4K91-12

1990

ALASKA PENINSULA - ALEUTIAN ISLANDS AREAS

SALMON AND HERRING ANNUAL MANAGEMENT REPORT

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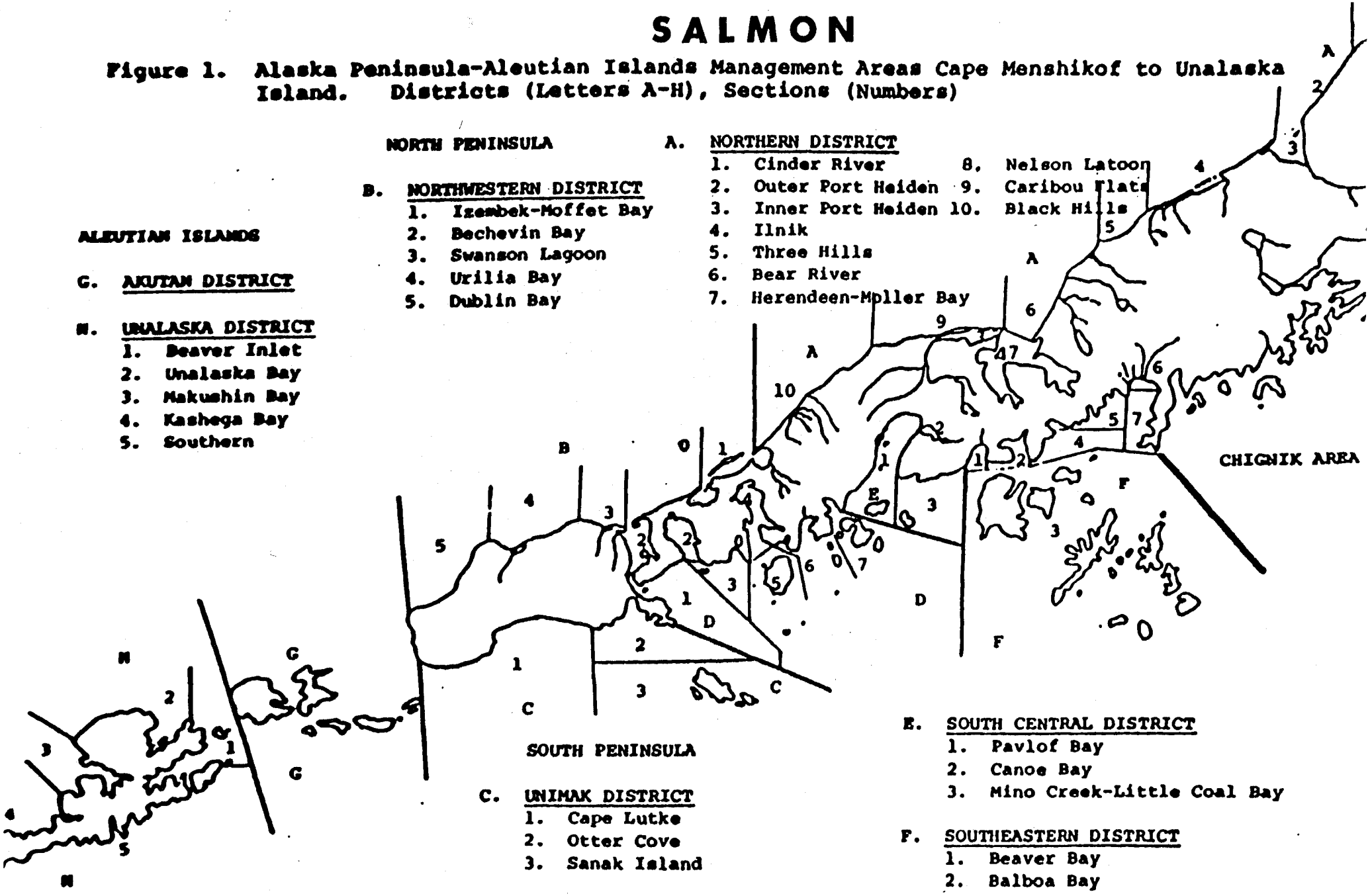
SALMON

Figure 1. Alaska Peninsula-Aleutian Islands Management Areas Cape Menshikof to Unalaska Island. Districts (Letters A-H), Sections (Numbers)



NORTH PENINSULA

A. NORTHERN DISTRICT
1. Cinder River
2. Outer Port Heiden
3. Inner Port Heiden
4. Ilnik
5. Three Hills
6. Bear River
7. Herendeen-Moller Bay
8. Nelson Lagoon
9. Caribou Flats
10. Black Hills

B. NORTHWESTERN DISTRICT
1. Izembek-Moffet Bay
2. Bechevin Bay
3. Swanson Lagoon
4. Urilia Bay
5. Dublin Bay

ALEUTIAN ISLANDS

G. AKUTAN DISTRICT

H. UNALASKA DISTRICT
1. Beaver Inlet
2. Unalaska Bay
3. Makushin Bay
4. Kashega Bay
5. Southern

SOUTH PENINSULA

C. UNIMAK DISTRICT
1. Cape Lutke
2. Otter Cove
3. Sanak Island

D. SOUTHWESTERN DISTRICT
1. Ikatan Bay
2. Morzhovoi Bay
3. Thin Point
4. Cold Bay
5. Deer Island
6. Belkofski Bay
7. Volcano Bay

E. SOUTH CENTRAL DISTRICT
1. Pavlof Bay
2. Canoe Bay
3. Mino Creek-Little Coal Bay

F. SOUTHEASTERN DISTRICT
1. Beaver Bay
2. Balboa Bay
3. Shumagin Islands
4. Southwest Stepovak
5. Northwest Stepovak
6. Stepovak Flats
7. East Stepovak

INTRODUCTION

The Alaska Peninsula-Aleutian Islands Area includes all of the Aleutian Islands, the Bering Sea (north) side of the Alaska Peninsula west of Cape Menshikof and the Pacific (south) side of the Alaska Peninsula located west of Kupreanof Point (Figure 1). No commercial salmon or herring fishing effort presently occurs west of Unalaska Island.

The area constitutes permit Area M for both salmon and herring. During January through June, Area T (Bristol Bay) salmon fishermen are allowed to fish during the open season in the Port Heiden and Cinder River Sections. During August through December Area T fishermen can commercially fish in the Inner Port Heiden and Cinder River Sections and in Ilnik Lagoon.

Unlike salmon, which is under limited entry to commercial fishing, herring fishing is open to anyone wishing to purchase an Area M herring interim use permit from the state.

There are three headquarters offices in the Alaska Peninsula and Aleutian Islands Areas. The Dutch Harbor office has Aleutian Islands Area salmon and herring management responsibilities. Beginning in 1990, the Sand Point office assumed responsibility for managing salmon in the Southeastern District and for herring management throughout the Alaska Peninsula Area. The balance of the Alaska Peninsula Area's salmon fisheries are managed from Cold Bay. Port Moller serves as a salmon research office and is also used by the Area Management Biologist in Sand Point to manage herring. Assistance in monitoring the Port Heiden, Ilnik, and Cinder River stocks is given by the Chignik Area salmon staff.

There were four salmon weirs operating in the Alaska Peninsula Area during 1990. In addition to the Bear and Nelson River weirs which have been used (often towers rather than weirs were used in these locations) for many years, weirs at Orzenoi (Orzinski) and Ilnik were operated in 1990. Orzenoi had been weired during 1929 through 1941. Due to the importance of Orzenoi sockeye in determining fishing time for the Northwest Stepovak Section, the amount of attention this area receives in regards to potential Chignik sockeye interception, and the difficult (often dangerous) job of trying to estimate fish from the air at Orzenoi, it was

decided to reinstall a weir. Orzenoi is an easy system to weir, unfortunately this can't be said for 400 plus foot wide Ilnik Lagoon. It was decided to weir Ilnik due to the sometimes poor conditions for estimating fish from the air, and the importance of this system in determining fishing time for both the Ilnik Lagoon fishery (dominantly set gillnets) and a large drift gillnet fleet fishing outside the lagoon. Unfortunately, there were too many problems in securing a fish tight weir due to a sandy bottom, debris, and tides making it impossible to obtain good escapement data in 1990. Hopefully modifications will make the project a success in 1991.

An ADF&G pilot (Hal Terry) equipped with a Piper Supercub (on wheels) and a DeHaviland Beaver (on wheel floats) provides much of the aircraft needs. A second pilot (Dave Henley) with a Supercub (on wheels) is based at Chignik and assists in Alaska Peninsula Area operations. Local air taxis utilized include Peninsula Airways and Kenai Floatplane Service. The Alaska Department of Public Safety Grumman Goose is also used.

The M/V RESOLUTION is used to transport supplies. The Fish and Wildlife Division (Department of Public Safety) vessels VIGILANT and WOLSTAD were used to monitor the South Unimak fishery.

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SALMON

GENERAL BACKGROUND

The salmon fisheries in the Alaska Peninsula Area date back to at least 1888 when canneries were reportedly constructed (but remained for a very brief period of time) at Orzinski Bay (Orzenoi Bay) and Thin Point Cove. However, the earliest catch records for the Alaska Peninsula Area date back only to 1906. The first recorded Aleutian Islands Area commercial salmon catches were in 1911.

Early catches were dominantly sockeye with a few kings and cohos. The first year in which pink and chum salmon catches exceeded 500,000 each was 1916. Area wide historical catches are listed in Table 1.

A large portion of fishermen's earnings along the South Peninsula come from harvesting migrant salmon. The South Peninsula interception fisheries include the South Unimak (also known as False Pass) June fishery, the Shumagin Islands June fishery, and the Southeastern District Mainland (also known as Balboa-Stepovak or just Stepovak) fishery.

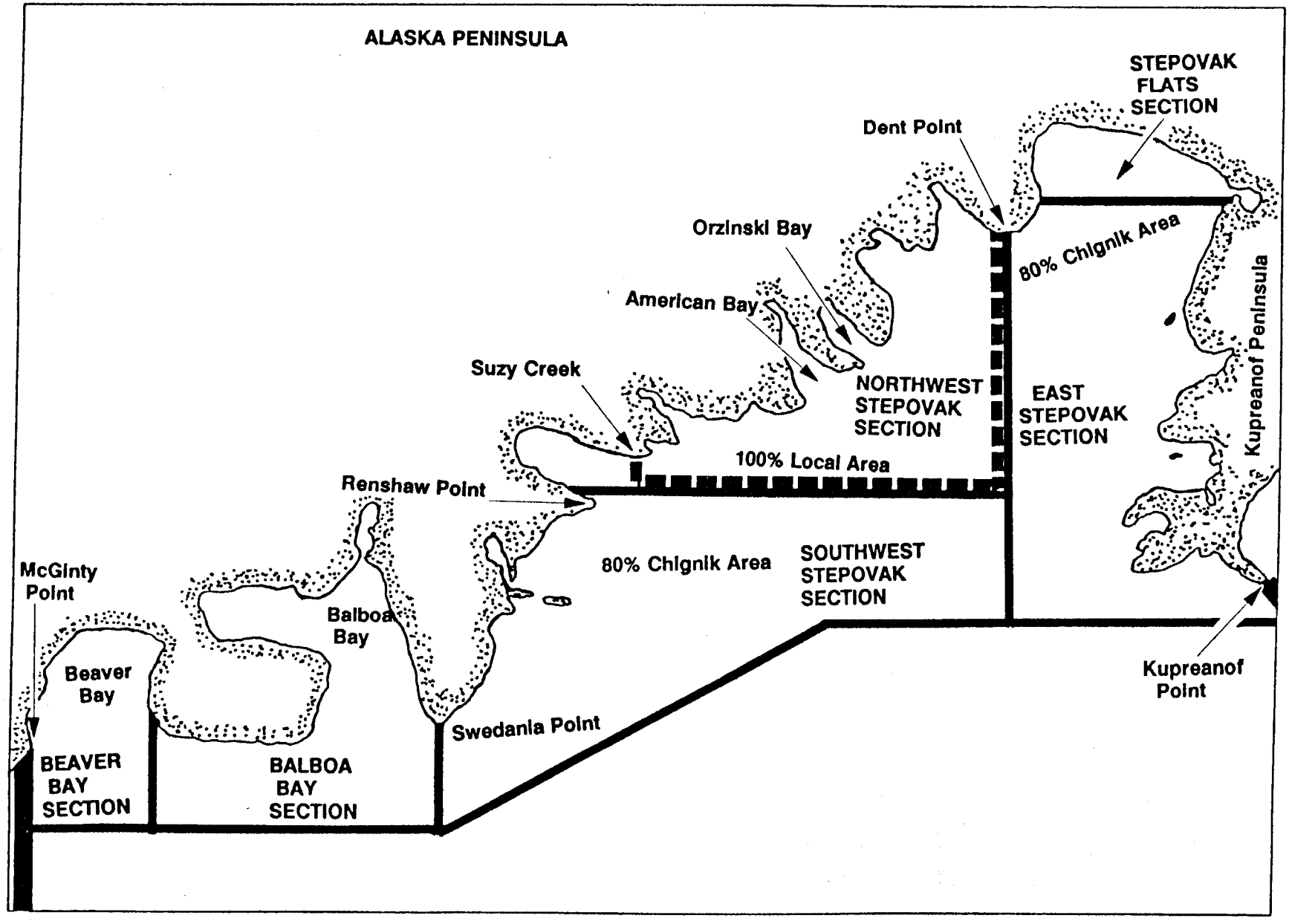
Southeastern District Mainland Fishery

Tables 7-10 contain data regarding the Southeastern District Mainland fishery.

The Southeastern District Mainland fishery (Figure 2) includes the Beaver Bay, Balboa Bay, Southwest Stepovak, Northwest Stepovak, East Stepovak, and Stepovak Flats Sections. Effort during June and most of July is primarily targeted on Chignik destined sockeye. There is also a local sockeye run (Orzenoi or Orzinski Lake run) in the Northwest Stepovak Section and early July chums in the Stepovak Flats Section. Through an Alaska Board of Fisheries management plan, the Northwest Stepovak and Stepovak Flats Sections are managed on a local stock basis throughout the season. After July 25, the entire area is managed for local stocks.

During late July through mid August pink and chum salmon runs are peaking. The fishery is usually closed during mid and late August to top off escapements and is opened again in September to harvest coho. Traveling sockeye salmon are moving through the area during the entire season.

Figure 2. Southeastern District Mainland



Through July 25 as near as possible to 6 percent of the total estimated Chignik destined sockeye catch is allowed to be taken in that portion of the Southeastern District Mainland located outside the Northwest Stepovak Section. However, if it appears that the Chignik Area sockeye catch will not reach 600,000 through July 25, then there will be no commercial fishery targeting Chignik sockeye in the Southeastern District Mainland or in the Cape Igvak Section of the Kodiak Area. No fishing targeting Chignik stocks in the Southeastern District Mainland or Cape Igvak fisheries is allowed until the run passing through those locations is assessed to be in excess of escapement needs. The assessment is made at Chignik.

The total Chignik destined sockeye catch is estimated by adding 80 percent of the Southeastern District Mainland (excluding Northwest Stepovak Section) catch to 80 percent of the Cape Igvak catch plus the entire Chignik Area sockeye catch.

The present management plan was first used for the Southeastern District Mainland during the 1985 season. A similar plan has been used at Cape Igvak since 1978.

Historically, the Southeastern District Mainland fishery has produced minor harvests. During 1974 through 1977, the fishery was open on a day to day basis with Chignik Lagoon. During some years, such as 1977 when little fishing was required to harvest large runs in Chignik Lagoon and daily interception rates were low, the result was a disastrous season for Southeastern Mainland fishermen.

For the 1978 season, the Board of Fisheries allowed three fishing days per week in the Southeastern District Mainland fishery through July 10 and made set gillnets the only legal gear during that period. Interception rates were low despite strong Chignik runs and catches were poor for the few set gillnetters in the Southeastern Mainland fishery. Up through 1978, a maximum of 12-15 gillnetters participated in this fishery.

During the winter of 1978-79, the Board of Fisheries increased fishing time to five days per week but specified that not more than 60,000 estimated Chignik sockeye could be taken through July 10. However, the fishery could be closed if it became apparent that a closure was needed to assure the attainment of Chignik escapement needs. Also, if the Chignik Area catch exceeded 1,000,000

sockeye before July 10, the Southeastern District Mainland fishery could continue beyond the 60,000 ceiling. This provision was a major factor during the 1984 season.

During 1979 through 1982 Southeastern District Mainland fishermen experienced good seasons even though closures were needed at times because of weak Chignik escapements. During this period, gear level increased to 20-25.

During 1983, the gear level did not change drastically but the fishery demonstrated its ability to catch a large number of fish during a short period of time when the July 7-8 total sockeye catch was approximately 49,000, The 1983 season was an outstanding one for Southeastern District Mainland fishermen with the season estimated interception of Chignik destined sockeye reaching 217,000. Most of the sockeye were taken between July 10 and August 10.

The 1984 season saw a dramatic increase of set gillnet gear, with the total reaching approximately 48. Several of the units of gear were operated by purse seine fishermen who also had set net permits. Consequently, there were roughly 43 full time set net fishermen. Due to the huge early Chignik run, the large number of these fish available in the Southeastern District Mainland, and the large amount of gear, only 6 days were required to harvest 60,000 estimated Chignik destined sockeye. However, the fishery was closed for only 3 days before the Chignik catch reached 1,000,000. The Southeastern District Mainland fishery was reopened on June 14 using the fishing periods listed in the regulation book (5 days/week).

It was anticipated that the 1984 second Chignik sockeye run would be very strong. This later proved to be incorrect. The Chignik escapement goal was reached on the second run only after considerable curtailment of the Southeast Mainland, Chignik, and Cape Igvak (Kodiak Area) fisheries during mid July.

The 1984 Southeastern District Mainland interception of Chignik destined sockeye through July 25 was 385,000.

In addition to the gear increase, another possible major reason for the large sockeye catches in the Southeastern District Mainland fishery in 1983, 1984, and

1986 appears to be an increase in the proportion of the Chignik run migrating through this area rather than coming from the east. The present management described earlier, was adopted after the 1984 season.

The 1985-1989 catch of Chignik destined sockeye salmon through July 25 was 51,000 (5.88%), 118,000 (6.70%) 147,000 (6.91%) and 19,000 (2.70%) respectively. The 1988 and 1989 percentages were low due to the pre July 26 Chignik Area sockeye harvest marginally reaching or falling below 600,000 fish. In 1990 the catch of Chignik destined sockeye salmon through July 25 was 128,599 salmon (8.91% of the total designated Chignik catch). Reasons for exceeding the 6.0% Chignik sockeye allocation include: 1) large catches of sockeye during the July 18-19 opening, 2) the lower than anticipated harvest at Cape Igvak which would have lowered the Southeastern District Mainland fishery percentage if the Cape Igvak fishery would have harvested its 15% allocation, the Cape Igvak catch was only 7.4%, 3) the difficulty of estimating the catching power of the fishing fleet especially purse seine gear (about 50% of the purse seine vessels have chilled water systems and often do not deliver fish until 48 hours after a fishing period opening).

