

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	69.23	0.00	53.85	0.00	76.92
Unknown Flounder	23.08	0.00	0.00	0.00	23.08
Halibut	46.15	0.00	15.38	0.00	61.54
Black Rockfish (black bass)	7.69	0.00	0.00	0.00	7.69
Dolly Varden	61.54	0.00	38.46	0.00	69.23
Rainbow Trout	7.69	0.00	7.69	0.00	15.38
Steelhead	30.77	0.00	15.38	0.00	46.15

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

Figure XIV-7. Karluk Households' Assessments of Their Subsistence Uses Compared to Before the Exxon Valdez Oil Spill

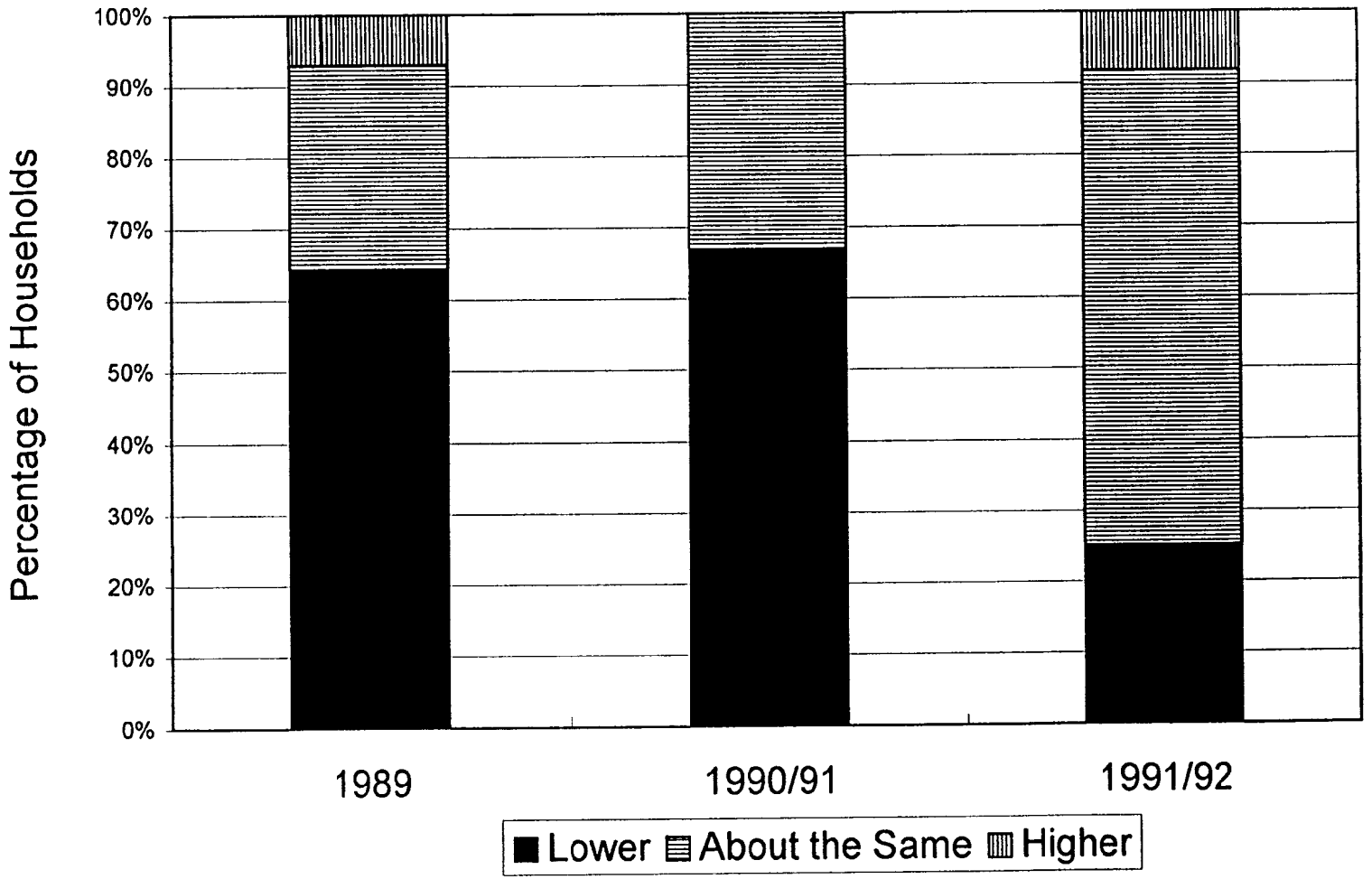


Figure XIV-8. Composition of Harvests by Resource Category, Karluk, 1982/83, 1986, 1989, 1990/91, and 1991/92

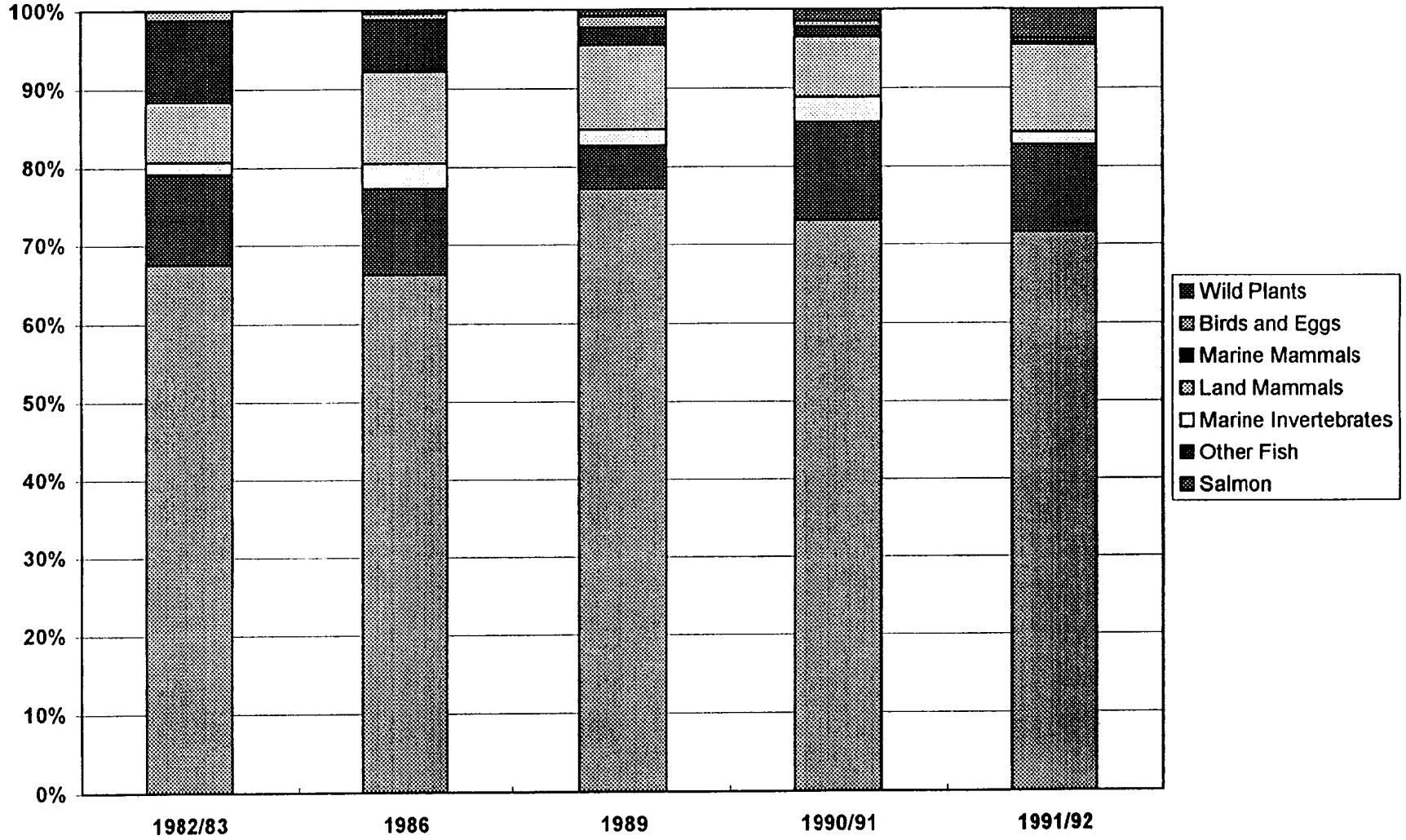


Table XIV-19. Uses of Wild Foods, Karluk

	STUDY YEAR 1991
ANY WILD FOODS EATEN YESTERDAY?	
No	
Count	10
Col %	76.9%
Yes	
Count	3
Col %	23.1%
WILD FOODS AS MAIN PART OF A MEAL	
No	
Count	11
Col %	84.6%
Yes	
Count	2
Col %	15.4%
HARVEST OF WILD FOODS BY RESPONDENT	
No	
Count	11
Col %	84.6%
Yes	
Count	2
Col %	15.4%
WF HARVESTED BY RELATIVE IN HH	
No	
Count	13
Col %	100.0%
WF HARVESTED BY RELATIVE IN ANOTHER HH	
No	
Count	12
Col %	92.3%
Yes	
Count	1
Col %	7.7%
WF HARVESTED BY RELATIVE IN ANOTHER COMM.	
No	
Count	13
Col %	100.0%

(continued)

Table XIV-19. Uses of Wild Foods, Karluk

	STUDY YEAR 1991
WF HARVESTED BY FRIEND IN HH	
No	
Count	13
Col %	100.0%
WF HARVESTED BY FRIEND IN COMMUNITY	
No	
Count	13
Col %	100.0%
WF HARVESTED BY FRIEND IN ANOTHER COMM.	
No	
Count	13
Col %	100.0%

Table XIV-20. Safety of Using Subsistence Foods, Karluk

	STUDY YEAR
	1991
IS EATING BIDARKIES IMPORTANT TO YOU?	
No	
Count	6
Col %	46.2%
Yes	
Count	7
Col %	53.8%
BIDARKIE HARVEST AREAS SAFE?	
Safe	
Count	7
Col %	100.0%
IS EATING CLAMS IMPORTANT?	
No	
Count	6
Col %	46.2%
Yes	
Count	7
Col %	53.8%
ARE CLAMS SAFE FOR CHILDREN TO EAT?	
Not Safe	
Count	1
Col %	14.3%
Safe	
Count	6
Col %	85.7%
IS EATING SEAL MEAT OR OIL IMPORTANT?	
No	
Count	9
Col %	69.2%
Yes	
Count	4
Col %	30.8%
ARE SEALS FROM HARVEST AREAS SAFE TO EAT?	
Safe	
Count	4
Col %	100.0%

Table XIV-21. Resource Population Statuses, Karluk

	STUDY YEAR
	1991
COMPARED TO 1988: DEER	
Do Not Know	
Count	2
Col %	16.7%
Less	
Count	5
Col %	41.7%
Same	
Count	3
Col %	25.0%
More	
Count	2
Col %	16.7%
COMPARED TO 1988: BEAR	
Do Not Know	
Count	1
Col %	8.3%
Less	
Count	1
Col %	8.3%
Same	
Count	4
Col %	33.3%
More	
Count	6
Col %	50.0%
COMPARED TO 1988: HARBOR SEAL	
Do Not Know	
Count	3
Col %	25.0%
Less	
Count	5
Col %	41.7%
Same	
Count	4

(continued)

Table XIV-21. Resource Population Statuses, Karluk

	STUDY YEAR
	1991
Col %	33.3%
COMPARED TO 1988: SEA DUCKS	
Do Not Know	
Count	1
Col %	8.3%
Less	
Count	1
Col %	8.3%
Same	
Count	8
Col %	66.7%
More	
Count	2
Col %	16.7%
COMPARED TO 1988: SALMON	
Do Not Know	
Count	1
Col %	8.3%
Less	
Count	3
Col %	25.0%
Same	
Count	6
Col %	50.0%
More	
Count	2
Col %	16.7%
COMPARED TO 1988: HALIBUT	
Do Not Know	
Count	4
Col %	33.3%
Less	
Count	3
Col %	25.0%

(continued)

Table XIV-21. Resource Population Statuses, Karluk

	STUDY YEAR
	1991
Same	
Count	5
Col %	41.7%
COMPARED TO 1988: ROCKFISH	
Do Not Know	
Count	8
Col %	66.7%
Less	
Count	2
Col %	16.7%
Same	
Count	2
Col %	16.7%
COMPARED TO 1988: DOLLY VARDEN	
Do Not Know	
Count	1
Col %	8.3%
Less	
Count	1
Col %	8.3%
Same	
Count	7
Col %	58.3%
More	
Count	3
Col %	25.0%
COMPARED TO 1988: CLAMS	
Do Not Know	
Count	3
Col %	25.0%
Less	
Count	1
Col %	8.3%
Same	
Count	8

(continued)

Table XIV-21. Resource Population Statuses, Karluk

	STUDY YEAR
	1991
Col %	66.7%
COMPARED TO 1988: BIDARKIES	
Do Not Know	
Count	1
Col %	8.3%
Less	
Count	5
Col %	41.7%
Same	
Count	6
Col %	50.0%
COMPARED TO 1988: SEA URCHINS	
Do Not Know	
Count	2
Col %	16.7%
Less	
Count	6
Col %	50.0%
Same	
Count	4
Col %	33.3%
COMPARED TO 1988: OCTOPUS	
Do Not Know	
Count	2
Col %	16.7%
Less	
Count	5
Col %	41.7%
Same	
Count	5
Col %	41.7%

Table XIV-22. Children's Participation in Subsistence, Karluk

	STUDY YEAR
	1991
DO CHILDREN HELP YOUR HH PROCESS WILD FOODS?	
No	
Count	8
Col %	61.5%
Yes	
Count	5
Col %	38.5%
DID EVOS AFFECT PARTICIPATION WITH CHILDREN?	
No	
Count	11
Col %	84.6%
Yes	
Count	2
Col %	15.4%
WHY EVOS AFFECTED PARTICIPATION WITH CHILDREN	
Were too busy with other affairs	
Count	2
Col %	100.0%

Table XIV-23. Sharing, Karluk

	STUDY YEAR
	1991
DID HOUSEHOLD SHARE?	
No	
Count	6
Col %	46.2%
Yes	
Count	7
Col %	53.8%
PREV. YEAR: SHARING OF WILD RES.	
Less	
Count	2
Col %	15.4%
Same	
Count	10
Col %	76.9%
More	
Count	1
Col %	7.7%
PRE-OS: SHARING OF WILD RESOURCES	
Less	
Count	2
Col %	15.4%
Same	
Count	11
Col %	84.6%

Table XIV-24. Political Activities, Karluk

	STUDY YEAR
	1991
LAST 3 YRS.: ELDERS INFLUENCE	
Decreased	
Count	4
Col %	30.8%
Same	
Count	9
Col %	69.2%
PRE-EVOS: ATTEND PUBLIC MEETINGS	
Never	
Count	7
Col %	53.8%
Sometimes	
Count	4
Col %	30.8%
Almost Always	
Count	2
Col %	15.4%
LAST YEAR: ATTEND PUBLIC MEETINGS	
Never	
Count	3
Col %	23.1%
Sometimes	
Count	4
Col %	30.8%
Almost Always	
Count	6
Col %	46.2%
VOTE IN LAST CITY COUNCIL ELECTION?	
No	
Count	3
Col %	60.0%
Yes	
Count	2
Col %	40.0%
VOTE IN LAST STATE-WIDE ELECTION?	

(continued)

Table XIV-24. Political Activities, Karluk

	STUDY YEAR
	1991
No	
Count	4
Col %	30.8%
Yes	
Count	9
Col %	69.2%
BELONG TO NATIVE CORPORATION?	
No	
Count	2
Col %	15.4%
Yes	
Count	11
Col %	84.6%
REGIONAL NATIVE CORPORATION	
Koniag, Inc.	
Count	11
Col %	100.0%
VOTE IN LAST REG. CORP. ELECTION?	
Do Not Know	
Count	1
Col %	9.1%
No	
Count	2
Col %	18.2%
Yes	
Count	8
Col %	72.7%
HAS VIEW OF LEADER CHANGED SINCE EVOS?	
Do Not Know	
Count	1
Col %	7.7%
No	
Count	7
Col %	53.8%
Yes	

(continued)

Table XIV-24. Political Activities, Karluk

	STUDY YEAR
	1991
Count	5
Col %	38.5%
WHY POST EVOS VIEW OF LEADERS	
Do Not Know	
Count	1
Col %	16.7%
Trust	
Count	2
Col %	33.3%
Awareness/involvement	
Count	1
Col %	16.7%
Represents concerns	
Count	1
Col %	16.7%
Concern	
Count	1
Col %	16.7%
Lifestyle	
Count	1
Col %	16.7%

Table XIV-25. Significance of Place, Karluk

	STUDY YEAR
	1991
MAIN REASON MOVED TO COMMUNITY	
Born or reared here	
Count	7
Col %	53.8%
Married a person born or reared here	
Count	1
Col %	7.7%
Family has always lived here	
Count	2
Col %	15.4%
Friends	
Count	1
Col %	7.7%
Employment reasons	
Count	2
Col %	15.4%
LIVE HERE: WHERE PERSON IS FROM	
No	
Count	4
Col %	30.8%
Yes	
Count	9
Col %	69.2%
LIVE HERE: RELATIVES LIVE HERE	
No	
Count	3
Col %	23.1%
Yes	
Count	10
Col %	76.9%
LIVE HERE: MARRIED PERSON FROM HERE	
No	
Count	6
Col %	46.2%
Yes	

(continued)

Table XIV-25. Significance of Place, Karluk

	STUDY YEAR
	1991
Count	7
Col %	53.8%
LIVE HERE: ALWAYS LIVED HERE	
No	
Count	2
Col %	15.4%
Yes	
Count	11
Col %	84.6%
LIVE HERE: FRIENDS LIVE HERE	
No	
Count	4
Col %	30.8%
Yes	
Count	9
Col %	69.2%
LIVE HERE: HUNTING & FISHING HERE	
No	
Count	5
Col %	38.5%
Yes	
Count	8
Col %	61.5%
LIVE HERE: JOB OPPORTUNITIES HERE	
No	
Count	10
Col %	76.9%
Yes	
Count	3
Col %	23.1%
LIVE HERE: EDUCATIONAL OPPORTUNITIES	
No	
Count	11
Col %	84.6%
Yes	

(continued)

Table XIV-25. Significance of Place, Karluk

	STUDY YEAR
	1991
Count	2
Col %	15.4%
LIVE HERE: COST OF LIVING	
No	
Count	10
Col %	76.9%
Yes	
Count	3
Col %	23.1%
LIVE HERE: HOUSING AVAILABLE	
No	
Count	3
Col %	23.1%
Yes	
Count	10
Col %	76.9%
LIVE HERE: STORES	
No	
Count	11
Col %	84.6%
Yes	
Count	2
Col %	15.4%
LIVE HERE: MEDICAL SERVICES	
No	
Count	10
Col %	76.9%
Yes	
Count	3
Col %	23.1%
LIVE HERE: OTHER SERVICES	
No	
Count	12
Col %	92.3%
Yes	

(continued)

Table XIV-25. Significance of Place, Karluk

	STUDY YEAR
	1991
Count	1
Col %	7.7%
LIVE HERE: BEAUTY OF AREA	
Yes	
Count	13
Col %	100.0%
LIVE HERE: SIZE OF COMMUNITY	
No	
Count	7
Col %	53.8%
Yes	
Count	6
Col %	46.2%
LIVE HERE: LESS CRIME	
No	
Count	4
Col %	30.8%
Yes	
Count	9
Col %	69.2%
LIVE HERE: LESS DRINKING/DRUGS	
No	
Count	10
Col %	76.9%
Yes	
Count	3
Col %	23.1%
LIVE HERE: NECESSARY PERSONAL FREEDOMS	
No	
Count	4
Col %	30.8%
Yes	
Count	9
Col %	69.2%
LIVE HERE: RECREATIONAL OPPORTUNITIES	

(continued)

Table XIV-25. Significance of Place, Karluk

	STUDY YEAR
	1991
No	
Count	7
Col %	53.8%
Yes	
Count	6
Col %	46.2%
OTHER REASONS FOR LIVING IN COMMUNITY	
Not here by choice	
Count	1
Col %	100.0%
MAIN REASON REMAINING IN COMMUNITY	
Born or reared here	
Count	4
Col %	30.8%
Relatives (family)	
Count	3
Col %	23.1%
Subsistence opportunities	
Count	1
Col %	7.7%
Employment reasons	
Count	3
Col %	23.1%
Housing/property	
Count	1
Col %	7.7%
Quality of Life	
Count	1
Col %	7.7%
POST-EVOS: CHANGE IN LIKING COMMUNITY	
Do Not Know	
Count	1
Col %	8.3%
Less	
Count	2

(continued)

Table XIV-25. Significance of Place, Karluk

	STUDY YEAR
	1991
Col %	16.7%
Same	
Count	9
Col %	75.0%
POST-EVOS: WHY CHANGE IN LIKING COMMUNITY	
Increased dissension/conflict/violence	
Count	1
Col %	50.0%
More stressful	
Count	1
Col %	50.0%
RATHER LIVE IN ANOTHER COMMUNITY	
Do Not Know	
Count	1
Col %	7.7%
No	
Count	4
Col %	30.8%
Yes	
Count	8
Col %	61.5%
EXPECT TO LIVE IN REGION WHEN OLD	
Do Not Know	
Count	1
Col %	7.7%
No	
Count	3
Col %	23.1%
Yes	
Count	9
Col %	69.2%
CONFIDENT ABOUT HUNT/FISH/GATHERING	
Do Not Know	
Count	1

(continued)

Table XIV-25. Significance of Place, Karluk

	STUDY YEAR
	1991
Col %	7.7%
No	
Count	3
Col %	23.1%
Yes	
Count	9
Col %	69.2%
WHY UNCONFIDENT ABOUT HUNTING/FISHING/GATHERING	
Increased restrictions	
Count	1
Col %	25.0%
Uncertainty about the future	
Count	1
Col %	25.0%
Increased development	
Count	1
Col %	25.0%
Native ownership of lands	
Count	1
Col %	25.0%
Population pressure	
Count	2
Col %	50.0%
CONTINUE TO LIVE HERE IF NO WILD FOOD	
Do Not Know	
Count	1
Col %	7.7%
No	
Count	4
Col %	30.8%
Yes	
Count	8
Col %	61.5%

Table XIV-26. Effectiveness of Oil Spill Responses, Karluk

	STUDY YEAR 1991
EFFECTIVENESS EVOS: US COAST GUARD	
Do Not Know	
Count	4
Col %	33.3%
Not Effective	
Count	2
Col %	16.7%
Somewhat	
Count	3
Col %	25.0%
Effective	
Count	3
Col %	25.0%
EFFECTIVENESS EVOS: ADEC	
Do Not Know	
Count	4
Col %	33.3%
Not Effective	
Count	1
Col %	8.3%
Somewhat	
Count	4
Col %	33.3%
Effective	
Count	3
Col %	25.0%
EFFECTIVENESS EVOS: LOCAL NATIVE PROFIT	
Do Not Know	
Count	3
Col %	25.0%
Not Effective	
Count	8
Col %	66.7%
Effective	
Count	1

(continued)

Table XIV-26. Effectiveness of Oil Spill Responses, Karluk

	STUDY YEAR 1991
Col %	8.3%
EFFECTIVENESS EVOS: NATIVE NON-PROFITS	
Do Not Know	
Count	3
Col %	25.0%
Not Effective	
Count	4
Col %	33.3%
Somewhat	
Count	3
Col %	25.0%
Effective	
Count	2
Col %	16.7%
EFFECTIVENESS EVOS: BOROUGH GOVERNMENT	
Do Not Know	
Count	3
Col %	25.0%
Not Effective	
Count	3
Col %	25.0%
Somewhat	
Count	4
Col %	33.3%
Effective	
Count	2
Col %	16.7%
EFFECTIVENESS EVOS: IRA COUNCIL	
No Response	
Count	1
Col %	8.3%
Do Not Know	
Count	1
Col %	8.3%

(continued)

Table XIV-26. Effectiveness of Oil Spill Responses, Karluk

	STUDY YEAR
	1991
Not Effective	
Count	4
Col %	33.3%
Somewhat	
Count	1
Col %	8.3%
Effective	
Count	5
Col %	41.7%
EFFECTIVENESS EVOS: COMMERCIAL FISHING GROUPS	
Somewhat	
Count	1
Col %	50.0%
Effective	
Count	1
Col %	50.0%
EFFECTIVENESS EVOS: SCHOOLS	
Do Not Know	
Count	2
Col %	33.3%
Not Effective	
Count	2
Col %	33.3%
Somewhat	
Count	1
Col %	16.7%
Effective	
Count	1
Col %	16.7%
EFFECTIVENESS EVOS: CHURCHES	
Do Not Know	
Count	3
Col %	50.0%
Not Effective	

