# Subsistence Salmon Harvest Summary

# Northwest Alaska 2001

- Norton Sound District
- Port Clarence District
- Kotzebue District

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## BACKGROUND

Subsistence salmon fishing has been a major feature of life in northwest Alaska for centuries. Coastal sites with fishing artifacts in the area date to more than 4,000 years ago, and it is probable that earlier sites have been obscured by rising sea levels. Salmon, along with marine mammals and terrestrial mammals, were likely among the foundations of the ancient subsistence economy and they remain an essential component to the present day.

In 2001, in the Norton Sound District, about 7,800 people lived in 11 predominantly Iñupiaq or Yup'ik Eskimo communities ranging from Stebbins in the south to Nome in the north and including St. Lawrence Island. In the Port Clarence District about 550 people lived in two predominantly Iñupiaq communities, Teller and Brevig Mission; and in the Kotzebue District about 8,800 people lived in 15 predominantly Iñupiaq communities stretching from Wales in the south to Point Hope in the north. Most local residents in the region participated in a mixed subsistence-cash economy, depending on local wild foods for cultural and nutritional sustenance.

In the Norton Sound and Port Clarence districts, subsistence fishers operated gillnets or seines in the main Seward Peninsula rivers and in the coastal marine waters. Beach seines were used near the spawning grounds to catch schooling or spawning salmon and other species of fish. The major portion of fish taken during the summer months was air dried or smoked for later consumption by local residents. Chum, pink, and coho salmon were found throughout the Norton Sound and Port Clarence districts, with chinook salmon more common in eastern and southern Norton Sound and sockeye salmon more common in Port Clarence drainages.

In the Kotzebue District, salmon's role in the wild food diet varied from community to community, affected primarily by salmon abundance. Along the Noatak and Kobuk rivers, where runs of chum salmon are strong, many households' activities in middle and late summer (July to early September) revolved around the catching, drying, and storing of salmon for use during the winter. Some local residents based their fishing activities out of the village, while others moved seasonally to fish camps where they stayed from several days to several weeks. Chum salmon predominated in the district, with small numbers of other salmon species present.

The management of the region's salmon fisheries requires that the department know how many salmon are harvested in both the subsistence and commercial fisheries. Data on

subsistence harvests are not used for inseason management, but rather they help to identify subsistence needs, which must be considered in management decisions.

From 1963 to 1993, the department assessed subsistence salmon harvests in the region using a combination of household surveys, calendars, and permits. Permit data collection methods were the most consistent over time, but applied only to fishing in the Nome subdistrict. Survey data collection methods were not consistent from year to year and the results were published as simple, unexpanded data with no adjustments for variations in sampling fractions. In 1986, as a result of funding reductions, the Division of Commercial Fisheries discontinued subsistence salmon surveys in Norton Sound. By 1993 it became apparent that managers needed more reliable subsistence salmon harvest data and the following year the department initiated a new annual subsistence salmon harvest assessment effort in northwest Alaska that provided more extensive, complete, and reliable salmon harvest estimates than had existed previously.

In 2001 the department continued its subsistence salmon harvest assessment program as developed in 1994. This included household surveys in 8 of the 11 communities in the Norton Sound District, both communities in the Port Clarence District, and 5 of the 15 communities in the Kotzebue District. In Nome (Norton Sound Subdistrict 1), subsistence salmon harvests were determined through the return of permits as required since 1974. In Kotzebue, subsistence salmon harvests were determined through a postcard survey. The Division of Commercial Fisheries funded most of the household surveys and the Division of Subsistence collected and analyzed the data. The Bering Sea Fishermen's Association and Kawerak, Inc. provided funding for local village researchers to assist with the data collection in the Norton Sound and Port Clarence districts. The National Park Service provided funding for local village assistants in the Kotzebue District.

## SUBSISTENCE SALMON HARVEST COLLECTION METHODS

Three methods were used to assess subsistence salmon harvests in northwest Alaska in 2001: 1) post-season household surveys in 15 communities, 2) a postcard survey in Kotzebue, and 3) fishing permits in the Nome Subdistrict and the Salmon Lake-Pilgrim River drainage.

### *Household Surveys*

In the Norton Sound District, household surveys were conducted in Golovin, White Mountain, Elim, Koyuk, Shaktoolik, Unalakleet, St. Michael, and Stebbins. The seasonal community of Council on the Niukluk River was not surveyed. An unknown amount of

subsistence salmon fishing occurs at Council by Nome residents that is neither documented by household surveys nor permit data (a fishing permit is not required for the Niukluk River, although the department issues one to people who request it). An unknown amount of subsistence salmon fishing by Nome residents also occurs at Woolley Lagoon near the district's western border, where members of Nome's King Island community maintain seasonal camps. In 2001 a study was jointly conducted by Kawerak and the Alaska Department of Fish and Game to estimate Nome's salmon harvest in both these locations.

In Port Clarence, household surveys were conducted in both of the district's two communities, Brevig Mission and Teller. Like the Council area, subsistence salmon fishing by Nome residents takes place in the Teller area and is neither documented by household surveys nor permit data. The joint study mentioned above also estimated Nome's salmon harvest in the Teller area. In the Port Clarence District, permits are required only for Salmon Lake and the Pilgrim River drainage.

In the Kotzebue District, household surveys were conducted in the Noatak and Kobuk river villages of Noatak, Noorvik, Kiana, Shungnak, and Kobuk. Ambler was not surveyed in 2001, although normally it is. The communities of Wales, Diomede, Shishmaref, Deering, Buckland, Selawik, Kivalina, and Point Hope were not surveyed due to little availability of salmon, the lack of competing commercial salmon uses, or limited staff time and funding.

The goals of the post-season household survey were to:

1) collect harvest data that would result in a total harvest estimate for subsistence salmon by species by community, and

2) compile information on gear types, participation rates, sharing, household size, and use of salmon for dog food.

Researchers attempted to contact 100% of the households in each of the surveyed communities. Actual sample rates ranged from 52% of households in Noatak to 97% of households in White Mountain. Overall, 77% of the households in the surveyed communities were interviewed. Table 1 lists the study communities and summarizes the samples. Researchers interviewed households with the use of a two-page survey instrument (Appendix). In six villages (White Mountain, Golovin, Elim, Koyuk, Shaktoolik, and Unalakleet), the survey included an additional page of questions on subsistence crab harvests. Two department staff assisted by local residents in each community were responsible for conducting the household surveys.

Department staff traveled to all the communities between October 8 and November 21, 2001. Prior to arriving in a community, researchers called the local city or tribal office to inform them of the project, ask if it were a suitable time to visit, and seek suggestions for local contractors to assist in the surveys. Announcements about community survey schedules were broadcast on the local radio stations. Upon arrival in a community, staff checked in with the city or tribal council office, introduced themselves, and described their tasks. City or tribal administrators typically identified one or two local residents who were willing to assist with the surveys and arranged for them to meet with department staff for training and orientation. When possible, the same local assistants were used in 2001 as in the previous years.

With the help of knowledgeable individuals, department staff updated the community household list from 2000, adding new households and deleting those no longer there. Department staff and local assistants then worked concurrently to contact all the households and administer a survey, recording their progress on a tracking sheet. Surveys typically took less than 15 minutes each to complete and most communities were surveyed in two days. After returning to Nome or Kotzebue, staff mailed a survey to households who were out-of-town or unavailable at the time of the village visit. In total, 612 subsistence salmon surveys were completed in the Norton Sound District, 116 in the Port Clarence District, and 257 in the Kotzebue District in 2001 for a total of 985 household surveys (Table 1).

*Norton Sound Subdistrict 1 Fishing Permits*

In Norton Sound Subdistrict 1 (Nome), low salmon stock levels in the area combined with a large concentration of users have led the department to issue subsistence fishing permits since 1974. In 2001, Tier II chum salmon fishing permits were issued for the third year to a limited number of Nome households. These households would have first priority over other subsistence users if only a small number of chum salmon were available for harvest. Tier I fishing permits were available to all other households when run strength was determined to be adequate. The Tier I permits identified a particular fishing location, each of which had its own catch limit per permit; additional permits for other areas could be issued to fishermen after the earlier one had been returned. The permits included a calendar on which to record harvest by species, river, and date. After the fishing season, households returned the completed calendar to the department, whether or not they actually fished. In 2001, 118 permits (89 Tier I and 29 Tier II permits) were issued for Subdistrict 1, 100 (85%) of which were returned to the department. One person selected for the Tier II fishery did not pick up a permit.

*Salmon Lake and Pilgrim River Fishing Permits*

Households fishing for salmon in Salmon Lake or the Pilgrim River drainage (Port Clarence District) were required by regulation to apply for a permit at the department's Nome office. Their application was logged in department records and they were given a calendar on which to record harvest. After the fishing season, households were required to return the completed calendar to the department, whether or not they actually fished. In 2001, 20 households requested permits for this area, 15 (75%) of which were returned to the department.

*Kotzebue Postcard Survey*

With a population of about 3,000 people, Kotzebue was too large to survey house-to-house in an effective and timely way. Instead the department assessed subsistence salmon harvests through a mail-out postcard survey.

An abbreviated version of the household survey instrument, the postcard survey simply asked if the household harvested salmon for subsistence use, the quantities harvested, the type of fishing gear used, and whether the household had a very good, average, or poor fishing season (Appendix). The postcard could be separated in half and returned postage paid. After updating the 2000 mailing list, a total of 812 postcards were mailed to Kotzebue households, 26 of which were returned as undeliverable. Of the remaining 786 households, 151 (19%) responded (Table 1). An undetermined number of households, especially those who recently moved to Kotzebue, were missed by the postcard survey. These newer households, however, were less likely to be major subsistence harvesters than stable, long-term households.

## SUBSISTENCE SALMON HARVEST ESTIMATION

Once completed, each community's surveys were reviewed by the project field workers and by the project leader in Kotzebue. Then the data were entered into a computer database for analysis. Households were stratified into "usually fish" and "do not usually fish" households on the basis of their response to question 2 on the survey instrument: "Does your household **usually** subsistence fish for salmon?" (Appendices 1-2). Households not surveyed in 2001 were placed in the same stratum as in previous years (based on their response to the same question) or, if they were new to the community, then in the "do not usually fish" stratum. The salmon survey data were then expanded by stratum to estimate total community harvests with expansion factors varying by stratum depending upon the sampling rate. Community harvest estimates and their variances were summed across communities for district totals and across all districts for area totals.

If less than 30 households and less than 50% of the households in a community were surveyed, then the data were not expanded and the estimated and the reported harvests were the same. This was not the case for any community in 2001.

As in the past three years, the Nome permit data were not expanded in 2001. This contrasted with earlier years when permit data were expanded by drainage with expansion factors based upon the fraction of unreturned permits for that drainage. Department staff believed that expansion of the permit data led to an overestimation of the salmon harvest because the unreturned permits were most likely from households that did not fish.

The Kotzebue postcard data were analyzed as a random sample and expanded with a single expansion factor based on the sampling rate of the entire community. Kotzebue households were arbitrarily placed under the "usually fish" column in the data analysis. (The postcard survey did not ask respondents whether or not they usually subsistence fish for salmon.)

## SUBSISTENCE SALMON HARVEST SURVEY RESULTS, 2001

### *Subsistence Salmon Harvest*

In 2001 the estimated subsistence harvest of salmon in the Norton Sound, Port Clarence, and Kotzebue districts was 129,378 fish. This was the lowest subsistence salmon harvest of the three districts combined in the past eight years. A summary of the 2001 subsistence salmon harvest estimates by community is presented in Table 2. Subsistence salmon harvests by district are summarized in Figures 1-3. Tables 3 and 4 summarize subsistence salmon harvests by community in the three districts for the years 1994-2001.

### Norton Sound District

The 2001 subsistence salmon harvest in the Norton Sound District was 71,367 fish. This was the second lowest subsistence salmon harvest documented in the eight years of this survey project for this area. Weak coho, chum, and chinook returns and an off-year for pink salmon abundance contributed to the low harvest. (Pink salmon abundance fluctuates in an even-year/odd-year cycle, with even-numbered years having the greatest abundance.) For comparable odd-numbered years, the 2001 harvest was about 17% more than the 1999 harvest and about 4% less than the 1997 harvest for the same communities.

Figures 4-8 depict subsistence salmon harvests by species in the Norton Sound District for the past eight years. The chum salmon harvest was slightly higher in 2001 than in the previous three years, although still considerably lower than the 1995-97 harvests. The chinook salmon harvest was also higher in 2001 than in the previous year, but lower than the 1994-99 harvests. Pink salmon alternate in abundance in an even-year/odd-year cycle; harvests in 2001 were higher than in 1999 and 1997, but lower than in 1995 and all even-numbered years. The sockeye salmon harvest in 2001 was higher than in 2000, but lower than in 1994-99. The coho salmon harvest in 2001 was similar to the 1999 harvest, and somewhat lower than the 2000 harvest.

Of the total salmon harvest, 8% were chinook, 28% were chum, 43% were pink, 1% were sockeye, and 20% were coho (Fig. 9). Figure 9 also compares the 2001 proportional contribution of species to the total harvest with 1999, a comparable year of pink salmon abundance. In 2000, a year of abundant pink salmon, pink salmon accounted for 50% of the total harvest by number.

In the Norton Sound District, the estimated mean salmon harvest was about 83 salmon per household; the estimated breakdown of this harvest was 6 chinook, 24 chum, 35 pink, 1 sockeye, and 17 coho. As in past years, Subdistrict 5 (Shaktoolik) accounted for the largest mean household harvest of salmon, an estimated 248 fish. The mean household harvests in the other subdistricts were 15 salmon in Subdistrict 1 (Nome), 51 salmon in Subdistrict 2 (Golovin and White Mountain), 52 salmon in Subdistrict 3 (Elim), 127 salmon in Subdistrict 4 (Koyuk), 115 salmon in Subdistrict 6 (Unalakleet), and 50 salmon in southern Norton Sound (Stebbins and St. Michael). After Shaktoolik, the communities reporting the largest mean household harvests of salmon were Koyuk (127 fish) and Unalakleet (115 fish) (Fig. 10).

Port Clarence District

The estimated 2001 subsistence harvest of salmon in the Port Clarence District was 8,167 fish (Table 2). This was the second highest harvest in the past five years (1997-2001), but lower than the harvests in 1994-96. Of the total harvest, 1% were chinook, 23% were chum, 14% were pink, 46% were sockeye, and 16% were coho (Fig. 9).

The estimated mean harvest in the Port Clarence District was about 51 salmon per household; the estimated breakdown of this harvest was 0.5 chinook, 12 chum, 7 pink, 23 sockeye, and 8 coho. Brevig Mission harvested a total of 4,660 salmon, or a mean of 69 salmon per household. In Teller, the total subsistence harvest of salmon was 3,310 fish, or 46 salmon per household (Fig. 10). Households with Pilgrim River permits harvested an average of 14 salmon per household.

Kotzebue District

The 2001 subsistence salmon harvest in the Kotzebue District was 49,844 fish, 98% of which were chum salmon (Fig. 9). The remaining portion was a mix of other salmon species, present in only small numbers in the district. The 2001 subsistence salmon harvest was the lowest in the past eight years, though not far below the 1998 harvest. In 2001, one less community (Ambler) was surveyed than in previous years, accounting in small part for the lower harvest (Fig. 2). In addition, an extended search for a drowning victim took place in the upper Kobuk area during the summer and fall fishing season. This search, along with other unexpected deaths in these communities, overwhelmed local residents both physically and psychologically, leading to a decline in fishing effort in 2001.

The estimated mean salmon harvest was about 43 salmon per household, nearly all chum. Noorvik had the highest mean household harvest (158 salmon), followed by Kobuk (109 salmon) and Shungnak (94 salmon) (Fig. 10). The remaining communities had mean household harvests ranging from 23 to 62 salmon. Kotzebue's estimated salmon harvest accounted for about 36% of the district's total harvest.

*Participation in Subsistence Fishing*

About 43% of the households in the study communities subsistence fished for salmon in 2001 (Table 5). Overall, participation in subsistence salmon fishing in the Norton Sound and Port Clarence districts has been fairly stable over the past seven years with no clear trends upwards or downwards (Fig. 11). In the Kotzebue District, participation in subsistence salmon fishing was considerably lower in 2001 than in previous years. In the Norton Sound District in 2001, about 61% of households subsistence fished for salmon and an additional 8% assisted other households in processing subsistence-caught salmon. Participation in subsistence salmon fishing in the district ranged from about 45% of households in St. Michael to 81% in Shaktoolik (Table 5).

In the Port Clarence District in 2001, about 57% of households subsistence fished for salmon (Table 5). About 11% helped other households process subsistence-caught fish.

In the Kotzebue District, about 28% of households subsistence fished for salmon in 2001 and about 8% assisted other households in processing subsistence-caught salmon. Participation in subsistence salmon fishing ranged from 21% of households in Kotzebue to 54% in Kobuk (Table 5).

*Participation in Commercial Fishing*

About 4% of the households in the surveyed communities in the three districts participated in commercial salmon fishing in 2001. About one-half of these households reported removing salmon from their commercial catches for subsistence use. In the Norton Sound District about 7% of households participated in commercial salmon fishing, in the Port Clarence District none participated, and in the Kotzebue District (excluding Kotzebue) less than 1% participated (Table 6). An estimated total of 243 salmon were retained from commercial catches for subsistence use, comprising less than 1% of the estimated total subsistence harvest in the region (Table 6). In 2001 as in other recent years, commercial salmon fishing throughout the region suffered from poor market conditions and from poor salmon returns in some areas. The 2001 participation in commercial salmon fishing was the lowest in the past seven years. Typically 10-14% of households in the three districts participate in commercial salmon fishing.

*Gear Type*

In the Norton Sound and Port Clarence districts, set gillnets were the most common gear for harvesting salmon; about 86% and 93% respectively of the households that subsistence fished for salmon used gillnets (Table 7). In the Norton Sound District, rod and reel was the next most widely used gear, used by 77% of fishing households. Seines were used by about 24% of fishing households in Norton Sound and 10% of fishing households in Port Clarence. (A household may use multiple gear types.) Although rod and reel was widely used, it accounted for only 7% of the total salmon harvest in the surveyed communities (excluding Nome) in the Norton Sound District. About 18% of the total coho harvest in the district (excluding Nome) was taken with a rod and reel compared to 7% or less for each of the other salmon species (Fig. 12). Rod-and-reel fishing contributed the most to the total salmon harvest in Elim (28% of the harvest).