For further details regarding the Southeastern District Mainland fishery check the State of Alaska commercial fishing regulations under 5 AAC 09.360. **SOUTHEASTERN DISTRICT SALMON MANAGEMENT PLAN** later in this report (under Commercial Fishing Regulations).

South Unimak-Shumagin June Fishery

Tables 11-25 contain data regarding the South Unimak and Shumagin Islands June fisheries and the amount of gear used in the Alaska Peninsula and Aleutian Islands Areas.

The South Unimak and Shumagin Islands June fisheries date back to at least 1911. The dominant stocks targeted by these fisheries are Bristol Bay bound sockeye, which has caused controversy between Peninsula-Aleutian and Bristol Bay fishermen for many years. During the late sixties, the South Unimak-Shumagin fisheries were open to fishing seven days per week regardless of Bristol Bay run strength. This caused many debates at Fish and Game Board meetings, with special meetings occurring over this one issue during the early seventies. South Unimak-Shumagin

June management strategy was decided on a year by year basis during 1972-74 due to very low anticipated Bristol Bay sockeye returns.

Beginning in 1975, the Alaska Board of Fisheries implemented an allocation plan where the South Unimak-Shumagin Islands June fisheries would be managed on guideline harvest levels allocated by the basis of predicted Bristol Bay inshore sockeye harvests. Based on historical catch information, 6.8 and 1.5 percent of the forecasted inshore Bristol Bay harvest was allocated to the South Unimak and Shumagin Islands June fisheries, respectively. To reduce the possibility of overharvesting any segment of the Bristol Bay run, the guideline harvest level was allocated to discrete time periods based on historical catch data. The allocation by time period is listed as follows:

	South Unimak	Shumagin Islands
June 1 - 11	5%	9%
12 - 18	29%	28%
19 - 25	51%	41%
26 - 30	15%	22%
Totals	100%	100%

If the guideline harvest for an individual time period is not reached, the unharvested portion is lost to the fishery. If the guideline harvest for an individual time period is exceeded, the overharvest is subtracted from the total season allocation.

Chum salmon are taken incidental to sockeye during the South Unimak-Shumagin Islands June fisheries. An unusually large harvest of approximately 1.1 million chums during 1982 along with a failing fall Yukon River chum run brought pressure from fishermen in the Arctic-Yukon-Kuskokwim (A-Y-K) Region to curtail or eliminate the fishery. Unlike the sockeye which are primarily bound for one area (Bristol Bay), chums are headed for a variety of areas ranging from Japan to Kotzebue to Prince William Sound.

To limit the chum salmon by-catch, the Board of Fisheries placed further restrictions in the form of windows on the South Unimak-Shumagin fishery beginning in 1984. The windows consist of allowing no more than 96 hours of fishing during a seven day period and no more than 72 consecutive hours.

During 1986 only, the following additional restrictions were used.

1. No fishing before June 11.
2. No fishing during June 26-30 and the loss of that period's sockeye allocation.
3. A 400,000 chum salmon catch ceiling.

These restrictions plus a low availability of sockeye resulted in only 470,000 of the 1,107,000 sockeye allocation being taken.

During the fall 1986 Board of Fisheries meeting, the Board adjourned (with three members resigning) without taking any action on the South Unimak-Shumagin Islands June fisheries. The regulations during 1987 were the same as during 1984-85.

A tagging program was carried out during 1987, indicating that chums go to a variety of places after passing the South Peninsula in June. The Yukon River fall contribution was small during this year. Details of the study have been printed in Alaska Department of Fish and Game Regional Information Report No. 5788-03.

During the spring 1988 meeting, the Board of Fisheries placed a 500,000 (fish) chum cap on the South Unimak-Shumagin Islands June fisheries (once a total of 500,000 chums are harvested the fishery will be closed). It would be very difficult or impossible to harvest the sockeye allocation during many years due to the chum cap.

In 1988, the South Unimak sockeye harvest was reduced by approximately 669,000 fish by the 500,000 chum cap. This reduction is in addition to the estimated reduction of 117,000 sockeye that would have been caused by other restrictions (no more than 96 hours to be fished in any 7 day period nor more than 72 consecutive hours). The Shumagin fishery harvested its 1988 sockeye allocation.

In 1989, South Unimak and Shumagin Islands fishermen did harvest their June sockeye allocations. However, this was due to the Bristol Bay forecast (and consequently the South Unimak and Shumagin quotas) being low. If the Bristol Bay inshore sockeye harvest had been accurately predicted, the South Unimak fishery would have fallen approximately 400,000 fish shore of it's sockeye allocation, due to the 500,000 chum cap. Sockeye catch rates were so high in

the Shumagins that this fishery could have easily taken it's allocation if the Bristol Bay harvest had been accurately forecasted before the chum ceiling was reached.

After the 1989 season, the Board of Fisheries made the following changes in regards to the South Unimak and Shumagin Islands June fisheries:

(1) The starting date of the fishery was delayed until June 13 as the chum percentage is normally higher during June.

(2) The chum salmon ceiling for both fisheries combined was raised from 500,000 to 600,000.

(3) The "window regulations" were eliminated as there did not seem to be a need for both a chum ceiling and windows.

(4) The sockeye allocation periods and allocations were changed and are presently the same for each fishery.

June 13-18	35%
June 19-25	45%
June 26-30	20%
TOTAL	100%

If catches in either fishery fall below the guidelines in the June 13-18 period, those unharvested sockeye up to a maximum of five percent of the total allocation for that fishery may be harvested during the June 19-25 period. The June 26-30 period cannot be used to make up for underharvests during the first two periods. Available information and thinking was that the sockeye stock composition between the first two periods was very similar, however the June 25-30 stock composition at South Unimak-Shumagins may be dominated by fewer and later stocks.

(5) Unlimited seine leads were eliminated at South Unimak and leads of 50 to 150 fathoms are the only legal lengths for the entire Alaska Peninsula.

(6) For the first time, maximum depth restrictions were placed on seine and gillnet near. For the entire Alaska Peninsula Area seine depth may not exceed 375 meshes in depth. Seine mesh may not exceed 3-1/2 inches except the first 25 meshes above the lead line may not be more than 7 inches. No gillnet gear used along the South Peninsula may exceed 90 meshes in depth.

(7) The area comprising the South Unimak fishery was extended to include the following portions of the Southwestern District located outside the Ikatan Bay Section:

(a) all waters north and west of a line from Cape Pankof Light to Thin Point.

(b) all waters enclosed by a line from Thin Point to Stag Point on Deer Island to Dolgoi Cape and from Bluff Point on Dolgoi Island to Arch Point.

In 1990, sockeye were not available (this may have been partly due to the reduction in gear depth) in large numbers at either the Shumagins or South Unimak despite the fact that Bristol Bay experienced one of its largest runs on record. Windy weather plagued fishing operations but fish abundance also seemed low, especially in view of the huge run that arrived in Bristol Bay. The Shumagin Islands sockeye harvest was 256,000 compared to a guideline harvest level of 240,000. The Shumagin Islands were open to fishing a total of 184 hours during 9 days. At South Unimak, the harvest was 1,091,000 (1,087,000 allocation). The South Unimak fishery was open to fishing for 269 hours during 13 days.

A total of 64,000 chums were caught in the Shumagin Islands and 455,000 were caught at South Unimak for a combined total of 519,000.

If the Bristol Bay sockeye run had been accurately forecasted, the Shumagin Islands and South Unimak quotas would have been 497,000 and 2,255,000 respectively. However, due to the 600,000 chum ceiling, the Shumagin Islands fishery would have fallen approximately 35,000 sockeye short of its corrected quota while South Unimak would have fallen approximately 1,050,000 sockeye short.

With no chum salmon ceiling, the Shumagin Islands fishery would have easily taken its sockeye allocation with a total chum catch of approximately 135,000.

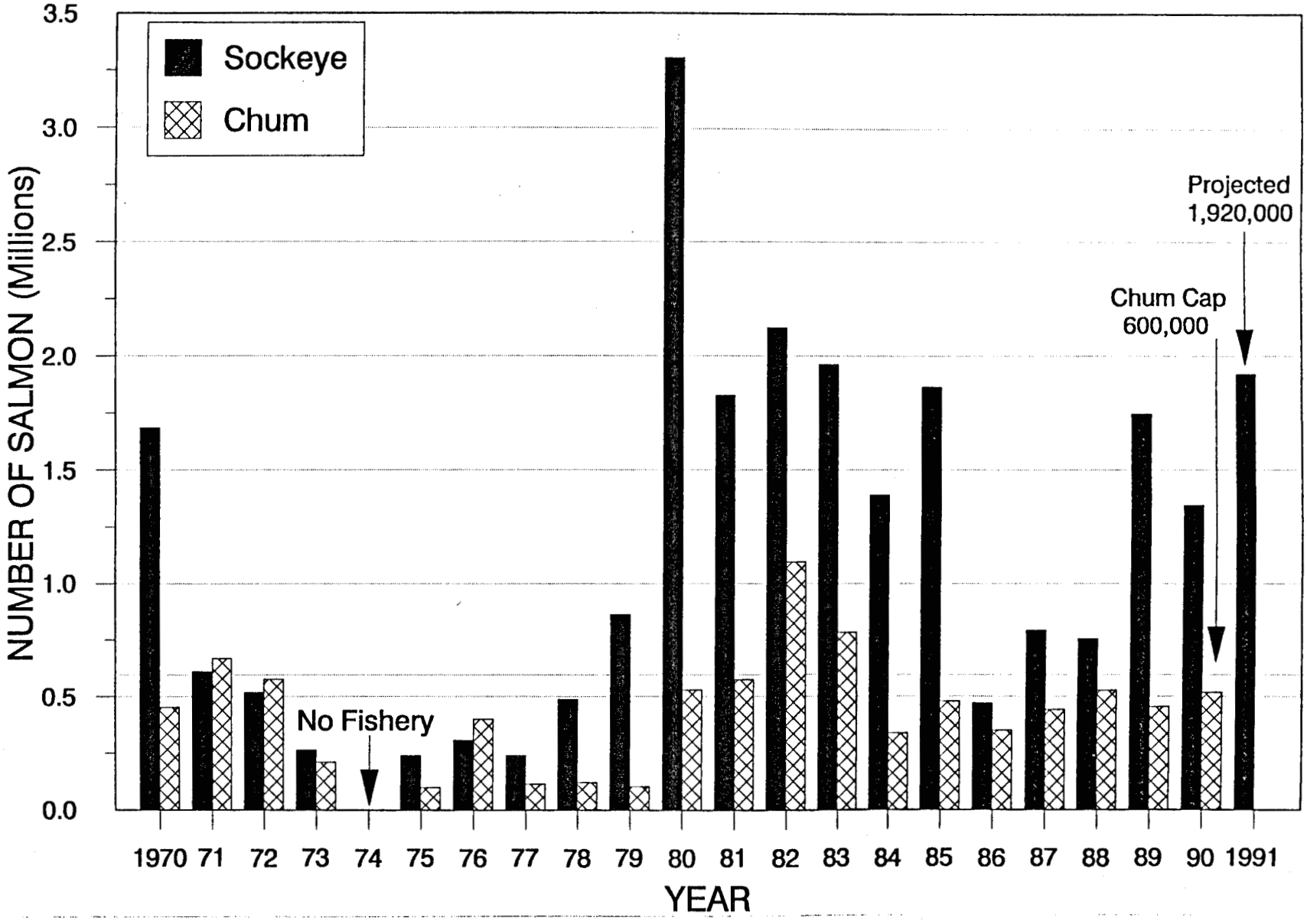


Figure 2. South Unimak-Shumagin June sockeye and chum catches, 1970-90 and projected 1991 catch.

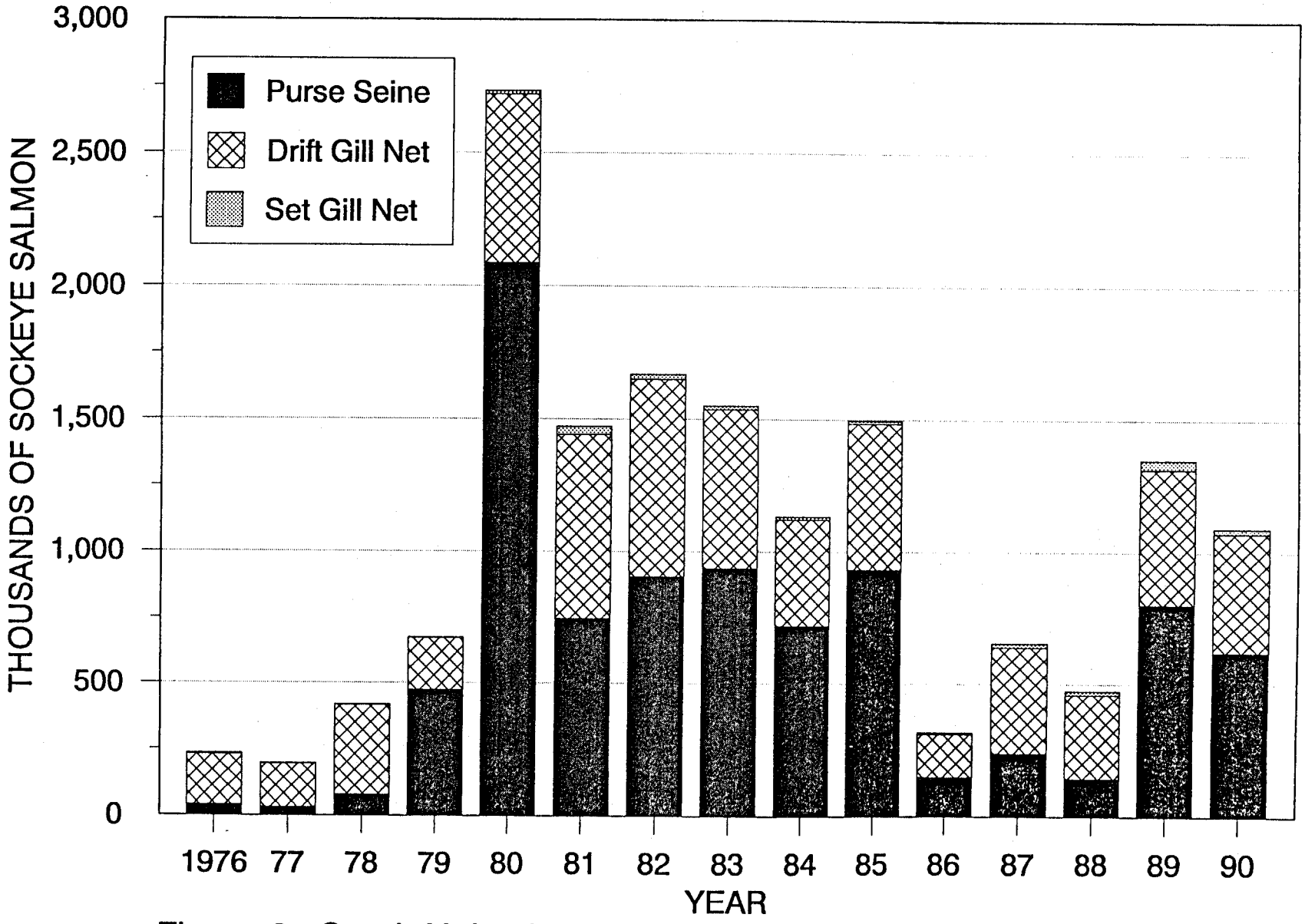


Figure 3. South Unimak June sockeye catch by gear type, 1976-90.

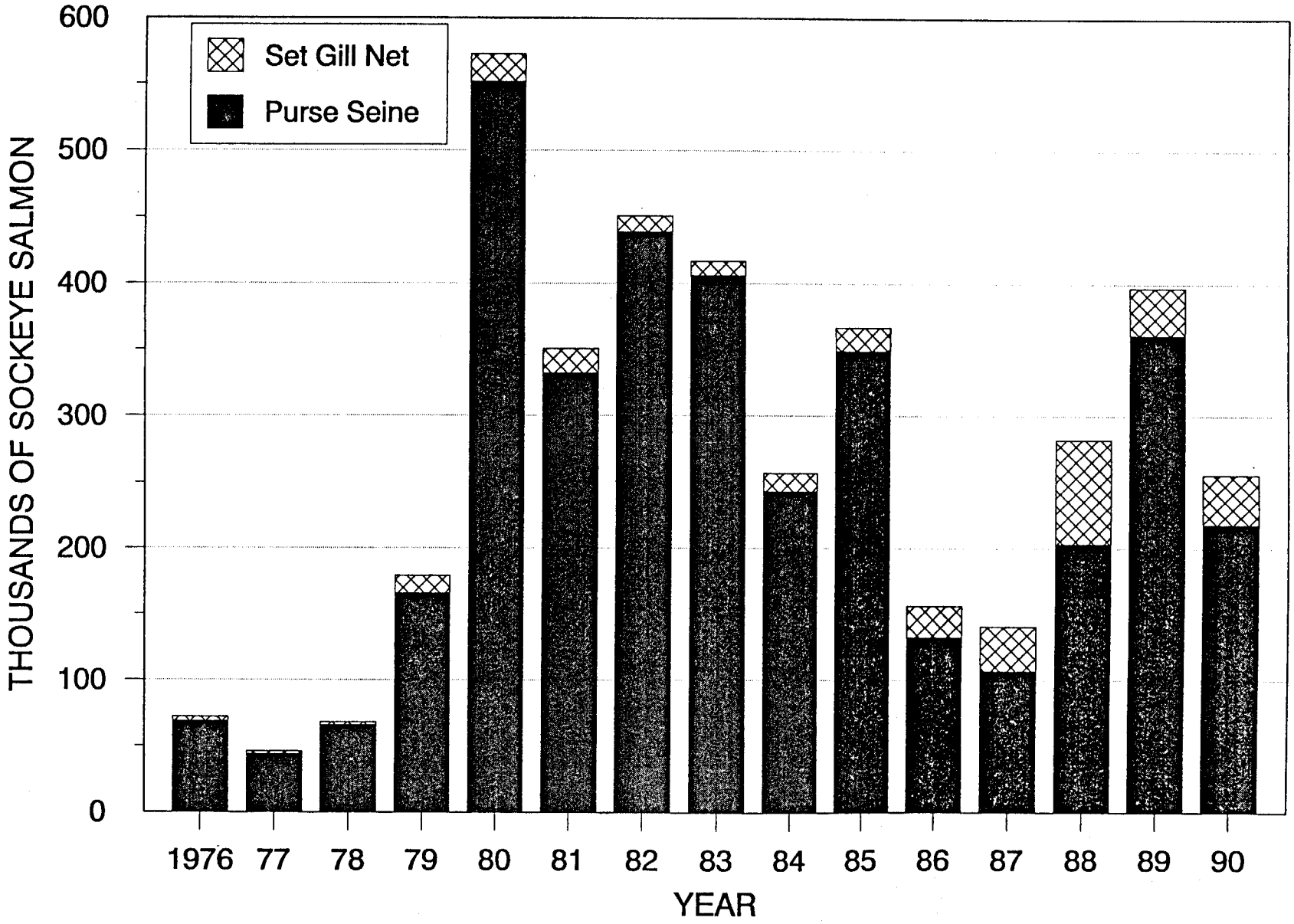


Figure 4. Shumagin Islands Section June sockeye catch by gear type, 1976-90.