(continued)

Table XIV-26. Effectiveness of Oil Spill Responses, Karluk

	STUDY YEAR
	1991
Count	3
Col %	50.0%
EFFECTIVENESS EVOS: HEALTH AIDES	
Do Not Know	
Count	4
Col %	33.3%
Not Effective	
Count	2
Col %	16.7%
Somewhat	
Count	1
Col %	8.3%
Effective	
Count	5
Col %	41.7%
EFFECTIVENESS EVOS: SOCIAL WORKERS	
Do Not Know	
Count	2
Col %	40.0%
Not Effective	
Count	3
Col %	60.0%
EFFECTIVENESS EVOS: LOCAL LAW ENFORCEMENT	
Not Effective	
Count	3
Col %	25.0%
Somewhat	
Count	2
Col %	16.7%
Effective	
Count	7
Col %	58.3%
EFFECTIVENESS EVOS: EXXON	
Do Not Know	

(continued)

Table XIV-26. Effectiveness of Oil Spill Responses, Karluk

	STUDY YEAR 1991
Count	3
Col %	25.0%
Not Effective	
Count	2
Col %	16.7%
Somewhat	
Count	4
Col %	33.3%
Effective	
Count	3
Col %	25.0%
EFFECTIVENESS EVOS: VECO	
No Response	
Count	1
Col %	8.3%
Do Not Know	
Count	1
Col %	8.3%
Somewhat	
Count	4
Col %	33.3%
Effective	
Count	6
Col %	50.0%
EFFECTIVENESS EVOS: ALYESKA PIPELINE	
Do Not Know	
Count	8
Col %	66.7%
Not Effective	
Count	4
Col %	33.3%
EFFECTIVENESS EVOS: OILED MAYORS	
Do Not Know	
Count	8
Col %	66.7%

(continued)

Table XIV-26. Effectiveness of Oil Spill Responses, Karluk

	STUDY YEAR 1991
Not Effective	
Count	1
Col %	8.3%
Somewhat	
Count	2
Col %	16.7%
Effective	
Count	1
Col %	8.3%

Table XIV-27. Subsistence Food Safety Information, Karluk

	STUDY YEAR
	1991
ADEQUATELY INFORMED ABOUT FOOD SAFETY?	
Do Not Know	
Count	1
Col %	7.7%
No	
Count	2
Col %	15.4%
Somewhat	
Count	2
Col %	15.4%
Yes	
Count	8
Col %	61.5%
WHY NOT ADEQUATELY INFORMED	
Received no information	
Count	1
Col %	25.0%
Untimely	
Count	1
Col %	25.0%
Did not trust results because of Exxon involvement	
Count	1
Col %	25.0%
There were not enough tests	
Count	1
Col %	25.0%

Table XIV-28. OCS Development Effects, Karluk

	STUDY YEAR
	1991
OCS EFFECT: FISH	
Do Not Know	
Count	2
Col %	15.4%
Decrease	
Count	7
Col %	53.8%
No Change	
Count	4
Col %	30.8%
OCS EFFECT: SHELLFISH	
Do Not Know	
Count	1
Col %	7.7%
Decrease	
Count	4
Col %	30.8%
No Change	
Count	8
Col %	61.5%
OCS EFFECT: MARINE MAMMALS	
Decrease	
Count	6
Col %	46.2%
No Change	
Count	7
Col %	53.8%
OCS EFFECT: LAND MAMMALS	
Do Not Know	
Count	1
Col %	7.7%
Decrease	
Count	4
Col %	30.8%
No Change	

(continued)

Table XIV-28. OCS Development Effects, Karluk

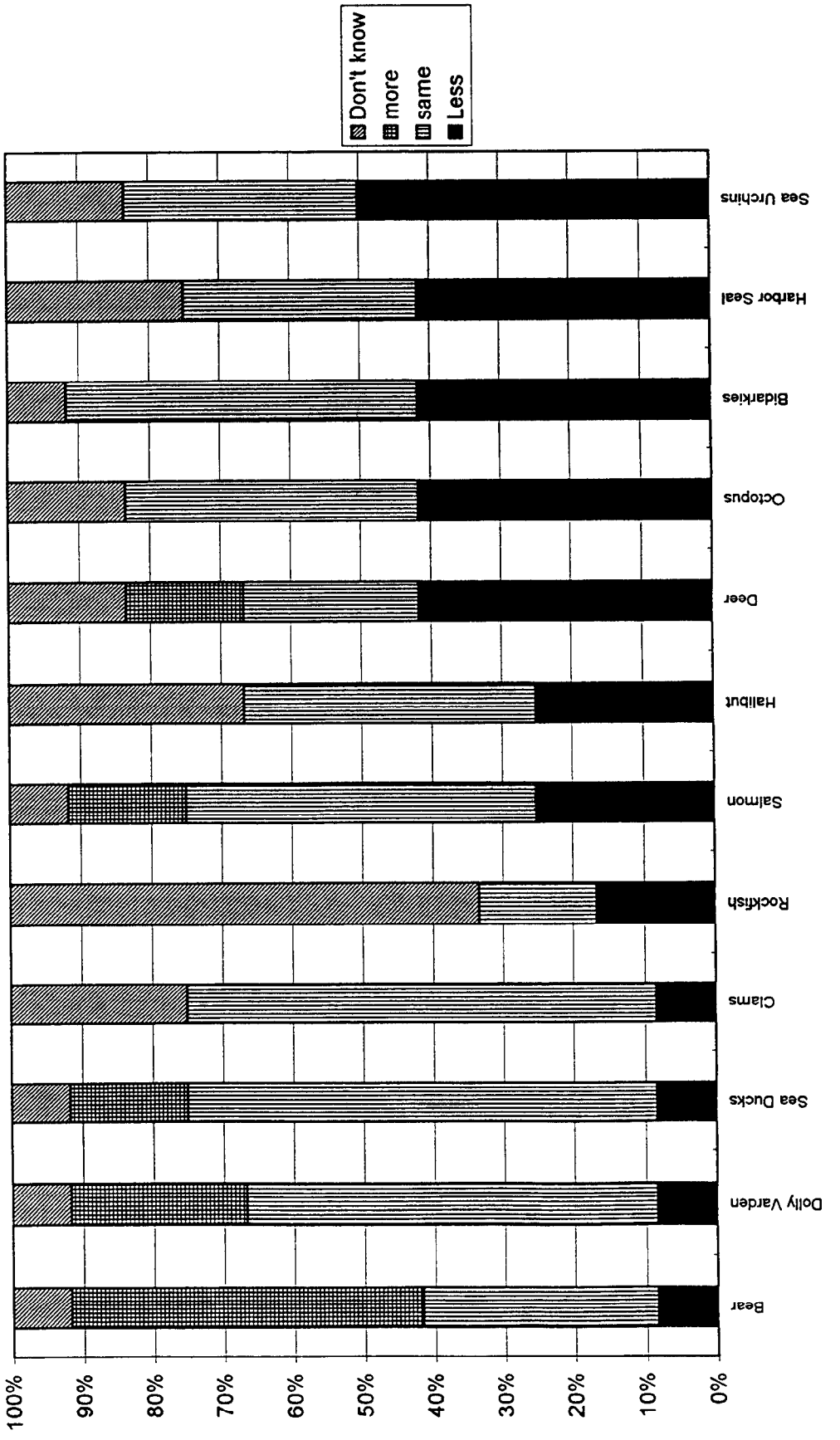
	STUDY YEAR
	1991
Count	8
Col %	61.5%
OCS EFFECT: BIRDS	
Do Not Know	
Count	2
Col %	15.4%
Decrease	
Count	4
Col %	30.8%
No Change	
Count	7
Col %	53.8%
OCS DEVELOPMENT = MORE JOBS?	
Do Not Know	
Count	2
Col %	15.4%
No	
Count	4
Col %	30.8%
Yes	
Count	7
Col %	53.8%
CONTAIN AND CLEANUP SMALL OIL SPILL	
No	
Count	4
Col %	30.8%
Maybe	
Count	4
Col %	30.8%
Yes	
Count	5
Col %	38.5%
CONTAIN AND CLEANUP LARGE OIL SPILL	
No	
Count	7

(continued)

Table XIV-28. OCS Development Effects, Karluk

	STUDY YEAR
	1991
Col %	53.8%
Maybe	
Count	4
Col %	30.8%
Yes	
Count	2
Col %	15.4%

Figure XIV-9. Karluk: Respondents' Assessments of Resource Status in 1991 Compared to 1988



CHAPTER XV: AKHIOK

by

Craig Mishler

CLIMATE, SETTING, AND GENERAL HISTORY

Akhiok is a very small and isolated Alutiiq community located on open hilly tundra at the extreme south end of Kodiak Island on Alitak Bay (Fig. I-1). At one time it even bore the name Alitak. Akhiok is adjacent to the entrance to Moser Bay and Olga Bay and is not connected to any other community by road. Sometimes known as "the windy city," the village overlooks a small cove where a handful of skiffs are anchored. This cove goes completely dry during most low tides, which is a limiting factor for launching and landing small boats.

Little of Akhiok's community history has been recorded, and although it was first reported by Ivan Petroff in the 1880 U.S. Census, it is certain that part of the village is located on a shell midden of considerable antiquity. A post office was established in the community in 1933 and discontinued in 1945 (Orth 1967:56). Today Akhiok has its own post office but still uses the zip code for Kodiak City. Several families from the village of Kaguyak resettled in Akhiok after Kaguyak was destroyed in the great Alaskan earthquake of 1964; other families moved to Old Harbor. Most if not all Akhiok residents are members of the Russian Orthodox Church, attending services conducted by a local lay reader and by the priest who visits occasionally from Old Harbor.

Akhiok has one small building which serves triple duty as a post office, city office, and social center. A second community building serves as a youth dance hall and contains an apartment for visitors. Fifteen new houses were erected in the village in 1978 and very little new construction has taken place since then, although there has been some recent remodeling. One of the houses serves as a health clinic. All of the houses are within close proximity to one another, allowing people to visit back and forth easily on foot.

Residents of Akhiok make frequent trips to the Wards Cove cannery at Alitak to buy groceries, gasoline, and heating oil at very reasonable prices. Akhiok no longer enjoys the convenience of having its own local grocery store as it did back in 1983. Fortunately, even when the Alitak cannery is closed for the season, the winter watchmen are still available to sell needed groceries, fuel oil, gasoline, and other supplies to villagers. In good weather with calm seas, Alitak is a quick 20-minute skiff ride from Akhiok.

Akhiok's most modern building is the state-operated school, which has a gymnasium and serves importantly as a family recreation center in the evenings. At the end of the air strip there is a landing for a fuel barge which arrives infrequently with home heating oil and gasoline for the community's electric generators.

While many residents have 4-wheelers and skiffs for basic transportation, only one vehicle, a pickup truck, has been available for hauling freight and passengers back and forth to the airport or for taking garbage to the dump. This truck is shared by nearly everyone in the village and seems to be available to anyone who needs it.

Akhiok is served by two bush airlines, Markair and Peninsula Airways, which arrive daily during the summer months but only three times each week during the winter. Planes flying to Akhiok generally stop in Old Harbor enroute, and there is a fair amount of passenger traffic back and forth between these two communities. Due to its small size and remoteness from Kodiak, however, Akhiok is viewed as "the end of the line" for commercial air traffic and receives only half as many flights each week as Old Harbor. Flights from Kodiak to Akhiok, counting the stopover time in Old Harbor, take nearly an hour to complete.

PREVIOUS RESEARCH

Four subsistence harvest surveys have been done in Akhiok. The Division of Subsistence, in cooperation with the Kodiak Area Native Association (KANA), first conducted research in Akhiok in 1983, pertaining to resource harvest activities that occurred in 1982/83 (KANA 1983; Schroeder et al. 1987). Additional fieldwork occurred again in 1987 for the calendar year 1986 (Fall and Walker 1993) and once more in 1990 immediately after the oil spill for the calendar year 1989 (Mishler and Cohen forthcoming). The two earliest surveys did not ask about employment, demographic information, and other socioeconomic variables, and were not always species-specific. For example, during the early and mid-1980s all "ducks" were lumped together without regard to species. Certain kinds of across the board comparisons, therefore, are not possible. Nevertheless, it is still useful to make some basic comparisons to these earlier years, particularly in the pounds harvested per capita for all resources. Data from all of these earlier studies have been entered into the Division's Community Profile Database (Scott et al. 1993).

STUDY GOALS AND RESEARCH OBJECTIVES

A subsistence harvest survey of Akhiok was initiated by the Alaska Department of Fish and Game, Division of Subsistence, with field assistance from the Kodiak National Wildlife Refuge, to determine levels of subsistence takes of wild resources and use areas by local residents between April 1, 1992, and March 31, 1993. This was the first time a complete harvest survey had been done in Akhiok since 1989, the year of the *Exxon Valdez* oil spill. A written questionnaire was developed to address harvesting, processing, and distribution of a wide variety of wild resources. Respondents were asked to provide harvest quantities of salmon, other finfish, marine invertebrates, land and sea mammals, birds and bird eggs, and plants over the previous twelve months. They were also asked whether they used, attempted to harvest, gave away, or received these resources. Household demographic information was collected, along with data on cash

employment and other income, including participation in commercial fisheries. The questionnaire was done in face-to-face interviews with the heads of households. No social effects surveys were administered.

Fieldwork

Interviews in Akhiok began on March 31, 1993, and most were completed by April 1. Staff members assigned to this project were Craig Mishler and Rachel Mason. Robert Stovall from the Kodiak National Wildlife Refuge also participated. Marvin Agnot, the current mayor of Akhiok, worked as a local research assistant and later completed interviews with three households which were absent from the community when the field staff were there. All interviews were completed by May 7, 1993.

Sample Selection and Achievement

A census method was employed, and our goal was to interview every household in the community. This goal was achieved, with 24 out of 24 households being interviewed. It is very rare that such surveys achieve 100 percent coverage. Due to this achievement, the demographic and harvest data from Akhiok for 1992/93 represent actual rather than expanded numbers and percentages (Table XV-1).

DEMOGRAPHY

At the time of our survey, in April 1993, Akhiok had an estimated population of 80, with a mean household size of 3.3 persons (Table XV-2). This was an increase of 42 percent from the 56 individuals and 13 households we counted there during our 1989 survey, and 4 percent increase over the official U.S. census for 1990, when 77 people were enumerated (Fig. XV-1). The 1993 population was 57.5 percent male and 42.5 percent female, and the community was 87.5 percent Alaska Native. The mean length of residency for all persons was 18.3 years. Although Akhiok is a very old community, it continues to have a very young population. Some 42.5 percent of the 1993 population, for example, was under the age of 14, and only 7.5 percent of the population was over the age of 54 (Figure XV-2, Tables XV-2, XV-3).

MONETARY ECONOMY

Akhiok's average household income from all sources in 1992/93 was $21,588, and the average per capita income was $6,476 (Table XV-5). This was only about half the $11,954 per capita income for Ouzinkie over the same time period, and about 30 percent less than the $8,959 reported per capita income for Larsen Bay. Akhiok, along with Karluk, has the lowest household and per capita incomes of all the Kodiak area communities. Wild foods are heavily depended on to supplement low cash incomes.

Of the 45 adults in the community, 86.7 percent were employed in at least one job, but only 15.4 percent were employed year-round, and the average number of months employed was 7.6 (Table XV-4).

Each household reported an average of 2.8 jobs during the year. For earned income, the largest single source of wages was from local government and local education, which together provided an average of $1,772 per person. This sector made up 27.4 percent of the total income per capita and 42 percent of the total number of jobs (Table XV-5, Figure XV-3). Many of the community's steady jobs are with the Akhiok public school.

Commercial fishing was the next most important source of earned income, representing 16.3 percent of the total income per capita and 29 percent of the total number of jobs. Several members in the community work during the summer as crew members on salmon purse seiners or operate set gill nets at sites in Moser Bay and Olga Bay. The Alaska Commercial Fisheries Entry Commission lists only one Akhiok resident with a beach seine salmon permit and two residents with set gillnet salmon permits in 1993. One other resident had his own purse seiner. Other sources of wage income were in the category of finance, insurance and real estate (representing employment by the Akhiok-Kaguyak Corporation), state government, and construction.

A significant portion of Akhiok's personal and household cash economy derives from other non-wage income. From all sources combined, the per capita other income was $2,225, representing 34.5 percent of the total per capita income (Table XV-6). The largest single source of other income was the Alaska Permanent Fund dividend (37 percent of the total), followed by Aid to Families with Dependent Children (14.4 percent), unemployment benefits (12.6 percent), and food stamps (12.3 percent). Smaller amounts were received from adult public assistance, energy assistance, social security, supplemental security income, workmen's compensation, veterans disability, and Native corporation dividends.

Akhiok's cost of living is higher than other Kodiak communities because of the greater distance required to ship air freight and the lack of a local grocery store. Many Akhiok residents travel by skiff to the cannery at Alitak to purchase their groceries. Travel is expensive. A round-trip plane ticket from Akhiok to Kodiak, for example, costs $150 round trip, compared to just $60 from Port Lions and Ouzinkie, and $100 from Old Harbor.

RESOURCE HARVESTS AND USES

Participation Rates

Participation levels for the community were extremely high. Every Akhiok household reported harvesting at least two wild resources, and every household reported using at least eight wild resources. One Akhiok household used 44 different wild resources, and the average number used was 18.7 per household. Some 95.8 percent of the households received at least one wild resource and 83.3 percent gave away at least one wild resource (Table XV-7). As shown in Table XV-8, 87.5 percent of the individuals in Akhiok engaged in subsistence activities during 1992/93, and 71.3 percent processed wild resources.

Also, 32.5 percent hunted, 61.3 percent fished, and 57.5 percent gathered wild plants and berries. There was no one in the community who said they hunted or trapped furbearers.

Harvest Quantities

The mean per capita harvest for all resources in Akhiok in 1992/93 was 321.7 pounds edible weight. The mean household harvest was a substantial 1,072.3 pounds (Table XV-11; Fig. XV-6). Over two-thirds (69.5 percent) of the per capita harvest of wild resources was fish, at 223.9 pounds, and most of the fish was salmon (199.5 pounds per capita, or 62.0 percent of the total harvest). Other finfish, at 24.4 pounds per capita, represented 7.5 percent of the total harvest.

Sockeye salmon made up 48.0 percent of the salmon harvest, at 96.1 pounds per capita. The coho salmon harvest was 70.8 pounds per capita, or 35.4 percent of all salmon taken. Much smaller amounts of chum salmon, king salmon, and pink salmon were also taken. By gear type and by weight, 7.9 percent or 1,261.3 pounds of the non-commercial salmon harvest came from commercial catches, 50.9 percent was caught in subsistence set gill nets, 38.7 percent in subsistence beach seines, and 2.5 percent was taken with rod and reel (Tables XV-12, XV-13, XV-14). In terms of participation, 70.8 percent of all Akhiok households that harvested salmon used subsistence methods, 33.3 percent removed salmon from their commercial catch, and 16.7 percent caught salmon with rod and reel (Table XV-15).

In 1993 we asked respondents for the first time to distinguish between beach seines and purse seines. No subsistence fish was harvested by purse seine. As shown in Table XV-14, 54.2 percent of the households caught their salmon in set gill nets, 16.7 percent used beach seines, another 16.7 percent used rod and reel, and 33.3 percent removed salmon from their commercial catch for home use.

For non-salmon fish, the largest harvest by volume was halibut, at 18.0 pounds per capita. Other species that were harvested and used in small amounts were herring at 2.3 pounds per capita, Dolly Varden adults and fingerlings at 2.1 pounds, gray cod at 0.8 pounds, skates at 0.1 pounds, grayling at 0.5 pounds, and trout (including steelhead) at 0.6 pounds (Table XV-16). By gear type and by weight, 78.2 percent of the non-salmon fish was caught with subsistence gear, 12.6 percent were removed from the commercial catch, and 9.3 percent were caught with rod and reel (Table XV-17). Approximately 54.2 percent of all Akhiok households that harvested fish other than salmon employed subsistence gear types, while 37.5 percent used rod and reel, and 12.5 percent removed them from their commercial catch (Table XV-18).

Akhiok residents harvested fairly large quantities of marine invertebrates in 1992/93, averaging 42.1 pounds per person. The most heavily used species were butter clams, at 18.9 pounds per person, cockles, at 7.4 pounds, octopus at 4.2 pounds, chitons (small bidarkis) at 3.0 pounds, sea urchins at 2.0 pounds, horse clams at 1.6 pounds, and razors at 1.2 pounds. The crab harvest was 2.8 pounds per person, consisting largely of Tanner crab and king crab.

For land mammals, the Akhiok harvest was more moderate, averaging 28.1 pounds per person, almost all of it deer. Only 0.03 pounds per capita of small game were taken, consisting entirely of snowshoe hare. Marine mammal harvests averaged 19.4 pounds per person. Of this, 11.9 pounds was harbor seal and 7.5 pounds was Steller sea lion. While 25 percent of the households harvested marine mammals, the ethic of sharing resulted in 70.8 percent of the households using these marine mammals.

Birds and bird eggs were taken at an average of 3.5 pounds per capita. The bird harvest was distributed among ducks (1.6 pounds per capita), geese (0.6 pounds), ptarmigan (0.5 pounds), and eggs (0.8 pounds). The duck species harvested included goldeneye, mallard, black scoter, and harlequin. The geese taken were limited to emperor geese (0.5 pounds per capita) and Canadian geese (0.1 pound per capita). Most of the bird eggs collected were seagulls, with a few tern eggs and kittiwake eggs.

Plants and berries, at 4.7 pounds per capita, were also taken in modest amounts. Per person, 4.4 pounds of berries and 0.3 pounds of greens and mushrooms were gathered. Although Akhiok is treeless, driftwood was collected for firewood stoves and for banyas (steam baths), with an estimated level of 1.7 cords per household.

DISCUSSION

Compared to 1989, the year of the spill, there was a notable decrease in the average household harvest accompanied by an increase in the per capita harvest of wild foods. In 1989, the mean household harvest for all resources in Akhiok was 1,280.1 pounds edible weight, and the per capita harvest was 297.7 pounds (Fig. XV-4; Scott et al. 1993). In 1992/93 these amounts were calculated at 1,069.5 pounds per household and 321.7 pounds per capita.

The quantitative differences between these two study years can be readily understood by noticing that the mean household size changed sharply. In 1989 the mean household size was 4.3 persons, but this figure dropped sharply to 3.3 persons in 1993. This is the only way the per capita amounts could increase while the total household harvests decreased. This trend toward smaller households and smaller nuclear families was not immediately evident during the field interviews.

Since the Division began conducting harvest surveys in Akhiok in 1983, the estimated number of pounds of wild food harvested per household and per capita has been very uneven, and a comparison of 1982/83, 1986, 1989, and 1992/93 averages shows no clear-cut trend in harvest amounts (Fig. XV-4, Table XV-9). The total per capita harvest for 1992/93 is somewhat greater than 1989 and much greater than 1986 but still significantly less than 1982/83. At the same time, the 1986 harvest was calculated from a very limited sample (only 12 of approximately 34 households) which "may not be representative of the community overall" (Fall 1993b).