In the Kotzebue District, set gillnets were also the most common gear for harvesting salmon, used by about 56% of households that subsistence fished for salmon. Rod-and-reel was the second most common gear, used by about 47% of fishing households (Table 7). Overall, rod-and-reel gear accounted for less than 3% of the total salmon harvest in the surveyed communities (excluding Kotzebue) in the district. Rod-and-reel gear was used most widely in Kiana (76% of fishing households) and Noatak (64% of fishing households).

*Sharing*

In the surveyed communities, respondents who fished were asked whether they gave salmon to other households this year. About 61% of the fishing households in the Norton Sound, Port Clarence, and Kotzebue districts (excluding Nome and Kotzebue) responded affirmitively to this question (Table 8).

*Salmon for Dog Food*

In 2001 an estimated 4,309 salmon were harvested specifically for dog food in the surveyed communities (excluding Kotzebue and Nome) in the three districts (Table 9). This harvest for dog food was comparable to the previous three years, but substantially less than in 1994-97 (Fig. 13). In 2001 the mean number of salmon fed per dog was about 11 fish per year (Table 9). In the Kotzebue District, about 7% of the estimated subsistence salmon harvest in the surveyed communities (excluding Kotzebue) was caught specifically for dog food (Fig. 14). In the Norton Sound-Port Clarence districts (excluding Nome), about 2% of the salmon harvest was caught for dog food. Overall, in the three districts about 4% of the surveyed households (excluding Nome and Kotzebue) caught salmon for dog food (Table 9).

*Assessment of Fishing Season*

When asked whether subsistence chum salmon fishing was very good, average, or poor in 2001, 53% of the fishing households in the Norton Sound District (excluding Nome) responded "poor," 40% responded "average," and 6% responded "very good" (Table 10). A smaller percentage of households responded "poor" in 2001 than in the previous year (Fig. 15). The percentage of households assessing the 2001 chum salmon fishing season as "poor" ranged from 26% of fishing households in Stebbins to 78% in Golovin.

In the Port Clarence District, about 72% of the fishing households responded that the chum fishing season was "poor" in 2001, 21% said it was "average," and 8% said "very good" (Table 10). As in the Norton Sound District, a smaller percentage of households responded "poor" in 2001 than in the previous year (Fig. 16).

In the Kotzebue District, 7% of fishing households responded that their chum fishing season was "poor" in 2001, 47% said "average," and 46% said "very good." This was fairly similar to the previous two years (Fig. 17). In general, satisfaction with subsistence chum salmon fishing in the Kotzebue District is determined largely by weather and water conditions. Salmon stocks continue to be fairly stable and abundant in this district, particularly compared to Norton Sound.

*Sheefish, Whitefish, and Char*

In the Kotzebue District, the household survey collected information on subsistence sheefish and whitefish harvests in the Kobuk River villages and on subsistence char and whitefish harvests in Noatak. In 2001 an estimated 3,838 sheefish were harvested by four Kobuk River villages (Noorvik, Kiana, Shungnak, and Kobuk) (Table 11). This was the lowest harvest reported in the past seven years (Fig. 18). Mean household harvests ranged from 1 sheefish in Kobuk to 21 sheefish in Shungnak (Table 11). The reduced sheefish harvest was likely due in large part to an extended summer and fall search for a drowning victim on the upper Kobuk River, which consumed several communities' time and energy during the fishing season. In addition, Ambler was not surveyed in 2001 as in previous years.

In 2001 an estimated 30,976 whitefish were harvested for subsistence by the surveyed communities in Kotzebue Sound (excluding Kotzebue) (Table 11). This was the lowest harvest reported in the past seven years (Fig. 19). Mean household harvests ranged from no whitefish in Kobuk to 146 in Shungnak (Table 11). As with sheefish, the reduced whitefish harvest was likely due to an extended search for a drowning victim that consumed the attention of several Kobuk River communities during the fishing season.

In 2001 an estimated 2,702 char (Dolly Varden) were harvested for subsistence by the community of Noatak for a mean household harvest of about 28 fish (Table 12). This was the lowest char harvest in Noatak since 1995, when char were first included in this harvest survey project. Char harvests in Noatak show a declining trend over the past seven years (Fig. 20).

# TABLES AND FIGURES

## Table 1. Household Sampling, Subsistence Salmon Harvest Surveys, Northwest Alaska, 2001

| | Total HH's | HH's Contacted | % of Total HH | Postcards | | | Survey | |
|---|---|---|---|---|---|---|---|---|
| | | | | Mailed | Returned | % Returned | Interviews | % of Total HH |
| Golovin | 44 | 39 | 88.6% | 0 | 0 | 0.0% | 39 | 88.6% |
| White Mountain | 65 | 63 | 96.9% | 0 | 0 | 0.0% | 63 | 96.9% |
| **Subdistrict 2** | **109** | **102** | **93.6%** | **0** | **0** | **0.0%** | **102** | **93.6%** |
| Elim | 80 | 69 | 86.3% | 0 | 0 | 0.0% | 69 | 86.3% |
| **Subdistrict 3** | **80** | **69** | **86.3%** | **0** | **0** | **0.0%** | **69** | **86.3%** |
| Koyuk | 82 | 69 | 84.1% | 0 | 0 | 0.0% | 69 | 84.1% |
| **Subdistrict 4** | **82** | **69** | **84.1%** | **0** | **0** | **0.0%** | **69** | **84.1%** |
| Shaktoolik | 60 | 51 | 85.0% | 0 | 0 | 0.0% | 51 | 85.0% |
| **Subdistrict 5** | **60** | **51** | **85.0%** | **0** | **0** | **0.0%** | **51** | **85.0%** |
| Unalakleet | 205 | 140 | 68.3% | 0 | 0 | 0.0% | 140 | 68.3% |
| **Subdistrict 6** | **205** | **140** | **68.3%** | **0** | **0** | **0.0%** | **140** | **68.3%** |
| Stebbins | 124 | 107 | 86.3% | 0 | 0 | 0.0% | 107 | 86.3% |
| St. Michael | 90 | 74 | 82.2% | 0 | 0 | 0.0% | 74 | 82.2% |
| **South Norton Sound** | **214** | **181** | **84.6%** | **0** | **0** | **0.0%** | **181** | **84.6%** |
| **NORTON SOUND** | **750** | **612** | **81.6%** | **0** | **0** | **0.0%** | **612** | **81.6%** |
| Brevig Mission | 68 | 55 | 80.9% | 0 | 0 | 0.0% | 55 | 80.9% |
| Teller | 72 | 61 | 84.7% | 0 | 0 | 0.0% | 61 | 84.7% |
| **PORT CLARENCE** | **140** | **116** | **82.9%** | **0** | **0** | **0.0%** | **116** | **82.9%** |
| Ambler | NA | NA | NA | NA | NA | NA | NA | NA |
| Kiana | 87 | 67 | 77.0% | 0 | 0 | 0.0% | 67 | 77.0% |
| Kobuk | 26 | 24 | 92.3% | 0 | 0 | 0.0% | 24 | 92.3% |
| Kotzebue | 786 | 151 | 19.2% | 786 | 151 | 19.2% | - | - |
| Noatak | 96 | 68 | 70.8% | 0 | 0 | 0.0% | 68 | 70.8% |
| Noorvik | 108 | 56 | 51.9% | 0 | 0 | 0.0% | 56 | 51.9% |
| Shungnak | 46 | 42 | 91.3% | 0 | 0 | 0.0% | 42 | 91.3% |
| **KOTZEBUE SOUND** | **1,149** | **408** | **33.5%** | **786** | **151** | **19.2%** | **257** | **70.8%** |
| **TOTALS** | **2,039** | **1,136** | **53.9%** | **786** | **151** | **19.2%** | **985** | **76.8%** |

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, household surveys, 2001.

## Table 2. Subsistence Salmon Harvests, Northwest Alaska, 2001

| | | | Chinook | | Chum | | Pink | | Sockeye | | Coho | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total HH's | HH's Contacted | Reported Harvest | Est.* Total | Reported Harvest | Est.* Total | Reported Harvest | Est.* Total | Reported Harvest | Est.* Total | Reported Harvest | Est.* Total | Reported Harvest | Est.* Total |
| Nome Permits[1] | 118 | 100 | 2 | 2 | 864 | 864 | 121 | 121 | 92 | 92 | 432 | 432 | 1,511 | 1,511 |
| **Subdistrict 1** | **118** | **100** | **2** | **2** | **864** | **864** | **121** | **121** | **92** | **92** | **432** | **432** | **1,511** | **1,511** |
| Golovin | 44 | 39 | 60 | 65 | 1,111 | 1,206 | 155 | 168 | 63 | 68 | 183 | 199 | 1,572 | 1,707 |
| Niukluk R. Permits[1] | 10 | 8 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 124 | 124 | 128 | 128 |
| White Mountain | 65 | 63 | 21 | 21 | 2,037 | 2,083 | 1,463 | 1,497 | 4 | 4 | 544 | 557 | 4,069 | 4,163 |
| **Subdistrict 2** | **119** | **110** | **83** | **89** | **3,150** | **3,291** | **1,618** | **1,665** | **67** | **72** | **851** | **880** | **5,769** | **5,997** |
| Elim | 80 | 69 | 390 | 427 | 820 | 898 | 1,269 | 1,390 | 64 | 70 | 1,224 | 1,352 | 3,767 | 4,137 |
| **Subdistrict 3** | **80** | **69** | **390** | **427** | **820** | **898** | **1,269** | **1,390** | **64** | **70** | **1,224** | **1,352** | **3,767** | **4,137** |
| Koyuk | 82 | 69 | 401 | 460 | 3,887 | 4,445 | 4,543 | 5,203 | 12 | 14 | 242 | 276 | 9,085 | 10,397 |
| **Subdistrict 4** | **82** | **69** | **401** | **460** | **3,887** | **4,445** | **4,543** | **5,203** | **12** | **14** | **242** | **276** | **9,085** | **10,397** |
| Shaktoolik | 60 | 51 | 898 | 936 | 1,489 | 1,553 | 9,757 | 10,172 | 137 | 143 | 1,962 | 2,090 | 14,244 | 14,895 |
| **Subdistrict 5** | **60** | **51** | **898** | **936** | **1,489** | **1,553** | **9,757** | **10,172** | **137** | **143** | **1,962** | **2,090** | **14,244** | **14,895** |
| Unalakleet[2] | 205 | 140 | 1,946 | 2,810 | 1,616 | 2,918 | 7,773 | 11,279 | 257 | 359 | 4,332 | 6,270 | 15,924 | 23,637 |
| **Subdistrict 6** | **205** | **140** | **1,946** | **2,810** | **1,616** | **2,918** | **7,773** | **11,279** | **257** | **359** | **4,332** | **6,270** | **15,924** | **23,637** |
| Stebbins | 124 | 107 | 500 | 570 | 3,509 | 3,999 | 178 | 202 | 0 | 0 | 2,420 | 2,759 | 6,607 | 7,530 |
| St. Michael | 90 | 74 | 245 | 282 | 1,982 | 2,246 | 204 | 229 | 12 | 17 | 437 | 490 | 2,880 | 3,264 |
| **South Norton Sound** | **214** | **181** | **745** | **852** | **5,491** | **6,244** | **382** | **431** | **12** | **17** | **2,857** | **3,250** | **9,487** | **10,793** |
| **NORTON SOUND** | **878** | **720** | **4,466** | **5,576** | **17,317** | **20,213** | **25,463** | **30,261** | **641** | **767** | **11,900** | **14,550** | **59,787** | **71,367** |
| Brevig Mission | 68 | 55 | 35 | 41 | 889 | 1,041 | 400 | 468 | 1,737 | 2,040 | 912 | 1,070 | 3,973 | 4,660 |
| Pilgrim R. Permits[1] | 20 | 15 | 3 | 3 | 6 | 6 | 0 | 0 | 169 | 169 | 20 | 20 | 198 | 198 |
| Teller | 72 | 61 | 35 | 40 | 754 | 863 | 627 | 715 | 1,301 | 1,483 | 183 | 209 | 2,900 | 3,310 |
| **PORT CLARENCE** | **160** | **131** | **73** | **84** | **1,649** | **1,910** | **1,027** | **1,183** | **3,207** | **3,692** | **1,115** | **1,299** | **7,071** | **8,167** |
| Ambler | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Kiana[3] | 87 | 67 | 0 | 0 | 2,749 | 5,379 | 0 | 0 | 0 | 0 | 0 | 0 | 2,749 | 5,379 |
| Kobuk | 26 | 24 | 0 | 0 | 2,640 | 2,843 | 1 | 1 | 1 | 1 | 0 | 0 | 2,642 | 2,846 |
| Kotzebue[4] | 786 | 151 | 2 | 5 | 6,448 | 17,713 | 10 | 25 | 5 | 13 | 0 | 0 | 6,465 | 17,756 |
| Noatak | 96 | 68 | 0 | 0 | 1,687 | 2,326 | 0 | 0 | 0 | 0 | 84 | 116 | 1,771 | 2,442 |
| Noorvik | 108 | 56 | 4 | 6 | 10,228 | 16,444 | 6 | 10 | 0 | 0 | 406 | 652 | 10,644 | 17,112 |
| Shungnak | 46 | 42 | 0 | 0 | 4,055 | 4,310 | 0 | 0 | 0 | 0 | 0 | 0 | 4,055 | 4,310 |
| **KOTZEBUE SOUND** | **1,149** | **408** | **6** | **11** | **27,806** | **49,014** | **17** | **36** | **6** | **14** | **490** | **768** | **28,326** | **49,844** |
| **TOTALS** | **2,187** | **1,259** | **4,545** | **5,671** | **46,772** | **71,138** | **26,507** | **31,480** | **3,854** | **4,473** | **13,506** | **16,617** | **95,184** | **129,378** |

NOTE: Includes salmon from subsistence nets, rod and reel, removal from commercial harvest, and test fisheries.

* Data from contacted households were expanded to households not contacted. If less than 30 and less than 50% of households in a community were contacted, then reported harvest is used for estimated harvest.

[1] Alaska Department of Fish and Game, Division of Commercial Fisheries, permit returns, 2001. Data not expanded.

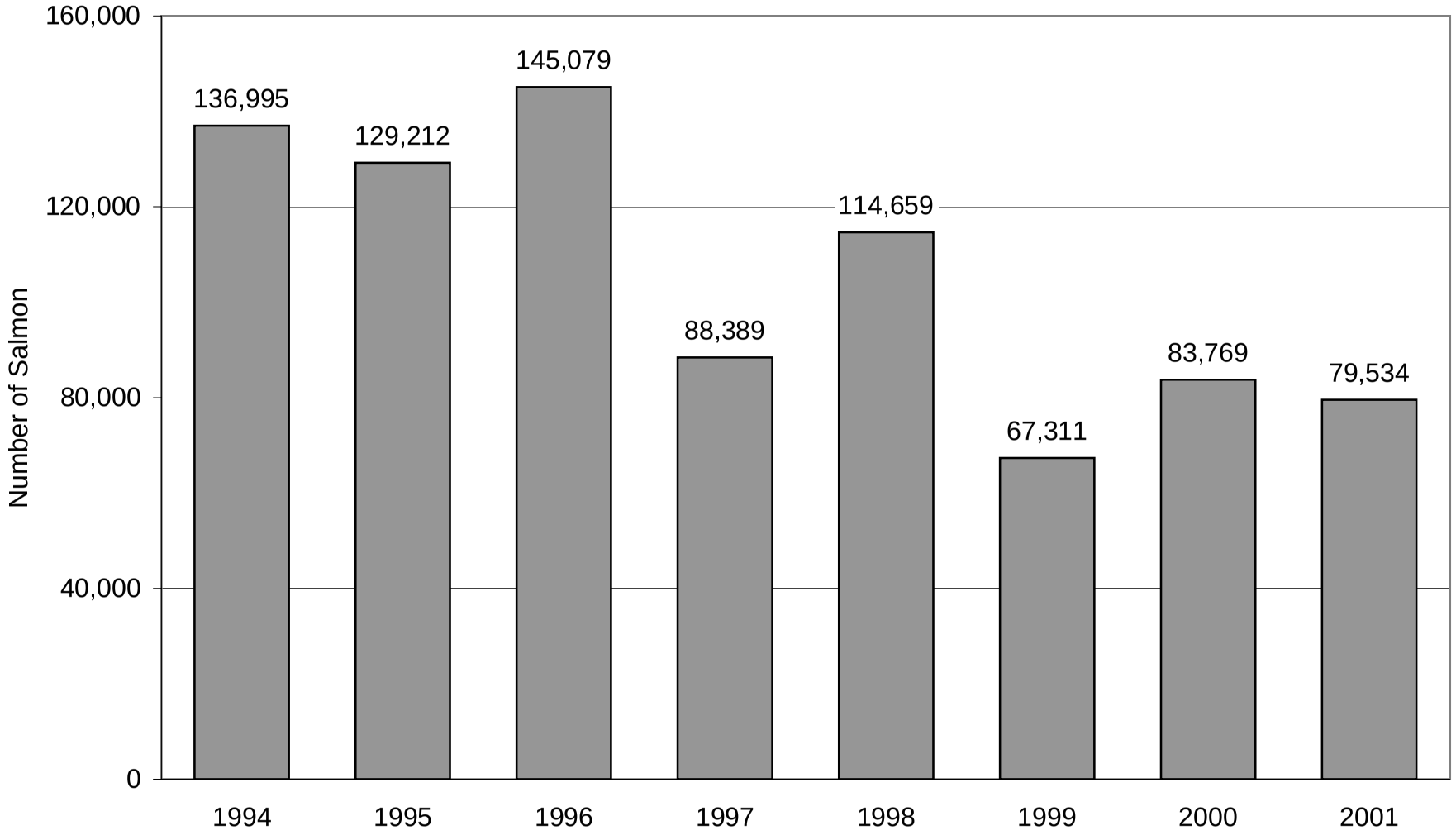
[2] Unalakleet estimated harvests include 79 chinook, 643 chum, 415 pink, and 200 coho from the ADF&G test net fishery in addition to the survey results.

[3] Kiana estimated chum harvest includes 2,036 chum from the ADF&G test net fishery in addition to the survey results.

[4] Alaska Department of Fish and Game, Division of Subsistence, postcard survey, 2001.