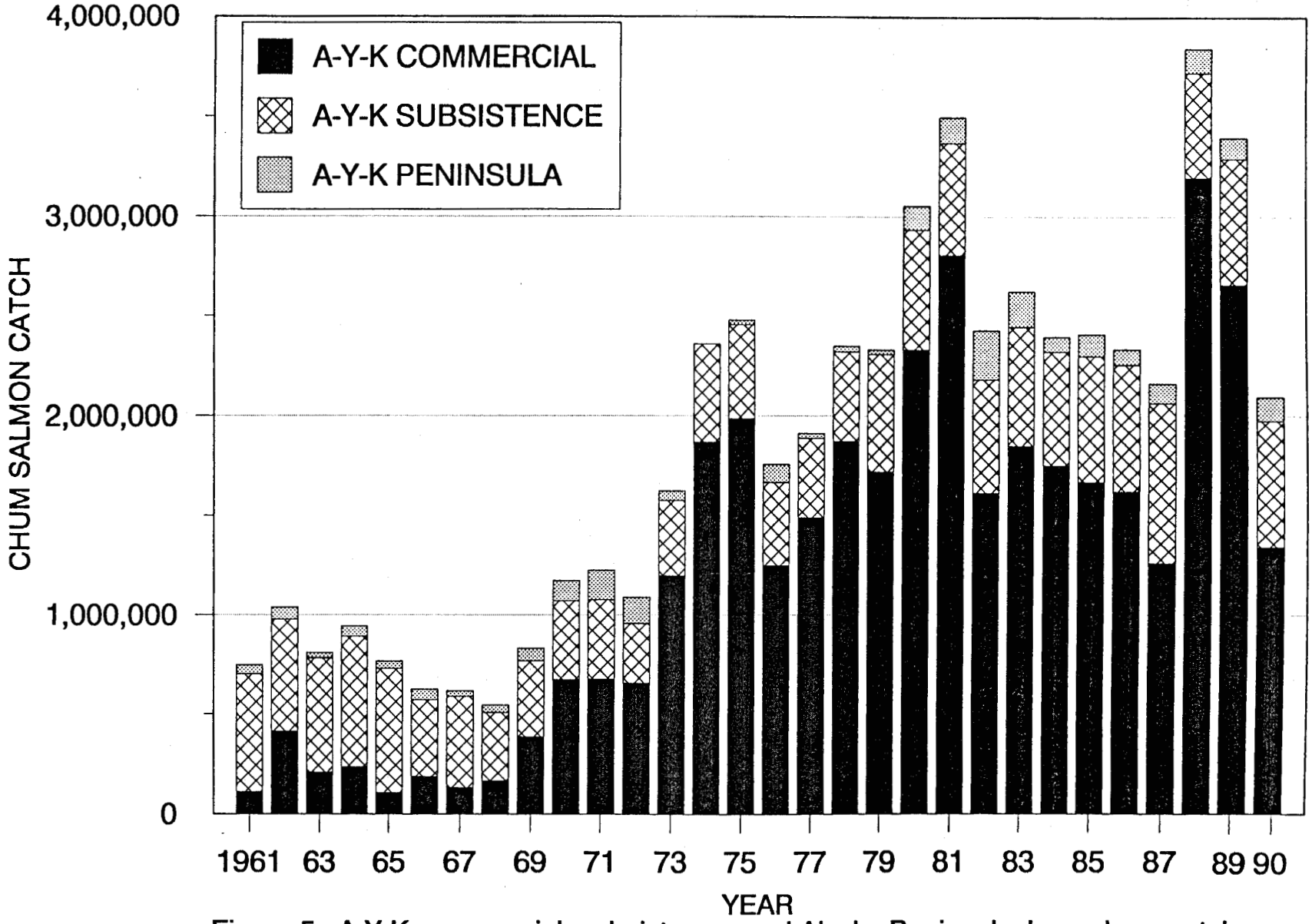


Figure 5. A-Y-K commercial, subsistence, and Alaska Peninsula June chum catch, 1961-90. Alaska Peninsula June catch of A-Y-K chum salmon is 22.57% of total catch, based on 1987 tagging study.

Even without a chum ceiling, the South Unimak fishery would have only taken about 1.6 million of its corrected allocation while catching approximately 700,000 chums.

It is not known at this time what impact reduction in gear depth had on gear efficiency or if the gear reduction caused a reallocation between gear types.

Figures 3 and 4 show the sockeye harvest by gear for each fishery. Figure 5 shows the impact on A-Y-K chum runs based on the 1987 tagging study.

For more details regarding regulations dealing with the South Unimak-Shumagin Islands June fisheries during 1990, check the regulations under 5 AAC 09.365. **SOUTH UNIMAK AND SHUMAGIN ISLANDS JUNE SALMON MANAGEMENT PLAN** later in this report (under Commercial Fishing Regulations). Regulation changes to be in effect after the 1989 season are also listed later in this report.

South Peninsula

Tables 27-31 contain South Peninsula catch and total run information.

The major species produced by South Peninsula streams are pink salmon. Runs fluctuate dramatically over time due to the magnitude of parent escapements and environmental conditions. During the 1973-90 period, commercial catches have varied (not including June catches) from 36,000 in 1973 to 10,669,000 in 1984 (Table 28). Most systems produce large runs on both even and odd year cycles, except most of the streams between Cold Bay and Unimak Bight which are basically even year producers. Dry Lagoon and Apollo Creeks on Unga Island also seem to be even year cycle systems. Pink salmon runs usually arrive in force about July 20 and peak about August 1. After August 15-20 the fish quality is usually poor due to water marking.

Chum salmon are the second most important locally produced species along the South Peninsula. Not including June catches, the 1962-90 chum salmon catches ranged from 34,000 fish in 1974 to 1,399,000 in 1986 (Table 29). Chum salmon runs are somewhat more stable than pink salmon due to the presence of more than one age class and the tendency for chums to select spawning locations which are less susceptible to scouring and freezing. Chum salmon runs start earlier and

last longer than those of pink salmon and there is a large variation in timing between different chum stocks.

The South Peninsula has numerous sockeye salmon stocks. Most stocks are small although Thin Point and Middle Lagoon (Morzhovoi Bay) have a history of substantial runs during the 1920's and 1930's. It is believed that these two systems can be brought back to their former levels by a good escapement monitoring and enforcement program. Thin Point and Morzhovoi Lakes are suspected of having rearing capacities greatly in excess of the spawning capacities. Therefore the potential to produce substantially larger runs through supplemental methods exists. Orzinski (Orzenoi) Lake is an important contributor to Southeastern District catches.

Post-June South Peninsula sockeye catches are often substantial. Many of the fish are taken in the Southeastern District Mainland fishery which targets on Chignik destined sockeye. However, a substantial number (50,000 to 400,000) are taken annually in the Shumagins and lesser numbers taken throughout the balance of the area. Many of these fish are undoubtedly bound for other areas, although South and North Peninsula streams are contributors.

Most South Peninsula coho are taken while the fishery is targeted on pink and chum salmon during mid-July to mid-August and a smaller amount during September. The fishery is usually closed during late August to achieve good pink and chum escapements.

Historically, South Peninsula coho catches have demonstrated long periods of different abundance levels. From 1923 through 1946, catches stayed at a high level, averaging 148,000 fish annually. During 1947 through 1958, the average fell to 50,000 coho salmon. The 1959-77 average South Peninsula coho catch was only 12,000. However catches jumped to an average of 244,000 during 1978-90 (Table 1). The record high catch was 505,500 coho during 1988. It should be pointed out that the Aleutian Islands catches were combined with the South Peninsula during 1928 through 1950, however, the Aleutian contribution was probably insignificant based on years when Aleutian catches were kept separate. The record Aleutian Islands Area documented coho catch was 4,400 fish in 1918 and the catch is less than 200 during most years. Figures 7 and 8 show the

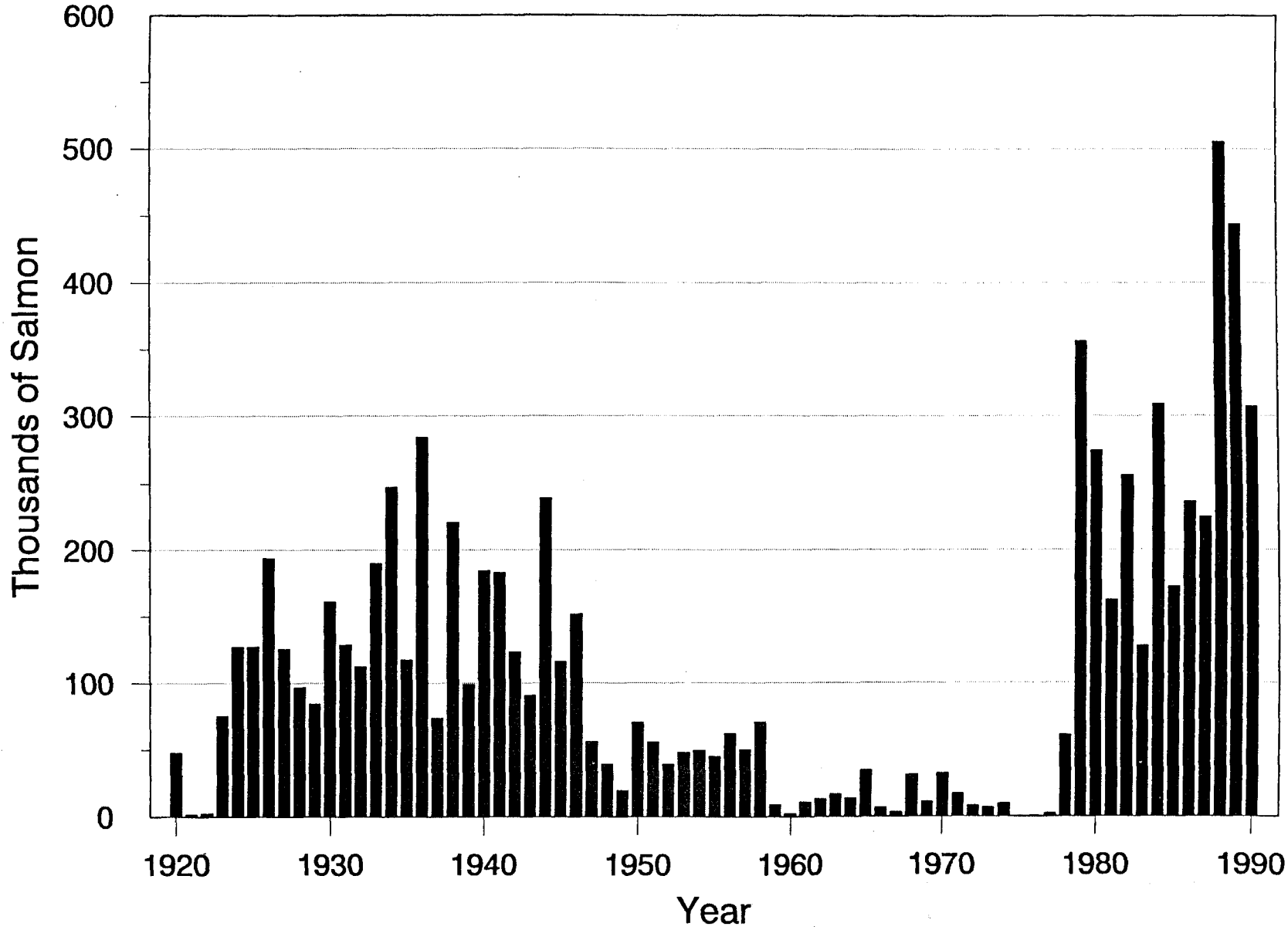


Figure 6. South Peninsula coho salmon catches, 1920-90.

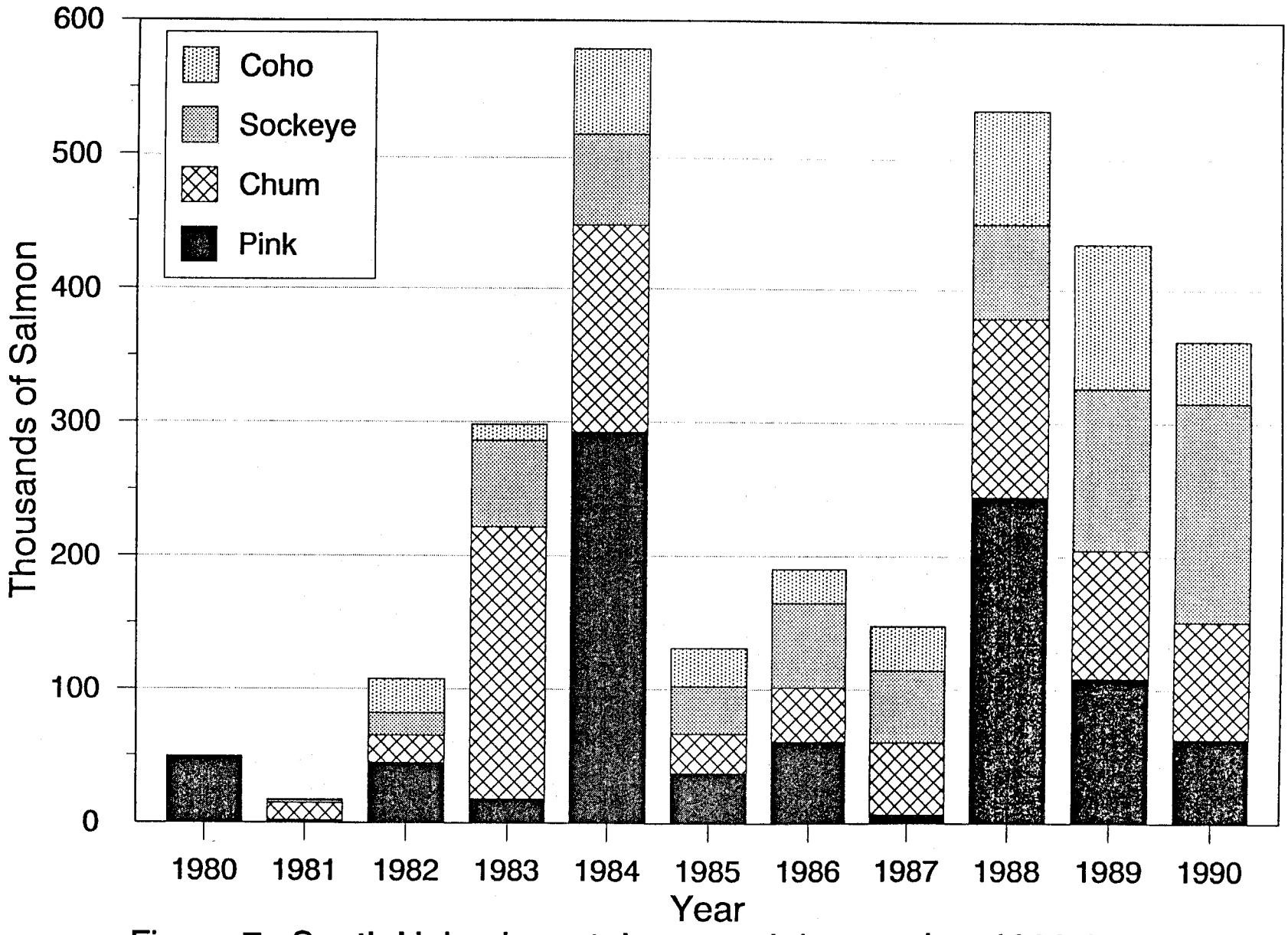


Figure 7. South Unimak post-June catch by species, 1980-90.

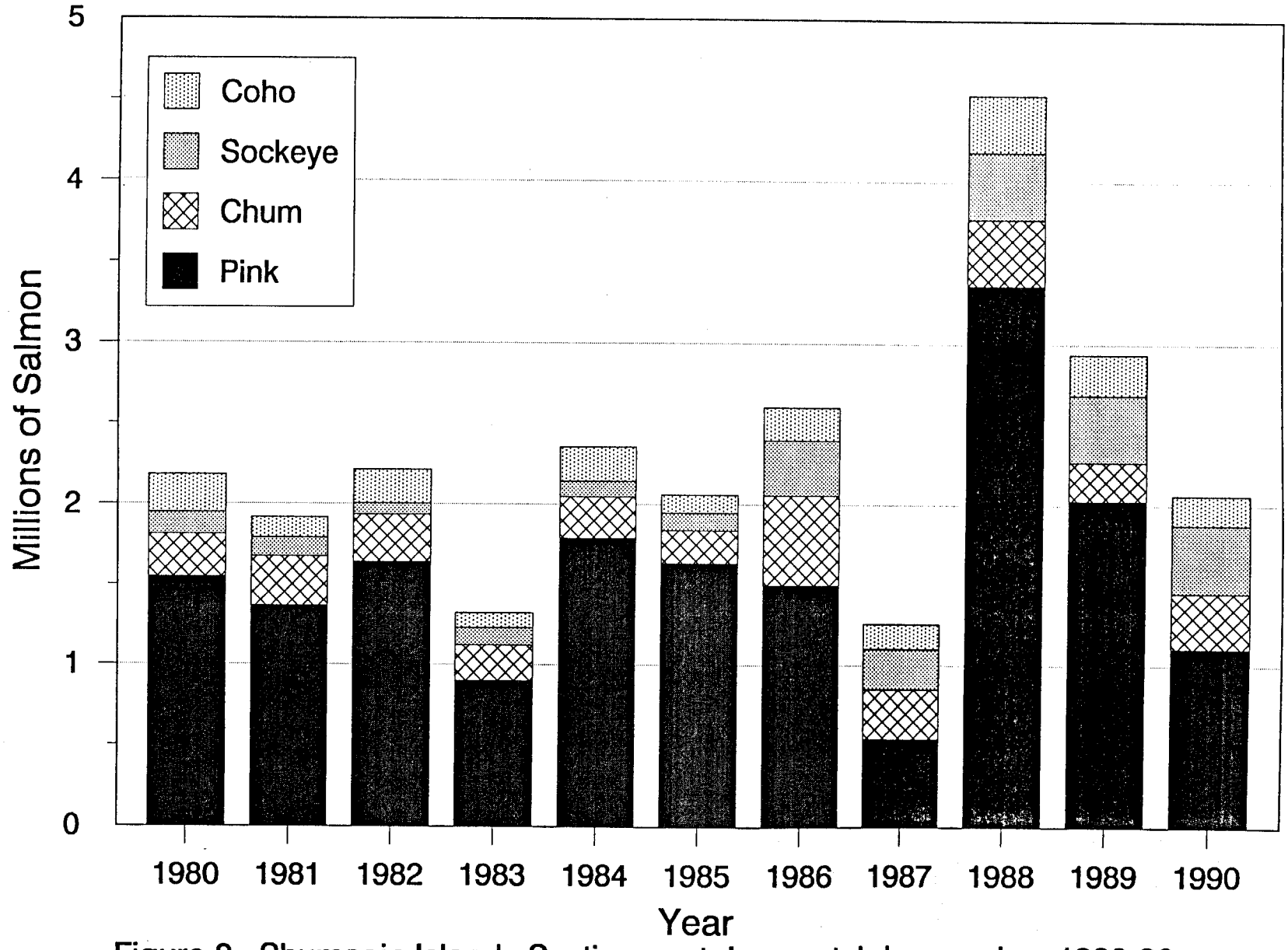


Figure 8. Shumagin Islands Section post-June catch by species, 1980-90.