A comparison of the composition of Akhiok harvests by resource category over the four study years, on the other hand, shows a general downward trend in the harvest of marine mammals (Figs. XV-5,

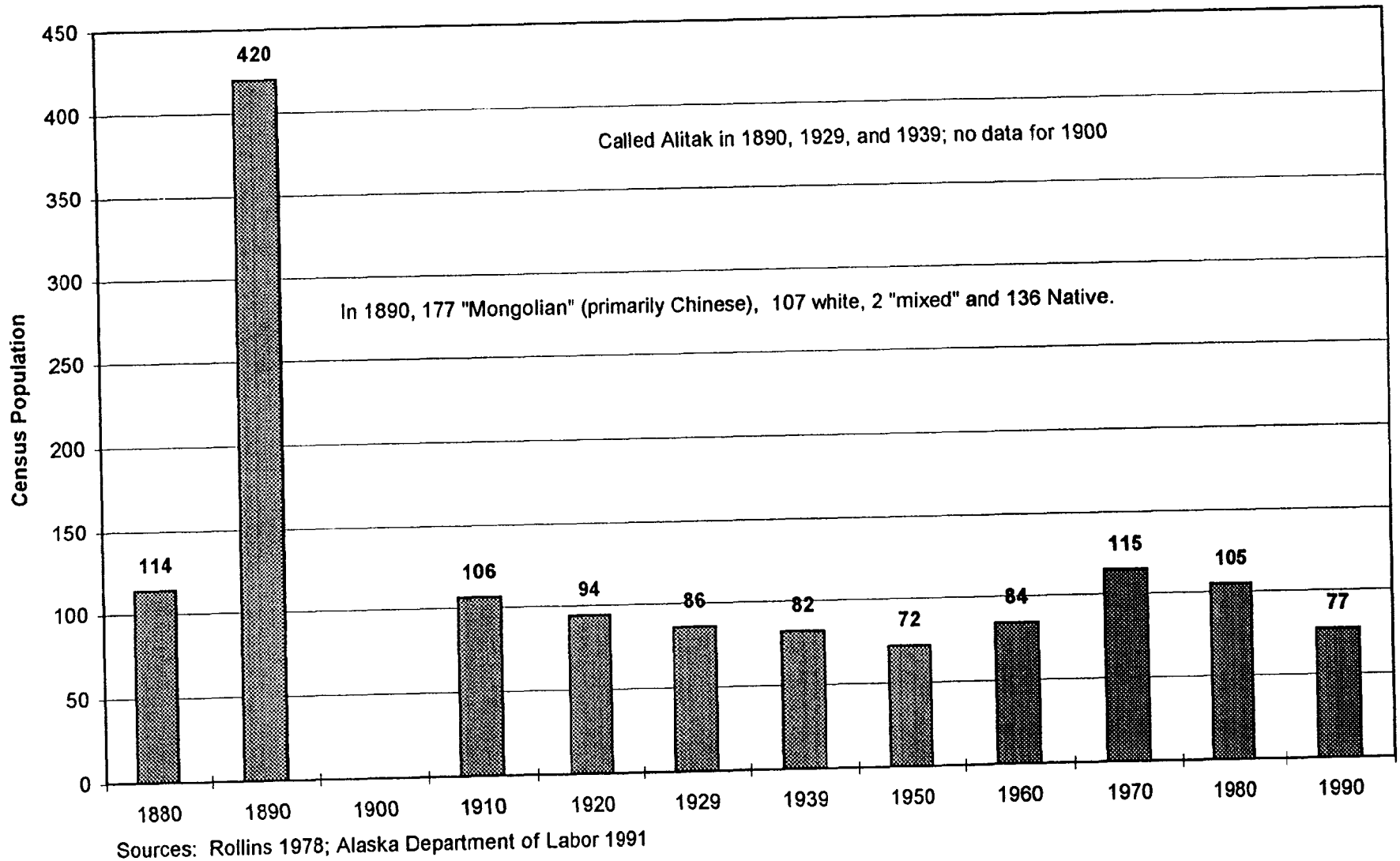
XV-7; Tables XV-9, XV-10), a decline directly associated with the widespread population decline of harbor seals and Steller sea lions throughout the Gulf of Alaska over the past decade (Haynes and Mishler 1991; Wolfe and Mishler 1993). One Akhiok hunter told us, "We like to get seals and sea lions, but we just don't see them around."

If anything, the 1992/93 harvest amounts appear to be quite substantial, comparing favorably with other Kodiak communities--Larsen Bay, Ouzinkie, and Kodiak City--during the same study year (Table XXIII-14). With relatively high per capita harvests accompanied by a low per capita income, Akhiok appears to be a community which relies quite heavily on subsistence foods to sustain its economy. In hindsight, it would seem that the 1992/93 results are much more representative for Akhiok than those obtained for 1986, especially with 100 percent coverage of all households, and these results are similar in many respects to what was reported for 1989.

If the *Exxon Valdez* oil spill had any negative effect on Akhiok's subsistence production, it appears to have been rather slight. For example, there were a few more shellfish taken per capita in 1989 (44.5 pounds per capita) than there were in 1992/93 (42 pounds per capita) and almost exactly the same amount as reported in 1982/83 (44.1 pounds per capita).

The 1992/93 average household income of $21,519 was less than half of the $45,415 average household income reported during 1989 (Scott et al. 1993). While this drop may be partly due to smaller households in 1992/93, it is abundantly clear that 1989 was an unusual and atypical year in that many Akhiok residents earned substantially more from oil spill cleanup activities than they do from other employment in normal years.

Figure XV-1. Akhiok Census Population, 1880 - 1990



Sources: Rollins 1978; Alaska Department of Labor 1991

Table XV-1. Sample Participation: Akhiok, 1993

VARIABLE	TOTAL HOUSEHOLDS
Estimated Household Structures	26
Non-Residential Structures	0
Estimated Households	26
Interview Goal:	26
Households Interviewed	24
Failed to Contact	0
Refused	0
Vacant Households	2
Seasonal Households*	0
Non-Resident Household **	0
Vacant and Invalid Households:	2
Total Households Attempted:	26
Refusal Rate:	0.00%
Non-Perm. HH Rate ("Vacancy Rate"):	7.7%
Interview Goal (Percentage)	92.3%
Total Permanent Households	24
Percentage Interviewed	100.00%
Percentage of Total Households	100.00%
Interview Weighting Factor	1.000

NOTES:

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

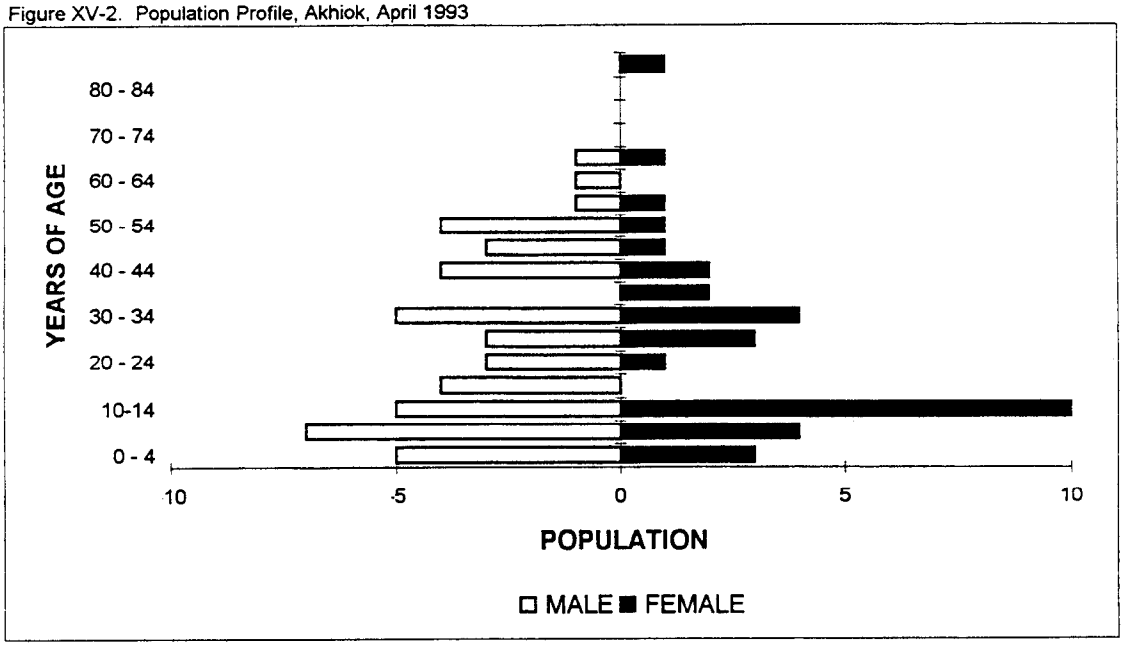
** Non-resident households are households which were not present during the study year or which were resident less than the required number of months.

Table XV-2. Demographic Characteristics of Households, Akhiok, April 1993

Characteristics	1992/93
Sampled Households	24
Number of Households in the Community	24
Percentage of Households Sampled	100.00
Household Size	
Mean	3.33
Minimum	1.00
Maximum	8.00
Sample Population	80
Estimated Community Population	80.00
Age	
Mean	26.20
Minimum	1.29
Maximum	88.32
Median	20.546
Length of Residency - Population	
Mean	18.33
Minimum	0.63
Maximum	88.32
Length of Residency - Household Heads	
Mean	25.18
Minimum	0.63
Maximum	67.09
Sex	
Males	
Number	46.00
Percentage	57.50
Females	
Number	34.00
Percentage	42.50
Alaska Native	
Households (Either Head)	
Number	19.00
Percentage	79.17
Estimated Population	
Number	71.00
Percentage	88.75

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

Figure XV-2. Population Profile, Akhiok, April 1993



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

Table XV-3. Population Profile, Akhiok, April 1993

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	5.00	10.87%	10.87%	3.00	8.82%	8.82%	8.00	10.00%	10.00%
5-9	7.00	15.22%	26.09%	4.00	11.76%	20.59%	11.00	13.75%	23.75%
10-14	5.00	10.87%	36.96%	10.00	29.41%	50.00%	15.00	18.75%	42.50%
15 - 19	4.00	8.70%	45.65%	0.00	0.00%	50.00%	4.00	5.00%	47.50%
20 - 24	3.00	6.52%	52.17%	1.00	2.94%	52.94%	4.00	5.00%	52.50%
25 - 29	3.00	6.52%	58.70%	3.00	8.82%	61.76%	6.00	7.50%	60.00%
30 - 34	5.00	10.87%	69.57%	4.00	11.76%	73.53%	9.00	11.25%	71.25%
35 - 39	0.00	0.00%	69.57%	2.00	5.88%	79.41%	2.00	2.50%	73.75%
40 - 44	4.00	8.70%	78.26%	2.00	5.88%	85.29%	6.00	7.50%	81.25%
45 - 49	3.00	6.52%	84.78%	1.00	2.94%	88.24%	4.00	5.00%	86.25%
50 - 54	4.00	8.70%	93.48%	1.00	2.94%	91.18%	5.00	6.25%	92.50%
55 - 59	1.00	2.17%	95.65%	1.00	2.94%	94.12%	2.00	2.50%	95.00%
60 - 64	1.00	2.17%	97.83%	0.00	0.00%	94.12%	1.00	1.25%	96.25%
65 - 69	1.00	2.17%	100.00%	1.00	2.94%	97.06%	2.00	2.50%	98.75%
70 - 74	0.00	0.00%	100.00%	0.00	0.00%	97.06%	0.00	0.00%	98.75%
75 - 79	0.00	0.00%	100.00%	0.00	0.00%	97.06%	0.00	0.00%	98.75%
80 - 84	0.00	0.00%	100.00%	0.00	0.00%	97.06%	0.00	0.00%	98.75%
85 - 89	0.00	0.00%	100.00%	1.00	2.94%	100.00%	1.00	1.25%	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	46.00	57.50%		34.00	42.50%		80.00	100.00%	

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

Table XV-4. Employment Characteristics, Akhiok, 1992/93

Characteristics		1992/93
ADULTS		
Total		45.00
Employed		
	Number	39.00
	Percentage	86.67
Jobs		
	Number	66.00
	Mean	1.69
	Minimum	1
	Maximum	5
Months Employed		
	Mean	7.56
	Minimum	1
	Maximum	12
	Year-Round	15.38%
HOUSEHOLDS		
Total		24.00
Employed		
	Number	24.00
	Percentage	100.00
Jobs per Employed Household		
	Mean	2.75
	Minimum	1
	Maximum	6
Employed Adults		
	Mean	1.63
	Minimum	1
	Maximum	3

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

Table XV-5. Community, Household, and Per Capita Incomes, All Sources and by Employer Type, Akhiok, 1992/93

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$518,102.10	$21,587.59	$6,476.28
Earned Income	$340,104.64	$14,171.03	$4,251.31
Agriculture, Forestry, and Fishing	84,071.00	3,502.96	1,050.89
Agriculture	0.00	0.00	0.00
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	84,071.00	3,502.96	1,050.89
Hatchery/Enhancement	0.00	0.00	0.00
Commercial Fishing	84,071.00	3,502.96	1,050.89
Hunting/Trapping	0.00	0.00	0.00
Mining	0.00	0.00	0.00
Construction	14,000.00	583.33	175.00
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	0.00	0.00	0.00
Trade	3,000.00	125.00	37.50
Wholesale	0.00	0.00	0.00
Retail	3,000.00	125.00	37.50
Finance, Insurance, and Real Estate	37,063.00	1,544.29	463.29
Services	60,214.50	2,508.94	752.68
Government	141,756.14	5,906.51	1,771.95
Federal	AMT UNK	AMT UNK	AMT UNK
State	0.00	0.00	0.00
Local	141,756.14	5,906.51	1,771.95
Local Government	44,155.64	1,839.82	551.95
Local Education	97,600.50	4,066.69	1,220.01
Unknown	0.00	0.00	0.00
Other Income	$177,997.47	$7,416.56	$2,224.97

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

Table XV-6. Community, Household, and Per Capita Other Income by Source, Akhiok, 1992/93

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$177,997.47	$7,416.56	$2,224.97
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	12.50	25,720.00	1,071.67	321.50
Adult Public Assistance	4.17	6,180.00	257.50	77.25
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	0.00	0.00	0.00	0.00
Longevity Bonus	8.33	6,000.00	250.00	75.00
Social Security	8.33	7,188.00	299.50	89.85
Workman's Comp./Insurance	4.17	468.00	19.50	5.85
Energy Assistance	66.67	7,842.13	326.76	98.03
Supplemental Security Income	4.17	6,024.00	251.00	75.30
Food Stamps	37.50	21,952.00	914.67	274.40
Unemployment	37.50	22,418.00	934.08	280.23
Native Corporation Dividend	16.67	3,733.33	155.56	46.67
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	4.17	1,020.00	42.50	12.75
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	4.17	3,500.00	145.83	43.75
Disability	0.00	0.00	0.00	0.00
Alaska Permanent Fund Dividend	87.50	65,952.00	2,748.00	824.40
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	4.17	AMT UNK	AMT UNK	AMT UNK

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

Figure XV-3. Employment by Industry, Akhiok, 1992/93

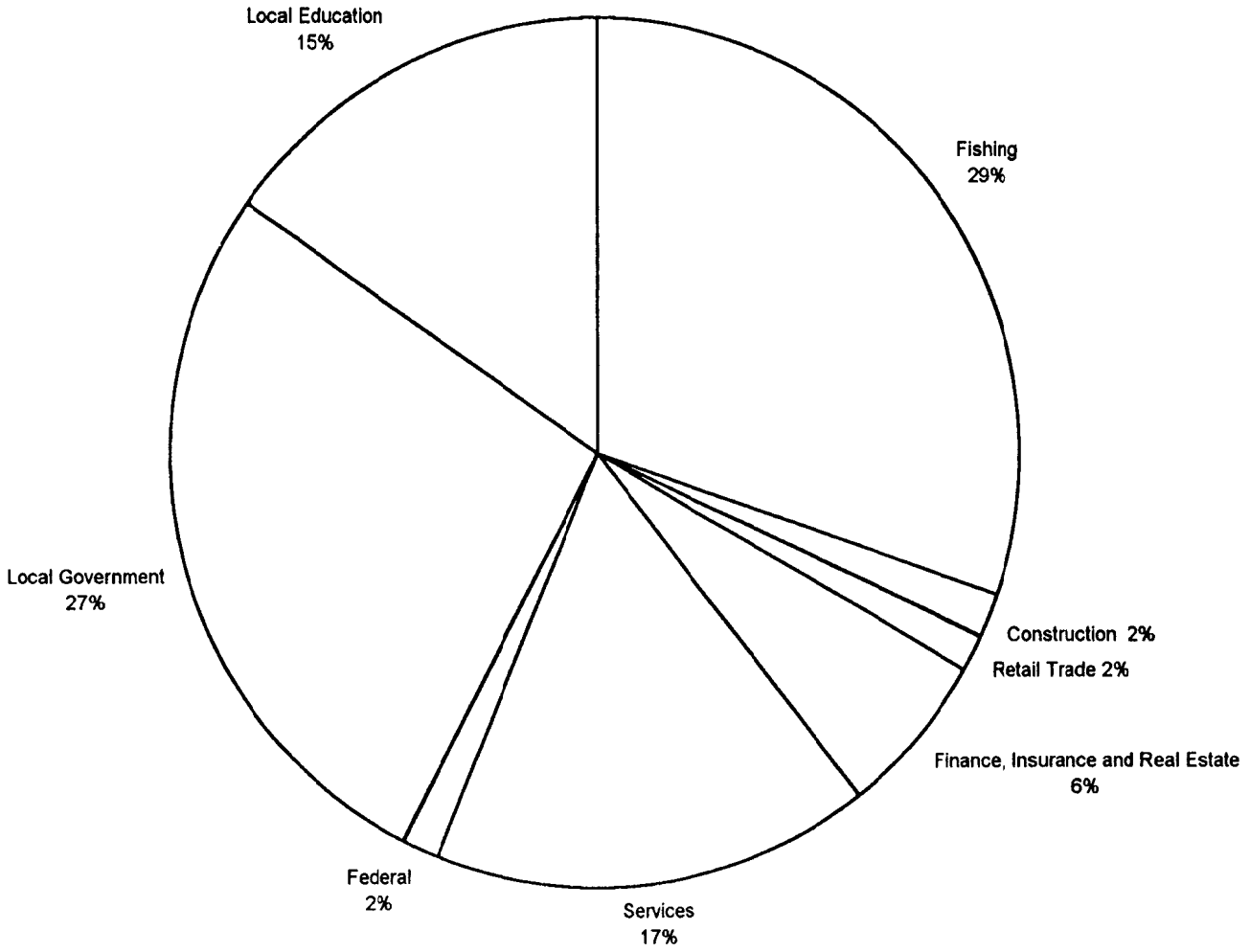


Table XV-7. Characteristics of Resource Harvest and Use, Akhiok, 1992/93

Study Year	1992/93
Mean Number Of Resources Used Per Household	18.71
Minimum	8
Maximum	44
95 % Confidence Limit (+/-)	0.00
Median	18
Mean Number Of Resources Attempted To Harvest Per Household	13.25
Minimum	2
Maximum	28
95 % Confidence Limit (+/-)	0.00
Median	13
Mean Number Of Resources Harvested Per Household	12.67
Minimum	2
Maximum	28
95 % Confidence Limit (+/-)	0.00
Median	13
Mean Number Of Resources Received Per Household	9.25
Minimum	0
Maximum	39
95 % Confidence Limit (+/-)	0.00
Median	6
Mean Number Of Resources Given Away Per Household	7.42
Minimum	0
Maximum	24
95 % Confidence Limit (+/-)	0.00
Median	5.5
Mean Household Harvest, Pounds	1,072.28
Minimum	6.00
Maximum	3,451.00
Total Pounds Harvested	25,734.66
Community Per Capita Harvest, Pounds	321.68
Percent Using Any Resource	100.00
Percent Attempting To Harvest Any Resource	100.00
Percent Harvesting Any Resource	100.00
Percent Receiving Any Resource	95.83
Percent Giving Away Any Resource	83.33
Number Of Households In Sample	24
Number of Resources Available	124

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

Table XV-8. Participation in the Harvest and Processing of Wild Resources, Akhiok, 1992/93

Characteristics			1992/93
Total Number of People			80.00
GAME	Hunt	Number	28.00
		Percentage	35.00
		Missing	0.00
		Missing %	0.00
	Process	Number	33.00
		Percentage	41.25
		Missing	0.00
		Missing %	0.00
FISH	Fish	Number	49.00
		Percentage	61.25
		Missing	0.00
		Missing %	0.00
	Process	Number	47.00
		Percentage	58.75
		Missing	0.00
		Missing %	0.00
FURBEARERS	Hunt or Trap	Number	0.00
		Percentage	0.00
		Missing	0.00
		Missing %	0.00
	Process	Number	0.00
		Percentage	0.00
		Missing	0.00
		Missing %	0.00
PLANTS	Gather	Number	52.00
		Percentage	65.00
		Missing	0.00
		Missing %	0.00
	Process	Number	37.00
		Percentage	46.25
		Missing	0.00
		Missing %	0.00
ANY RESOURCE			
	Attempt	Number	70.00
		Percent	87.50
	Process	Number	57.00
		Percent	71.25

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

Table XV-9. Subsistence Harvests in Pounds Usable Weight per Person by Resource Category, Akhiok, 1982/83, 1986, 1989, and 1992/93

	Pounds Usable Weight per Person			
	1982/83	1986	1989	1992/93
Salmon	237.9	111.3	110.0	199.5
Other Fish	29.5	7.1	59.4	24.4
Marine Invertebrates	44.1	10.0	44.5	42.1
Land Mammals	41.3	31.2	29.2	28.1
Marine Mammals	153.3	1.5	45.6	19.4
Birds and Eggs	13.4	0.4	7.8	3.5
Wild Plants	*	1.0	1.2	4.7
All Resources	519.5	162.4	297.7	321.7

* No plant data collected for 1982/83

Table XV-10. Composition of Resource Harvests by Resource Category, Akhiok, 1982/83, 1986, 1989, and 1992/93

	Percentage of Total Harvest			
	1982/83	1986	1989	1992/93
Salmon	45.8%	68.5%	37.0%	62.0%
Other Fish	5.7%	4.3%	19.9%	7.6%
Marine Invertebrates	8.5%	6.2%	15.0%	13.1%
Land Mammals	7.9%	19.2%	9.8%	8.7%
Marine Mammals	29.5%	0.9%	15.3%	6.0%
Birds and Eggs	2.6%	0.2%	2.6%	1.1%
Wild Plants	*	0.6%	0.4%	1.5%

* Note: wild plant data not collected for 1982/83

Figure XV-4. Harvests of Wild Resources for Home Use, Pounds Usable Weight per Capita, Akhiok, 1982/83, 1986, 1989, and 1992/93

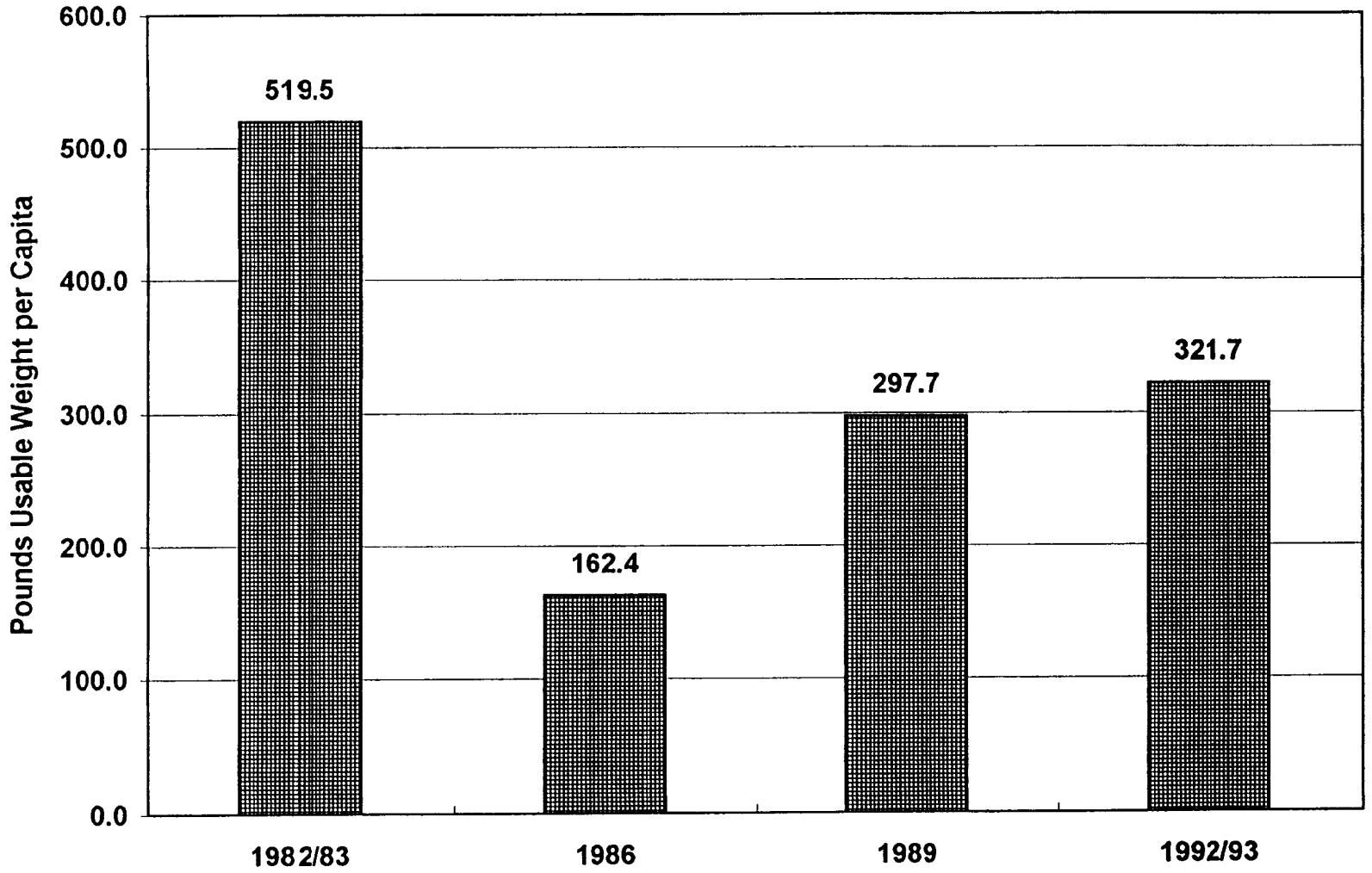


Figure XV-5. Per Capita Harvests of Wild Resources by Resource Category, Akhiok, 1982/83, 1986, 1989, and 1992/93