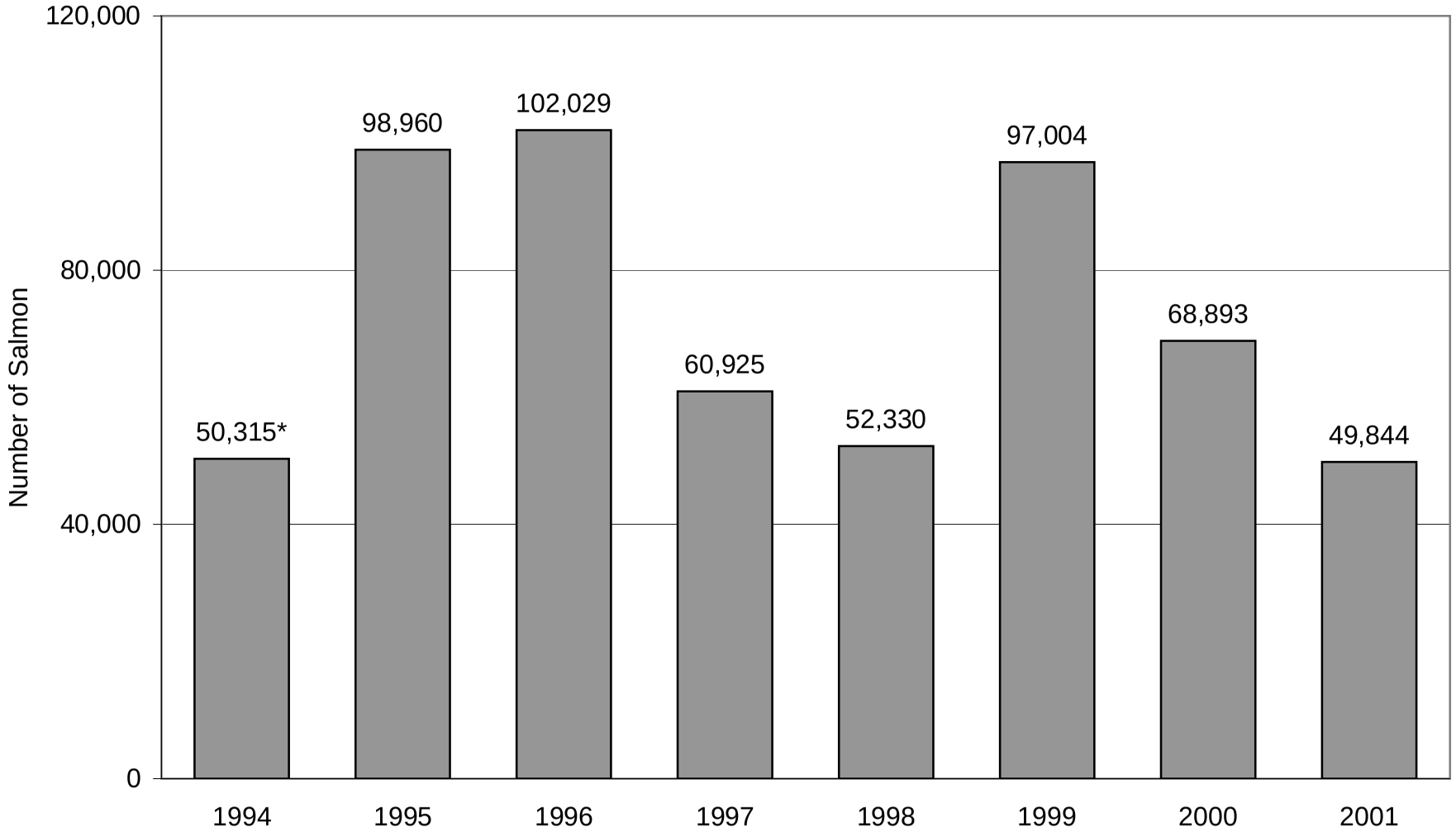
SOURCE: Alaska Department of Fish and Game, Division of Subsistence, household surveys, 2001.

**FIG. 1. SUBSISTENCE SALMON HARVESTS, 1994-2001,**
**Norton Sound-Port Clarence Districts**




Alaska Department of Fish and Game, Division of Subsistence

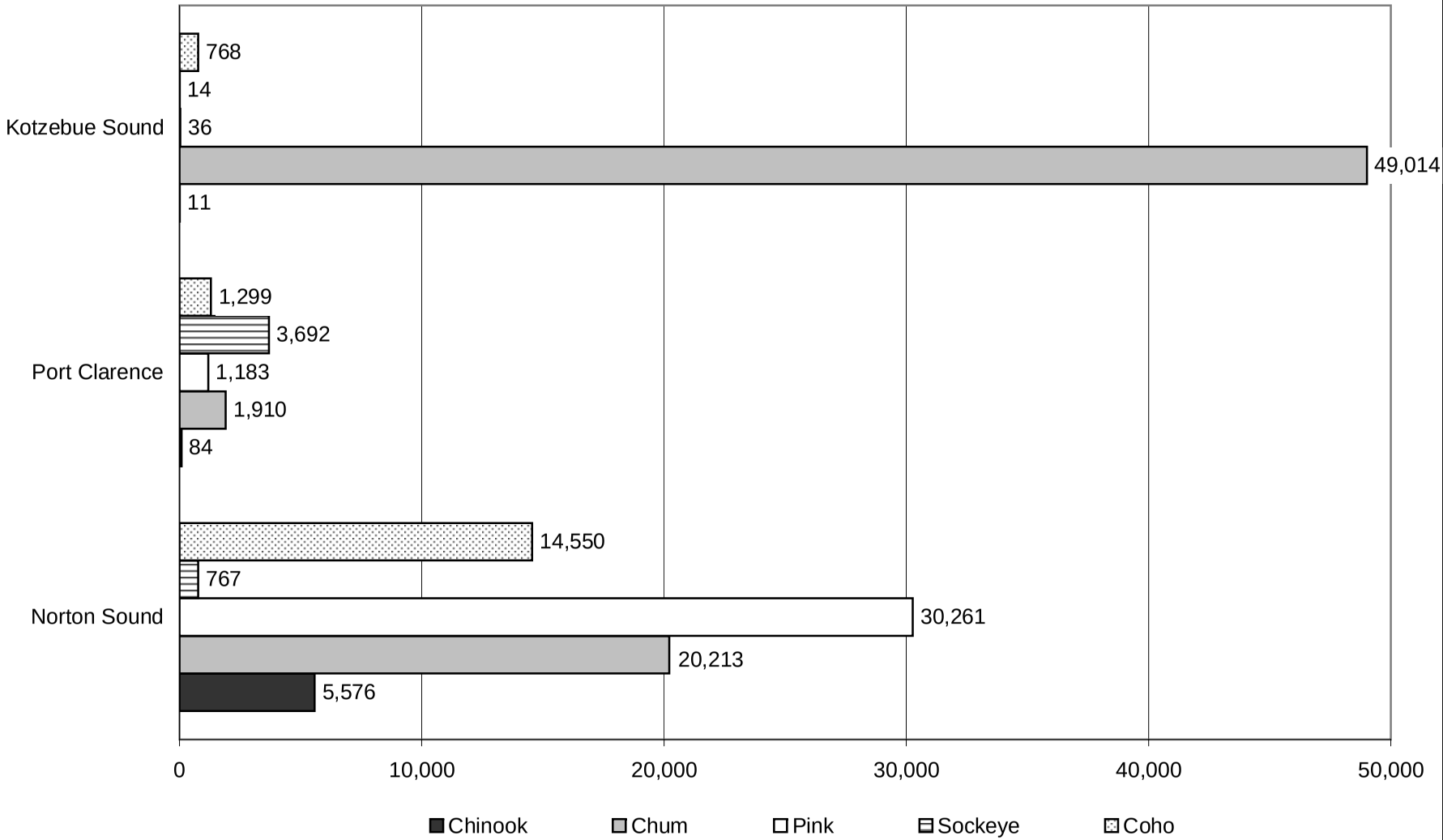
## FIG. 2. SUBSISTENCE SALMON HARVESTS, 1994-2001, Kotzebue District




* Note: 1994 does not include harvest estimates for Kotzebue.

Alaska Department of Fish and Game, Division of Subsistence

## FIG. 3. SUBSISTENCE SALMON HARVESTS BY SPECIES, 2001, Norton Sound, Port Clarence, and Kotzebue Districts




Alaska Department of Fish and Game, Division of Subsistence

## Table 3. Subsistence Salmon Harvests by Community, 1994-2001, Norton Sound-Port Clarence Districts

| Place | Species | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|---|
| **Brevig Mission** | Chinook | 37 | 3 | 13 | 56 | 109 | 38 | 32 | 41 |
| | Chum | 296 | 1,869 | 2,350 | 1,086 | 588 | 748 | 486 | 1,041 |
| | Pink | 1,436 | 1,976 | 1,584 | 476 | 4,981 | 666 | 808 | 468 |
| | Sockeye | 412 | 1,741 | 727 | 1,267 | 590 | 919 | 1,007 | 2,040 |
| | Coho | 883 | 945 | 734 | 514 | 606 | 774 | 530 | 1,070 |
| | **All Salmon** | **3,064** | **6,533** | **5,408** | **3,399** | **6,874** | **3,144** | **2,863** | **4,660** |
| **Elim** | Chinook | 322 | 284 | 417 | 619 | 414 | 424 | 248 | 427 |
| | Chum | 3,476 | 3,774 | 2,319 | 2,064 | 1,376 | 744 | 1,173 | 898 |
| | Pink | 9,345 | 2,046 | 9,442 | 1,314 | 6,891 | 1,564 | 5,983 | 1,390 |
| | Sockeye | 104 | 17 | 52 | 50 | 49 | 13 | 46 | 70 |
| | Coho | 1,180 | 1,353 | 1,720 | 1,213 | 1,831 | 975 | 1,429 | 1,352 |
| | **All Salmon** | **14,426** | **7,474** | **13,951** | **5,261** | **10,561** | **3,720** | **8,879** | **4,137** |
| **Golovin** | Chinook | 48 | 106 | 56 | 81 | 86 | 56 | 42 | 65 |
| | Chum | 833 | 4,235 | 952 | 1,788 | 1,023 | 1,692 | 866 | 1,206 |
| | Pink | 5,066 | 2,940 | 5,661 | 1,648 | 5,446 | 172 | 4,306 | 168 |
| | Sockeye | 163 | 33 | 70 | 35 | 17 | 48 | 18 | 68 |
| | Coho | 336 | 441 | 1,077 | 311 | 611 | 784 | 1,328 | 199 |
| | **All Salmon** | **6,445** | **7,755** | **7,815** | **3,863** | **7,184** | **2,751** | **6,560** | **1,707** |
| **Koyuk** | Chinook | 308 | 475 | 295 | 565 | 684 | 327 | 397 | 460 |
| | Chum | 4,581 | 5,828 | 4,161 | 4,040 | 6,192 | 4,153 | 4,714 | 4,445 |
| | Pink | 6,049 | 3,514 | 3,929 | 1,795 | 2,009 | 1,943 | 2,255 | 5,203 |
| | Sockeye | 1 | 46 | 3 | 54 | 0 | 0 | 2 | 14 |
| | Coho | 370 | 985 | 676 | 322 | 388 | 167 | 267 | 276 |
| | **All Salmon** | **11,309** | **10,847** | **9,064** | **6,777** | **9,274** | **6,590** | **7,635** | **10,397** |
| **Shaktoolik** | Chinook | 1,175 | 1,303 | 1,114 | 1,146 | 982 | 818 | 440 | 936 |
| | Chum | 1,221 | 2,534 | 4,425 | 1,612 | 1,034 | 467 | 2,412 | 1,553 |
| | Pink | 9,133 | 7,176 | 8,370 | 5,779 | 6,270 | 5,092 | 5,432 | 10,172 |
| | Sockeye | 1 | 72 | 31 | 62 | 92 | 183 | 20 | 143 |
| | Coho | 2,777 | 2,682 | 3,615 | 2,761 | 1,872 | 1,556 | 2,799 | 2,090 |
| | **All Salmon** | **14,307** | **13,766** | **17,555** | **11,360** | **10,250** | **8,116** | **11,103** | **14,895** |
| **St. Michael** | Chinook | 769 | 1,267 | 1,400 | 970 | 542 | 1,053 | 160 | 282 |
| | Chum | 4,309 | 5,778 | 6,352 | 2,816 | 1,502 | 3,036 | 1,381 | 2,246 |
| | Pink | 2,673 | 391 | 1,503 | 84 | 961 | 365 | 80 | 229 |
| | Sockeye | 127 | 45 | 3 | 41 | 143 | 111 | 16 | 17 |
| | Coho | 1,022 | 2,235 | 1,641 | 547 | 1,406 | 798 | 1,180 | 491 |
| | **All Salmon** | **8,901** | **9,715** | **10,899** | **4,458** | **4,554** | **5,363** | **2,818** | **3,264** |

## Table 3. (con't) Subsistence Salmon Harvests by Community, 1994-2001, Norton Sound-Port Clarence Districts

| Place | Species | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|---|
| **Stebbins** | Chinook | 1,525 | 1,211 | 1,030 | 1,164 | 1,410 | 760 | 298 | 570 |
| | Chum | 5,989 | 5,042 | 7,401 | 3,230 | 3,909 | 3,312 | 2,913 | 3,999 |
| | Pink | 5,552 | 758 | 2,375 | 243 | 3,125 | 459 | 364 | 202 |
| | Sockeye | 288 | 207 | 424 | 116 | 295 | 200 | 341 | 0 |
| | Coho | 3,948 | 2,570 | 3,746 | 1,826 | 3,116 | 1,312 | 2,429 | 2,759 |
| | **All Salmon** | **17,302** | **9,788** | **14,975** | **6,580** | **11,854** | **6,043** | **6,345** | **7,530** |
| **Teller** | Chinook | 167 | 64 | 182 | 102 | 178 | 24 | 39 | 40 |
| | Chum | 1,998 | 4,130 | 2,357 | 1,000 | 2,033 | 1,097 | 747 | 863 |
| | Pink | 2,824 | 1,317 | 652 | 276 | 2,831 | 120 | 557 | 715 |
| | Sockeye | 1,774 | 2,564 | 1,907 | 1,881 | 1,075 | 1,293 | 1,784 | 1,483 |
| | Coho | 1,009 | 787 | 524 | 316 | 1,153 | 236 | 369 | 209 |
| | **All Salmon** | **7,771** | **8,862** | **5,621** | **3,574** | **7,270** | **2,770** | **3,494** | **3,310** |
| **Unalakleet** | Chinook | 3,000 | 3,026 | 2,894 | 4,191 | 3,963 | 2,691 | 2,429 | 2,810 |
| | Chum | 2,434 | 4,342 | 2,728 | 1,603 | 2,551 | 3,692 | 3,000 | 2,918 |
| | Pink | 23,347 | 16,404 | 15,904 | 10,477 | 13,173 | 10,067 | 10,631 | 11,279 |
| | Sockeye | 404 | 591 | 181 | 196 | 201 | 537 | 212 | 359 |
| | Coho | 11,110 | 9,645 | 10,576 | 6,746 | 7,303 | 8,140 | 5,878 | 6,270 |
| | **All Salmon** | **40,295** | **34,008** | **32,282** | **23,213** | **27,191** | **25,127** | **22,150** | **23,637** |
| **White Mountain** | Chinook | NA | 59 | 30 | 54 | 98 | 4 | 120 | 21 |
| | Chum | NA | 6,138 | 1,915 | 3,031 | 870 | 1,694 | 289 | 2,083 |
| | Pink | NA | 4,878 | 11,738 | 2,910 | 7,894 | 271 | 6,600 | 1,497 |
| | Sockeye | NA | 1 | 64 | 0 | 20 | 0 | 0 | 4 |
| | Coho | NA | 1,170 | 1,937 | 244 | 603 | 365 | 932 | 557 |
| | **All Salmon** | NA | **12,246** | **15,684** | **6,239** | **9,486** | **2,334** | **7,941** | **4,163** |

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, household surveys.

## Table 4. Subsistence Salmon Harvests by Community, 1994-2001, Kotzebue District

| Place | Species | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|---|
| **Ambler** | Chinook | 0 | 1 | 1 | 0 | 0 | 0 | 0 | NA |
| | Chum | 6,444* | 8,558 | 9,062 | 2,713 | 2,432 | 590* | 5,009 | NA |
| | Pink | 0 | 1 | 65 | 14 | 2 | 0 | 0 | NA |
| | Sockeye | 0 | 5 | 2 | 5 | 2 | 0 | 0 | NA |
| | Coho | 5* | 0 | 6 | 1 | 0 | 100* | 0 | NA |
| | **All Salmon** | **6,449*** | **8,566** | **9,137** | **2,732** | **2,437** | **690*** | **5,009** | NA |
| **Kiana** | Chinook | 0 | 0 | 6 | 0 | 29 | 5 | 0 | 0 |
| | Chum | 4,060 | 5,985 | 5,935 | 3,064 | 3,414 | 3,788 | 2,876 | 5,379 |
| | Pink | 22 | 7 | 0 | 6 | 6 | 7 | 0 | 0 |
| | Sockeye | 0 | 0 | 0 | 0 | 0 | 0 | 74 | 0 |
| | Coho | 0 | 0 | 12 | 138 | 17 | 33 | 107 | 0 |
| | **All Salmon** | **4,082** | **5,991** | **5,953** | **3,208** | **3,466** | **3,832** | **3,057** | **5,379** |
| **Kobuk** | Chinook | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Chum | 6,369 | 2,959 | 1,819 | 629 | 1,031 | 1,869 | 318* | 2,843 |
| | Pink | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Sockeye | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Coho | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| | **All Salmon** | **6,372** | **2,960** | **1,821** | **629** | **1,031** | **1,869** | **318*** | **2,846** |
| **Kotzebue** | Chinook | NA | 140 | 505 | 449 | 327 | 0 | 206 | 5 |
| | Chum | NA | 50,708 | 50,573 | 26,355 | 24,968 | 64,768 | 37,144 | 17,713 |
| | Pink | NA | 522 | 288 | 1,083 | 1,877 | 817 | 0 | 25 |
| | Sockeye | NA | 484 | 468 | 443 | 387 | 478 | 0 | 13 |
| | Coho | NA | 1,664 | 42 | 22 | 262 | 1,202 | 640 | 0 |
| | **All Salmon** | NA | **53,518** | **51,876** | **28,351** | **27,821** | **67,264** | **37,990** | **17,756** |
| **Noatak** | Chinook | 4 | 0 | 0 | 4 | 5 | 0 | 0 | 0 |
| | Chum | 5,771 | 6,359 | 10,091 | 5,309 | 2,614 | 1,616* | 7,293 | 2,326 |
| | Pink | 0 | 0 | 0 | 0 | 6 | 10* | 3 | 0 |
| | Sockeye | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 0 |
| | Coho | 185 | 111 | 0 | 9 | 0 | 0 | 87 | 116 |
| | **All Salmon** | **5,960** | **6,469** | **10,092** | **5,323** | **2,627** | **1,626*** | **7,385** | **2,442** |
| **Noorvik** | Chinook | 2 | 8 | 38 | 9 | 21 | 4 | 5 | 6 |
| | Chum | 10,649 | 15,485 | 13,611 | 14,323 | 9,845 | 17,843 | 10,391 | 16,444 |
| | Pink | 0 | 34 | 597 | 78 | 224 | 8 | 71 | 10 |
| | Sockeye | 0 | 1 | 0 | 80 | 0 | 0 | 0 | 0 |
| | Coho | 0 | 47 | 256 | 677 | 140 | 0 | 1,722 | 652 |
| | **All Salmon** | **10,652** | **15,575** | **14,501** | **15,166** | **10,230** | **17,855** | **12,189** | **17,112** |

## Table 4. (con't) Subsistence Salmon Harvests by Community, 1994-2001, Kotzebue District

| Place | Species | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|---|
| **Shungnak** | Chinook | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| | Chum | 8,611 | 5,880 | 8,649 | 5,513 | 4,676 | 3,868 | 2,944 | 4,310 |
| | Pink | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sockeye | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Coho | 0 | 0 | 0 | 0 | 42 | 0 | 1 | 0 |
| | **All Salmon** | **8,612** | **5,880** | **8,649** | **5,515** | **4,718** | **3,868** | **2,945** | **4,310** |

* Includes only harvests reported by interviewed households. Data not expanded to unsurveyed households due to insufficient number of surveys.