1980-90 post-June catches by species at South Unimak and in the Shumagin Islands.

King salmon are of minor importance along the South Peninsula averaging only 11,300 fish harvested during 1979-90 (Table 1). There are no king salmon streams along the south side of the Alaska Peninsula Area and the Chignik River is the only king producer on the Pacific side of the entire Alaska Peninsula.

Aleutian Islands Area

The Aleutian Islands Area produces runs of sockeye, coho, pink, and chum salmon. However, it is only the pink salmon which have proven to be of major commercial importance.

The following islands produce large pink salmon runs during some years:

Unalaska	Atka
Umnak	Adak
Amlia	Attu

Tanaga, Kanaga, and Kiska all have at least one important pink salmon stream.

Except for occasional fishing on Umnak Island during the early 1960's and probably the 1950's, all commercial effort has been confined to Unalaska Island, with the exception of a 1963 Attu expedition.

It is quite likely that Attu salmon runs are heavily impacted by Japanese high seas fishing as the Japanese are still allowed to fish in the proximity of the island until 1988. Japanese salmon fishing was closed by court action during 1988 in all U.S. waters to protect marine mammals and birds. The other islands may have been impacted but to a lesser degree than Attu by foreign fishing in recent years.

Aleutian Islands pink salmon runs tend to be much larger during the even year cycle. Unalaska Bay has a history of producing large runs during both odd and even years.

Pink salmon runs are very unstable in the Aleutians. They produce legendary high returns at times and then collapse for no apparent reason.

Aleutian pinks and sockeyes (within a given age group) tend to be of smaller size than those of Alaska Peninsula stocks.

Prior to 1979, markets were a limiting factor at Unalaska. There was often no market unless pink salmon abundance warranted sending tenders from False Pass or King Cove. Some fish (usually sockeye) were salted by the fishermen. From 1979 to the present, most fish have been processed by buyers at Unalaska-Dutch Harbor or Akutan.

The record Aleutian pink salmon catch was approximately 2.6 million fish during 1980 (roughly 2 million were taken out of Makushin Bay alone).

Unalaska pink runs seem to arrive about the same time as those of the South Peninsula. However there is considerable variation from year to year as to when pinks enter Unalaska streams as well as timing between various streams. This is a different situation than found on the South Peninsula where pink salmon entry into streams is less variable. During large runs Unalaska pinks may trickle in throughout September.

North Peninsula

Tables 30-42 contain historical catch and total run information regarding North Peninsula salmon.

It should be noted that except for Bear River sockeye, Sapsuk River sockeye, and Sapsuk River kings and chums from 1962 through 1985, all escapement figures used in this report are indexed totals. The indexed totals are calculated from aerial surveys and are likely lower than the actual totals. Consequently there will be differences after 1984 between figures used in Area Management Reports and those in formally published reports (Technical Data Reports, Bulletins, etc.) which use different expansion factors. The indexed totals continue to be used for historical comparisons.

Sockeye are the dominant species along the North Peninsula. The major producing systems are Bear River, Nelson Lagoon, Meshik River, Sandy River, Ilnik, and Urilia Bay. Bear River is the top producer with Nelson Lagoon being second. In addition to those listed above, there are numerous less important systems.

North Peninsula sockeye catches averaged 239,500 during 1962-1975, 669,600 during 1976-78, and 1,866,000 during 1979-90 (Table 1). Catches during the 1962-90 period ranged from 172,000 in 1973 to 2,601,000 (record high) during 1985.

Peak North Peninsula sockeye catches are taken during the first 10 days of July. The Urilia Bay return is somewhat earlier. Most returns are completely through the fishery by the end of July. However, Bear River's return lasts well into September and sometimes has a second peak in August. There is also a late (early August) small sockeye return in Nelson Lagoon, these fish are believed to spawn in lakes (mainly tributaries of the David's River) along the west side of the Nelson Lagoon drainage.

Chums are the second most important North Peninsula salmon species. Catches have averaged 411,400 during 1979-90 (Table 1). The record catch was 797,000 fish during 1984.

The major chum producing locations are the Izembek-Moffet Bay, Herendeen-Port Moller Bay, Bear River, and Bechevin Bay Sections.

The North Peninsula chum runs (with some variation among stocks) usually begin in June and continue at a steady rate throughout July and through early August. Nelson Lagoon's run (occasionally strong) begins in late July and is of short duration. Trader's Cove and Warm Springs chum returns occur during August through early September.

On the average, coho are the third most important commercial salmon species on the North Peninsula although coho are more important than chums during some years. Due to the lateness of the runs, virtually no fishing effort was directed towards North Peninsula coho until 1948, and then only in limited locations. During recent years more stocks have been exploited. However, there are undoubtedly stocks on both sides of the Alaska Peninsula which have not been identified. Escapement information is very limited.

North Peninsula coho catches averaged 33,500 fish per year from 1948 through 1978. The catch jumped dramatically to a 172,200 average during 1979-90, with catches ranging from 75,100 during 1983 to 238,000 in 1982 (Table 1).

Nelson Lagoon is the largest North Peninsula coho producer. Other major runs include Port Heiden, Cinder River, Ilnik, and Swanson Lagoon.

There is some variation among stocks, however coho returns generally begin about August 1, peak during the last two weeks in August and the first week in September, and are essentially over by September 15. However, there are exceptions. For example, the Ocean River coho run seems to peak during late September. There is a lot to be learned concerning North Peninsula coho stocks.

King salmon are the fourth ranked salmon species in commercial importance along the North Peninsula. However, they are extremely important to some individuals. For example, kings are one of the two most important species at Port Heiden and are an important contributor to the Nelson Lagoon economy. The record catch was 44,200 fish during 1916. The harvest has averaged 20,100 fish during 1979 through 1988, ranging from 11,700 in 1986 to 30,100 during 1982 (Table 1).

Nelson Lagoon, Port Moller, Port Heiden are the major North Peninsula king salmon producing locations.

King salmon runs begin during the last week in May, peaks during mid and late June then gradually declines until they are essentially over in late July. Most spawning occurs during the first half of August.

On the average, pink salmon are the least important North Peninsula salmon. Returns are quite small and value per fish is lower than the other species. However Bechevin Bay has occasionally produced large pink salmon returns during even numbered years and there was an unusually large run in Herendeen Bay during 1990. The North Peninsula harvest has averaged 45,000 fish during 1980-1990, ranging from 3,000 in 1985 to 518,000 in 1990 (the all time record). The catches in 1978, 1980 and 1990 were the only harvest on record to exceed 65,000 (Table 1).

It is not known why the North Peninsula is not a much larger pink salmon producer than it is. Some of the streams look like good producers and do occasionally receive large enough pink salmon escapements to produce a substantial return. However the returns normally fail to build and there likely is a feature in the marine environment which is not conducive to good pink salmon survival. The one area (Bechevin Bay) that has produced most of the larger pink salmon returns possibly should be considered part of the South Peninsula.

1990 SALMON SEASON

South Unimak-Shumagin Islands June Fishery:

The total sockeye harvest in the Shumagin Islands was 255,600 (the quota was 240,000). At South Unimak, the sockeye harvest totaled 1,090,800 (quota 1,087,000). The incidental chum harvest totaled 63,500 in the Shumagins and 445,300 at South Unimak for a total of 508,800 (ceiling was 600,000).

A total of 109 purse seiners, 150 drift gillnet vessels, and 59 set gillnetters participated in the South Peninsula June fisheries. Fourteen setnetters fished South Unimak exclusively. An additional 8 setnetters moved to South Unimak after the Shumagins closed.

The harvest in that portion of the Southwestern District added to the South Unimak fishery by the Board of Fisheries in 1990 was very light, only 1,500 sockeye and 100 chums.

Daily sockeye harvests were very small in both fisheries when compared to what would be expected during a huge Bristol Bay sockeye year (which 1990 proved to be), although high winds were a factor during much of the fishery. Fishing was allowed for 9 days in the Shumagins and for 13 days at South Unimak.

Chum catches were very light during June 13, 15, and 16 openings in the Shumagins, averaging less than 3,000 fish per day. The chum harvest jumped to 16,700 on June 18, but then only averaged 4,500 during June 19, 20, and 21. The June 22 catch (the last day of fishing) was 13,300 chum salmon. At South Unimak, daily chum catches were light during June 14-23, averaging 29,800 per day. However, the catch jumped to an alarming 73,800 on June 24 and 89,500 on June 26. Only 7,100 chums were caught on June 28 (the last fishing period) but the period only lasted 5 hours during windy weather.

The South Peninsula June pink salmon harvest totaled 515,200 fish (70,800 from the Shumagins and 444,400 from South Unimak).

Southeastern District Mainland Fishery:

In 1990, the forecasted Chignik sockeye early run was 1,150,000 salmon of which 750,000 would be harvested, and a late run of 954,000 sockeye of which 704,000 would be harvested. Preliminary numbers place the early run close to the forecast. However many of the early run sockeye were age 1.2 which returned later than the older fish (age 1.3 and 2.3) which normally comprise the bulk of the run. As a result of the late arrival of 1.2 age sockeye, Chignik fishermen didn't catch their 300,000 early run sockeye until June 27 which in the Southeastern District Mainland fishery is normally the time period between the early and late run. The Southeastern District Mainland fishery is usually closed from June 26 through July 9 because during this time period, the strength of the second run of Chignik sockeye cannot be evaluated.

By July 8 the Chignik sockeye catch was 639,007 salmon and the Chignik second run escapement was estimated at 12,319 sockeye. Preliminary estimates of the second Chignik sockeye run indicated a harvestable surplus of late run sockeye beyond escapement requirements. A 41 hour fishing period was established in the entire Southeastern District Mainland area with the exception of Orzenoi Bay for July 9-10. Orzenoi Bay remained closed due to the lack of sockeye escapement into Orzenoi Lake and the observed build up of sockeye in the bay which were believed to be destined to Orzenoi Lake. The Chignik destined sockeye gillnet harvest in the mainland fishery for this time period was 13,518 salmon. Prior to midnight July 10 only gillnet gear is allowed in the fishery, after July 10 both purse seine and set gillnet gear are allowed in the fishery.

By July 11 the sockeye harvest in Chignik was 694,625 salmon and the late run sockeye escapement through July 10 was an estimated 59,147 salmon. The late run sockeye escapement goal through July 10 was 40,000 salmon and the cumulative Southeastern District Mainland catch of Chignik destined sockeye was 13,518 sockeye (2.0% of the total Chignik sockeye catch). Another 41 hour fishing period was established for the Southeastern District Mainland fishery on July 13-14. By July 10 the escapement into Orzenoi Lake was 762 sockeye and the entire Northwest Stepovak Section remained closed. The Chignik destined sockeye harvested for this fishing period was 44,563 salmon.

Through July 14 the sockeye harvest in Chignik was 842,230 salmon and the late run sockeye escapement through July 15 was estimated at 100,292 salmon. The late run sockeye escapement goal through July 15 was 75,000 to 80,000 salmon. The cumulative Southeastern District Mainland catch of Chignik destined sockeye through July 15 was 58,081 sockeye (5.8% of the total Chignik sockeye catch). A 41 hour fishing period was established for the Southeastern District Mainland fishery on July 18-19. Through July 15 the escapement into Orzenoi Lake was 1,883 sockeye and the entire Northwest Stepovak Section remained closed. The Chignik destined sockeye harvest for this fishing period was 70,518 salmon.

The Southeastern District Mainland catch of Chignik destined sockeye through July 25 was 128,599 salmon (8.8% of the total designated Chignik catch). Reasons for exceeding the 6.0% Chignik sockeye allocation include: 1) the large catches of sockeye during the July 18-19 opening, 2) the poor catch at Cape Igvak which would have lowered the Southeastern District Mainland fishery percentage if Cape Igvak would have caught their allocation, the Cape Igvak catch was only 7.4%, Cape Igvak is allocated 15% of the total Chignik sockeye run through July 25, and 3) the difficulty of estimating the catching power of the Southeastern District Mainland fleet especially the purse seine fleet (about 50% of the purse seine vessels have chilled water systems and often do not deliver fish until 48 hours after a fishing period opening).

Since the current management plan has been in effect the Southeastern District Mainland catch of Chignik destined sockeye through July 25 has ranged from 0.99% to 6.86% and averaged 4.55% (1985-1989) of the total destined Chignik catch through July 25. The 1990 Southeastern District Mainland catch through July 25 was 8.8% of the total destined Chignik catch through July 25.

The total catch in the Southeastern District Mainland fishery through July 25 was 271,341 salmon which included 677 chinook, 164,028 sockeye, 16,781 coho, 46,852 pink, and 43,003 chum salmon. The catch in the Northwest Stepovak Section was 3,902 salmon which included 17 chinook, 3,279 sockeye, 3 coho, 55 pink, and 548 chum salmon.

The Southeastern District Mainland fishery did not reopen until July 26 when fishing time was justified on a local stock basis.

After July 25 an additional 468,323 salmon which included 138 chinook, 113,432 sockeye, 38,784 coho, 202,927 pink, and 113,02 chum salmon were harvested in the Southeastern District Mainland area. About 60,000 chum salmon were illegally harvested in the Stepovak Flats Section during the September 1-3 fishing period and as a result the chum salmon escapement into rivers in the Stepovak Flats Section had below desired escapement levels. The total catch for the 1990 season in the Southeastern District Mainland area was 739,694 salmon which included 815 chinook, 277,460 sockeye, 55,563 coho, 249,809 pink, and 156,045 chum salmon.

In addition to the gear increase, another factor leading to the increasing catches in the Southeastern District Mainland fishery in 1983, 1984, 1986, and 1990 may have been an increase in the proportion of the Chignik run migrating through the mainland area rather than traveling to Chignik from the east (Igvak area).

South Peninsula Post-June:

During July and August, a total of 6,200 chinook, 973,500 sockeye, 284,000 coho, 2,349,500 pink and 645,000 chum salmon were harvested in the entire South Peninsula. During September another 68,000 sockeye, 23,000 coho, 1,000 pink and 73,000 chum salmon were harvested. These figures include fish taken in the Southeastern District Mainland fishery.

The pink salmon harvest was very disappointing when compared to the pre-season projection of 8,000,000. The harvest was the second lowest since 1977 and was the smallest even year catch since 1976. However, pink salmon escapements were large enough (1.6 million) to produce a large return if environmental factors are favorable. The 1983 escapement of only 851,000 produced a 4.3 million harvest (plus 1.6 million escapement) in 1985. The desirable pink salmon indexed total escapement level for the entire South Peninsula is approximately 2,000,000 fish.

The chum harvest was at the projected harvest level of 700,000. However, an undetermined number of the chums caught were immatures. The 1980-89 average South Peninsula post June harvest was 1,060,000. The indexed total chum escapement was 355,000. The 1980-89 average was 475,000. The 1990 chum escapement would have been considerably higher had over 60,000 chums not been stolen out of closed waters during the September fishery.

The indexed total sockeye escapement was 95,000 which was the largest South Peninsula sockeye escapement since 1974. The Middle Lagoon system in Morzhovoi Bay accounted for at least 40,000 of the South Peninsula sockeye escapement. The Middle Lagoon escapement would likely have been very poor had it not been for a stream guard based at the lagoon mouth. The escapement into Orzenoi Lake was 15,000.

The coho escapement information is incomplete but a substantial number of systems were surveyed. Over 50,000 coho were documented in South Peninsula streams. The actual total was probably between 75,000 and 100,000.

Shumagin Immature Salmon Problems:

Historically the presence of immature salmon in the Shumagin Islands Section of the Southeastern District has caused the curtailment of purse seine fishing effort during late June or July in 1963, 1968, 1969, 1974, 1979, 1989, and 1990. The problem associated with the immature salmon is restricted to the purse seine fleet. The immature salmon are gilled in the seine webbing resulting in what is likely a 100% mortality factor. Usually when immature salmon were present they moved out of the Shumagin Islands by about July 23.

During the Board of Fisheries meeting in February 1990 a discussion on the problem of immature salmon in the Shumagin Islands resulted in a policy statement by the Board of Fisheries (1990-91 Bristol Bay and Westward Alaska commercial fishing regulations salmon and miscellaneous finfish: Department of Fish and Game policy on the incidental harvest of immature salmon in the South Peninsula Area of the Alaska Peninsula/Aleutian Islands Area). This policy gives ADF&G authority to close by emergency order areas of the South Peninsula when the incidental by-catch of immature salmon are considered excessive. The

department will consider average immatures per set, fleet distribution, and historical dates of occurrence. The department will utilize results from subsistence and commercial openings in order to evaluate the abundance of immature salmon and their possible presence in future openings. ADF&G may also open the Unimak, Southwestern, South Central, and Southeastern Districts to gillnet gear only during fishing periods when the seine fishery is closed by emergency order due to the presence of immature salmon (1990-91 Bristol Bay and Westward Alaska commercial fishing regulations salmon and miscellaneous finfish: 5 AAC 09.330. Gear).

In early July, immature salmon were reported to the Alaska Department of Fish and Game (ADF&G) office in Sand Point from subsistence catches along the east shore of Popof Island. ADF&G chartered purse seine vessels on July 3 and 5 prior to the first July Shumagin Islands Section opening to determine the presence and abundance of immature salmon. In an attempt to standardize results from test fishing ADF&G requested chartered vessel skippers to make at least one set each at Popof Head, Middle Set, and Red Bluff for 20 minutes at each site. Additional sets were made if time permitted. ADF&G also attempted to charter only those vessels with full purse seine gear rather than half pursing the gear.

Results of the test fishery on July 3 indicated that the average catch of immature salmon per set was 3 sockeye and 3 pink salmon. The test fishery on July 5 resulted in an average catch of immature salmon per set of 8 sockeye and 6 pink salmon. The catch of immature salmon from test fishing did not warrant closure of the area to purse seine gear and an opening was announced for a fishing period on July 6. Commercial salmon fishing did not produce substantial numbers of immature salmon during the July 6 nor the July 9-10 fishing periods.

The next opening for the South Peninsula on July 13-14 resulted in an increased catch of immature chum salmon. The average weight of chum salmon in the catch from both the Shumagin Islands and the South Unimak area decreased substantially from the July 9-10 fishing period. In the Shumagin Islands the average weight of chum salmon was 7.33 pounds per chum salmon on July 9 and decreased to 3.66 pounds per chum salmon on July 13.