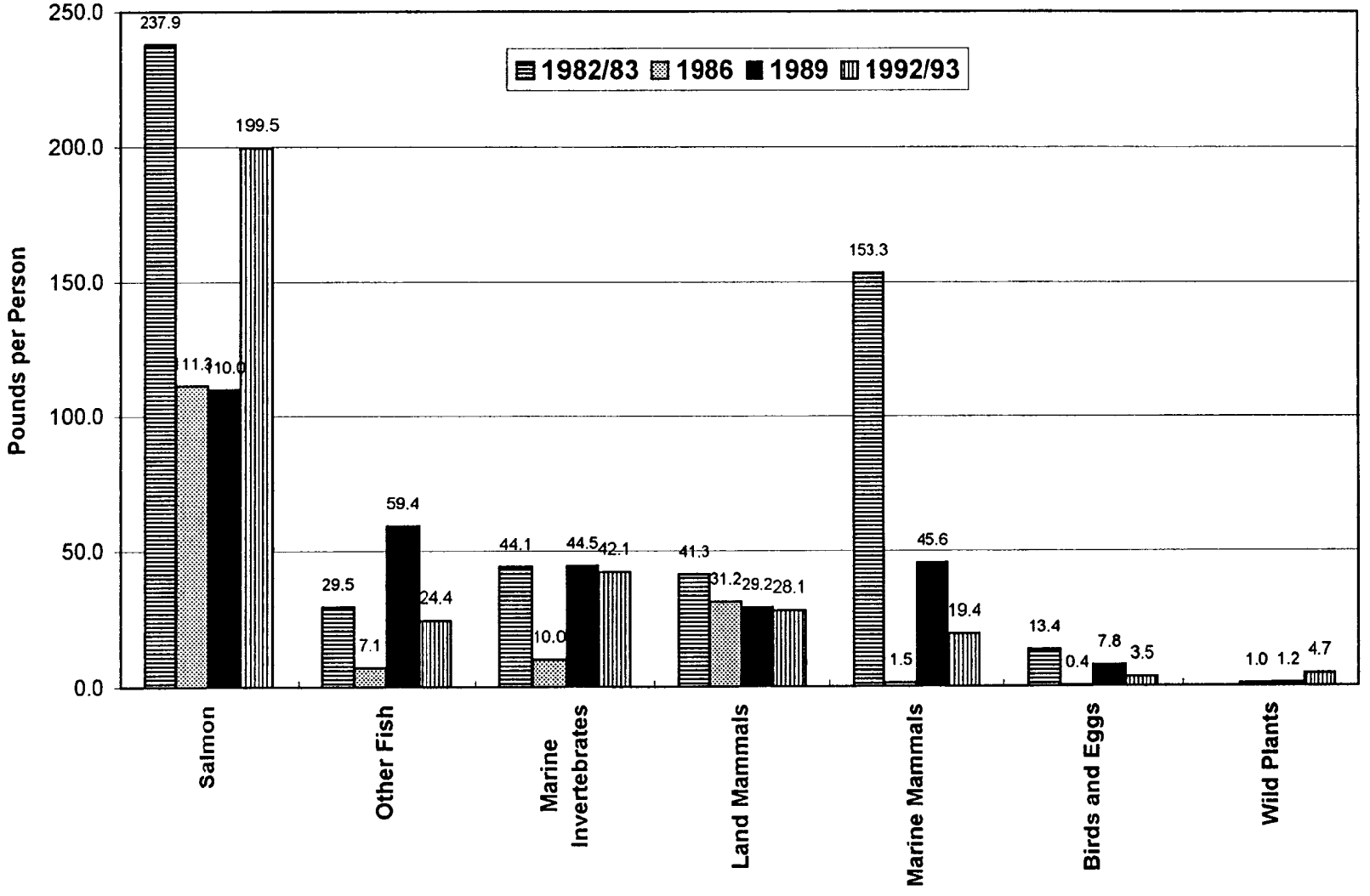


Figure XV-6. Composition of Wild Resource Harvests by Resource Category, Akhiok, 1992/93

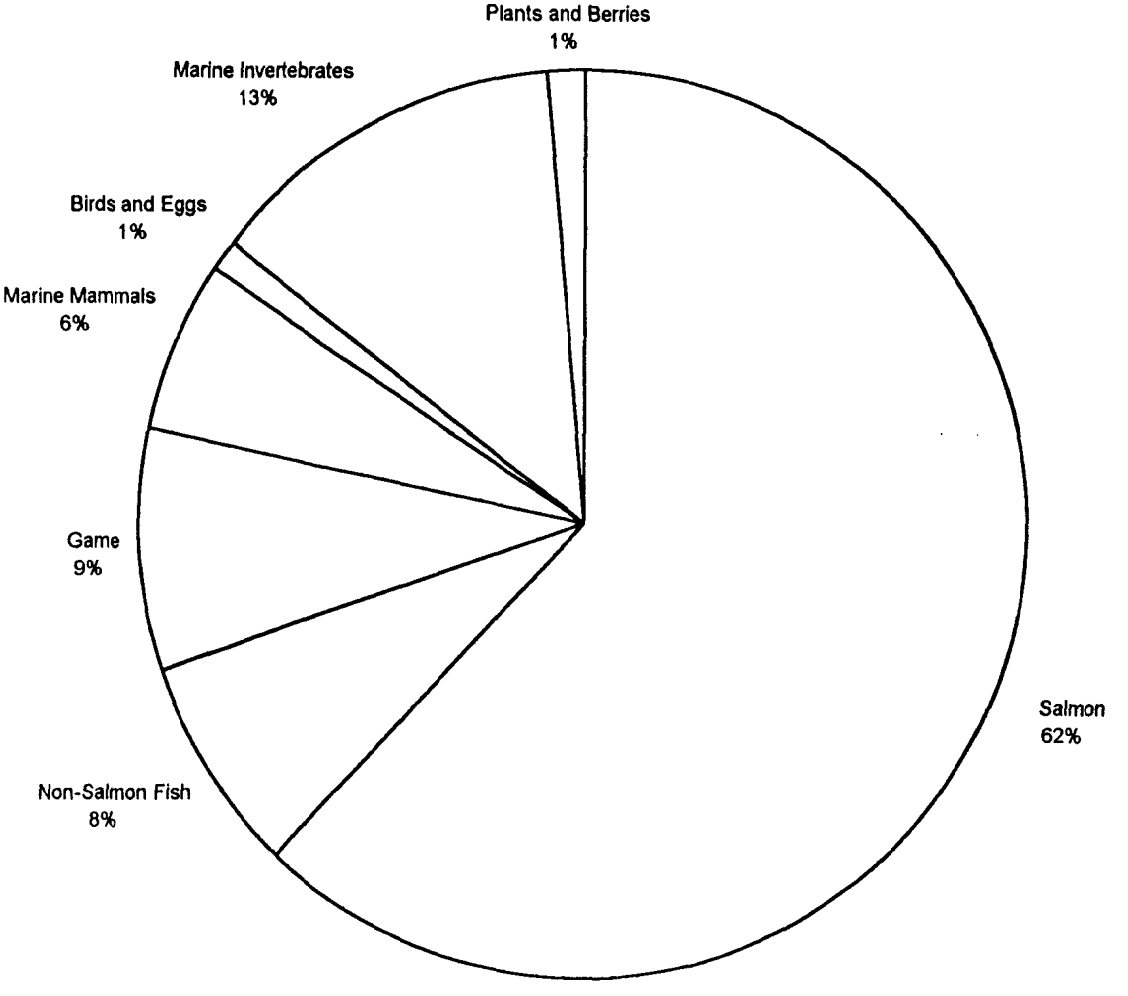


Table XV-11. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Akhiok, 1992/93

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	100.0	100.0	95.8	83.3	25,734.66	1,072.28	321.68				
Fish	100.0	95.8	95.8	66.7	70.8	17,909.47	746.23	223.87				
Salmon	100.0	95.8	95.8	62.5	70.8	15,961.20	665.05	199.52	2,510.00	104.58		
Chum Salmon	70.8	50.0	50.0	29.2	41.7	1,653.00	68.88	20.66	228.00	9.50		
Coho Salmon	79.2	70.8	70.8	29.2	41.7	5,660.56	235.86	70.76	692.00	28.83		
Chinook Salmon	37.5	20.8	16.7	20.8	8.3	100.10	4.17	1.25	7.00	0.29		
Pink Salmon	62.5	54.2	54.2	25.0	29.2	862.50	35.94	10.78	230.00	9.58		
Sockeye Salmon	95.8	83.3	83.3	41.7	66.7	7,685.04	320.21	96.06	1,353.00	56.38		
Unknown Salmon	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Non-Salmon Fish	87.5	75.0	66.7	45.8	41.7	1,948.27	81.18	24.35				
Cod	33.3	20.8	20.8	16.7	12.5	67.20	2.80	0.84	21.00	0.88		
Pacific Cod (Gray)	33.3	20.8	20.8	16.7	12.5	67.20	2.80	0.84	21.00	0.88		
Sablefish (Black Cod)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Greenling	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Lingcod	0.0	0.0	0.0	0.0	0.0	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		
Flounder	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Arrow Tooth Flounder (Turbot)	0.0	0.0	0.0	0.0	0.0	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		
Sole	0.0	0.0	0.0	0.0	0.0	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		
Halibut	75.0	50.0	45.8	41.7	33.3	1,441.99	60.08	18.02	40.08	1.67		
Herring	12.5	4.2	4.2	8.3	4.2	180.00	7.50	2.25	30.00 gal	1.25		
Herring Roe	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00		
Rockfish	4.2	0.0	0.0	4.2	0.0	0.00	0.00	0.00	0.00	0.00		
Black Rockfish (black bass)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Red Rockfish	4.2	0.0	0.0	4.2	0.0	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		
Sea Perch	0.0	0.0	0.0	0.0	0.0	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		
Irish Lord	0.0	0.0	0.0	0.0	0.0	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		
Smelt	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	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		
Wolf Eel (Wolffish)	0.0	0.0	0.0	0.0	0.0	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				

Table XV-11. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Akhiok, 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
Salmon Shark	0.0	0.0	0.0	0.0	0.0	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		
Skates	4.2	4.2	4.2	0.0	4.2	10.00	0.42	0.13	2.00	0.08		
Grayling	4.2	4.2	4.2	4.2	4.2	40.00	1.67	0.50	57.14	2.38		
Trout and Char	41.7	37.5	33.3	16.7	16.7	209.08	8.71	2.61	167.00	6.96		
Char (general)	37.5	33.3	29.2	16.7	16.7	164.70	6.86	2.06	153.00	6.38		
Dolly Varden	33.3	29.2	25.0	12.5	12.5	151.20	6.30	1.89	108.00	4.50		
Dolly Varden-Fingerling	8.3	8.3	8.3	4.2	4.2	13.50	0.56	0.17	45.00	1.88		
Brook Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Unknown Char	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Trout	12.5	16.7	12.5	0.0	0.0	44.38	1.85	0.55	14.00	0.58		
Rainbow Trout	12.5	16.7	12.5	0.0	0.0	11.20	0.47	0.14	8.00	0.33		
Steelhead	8.3	8.3	8.3	0.0	0.0	33.18	1.38	0.41	6.00	0.25		
Unknown Trout	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Game	87.5	70.8	66.7	45.8	41.7	2,248.40	93.68	28.11	53.00	2.21		
Big Game	87.5	70.8	66.7	45.8	41.7	2,246.40	93.60	28.08	52.00	2.17		
Bison	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Black Bear	0.0	0.0	0.0	0.0	0.0	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		
Caribou	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Deer	87.5	70.8	66.7	45.8	41.7	2,246.40	93.60	28.08	52.00	2.17		
Deer, Male	66.7	62.5	58.3	25.0	37.5	1,728.00	72.00	21.60	40.00	1.67		
Deer, Female	12.5	16.7	12.5	4.2	8.3	216.00	9.00	2.70	5.00	0.21		
Deer, Sex Unknown	20.8	8.3	8.3	20.8	4.2	302.40	12.60	3.78	7.00	0.29		
Elk	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Goat	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Moose	0.0	0.0	0.0	0.0	0.0	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		
Small Game/Furbearer	8.3	4.2	4.2	4.2	4.2	2.00	0.08	0.03	1.00	0.04		
Fox	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Red Fox	0.0	0.0	0.0	0.0	0.0	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		
Hare	8.3	4.2	4.2	4.2	4.2	2.00	0.08	0.03	1.00	0.04		
Snowshoe Hare	8.3	4.2	4.2	4.2	4.2	2.00	0.08	0.03	1.00	0.04		
Land Otter	0.0	0.0	0.0	0.0	0.0	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		

Table XV-11. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Akhiok, 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
Feral Animals	0.0	0.0	0.0	0.0	0.0	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		
Marine Mammals	70.8	41.7	25.0	62.5	33.3	1,552.00	64.67	19.40	20.00	0.83		
Whale	4.2	0.0	0.0	4.2	0.0	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		
Humpback Whale	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Unknown Whale	4.2	0.0	0.0	4.2	0.0	0.00	0.00	0.00	0.00	0.00		
Seal	62.5	41.7	25.0	50.0	33.3	952.00	39.67	11.90	17.00	0.71		
Harbor Seal	62.5	41.7	25.0	50.0	33.3	952.00	39.67	11.90	17.00	0.71		
Porpoise/Dolphin	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Steller Sea Lion	50.0	16.7	8.3	45.8	20.8	600.00	25.00	7.50	3.00	0.13		
Sea Otter	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Birds and Eggs	79.2	66.7	66.7	37.5	37.5	276.65	11.53	3.46	564.00	23.50		
Birds	62.5	41.7	37.5	33.3	29.2	211.70	8.82	2.65	219.00	9.13		
Upland Game Birds	45.8	25.0	25.0	20.8	16.7	35.70	1.49	0.45	51.00	2.13		
Grouse	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Ptarmigan	45.8	25.0	25.0	20.8	16.7	35.70	1.49	0.45	51.00	2.13		
Migratory Birds	58.3	41.7	37.5	29.2	29.2	176.00	7.33	2.20	168.00	7.00		
Waterfowl	58.3	41.7	37.5	29.2	29.2	176.00	7.33	2.20	168.00	7.00		
Ducks	58.3	41.7	37.5	20.8	29.2	129.30	5.39	1.62	149.00	6.21		
Eider	4.2	0.0	0.0	4.2	0.0	0.00	0.00	0.00	0.00	0.00		
Eider, Unknown	4.2	0.0	0.0	4.2	0.0	0.00	0.00	0.00	0.00	0.00		
Scoter	33.3	20.8	16.7	16.7	12.5	50.40	2.10	0.63	56.00	2.33		
Scoter, White-winged	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Scoter, Black	33.3	20.8	16.7	16.7	12.5	50.40	2.10	0.63	56.00	2.33		
Scoter, Surf	0.0	0.0	0.0	0.0	0.0	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		
Harlequin	12.5	4.2	4.2	8.3	4.2	1.50	0.06	0.02	3.00	0.13		
Goldeneye	45.8	29.2	29.2	16.7	20.8	50.40	2.10	0.63	63.00	2.63		
Bufflehead	12.5	0.0	0.0	12.5	0.0	0.00	0.00	0.00	0.00	0.00		
Merganser	8.3	0.0	0.0	8.3	0.0	0.00	0.00	0.00	0.00	0.00		
Scaup	4.2	0.0	0.0	4.2	0.0	0.00	0.00	0.00	0.00	0.00		
Mallard	33.3	16.7	16.7	16.7	12.5	27.00	1.13	0.34	27.00	1.13		
Pintail	12.5	0.0	0.0	12.5	0.0	0.00	0.00	0.00	0.00	0.00		
Wigeon	8.3	0.0	0.0	8.3	0.0	0.00	0.00	0.00	0.00	0.00		
Teal	4.2	0.0	0.0	4.2	0.0	0.00	0.00	0.00	0.00	0.00		

Table XV-11. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Akhiok, 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
Oldsquaw	4.2	0.0	0.0	4.2	0.0	0.00	0.00	0.00	0.00	0.00		
Redhead Duck	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Ducks, Unknown	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Geese	25.0	16.7	16.7	16.7	8.3	46.70	1.95	0.58	19.00	0.79		
Black Brant	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Emperor Geese	20.8	12.5	12.5	12.5	8.3	42.50	1.77	0.53	17.00	0.71		
Snow Geese	0.0	0.0	0.0	0.0	0.0	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		
Canada Geese (general)	4.2	4.2	4.2	4.2	0.0	4.20	0.18	0.05	2.00	0.08		
Canada Geese, Unknown	4.2	4.2	4.2	4.2	0.0	4.20	0.18	0.05	2.00	0.08		
Geese, Unknown	0.0	0.0	0.0	0.0	0.0	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		
Common Snipe	0.0	0.0	0.0	0.0	0.0	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		
Gulls	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Auklet	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Parakeet Auklet	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Eggs	58.3	41.7	41.7	25.0	20.8	64.95	2.71	0.81	345.00	14.38		
Seabird Eggs	58.3	41.7	41.7	25.0	20.8	64.95	2.71	0.81	345.00	14.38		
Gull Eggs	58.3	41.7	41.7	25.0	20.8	55.80	2.33	0.70	186.00	7.75		
Puffin Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Tern Eggs	33.3	25.0	25.0	12.5	16.7	7.35	0.31	0.09	147.00	6.13		
Kittiwake Eggs	4.2	4.2	4.2	4.2	4.2	1.80	0.08	0.02	12.00	0.50		
Shorebird Eggs	0.0	0.0	0.0	0.0	0.0	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		
Black Snipe Eggs (Oystercatcher)	0.0	0.0	0.0	0.0	0.0	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		
Duck Eggs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Eider Eggs	0.0	0.0	0.0	0.0	0.0	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		
Marine Invertebrates	100.0	87.5	87.5	83.3	54.2	3,371.15	140.46	42.14				
Clams	87.5	75.0	75.0	37.5	37.5	1,812.33	75.51	22.65	604.11 gal	25.17		
Butter Clams	87.5	75.0	75.0	33.3	37.5	1,510.50	62.94	18.88	503.50 gal	20.98		
Razor Clams	20.8	16.7	16.7	8.3	8.3	96.00	4.00	1.20	32.00 gal	1.33		
Pacific Littleneck Clams (Steamers)	20.8	16.7	16.7	8.3	8.3	64.50	2.69	0.81	21.50 gal	0.90		
Pinkneck Clams	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00		

Table XV-11. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Akhiok, 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
Horse Clams (Gaper)	37.5	25.0	25.0	12.5	4.2	126.33	5.26	1.58	42.11 gal	1.75		
Unknown Clams	4.2	4.2	4.2	4.2	4.2	15.00	0.63	0.19	5.00 gal	0.21		
Cockles	62.5	50.0	50.0	20.8	20.8	594.39	24.77	7.43	198.13 gal	8.26		
Scallops	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Jingles	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00		
Mussels	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00		
Crabs	75.0	33.3	29.2	66.7	16.7	225.15	9.38	2.81				
Dungeness Crab	25.0	4.2	4.2	20.8	0.0	10.50	0.44	0.13	15.00	0.63		
King Crab	66.7	29.2	25.0	58.3	16.7	150.65	6.28	1.88				
King Crab Eggs, Red	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00				
King Crab, Unknown	66.7	29.2	25.0	58.3	16.7	150.65	6.28	1.88	65.50	2.73		
Tanner Crab	20.8	12.5	12.5	16.7	8.3	64.00	2.67	0.80	40.00	1.67		
Tanner Crab, Bairdi	0.0	0.0	0.0	0.0	0.0	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		
Tanner Crab, Unknown	20.8	12.5	12.5	16.7	8.3	64.00	2.67	0.80	40.00	1.67		
Unknown Crabs	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Chitons (bidarkis)	66.7	54.2	54.2	29.2	20.8	244.40	10.18	3.06	61.10 gal	2.55		
Chitons (small)	66.7	54.2	54.2	29.2	20.8	244.40	10.18	3.06	61.10 gal	2.55		
Octopus	66.7	45.8	45.8	33.3	29.2	336.00	14.00	4.20	84.00	3.50		
Sea Cucumber	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00		
Sea Urchin	75.0	66.7	66.7	33.3	37.5	158.88	6.62	1.99	317.75 gal	13.24		
Shrimp	4.2	0.0	0.0	4.2	0.0	0.00	0.00	0.00	0.00 gal	0.00		
Snails	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00		
Limpets	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00		
Squid	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00		
Plants and Berries	91.7	87.5	87.5	25.0	29.2	377.00	15.71	4.71	94.25 gal	3.93		
Berries	91.7	87.5	87.5	16.7	29.2	355.00	14.79	4.44	88.75 gal	3.70		
Plants/Greens/Mushrooms	33.3	25.0	25.0	8.3	0.0	22.00	0.92	0.28	5.50 gal	0.23		
Seaweed/Kelp (Food)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00		
Fertilizer	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00		
Vegetative Fertilizer	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00		
Seaweed/Kelp (Non-food)	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00 gal	0.00		
Wood	70.8	54.2	54.2	29.2	29.2	0.00	0.00	0.00	40.00 crd	1.67		

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

Table XV-12. Estimated Amount of Resources Removed From Commercial Harvest, Akhiok, 1992/93

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		1,546.59	7.27	6.01
Fish		1,506.59	8.41	5.85
Salmon	201.00	1,261.34	7.90	4.90
Chum Salmon	26.00	188.50	11.40	0.73
Coho Salmon	46.00	376.28	6.65	1.46
Chinook Salmon	7.00	100.10	100.00	0.39
Pink Salmon	50.00	187.50	21.74	0.73
Sockeye Salmon	72.00	408.96	5.32	1.59
Non-Salmon Fish		245.25	12.59	0.95
Cod	2.00	6.40	9.52	0.02
Pacific Cod (Gray)	2.00	6.40	9.52	0.02
Halibut	1.00	31.20	2.16	0.12
Herring	30.00 gal	180.00	100.00	0.70
Trout and Char	5.00	27.65	13.22	0.11
Trout	5.00	27.65	62.30	0.11
Steelhead	5.00	27.65	83.33	0.11
Marine Invertebrates		40.00	1.19	0.16
Crabs		40.00	17.77	0.16
Tanner Crab	25.00	40.00	62.50	0.16
Tanner Crab, Unknown	25.00	40.00	62.50	0.16

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

Table XV-13. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest, Akhiok, 1992/93

		Subsistence Methods						Removed from Commercial Catch		Rod and Reel		Any Method	
		Setnet		Beach Seine		Subsistence Gear Any Method							
Resource	Percent Base	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.	No.	Lbs.
Salmon	total	51.12	50.90	38.65	38.70	89.76	89.60	8.01	7.90	2.23	2.50		
Chum Salmon	gear type	10.29	11.78	7.22	8.22	8.97	10.24	12.94	14.94	0.00	0.00		
	resource	57.89	57.89	30.70	30.70	88.60	88.60	11.40	11.40	0.00	0.00		
	total	5.26	6.00	2.79	3.18	8.05	9.18	1.04	1.18	0.00	0.00	9.08	10.36
Coho Salmon	gear type	27.75	35.84	25.77	33.11	26.90	34.66	22.89	29.83	71.43	82.05		
	resource	51.45	51.45	36.13	36.13	87.57	87.57	6.65	6.65	5.78	5.78		
	total	14.18	18.24	9.96	12.81	24.14	31.06	1.83	2.36	1.59	2.05	27.57	35.46
Chinook Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	3.48	7.94	0.00	0.00		
	resource	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00		
	total	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.63	0.00	0.00	0.28	0.63
Pink Salmon	gear type	10.52	6.23	3.61	2.12	7.55	4.46	24.88	14.87	17.86	9.40		
	resource	58.70	58.70	15.22	15.22	73.91	73.91	21.74	21.74	4.35	4.35		
	total	5.38	3.17	1.39	0.82	6.77	3.99	1.99	1.17	0.40	0.23	9.16	5.40
Sockeye Salmon	gear type	51.44	46.14	63.40	56.55	56.59	50.64	35.82	32.42	10.71	8.55		
	resource	48.78	48.78	45.45	45.45	94.24	94.24	5.32	5.32	0.44	0.44		
	total	26.29	23.49	24.50	21.89	50.80	45.37	2.87	2.56	0.24	0.21	53.90	48.15
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 XV-14. Estimated Salmon Harvest by Gear Type and Species, Akhiok, 1992/93