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, household surveys.

**FIG. 4. SUBSISTENCE CHUM SALMON HARVESTS IN NORTON SOUND DISTRICT, 1994-2001**

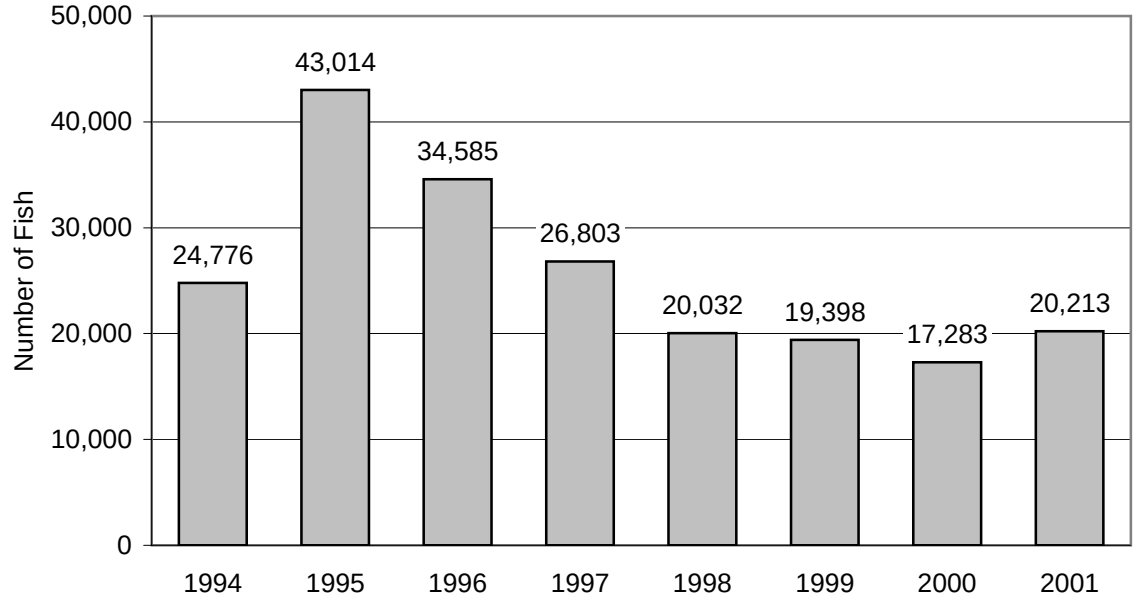



**FIG. 5. SUBSISTENCE CHINOOK SALMON HARVESTS IN NORTON SOUND DISTRICT, 1994-2001**

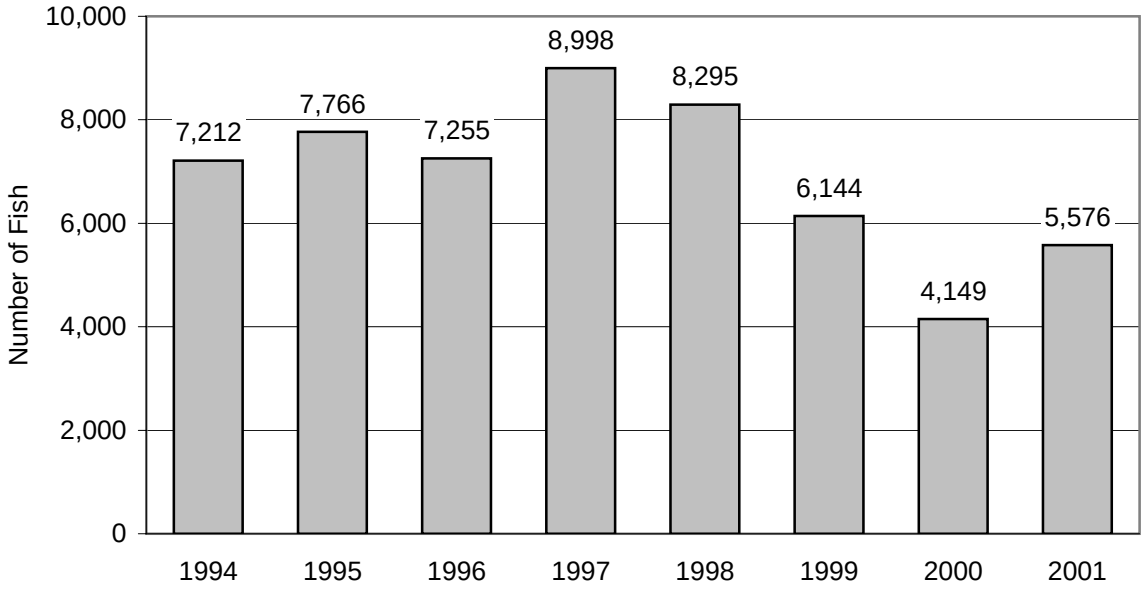


**FIG. 6. SUBSISTENCE PINK SALMON HARVESTS IN NORTON SOUND DISTRICT, 1994-2001**

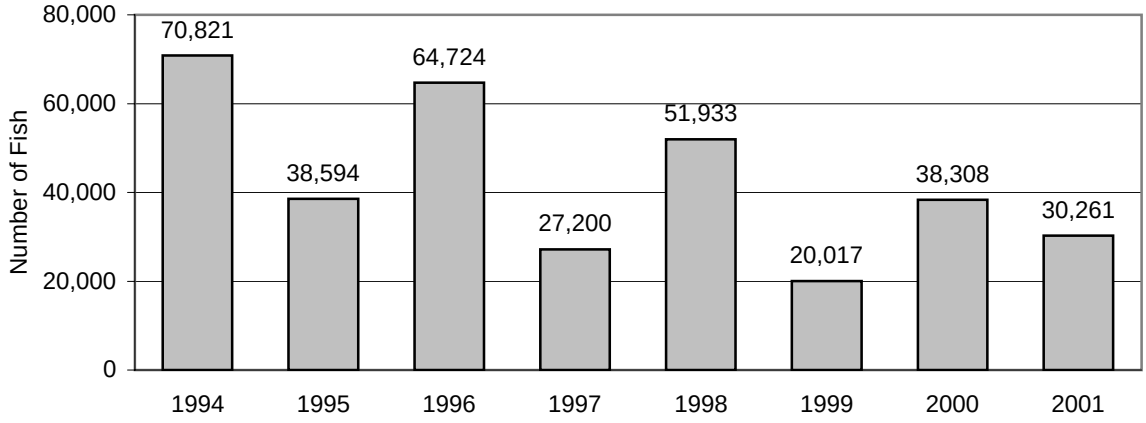



**FIG. 7. SUBSISTENCE SOCKEYE SALMON HARVESTS IN NORTON SOUND DISTRICT, 1994-2001**

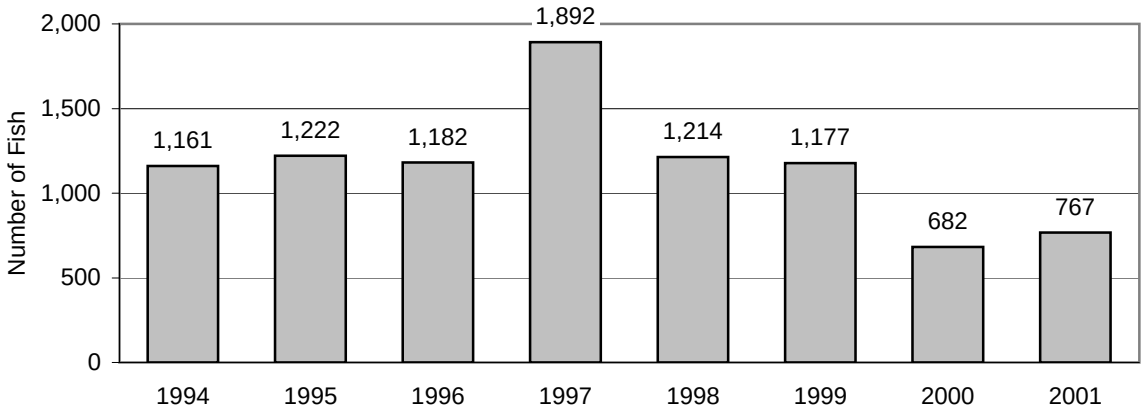
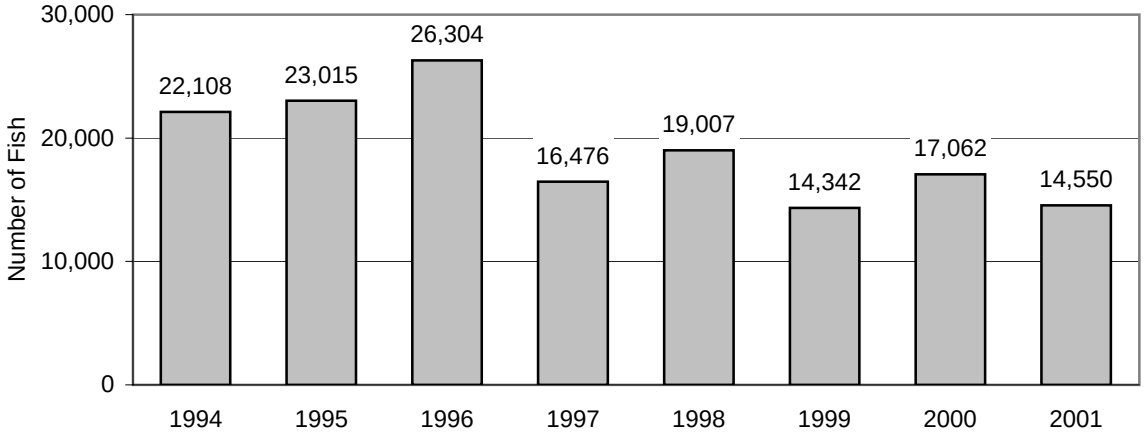



**FIG. 8. SUBSISTENCE COHO SALMON HARVESTS IN NORTON SOUND DISTRICT, 1994-2001**



## FIG. 9. SPECIES COMPOSITION OF SUBSISTENCE SALMON HARVESTS, 1999 and 2001, Norton Sound, Port Clarence, and Kotzebue Districts

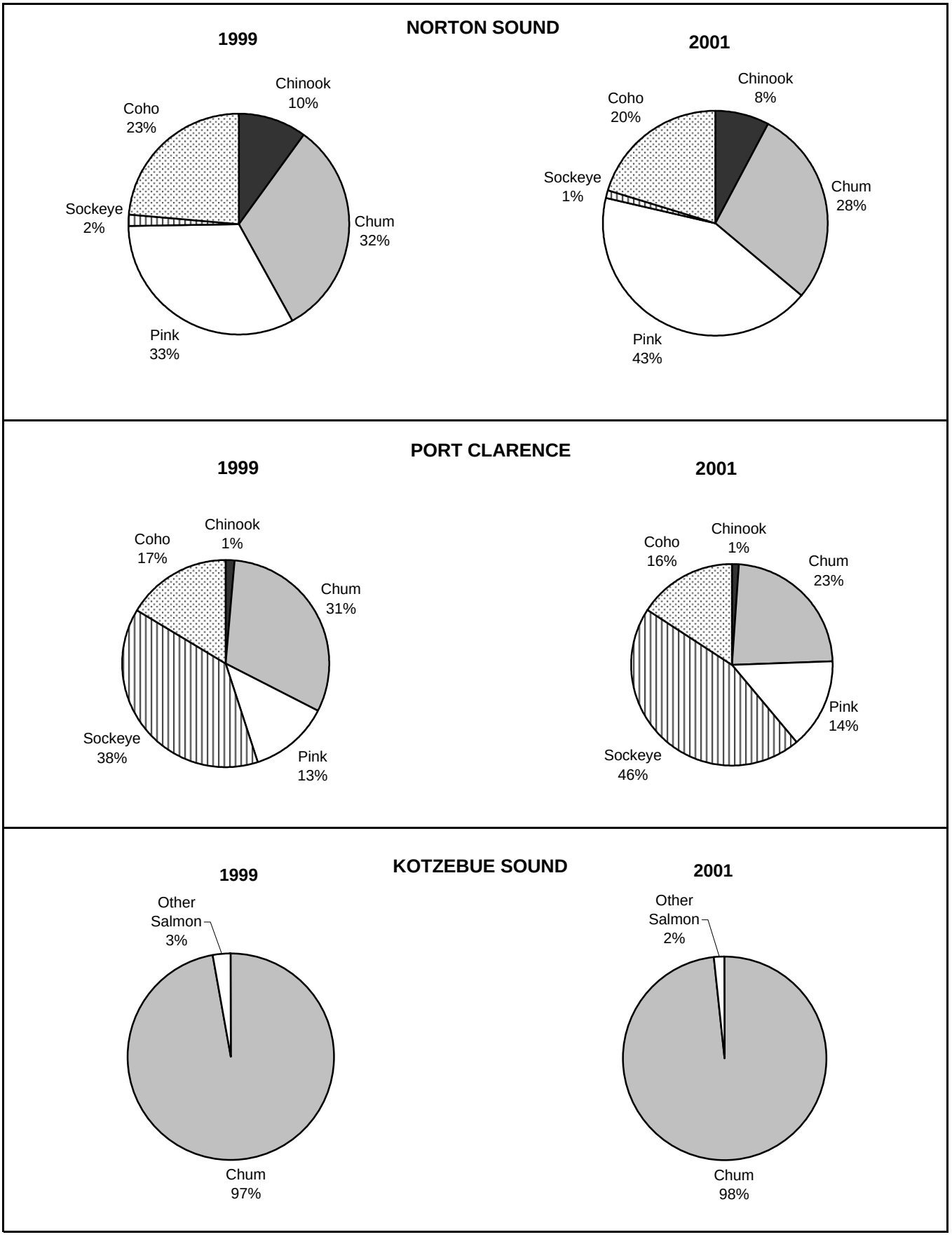
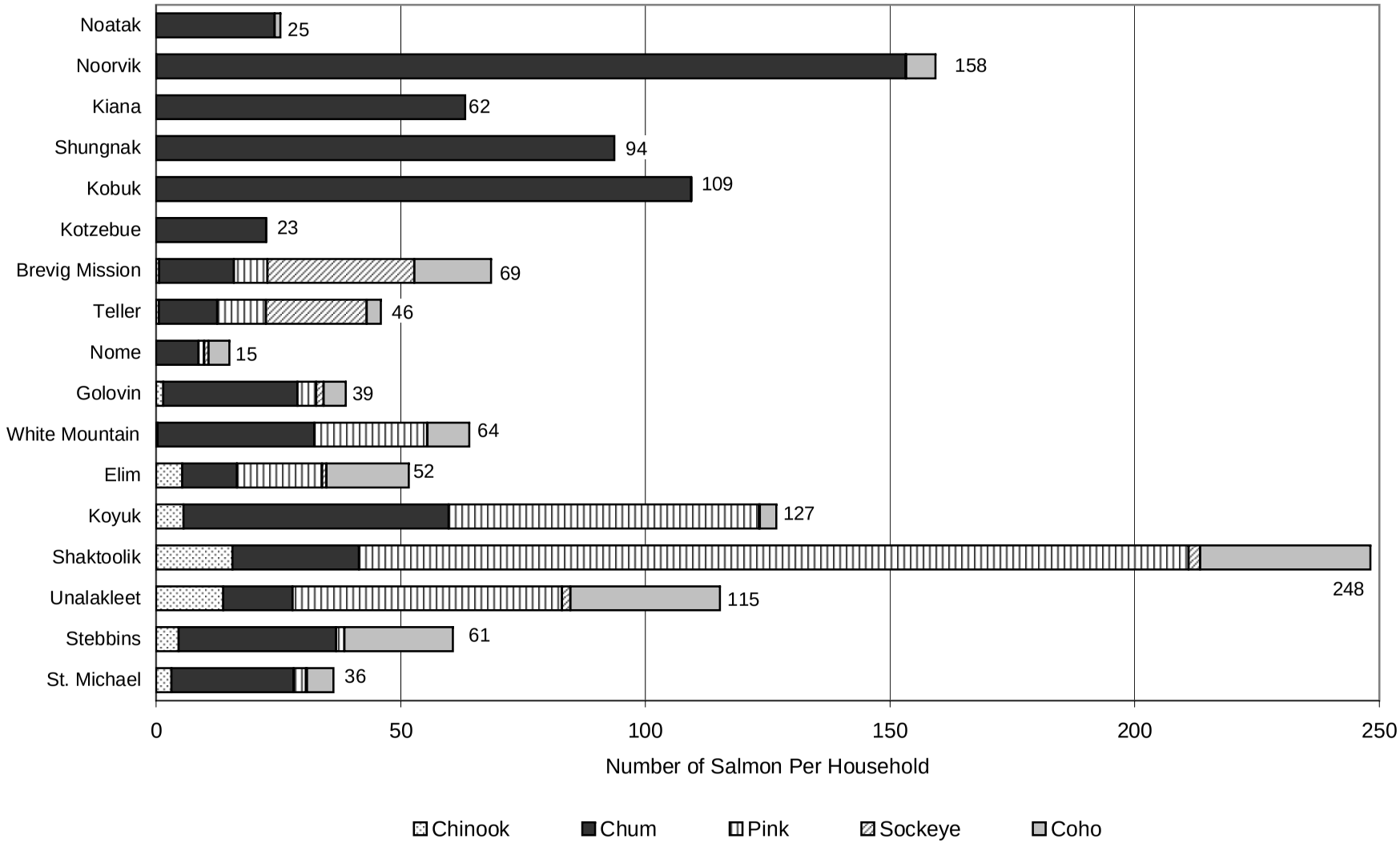