Results of the test fishery on July 16 indicated that the average catch of immature salmon per set was 7 chinook, 210 sockeye, 89 chum, and 9 pink salmon. The test fishery on July 17 resulted in an average catch of immature salmon per set of 7 chinook, 139 sockeye, 231 chum and 1 pink salmon.

Purse seine gear was not allowed in the Shumagin Island Section for the next opening in the South Peninsula (July 18-19). During this fishing period some purse seine fishermen traveled to the South Central or Southwestern Districts to fish in waters open to purse seine gear but about 50% of the purse seine fleet remained in port. Those purse seine fishermen that did travel to open areas had poor fishing success and had to compete with other purse seine fishermen that normally fished in those areas. Set gillnet fishermen were given the opportunity to fish in the area between Popof Head and Dark Cliffs (Popof Island) while the closure was in effect for purse seine gear.

Results of the test fishery on July 20 indicated that the average catch of immature salmon per set was 1 chinook, 18 sockeye, and 15 chum salmon. The test fishery on July 21 resulted in an average catch of immature salmon per set of 12 sockeye, and 43 chum salmon. The catch of immature salmon from the test fishery did not warrant continued closure of the Shumagin Islands Section to purse seine gear and an opening was announced for a fishing period on July 23-25.

In the afternoon of July 23 ADF&G personnel traveled around the Shumagin Islands via skiff to observe fishing effort, weather in the morning prevented traveling by skiff. Five complete purse seine sets were observed: two sets at Popof Head, two sets at Middle Set, and one set at Red Bluff. The average number of immature salmon per set was about 150 salmon of which about 39% were sockeye and 61% being chum salmon. An emergency order was issued closing the Shumagin Islands to purse seine gear effective 10:30 P.M. July 23 and lasting through the announced closure of the opening (10:00 P.M. July 25). Immature salmon appeared to move back into the Shumagin Islands Section between the test fishery on July 21 and the commercial fishing opening on July 23, strong Southeast winds on July 22 may have been the cause of the immature salmon returning to the commercial fishing areas. Some purse seine fishermen again traveled to areas open to purse seine gear but the majority of purse seine fishermen remained in port. Set

gillnet fishermen again took advantage of the new regulation and fished the waters between Popof Head and Dark Cliffs.

Results of the test fishery on July 25 indicated that the average catch of immature salmon per set was 2 sockeye and 4 chum salmon. Commercial fishing by purse seine gear was allowed in the Shumagin Islands Section at 4:00 P.M. on July 25 and fishing time was extended an additional 48 hours. The Popof Head to Dark Cliffs area was closed to set gillnet gear effective at 4:00 P.M. July 25 and all gear was removed. Those purse seine fishermen that had traveled to other areas to fish returned to the Shumagin Islands.

Large numbers of immature chum salmon were also reported from the commercial catch in the Otter Cove and Sanak Island Sections of the Unimak District on July 6. These sections closed to purse seine gear after July 6 and remained closed until July 31. The impact of closing the Otter Cove and Sanak Island Sections on the balance of the South Peninsula purse seine fleet was minor in comparison to the closure in the Shumagin Islands Section. Closure of the Shumagin Islands Section displaces a purse seine fleet of 40 to 50 vessels while the Otter Cove and Sanak Island Sections closure displaced 9 vessels.

The catch of immature salmon in the commercial salmon fishery for the rest of the salmon season was minor (probably averaging less than 1 immature per set) and did not warrant any further closures of the Shumagin Islands Section or other areas in the South Peninsula to purse seine gear.

Aleutian Islands:

As in the case of South Peninsula pink salmon runs, those of Unalaska (the only island where there is any commercial salmon fishing effort in the Aleutian Islands Area) were disappointing during 1990. The harvest was 282,800 (projected harvest was 500,000) and peak escapement counts from traditional fishing areas totaled approximately 300,000.

In general, Unalaska pink salmon escapements were better than during the 1988 parent year. However, escapements into Nateekin River and the largest stream in Makushin Bay (the two most important pink producing streams in the Aleutians) were below 1988 levels.

The Aleutian Islands Area sockeye harvest totaled 12,400. Escapement information was incomplete from some traditional fishing areas. However, 2,500 sockeye were observed in McLees Lake and 16,800 in the Kashega Lakes during September.

North Peninsula:

The North Peninsula sockeye harvest of 2,415,900 was the third highest on record. The indexed total escapement was 1,023,000 with all major systems except Sandy River reaching or exceeding their goals. The Sandy River sockeye escapement (17,500) was much better than that of the parent seasons and only slightly below the goal (20,000-30,000).

The chum salmon run on the North Peninsula was the weakest since 1976. The harvest was 125,800 and the indexed total escapement was 226,000. Herendeen Bay was the only location demonstrating any strength at all.

The coho harvest totaled 192,800 which was the fourth highest on record. Port Heiden and Cinder River (locations almost totally consisting of Area T permit holders) accounted for almost 75,000 of the total. These were record harvests for both Port Heiden and Cinder River. Escapement information is incomplete, but available data indicates the escapement was in the 140,000 to 175,000 range.

The North Pacific king salmon run of 21,000 was the third lowest since 1977. The harvest was 12,300. The king salmon runs have declined considerably during the past 5 years despite strong parent escapements.

Normally the North Peninsula is not an important pink salmon producer. In 1978 and 1980 large catches were recorded in Bechevin Bay, part of the Northwestern Districts, but a harvest of over 65,000 had never occurred in the Northern District until 1990. In 1990, the North Peninsula catch was 517,700 of which

511,500 were harvested in Herendeen Bay. The pink escapement was estimated at 100,000 in Lawrence Valley Creek, pink salmon were not recorded in any other Herendeen Bay streams. This was a record North Peninsula pink salmon harvest.

SUBSISTENCE SALMON FISHERY

Subsistence salmon catches are estimated from permit return information. Information from returned permits are used to extrapolate catches for all permits issued. There are undoubtedly many fish kept from commercial catches and are not reported.

Permits are not required to subsistence fish in the Akutan and Umnak District. Consequently no catch estimates are made by the Commercial Fisheries Division for those districts.

Subsistence salmon fishing is not allowed in the Adak District. However a personal use salmon fishery is allowed on Adak and Kagalaska Islands for Alaska residents and military personnel (and their dependents) who have been stationed in Alaska for the preceding 12 months.

1990 subsistence and personal use catch information is contained in Tables 64-71.

METHODS OF CALCULATING INDEXED TOTAL ESCAPEMENTS

Unusual circumstances may cause occasional deviation, but basically the methods of calculating estimated indexed total escapements without the use of a weir or tower are as follows:

King, Sockeye, Coho: These species tend to have a much longer stream life than pink and chum salmon. Therefore, the estimated total escapement is usually the peak escapement. Carcasses are included. However, it is recognized that there are problems in large systems such as Ilnik and Caribou-David's Rivers. The basic problem on large systems is the length of time, expense, and fuel needed to do a thorough survey yet meet more pressing obligations.

The Caribou and David's River complex (including Coastal and other nearby lakes) is so massive a system for the size of its runs that complete surveys will probably never be done. The timing if such surveys would have to coincide with the peak of the South Peninsula pink and chum fisheries.

In the case of Ilnik, numerous management surveys are done while the fishery is being managed for the Ilnik stocks. However, the peak surveys occur after the fishery has tapered off and most effort must be devoted to South Peninsula runs. However, Ilnik is a very important run and more effort is being made to accurately monitor it. The Ilnik sockeye run is of longer duration than the majority of unweired (or towered) North Peninsula sockeye streams. Ilnik sockeye also seem to have a shorter stream life than those in most other shallow water systems. Consequently, Ilnik requires at least two complete surveys or at least one complete survey with fish in the lower area during subsequent surveys being added to a peak count for the system. Again this system justifies more effort and is probably a larger producer than a number of weired systems in other portions of the state. Many of the Ilnik figures listed in this publication are minimal.

Pink and Chum Salmon: A 21-day stream life is used to calculate total pink and chum escapements. Fish in saltwater during the final survey are added:

EXAMPLE

Survey Date	Pinks	Chums	Fish at Mouth
July 10	5,000	0	5,000P
17	25,000	0	10,000P
August 1	100,000	0	10,000P
15	150,000	0	12,000P 1,000CH
September 1	150,000	5,000	2,000CH
Estimated Total	255,000	7,000	

The estimate of 21 days stream life was used because significant numbers of carcasses seem to appear about three weeks after adult pinks and chums first appear in Alaska Peninsula streams. It is recognized that stream life can vary, however this method is easily duplicated and is comparable from year to year. Variation in stream life is likely a much smaller factor than variation between observers.

With the exception of several small streams, there are no problems of streams being obscured by brush or trees in the Alaska Peninsula and Aleutian Islands Areas. With several exceptions, visibility of spawning grounds is outstanding during periods of normal water flow and clear weather.

Table 1. Alaska Peninsula/Aleutian Islands salmon catches (Fish in thousands).

YEAR		KING	SOCKEYE	COHO	PINK	CHUM	TOTAL
1906	South Peninsula	0	0	0	0	0	0
	North Peninsula	1,500	135,000	0	0	0	136,500
	Aleutians	0	0	0	0	0	0
	Total	1,500	135,000	0	0	0	136,500
1907	South Peninsula	0	0	0	0	0	0
	North Peninsula	1,700	66,500	3,200	1,500	0	72,900
	Aleutians	0	0	0	0	0	0
	Total	1,700	66,500	3,200	1,500	0	72,900
1908	South Peninsula	0	69,400	0	0	0	69,400
	North Peninsula	1,500	166,900	0	0	0	168,400
	Aleutians	0	0	0	0	0	0
	Total	1,500	236,300	0	0	0	237,800
1909	South Peninsula	0	108,400	7,200	0	0	115,600
	North Peninsula	1,500	143,000	0	0	1,000	145,500
	Aleutians	0	0	0	0	0	0
	Total	1,500	251,400	7,200	0	1,000	261,100
1910	South Peninsula	0	46,300	5,500	0	0	51,800
	North Peninsula	0	0	0	0	0	0
	Aleutians	0	0	0	0	0	0
	Total	0	46,300	5,500	0	0	51,800
1911	South Peninsula	0	240,800	12,400	25,200	83,000	361,400
	North Peninsula	0	129,600	0	0	0	129,600
	Aleutians	0	9,300	0	0	0	9,300
	Total	0	379,700	12,400	25,200	83,000	500,300
1912	South Peninsula	0	334,400	27,000	40,400	195,000	596,800
	North Peninsula	900	252,700	11,000	0	2,400	267,000
	Aleutians	0	0	0	0	0	0
	Total	900	587,100	38,000	40,400	195,000	863,800
1913	South Peninsula	1,800	299,700	0	0	7,000	308,500
	North Peninsula	600	888,800	18,700	0	2,000	910,100
	Aleutians	0	0	0	0	0	0
	Total	2,400	1,188,500	18,700	0	9,000	1,218,600
1914	South Peninsula	600	628,900	0	311,000	221,100	1,171,500
	North Peninsula	8,100	1,325,100	0	0	0	1,333,200
	Aleutians	0	0	0	0	0	0
	Total	8,700	1,954,000	9,900	311,000	221,100	2,504,700
1915	South Peninsula	4,800	367,900	16,200	120,100	333,100	842,100
	North Peninsula	14,000	1,974,300	0	0	54,800	2,043,100
	Aleutians	0	0	0	0	0	0
	Total	18,800	2,342,200	16,200	120,100	387,900	2,885,200
1916	South Peninsula	6,800	730,900	34,100	576,100	508,900	1,856,800
	North Peninsula	44,200	1,974,700	0	2,600	191,400	2,212,900
	Aleutians	0	76,500	1,200	180,300	100	258,100
	Total	51,000	2,782,100	35,300	759,000	700,400	4,327,800
1917	South Peninsula	6,400	1,486,100	4,600	72,100	415,500	1,984,700
	North Peninsula	20,000	679,600	6,800	600	90,300	797,300
	Aleutians	0	70,400	3,800	600	23,100	97,900
	Total	26,400	2,236,100	15,200	73,300	528,900	2,879,900

continued

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1918	South Peninsula	8,700	1,014,100	16,300	2,150,000	1,501,000	4,690,900
	North Peninsula	9,700	1,208,500	0	1,200	252,300	1,471,700
	Aleutians	0	55,200	4,400	75,600	135,200	270,400
	Total	18,400	2,277,800	20,700	2,227,600	1,888,500	6,433,000
1919	South Peninsula	9,600	619,100	56,100	80,200	921,400	1,686,400
	North Peninsula	19,600	389,200	0	12,000	143,500	564,300
	Aleutians	0	3,900	800	4,000	0	8,700
	Total	29,200	1,012,200	56,900	96,200	1,064,900	2,259,400
1920	South Peninsula	7,800	1,142,300	47,700	2,109,800	934,000	4,241,600
	North Peninsula	19,000	1,371,900	0	0	37,000	1,427,900
	Aleutians	0	10,100	2,800	0	0	12,900
	Total	26,800	2,524,300	50,500	2,109,800	971,000	5,682,400
1921	South Peninsula	700	830,700	1,500	47,300	84,600	964,800
	North Peninsula	12,500	1,746,500	0	0	32,800	1,791,800
	Aleutians	0	0	0	0	0	0
	Total	13,200	2,577,200	1,500	47,300	117,400	2,756,600
1922	South Peninsula	6,900	3,376,800	2,200	756,700	349,300	4,491,900
	North Peninsula	10,400	667,900	0	0	42,900	721,200
	Aleutians	0	14,000	0	0	0	14,000
	Total	17,300	4,058,700	2,200	756,700	392,200	5,227,100
1923	South Peninsula	4,100	1,827,200	75,300	143,600	538,900	2,589,100
	North Peninsula	9,100	731,700	100	0	25,800	766,700
	Aleutians	0	0	0	0	0	0
	Total	13,200	2,558,900	75,400	143,600	564,700	3,355,800
1924	South Peninsula	3,900	1,352,000	127,300	3,931,300	1,330,700	6,745,200
	North Peninsula	10,500	701,700	0	0	48,400	760,600
	Aleutians	0	24,900	0	673,800	100	698,800
	Total	14,400	2,078,600	127,300	4,605,100	1,379,200	8,204,600
1925	South Peninsula	10,700	820,500	127,100	382,100	1,116,800	2,457,200
	North Peninsula	10,600	400,200	0	0	53,900	464,700
	Aleutians	0	18,600	0	3,800	9,100	31,500
	Total	21,300	1,239,300	127,100	385,900	1,179,800	2,953,400
1926	South Peninsula	9,500	3,071,500	193,800	3,719,700	1,179,800	8,174,300
	North Peninsula	23,900	672,900	0	0	71,500	768,300
	Aleutians	0	1,300	0	521,700	7,800	530,800
	Total	33,400	3,745,700	13,800	4,241,400	1,259,100	9,473,400
1927	South Peninsula	9,600	714,700	125,300	1,455,500	1,299,700	3,604,800
	North Peninsula	16,500	230,600	100	0	87,000	334,200
	Aleutians	0	17,300	0	334,600	0	351,900
	Total	26,100	962,600	125,400	1,790,100	1,386,700	4,290,900
1928	S.Pen & Aleutian	7,700	971,500	96,600	900,900	2,416,300	4,393,000
	North Peninsula	4,600	855,600	0	0	83,500	943,700
	Total	12,300	1,827,100	96,600	900,900	2,499,800	5,336,700
1929	S.Pen & Aleutian	10,500	935,800	84,500	1,793,500	2,429,000	5,253,300
	North Peninsula	4,100	878,000	0	0	145,200	1,027,300
	Total	14,600	1,813,800	84,500	1,793,500	2,574,200	6,280,600
1930	S.Pen & Aleutian	10,900	935,200	161,100	6,094,800	1,278,100	8,480,100
	North Peninsula	3,800	167,700	0	0	93,400	265,200
	Total	14,700	1,102,900	161,100	6,094,800	1,371,800	8,745,300

continued

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1931	S.Pen & Aleutian	11,000	1,863,200	128,700	997,900	1,216,000	4,211,800
	North Peninsula	1,300	761,000	0	0	54,900	817,200
	Total	12,300	2,624,200	128,700	997,900	1,265,900	5,029,000
1932	S.Pen & Aleutian	17,400	2,977,300	112,300	3,604,800	817,300	7,529,100
	North Peninsula	3,200	977,100	0	0	56,300	1,036,600
	Total	20,600	3,954,400	112,300	3,604,800	873,600	8,565,700
1933	S.Pen & Aleutian	12,600	1,996,700	190,000	3,109,200	1,173,900	6,482,400
	North Peninsula	1,100	350,100	0	0	16,000	367,200
	Total	13,700	2,346,800	190,000	3,109,200	1,189,900	6,849,600
1934	S.Pen & Aleutian	17,600	1,372,400	247,100	6,538,500	1,940,300	10,115,900
	North Peninsula	1,600	1,091,300	0	400	13,000	1,106,300
	Total	19,200	2,464,700	247,100	6,538,900	1,953,300	11,222,200
1935	S.Pen & Aleutian	13,900	978,400	117,200	5,386,200	2,003,100	8,498,800
	North Peninsula	1,000	479,200	0	100	33,800	514,100
	Total	14,900	1,457,600	117,200	5,386,300	2,036,300	9,012,900
1936	S.Pen & Aleutian	14,400	3,662,600	284,600	9,471,000	2,310,900	15,743,500
	North Peninsula	1,000	610,700	0	2,800	19,000	633,500
	Total	15,400	4,273,300	284,600	9,473,800	2,329,900	16,377,000
1937	S.Pen & Aleutian	9,300	1,558,000	73,900	9,302,000	1,506,700	12,449,900
	North Peninsula	1,600	860,900	0	100	65,600	928,200
	Total	10,900	2,418,900	73,900	9,302,100	1,572,300	13,378,100
1938	S.Pen & Aleutian	6,400	772,100	220,700	7,169,100	1,476,600	9,644,900
	North Peninsula	5,900	1,009,600	0	0	34,700	1,050,200
	Total	12,300	1,781,700	220,700	7,169,100	1,511,300	10,695,100
1939	S.Pen & Aleutian	16,500	1,881,700	98,900	6,005,300	1,440,600	9,443,000
	North Peninsula	3,900	746,200	0	0	82,200	882,300
	Total	20,400	2,527,900	98,900	6,005,300	1,522,800	10,275,300
1940	S.Pen & Aleutian	9,100	1,040,300	184,200	7,182,800	2,326,300	10,472,700
	North Peninsula	700	678,900	0	0	65,600	745,200
	Total	9,800	1,719,200	184,200	7,182,800	2,391,900	11,487,900
1941	S.Pen & Aleutian	13,000	1,072,000	183,000	5,347,000	1,542,000	8,157,800
	North Peninsula	700	491,700	0	3,200	30,200	525,800
	Total	13,700	1,563,700	183,000	5,350,200	1,572,200	8,682,800
1942	S.Pen & Aleutian	4,800	810,100	123,000	6,762,600	1,321,100	9,021,600
	North Peninsula	0	0	0	0	0	0
	Total	4,800	810,100	123,000	6,762,600	1,321,100	9,021,600
1943	S.Pen & Aleutian	21,700	2,397,700	90,600	4,360,200	924,500	7,794,700
	North Peninsula	200	567,400	0	1,300	50,400	619,300
	Total	21,900	2,965,100	90,600	4,361,500	974,900	8,414,000
1944	S.Pen & Aleutian	9,900	538,600	238,700	2,653,800	985,600	4,426,600
	North Peninsula	100	414,700	0	2,600	157,900	575,300
	Total	10,000	953,300	238,700	2,656,400	1,143,500	5,001,900
1945	S.Pen & Aleutian	21,400	813,400	116,100	3,639,600	948,900	5,539,400
	North Peninsula	100	394,400	0	2,500	335,100	732,100
	Total	21,500	1,207,800	116,100	3,642,100	1,284,000	6,271,500
1946	S.Pen & Aleutian	6,100	752,300	151,400	1,964,000	1,219,900	4,093,700
	North Peninsula	2,500	697,700	300	0	36,000	736,500
	Total	8,600	1,450,000	151,700	1,964,000	1,255,900	4,830,200

continued

Table 1. (page 4 of 7)