		Subsistence Methods						Removed from Commercial Catch		Rod and Reel		Any Method	
		Setnet		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
Salmon	numbers	1,283.00	53.46	970.00	40.42	2,253.00	93.88	201.00	8.38	56.00	2.33	2,510.00	104.58
	pounds	8,124.13	338.51	6,176.95	257.37	14,301.08	595.88	1,261.34	52.56	398.78	16.62	15,961.20	665.05
Chum Salmon	numbers	132.00	5.50	70.00	2.92	202.00	8.42	26.00	1.08	0.00	0.00	228.00	9.50
	pounds	957.00	39.88	507.50	21.15	1,464.50	61.02	188.50	7.85	0.00	0.00	1,653.00	68.88
Coho Salmon	numbers	356.00	14.83	250.00	10.42	606.00	25.25	46.00	1.92	40.00	1.67	692.00	28.83
	pounds	2,912.08	121.34	2,045.00	85.21	4,957.08	206.55	376.28	15.68	327.20	13.63	5,660.56	235.86
Chinook Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	7.00	0.29	0.00	0.00	7.00	0.29
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	100.10	4.17	0.00	0.00	100.10	4.17
Pink Salmon	numbers	135.00	5.63	35.00	1.46	170.00	7.08	50.00	2.08	10.00	0.42	230.00	9.58
	pounds	506.25	21.09	131.25	5.47	637.50	26.56	187.50	7.81	37.50	1.56	862.50	35.94
Sockeye Salmon	numbers	660.00	27.50	615.00	25.63	1,275.00	53.13	72.00	3.00	6.00	0.25	1,353.00	56.38
	pounds	3,748.80	156.20	3,493.20	145.55	7,242.00	301.75	408.96	17.04	34.08	1.42	7,685.04	320.21
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 XV-15. Percentage of Households Harvesting Salmon by Gear Type and Species, Akhiok, 1992/93

Resource	Subsistence Methods			Removed from Commercial Catch	Rod and Reel	Any Method
	Setnet	Beach Seine	Any Subsistence Gear			
Salmon	54.17	16.67	70.83	33.33	16.67	95.83
Chum Salmon	33.33	8.33	41.67	12.50	0.00	50.00
Coho Salmon	33.33	12.50	45.83	20.83	12.50	70.83
Chinook Salmon	0.00	0.00	0.00	16.67	0.00	16.67
Pink Salmon	33.33	8.33	41.67	16.67	4.17	54.17
Sockeye Salmon	45.83	16.67	62.50	25.00	8.33	83.33
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 XV-16. Estimated Harvest of Fish Other than Salmon by Gear Type, Akhiok, 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	1,523.16	63.47	245.25	10.22	179.86	7.49	0.00	0.00	1,948.27	81.18
Grayling	pounds	40.00	1.67	0.00	0.00	0.00	0.00	0.00	0.00	40.00	1.67
Pacific Cod (Gray)	pounds	60.80	2.53	6.40	0.27	0.00	0.00	0.00	0.00	67.20	2.80
Halibut	pounds	1,386.96	57.79	31.20	1.30	23.83	0.99	0.00	0.00	1,441.99	60.08
Herring	pounds	0.00	0.00	180.00	7.50	0.00	0.00	0.00	0.00	180.00	7.50
Skates	pounds	10.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.42
Dolly Varden	pounds	14.00	0.58	0.00	0.00	137.20	5.72	0.00	0.00	151.20	6.30
Dolly Varden-Fingerling	pounds	3.00	0.13	0.00	0.00	10.50	0.44	0.00	0.00	13.50	0.56
Rainbow Trout	pounds	8.40	0.35	0.00	0.00	2.80	0.12	0.00	0.00	11.20	0.47
Steelhead	pounds	0.00	0.00	27.65	1.15	5.53	0.23	0.00	0.00	33.18	1.38

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

Table XV-17. Percentage of Fish Other Than Salmon Harvested by Gear Type, Akhiok, 1992/93

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	78.18	12.59	9.23	0.00
Grayling	resource	100.00	0.00	0.00	0.00
Pacific Cod (Gray)	resource	90.48	9.52	0.00	0.00
Halibut	resource	96.18	2.16	1.65	0.00
Herring	resource	0.00	100.00	0.00	0.00
Skates	resource	100.00	0.00	0.00	0.00
Dolly Varden	resource	9.26	0.00	90.74	0.00
Dolly Varden-Fingerling	resource	22.22	0.00	77.78	0.00
Rainbow Trout	resource	75.00	0.00	25.00	0.00
Steelhead	resource	0.00	83.33	16.67	0.00

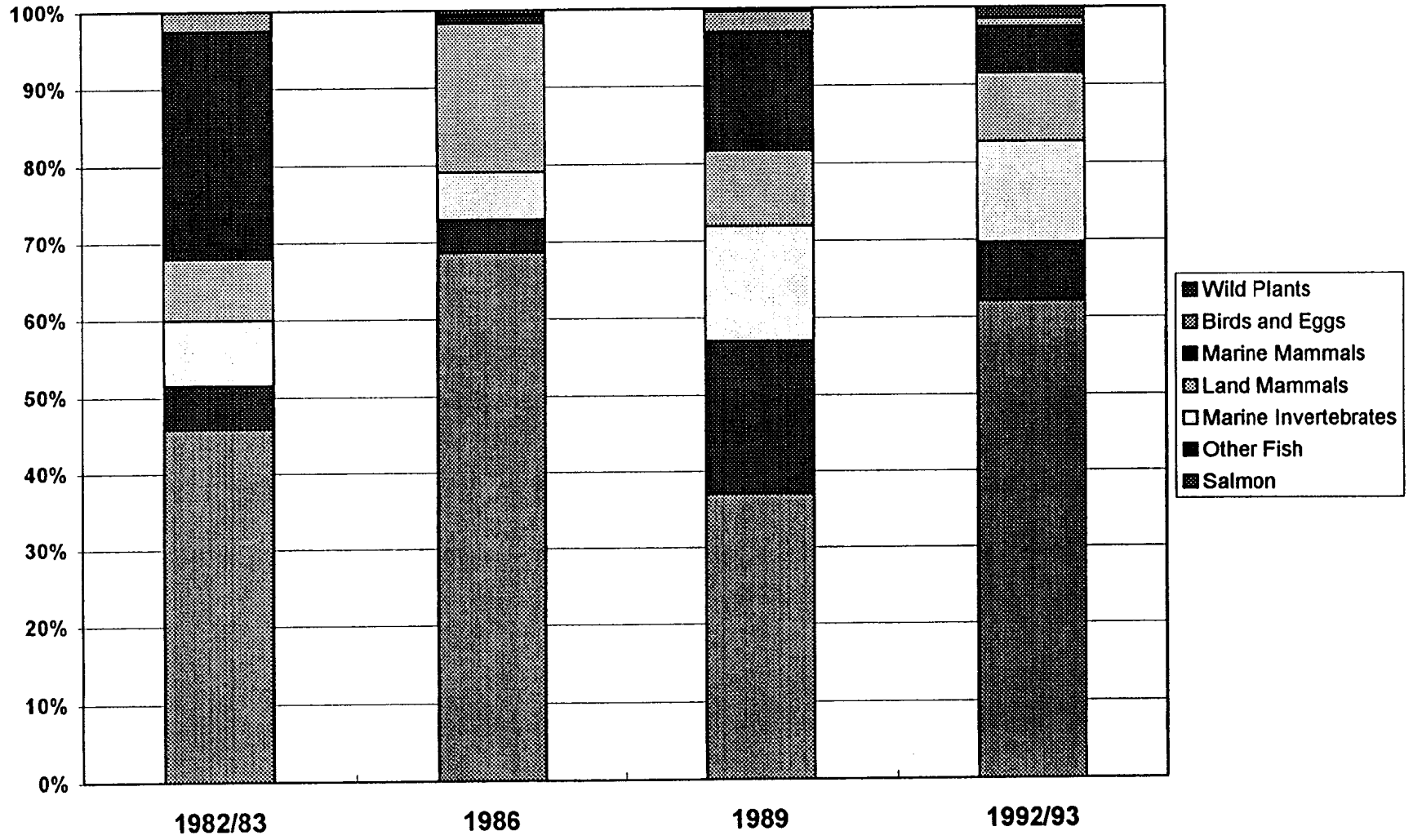
SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1993

Table XV-18. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Akhlok, 1992/93

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	54.17	12.50	37.50	0.00	66.67
Grayling	4.17	0.00	0.00	0.00	4.17
Pacific Cod (Gray)	16.67	4.17	0.00	0.00	20.83
Halibut	41.67	4.17	4.17	0.00	45.83
Herring	0.00	4.17	0.00	0.00	4.17
Skates	4.17	0.00	0.00	0.00	4.17
Dolly Varden	4.17	0.00	25.00	0.00	25.00
Dolly Varden-Fingerling	4.17	0.00	4.17	0.00	8.33
Rainbow Trout	4.17	0.00	8.33	0.00	12.50
Steelhead	0.00	4.17	4.17	0.00	8.33

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

Figure XV-7. Composition of Harvests by Resource Category, Akhiok, 1982/83, 1986, 1989, and 1992/93



CHAPTER XVI: PORT LIONS

by

James A. Fall and Craig Mishler

CLIMATE, SETTING, AND GENERAL HISTORY

The community of Port Lions is located on the forested north side of Kodiak Island at Settlers Cove in Kizhuyak Bay near the mouth of the Kizhuyak River (Fig. I-1). It is about 18 miles northwest of the city of Kodiak. Although not on the island's road system, Port Lions is serviced by the Alaska Marine Highway ferry system. Port Lions is characterized by a cool, mild, rainy climate--similar to that found in southeast Alaska. Fog often covers the area during the summer, making it treacherous for boat navigation and for aircraft attempting to fly in and out. High winds are also a frequent problem for boats and aircraft, even though the community itself is well-sheltered by tall stands of mature spruce.

Port Lions was founded in 1965 by residents of the former Alutiiq village of Afognak, located on nearby Afognak Island. It is an interesting historical footnote that for seventeen years, from 1892 until 1909, the Natives of Afognak Island were not allowed to do any subsistence or commercial fishing near their villages due to a Presidential proclamation setting aside the Afognak Forest and Fish Culture Reserve. This proclamation was largely the result of the lobbying efforts of Livingston Stone, a superintendent of federal fish hatcheries in California who decided after a short visit to Alaska that the United States needed a "National Salmon Park" to protect salmon stocks from overfishing. The Reserve's boundary included all of the waters within a three-mile limit of Afognak Island. Even after 1909, Afognak Natives were only allowed to take salmon for their own use under supervision from the superintendent of the Afognak hatchery. In 1912 the Secretary of Commerce and Labor established new regulations granting Native residents permission to fish in the waters of the Reserve, but the White Act of 1926 revoked their exclusive rights to fish in this area (Roppel 1986:44-49). It is hardly surprising that although the residents of Afognak moved to Port Lions almost 30 years ago following the Great Alaska Earthquake of 1964, many of their traditional subsistence fishing areas are still located near the old villages of Afognak and Little Afognak.

During our visit in 1993, Port Lions was served by two airlines, Markair Express and Penair, with a total of about five flights a day, and a reduced schedule on weekends. The community has a large boat harbor for its sizable commercial and subsistence fishing fleet. Unlike most other Kodiak villages, the majority of Port Lions families own cars or trucks, and the Port Lions road system extends about ten miles, joining the air strip on one end with the Alaska state ferry dock on the other. A high, long boardwalk or causeway for pedestrians has been constructed across Settlers Cove primarily for the convenience and safety of school children. Two churches serve the community: one is Russian Orthodox, and the other is Protestant. There are two lodges which cater to sports hunters and sports fishermen and also accommodate other visitors, and at least one charter boat operation. At the time of our study the only

grocery store in the community, owned by Kraft's, had closed down, but one individual sampled in our survey announced his plans to open a new store.

RESEARCH METHODS

Port Lions was not included in the original research plan for this project. However, in the third study year (1993/94), limited funding was available through the division's state general fund allocation to conduct the harvest survey portion of the research in Port Lions. This was considered desirable in that Port Lions was the only Kodiak Island Borough community which had not been surveyed since 1989, the year of the *Exxon Valdez* oil spill, during which subsistence harvests in the community declined about 52 percent compared to pre-spill averages (Fall 1991b; Mishler and Cohen forthcoming). The social effects questionnaire was not administered in Port Lions, for two reasons. First, funding and staffing were insufficient. Second, no comparative data from earlier social effects or social indicators surveys were available for this community.

Researchers initially estimated a total of 81 year-round households in Port Lions. Because of this relatively large size, the goal was to interview a random sample of 50 percent of these households. As shown in Table XVI-1, this goal was exceeded. In total, 45 harvest surveys were completed, representing a 56.3 percent sample of the revised estimate of 80 permanent Port Lions households. Only three households declined to participate in the survey, for a below-average refusal rate of 6.3 percent. On average, the harvest surveys took 0.81 hours (49 minutes) to administer (Table I-7).

The study team in Port Lions consisted of Craig Mishler (field supervisor), Jeff Barnhart, Vicki Vanek, and Bert Nelson Sr. (local research assistant). The interviews were conducted in late March, 1994. The study year for Port Lions, as in other Kodiak Island Borough villages, ran from April 1993 through March 1994.

DEMOGRAPHY

In 1990, Port Lion's population was 222, 67.6 percent of which was Alaska Native (Alaska Department of Labor 1991:93). Figure XVI-1 depicts the decennial census estimates for the populations of Afognak and Port Lions from 1880 through 1990.

Demographic characteristics of Port Lions for the 1993/94 study year are summarized in Table XVI-2. The estimated population was 236.4, of which 66.2 percent was Alaska Native. This represents a slight increase over the 1990 population estimate, although the Alaska Native proportion of the population was virtually identical in both years. The average length of residency of household heads in Port Lions was about 18 years. The mean age of 31.7 years was the highest of all the Kodiak area communities, due in large part a substantial number of middle-aged persons--approximately 37.6 percent of the community was

estimated to be over the age of 40, but only about 9.8 percent was estimated to be over 60. Males in the community outnumbered females by a ratio of 56.4 percent to 43.6 percent. Table XVI-3 and Figure XVI-2 provide a population profile of Port Lions as of late March, 1994.

CASH ECONOMY

During the 1993/94 study year, about 70 percent of Port Lion's adult population (age 16 and older) had some form of cash employment (Table XVI-4). This employment was primarily seasonal; the average length of employment for employed adults was 7.4 months, and only 30.2 percent worked year-round.

The estimated per capita cash income in Port Lions in 1993/94 was $15,627 (Table XVI-5). This was very similar to the $14,960 per capita income reported for 1989 by the US Census (US Bureau of the Census 1992b:57). The 1993/94 income estimate for Port Lions was higher than any other per capita income estimate for Kodiak Island Borough villages for all years of this study (e.g., Ouzinkie's per capita income was $12,117 in 1993/94, and Larsen Bay's was $12,574 in the same year), but was substantially below the estimated cash income in Kodiak City, which averaged about $20,000 per person or more in each year of this study.

Of all cash income in Port Lions in 1993/94, about 61.3 percent was earned through jobs ($9,582 per person) and the remainder (39.7 percent; $6,044 per person) was other income. Of earned income, by far the largest portion ($4,632 per person) derived from commercial fishing. The Commercial Fisheries Entry Commission listed 9 salmon purse seine permit holders and one set gillnet salmon permit holder living in Port Lions in 1993 (Alaska Department of Fish and Game 1993). Income from government employment (primarily local government) ranked second ($2,428 per person) and the transportation, communications, and utilities sector (TCU) ranked third ($1,134 per person) (Table XVI-5). As depicted in Figure XVI-3, this same ranking held for jobs: commercial fishing, 28 percent; government, 24 percent; and TCU, 13 percent.

For other income, pension and retirement payments ranked first ($1,759 per person), although these were received by just 13.3 percent of the households. Native corporation dividends ranked second among other sources of income, at $1,125 person (received by two-thirds of households). Virtually every household (97.8 percent) received Alaska Permanent Fund dividends, which, at an average of $862 per person, ranked third among other sources of income (Table XVI-6).

On average, Port Lions households estimated that they spent about $588 per month on food during the study year; the median monthly food expenditure was $550 per household (Table I-102). This represents about 14.3 percent of the average household income in the community.

Participation in Harvests and Uses of Wild Resources

In the 1993/94 study year, every Port Lions household used, harvested, and received wild resources, and 91.1 percent gave wild resources away. On average, households used 15.6 kinds of wild resources in 1993/94, attempted to harvest 11.8 kinds, harvested 11.5, received 7.0, and gave away 6.0 kinds (Table XVI-7). The most widely used resource in Port Lions in 1993/94 was berries (used by all households), followed by coho salmon (93.3 percent using), sockeye salmon (93.3 percent), halibut (93.3 percent), butter clams (91.1 percent), and deer (80.0 percent) (Table XVI-11).

Of the estimated total population in Port Lions, 92.5 percent participated in at least one resource harvest activity in 1993/94. The largest percentage (90.2 percent) gathered wild plants, while 81.2 percent fished, 45.1 percent hunted, and 12.8 percent trapped (Table XVI-8).

Harvest Quantities and Composition

The average household harvest of wild resources in Port Lions in 1993/94 was 979.7 pounds usable weight, for a per capita harvest of 331.5 pounds (Table XVI-7; Figure XVI-3). At 157.7 pounds per person, salmon made up the largest portion of this harvest, 47.6 percent, followed by other fish (63.7 pounds per person; 19.2 percent), land mammals (56.2 pounds per person; 16.9 percent), marine invertebrates (30.2 pounds per person; 9.1 percent), wild plants (15.4 pounds per person; 4.6 percent) marine mammals (4.5 pounds per person; 1.3 percent), and birds and eggs (3.9 pounds per person; 1.2 percent) (Table XVI-9, Table XVI-10; Fig. XVI-6). At the resource level, coho salmon contributed the most to the harvest (72.1 pounds per person). Rounding out the top five resources were sockeye salmon (67.4 pounds per person), deer (50.0 pounds per person), halibut (47.7 pounds per person), and butter clams (15.1 pounds per person) (Table XVI-11).

The largest portion of the sampled households in Port Lions (37.5 percent) estimated that in 1993/94 between 1 and 25 percent of their use of meat, fish, and poultry was from wild resources (Table I-105). Also, 32.5 percent provided an estimate of 26 to 50 percent, 10.0 percent said 51 to 75 percent, 17.5 said 76 to 99 percent, and 2.5 percent said 100 percent.

Just over half the sampled households in Port Lions (53.3 percent) said that, overall, their subsistence uses in 1993/4 were about the same as the year before, while 31.1 percent said their uses had gone up and 15.6 percent said their uses had declined.

Removal of resources from commercial catches (either targeted species or by-catch) accounted for a relatively small portion of the total harvest for home use in Port Lions in 1993/94, just 4.5 percent (Table XVI-12).

All Port Lions households used salmon in 1993/94, and 82.2 percent harvested salmon (Table XVI-11). The estimated total salmon harvest was 8,991 fish. Of this, sockeyes made up the largest portion as

measured in numbers of fish (4,192 salmon, 46.6 percent), followed by cohos (3,381 salmon, 37.6 percent). However, as measured in usable pounds, cohos ranked first (45.7 percent) followed closely by sockeyes (42.7 percent) (Table XVI-13, Table XVI-14).

Most salmon harvested for home use in Port Lions in 1993/94 were taken with subsistence methods (82.5 percent of all salmon). Rod and reel accounted for 13.4 percent of the salmon harvest, and removal from commercial catches provided the remainder, 4.2 percent) (Table XVI-14). There was widespread participation in subsistence salmon fisheries in Port Lions: 71.1 percent of all households harvested salmon with subsistence methods (mostly set nets and beach seines). Additionally, 53.3 percent of the households harvested salmon for home use with rod and reel, and 22.2 percent removed some salmon from their commercial catches for home use (Table XVI-15).

Most Port Lions households (95.6 percent) used fish other than salmon in 1993/94, and a large majority of them (68.9 percent) harvested these fish. Most commonly used were halibut (93.3 percent using), gray cod (53.3 percent using), and Dolly Varden (24.4 percent using) (Table XVI-11). Most non-salmon fish were taken with rod and reel (67.4 percent), followed by subsistence methods (22.9 percent) and removal from commercial catches (9.7 percent) (Tables XVI-16, Table XVI-17). Most households (53.3 percent) caught fish other than salmon with rod and reel, 31.1 percent used subsistence gear, and 22.2 percent removed fish from commercial harvests (Table XVI-18).

Land mammals were used by 84.4 percent of Port Lions households in the study year. Most of the land mammal harvest was deer, with a few elk, goats, and hares also harvested locally (Table XVI-11). Deer were harvested by 55.6 percent of the households and used by 80 percent of the households. Elk were harvested by 2.2 percent of the households and used by 15.6 percent.

Marine invertebrates were an important part of the subsistence harvest in Port Lions in 1993/94, used by virtually all households (93.3 percent). Butter clams made up almost half the marine invertebrate harvest. Tanner crab, Dungeness crab, chitons, octopus, and king crab were also used by more than a quarter of Port Lions households in the study year Table XVI-11).

An estimated 60.0 percent of Port Lions households used wild birds and eggs in 1993/94 and 42.2 percent harvested them. This is a fairly high level of participation for birds, similar to that recorded for Ouzinkie, and triple the percentage of those who used and harvested birds in Kodiak City in 1993. Ducks were the most frequently used (mostly goldeneye, mallards, and scoters), and many sea ducks spend the winter right in Settlers Cove (Table XVI-11).

Every household in Port Lions used wild plants for food in 1993/94, with almost all of the harvest made up of berries. Twenty percent of the households also used seaweed for garden fertilizer, and 71.1 percent used wood (Table XVI-11).

Of all resource categories, marine mammals were used by the fewest Port Lions households in 1993/94, just 17.8 percent. The sampled households harvested an estimated 12.4 harbor seals and 1.8 sea lions (Table XVI-11). For the 1993 calendar year, a separate study identified seven active marine mammal

hunting households in Port lions, with a total harvest of 26 harbor seals and 4 sea lions (Wolfe and Mishler 1994). The harvest estimate for calendar year 1992 was 37 harbor seals and 1 sea lion; 13 households were identified as active marine mammal hunters in that year (Wolfe and Mishler 1993:C-144,C-146).

DISCUSSION[1]

Estimates of subsistence harvests in Port Lions are available for three previous study years: 1982/83 (KANA 1983), 1986 (Fall and Walker 1993), and 1989, the year of the *Exxon Valdez* oil spill (Mishler and Cohen forthcoming). The two pre-spill estimates were very similar: 279.8 pounds per person for 1982/83 and 333.1 pounds per person for 1986. In contrast, the estimated subsistence harvest in Port Lions in 1989 was only 146.7 pounds per person, down 52 percent from the pre-spill average (Fig. XVI-4, Table XVI-9). More than half (51.4 percent) of the Port Lions households who were interviewed about their 1989 subsistence harvests reported that their uses had declined compared to pre-spill norms (Fig. XVI-7). The large majority of these households (83.3 percent) blamed the oil spill for this decline, including fear of oil contamination of subsistence foods (53.3 percent) and the time they lost to subsistence harvesting while engaged in spill clean-up activities (40.0 percent) (Mishler and Cohen forthcoming). Most households, 68.6 percent, said that their marine invertebrate harvests were down; fear of contamination was the most often cited reason for this decline. Interviews conducted by Impact Assessment Inc. as part of the "Oiled Mayors' study" also documented oil contamination issues in Port Lions, especially regarding clams and deer (IAI 1990c:104).

In 1993/94, the subsistence harvest in Port Lions had rebounded to 331.3 pounds per person, more than double that of the spill year and virtually identical to the 1986 estimate (Fig. XVI-4, Table XVI-9). Compared to the year before the oil spill, the highest percentage of households in Port Lions (47.4 percent) said their resource uses were about the same in 1993/94, although 36.8 percent said they were lower and just 15.8 percent said their uses were higher (Table I-95). However, only 2 of the 14 sampled households (14.3 percent) which had used less resources in 1993/94 than in 1988 cited the oil spill as the reason for the decline (Table I-97). Three sampled households blamed the spill for their lowered uses of marine invertebrates, with two of these citing contamination issues and all three stating that they thought the spill had reduced the populations of marine invertebrates (Table I-89). No sampled households blamed the spill for reduced uses of marine mammals or land mammals in 1993/94, and only one pointed to the spill for their reduced uses of fish (Tables I-65, I-69).