**FIG. 10. AVERAGE NUMBER OF SUBSISTENCE SALMON CAUGHT PER HOUSEHOLD, 2001, Norton Sound, Port Clarence, and Kotzebue Districts**




Alaska Department of Fish and Game, Division of Subsistence

## Table 5. Household Participation in Subsistence Salmon Fishing, Northwest Alaska, 2001

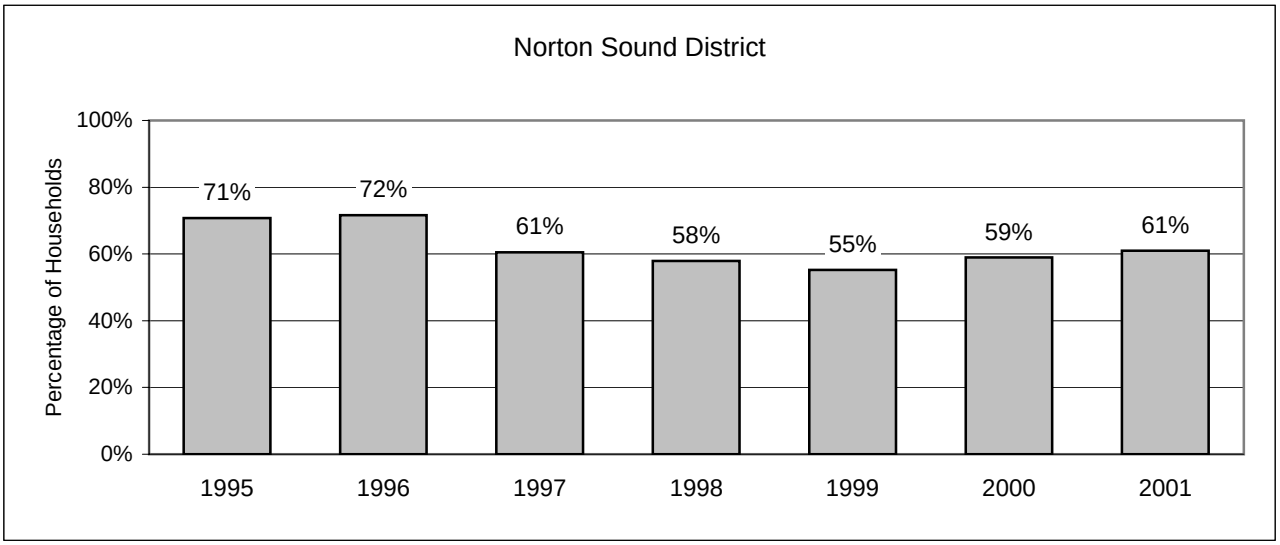
| | | | Percentage of Households | | |
|---|---|---|---|---|---|
| | Total HH's | HH's Contacted | Did Not Participate | Helped Process | Fished |
| Nome Permits | 118 | 100 | 54.8% | NA | 45.2% |
| **Subdistrict 1** | **118** | **100** | **54.8%** | **NA** | **45.2%** |
| Golovin | 44 | 39 | 28.4% | 4.9% | 66.6% |
| Niukluk R. Permits | 10 | 8 | 12.5% | NA | 87.5% |
| White Mountain | 65 | 63 | 30.5% | 9.6% | 59.9% |
| **Subdistrict 2** | **119** | **110** | **28.0%** | **7.3%** | **64.7%** |
| Elim | 80 | 69 | 22.4% | 0.0% | 77.6% |
| **Subdistrict 3** | **80** | **69** | **22.4%** | **0.0%** | **77.6%** |
| Koyuk | 82 | 69 | 31.6% | 15.4% | 53.0% |
| **Subdistrict 4** | **82** | **69** | **31.6%** | **15.4%** | **53.0%** |
| Shaktoolik | 60 | 51 | 9.8% | 9.2% | 81.0% |
| **Subdistrict 5** | **60** | **51** | **9.8%** | **9.2%** | **81.0%** |
| Unalakleet | 205 | 140 | 22.2% | 4.1% | 73.6% |
| **Subdistrict 6** | **205** | **140** | **22.2%** | **4.1%** | **73.6%** |
| Stebbins | 124 | 107 | 40.9% | 10.4% | 48.7% |
| St. Michael | 90 | 74 | 36.7% | 17.9% | 45.4% |
| **South Norton Sound** | **214** | **181** | **39.2%** | **13.5%** | **47.3%** |
| **NORTON SOUND** | **878** | **720** | **31.4%** | **7.5%** | **61.2%** |
| Brevig Mission | 68 | 55 | 29.6% | 13.6% | 56.8% |
| Pilgrim R. Permits | 20 | 15 | 42.9% | NA | 57.1% |
| Teller | 72 | 61 | 31.0% | 12.0% | 57.0% |
| **PORT CLARENCE** | **160** | **131** | **31.4%** | **11.3%** | **57.3%** |
| Ambler[1] | - | - | - | - | - |
| Kiana | 87 | 67 | 42.0% | 18.5% | 39.4% |
| Kobuk | 26 | 24 | 29.4% | 16.7% | 53.9% |
| Kotzebue | 786 | 151 | 78.6% | NA | 21.4% |
| Noatak | 96 | 68 | 44.8% | 5.9% | 49.3% |
| Noorvik | 108 | 56 | 46.1% | 16.7% | 37.2% |
| Shungnak | 46 | 42 | 48.6% | 14.5% | 37.0% |
| **KOTZEBUE SOUND** | **1,149** | **408** | **64.9%** | **7.6%** | **27.5%** |
| **TOTALS** | **2,187** | **1,259** | **47.4%** | **9.4%** | **43.3%** |

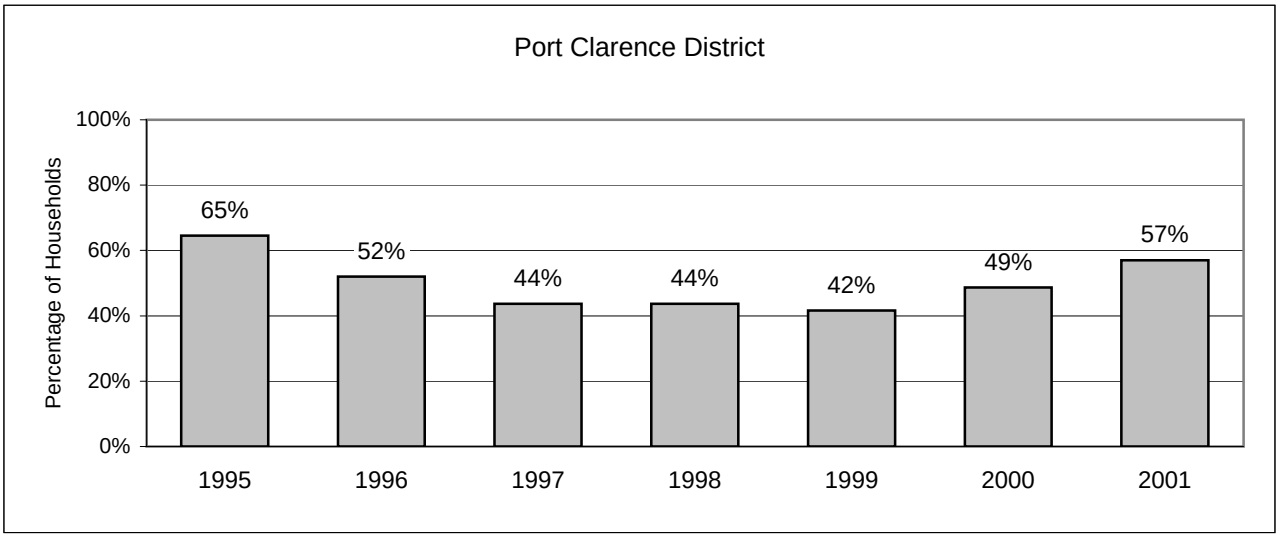
NA = Information on helping to process fish not available from permits or postcard surveys.

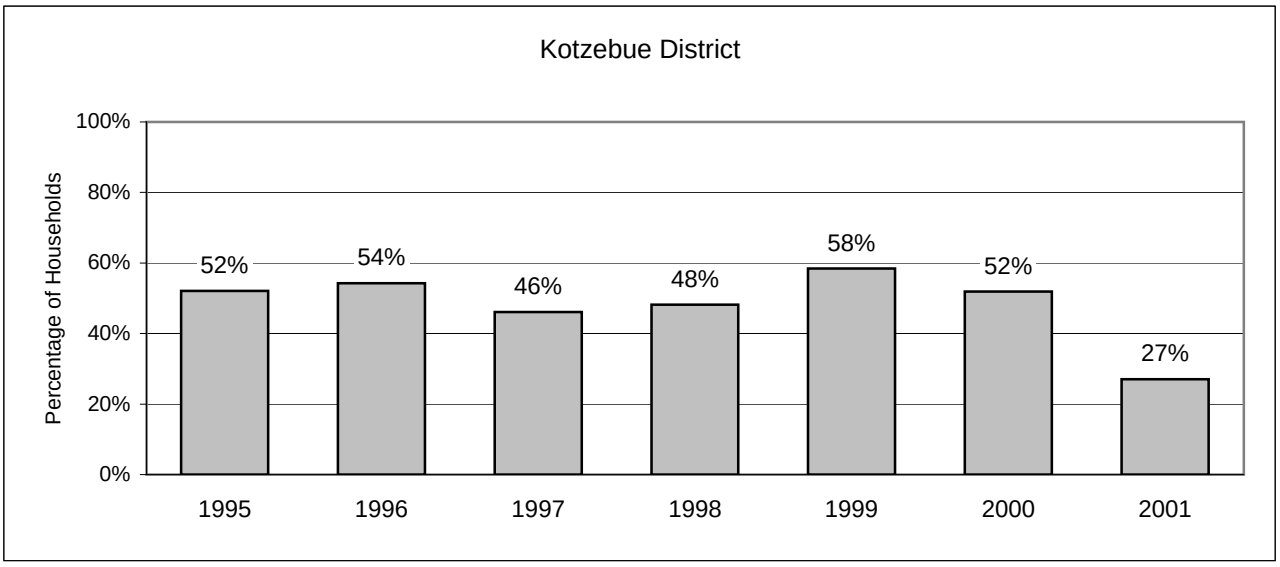
[1] Surveys were not conducted in Ambler in 2001.

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, household surveys, 2001, Alaska Department of Fish and Game, Division of Commercial Fisheries Management and Development, permit returns, 2001.

**FIG. 11. HOUSEHOLD PARTICIPATION IN SUBSISTENCE SALMON FISHING, 1995-2001, Norton Sound, Port Clarence, and Kotzebue Districts**




Alaska Department of Fish and Game, Division of Subsistence

## Table 6. Salmon Removed from Commercial Catches for Subsistence Use, Northwest Alaska, 2001

| | Total HH's | HH's Contacted | % of HH's Commercial Fishing | % Removing Salmon from Comm. Catch | Number Removed from Commercial Catch | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Chinook | Chum | Pink | Sockeye | Coho | Total |
| Nome Permits[1] | | | | | | | | | | |
| **Subdistrict 1** | | | | | | | | | | |
| Golovin | 44 | 39 | 14.8% | 12.3% | 12 | 66 | 0 | 21 | 0 | 99 |
| Niukluk R. Permits[1] | | | | | | | | | | |
| White Mountain | 65 | 63 | 0.0% | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 |
| **Subdistrict 2** | **109** | **102** | **5.8%** | **4.8%** | **12** | **66** | **0** | **21** | **0** | **99** |
| Elim | 80 | 69 | 8.2% | 2.7% | 1 | 1 | 1 | 1 | 1 | 5 |
| **Subdistrict 3** | **80** | **69** | **8.2%** | **2.7%** | **1** | **1** | **1** | **1** | **1** | **5** |
| Koyuk | 82 | 69 | 0.0% | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 |
| **Subdistrict 4** | **82** | **69** | **0.0%** | **0.0%** | **0** | **0** | **0** | **0** | **0** | **0** |
| Shaktoolik | 60 | 51 | 15.6% | 1.7% | 1 | 0 | 0 | 0 | 2 | 3 |
| **Subdistrict 5** | **60** | **51** | **15.6%** | **1.7%** | **1** | **0** | **0** | **0** | **2** | **3** |
| Unalakleet | 205 | 140 | 10.2% | 5.5% | 13 | 14 | 56 | 25 | 21 | 128 |
| **Subdistrict 6** | **205** | **140** | **10.2%** | **5.5%** | **13** | **14** | **56** | **25** | **21** | **128** |
| Stebbins | 124 | 107 | 0.0% | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 |
| St. Michael | 90 | 74 | 0.0% | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 |
| **South Norton Sound** | **214** | **181** | **0.0%** | **0.0%** | **0** | **0** | **0** | **0** | **0** | **0** |
| **NORTON SOUND** | **750** | **612** | **7.2%** | **2.6%** | **27** | **81** | **57** | **47** | **24** | **236** |
| Brevig Mission | 68 | 55 | 0.0% | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 |
| Pilgrim R. Permits[1] | | | | | | | | | | |
| Teller | 72 | 61 | 0.0% | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 |
| **PORT CLARENCE** | **140** | **116** | **0.0%** | **0.0%** | **0** | **0** | **0** | **0** | **0** | **0** |
| Ambler[2] | - | - | - | - | - | - | - | - | - | - |
| Kiana | 87 | 67 | 0.0% | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 |
| Kobuk | 26 | 24 | 0.0% | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 |
| Kotzebue[1] | | | | | | | | | | |
| Noatak | 96 | 68 | 1.4% | 1.4% | 0 | 7 | 0 | 0 | 0 | 7 |
| Noorvik | 108 | 56 | 0.0% | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 |
| Shungnak | 46 | 42 | 0.0% | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 |
| **KOTZEBUE SOUND** | **363** | **257** | **0.4%** | **0.4%** | **0** | **7** | **0** | **0** | **0** | **7** |
| **TOTALS** | **1,253** | **985** | **4.3%** | **2.0%** | **27** | **88** | **57** | **47** | **24** | **243** |

[1] Information on commercial salmon fishing not collected.

[2] Surveys were not conducted in Ambler in 2001.

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, household surveys, 2001.

## Table 7. Gear Types for Non-Commercial Salmon Harvest, Northwest Alaska, 2001

| | Total HH's | HH's Responding | Gear Types* Driftnet | Setnet | Seine | Rod & Reel |
|---|---|---|---|---|---|---|
| Nome Permits[1] | | | | | | |
| **Subdistrict 1** | | | | | | |
| Golovin | 44 | 26 | 0.0% | 69.2% | 19.2% | 46.2% |
| Niukluk R. Permits[1] | | | | | | |
| White Mountain | 65 | 38 | 0.0% | 10.8% | 21.5% | 87.1% |
| **Subdistrict 2** | **109** | **64** | **0.0%** | **30.1%** | **19.6%** | **73.8%** |
| Elim | 80 | 56 | 1.6% | 34.5% | 22.0% | 90.6% |
| **Subdistrict 3** | **80** | **56** | **1.6%** | **34.5%** | **22.0%** | **90.6%** |
| Koyuk | 82 | 38 | 0.0% | 90.6% | 20.7% | 18.8% |
| **Subdistrict 4** | **82** | **38** | **0.0%** | **90.6%** | **20.7%** | **18.8%** |
| Shaktoolik | 60 | 45 | 0.0% | 52.0% | 52.0% | 72.2% |
| **Subdistrict 5** | **60** | **45** | **0.0%** | **52.0%** | **52.0%** | **72.2%** |
| Unalakleet | 205 | 107 | 4.8% | 69.3% | 19.8% | 65.1% |
| **Subdistrict 6** | **205** | **107** | **4.8%** | **69.3%** | **19.8%** | **65.1%** |
| Stebbins | 124 | 53 | 0.0% | 94.6% | 0.0% | 20.2% |
| St. Michael | 90 | 37 | 0.0% | 92.8% | 0.0% | 16.3% |
| **South Norton Sound** | **214** | **90** | **0.0%** | **93.8%** | **0.0%** | **19.2%** |
| **NORTON SOUND** | **750** | **400** | **1.8%** | **85.8%** | **23.5%** | **76.9%** |
| Brevig Mission | 68 | 32 | 0.0% | 93.8% | 21.9% | 0.0% |
| Pilgrim R. Permits[1] | | | | | | |
| Teller | 72 | 36 | 0.0% | 91.7% | 0.0% | 13.9% |
| **PORT CLARENCE** | **140** | **68** | **0.0%** | **92.6%** | **10.3%** | **7.4%** |
| Ambler[2] | - | - | - | - | - | - |
| Kiana | 87 | 28 | 0.0% | 32.2% | 5.4% | 75.9% |
| Kobuk | 26 | 13 | 0.0% | 95.5% | 4.5% | 9.0% |
| Kotzebue | 786 | 52 | 0.0% | 70.9% | 0.8% | 30.3% |
| Noatak | 96 | 35 | 0.0% | 42.8% | 11.9% | 64.4% |
| Noorvik | 108 | 23 | 0.0% | 100.0% | 8.7% | 13.0% |
| Shungnak | 46 | 16 | 0.0% | 81.3% | 37.5% | 12.5% |
| **KOTZEBUE SOUND** | **1,149** | **167** | **0.0%** | **56.1%** | **4.1%** | **46.6%** |
| **TOTALS** | **2,039** | **635** | **0.7%** | **69.1%** | **11.6%** | **57.4%** |

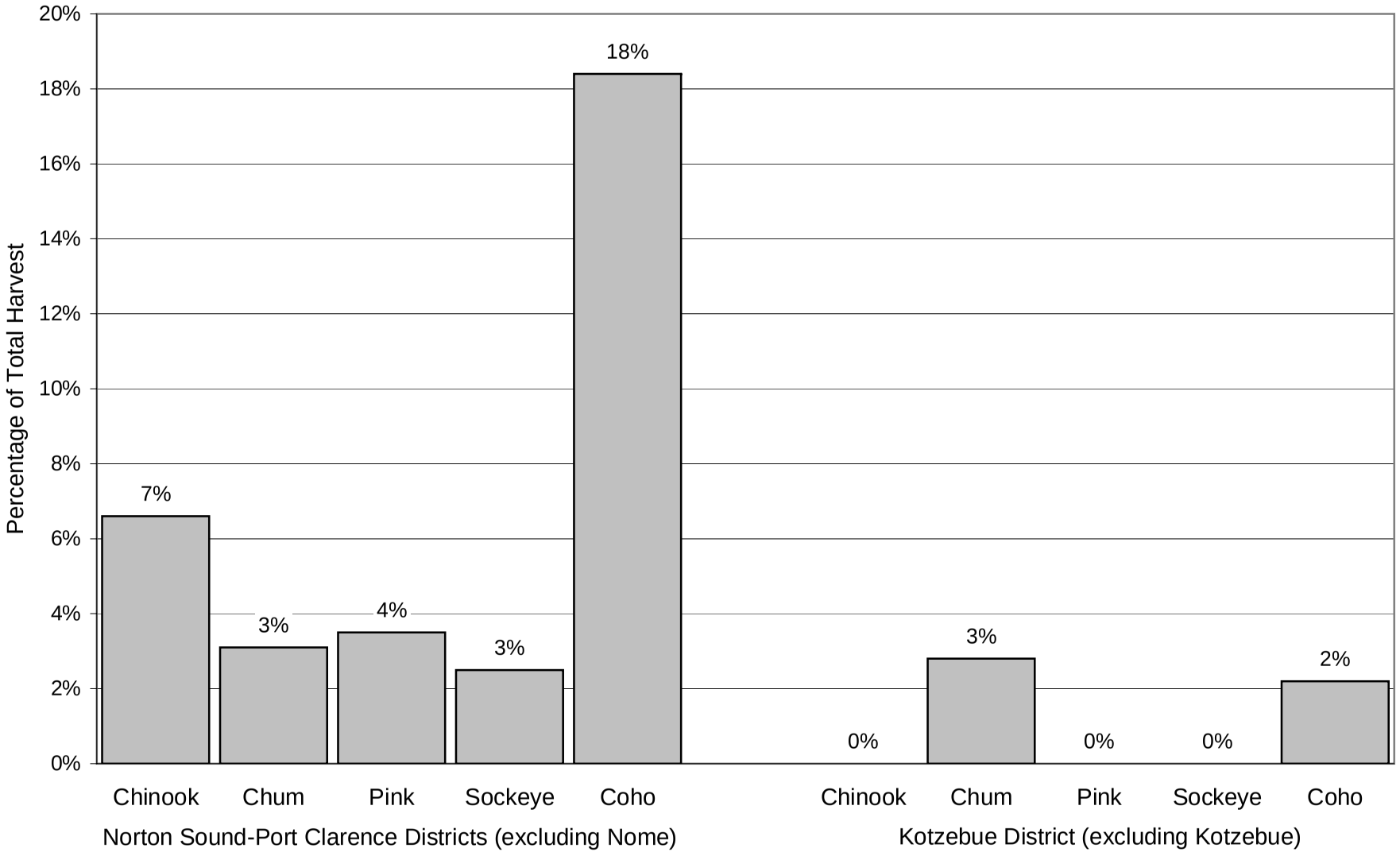
* A household may use multiple gear types.