1947	S.Pen & Aleutian	3,400	1,137,100	55,800	2,319,600	1,219,200	4,735,100
	North Peninsula	100	357,700	100	100	75,000	433,000
	Total	3,500	1,491,800	55,900	2,319,700	1,294,200	5,168,100
1948	S.Pen & Aleutian	1,200	285,900	39,200	1,683,700	1,139,600	3,149,600
	North Peninsula	1,200	477,600	17,200	0	161,700	658,700
	Total	3,400	763,500	56,400	1,683,700	1,301,300	3,808,300
1949	S.Pen & Aleutian	3,800	637,500	19,500	1,544,000	560,900	2,765,700
	North Peninsula	700	137,100	25,700	0	40,700	204,200
	Total	4,500	774,600	45,200	1,544,000	601,600	2,969,900
1950	S.Pen & Aleutian	4,000	1,745,300	70,700	1,613,700	562,500	3,996,200
	North Peninsula	1,100	127,800	37,800	0	217,600	284,300
	Total	5,100	1,873,100	108,500	1,613,700	780,100	4,380,500
1951	South Peninsula	1,500	264,200	55,700	2,844,800	683,100	3,849,300
	North Peninsula	1,200	358,900	32,900	20,400	203,000	616,400
	Aleutians	0	11,700	400	500	94,500	107,100
	Total	2,700	634,800	89,000	2,865,700	980,600	4,572,800
1952	South Peninsula	9,200	894,500	39,200	908,500	1,040,800	2,892,200
	North Peninsula	700	354,800	54,200	1,400	246,900	658,000
	Aleutians	200	42,800	0	31,800	25,700	100,500
	Total	10,100	1,292,100	93,400	941,700	1,313,400	3,650,700
1953	South Peninsula	7,200	1,039,200	47,900	2,743,900	1,464,600	5,302,800
	North Peninsula	800	537,300	26,200	18,300	224,400	807,000
	Aleutians	0	4,200	500	69,200	800	74,700
	Total	8,000	1,580,700	74,600	2,831,400	1,689,800	6,184,500
1954	South Peninsula	4,200	636,300	49,400	2,033,300	1,413,400	4,136,600
	North Peninsula	3,400	354,700	35,000	18,500	405,000	816,600
	Aleutians	0	6,300	800	566,500	200	573,800
	Total	7,600	997,300	85,200	2,618,300	1,818,600	5,527,000
1955	South Peninsula	5,400	550,100	44,800	2,529,200	688,200	3,817,700
	North Peninsula	4,100	586,600	6,200	900	129,600	727,400
	Aleutians	0	12,600	100	31,100	400	44,200
	Total	9,500	1,149,300	51,100	2,561,200	818,200	4,589,300
1956	South Peninsula	4,800	641,400	61,900	2,740,700	1,618,700	5,067,500
	North Peninsula	4,200	1,370,900	8,200	28,500	427,400	1,839,200
	Aleutians	0	400	0	33,900	0	34,300
	Total	9,000	2,012,700	70,100	2,803,100	2,046,100	6,941,000
1957	South Peninsula	5,800	341,900	49,900	913,100	1,281,400	2,592,100
	North Peninsula	1,000	327,900	18,300	3,300	274,900	625,400
	Aleutians	2,300	27,300	100	500	13,900	44,100
	Total	9,100	697,100	68,300	916,900	1,570,200	3,261,600
1958	South Peninsula	800	186,100	70,600	1,385,200	841,000	2,483,700
	North Peninsula	15,000	473,800	57,100	60,400	254,800	861,100
	Aleutians	0	300	0	613,200	3,700	617,200
	Total	15,800	660,200	127,700	2,058,800	1,099,500	3,962,000
1959	South Peninsula	900	217,500	8,500	915,600	711,700	1,854,200
	North Peninsula	28,700	634,900	59,100	9,600	404,700	1,137,000
	Aleutians	0	6,100	0	12,000	100	18,200
	Total	29,600	858,500	67,600	937,200	1,116,500	3,009,400

continued

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1960	South Peninsula	1,700	379,000	1,800	1,197,500	904,400	2,484,400
	North Peninsula	10,400	692,800	44,000	34,700	607,200	1,389,100
	Aleutians	0	7,600	0	444,900	300	452,800
	Total	12,100	1,079,400	45,800	1,677,100	1,511,900	4,326,300
1961	South Peninsula	900	456,800	10,400	1,727,800	748,600	2,944,500
	North Peninsula	6,100	387,700	24,600	3,000	153,300	574,700
	Aleutians	0	2,700	0	94,000	200	96,900
	Total	7,000	847,200	35,000	1,824,800	902,100	3,616,100
1962	South Peninsula	3,300	420,000	12,500	1,965,500	824,800	3,226,100
	North Peninsula	5,400	249,700	35,200	31,200	34,900	356,400
	Aleutians	0	5,500	100	2,001,700	1,200	2,008,500
	Total	8,700	675,200	47,800	3,998,400	860,900	5,591,000
1963	South Peninsula	1,900	204,400	16,500	2,367,700	461,300	3,051,800
	North Peninsula	3,600	225,200	40,500	6,900	49,900	326,100
	Aleutians	0	4,500	0	93,900	300	98,700
	Total	5,500	434,100	57,000	2,468,500	511,500	3,476,600
1964	South Peninsula	2,000	370,800	13,600	2,740,400	751,000	3,877,800
	North Peninsula	3,600	250,800	36,600	6,800	139,000	436,800
	Aleutians	0	200	0	194,100	2,300	196,600
	Total	5,600	621,700	50,200	2,941,300	892,300	4,511,200
1965	South Peninsula	2,100	915,700	34,200	2,884,100	556,400	4,392,500
	North Peninsula	6,100	199,500	34,500	2,100	69,700	311,900
	Aleutians	0	0	0	0	0	0
	Total	8,200	1,115,200	68,700	2,886,200	626,100	4,704,400
1966	South Peninsula	1,400	606,200	6,300	302,300	494,400	1,410,600
	North Peninsula	5,600	245,300	37,300	16,000	82,800	387,000
	Aleutians	0	1,000	0	63,500	700	65,200
	Total	7,000	852,500	43,600	381,800	577,900	1,862,800
1967	South Peninsula	1,600	294,100	2,900	77,800	245,200	621,600
	North Peninsula	5,500	224,700	46,800	700	41,300	319,000
	Aleutians	0	200	0	7,900	0	8,100
	Total	7,100	519,000	49,700	86,400	286,500	948,700
1968	South Peninsula	1,400	699,800	31,100	1,287,100	325,300	2,344,700
	North Peninsula	4,500	237,100	64,900	200	73,500	380,200
	Aleutians	0	2,000	100	902,800	800	905,700
	Total	5,900	938,900	96,100	2,190,100	399,600	3,630,600
1969	South Peninsula	1,900	912,800	10,900	1,219,400	389,200	2,534,200
	North Peninsula	4,800	321,300	49,100	100	28,100	403,400
	Aleutians	0	1,900	0	242,200	1,500	245,600
	Total	6,700	1,236,000	60,000	1,461,700	418,800	3,183,200
1970	South Peninsula	1,800	1,794,600	32,200	1,723,400	981,700	4,533,700
	North Peninsula	3,200	213,000	26,400	7,800	50,200	300,600
	Aleutians	0	200	100	672,500	3,300	676,100
	Total	5,000	2,007,800	58,700	2,403,700	1,035,200	5,510,400
1971	South Peninsula	2,200	715,500	16,800	1,450,100	1,366,600	3,551,200
	North Peninsula	2,200	354,200	8,200	300	64,200	429,100
	Aleutians	0	300	0	45,500	100	45,900
	Total	4,400	1,070,000	25,000	1,495,900	1,430,900	4,026,200
1972	South Peninsula	1,300	557,800	8,000	78,000	727,500	1,372,600
	North Peninsula	1,800	179,500	9,600	0	84,700	275,600
	Aleutians	0	100	0	2,800	0	2,900
	Total	3,100	737,400	17,600	80,800	812,200	1,651,100

continued

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1973	South Peninsula	400	330,200	6,600	58,000	293,000	688,200
	North Peninsula	4,400	171,800	26,900	300	155,700	359,100
	Aleutians	0	100	0	7,000	0	7,100
	Total	4,800	502,100	33,500	65,300	448,700	1,054,400
1974	South Peninsula	500	204,700	9,400	99,700	71,500	385,800
	North Peninsula	5,100	247,900	24,000	10,500	35,300	322,800
	Aleutians	0	0	0	0	0	0
	Total	5,600	452,600	33,400	110,200	106,800	708,600
1975	South Peninsula	100	268,400	0	61,700	132,900	463,100
	North Peninsula	2,100	233,500	28,200	300	8,700	272,800
	Aleutians	0	0	0	0	0	0
	Total	2,200	501,900	28,200	62,000	141,600	735,900
1976	South Peninsula	2,100	375,000	200	2,367,000	532,500	3,276,800
	North Peninsula	4,900	641,100	26,000	600	73,600	746,200
	Aleutians	0	0	0	0	0	0
	Total	7,000	1,016,100	26,200	2,367,600	606,100	4,023,000
1977	South Peninsula	500	311,700	2,100	1,448,600	243,200	2,006,100
	North Peninsula	5,500	471,100	34,100	900	129,100	640,700
	Aleutians	0	0	0	0	0	0
	Total	6,000	782,800	36,200	1,449,500	372,300	2,646,800
1978	South Peninsula	800	579,500	60,700	5,608,800	547,000	6,796,800
	North Peninsula	14,200	896,200	63,300	466,600	163,200	1,603,500
	Aleutians	0	1,800	0	38,100	0	39,900
	Total	15,000	1,477,500	124,000	6,113,500	710,200	8,440,200
1979	South Peninsula	2,100	1,149,700	356,500	6,570,500	483,000	8,561,800
	North Peninsula	17,100	1,979,500	112,800	5,000	65,700	2,180,100
	Aleutians	0	12,200	0	539,400	200	551,800
	Total	19,200	3,141,400	469,300	7,114,900	548,900	11,293,700
1980	South Peninsula	4,800	3,613,000	274,200	7,961,500	1,351,200	13,104,700
	North Peninsula	16,800	1,397,100	127,900	301,700	700,200	2,543,700
	Aleutians	0	9,200	0	2,597,500	4,900	2,611,600
	Total	21,600	5,019,300	402,100	10,760,700	2,056,300	18,260,000
1981	South Peninsula	10,200	2,255,200	162,200	5,035,900	1,770,300	9,233,800
	North Peninsula	18,300	1,844,900	155,400	11,200	706,800	2,736,600
	Aleutians	0	5,400	200	302,800	6,600	315,000
	Total	28,500	4,105,500	317,800	5,349,900	2,483,700	12,285,400
1982	South Peninsula	9,800	2,346,000	256,000	6,734,900	2,272,500	11,619,200
	North Peninsula	30,100	1,435,300	238,000	12,300	331,100	2,046,800
	Aleutians	0	2,700	0	1,447,800	6,100	1,456,600
	Total	39,900	3,784,000	494,000	8,195,000	2,609,700	15,122,600
1983	South Peninsula	26,900	2,556,600	127,700	2,827,600	1,707,100	7,245,900
	North Peninsula	29,500	2,093,400	75,100	3,400	348,700	2,550,100
	Aleutians	0	4,400	0	2,000	11,400	17,800
	Total	56,400	4,654,400	202,800	2,833,000	2,067,200	9,813,800
1984	South Peninsula	9,200	2,318,000	309,100	11,589,300	1,656,500	5,882,100
	North Peninsula	23,000	1,734,900	198,600	27,400	796,700	2,780,600
	Aleutians	0	67,200	0	2,309,700	33,900	2,410,800
	Total	32,200	4,120,100	507,700	13,926,400	2,487,100	21,073,500
1985	South Peninsula	7,900	2,214,600	172,500	4,433,700	1,393,100	8,221,800
	North Peninsula	23,500	2,600,500	167,800	3,100	671,100	3,466,000
	Aleutians	0	2,800	0	100	14,200	17,100
	Total	31,400	4,817,900	340,300	4,436,900	2,078,400	11,704,900

continued

Table 1. (page 7 of 7)

1986	South Peninsula	5,600	1,223,000	235,900	4,031,500	1,749,700	7,245,700
	North Peninsula	11,700	2,436,700	164,100	22,600	271,200	2,933,300
	Aleutians	0	7,700	100	42,600	38,800	89,200
	Total	17,300	3,694,400	400,100	4,096,700	2,059,700	10,268,200
1987	South Peninsula	9,200	1,449,800	224,700	1,208,600	1,376,300	4,268,600
	North Peninsula	14,200	1,209,400	171,800	3,500	368,700	1,767,600
	Aleutians	0	100	0	0	0	100
	Total	23,400	2,659,300	396,500	1,212,100	1,745,000	6,036,300
1988	South Peninsula	11,100	1,472,900	505,500	7,044,800	1,905,200	10,939,500
	North Peninsula	16,800	1,528,100	234,000	65,200	393,500	2,237,600
	Aleutians	0	4,300	0	183,100	500	187,900
	Total	27,900	3,005,300	739,500	7,293,100	2,299,200	13,365,000
1989	South Peninsula	7,000	2,660,700	443,800	7,292,700	994,200	11,398,400
	North Peninsula	10,900	1,718,700	227,600	4,100	157,200	2,118,500
	Aleutians	0	8,200	0	6,700	0	14,900
	Total	17,900	4,387,600	671,400	7,303,500	1,151,400	13,531,800
1990	South Peninsula	16,500	2,386,600	307,200	2,865,900	1,237,800	6,814,000
	North Peninsula	12,300	2,415,900	192,800	517,700	125,800	3,264,500
	Aleutians	0	12,400	100	282,800	1,000	296,300
	Total	28,800	4,814,900	500,100	3,666,400	1,364,600	10,374,800

Table 2. 1990 Alaska Peninsula-Aleutian Islands Salmon Harvest in Numbers of Fish by Statistical Area, Section, and District.

SOUTH PENINSULA

Southeastern District

Area		Kings	Sockeyes	Cohos	Pinks	Chums	Total
281-36	Kupreanof Point	138	36,325	34,094	145,338	26,494	242,389
281-35	Island & Fox Bays	365	125,906	15,652	41,015	29,108	212,046
East Stepovak Section Total		**503**	**162,231**	**49,746**	**186,353**	**55,602**	**454,435**
281-33	Stepovak Flats Section	30	6,526	1,297	3,328	77,096	88,277
281-32	Grub Gulch/Clark Bay	8	1,991	96	2,454	1,474	6,023
281-31	Orzinski & American Bays	2	1,257	2	707	378	2,346
281-20	Chicagof Bay/West Cove	10	2,805	12	4,341	1,602	8,770
281-10	Dorenoi Bay	0	227	0	5,024	98	5,349
Northwest Stepovak Section Total		**20**	**6,280**	**110**	**12,526**	**3,552**	**22,488**
283-90	Southwest Stepovak Section	75	32,695	1,803	13,835	5,883	54,291
283-90	Balboa Bay Section	117	54,737	1,835	23,948	11,480	92,177
283-75	Beaver Bay Section	10	14,991	774	9,817	2,432	28,024

continued

Table 2. 1990 Alaska Peninsula-Aleutian Islands Salmon Harvest in Numbers of Fish by Statistical Area, Section, and District.

SOUTH PENINSULA

Southeastern District (Continued)

Area		Kings	Sockeyes	Cohos	Pinks	Chums	Total
282-10	East Unga Island	78	45,255	3,269	21,274	13,309	83,185
282-11	Unga Cape, Popof Head, Korovin Island	6,379	447,070	167,079	998,688	332,039	1,921,255
282-12	Zachary Bay	13	1,930	290	2,310	14,203	18,746
282-13	Bay Point	12	9,742	605	9,295	3,652	23,306
282-14	West Unga Island	48	29,336	1,297	17,471	7,464	55,616
282-15	Acheredin Bay	128	97,465	6,053	110,536	22,626	236,808
282-20	N.W. Nagai Island	5	1,968	175	2,006	934	5,088
282-21	Cape Wedge	5	918	42	1,705	505	3,175
282-22	S.W. Nagai Island	128	44,533	5,023	44,416	15,199	109,299
282-23	East Nagai Strait	2	1,717	3	23	791	2,536
282-25	S.E. Nagai Island	0	188	0	0	22	210
Shumagin Islands Section Total		**6,798**	**680,122**	**183,836**	**1,177,724**	**410,744**	**2,459,224**
SOUTHEASTERN DISTRICT TOTAL		**7,613**	**957,582**	**239,401**	**1,427,531**	**566,789**	**3,198,916**

South Central District

283-70	Mino Creek Vicinity	10	2,294	28	2,117	476	4,925
283-62	Coal Bay-Cape Tolstoi	32	19,446	1,306	98,966	4,109	123,859
Mino Cr, Little Coal B. Sect. Total		**42**	**21,740**	**1,334**	**101,083**	**4,585**	**128,784**

continued

Table 2. 1990 Alaska Peninsula-Aleutian Islands Salmon Harvest in Numbers of Fish by Statistical Area, Section, and District.

SOUTH PENINSULA

South Central District (Continued)

Area	Kings	Sockeyes	Cohos	Pinks	Chums	Total
283-63 East Pavlof Bay	0	1,699	0	133,846	2,629	138,174
283-65 Chinaman Lagoon	0	15	2	4,412	12,019	16,448
283-61 Long Beach	73	38,339	2,425	34,608	7,543	82,988
Pavlof Bay Section Total	**73**	**40,053**	**2,427**	**172,866**	**22,191**	**237,610**
283-64 Canoe Bay Section	11	247	6	108,116	33,594	141,974
SOUTH CENTRAL DISTRICT TOTAL	**126**	**62,040**	**3,767**	**382,065**	**60,370**	**508,368**
Southwestern District						
283-52 Volcano Bay	2	5,865	294	42,919	20,162	69,242
283-51 Dolgoi Island	66	84,114	4,085	184,477	13,465	286,207
Volcano Bay Section	**68**	**89,979**	**4,379**	**227,396**	**33,627**	**355,449**
283-42 Belkofski Bay	13	6,243	30	168,949	24,799	200,034
283-33 King Cove	0	5,532	51	18,330	3,164	27,077
Belkofski Bay Section Total	**13**	**11,775**	**81**	**187,279**	**27,963**	**227,111**
Deer Island Section	1	308	0	119,850	54	120,213

continued

Table 2. 1990 Alaska Peninsula-Aleutian Islands Salmon Harvest in Numbers of Fish by Statistical Area, Section, and District.