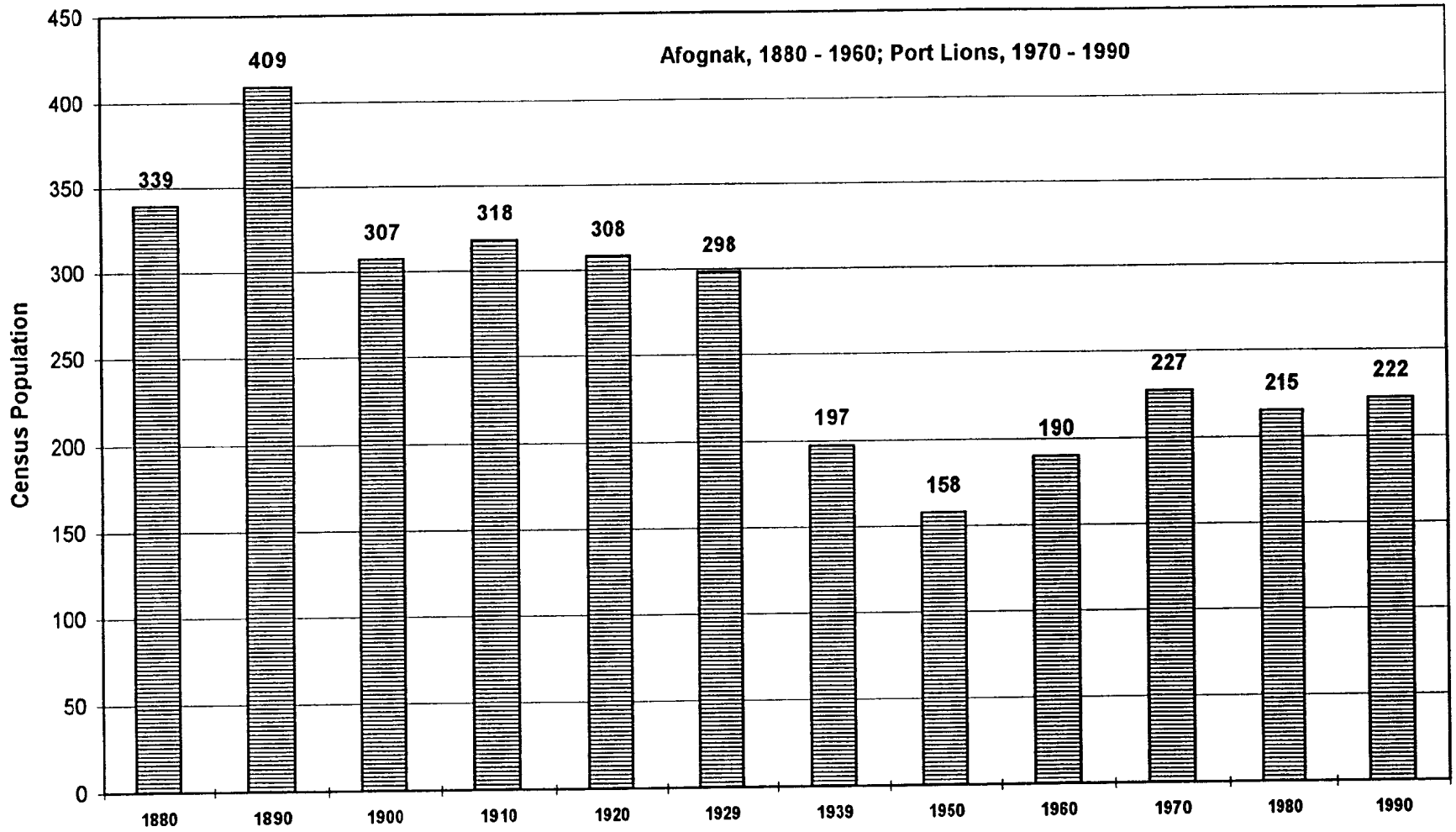
[1] Because the social effects questionnaire was not administered in Port Lions, this discussion is limited to changes to subsistence harvests and uses. For an overview of other oil spill effects in Port Lions, see IAI 1990c:98-107.

categories of wild foods used in Port Lions (salmon, other fish, marine invertebrates, and land mammals), the 1993/94 per capita harvest was about double or more than the spill year estimate, and in each case approximated or exceeded the pre-spill average harvests. The average number of resources used per household also bounced back up to 15.6 compared to 11.9 during 1989.

As shown in Table XVI-10 and Figure XVI-8, the composition of the resource harvest in Port Lions in 1993/94 was most similar to that of 1986 (discounting the anomalous oil spill year). The major difference is a slight decline in harvest levels of land mammals, and an increase in harvests of fish other than salmon and wild plants. Compared to 1982/83, the most recent study year had a notably higher salmon and land mammal harvest, but a much lower harvest of fish other than salmon. Nevertheless, all three non-oil spill years' harvests are broadly similar, with salmon and other fish dominating the harvests (about 200 pounds per person or more per year, making up 65 to 70 percent of the total harvest). Also consistent across these three years is the relatively large marine invertebrate harvest (30 pounds per person or more) and a modest, but not unimportant, harvest of land mammals (primarily deer).

In summary, the study findings for Port Lions for 1993/94 suggest a basic continuity over the last decade in subsistence harvests and uses in the community. The role of subsistence in the community is significant; harvests are relatively large and diverse. Virtually everyone participates in the use, harvest, and exchange of wild resources. The *Exxon Valdez* oil spill of 1989 severely disrupted subsistence in Port Lions, but by 1993/94, it appears that this disruption had almost ended and that most, but not all, subsistence users in Port Lions had recovered from effects of the spill.

Figure XVI-1. Port Lions and Afognak Census Population, 1880 - 1990



Sources: Rollins 1978; Alaska Department of Labor 1991

Table XVI-1. Sample Participation: Port Lions, 1994

VARIABLE	HOUSEHOLDS
Estimated Household Structures	81
Non-Residential Structures	0
Estimated Households	81
Interview Goal:	42
Households Interviewed	45
Failed to Contact/Unavailable	5
Refused	3
Vacant Residential Structures	0
Seasonal Households*	1
Non-Resident Household **	0
Invalid Households and Vacancies	1
Total Households Attempted:	54
Refusal Rate:	6.25%
Non-Perm. HH Rate ("Vacancy Rate"):	1.9%
Interview Goal (Percentage)	107.1%
Total Permanent Households	80
Percentage Interviewed	56.25%
Percentage of Total Households	100.00%
Interview Weighting Factor	1.778

NOTES:

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

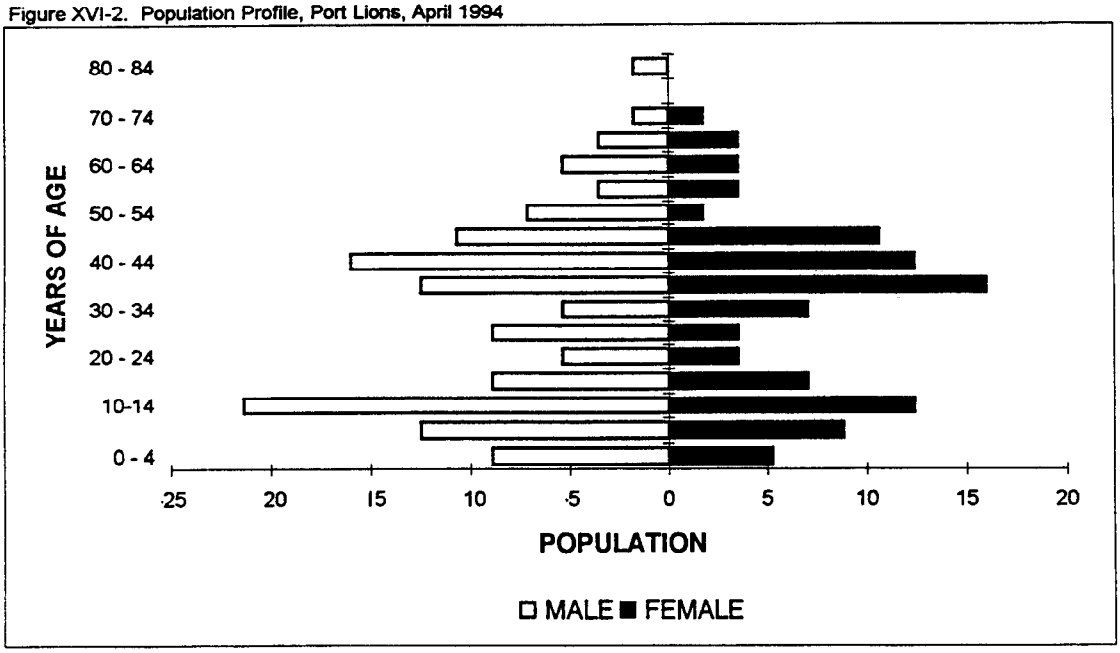
** Non-resident households are households which were not present during the study year or which were resident less than the required number of months.

Table XVI-2. Demographic Characteristics of Households, Port Lions, April 1994

Characteristics	
Sampled Households	45
Number of Households in the Community	80
Percentage of Households Sampled	56.25
Household Size	
Mean	2.96
Minimum	1
Maximum	7
Sample Population	133
Estimated Community Population	236.44
Age	
Mean	31.71
Minimum	1.63
Maximum	80.00
Median	33.996
Length of Residency - Population	
Mean	14.32
Minimum	0.625
Maximum	30.13
Length of Residency - Household Heads	
Mean	18.01
Minimum	0.625
Maximum	30.13
Sex	
Males	
Number	133.33
Percentage	56.39
Females	
Number	103.11
Percentage	43.61
Alaska Native	
Households (Either Head)	
Number	56.89
Percentage	71.11
Estimated Population	
Number	156.44
Percentage	66.17

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

Figure XVI-2. Population Profile, Port Lions, April 1994



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

Table XVI-3 Population Profile, Port Lions, April 1994

AGE	MALE			FEMALE			TOTAL		
	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT	NUMBER	PERCENT	CUM. PERCENT
0 - 4	8.89	6.67%	6.67%	5.33	5.17%	5.17%	14.22	6.02%	6.02%
5-9	12.44	9.33%	16.00%	8.89	8.62%	13.79%	21.33	9.02%	15.04%
10-14	21.33	16.00%	32.00%	12.44	12.07%	25.86%	33.78	14.29%	29.32%
15 - 19	8.89	6.67%	38.67%	7.11	6.90%	32.76%	16.00	6.77%	36.09%
20 - 24	5.33	4.00%	42.67%	3.56	3.45%	36.21%	8.89	3.76%	39.85%
25 - 29	8.89	6.67%	49.33%	3.56	3.45%	39.66%	12.44	5.26%	45.11%
30 - 34	5.33	4.00%	53.33%	7.11	6.90%	46.55%	12.44	5.26%	50.38%
35 - 39	12.44	9.33%	62.67%	16.00	15.52%	62.07%	28.44	12.03%	62.41%
40 - 44	16.00	12.00%	74.67%	12.44	12.07%	74.14%	28.44	12.03%	74.44%
45 - 49	10.67	8.00%	82.67%	10.67	10.34%	84.48%	21.33	9.02%	83.46%
50 - 54	7.11	5.33%	88.00%	1.78	1.72%	86.21%	8.89	3.76%	87.22%
55 - 59	3.56	2.67%	90.67%	3.56	3.45%	89.66%	7.11	3.01%	90.23%
60 - 64	5.33	4.00%	94.67%	3.56	3.45%	93.10%	8.89	3.76%	93.98%
65 - 69	3.56	2.67%	97.33%	3.56	3.45%	96.55%	7.11	3.01%	96.99%
70 - 74	1.78	1.33%	98.67%	1.78	1.72%	98.28%	3.56	1.50%	98.50%
75 - 79	0.00	0.00%	98.67%	0.00	0.00%	98.28%	0.00	0.00%	98.50%
80 - 84	1.78	1.33%	100.00%	0.00	0.00%	98.28%	1.78	0.75%	99.25%
85 - 89	0.00	0.00%	100.00%	0.00	0.00%	98.28%	0.00	0.00%	99.25%
90 - 94	0.00	0.00%	100.00%	0.00	0.00%	98.28%	0.00	0.00%	99.25%
95 - 99	0.00	0.00%	100.00%	0.00	0.00%	98.28%	0.00	0.00%	99.25%
100 - 104	0.00	0.00%	100.00%	0.00	0.00%	98.28%	0.00	0.00%	99.25%
Missing	0.00	0.00%	100.00%	1.78	1.72%	100.00%	1.78	0.75%	100.00%
TOTAL	133.33	56.39%		103.11	43.61%		236.44	100.00%	

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

Table XVI-4. Employment Characteristics, Port Lions, 1993/94

Characteristics		
ADULTS		
Total		160.00
Employed		
	Number	112.00
	Percentage	70.00
Jobs		
	Number	183.11
	Mean	1.63
	Minimum	1
	Maximum	4
Months Employed		
	Mean	7.40
	Minimum	1
	Maximum	12
	Year-Round	30.16%
HOUSEHOLDS		
Total		80.00
Employed		
	Number	64.00
	Percentage	80.00
Jobs per Employed Household		
	Mean	2.86
	Minimum	1
	Maximum	6
Employed Adults		
	Mean	1.75
	Minimum	1
	Maximum	3

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

Table XVI-5. Community, Household, and Per Capita Incomes, All Sources and by Employer Type, Port Lions, 1993/94

INCOME SOURCE	INCOME		
	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources	$3,694,860.27	$46,185.75	$15,626.76
Earned Income	$2,265,721.83	$28,321.52	$9,582.47
Agriculture, Forestry, and Fishing	1,095,200.00	13,690.00	4,631.95
Agriculture	0.00	0.00	0.00
Forestry	0.00	0.00	0.00
Fishing, Hunting, Trapping	1,095,200.00	13,690.00	4,631.95
Hatchery/Enhancement	0.00	0.00	0.00
Commercial Fishing	1,095,111.11	13,688.89	4,631.58
Hunting/Trapping	88.89	1.11	0.38
Mining	0.00	0.00	0.00
Construction	95,288.89	1,191.11	403.01
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	268,256.00	3,353.20	1,134.54
Trade	31,822.22	397.78	134.59
Wholesale	0.00	0.00	0.00
Retail	31,822.22	397.78	134.59
Finance, Insurance, and Real Estate	0.00	0.00	0.00
Services	200,972.00	2,512.15	849.98
Government	574,182.72	7,177.28	2,428.40
Federal	0.00	0.00	0.00
State	3,555.56	44.44	15.04
Local	570,627.16	7,132.84	2,413.37
Local Government	103,427.16	1,292.84	437.43
Local Education	467,200.00	5,840.00	1,975.94
Unknown	AMT UNK	AMT UNK	AMT UNK
Other Income	$1,429,138.44	$17,864.23	$6,044.29

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

Table XVI-6. Community, Household, and Per Capita Other Income by Source, Port Lions, 1993/94

Source	OTHER INCOME			
	PERCENTAGE REPORTING	COMMUNITY TOTAL	AVERAGE HOUSEHOLD	PER CAPITA
All Sources		$1,429,138.44	$17,864.23	$6,044.29
Exxon Claims	0.00	0.00	0.00	0.00
Aid to Families with Dependent Children	15.56	77,155.56	964.44	326.32
Adult Public Assistance	15.56	49,429.33	617.87	209.05
Exxon Damages	0.00	0.00	0.00	0.00
Pension/Retirement	13.33	416,000.00	5,200.00	1,759.40
Longevity Bonus	15.56	37,333.33	466.67	157.89
Social Security	20.00	110,000.00	1,375.00	465.23
Workman's Comp./Insurance	11.11	AMT UNK	AMT UNK	AMT UNK
Energy Assistance	33.33	11,432.00	142.90	48.35
Supplemental Security Income	20.00	66,320.00	829.00	280.49
Food Stamps	22.22	32,942.22	411.78	139.32
Unemployment	35.56	124,199.82	1,552.50	525.28
Native Corporation Dividend	66.67	266,084.44	3,326.06	1,125.36
Dividend/Interest	13.33	9,600.00	120.00	40.60
Child Support	0.00	0.00	0.00	0.00
Rental Income	2.22	2,666.67	33.33	11.28
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	97.78	203,752.84	2,546.91	861.74
Weatherization	0.00	0.00	0.00	0.00
Veteran's Assistance	0.00	0.00	0.00	0.00
Investments/Stocks/Bonds	2.22	22,222.22	277.78	93.98
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
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 XVI-3. Employment by Industry, Port Lions, 1993/94

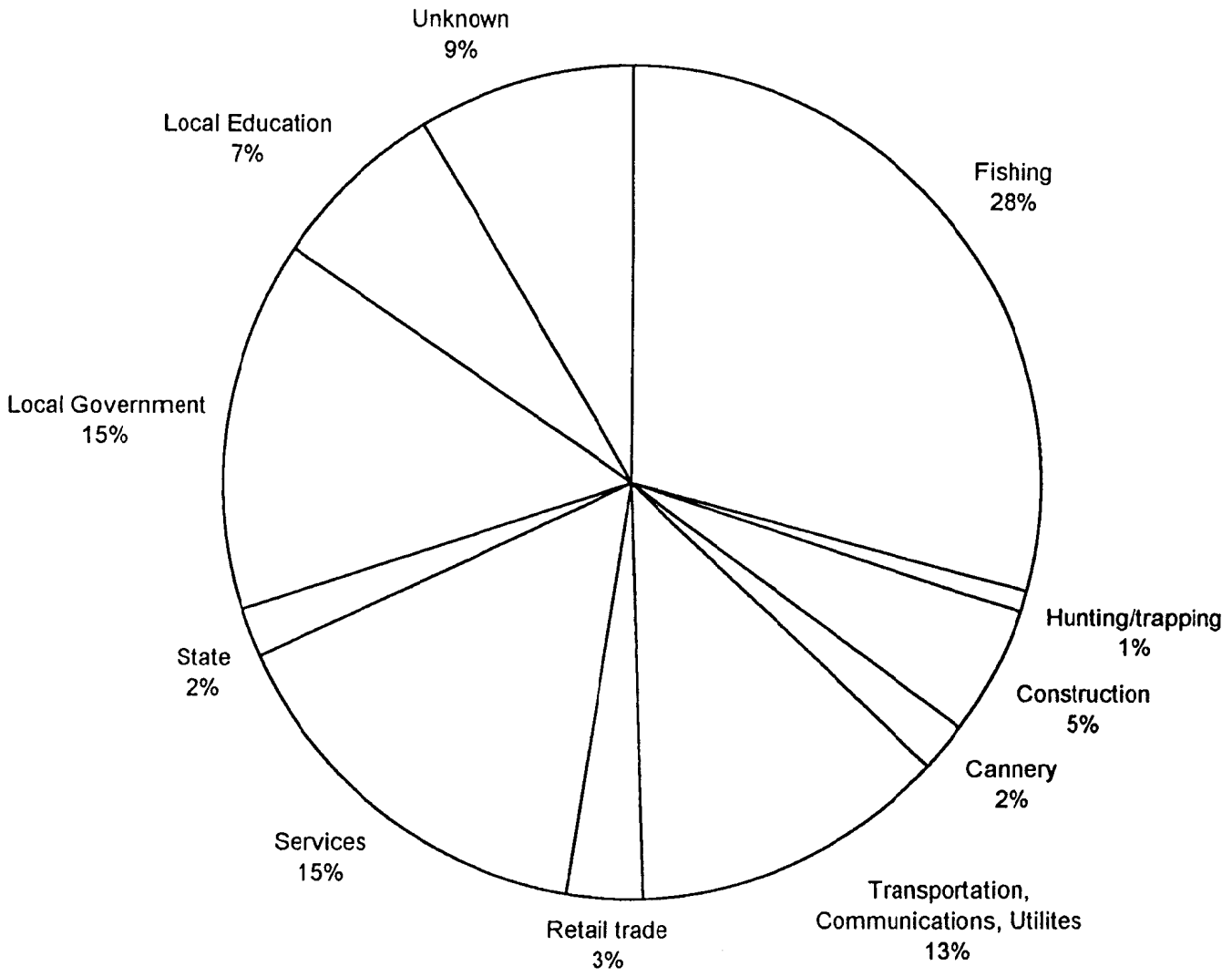


Table XVI-7. Characteristics of Resource Harvest and Use, Port Lions, 1993/94

Study Community	Port Lions
Mean Number Of Resources Used Per Household	15.62
Minimum	3
Maximum	37
95 % Confidence Limit (+/-)	10.95
Median	13
Mean Number Of Resources Attempted To Harvest Per Household	11.78
Minimum	1
Maximum	33
95 % Confidence Limit (+/-)	14.10
Median	10
Mean Number Of Resources Harvested Per Household	11.53
Minimum	1
Maximum	33
95 % Confidence Limit (+/-)	14.06
Median	10
Mean Number Of Resources Received Per Household	6.98
Minimum	1
Maximum	19
95 % Confidence Limit (+/-)	13.66
Median	6
Mean Number Of Resources Given Away Per Household	6.02
Minimum	0
Maximum	23
95 % Confidence Limit (+/-)	19.98
Median	5
Mean Household Harvest, Pounds	979.67
Minimum	8.00
Maximum	7,203.94
Total Pounds Harvested	78,373.30
Community Per Capita Harvest, Pounds	331.47
Percent Using Any Resource	100.00
Percent Attempting To Harvest Any Resource	100.00
Percent Harvesting Any Resource	100.00
Percent Receiving Any Resource	100.00
Percent Giving Away Any Resource	91.11
Number Of Households In Sample	45
Number of Resources Available	138

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

Table XVI-8. Participation in the Harvest and Processing of Wild Resources, Port Lions, 1993/94

Total Number of People			236.44
GAME	Hunt	Number	106.67
		Percentage	45.11
		Missing	0.00
		Missing %	0.00
	Process	Number	151.11
		Percentage	63.91
		Missing	0.00
		Missing %	0.00
FISH	Fish	Number	192.00
		Percentage	81.20
		Missing	0.00
		Missing %	0.00
	Process	Number	197.33
		Percentage	83.46
		Missing	0.00
		Missing %	0.00
FURBEARERS	Hunt or Trap	Number	30.22
		Percentage	12.78
		Missing	0.00
		Missing %	0.00
	Process	Number	17.78
		Percentage	7.52
		Missing	0.00
		Missing %	0.00
PLANTS	Gather	Number	213.33
		Percentage	90.23
		Missing	0.00
		Missing %	0.00
	Process	Number	193.78
		Percentage	81.95
		Missing	0.00
		Missing %	0.00
ANY RESOURCE			
	Attempt	Number	218.67
		Percent	92.48
	Process	Number	215.11
		Percent	90.98

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

Table XVI-9. Subsistence Harvests in Pounds Usable Weight per Person by Resource Category, Port Lions, 1982/83, 1986, 1989, and 1993/94

	Pounds Usable Weight per Person			
	1982/83	1986	1989	1993/94
Salmon	98.4	160.1	60.5	157.7
Other Fish	98.7	55.1	33.3	63.7
Marine Invertebrates	35.8	32.4	16.4	30.2
Land Mammals	36.3	73.5	26.1	56.2
Marine Mammals	8.1	6.5	0.5	4.5
Birds and Eggs	2.6	2.0	2.6	3.9
Wild Plants	*	3.6	7.3	15.4
All Resources	279.8	333.1	146.7	331.5

* Note: wild plant data not collected for 1982/83

Table XVI-10. Composition of Resource Harvests by Resource Category, Port Lions, 1982/83, 1986, 1989, and 1993/94

	Percentage of Total Harvest			
	1982/83	1986	1989	1993/94
Salmon	35.2%	48.0%	41.2%	47.6%
Other Fish	35.3%	16.5%	22.7%	19.2%
Marine Invertebrates	12.8%	9.7%	11.2%	9.1%
Land Mammals	13.0%	22.1%	17.8%	16.9%
Marine Mammals	2.9%	1.9%	0.4%	1.3%
Birds and Eggs	0.9%	0.6%	1.8%	1.2%
Wild Plants	*	1.1%	5.0%	4.6%

* Note: wild plant data not collected for 1982/83

Figure XVI-4. Harvests of Wild Resources for Home Use, Pounds Usable Weight per Capita, Port Lions, 1982/83, 1986, 1989, and 1993/94