[1] Information on gear type not collected.

[2] Surveys were not conducted in Ambler in 2001.

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, household surveys, 2000.

**FIG. 12. PERCENTAGE OF NON-COMMERCIAL SALMON HARVEST BY ROD AND REEL, 2001, Norton Sound-Port Clarence and Kotzebue Districts**




Alaska Department of Fish and Game, Division of Subsistence

## Table 8. Percentage of Households Giving Salmon to Others, Northwest Alaska, 2001

| | Total Households | Households Responding | % of Fishing Households Sharing Salmon |
|---|---|---|---|
| Nome Permits[1] | | | |
| **Subdistrict 1** | | | |
| Golovin | 44 | 27 | 44.8% |
| Niukluk R. Permits[1] | | | |
| White Mountain | 65 | 38 | 31.9% |
| **Subdistrict 2** | **109** | **65** | **38.9%** |
| Elim | 80 | 56 | 54.5% |
| **Subdistrict 3** | **80** | **56** | **54.5%** |
| Koyuk | 82 | 38 | 88.7% |
| **Subdistrict 4** | **82** | **38** | **88.7%** |
| Shaktoolik | 60 | 45 | 72.2% |
| **Subdistrict 5** | **60** | **45** | **72.2%** |
| Unalakleet | 205 | 107 | 58.7% |
| **Subdistrict 6** | **205** | **107** | **58.7%** |
| Stebbins | 124 | 53 | 68.9% |
| St. Michael | 90 | 36 | 59.3% |
| **South Norton Sound** | **214** | **89** | **65.2%** |
| **NORTON SOUND** | **750** | **400** | **59.7%** |
| Brevig Mission | 68 | 33 | 42.8% |
| Pilgrim R. Permits[1] | | | |
| Teller | 72 | 36 | 50.6% |
| **PORT CLARENCE** | **140** | **69** | **46.7%** |
| Ambler[2] | - | - | - |
| Kiana | 87 | 28 | 65.1% |
| Kobuk | 26 | 13 | 82.1% |
| Kotzebue[1] | | | |
| Noatak | 96 | 34 | 57.7% |
| Noorvik | 108 | 25 | 45.2% |
| Shungnak | 46 | 16 | 27.7% |
| **KOTZEBUE SOUND** | **363** | **116** | **65.5%** |
| **TOTALS** | **1,253** | **585** | **60.8%** |

[1] Information on salmon given to others not collected.

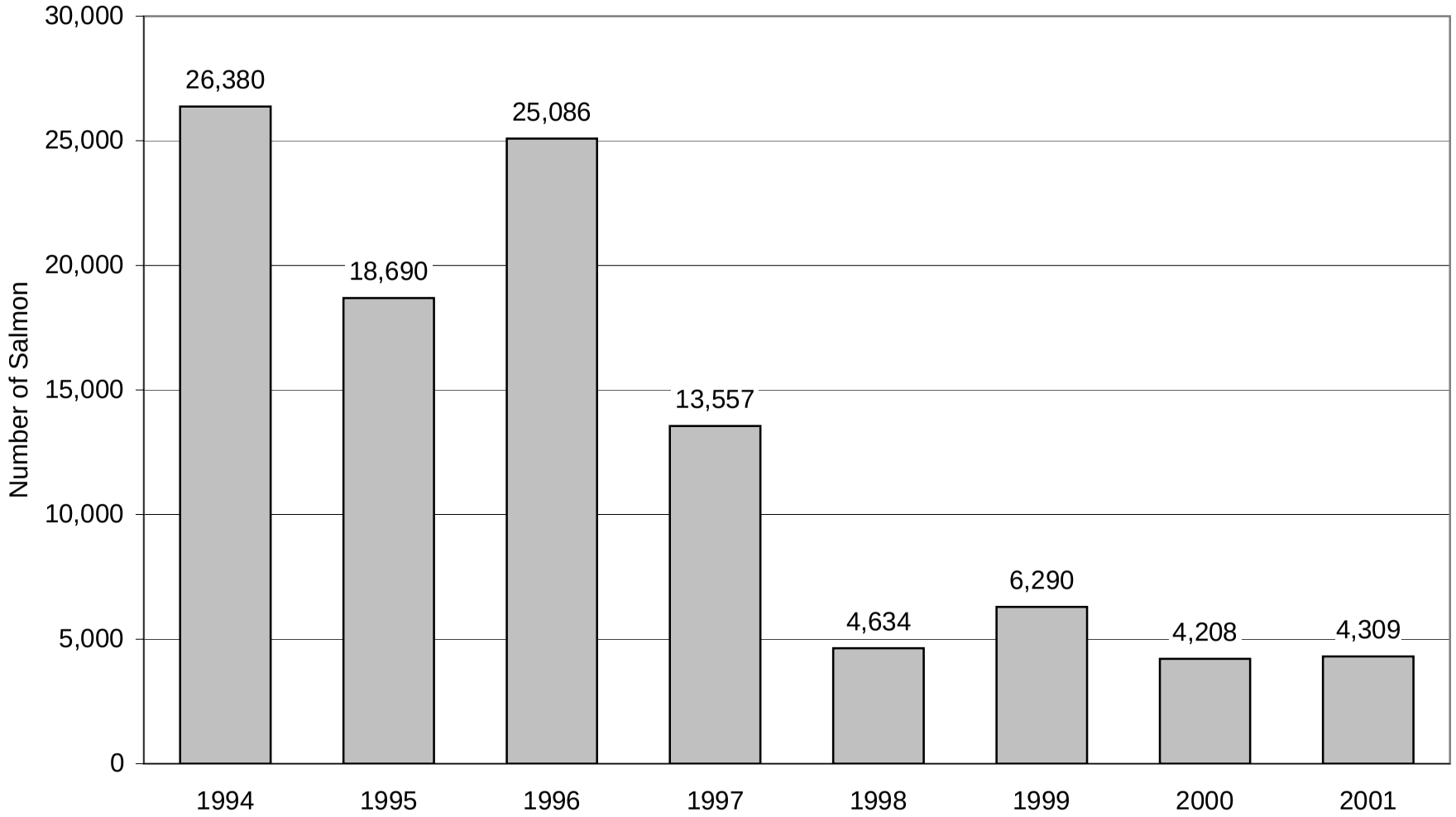
[2] Surveys were not conducted in Ambler in 2001.

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, household surveys, 2001.

## Table 9. Whole Salmon Fed to Dogs, Northwest Alaska, 2001

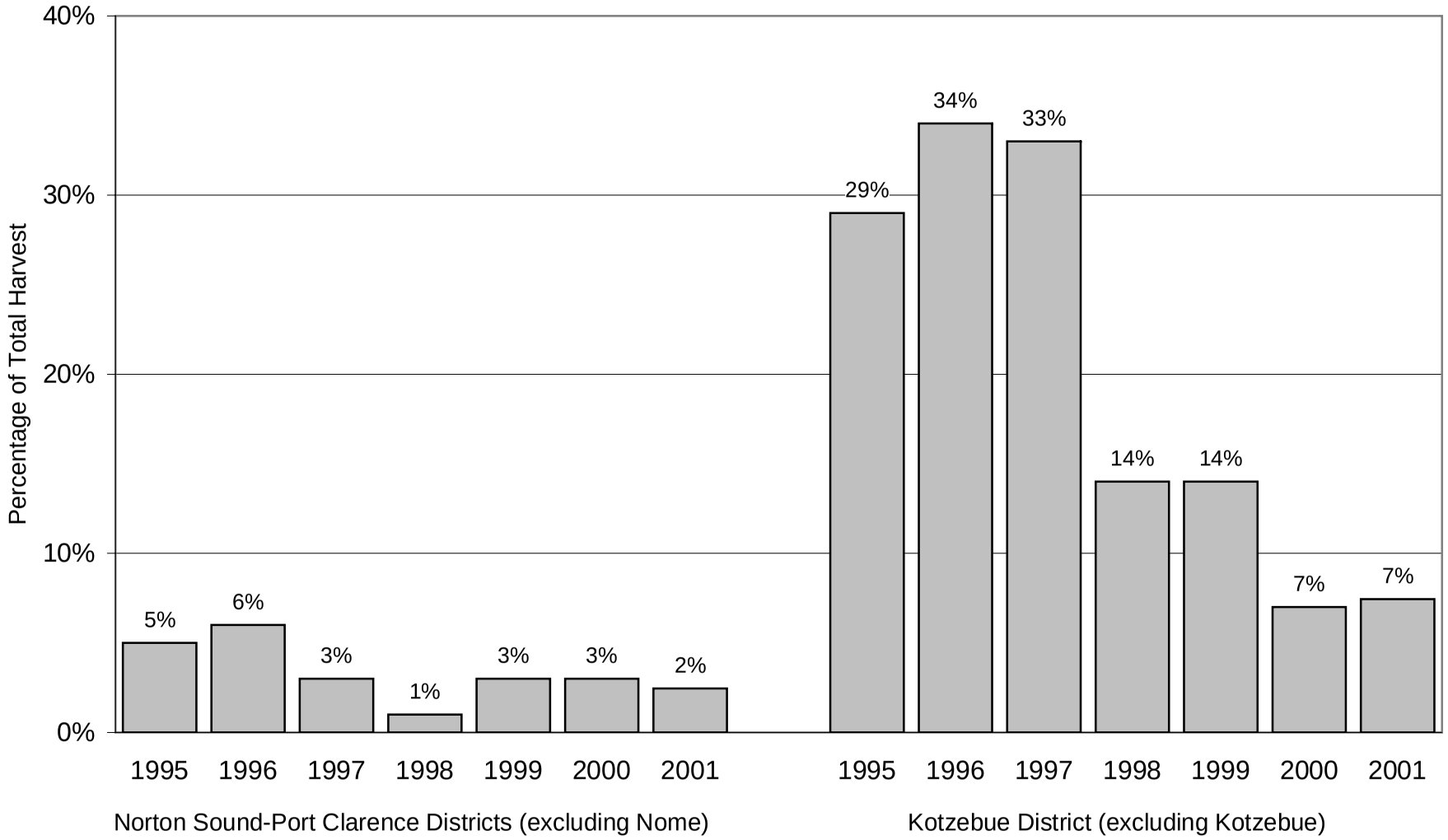
| | Total HH's | HH's Contacted | % of HH's Feeding Salmon to Dogs | Whole Salmon Fed to Dogs* | | | | | | Est. Number of Dogs | Salmon Per Dog |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Chinook | Chum | Pink | Sockeye | Coho | Total | | |
| Nome Permits[1] | | | | | | | | | | | |
| **Subdistrict 1** | | | | | | | | | | | |
| Golovin | 44 | 39 | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| Niukluk R. Permits[1] | | | | | | | | | | | |
| White Mountain | 65 | 63 | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| **Subdistrict 2** | **109** | **102** | **0.0%** | **0** | **0** | **0** | **0** | **0** | **0** | **0.0** | **0.0** |
| Elim | 80 | 69 | 8.2% | 0 | 46 | 0 | 0 | 44 | 90 | 21.9 | 4.1 |
| **Subdistrict 3** | **80** | **69** | **8.2%** | **0** | **46** | **0** | **0** | **44** | **90** | **21.9** | **4.1** |
| Koyuk | 82 | 69 | 4.2% | 0 | 71 | 63 | 0 | 0 | 133 | 5.7 | 23.4 |
| **Subdistrict 4** | **82** | **69** | **4.2%** | **0** | **71** | **63** | **0** | **0** | **133** | **5.7** | **23.4** |
| Shaktoolik | 60 | 51 | 12.2% | 0 | 219 | 459 | 0 | 52 | 730 | 82.4 | 8.9 |
| **Subdistrict 5** | **60** | **51** | **12.2%** | **0** | **219** | **459** | **0** | **52** | **730** | **82.4** | **8.9** |
| Unalakleet | 205 | 140 | 2.7% | 14 | 42 | 28 | 0 | 140 | 223 | 46.1 | 4.8 |
| **Subdistrict 6** | **205** | **140** | **2.7%** | **14** | **42** | **28** | **0** | **140** | **223** | **46.1** | **4.8** |
| Stebbins | 124 | 107 | 2.7% | 17 | 45 | 7 | 0 | 42 | 111 | 6.8 | 16.3 |
| St. Michael | 90 | 74 | 0.0% | 0 | 335 | 0 | 0 | 0 | 335 | 0.0 | 0.0 |
| **South Norton Sound** | **214** | **181** | **1.6%** | **17** | **381** | **7** | **0** | **42** | **447** | **6.8** | **65.6** |
| **NORTON SOUND** | **750** | **612** | **3.5%** | **31** | **758** | **556** | **0** | **278** | **1,623** | **162.9** | **10.0** |
| Brevig Mission | 68 | 55 | 3.4% | 0 | 89 | 16 | 155 | 36 | 296 | 16.4 | 18.1 |
| Pilgrim R. Permits[1] | | | | | | | | | | | |
| Teller | 72 | 61 | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| **PORT CLARENCE** | **140** | **116** | **1.7%** | **0** | **89** | **16** | **155** | **36** | **296** | **16.4** | **18.1** |
| Ambler[2] | - | - | - | - | - | - | - | - | - | - | - |
| Kiana | 87 | 67 | 1.4% | 0 | 61 | 0 | 0 | 0 | 61 | 6.1 | 10.0 |
| Kobuk | 26 | 24 | 24.9% | 0 | 882 | 1 | 1 | 0 | 884 | 92.6 | 9.5 |
| Kotzebue[1] | | | | | | | | | | | |
| Noatak | 96 | 68 | 1.4% | 0 | 14 | 0 | 0 | 0 | 14 | 27.5 | 0.5 |
| Noorvik | 108 | 56 | 7.4% | 0 | 1,007 | 0 | 0 | 0 | 1,007 | 77.1 | 13.1 |
| Shungnak | 46 | 42 | 4.6% | 0 | 425 | 0 | 0 | 0 | 425 | 29.8 | 14.3 |
| **KOTZEBUE SOUND** | **433** | **257** | 4.4% | **0** | **2,388** | **1** | **1** | **0** | **2,390** | **233.0** | **10.3** |

**FIG. 13. NUMBER OF SALMON HARVESTED FOR DOG FOOD, 1994-2001, Norton Sound, Port Clarence, and Kotzebue Districts**




Alaska Department of Fish and Game, Division of Subsistence

**FIG. 14. PERCENTAGE OF SUBSISTENCE SALMON HARVEST CAUGHT FOR DOG FOOD, 1995-2001, Norton Sound-Port Clarence and Kotzebue Districts**