SOUTH PENINSULA

Southwestern District (Continued)

Area	Kings	Sockeyes	Cohos	Pinks	Chums	Total
283-32 Mortensen's Lagoon	0	21	0	39	390	450
283-35 Lenard Harbor	0	0	0	325	130	455
Cold Bay Section Total	**0**	**21**	**0**	**364**	**520**	**905**
283-20 Thin Point Section	0	388	12,327	10,805	1,371	24,891
283-12 Morzhovoi Bay Section	17	11,631	748	3,597	3,758	19,751
284-60 Ikatan Bay Section	2,257	299,952	34,485	110,615	97,929	545,238
Southwestern District Total	**2,356**	**414,054**	**52,020**	**659,906**	**165,222**	**1,293,558**
Unimak District						
283-10 Sanak Island Section	46	16,063	68	3,515	42,853	62,545
284-50 Bird Island	424	153,750	8,833	21,585	71,457	256,049
294-40 Cape Lazaref	624	150,614	3,128	88,767	51,973	295,106
Otter Cove Section Total	**1,048**	**304,364**	**11,961**	**110,352**	**123,430**	**551,155**

continued

Table 2. 1990 Alaska Peninsula-Aleutian Islands Salmon Harvest in Numbers of Fish by Statistical Area, Section, and District.

SOUTH PENINSULA

Southwestern District (Continued)

Area	Kings	Sockeyes	Cohos	Pinks	Chums	Total
284-20 Cape Lutke Section	5,314	632,506	1	282,485	279,147	1,199,453
UNIMAK DISTRICT TOTAL	**6,408**	**952,933**	**12,030**	**396,352**	**445,430**	**1,813,153**
SOUTH PENINSULA TOTAL	**16,503**	**2,386,609**	**307,218**	**2,865,854**	**1,237,811**	**6,813,995**

ALEUTIAN ISLANDS AREA

Unalaska District

Area	Kings	Sockeyes	Cohos	Pinks	Chums	Total
302-31 Unalaska Bay Section	0	81	3	38,323	188	38,595
302-24 Makushin Bay Section	2	12,354	71	244,500	850	257,777
Unalaska District Total	**2**	**12,435**	**74**	**282,823**	**1,038**	**296,372**
ALEUTIAN ISLANDS AREA TOTAL	**2**	**12,435**	**74**	**282,823**	**1,038**	**296,372**

continued

Table 2. 1990 Alaska Peninsula-Aleutian Islands Salmon Harvest in Numbers of Fish by Statistical Area, Section, and District.

NORTH PENINSULA

Northwestern District

Area		Kings	Sockeyes	Cohos	Pinks	Chums	Total
311-32	Urilia Bay Section	14	104,675	1,300	0	122	106,111
311-52	Swanson Lagoon Section	27	13,518	4,570	0	5,455	23,570
311-60	Bechevin Bay Section	1	399	2	0	1,012	1,414
312-10	Outside Izembek	1	12,225	0	21	1,570	13,817
312-20	Izembek Lagoon	0	17,085	0	0	1,976	19,061
312-40	Moffet Lagoon	0	10,118	0	109	20,437	30,664
Izembek-Moffet Bay Section Total		1	39,428	0	130	23,983	63,542
NORTHWESTERN DISTRICT TOTAL		43	158,020	5,872	130	30,572	194,637

Northern District

313-10	Black Hills Section	1,126	13,265	0	0	818	15,209
313-30	Nelson Lagoon Section	3,573	410,227	79,234	22	2,163	495,219

continued

Table 2. 1990 Alaska Peninsula-Aleutian Islands Salmon Harvest in Numbers of Fish by Statistical Area, Section, and District.

NORTH PENINSULA

Northern District (Continued)

Area		Kings	Sockeyes	Cohos	Pinks	Chums	Total
314-20	Herendeen Bay	1	329	46	511,547	52,399	564,322
314-30	Port Moller Bay	71	68	0	0	578	717
314-12	Port Moller Bight	54	3,853	430	59	4,257	8,653
Herendeen-Moller Bay Section Total		**126**	**4,250**	**476**	**511,606**	**57,234**	**573,692**
315-11	Bear & Sandy Rivers	1,948	756,561	17,952	4,584	25,274	806,319
315-20	Muddy River	197	119,687	2,124	361	1,643	124,012
Bear River Section Total		**2,145**	**876,248**	**20,076**	**4,945**	**26,917**	**930,331**
316-10	Three Hills Section	319	189,902	1,099	601	2,332	194,253
316-20	Outside Ilnik	128	472,790	4,342	186	3,832	481,278
316-22	Ilnik Lagoon	6	9,287	6,808	0	0	16,101
316-25	Strogonof Point	90	270,953	216	83	1,577	272,919
Ilnik Section Total		**224**	**753,030**	**11,366**	**269**	**5,409**	**770,298**

continued

Table 2. 1990 Alaska Peninsula-Aleutian Islands Salmon Harvest in Numbers of Fish by Statistical Area, Section, and District.

NORTH PENINSULA

Northern District (Continued)

Area	Kings	Sockeyes	Cohos	Pinks	Chums	Total
317-20 Inner Port Heiden Sect.	4,699	9,701	38,942	0	269	53,611
318-20 Cinder River Section	63	1,246	35,784	151	99	37,343
Northern District Total	12,275	2,257,869	186,977	517,594	95,241	3,069,956
NORTH PENINSULA TOTAL	12,318	2,415,889	192,849	517,724	125,813	3,264,593
TOTAL ALASKA PENINSULA - ALEUTIAN ISLANDS AREAS	28,823	4,814,933	500,141	3,666,401	1,364,662	10,374,960

Table 3. Estimated Value of 1990 Commercial Fishery

SALMON EX-VESSEL

South Peninsula	Kings	Sockeye	Cohos	Pinks	Chums	Total
Poundage	242,224	14,126,806	2,133,441	8,879,211	8,112,579	33,494,261
Average Weight	14.7	5.9	6.9	3.1	6.6	
Value $$$	303,000	22,704,000	1,600,000	2,773,000	2,939,000	30,319,000
Aleutian Islands						
Poundage	50	62,521	492	795,509	7,191	865,763
Average Weight	25.0	5.0	6.7	2.8	6.9	
Value $$$	100	75,000	400	239,000	2,500	317,000
Northwestern District						
Poundage	655	923,688	47,405	376	245,106	1,217,230
Average Weight	15.2	5.8	8.1	2.9	8.0	
Value $$$	800	1,478,000	40,000	100	76,000	1,594,900
Northern District						
Poundage	239,108	12,492,186	1,571,066	1,513,344	628,959	16,444,663
Average Weight	16.2	5.5	8.4	2.9	6.6	
Value $$$	299,200	18,114,000	1,335,000	484,000	226,000	20,458,200
North Peninsula Total						
Poundage	239,763	13,415,874	1,616,471	1,513,720	874,065	17,659,893
Average Weight	16.2	5.6	8.4	2.9	7.0	
Value $$$	300,000	19,592,000	1,375,000	484,100	302,000	22,053,100
TOTAL ALASKA PENINSULA-ALEUTIAN ISLANDS AREAS						
Poundage	482,037	27,605,201	3,750,404	11,188,404	8,993,835	52,019,917
Average Weight	16.4	5.7	7.5	3.1	6.6	
Value $$$	603,100	42,371,000	2,975,400	3,496,100	3,243,500	52,689,100
ESTIMATED VALUE OF SOUTH UNIMAK AND SHUMAGIN ISLAND JUNE FISHERY (These figures are included above)						
Poundage	159,125	7,208,915	0	1,209,921	3,537,317	12,115,278
Average Weight	15.4	5.4	-	2.4	6.8	
Value $$$	119,000	14,057,000	0	242,000	1,521,000	16,019,000

SALMON FIRST WHOLESALE

Fish	$1,000,000	72,000,000	8,000,000	21,000,000	13,000,000	115,000,000
Roe	200,000	11,000,000	900,000	3,000,000	4,000,000	19,100,000
Total	$1,200,000	83,000,000	8,900,000	24,000,000	17,000,000	134,100,000

continued

Table 3. (page 2 of 2)

HERRING

	Ex-Vessel	Wholesale
South Peninsula Food/Bait	$ 0	$ 0
South Peninsula Sac-Roe	173,300	1,050,000
North Peninsula Sac-Roe	123,300	740,000
Eastern Aleutians Food/Bait	287,000	700,000
Total	$563,600	$2,490,000

Values are obtained by selecting a price that approximates an average and multiplying the price by the number of pounds. Because prices fluctuate throughout the year and between buyers and sections, the values are estimates.

Table 4. Alaska Peninsula-Aleutian Islands Management Areas salmon catch by year, gear, species, and estimated value, 1979-90.

Year	King Number	King Est.$Value by% of catch	Sockeye Number	Sockeye Est.$Value by% of catch	Coho Number	Coho Est.$Value by% of catch	Pink Number	Pink Est.$Value by% of catch	Chum Number	Chum Est.$Value by% of catch	Total Numbers	Total Est.$Value by% of catch
1979												
Seine	1,634	41,024	909,000	5,806,222	352,759	2,403,576	6,989,540	9,544,217	440,159	1,706,042	8,693,092	19,501,081
Drift GN	9,592	240,779	1,840,103	11,753,626	64,826	441,669	29,301	39,800	67,901	263,172	2,011,723	12,739,046
Set GN	8,022	201,398	392,197	2,505,152	52,117	355,256	90,460	123,283	40,823	158,286	583,619	3,343,374
Total	19,248	483,200	3,141,300	20,065,000	469,702	3,200,500	7,109,301	9,707,300	548,883	2,127,500	11,288,434	35,583,500
1980												
Seine	4,246	58,969	2,899,956	9,244,048	250,343	933,974	10,650,959	13,857,200	1,555,424	4,534,200	15,360,928	28,628,391
Drift GN	10,988	152,604	1,727,187	5,505,669	78,057	291,213	7,339	9,800	369,446	1,077,000	2,193,017	7,036,287
Set GN	6,367	88,426	392,227	1,250,283	73,661	274,813	102,305	133,000	133,313	388,800	707,873	2,135,322
Total	21,601	300,000	5,019,370	16,000,000	402,061	1,500,000	10,760,603	14,000,000	2,058,183	6,000,000	18,261,818	37,800,000
1981												
Seine	8,347	149,904	1,296,886	7,555,092	156,590	818,867	5,217,398	7,780,053	1,905,053	6,186,088	8,584,274	22,490,005
Drift GN	12,692	227,880	2,217,648	12,919,049	77,022	402,703	15,646	23,122	427,385	1,387,760	2,750,393	14,960,513
Set GN	9,034	162,216	576,744	3,359,859	84,219	440,430	113,987	169,825	149,408	485,152	933,392	4,617,482
Total	30,073	540,000	4,091,278	23,834,000	317,831	1,662,000	5,347,031	7,973,000	2,481,846	8,059,000	12,268,059	42,068,000
1982												
Seine	6,775	159,719	1,465,926	7,342,780	219,591	1,193,753	8,008,412	6,273,624	1,772,536	5,222,369	11,473,240	20,192,244
Drift GN	20,474	482,670	1,980,518	9,920,524	145,377	790,307	67,811	53,286	708,014	2,086,026	2,922,194	13,332,811
Set GN	12,709	299,612	337,489	1,690,697	129,122	701,940	118,821	93,090	129,226	380,606	727,367	3,165,944
Total	39,958	942,000	3,783,933	18,954,000	494,090	2,686,000	8,195,044	6,420,000	2,609,776	7,689,000	15,122,801	36,691,000

-Continued-

Table 4. (page 2 of 3).

Year	Kings Number	Kings Est.$Value by% of catch	Sockeyes Number	Sockeyes Est.$Value by% of catch	Cohos Number	Cohos Est.$Value by% of catch	Pinks Number	Pinks Est.$Value by% of catch	Chums Number	Chums Est.$Value by% of catch	Total Numbers	Total Est.$Value by% of catch
1983												
Seine	23,463	290,228	1,630,925	7,710,942	111,230	413,021	2,746,223	2,798,538	1,620,739	3,682,741	6,132,580	14,895,470
Drift GN	21,393	264,657	2,503,431	11,836,113	28,750	106,775	8,691	8,857	351,652	799,006	2,913,917	13,015,407
Set GN	11,164	138,115	515,856	2,438,945	62,815	233,204	78,117	79,605	91,128	207,254	759,080	3,097,123
Total	56,020	693,000	4,650,212	21,986,000	202,795	753,000	2,833,031	2,887,000	2,063,519	4,689,000	9,805,577	31,008,000
1984												
Seine	7,592	162,878	1,463,407	6,927,466	259,465	1,283,032	13,561,868	12,265,369	1,708,621	3,384,960	17,000,953	24,023,704
Drift GN	17,100	366,861	1,879,213	8,895,318	145,839	721,161	97,797	88,448	615,043	1,218,684	2,754,992	11,290,472
Set GN	7,498	160,861	777,427	3,680,216	106,151	524,907	266,677	241,183	159,711	316,356	1,317,464	4,923,524
Total	32,190	690,600	4,120,047	19,503,000	511,455	2,529,100	13,926,342	12,595,000	2,483,375	4,920,000	21,073,409	40,237,700
1985												
Seine	5,403	111,106	1,493,743	8,835,393	163,998	966,202	4,203,337	3,590,683	1,566,519	3,367,800	7,433,000	16,871,184
Drift GN	15,262	313,931	2,632,206	15,569,329	89,676	528,289	23,775	20,455	374,261	804,537	3,135,180	17,236,541
Set GN	9,545	196,362	617,298	3,651,278	94,958	559,510	207,048	176,901	88,752	190,663	1,017,601	4,774,714
Total	30,210	621,400	4,743,247	28,056,000	348,632	2,054,000	4,434,160	3,788,040	2,029,532	4,363,000	11,585,781	38,882,440
1986												
Seine	4,886	63,512	857,871	7,218,401	223,520	1,109,746	3,944,312	2,665,608	1,682,080	4,151,941	6,712,669	15,209,209
Drift GN	7,870	102,301	2,328,600	19,594,136	93,096	462,212	42,523	28,793	279,020	688,716	2,751,109	20,876,158
Set GN	4,584	59,587	508,055	4,274,463	83,439	414,342	109,903	74,198	98,586	243,344	804,567	5,065,933
Total	17,340	225,400	3,694,526	31,087,000	400,055	1,986,300	4,096,738	2,768,600	2,059,686	5,084,000	10,268,345	41,151,300

-Continued-

Table 4. (page 3 of 3).

Year	Kings Number	Kings Est.$Value by% of catch	Sockeyes Number	Sockeyes Est.$Value by% of catch	Cohos Number	Cohos Est.$Value by% of catch	Pinks Number	Pinks Est.$Value by% of catch	Chums Number	Chums Est.$Value by% of catch	Total Numbers	Total Est.$Value by% of catch
1987												
Seine	7,826	174,544	705,571	7,305,460	18,540	1,383,112	1,152,291	1,691,295	1,212,279	3,320,666	3,263,507	13,875,078
Drift GN	11,104	247,653	1,409,294	14,594,398	121,885	908,674	6,204	9,073	432,697	1,185,440	1,981,184	16,945,239
Set GN	4,430	98,803	544,398	5,636,742	89,099	664,213	53,547	78,632	99,987	273,894	791,461	6,752,284
Total	23,360	521,000	2,659,263	27,536,600	396,524	2,956,000	1,212,042	1,779,000	1,744,963	4,780,000	6,036,152	37,572,600
1988												
Seine	9,640	232,723	840511	11,952,232	405,243	3,534,600	6,818,574	19,005,582	1,660,529	10,403,088	9,734,497	45,128,225
Drift GN	12,324	297,533	1,652,827	23,503,525	199,807	1,742,790	181,516	506,192	512,998	3,213,893	2,559,472	29,263,934
Set GN	5,913	142,743	511,965	7,280,243	134,456	1,172,610	293,078	817,226	125,623	787,019	1,071,035	10,199,841
Total	27,877	673,000	3,005,303	42,736,000	739,506	6,450,000	7,293,168	20,329,000	2,299,150	14,404,000	13,365,004	84,592,000
1989												
Seine	5,775	117,486	1,666,704	14,925,204	307,919	1,831,648	6,857,700	8,958,999	720,709	1,947,290	9,558,807	27,780,628
Drift GN	7,822	159,100	2,038,341	18,253,184	217,192	1,292,059	87,114	113,538	329,560	890,441	2,680,029	20,708,323
Set GN	4,396	89,414	682,598	6,112,612	146,283	870,293	358,647	468,463	101,139	273,268	1,293,063	7,814,050
Total	17,993	366,000	4,387,643	39,291,000	671,394	3,994,000	7,303,461	9,541,000	1,151,408	3,111,000	13,531,899	56,303,000
1990												
Seine	11,674	239,867	1,470,145	12,937,460	227,688	1,354,192	3,533,661	3,369,540	996,546	2,368,008	6,239,714	20,269,067
Drift GN	13,203	271,284	2,583,655	22,736,487	158,088	940,241	54,787	52,242	282,319	670,851	3,092,052	24,671,105
Set GN	4,450	91,435	759,734	6,685,754	112,786	670,804	73,382	69,974	82,965	197,143	1,033,317	7,715,109
Total	29,327	602,586	4,813,534	42,359,701	498,562	2,965,237	3,661,830	3,491,756	1,361,830	3,236,001	10,342,001	52,655,281

Note: Sums of columns may not add up exactly due to rounding errors.