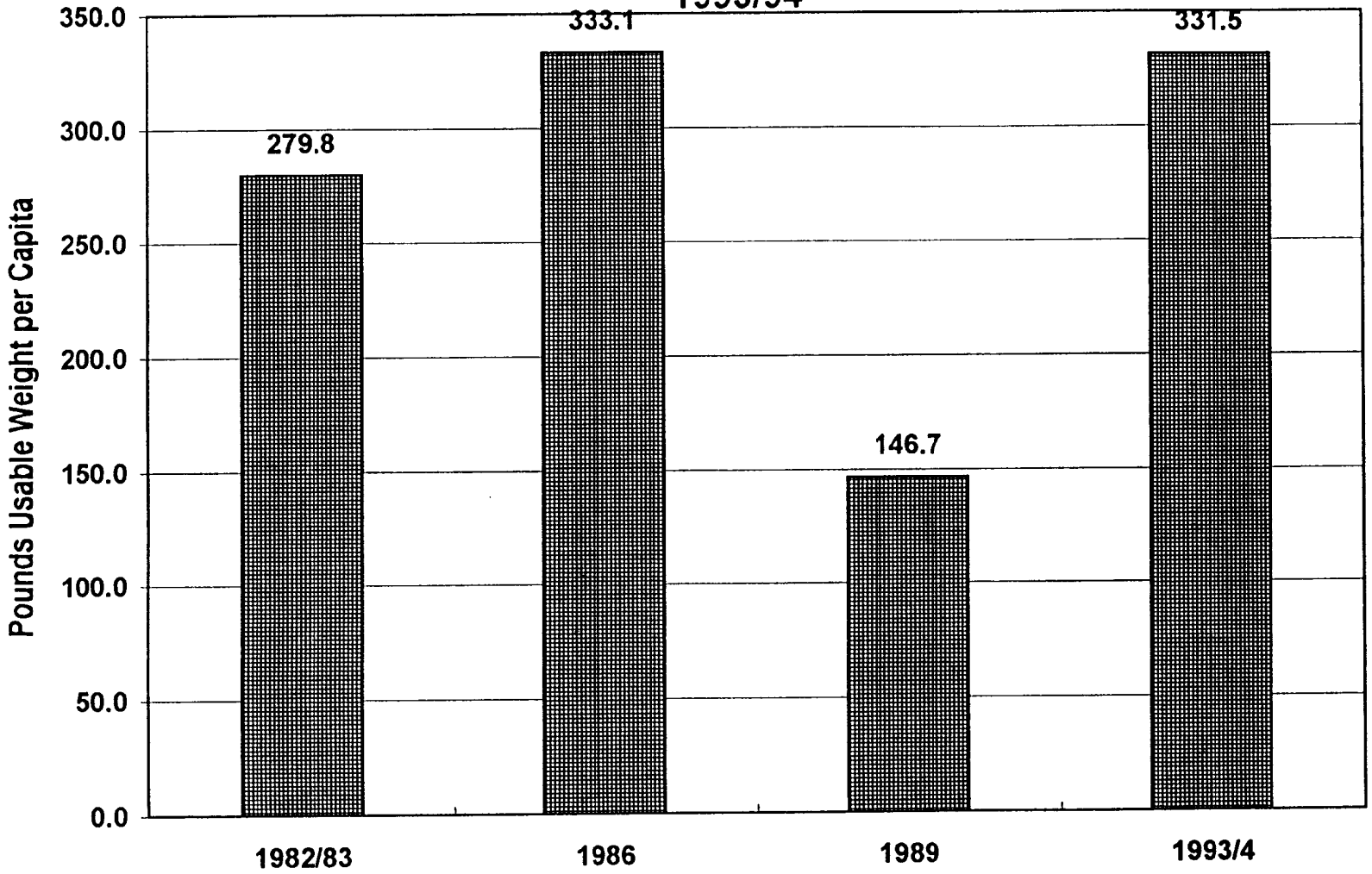


Figure XVI-5 . Per Capita Harvests of Wild Resources by Resource Category, Port Lions, 1982/83, 1986, 1989, and 1993/94

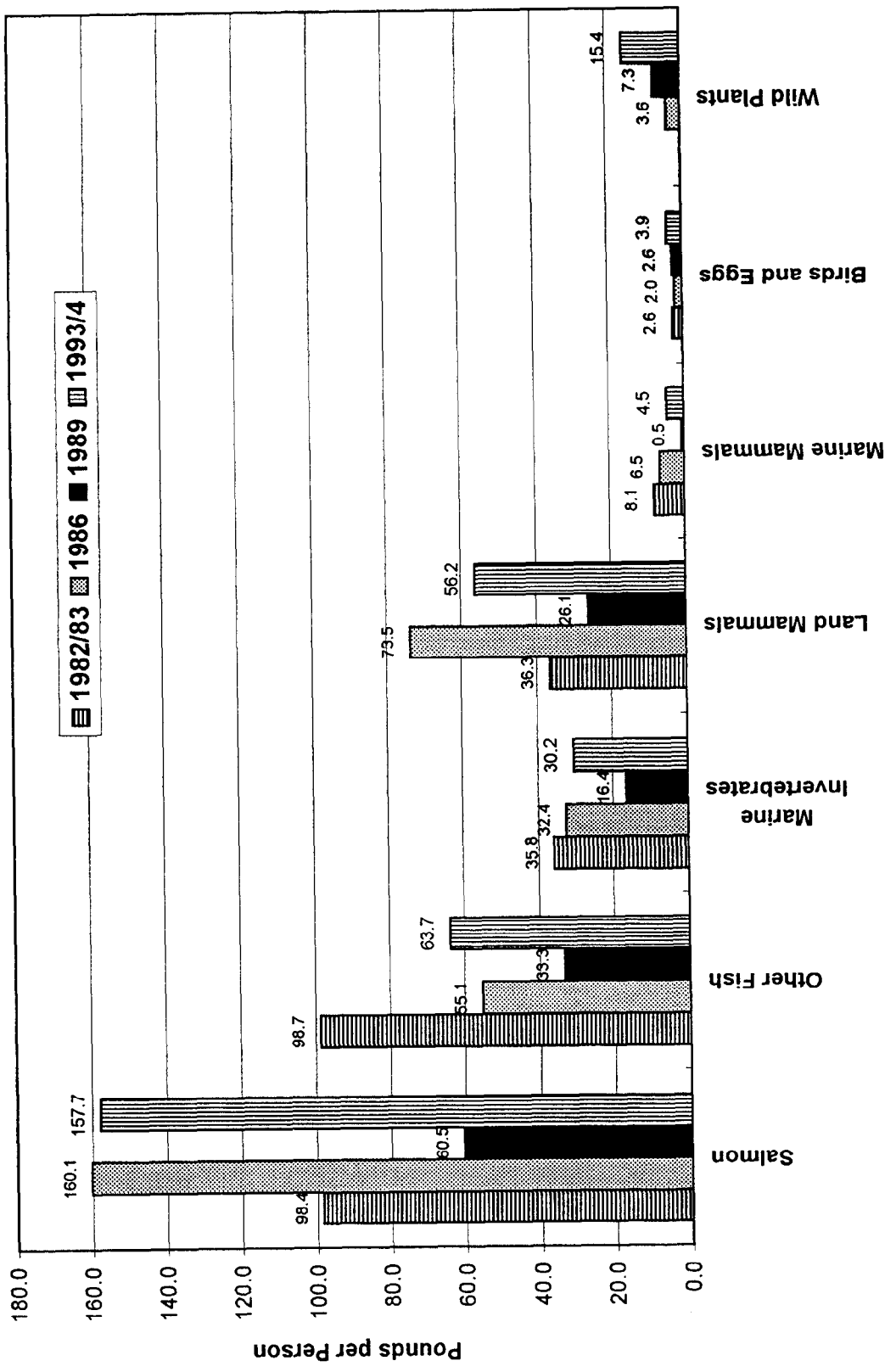


Figure XVI-6. Composition of Wild Resource Harvests by Resource Category, Port Lions, 1993/94

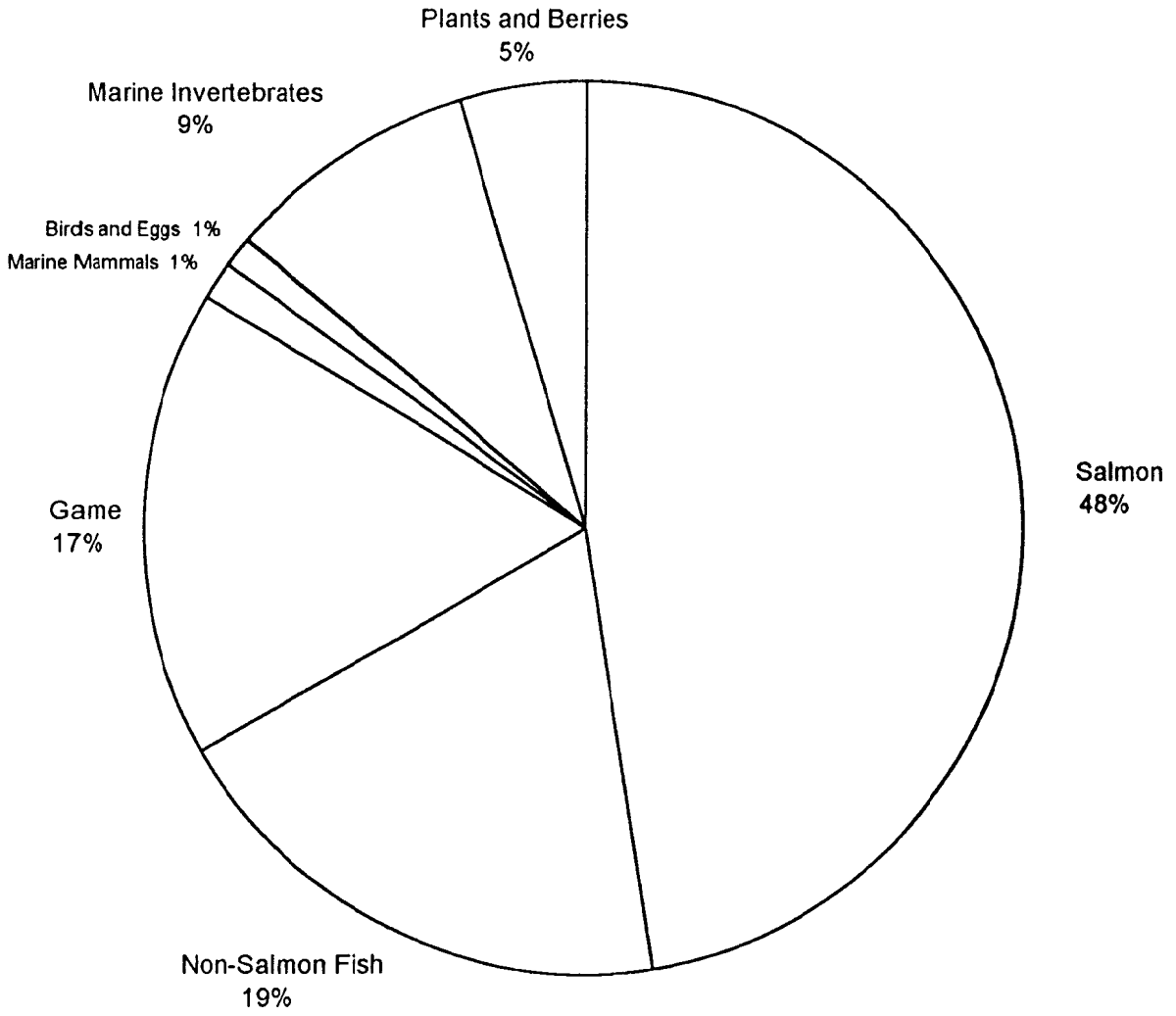


Table XVI-11. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Port Lions, 1993/94

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	100.0	100.0	100.0	91.1	78,373.30	979.67	331.47			26.51%	24.03%
Fish	100.0	86.7	86.7	88.9	75.6	52,341.66	654.27	221.37			26.70%	24.69%
Salmon	100.0	82.2	82.2	62.2	68.9	37,279.88	466.00	157.67	8,991.11	112.39	31.44%	30.19%
Chum Salmon	20.0	15.6	15.6	6.7	6.7	779.68	9.75	3.30	176.00	2.20	83.91%	81.15%
Coho Salmon	93.3	73.3	73.3	42.2	64.4	17,041.92	213.02	72.08	3,381.33	42.27	38.31%	36.81%
Chinook Salmon	35.6	31.1	26.7	13.3	6.7	831.31	10.39	3.52	96.89	1.21	78.82%	76.00%
Pink Salmon	55.6	42.2	42.2	22.2	26.7	2,498.88	31.24	10.57	1,096.00	13.70	56.96%	54.97%
Sockeye Salmon	93.3	77.8	77.8	53.3	42.2	15,929.60	199.12	67.37	4,192.00	52.40	31.61%	29.92%
Unknown Salmon	4.4	2.2	2.2	2.2	2.2	198.49	2.48	0.84	48.89	0.61	133.31%	133.65%
Non-Salmon Fish	95.6	68.9	68.9	82.2	48.9	15,061.78	188.27	63.70			30.72%	30.08%
Pike	2.2	2.2	2.2	0.0	0.0	62.22	0.78	0.26	20.74	0.26	133.31%	131.59%
Cod	53.3	24.4	24.4	37.8	13.3	1,034.31	12.93	4.37	323.22	4.04	48.57%	49.02%
Pacific Cod (Gray)	53.3	24.4	24.4	37.8	13.3	1,034.31	12.93	4.37	323.22	4.04	48.57%	49.02%
Sablefish (Black Cod)	13.3	11.1	11.1	2.2	2.2	171.56	2.14	0.73	55.34	0.69	69.43%	70.66%
Greenling	4.4	4.4	4.4	0.0	2.2	26.67	0.33	0.11	26.67	0.33	103.26%	102.11%
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	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 Greenling	4.4	4.4	4.4	0.0	2.2	26.67	0.33	0.11	26.67	0.33	103.26%	102.11%
Flounder	2.2	2.2	2.2	0.0	0.0	53.33	0.67	0.23	17.78	0.22	133.31%	130.55%
Arrow Tooth Flounder (Turbot)	2.2	2.2	2.2	0.0	0.0	53.33	0.67	0.23	17.78	0.22	133.31%	130.55%
Starry 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%
Greenland Halibut (Greenland Turbot)	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	2.2	2.2	2.2	0.0	0.0	17.78	0.22	0.08	17.78	0.22	133.31%	131.59%
Yellowfin Sole	2.2	2.2	2.2	0.0	0.0	17.78	0.22	0.08	17.78	0.22	133.31%	131.59%
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	93.3	66.7	66.7	64.4	42.2	11,271.47	140.89	47.67	312.23	3.90	33.46%	32.86%
Herring	20.0	11.1	11.1	8.9	11.1	864.36	10.80	3.66	144.06 gal	1.80	89.93%	90.84%
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%
Rockfish	24.4	17.8	17.8	11.1	8.9	553.78	6.92	2.34	309.93	3.87	70.67%	65.43%
Black Rockfish (black bass)	17.8	15.6	15.6	6.7	6.7	411.56	5.14	1.74	274.37	3.43	78.61%	76.49%
Red Rockfish	8.9	2.2	2.2	6.7	2.2	142.22	1.78	0.60	35.56	0.44	133.31%	134.67%
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%
Sea Perch	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	6.7	6.7	6.7	0.0	2.2	64.89	0.81	0.27	129.78	1.62	102.33%	103.85%
Irish Lord	4.4	4.4	4.4	0.0	2.2	41.78	0.52	0.18	83.56	1.04	108.08%	110.03%

Table XVI-11. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Port Lions, 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
Unknown Sculpin	4.4	4.4	4.4	0.0	2.2	23.11	0.29	0.10	46.22	0.58	100.14%	100.70%
Smelt	2.2	0.0	0.0	2.2	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%
Capelin (Grunion)	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)	2.2	0.0	0.0	2.2	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%
Unknown 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)	11.1	8.9	8.9	2.2	2.2	62.22	0.78	0.26	44.44	0.56	69.71%	72.96%
Skates	2.2	2.2	2.2	0.0	0.0	8.89	0.11	0.04	1.78	0.02	133.31%	135.68%
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%
Whitefish	2.2	2.2	2.2	0.0	0.0	19.56	0.24	0.08	11.17	0.14	133.31%	131.59%
Unknown Whitefish	2.2	2.2	2.2	0.0	0.0	19.56	0.24	0.08	11.17	0.14	133.31%	131.59%
Trout and Char	26.7	24.4	22.2	8.9	13.3	850.76	10.63	3.60	560.89	7.01	45.14%	41.53%
Char (general)	24.4	24.4	22.2	4.4	8.9	625.77	7.82	2.65	463.11	5.79	49.20%	46.02%
Dolly Varden	24.4	24.4	22.2	4.4	8.9	624.71	7.81	2.64	446.22	5.58	48.86%	45.99%
Dolly Varden-Fingerling	4.4	4.4	4.4	0.0	0.0	1.06	0.01	0.00	16.89	0.21	108.30%	109.72%
Brook 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 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%
Trout	17.8	15.6	15.6	6.7	8.9	225.00	2.81	0.95	97.78	1.22	70.27%	56.86%
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	13.3	11.1	11.1	2.2	6.7	107.02	1.34	0.45	76.44	0.96	83.06%	81.42%
Steelhead	13.3	11.1	11.1	4.4	4.4	117.97	1.47	0.50	21.33	0.27	66.27%	64.01%
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	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	84.4	60.0	57.8	48.9	44.4	13,275.20	165.94	56.15	542.22	6.78	34.04%	32.55%
Big Game	84.4	57.8	55.6	48.9	42.2	12,844.98	160.56	54.33	279.11	3.49	36.81%	33.38%
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	0.0	2.2	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Brown Bear	0.0	2.2	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Caribou	4.4	0.0	0.0	4.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Deer	80.0	57.8	55.6	42.2	40.0	11,827.20	147.84	50.02	273.78	3.42	37.03%	33.72%
Elk	15.6	2.2	2.2	13.3	4.4	400.00	5.00	1.69	1.78	0.02	133.31%	130.55%
Goat	4.4	2.2	2.2	4.4	2.2	128.89	1.61	0.55	1.78	0.02	133.31%	130.55%
Moose	17.8	0.0	0.0	17.8	2.2	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Muskox	2.2	2.2	2.2	0.0	2.2	488.89	6.11	2.07	1.78	0.02	133.31%	130.55%

Table XVI-11. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Port Lions, 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
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	28.9	26.7	24.4	6.7	15.6	430.22	5.38	1.82	263.11	3.29	43.54%	48.78%
Fox	6.7	8.9	6.7	0.0	4.4	0.00	0.00	0.00	24.89	0.31	81.51%	0.00%
Red Fox	6.7	8.9	6.7	0.0	4.4	0.00	0.00	0.00	24.89	0.31	81.51%	0.00%
Beaver	4.4	4.4	4.4	0.0	4.4	0.00	0.00	0.00	17.78	0.22	95.11%	0.00%
Hare	24.4	22.2	20.0	6.7	13.3	430.22	5.38	1.82	215.11	2.69	51.22%	48.78%
Snowshoe Hare	24.4	22.2	20.0	6.7	13.3	430.22	5.38	1.82	215.11	2.69	51.22%	48.78%
Land Otter	2.2	2.2	2.2	0.0	0.0	0.00	0.00	0.00	5.33	0.07	133.31%	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%
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%
Marine Mammals	17.8	4.4	4.4	15.6	4.4	1,052.44	13.16	4.45	14.22	0.18	93.18%	94.18%
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%
Humpback 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	17.8	4.4	4.4	15.6	4.4	696.89	8.71	2.95	12.44	0.16	94.17%	92.58%
Harbor Seal	17.8	4.4	4.4	15.6	4.4	696.89	8.71	2.95	12.44	0.16	94.17%	92.58%
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	2.2	2.2	2.2	0.0	2.2	355.56	4.44	1.50	1.78	0.02	133.31%	131.59%
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	60.0	44.4	44.4	33.3	26.7	913.96	11.42	3.87	1,353.78	16.92	33.98%	32.41%
Birds	60.0	42.2	42.2	31.1	24.4	837.16	10.46	3.54	1,076.44	13.46	34.45%	33.40%
Upland Game Birds	13.3	15.6	13.3	0.0	4.4	103.29	1.29	0.44	147.56	1.84	65.98%	62.86%
Ptarmigan	13.3	15.6	13.3	0.0	4.4	103.29	1.29	0.44	147.56	1.84	65.98%	62.86%
Migratory Birds	60.0	42.2	42.2	31.1	22.2	733.87	9.17	3.10	928.89	11.61	33.80%	33.60%
Waterfowl	60.0	42.2	42.2	31.1	22.2	727.47	9.09	3.08	907.56	11.34	34.31%	33.84%
Ducks	60.0	42.2	42.2	31.1	22.2	727.47	9.09	3.08	907.56	11.34	34.31%	33.84%
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%

Table XVI-11. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Port Lions, 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
Scoter	28.9	20.0	20.0	13.3	6.7	168.00	2.10	0.71	186.67	2.33	52.00%	50.20%
Scoter, White-winged	17.8	15.6	15.6	6.7	6.7	86.40	1.08	0.37	96.00	1.20	57.97%	57.46%
Scoter, Black	20.0	15.6	15.6	4.4	6.7	81.60	1.02	0.35	90.67	1.13	69.50%	67.19%
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	2.2	0.0	0.0	2.2	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Harlequin	13.3	6.7	6.7	6.7	4.4	28.44	0.36	0.12	56.89	0.71	75.51%	74.19%
Goldeneye	44.4	28.9	28.9	17.8	17.8	266.67	3.33	1.13	333.33	4.17	38.90%	40.02%
Bufflehead	13.3	11.1	11.1	2.2	2.2	20.62	0.26	0.09	51.56	0.64	64.80%	64.20%
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	4.4	4.4	4.4	0.0	2.2	14.40	0.18	0.06	16.00	0.20	119.08%	119.47%
Mallard	40.0	26.7	26.7	20.0	6.7	165.33	2.07	0.70	165.33	2.07	37.88%	37.15%
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	6.7	6.7	6.7	0.0	2.2	8.53	0.11	0.04	28.44	0.36	80.95%	82.77%
Oldsquaw	6.7	6.7	6.7	0.0	4.4	55.47	0.69	0.23	69.33	0.87	85.18%	81.83%
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%
Redhead Duck	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 Ducks	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	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
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%
Black 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, 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, 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%
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	2.2	2.2	2.2	0.0	0.0	6.40	0.08	0.03	21.33	0.27	133.31%	132.63%
Auklet	2.2	2.2	2.2	0.0	0.0	6.40	0.08	0.03	21.33	0.27	133.31%	132.63%
Parakeet Auklet	2.2	2.2	2.2	0.0	0.0	6.40	0.08	0.03	21.33	0.27	133.31%	132.63%
Eggs	13.3	13.3	13.3	2.2	6.7	76.80	0.96	0.32	277.33	3.47	60.24%	59.10%
Seabird Eggs	13.3	13.3	13.3	2.2	6.7	76.80	0.96	0.32	277.33	3.47	60.24%	59.10%
Gull Eggs	13.3	13.3	13.3	2.2	6.7	70.40	0.88	0.30	234.67	2.93	61.86%	60.45%
Herring Gull Eggs	13.3	13.3	13.3	2.2	6.7	70.40	0.88	0.30	234.67	2.93	61.86%	60.45%
Puffin 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 XVI-11. Estimated Harvest and Use of Fish, Mammal, Bird and Plant Resources, Port Lions, 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
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%
Kittiwake Eggs	4.4	4.4	4.4	2.2	4.4	6.40	0.08	0.03	42.67	0.53	93.18%	91.47%
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%
Eider 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%
Marine Invertebrates	93.3	88.9	86.7	71.1	53.3	7,149.16	89.36	30.24			28.41%	26.08%
Clams	91.1	82.2	82.2	28.9	46.7	3,842.67	48.03	16.25	1,280.89 gal	16.01	17.39%	17.09%
Butter Clams	91.1	82.2	82.2	28.9	46.7	3,568.00	44.60	15.09	1,189.33 gal	14.87	18.10%	17.84%
Razor Clams	4.4	4.4	4.4	0.0	0.0	90.67	1.13	0.38	30.22 gal	0.38	118.31%	118.43%
Pacific Littleneck Clams (Steamers)	17.8	17.8	17.8	0.0	2.2	184.00	2.30	0.78	61.33 gal	0.77	46.70%	46.07%
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	8.9	8.9	8.9	2.2	4.4	93.33	1.17	0.39	31.11 gal	0.39	82.77%	80.81%
Scallops	4.4	0.0	0.0	4.4	2.2	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
Jingles	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	6.7	6.7	6.7	2.2	2.2	20.62	0.26	0.09	13.75 gal	0.17	91.71%	88.80%
Crabs	77.8	37.8	35.6	64.4	17.8	2,561.42	32.02	10.83			55.39%	52.43%
Dungeness Crab	42.2	24.4	24.4	28.9	15.6	943.29	11.79	3.99	1,347.56	16.84	66.00%	63.27%
King Crab	26.7	6.7	4.4	24.4	0.0	212.62	2.66	0.90			128.17%	128.48%
King Crab, Blue	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 Eggs, Red	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%
King Crab, Unknown	26.7	6.7	4.4	24.4	0.0	212.62	2.66	0.90	92.44	1.16	128.17%	128.48%
Tanner Crab	71.1	20.0	20.0	60.0	13.3	1,405.51	17.57	5.94	878.44	10.98	62.08%	59.14%
Tanner Crab, Bairdi	4.4	4.4	4.4	0.0	0.0	138.67	1.73	0.59	86.67	1.08	111.43%	110.18%
Tanner Crab, Opilio	2.2	2.2	2.2	0.0	0.0	24.89	0.31	0.11	15.56	0.19	133.31%	130.55%
Tanner Crab, Unknown	68.9	17.8	17.8	60.0	13.3	1,241.96	15.52	5.25	776.22	9.70	68.44%	65.78%
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)	31.1	28.9	28.9	4.4	6.7	222.67	2.78	0.94	55.67 gal	0.70	40.12%	40.80%
Chitons (small)	31.1	28.9	28.9	4.4	6.7	222.67	2.78	0.94	55.67 gal	0.70	40.12%	40.80%
Octopus	28.9	24.4	24.4	11.1	11.1	373.33	4.67	1.58	93.33	1.17	48.38%	48.29%
Sea Cucumber	2.2	0.0	0.0	2.2	0.0	0.00	0.00	0.00	0.00 gal	0.00	0.00%	0.00%