Alaska Department of Fish and Game, Division of Subsistence
11/18/2003

## Table 10. Assessment of Chum Salmon Fishing, Northwest Alaska, 2001

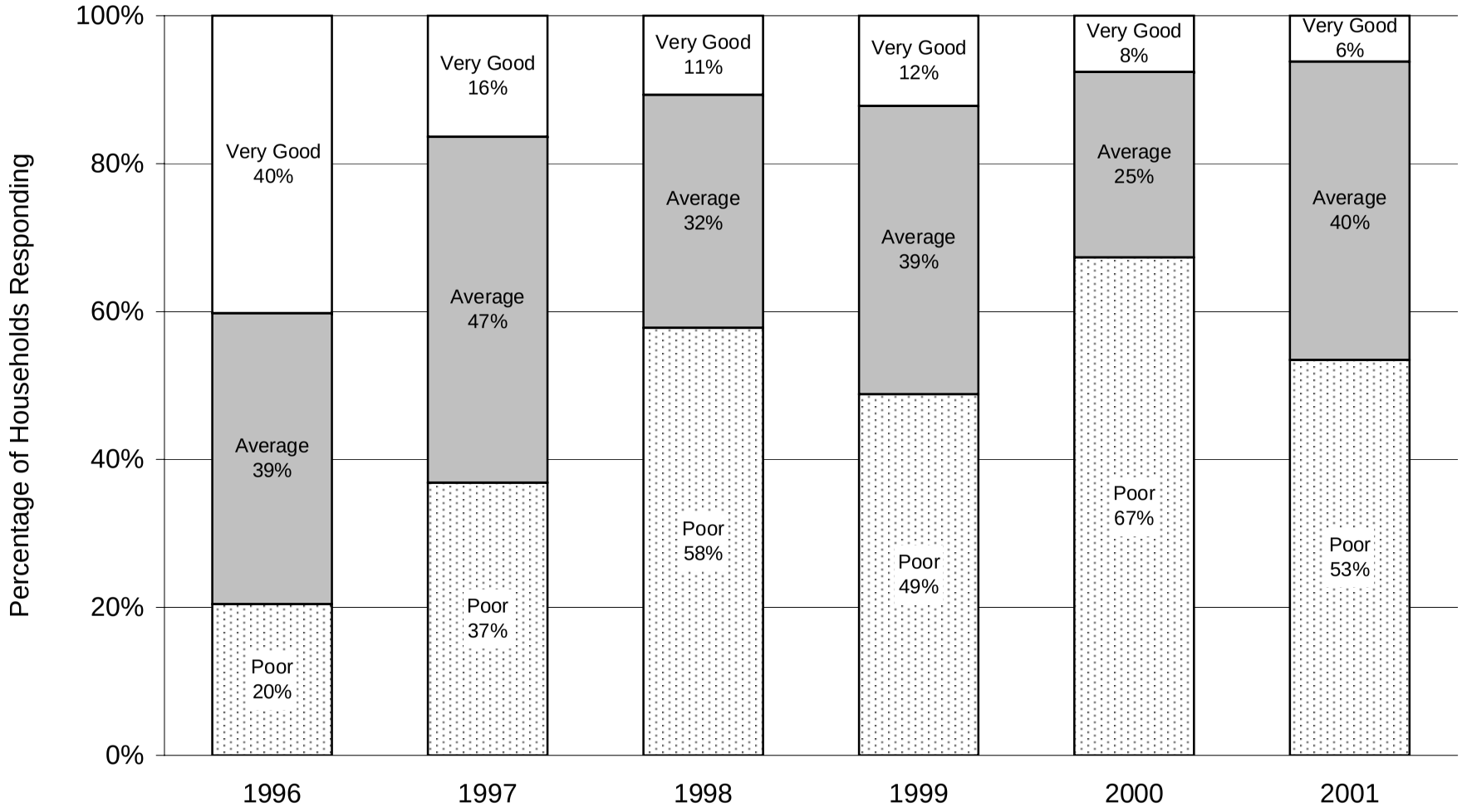
| | Total HH's | HH's Responding | Percentage of Households: Very Good | Average | Poor |
|---|---|---|---|---|---|
| Nome Permits[1] | | | | | |
| **Subdistrict 1** | | | | | |
| Golovin | 44 | 23 | 0.0% | 21.7% | 78.3% |
| Niukluk R. Permits[1] | | | | | |
| White Mountain | 65 | 26 | 7.7% | 26.9% | 65.4% |
| **Subdistrict 2** | **109** | **49** | **4.1%** | **24.5%** | **71.4%** |
| Elim | 80 | 43 | 0.0% | 46.5% | 53.5% |
| **Subdistrict 3** | **80** | **43** | **0.0%** | **46.5%** | **53.5%** |
| Koyuk | 82 | 34 | 11.8% | 50.0% | 38.2% |
| **Subdistrict 4** | **82** | **34** | **11.8%** | **50.0%** | **38.2%** |
| Shaktoolik | 60 | 30 | 3.3% | 33.3% | 63.3% |
| **Subdistrict 5** | **60** | **30** | **3.3%** | **33.3%** | **63.3%** |
| Unalakleet | 205 | 78 | 5.1% | 35.9% | 59.0% |
| **Subdistrict 6** | **205** | **78** | **5.1%** | **35.9%** | **59.0%** |
| Stebbins | 124 | 39 | 7.7% | 66.7% | 25.6% |
| St. Michael | 90 | 32 | 15.6% | 31.3% | 53.1% |
| **South Norton Sound** | **214** | **71** | **11.3%** | **50.7%** | **38.0%** |
| **NORTON SOUND** | **750** | **305** | **6.2%** | **40.3%** | **53.4%** |
| Brevig Mission | 68 | 32 | 6.3% | 21.9% | 71.9% |
| Pilgrim R. Permits[1] | | | | | |
| Teller | 72 | 35 | 8.6% | 20.0% | 71.4% |
| **PORT CLARENCE** | **140** | **67** | **7.5%** | **20.9%** | **71.6%** |
| Ambler[2] | - | - | - | - | - |
| Kiana | 87 | 26 | 69.2% | 26.9% | 3.8% |
| Kobuk | 26 | 13 | 30.8% | 53.8% | 15.4% |
| Kotzebue | 786 | 56 | 41.1% | 55.4% | 3.6% |
| Noatak | 96 | 35 | 37.1% | 51.4% | 11.4% |
| Noorvik | 108 | 17 | 64.7% | 35.3% | 0.0% |
| Shungnak | 46 | 16 | 37.5% | 43.8% | 18.8% |
| **KOTZEBUE SOUND** | **1,149** | **163** | **46.0%** | **46.6%** | **7.4%** |
| **TOTALS** | **2,039** | **535** | **18.5%** | **39.8%** | **41.7%** |

[1] Information on chum fishing assessment not collected.

[2] Surveys were not conducted in Ambler in 2001.

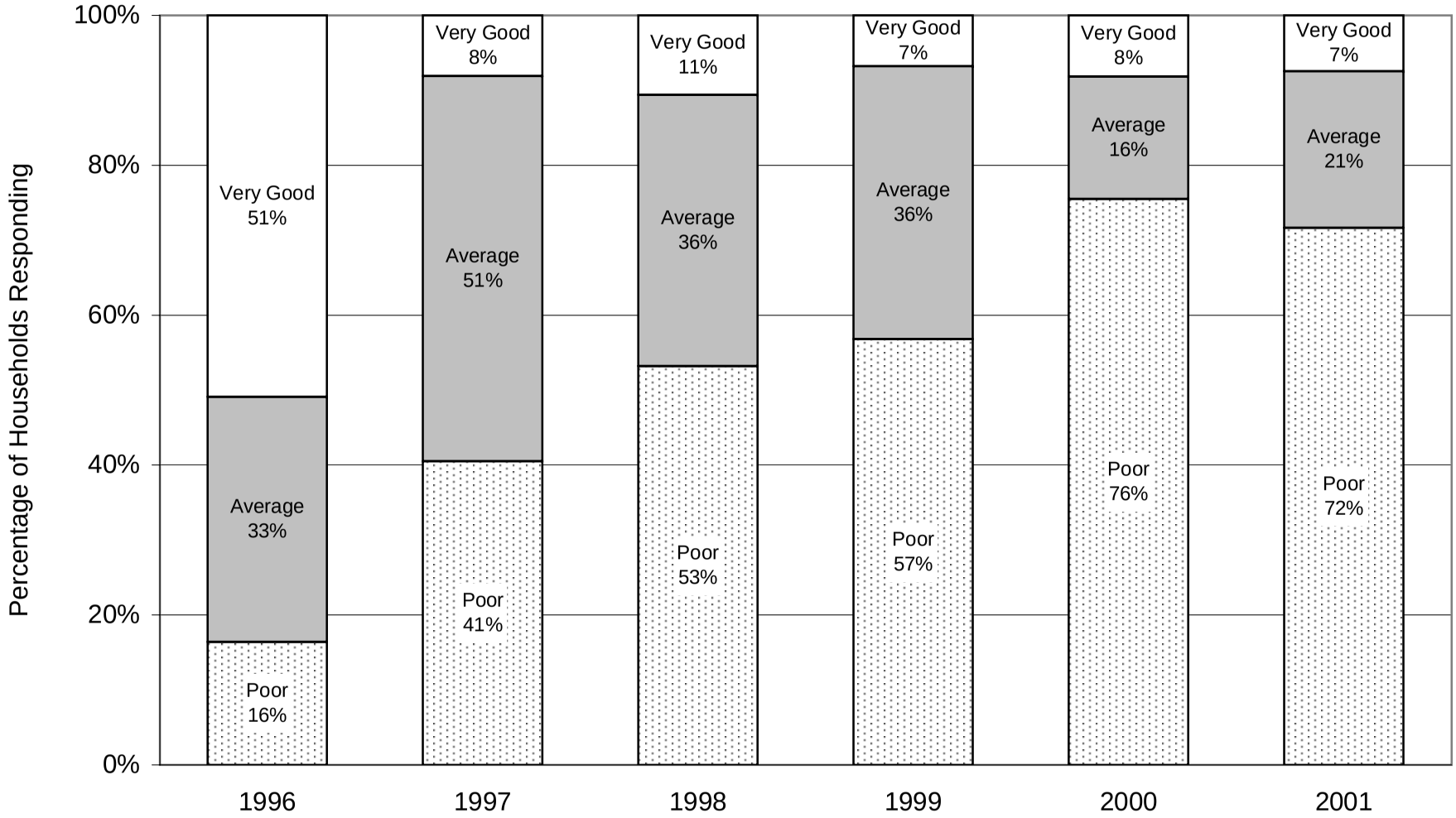
SOURCE: Alaska Department of Fish and Game, Division of Subsistence, household surveys, 2001.

## FIG. 15. ASSESSMENT OF CHUM SALMON FISHING, 1996-2001, Norton Sound District



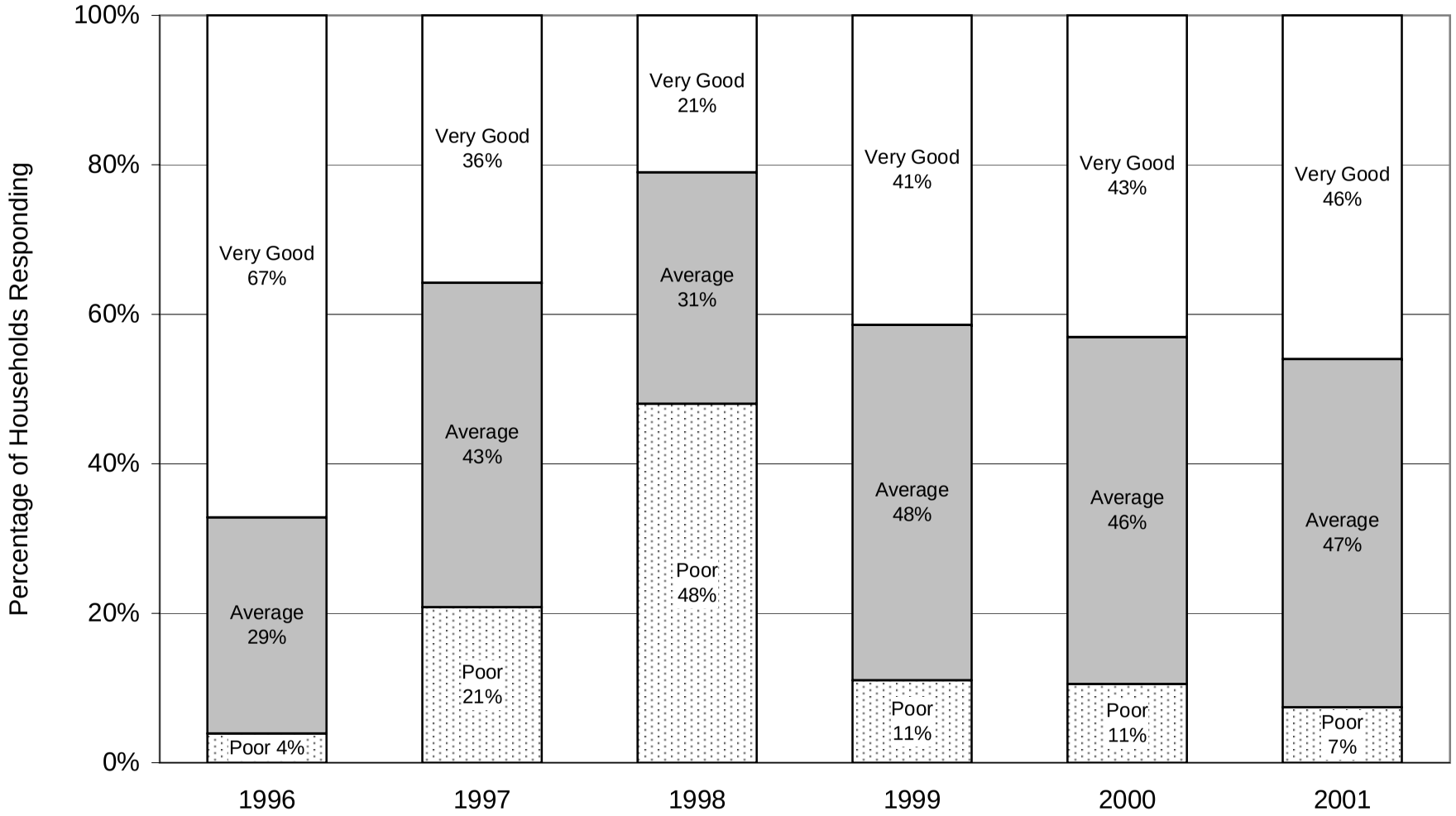

Alaska Department of Fish and Game, Division of Subsistence

## FIG. 16. ASSESSMENT OF CHUM SALMON FISHING, 1996-2001, Port Clarence District




Alaska Department of Fish and Game, Division of Subsistence

## FIG. 17. ASSESSMENT OF CHUM SALMON FISHING, 1996-2001, Kotzebue District




Alaska Department of Fish and Game, Division of Subsistence

## Table 11. Subsistence Sheefish and Whitefish Harvests, 2001, Kotzebue District

| | | | Sheefish | | | | Whitefish | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total HH's | HH's Contctd | Mean | Reported Harvest | Est. Total* | Confidence Interval % +/- | Mean | Reported Harvest | Est. Total* | Confidence Interval % +/- |
| Ambler[1] | - | - | - | - | - | - | - | - | - | - |
| Kiana | 87 | 67 | 13.8 | 987 | 1,200 | 19.5% | 81.8 | 5,342 | 7,118 | 30.3% |
| Kobuk | 26 | 24 | 1.2 | 30 | 32 | 53.5% | 0.0 | 0 | 0 | 0.0% |
| Noatak[2] | 96 | 68 | - | - | - | - | 25.4 | 1,595 | 2,443 | 34.6% |
| Noorvik | 108 | 56 | 15.4 | 1,030 | 1,658 | 48.9% | 136.2 | 9,627 | 14,711 | 44.9% |
| Shungnak | 46 | 42 | 20.6 | 885 | 947 | 12.2% | 145.8 | 4,425 | 6,705 | 40.5% |
| **KOTZEBUE SOUND** | **363** | **257** | **8.9** | **2,932** | **3,838** | **22.2%** | **71.5** | **20,989** | **30,976** | **24.3%** |

[1] Surveys were not conducted in Ambler in 2001.

[2] Information on sheefish harvests not collected in Noatak.

* Data from contacted households were expanded to households not contacted. If less than 30 and less than 50% of households in a community were contacted, then reported harvest is used for estimated harvest.

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, household surveys, 2001.

## Table 12. Subsistence Char Harvests, 2001, Noatak

| | Total HH's | HH's Contctd | Mean | Reported Harvest | Est. Total | Confidence Interval % +/- |
|---|---|---|---|---|---|---|
| Noatak | 96 | 68 | 28.1 | 1,933 | 2,702 | 14.8% |

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, household surveys, 2001.

**FIG. 18. SUBSISTENCE SHEEFISH HARVESTS, 1995-2001, Kobuk River Villages**

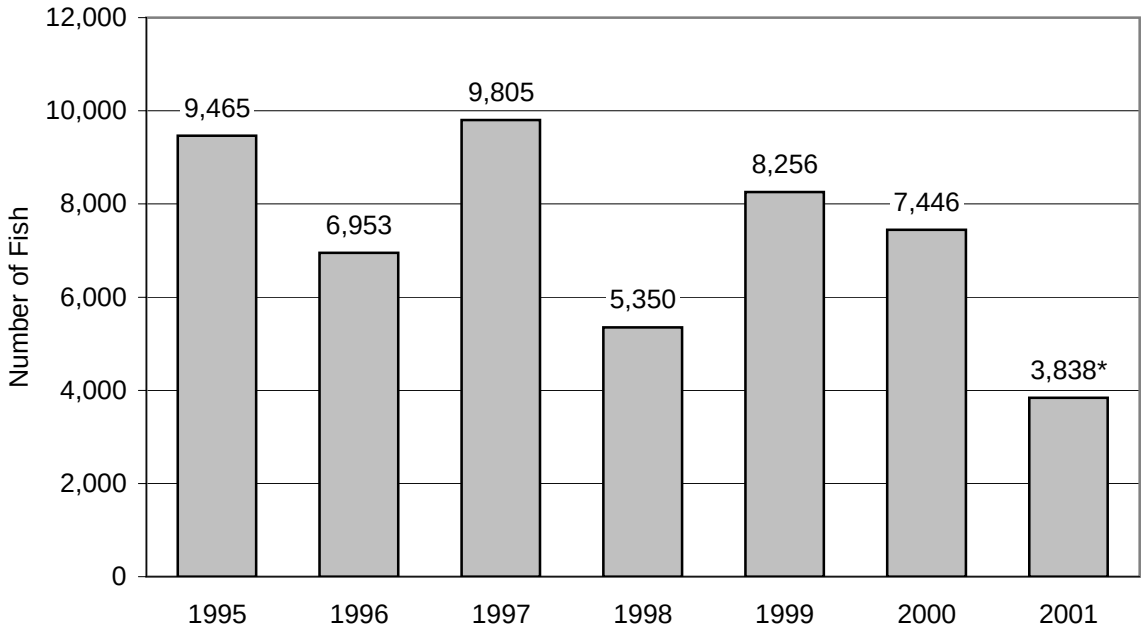
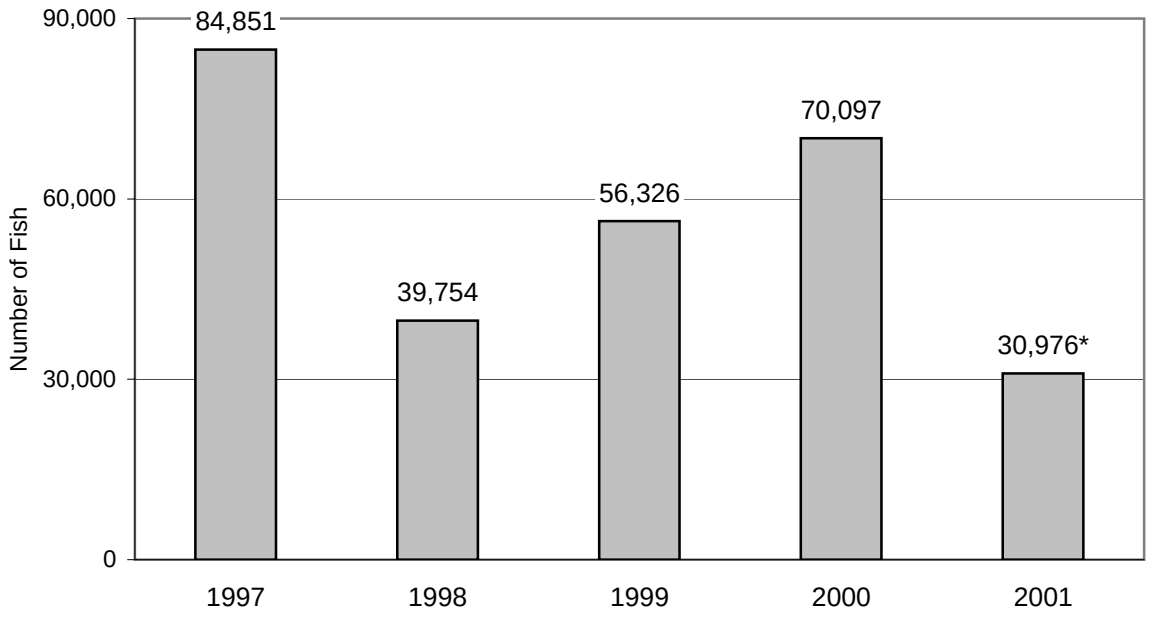
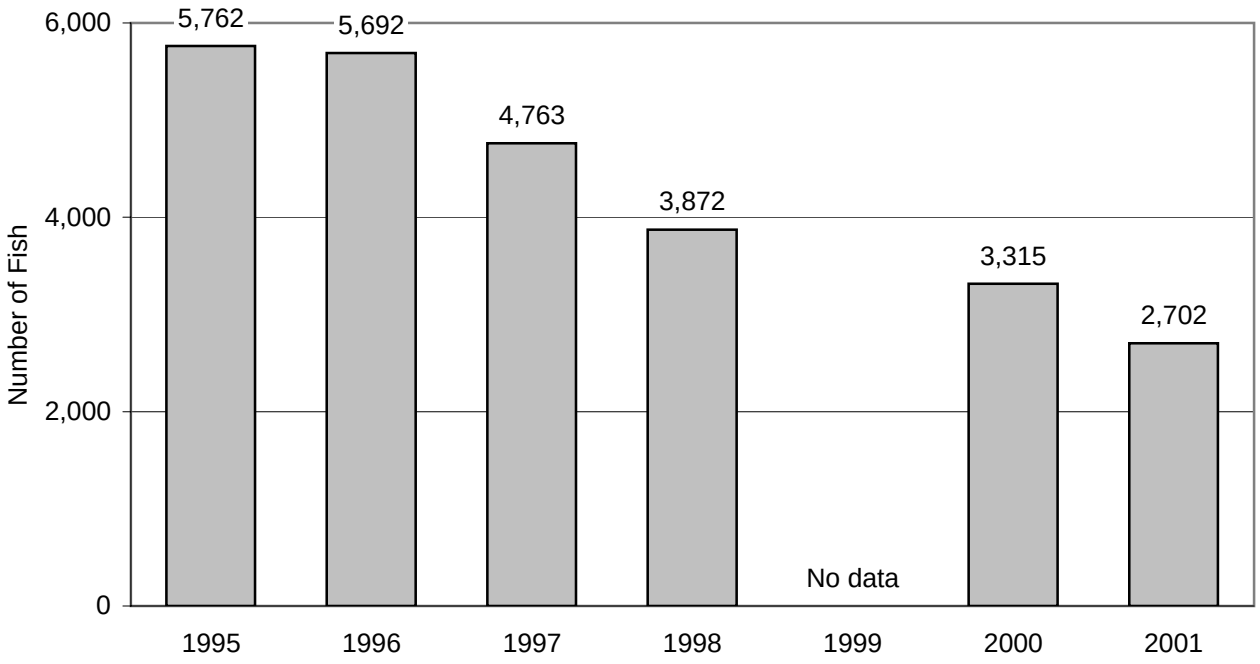



**FIG. 19. SUBSISTENCE WHITEFISH HARVESTS, 1997-2001, Noatak and Kobuk River Villages**




*Note: 2001 does not include harvests for Ambler.

**FIG. 20. SUBSISTENCE CHAR HARVESTS, 1995-2001, NOATAK**



# APPENDIX: SURVEY INSTRUMENTS

COMMUNITY ID# _____
HHID#_____

**NORTON SOUND AND SEWARD PENINSULA AREA**

**2001 SUBSISTENCE SALMON HOUSEHOLD HARVEST SURVEY**

* Questions marked with an asterisk are asked of all households interviewed

Community: _____
Survey Date: _____
Interviewer:_____

Household Head Name: _____
***Household Size** _____
If new household, where were you living last year? _____
_____
P.O. Box (if new)_____

***1**. **Did your household catch salmon for subsistence use this year (including with a rod-and-reel)?** No_____ Yes_____

***2. Does your household <u>usually</u> subsistence fish for salmon?** No_____ Yes_____

**FISHING HOUSEHOLDS ("Yes" to #1)**

3. Please estimate how many salmon your household caught for subsistence use this year , including with a rod-and-reel (your share of the catch if fishing with others). Include salmon you gave away, ate fresh, lost to spoilage, or obtained from helping others process fish.

CHUM_____ ("DOGS") CHINOOK_____ ("KINGS") PINK_____ ("HUMPIES") SOCKEYE _____ ("REDS") COHO_____ ("SILVERS") UNKNOWN SALMON_____

4. What type(s) of fishing gear did your household use for catching subsistence salmon this year?

SET GILL NET _____ SEINE _____
ROD-AND-REEL _____ DRIFT GILL NET _____

4a. (If rod-and- reel was used) How many salmon did your household catch and keep with rod-and-reel this year?

CHUM_____ ("DOGS") CHINOOK_____ ("KINGS") PINK_____ ("HUMPIES") SOCKEYE _____ ("REDS") COHO_____ ("SILVERS")

5. Did your household give salmon to other households this year? No _____ Yes _____

6. How was subsistence <u>chum</u> salmon fishing for your household this year?
____VERY GOOD _____AVERAGE _____POOR IF POOR, WHY?_____

7. Did your household catch salmon specifically for dog food? (Using salmon for dog food is allowed by regulations.)
No ____ (Go to #13) Only backbones/heads/guts/scraps/spoiled fish ____ (Go to #13) Yes _____(Go to #8)

**If Household Fished for Dog Food:**

8. How many salmon did your household catch for dog food? (Do not include fish lost to spoilage and fed to dogs.)
CHUM_____ ("DOGS") CHINOOK_____ ("KINGS") PINK_____ ("HUMPIES") SOCKEYE _____ ("REDS") COHO_____ ("SILVERS") UNKNOWN SALMON_____

9. Were these salmon included in the estimates you already gave me? No_____ Yes _____

10. How many dogs does your household have? _____ (Go to #13)

HH ID#_____

**NORTON SOUND AND SEWARD PENINSULA AREA**

**2001 SUBSISTENCE SALMON HOUSEHOLD HARVEST SURVEY (CON'T)**

**NON-FISHING HOUSEHOLDS ("No" to #1)**

11. Did your household help another household fish, cut or hang salmon, or process it some other way? No_____(Go to #13)
Yes _____

12. Did you receive salmon in exchange for your help? No ____ Yes ____

If yes, please estimate how many salmon you received for your household. (Do not include fish from a F&G test net.)

CHUM_____ ("DOGS") CHINOOK_____ ("KINGS") PINK_____ ("HUMPIES") SOCKEYE _____ ("REDS") COHO_____ ("SILVERS") UNKNOWN SALMON_____

(Go to #13)

**COMMERCIAL FISHING**

***13. Did your household commercially fish for salmon this year?** No _____ (Go to #17) Yes _____

If yes, where?_____

14. Were all of the salmon you caught when commercial fishing sold or were some brought home to eat or processed for subsistence? All sold _____ (Go to #17) Some used for subsistence _____

15. How many commercially caught salmon did your household use for subsistence?

CHUM_____ ("DOGS") CHINOOK_____ ("KINGS") PINK_____ ("HUMPIES") SOCKEYE _____ ("REDS") COHO_____ ("SILVERS") UNKNOWN SALMON_____

16. Were these salmon included in the estimates you already gave me? No _____ Yes _____

***17. Do you have any suggestions or concerns about subsistence fishing?**

**THANK YOU FOR YOUR TIME AND FOR HELPING WITH THIS PROJECT.**

A summary of this subsistence fishing survey will be sent to you next spring (April).

HHID#_____

**NORTON SOUND**

**2001 SUBSISTENCE CRAB HARVEST SURVEY**

* Questions marked with an asterisk are asked of all households interviewed

Community (please circle): White Mountain, Golovin, Elim, Koyuk, Shaktoolik, Unalakleet

***1. Did anyone in your household go crabbing for subsistence in the past 12 months?**

YES_____ NO_____

2. If yes, please estimate how many crabs your household caught for subsistence use in the past 12 months. Include crab you gave away.

NUMBER OF CRAB _____

3. How was subsistence crabbing last year compared to recent years?

____VERY GOOD _____AVERAGE _____POOR IF POOR, WHY?_____

4. Do you think the summer commercial crab fishery affects your subsistence crabbing?

YES_____ NO_____ WHY OR WHY NOT?

5. (Unalakleet and Shaktoolik only) How do you think moving the closure line closer to shore in the Unalakleet area would affect subsistence crabbing?

COMMUNITY ID# _____
HHID#_____

**KOBUK RIVER AREA**

**2001 SUBSISTENCE SALMON HOUSEHOLD HARVEST SURVEY**

* Questions marked with an asterisk are asked of all households interviewed

Community: _____
Survey Date: _____
Interviewer:_____

Household Head Name: _____
***Household Size** _____
If new household, where were you living last year? _____
_____
(If new household) P.O. Box: _____

***1. Did your household catch salmon for subsistence use or with a rod-and-reel this year?** No_____ Yes_____

***2. Does your household <u>usually</u> subsistence fish for salmon?** No_____ Yes_____

**FISHING HOUSEHOLDS ("Yes" to #1)**

3. Please estimate how many salmon your household caught for subsistence use or with a rod-and-reel this year (your share of the catch if fishing with others). Include salmon you gave away, ate fresh, lost to spoilage, or obtained from helping others process fish.

CHUM_____ ("DOGS") CHINOOK_____ ("KINGS") PINK_____ ("HUMPIES") SOCKEYE _____ ("REDS") COHO_____ ("SILVERS") UNKNOWN SALMON_____

4. What type(s) of fishing gear did your household use for catching subsistence salmon this year?

SET GILL NET _____ SEINE _____
ROD-AND-REEL _____ DRIFT GILL NET _____

4a. (If rod-and-reel was used) How many salmon did your household catch and keep with rod-and-reel this year?

CHUM_____ ("DOGS") CHINOOK_____ ("KINGS") PINK_____ ("HUMPIES") SOCKEYE _____ ("REDS") COHO_____ ("SILVERS")

5. Did your household give salmon to other households this year? No _____ Yes _____

6. How was subsistence <u>chum</u> salmon fishing for your household this year?
____VERY GOOD _____AVERAGE _____POOR IF POOR, WHY?_____

7. Did your household catch salmon specifically for dog food? (Using salmon for dog food is allowed by regulations.)
No ____ (Go to #13) Only backbones/heads/guts/scraps/spoiled fish ____ (Go to #13) Yes _____(Go to #8)

**If Household Fished for Dog Food:**

8. How many salmon did your household catch for dog food? (Do not include fish lost to spoilage and fed to dogs.)
CHUM_____ ("DOGS") CHINOOK_____ ("KINGS") PINK_____ ("HUMPIES") SOCKEYE _____ ("REDS") COHO_____ ("SILVERS") UNKNOWN SALMON_____

9. Were these salmon included in the estimates you already gave me? No_____ Yes _____

10. How many dogs does your household have? _____ (Go to #13)

HHID#_____

**KOBUK RIVER AREA**

**2001 SUBSISTENCE SALMON HOUSEHOLD HARVEST SURVEY (CON'T)**

**NON-FISHING HOUSEHOLDS ("No" to #1)**

11. Did your household help another household fish, cut or hang salmon, or process it some other way? No_____(Go to #13)
Yes _____

12. Did you receive salmon in exchange for your help? No ____ Yes ____

If yes, please estimate how many salmon you received for your household. (Do not include fish from a F&G test net.)

CHUM_____ ("DOGS") CHINOOK_____ ("KINGS") PINK_____ ("HUMPIES") SOCKEYE _____ ("REDS") COHO_____ ("SILVERS") UNKNOWN SALMON_____

(Go to #13)

**COMMERCIAL FISHING**

***13. Did your household commercially fish for salmon this year?** No _____ (Go to #17) Yes _____
If yes, where?_____

14. Were all of the salmon you caught when commercial fishing sold or were some brought home to eat or processed for subsistence? All sold _____ (Go to #17) Some used for subsistence _____

15. How many commercially caught salmon did your household use for subsistence?

CHUM_____ ("DOGS") CHINOOK_____ ("KINGS") PINK_____ ("HUMPIES") SOCKEYE _____ ("REDS") COHO_____ ("SILVERS") UNKNOWN SALMON_____

16. Were these salmon included in the estimates you already gave me? No _____ Yes _____

**SHEEFISH AND WHITEFISH FISHING**

***17. Did your household catch sheefish or whitefish for subsistence use this year?** No ____(Go to #19) Yes_____

18. Please estimate how many sheefish and whitefish your household caught for subsistence use this year (your share of the catch if fishing with others). Include fish you caught and gave away, ate fresh, lost to spoilage, or fed to dogs.

SHEEFISH _____ WHITEFISH _____

***19. Do you have any suggestions or concerns about subsistence fishing?**

**THANK YOU FOR YOUR TIME AND FOR HELPING WITH THIS PROJECT.**

A summary of this subsistence fishing survey will be sent to you next spring (April).

COMMUNITY ID# _____
HHID#_____

**NOATAK RIVER AREA**

**2001 SUBSISTENCE SALMON HOUSEHOLD HARVEST SURVEY**

* Questions marked with an asterisk are asked of all households interviewed

Community: _____
Survey Date: _____
Interviewer:_____

Household Head Name: _____
***Household Size** _____
If new household, where were you living last year? _____
_____
(If new household) P.O. Box: _____

***1. Did your household catch salmon for subsistence use or with a rod-and-reel this year?** No_____ Yes_____

***2. Does your household <u>usually</u> subsistence fish for salmon?** No_____ Yes_____

**FISHING HOUSEHOLDS ("Yes" to #1)**

3. Please estimate how many salmon your household caught for subsistence use or with a rod-and-reel this year (your share of the catch if fishing with others). Include salmon you gave away, ate fresh, lost to spoilage, or obtained from helping others process fish.

CHUM_____ ("DOGS") CHINOOK_____ ("KINGS") PINK_____ ("HUMPIES") SOCKEYE _____ ("REDS") COHO_____ ("SILVERS") UNKNOWN SALMON_____

4. What type(s) of fishing gear did your household use for catching subsistence salmon this year?

SET GILL NET _____ SEINE _____
ROD-AND-REEL _____ DRIFT GILL NET _____

4a. (If rod-and-reel was used) How many salmon did your household catch and keep with rod-and-reel this year?

CHUM_____ ("DOGS") CHINOOK_____ ("KINGS") PINK_____ ("HUMPIES") SOCKEYE _____ ("REDS") COHO_____ ("SILVERS")

5. Did your household give salmon to other households this year? No _____ Yes _____

6. How was subsistence <u>chum</u> salmon fishing for your household this year?
____VERY GOOD _____AVERAGE _____POOR IF POOR, WHY?_____

7. Did your household catch salmon specifically for dog food? (Using salmon for dog food is allowed by regulations.)
No ____ (Go to #13) Only backbones/heads/guts/scraps/spoiled fish ____ (Go to #13) Yes _____(Go to #8)

**If Household Fished for Dog Food:**

8. How many salmon did your household catch for dog food? (Do not include fish lost to spoilage and fed to dogs.)
CHUM_____ ("DOGS") CHINOOK_____ ("KINGS") PINK_____ ("HUMPIES") SOCKEYE _____ ("REDS") COHO_____ ("SILVERS") UNKNOWN SALMON_____

9. Were these salmon included in the estimates you already gave me? No_____ Yes _____

10. How many dogs does your household have? _____ (Go to #13)

HHID#_____

**NOATAK RIVER AREA**

**2001 SUBSISTENCE SALMON HOUSEHOLD HARVEST SURVEY (CON'T)**

**NON-FISHING HOUSEHOLDS ("No" to #1)**

11. Did your household help another household fish, cut or hang salmon, or process it some other way? No_____(Go to #13)
Yes _____

12. Did you receive salmon in exchange for your help? No ____ Yes ____

If yes, please estimate how many salmon you received for your household. (Do not include fish from a F&G test net.)

CHUM_____ ("DOGS") CHINOOK_____ ("KINGS") PINK_____ ("HUMPIES") SOCKEYE _____ ("REDS") COHO_____ ("SILVERS") UNKNOWN SALMON_____

(Go to #13)

**COMMERCIAL FISHING**

***13. Did your household commercially fish for salmon this year?** No _____ (Go to #17) Yes _____
If yes, where?_____

14. Were all of the salmon you caught when commercial fishing sold or were some brought home to eat or processed for subsistence? All sold _____ (Go to #17) Some used for subsistence _____

15. How many commercially caught salmon did your household use for subsistence?

CHUM_____ ("DOGS") CHINOOK_____ ("KINGS") PINK_____ ("HUMPIES") SOCKEYE _____ ("REDS") COHO_____ ("SILVERS") UNKNOWN SALMON_____

16. Were these salmon included in the estimates you already gave me? No _____ Yes _____

**TROUT (CHAR) AND WHITEFISH FISHING**

***17. Did your household catch trout or whitefish for subsistence use this year?** No ____(Go to #19) Yes_____

18. Please estimate how many trout and whitefish your household caught for subsistence use this year (your share of the catch if fishing with others). Include fish you caught and gave away, ate fresh, lost to spoilage, or fed to dogs.

TROUT _____ WHITEFISH _____

***19. Do you have any suggestions or concerns about subsistence fishing?**

**THANK YOU FOR YOUR TIME AND FOR HELPING WITH THIS PROJECT.**

A summary of this subsistence fishing survey will be sent to you next spring (April).