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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 Urchin	8.9	6.7	6.7	6.7	4.4	15.11	0.19	0.06	30.22 gal	0.38	83.39%	82.10%
Shrimp	2.2	4.4	2.2	0.0	0.0	17.78	0.22	0.08	8.89 gal	0.11	133.31%	130.55%
Snails	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%
Limpets	4.4	4.4	4.4	0.0	0.0	2.22	0.03	0.01	1.48 gal	0.02	95.11%	91.81%
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%
Plants and Berries	100.0	95.6	95.6	44.4	46.7	3,640.89	45.51	15.40	910.22 gal	11.38	29.25%	31.90%
Berries	100.0	95.6	95.6	44.4	44.4	3,552.00	44.40	15.02	888.00 gal	11.10	30.00%	32.68%
Plants/Greens/Mushrooms	24.4	17.8	17.8	11.1	8.9	88.89	1.11	0.38	22.22 gal	0.28	61.15%	60.57%
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%
Fertilizer	20.0	20.0	20.0	4.4	6.7	0.00	0.00	0.00			0.00%	0.00%
Vegetative Fertilizer	20.0	20.0	20.0	2.2	6.7	0.00	0.00	0.00	11,511.11 gal	143.89	94.73%	0.00%
Seaweed/Kelp (Non-food)	20.0	20.0	20.0	2.2	6.7	0.00	0.00	0.00	11,511.11 gal	143.89	94.73%	0.00%
Fish Fertilizer	4.4	4.4	4.4	2.2	4.4	0.00	0.00	0.00			0.00%	0.00%
Herring [Fertilizer]	4.4	4.4	4.4	2.2	4.4	0.00	0.00	0.00			0.00%	0.00%
Invertebrate Fertilizer	2.2	2.2	2.2	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Starfish	2.2	2.2	2.2	0.0	0.0	0.00	0.00	0.00			0.00%	0.00%
Wood	71.1	66.7	66.7	11.1	26.7	0.00	0.00	0.00	279.32 crd	3.49	25.36%	0.00%

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

Table XVI-12. Estimated Amount of Resources Removed From Commercial Harvest, Port Lions, 1993/94

Resource	Removed From Catch		Percent of	
	Amount	Pounds	Species Harvest (lbs)	Community Harvest (lbs)
All Resources		3486.36	5.86	4.45
Fish		3097.03	5.92	3.95
Salmon	375.11	1638.36	4.39	2.09
Chum Salmon	10.67	47.25	6.06	0.06
Coho Salmon	152.89	770.56	4.52	0.98
Chinook Salmon	14.22	122.03	14.68	0.16
Pink Salmon	33.78	77.01	3.08	0.10
Sockeye Salmon	163.56	621.51	3.90	0.79
Non-Salmon Fish		1458.67	9.68	1.86
Cod	96.00	307.20	29.70	0.39
Pacific Cod (Gray)	96.00	307.20	29.70	0.39
Sablefish (Black Cod)	32.00	99.20	57.82	0.13
Halibut	23.57	851.02	7.55	1.09
Herring	4.44 gal	26.67	3.09	0.03
Rockfish	35.56	142.22	25.68	0.18
Red Rockfish	35.56	142.22	100.00	0.18
Walleye Pollock (Whiting)	23.11	32.36	52.00	0.04
Marine Invertebrates		389.33	5.45	0.50
Crabs		368.00	14.37	0.47
King Crab		204.44	96.15	0.26
King Crab, Unknown	88.89	204.44	96.15	0.26
Tanner Crab	102.22	163.56	11.64	0.21
Tanner Crab, Bairdi	86.67	138.67	100.00	0.18
Tanner Crab, Opilio	15.56	24.89	100.00	0.03
Octopus	5.33	21.33	5.71	0.03

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

Table XVI-13. Percentage of Salmon Harvest By Resource, Gear Type, and Total Salmon Harvest Port Lions, 1993/94

Resource	Percent Base	Subsistence Methods: Setnet No.	Setnet Lbs.	Beach Seine No.	Beach Seine Lbs.	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	70.68	69.86	9.69	10.21	2.10	1.97	82.46	82.05	4.17	4.39	13.37	13.56		
Chum Salmon	gear type	1.99	2.15	0.00	0.00	4.72	5.35	1.82	1.96	2.84	2.88	2.51	2.65		
	resource	71.72	71.72	0.00	0.00	5.05	5.05	76.77	76.77	6.06	6.06	17.17	17.17		
	total	1.40	1.50	0.00	0.00	0.10	0.11	1.50	1.61	0.12	0.13	0.34	0.36	1.96	2.09
Coho Salmon	gear type	32.54	40.01	51.02	58.83	29.25	37.74	34.62	42.30	40.76	47.03	55.03	65.94		
	resource	61.15	61.15	13.14	13.14	1.63	1.63	75.92	75.92	4.52	4.52	19.56	19.56		
	total	23.00	27.95	4.94	6.01	0.61	0.75	28.55	34.71	1.70	2.07	7.36	8.94	37.61	45.71
Chinook Salmon	gear type	0.94	1.96	0.00	0.00	0.00	0.00	0.80	1.67	3.79	7.45	1.92	3.92		
	resource	61.47	61.47	0.00	0.00	0.00	0.00	61.47	61.47	14.68	14.68	23.85	23.85		
	total	0.66	1.37	0.00	0.00	0.00	0.00	0.66	1.37	0.16	0.33	0.26	0.53	1.08	2.23
Pink Salmon	gear type	10.69	5.95	4.08	2.13	18.87	11.01	10.12	5.59	9.00	4.70	25.96	14.07		
	resource	61.96	61.96	3.24	3.24	3.24	3.24	68.45	68.45	3.08	3.08	28.47	28.47		
	total	7.55	4.15	0.40	0.22	0.40	0.22	8.34	4.59	0.38	0.21	3.47	1.91	12.19	6.70
Sockeye Salmon	gear type	53.85	49.93	44.90	39.04	47.17	45.89	52.63	48.48	43.60	37.93	10.50	9.49		
	resource	81.64	81.64	9.33	9.33	2.12	2.12	93.09	93.09	3.90	3.90	3.01	3.01		
	total	38.06	34.88	4.35	3.99	0.99	0.91	43.40	39.78	1.82	1.67	1.40	1.29	46.62	42.73
Unknown Salmon	gear type	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.07	3.93		
	resource	0.00	0.00	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	0.00	0.00	0.54	0.53	0.54	0.53

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

Table XVI-14. Estimated Salmon Harvest by Gear Type and Species, Port Lions, 1993/94

		Subsistence Methods								Removed from Commercial Catch		Rod and Reel		Any Method	
		Setnet		Beach Seine		Dip 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	Total	HH Mean
Salmon	numbers	6,354.67	79.43	871.11	10.89	188.44	2.36	7,414.22	92.68	375.11	4.69	1,201.78	15.02	8,991.11	112.39
	pounds	26,043.45	325.54	3,807.29	47.59	735.98	9.20	30,586.72	382.33	1,638.36	20.48	5,054.79	63.18	37,279.88	466.00
Chum Salmon	numbers	126.22	1.58	0.00	0.00	8.89	0.11	135.11	1.69	10.67	0.13	30.22	0.38	176.00	2.20
	pounds	559.16	6.99	0.00	0.00	39.38	0.49	598.54	7.48	47.25	0.59	133.88	1.67	779.68	9.75
Coho Salmon	numbers	2,067.56	25.84	444.44	5.56	55.11	0.69	2,567.11	32.09	152.89	1.91	661.33	8.27	3,381.33	42.27
	pounds	10,420.48	130.26	2,240.00	28.00	277.76	3.47	12,938.24	161.73	770.56	9.63	3,333.12	41.66	17,041.92	213.02
Chinook Salmon	numbers	59.56	0.74	0.00	0.00	0.00	0.00	59.56	0.74	14.22	0.18	23.11	0.29	96.89	1.21
	pounds	510.99	6.39	0.00	0.00	0.00	0.00	510.99	6.39	122.03	1.53	198.29	2.48	831.31	10.39
Pink Salmon	numbers	679.11	8.49	35.56	0.44	35.56	0.44	750.22	9.38	33.78	0.42	312.00	3.90	1,096.00	13.70
	pounds	1,548.37	19.35	81.07	1.01	81.07	1.01	1,710.51	21.38	77.01	0.96	711.36	8.89	2,498.88	31.24
Sockeye Salmon	numbers	3,422.22	42.78	391.11	4.89	88.89	1.11	3,902.22	48.78	163.56	2.04	126.22	1.58	4,192.00	52.40
	pounds	13,004.44	162.56	1,486.22	18.58	337.78	4.22	14,828.44	185.36	621.51	7.77	479.64	6.00	15,929.60	199.12
Unknown Salmon	numbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.89	0.61	48.89	0.61
	pounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	198.49	2.48	198.49	2.48

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

Table XVI-15. Percentage of Households Harvesting Salmon by Gear Type and Species, Port Lions, 1993/94

Resource	Subsistence Methods				Removed from Commercial Catch	Rod and Reel	Any Method
	Setnet	Beach Seine	Dip Net	Any Subsistence Gear			
Salmon	66.67	6.67	4.44	71.11	22.22	53.33	82.22
Chum Salmon	8.89	0.00	2.22	8.89	4.44	6.67	15.56
Coho Salmon	46.67	4.44	4.44	53.33	13.33	42.22	73.33
Chinook Salmon	17.78	0.00	0.00	17.78	6.67	6.67	26.67
Pink Salmon	17.78	2.22	2.22	20.00	6.67	26.67	42.22
Sockeye Salmon	60.00	4.44	2.22	62.22	20.00	13.33	77.78
Unknown Salmon	0.00	0.00	0.00	0.00	0.00	2.22	2.22

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

Table XVI-16. Estimated Harvest of Fish Other than Salmon by Gear Type, Port Lions, 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	3,454.81	43.19	1,458.67	18.23	10,148.31	126.85	0.00	0.00	15,061.78	188.27
Pike	pounds	0.00	0.00	0.00	0.00	62.22	0.78	0.00	0.00	62.22	0.78
Unknown Whitefish	pounds	0.00	0.00	0.00	0.00	19.56	0.24	0.00	0.00	19.56	0.24
Pacific Cod (Gray)	pounds	0.00	0.00	307.20	3.84	727.11	9.09	0.00	0.00	1,034.31	12.93
Sablefish (Black Cod)	pounds	33.78	0.42	99.20	1.24	38.58	0.48	0.00	0.00	171.56	2.14
Arrow Tooth Flounder (Turbot)	pounds	0.00	0.00	0.00	0.00	53.33	0.67	0.00	0.00	53.33	0.67
Yellowfin Sole	pounds	0.00	0.00	0.00	0.00	17.78	0.22	0.00	0.00	17.78	0.22
Halibut	pounds	2,353.78	29.42	851.02	10.64	8,066.67	100.83	0.00	0.00	11,271.47	140.89
Herring	pounds	837.69	10.47	26.67	0.33	0.00	0.00	0.00	0.00	864.36	10.80
Black Rockfish (black bass)	pounds	0.00	0.00	0.00	0.00	411.56	5.14	0.00	0.00	411.56	5.14
Red Rockfish	pounds	0.00	0.00	142.22	1.78	0.00	0.00	0.00	0.00	142.22	1.78
Irish Lord	pounds	0.00	0.00	0.00	0.00	41.78	0.52	0.00	0.00	41.78	0.52
Unknown Sculpin	pounds	0.00	0.00	0.00	0.00	23.11	0.29	0.00	0.00	23.11	0.29
Unknown Greenling	pounds	0.00	0.00	0.00	0.00	26.67	0.33	0.00	0.00	26.67	0.33
Walleye Pollock (Whiting)	pounds	0.00	0.00	32.36	0.40	29.87	0.37	0.00	0.00	62.22	0.78
Skates	pounds	0.00	0.00	0.00	0.00	8.89	0.11	0.00	0.00	8.89	0.11
Dolly Varden	pounds	209.07	2.61	0.00	0.00	415.64	5.20	0.00	0.00	624.71	7.81
Dolly Varden-Fingerling	pounds	0.83	0.01	0.00	0.00	0.22	0.00	0.00	0.00	1.06	0.01
Rainbow Trout	pounds	0.00	0.00	0.00	0.00	107.02	1.34	0.00	0.00	107.02	1.34
Steelhead	pounds	19.66	0.25	0.00	0.00	98.31	1.23	0.00	0.00	117.97	1.47

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

Table XVI-17. Percentage of Fish Other Than Salmon Harvested by Gear Type, Port Lions, 1993/94

Resource	Percent Base	Subsistence Gear Lbs.	Removed from Commercial Catch Lbs.	Rod and Reel Lbs.	Ice Fishing Lbs.
Non-Salmon Fish	resource	22.94	9.68	67.38	0.00
Pike	resource	0.00	0.00	100.00	0.00
Unknown Whitefish	resource	0.00	0.00	100.00	0.00
Pacific Cod (Gray)	resource	0.00	29.70	70.30	0.00
Sablefish (Black Cod)	resource	19.69	57.82	22.49	0.00
Arrow Tooth Flounder (Turbot)	resource	0.00	0.00	100.00	0.00
Yellowfin Sole	resource	0.00	0.00	100.00	0.00
Halibut	resource	20.88	7.55	71.57	0.00
Herring	resource	96.91	3.09	0.00	0.00
Black Rockfish (black bass)	resource	0.00	0.00	100.00	0.00
Red Rockfish	resource	0.00	100.00	0.00	0.00
Irish Lord	resource	0.00	0.00	100.00	0.00
Unknown Sculpin	resource	0.00	0.00	100.00	0.00
Unknown Greenling	resource	0.00	0.00	100.00	0.00
Walleye Pollock (Whiting)	resource	0.00	52.00	48.00	0.00
Skates	resource	0.00	0.00	100.00	0.00
Dolly Varden	resource	33.47	0.00	66.53	0.00
Dolly Varden-Fingerling	resource	78.95	0.00	21.05	0.00
Rainbow Trout	resource	0.00	0.00	100.00	0.00
Steelhead	resource	16.67	0.00	83.33	0.00

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

Table XVI-18. Percentage of Households Harvesting Fish Other Than Salmon by Gear Type and Species, Port Lions, 1993/94

Resource	Subsistence Gear	Removed from Commercial Catch	Rod and Reel	Ice Fishing	Any Method
Non-Salmon Fish	31.11	22.22	53.33	0.00	68.89
Pike	0.00	0.00	2.22	0.00	2.22
Unknown Whitefish	0.00	0.00	2.22	0.00	2.22
Pacific Cod (Gray)	0.00	6.67	17.78	0.00	24.44
Sablefish (Black Cod)	2.22	4.44	4.44	0.00	11.11
Arrow Tooth Flounder (Turbot)	0.00	0.00	2.22	0.00	2.22
Yellowfin Sole	0.00	0.00	2.22	0.00	2.22
Halibut	17.78	15.56	46.67	0.00	66.67
Herring	8.89	2.22	0.00	0.00	11.11
Black Rockfish (black bass)	0.00	0.00	15.56	0.00	15.56
Red Rockfish	0.00	2.22	0.00	0.00	2.22
Irish Lord	0.00	0.00	4.44	0.00	4.44
Unknown Sculpin	0.00	0.00	4.44	0.00	4.44
Unknown Greenling	0.00	0.00	4.44	0.00	4.44
Walleye Pollock (Whiting)	0.00	4.44	4.44	0.00	8.89
Skates	0.00	0.00	2.22	0.00	2.22
Dolly Varden	6.67	0.00	20.00	0.00	22.22
Dolly Varden-Fingerling	2.22	0.00	2.22	0.00	4.44
Rainbow Trout	0.00	0.00	11.11	0.00	11.11
Steelhead	2.22	0.00	8.89	0.00	11.11

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

Figure XVI-7. Percentage of Port Lions Households Reporting Lower Uses of Wild Resources Compared to Before the Exxon Valdez Oil Spill

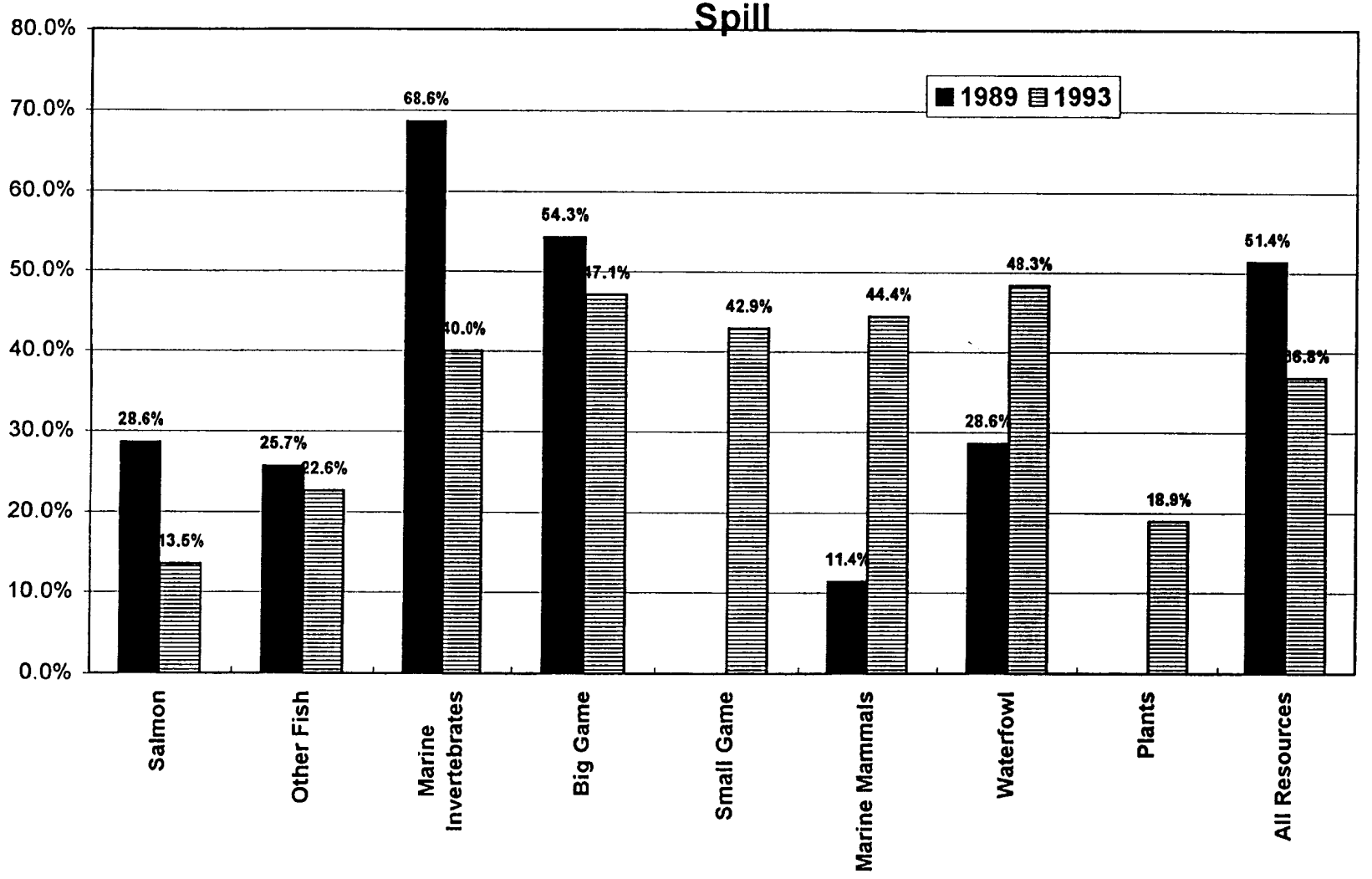
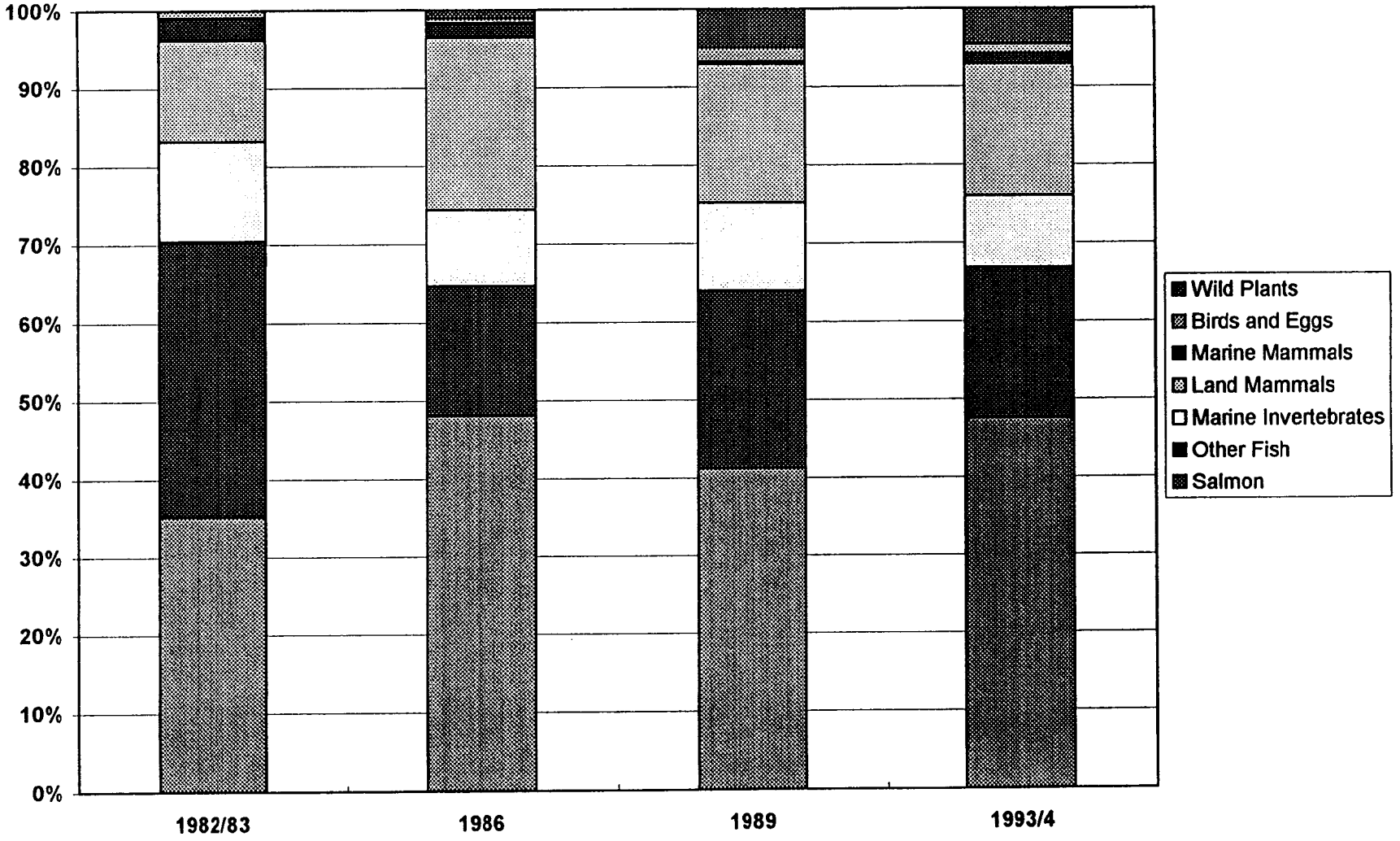
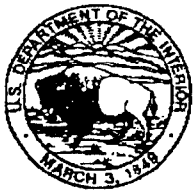


Figure XVI-8. Composition of Harvests by Resource Category, Port Lions, 1982/83, 1986, 1989, 1993/94





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.