Table 5. 1990 SALMON CATCHES (NUMBERS OF FISH) BY SPECIES, PERMANENT SALMON WEEK*, AND AREA (All Gear)

SOUTHEASTERN DISTRICT MAINLAND 1990

Week**		Kings	Sockeyes	Cohos	Pinks	Chums	Total
K	July 5-11	128	20,177	95	115	2,946	23,461
L	July 12-18	463	90,331	3,518	13,625	26,567	134,505
M	July 19-25	93	53,520	13,168	33,141	13,490	113,412
N	July 26-Aug. 1	100	49,623	21,835	129,170	29,215	229,943
O	Aug. 2-8	35	18,822	9,557	73,708	13,464	115,586
S	Sept. 1-3	2	26,342	4,460	49	69,621	100,474
T	Sept. 8-12	1	8,028	1,496	0	550	10,075
U	Sept. 13-19	0	5,205	674	0	116	5,995
V	Sept. 20-26	0	4,503	642	0	55	5,200
W	Sept. 27-Oct. 3	0	840	115	0	19	974
X	Oct. 4-10		69	5	0	2	76
Total		822	277,460	55,565	249,809	156,045	739,701

SHUMAGIN ISLANDS 1990

Week**		Kings	Sockeyes	Cohos	Pinks	Chums	Total
G	June 13	68	8,399	0	1,942	1,024	11,433
H	June 14-20	1,224	138,788	0	42,917	41,145	224,074
I	June 21-22	578	108,462	0	25,996	21,348	156,384
J	July 1-4	0	254	0	41	672	967
K	July 6-11	2,553	63,703	9,627	24,908	100,292	201,083
L	July 12-18	674	77,843	12,931	26,892	70,663	189,003
M	July 19-25	222	80,689	37,435	176,734	57,565	352,645
N	July 26-Aug. 1	1,173	119,747	86,048	551,424	76,267	834,659
O	Aug. 2-8	313	60,377	34,088	324,317	40,233	459,328
P	Aug. 9-15	0	175	267	2,022	160	2,624
S	Sept. 1-3	1	10,939	1,652	503	1,186	14,281
T	Sept. 8-12	0	3,537	808	28	69	4,442
U	Sept. 13-19	1	4,619	584	0	61	5,265
V	Sept. 20-26	2	2,196	351	0	19	2,568
W	Sept. 27-Oct. 3	0	366	45	0	7	418
X	Oct. 4-5	0	28	0	0	0	28
Total		6,809	680,122	183,836	1,177,724	410,711	2,459,202

continued

Table 5. (page 2 of 8)

SOUTH CENTRAL DISTRICT 1990

Week**		Kings	Sockeyes	Cohos	Pinks	Chums	Total
K	July 6-11	28	15,980	62	752	4,276	21,098
L	July 12-18	64	21,312	597	4,973	8,282	35,228
M	July 19-25	30	21,733	3,063	80,388	18,505	123,719
N	July 26-Aug. 1	1	1,375	0	92,002	8,216	101,594
O	Aug. 2-8	1	821	1	129,773	16,273	146,869
P	Aug. 9-11	2	819	44	74,177	4,818	79,860
Total		**126**	**62,040**	**3,767**	**382,065**	**60,370**	**508,368**

SOUTHWESTERN AND UNIMAK DISTRICTS 1990

Week**		Kings	Sockeyes	Cohos	Pinks	Chums	Total
G	June 13	126	12,444	0	236	5,116	17,922
H	June 14-20	4,179	456,010	0	194,272	135,842	790,303
I	June 21-27	4,131	609,216	1	242,449	308,330	1,164,127
J	June 28	29	13,040	0	7,485	5,950	26,504
K	July 6-11	126	46,562	2,432	6,693	49,957	105,770
L	July 12-18	46	34,541	6,411	3,214	4,940	49,152
M	July 19-25	63	80,828	12,243	35,756	14,460	143,350
N	July 26-Aug. 1	36	54,389	16,049	110,873	19,813	201,160
O	Aug. 2-8	26	41,981	12,213	289,989	32,627	376,836
P	Aug. 9-11	3	17,741	2,215	165,287	32,175	217,421
S	Sept. 1-5	0	312	4,634	0	1,374	6,320
T	Sept. 6-12	0	148	6,147	4	69	6,368
U	Sept. 13-19	0	10	1,705	0	14	1,729
Total		**8,765**	**1,367,222**	**64,050**	**1,056,258**	**610,667**	**3,106,962**

continued

Table 5. (page 3 of 8)

***ENTIRE SOUTH PENINSULA 1990

Week**		Kings	Sockeyes	Cohos	Pinks	Chums	Total
G	June 13	0	21,000	0	2,000	6,000	29,000
H	June 14-20	5,000	595,000	0	237,000	177,000	1,014,000
I	June 21-27	5,000	718,000	0	268,000	330,000	1,321,000
J	June 28-July 4	0	13,000	0	8,000	7,000	28,000
K	July 6-11	3,000	146,000	12,000	32,000	157,000	350,000
L	July 12-18	1,000	224,000	23,000	49,000	110,000	407,000
M	July 19-25	0	237,000	66,000	326,000	104,000	733,000
N	July 26-Aug. 1	1,000	225,000	124,000	883,000	134,000	1,367,000
O	Aug. 2-8	0	122,000	56,000	818,000	103,000	1,099,000
P	Aug. 9-13	0	19,000	3,000	241,000	37,000	300,000
S	Sept. 1-5	0	38,000	11,000	1,000	72,000	122,000
T	Sept. 6-12	0	12,000	8,000	0	1,000	21,000
U	Sept. 13-19	0	10,000	3,000	0	0	13,000
V	Sept. 20-26	0	7,000	1,000	0	0	8,000
W	Sept. 27-Oct. 3	0	1,000	0	0	0	1,000
X	Oct. 4-10	0	0	0	0	0	0
Total		15,000	2,388,000	307,000	2,865,000	1,238,000	6,813,000

UNALASKA ISLAND 1990

Week**		Kings	Sockeyes	Cohos	Pinks	Chums	Total
N	July 26-Aug. 1	0	5,000	0	7,000	0	12,000
O	Aug. 2-8	0	2,000	0	174,000	1,000	177,000
P	Aug. 9-15	0	5,000	0	101,000	0	106,000
Total		0	12,000	0	282,000	1,000	295,000

URILIA BAY SECTION 1990

Week**		Kings	Sockeyes	Cohos	Pinks	Chums	Total
F	June 1-6	1	1,281	0	0	0	1,282
G	June 7-13	1	2,905	0	0	0	2,906
H	June 14-20	1	15,892	0	0	0	15,893
I	June 21-27	4	42,490	0	0	0	42,494
J	June 28-July 4	7	42,107	0	0	122	42,236
S	Sept 1-5	0	0	1,300	0	0	1,300
Total		14	104,675	1,300	0	122	106,111

continued

Table 5. (page 4 of 8)

SWANSON LAGOON SECTION 1990

Week**		Kings	Sockeyes	Cohos	Pinks	Chums	Total
I	June 21-27	0	210	0	0	250	460
J	June 28-July 4	19	6,270	0	0	3,049	9,338
K	July 5-11	7	3,985	0	0	1,265	5,257
L	July 12-18	1	2,453	0	0	856	3,310
M	July 19-25	0	360	0	0	35	395
S	Sept. 1-5	0	135	1,190	0	0	1,325
T	Sept. 6-12	0	105	3,380	0	0	3,485
Total		**27**	**13,518**	**4,570**	**0**	**5,455**	**23,570**

BECHEVIN BAY SECTION 1990

Week**							
J	July 1-4	1	273	0	0	503	777
K	July 5-11	0	85	2	0	10	97
L	July 12-18	0	41	0	0	499	540
Total		**1**	**399**	**2**	**0**	**1,012**	**1,414**

IZEMBEK-MOFFET BAY SECTION 1990

Week**		Kings	Sockeyes	Cohos	Pinks	Chums	Total
I	June 21-27	0	150	0	0	700	850
J	June 28-July 4	0	550	0	0	1,000	1,550
K	July 5-11	0	1,790	0	0	4,100	5,890
L	July 12-18	0	2,278	0	31	7,598	9,907
M	July 19-25	0	7,730	0	9	2,195	9,934
N	July 26-Aug. 1	1	22,810	0	66	7,160	30,037
Total		**1**	**35,308**	**0**	**106**	**22,753**	**58,168**

BLACK HILLS SECTION 1990

Week**		Kings	Sockeyes	Cohos	Pinks	Chums	Total
I	June 21-27	9	996	0	0	0	1,005
J	June 28-July 4	1,117	12,269	0	0	818	14,204
Total		**1,126**	**13,265**	**0**	**0**	**818**	**15,209**

continued

Table 5. (page 5 of 8)

NELSON LAGOON SECTION 1990

Week**		Kings	Sockeyes	Cohos	Pinks	Chums	Total
F	June 1-6	460	483	0	0	0	943
G	June 7-13	789	2,621	0	0	0	3,410
H	June 14-20	916	9,535	0	0	0	10,451
I	June 21-27	824	37,129	0	0	1	37,954
J	June 28-July 4	367	82,473	0	0	6	82,846
K	July 5-11	185	125,210	0	1	12	125,408
L	July 12-18	24	55,850	0	0	177	56,051
M	July 19-25	5	26,755	2	1	459	27,222
N	July 26-Aug. 1	1	26,285	38	0	713	27,037
O	Aug. 2-8	1	27,106	425	8	696	28,236
P	Aug. 9-15	1	10,169	3,092	3	87	13,352
Q	Aug. 16-22	0	4,280	12,606	8	10	16,904
R	Aug. 23-29	0	1,691	21,733	1	1	23,426
S	Aug. 30-Sept. 5	0	545	33,918	0	1	34,464
T	Sept. 6-12	0	77	6,965	0	0	7,042
U	Sept. 13-19	0	18	455	0	0	473
Total		**3,573**	**410,227**	**79,234**	**22**	**2,163**	**495,219**

HERENDEEN BAY 1990

Week**		Kings	Sockeyes	Cohos	Pinks	Chums	Total
L	July 12-18	1	22	0	0	23,144	23,167
O	Aug. 8	0	137	-	66,765	4,390	71,292
P	Aug. 9-15	0	72	0	431,279	24,363	455,714
Total		**1**	**231**	**0**	**498,044**	**51,897**	**550,173**

continued

Table 5. (page 6 of 8)

PORT MOLLER TO STROGONOF POINT 1990

Week**		Kings	Sockeyes	Cohos	Pinks	Chums	Total
F	May 31-June 6	183	45	0	0	48	276
G	June 7-13	422	255	0	0	324	1,001
H	June 14-20	976	10,986	0	0	556	12,518
I	June 21-27	746	117,638	0	0	2,520	120,904
J	June 28-July 4	1	1,416	0	0	166	1,583
K	July 8-11	129	270,649	1	1	5,980	276,760
L	July 12-18	135	520,997	14	6	13,671	534,823
M	July 19-25	94	177,219	48	115	7,254	184,730
N	July 26-Aug. 1	60	101,888	155	897	3,980	106,980
O	Aug. 2-8	23	119,245	345	15,878	2,919	138,410
P	Aug. 9-15	18	136,923	1,831	1,318	1,412	141,502
Q	Aug. 16-22	28	154,500	5,889	617	826	161,860
R	Aug. 23-29	8	124,113	9,289	334	338	134,082
S	Aug. 30-Sept. 5	1	60,343	10,417	198	82	71,041
T	Sept. 6-12	1	26,098	4,987	13	6	31,105
U	Sept. 13	0	865	41	0	0	906
Total		**2,825**	**1,823,180**	**33,017**	**19,377**	**40,082**	**1,918,481**

PORT HEIDEN 1990

Week**		Kings	Sockeyes	Cohos	Pinks	Chums	Total
F	June 1-6	500	2	0	0	1	503
G	June 7-13	2,392	32	0	0	22	2,446
H	June 14-20	1,678	1,725	1	0	143	3,547
I	June 21-27	125	1,909	0	0	81	2,115
J	June 28-July 4	1	1,128	0	0	21	1,150
K	July 5-11	0	3,591	0	0	0	3,591
L	July 12-18	0	1,006	0	0	0	1,006
M	July 19-25	0	35	0	0	0	35
O	Aug. 2-8	0	77	194	0	0	271
P	Aug. 9-15	3	140	7,025	0	1	7,169
Q	Aug. 16-22	0	31	10,120	0	0	10,151
R	Aug. 23-29	0	25	14,793	0	0	14,818
S	Aug. 30-Sept. 5	0	0	5,529	9	9	5,529
T	Sept. 6-12	0	0	1,280	0	0	1,280
Total		**4,699**	**9,701**	**38,942**	**0**	**269**	**53,611**

continued

Table 5. (page 7 of 8)

CINDER RIVER SECTION 1990

Week**		Kings	Sockeyes	Cohos	Pinks	Chums	Total
F	June 1-6	13	2	0	0	0	15
G	June 7-13	48	50	0	0	0	98
P	Aug. 9-15	1	495	5,654	73	44	6,267
Q	Aug. 16-22	1	495	17,703	30	44	18,273
R	Aug. 23-29	0	204	12,427	48	11	12,690
Total		**63**	**1,246**	**35,784**	**151**	**99**	**37,343**

*****ENTIRE NORTH PENINSULA 1990**

Week**		Kings	Sockeyes	Cohos	Pinks	Chums	Total
F	May 31-June 6	1,000	2,000	0	0	0	3,000
G	June 7-13	4,000	6,000	0	0	0	10,000
H	June 14-20	4,000	38,000	0	0	1,000	43,000
I	June 21-27	2,000	201,000	0	0	4,000	207,000
J	June 28-July 4	2,000	146,000	0	0	7,000	155,000
K	July 5-11	0	406,000	0	0	11,000	417,000
L	July 12-18	0	583,000	0	0	46,000	629,000
M	July 19-25	0	212,000	0	0	10,000	222,000
N	July 26-Aug. 1	0	151,000	0	1,000	12,000	164,000
O	Aug. 2-8	0	151,000	1,000	83,000	10,000	245,000
P	Aug. 9-15	0	148,000	18,000	433,000	26,000	625,000
Q	Aug. 16-22	0	159,000	46,000	1,000	1,000	207,000
R	Aug. 23-29	0	126,000	58,000	0	0	184,000
S	Aug. 30-Sept. 5	0	61,000	52,000	0	0	113,000
T	Sept. 6-12	0	26,000	17,000	0	0	43,000
U	Sept. 13-19	0	1,000	0	0	0	1,000
Total		**13,000**	**2,417,000**	**192,000**	**518,000**	**128,000**	**3,268,000**

continued

Table 5. (page 8 of 8)

***ENTIRE ALASKA PENINSULA - ALEUTIANS ISLANDS AREA 1990

Week**		Kings	Sockeyes	Cohos	Pinks	Chums	Total
F	May 31-June 6	1,000	2,000	0	0	0	3,000
G	June 7-13	4,000	27,000	0	2,000	6,000	39,000
H	June 14-20	9,000	633,000	0	237,000	177,000	1,056,000
I	June 21-27	6,000	918,000	0	268,000	333,000	1,525,000
J	June 28-July 4	2,000	160,000	0	8,000	12,000	182,000
K	July 5-11	3,000	552,000	12,000	32,000	169,000	768,000
L	July 12-18	1,000	807,000	23,000	49,000	156,000	1,036,000
M	July 19-25	1,000	449,000	66,000	326,000	114,000	956,000
N	July 26-Aug. 1	1,000	381,000	124,000	892,000	146,000	1,544,000
O	Aug. 2-8	0	275,000	57,000	1,075,000	113,000	1,520,000
P	Aug. 9-15	0	171,000	20,000	776,000	63,000	1,030,000
Q	Aug. 16-22	0	159,000	46,000	1,000	1,000	207,000
R	Aug. 23-29	0	126,000	58,000	0	0	184,000
S	Aug. 30-Sept. 5	0	99,000	63,000	1,000	72,000	235,000
T	Sept. 6-12	0	38,000	25,000	0	1,000	64,000
U	Sept. 13-19	0	11,000	3,000	0	0	14,000
V	Sept. 20-26	0	7,000	1,000	0	0	8,000
W	Sept. 27-Oct. 3	0	1,000	0	0	0	1,000
X	Oct. 4-10	0	0	0	0	0	0
Total		28,000	4,816,000	498,000	3,667,000	1,363,000	10,372,000

*Permanent salmon weeks are the 1987 statistical weeks and will be used every year beginning in 1990. Previously, differences in statistical weeks between years made much of the data unmcomparable.

**The weeks listed here do not necessarily include the entire week. A complete list of permanent statistical weeks is at the end of the report.

***Catches for the entire South Peninsula, North Peninsula, and Alaska Peninsula Islands Areas are rounded to the nearest thousand by week, consequently the totals may be slightly in error.

Table 6. 1990 Salmon Catches in Numbers of Fish by Gear*

SOUTHEASTERN DISTRICT

	King	Sockeye	Coho	Pink	Chum	Total
Seine	7,120	597,588	215,797	1,381,317	501,601	2,703,423
Set Gillnet	486	358,710	21,896	41,643	62,041	484,776
Total	**7,606**	**956,298**	**237,693**	**1,422,960**	**563,642**	**3,188,199**

SOUTH CENTRAL DISTRICT

	King	Sockeye	Coho	Pink	Chum	Total
Seine	121	56,648	3,641	381,362	59,760	501,532
Set Gillnet	5	5,392	126	703	610	6,836
Total	**126**	**62,040**	**3,767**	**382,065**	**60,370**	**508,368**

SOUTHWESTERN AND UNIMAK DISTRICTS

	King	Sockeye	Coho	Pink	Chum	Total
Seine	4,427	708,029	4,916	1,009,175	361,380	2,087,917
Drift Gillnet	4,148	585,391	42,660	32,127	236,702	901,028
Set Gillnet	190	73,802	16,474	14,956	12,585	118,007
Total	**8,765**	**1,367,222**	**64,050**	**1,056,258**	**610,667**	**3,106,962**

SOUTH PENINSULA TOTAL

	King	Sockeye	Coho	Pink	Chum	Total
Seine	11,668	1,362,265	224,354	2,771,854	922,741	5,292,882
Drift Gillnet	4,148	585,391	42,660	32,127	236,702	901,028
Set Gillnet	681	437,904	38,496	57,302	75,236	609,619
Total	**16,497**	**2,385,560**	**305,510**	**2,861,283**	**1,234,679**	**6,803,529**

ALEUTIAN ISLANDS AREA

	King	Sockeye	Coho	Pink	Chum	Total
Seine	2	12,435	74	282,823	1,038	296,372
Total	**2**	**12,435**	**74**	**282,823**	**1,038**	**296,372**

-continued-

Table 6. (page 2 of 2)

NORTHWESTERN DISTRICT

	King	Sockeye	Coho	Pink	Chum	Total
Seine	4	95,434	3,260	130	28,539	127,367
Drift Gillnet	35	43,618	0	0	1,406	45,059
Set Gillnet	4	18,968	2,612	0	627	22,211
Total	**43**	**158,020**	**5,872**	**130**	**30,572**	**194,637**

NORTHERN DISTRICT

	King	Sockeye	Coho	Pink	Chum	Total
Seine	0	11	0	478,854	44,228	523,093
Drift Gillnet	8,512	1,955,154	115,428	22,660	44,211	2,145,965
Set Gillnet	3,765	302,862	71,678	16,080	7,102	401,487
Total	**12,277**	**2,258,027**	**187,106**	**517,594**	**95,541**	**3,070,545**

NORTH PENINSULA TOTAL

	King	Sockeye	Coho	Pink	Chum	Total
Seine	4	95,445	3,260	478,984	72,767	650,460
Drift Gillnet	8,547	1,998,772	115,428	22,660	45,617	2,191,024
Set Gillnet	3,769	321,830	74,290	16,080	7,729	423,698
Total	**12,320**	**2,416,047**	**192,978**	**517,724**	**126,113**	**3,265,182**

ALASKA PENINSULA - ALEUTIANS ISLANDS TOTAL

	King	Sockeye	Coho	Pink	Chum	Total
Seine	11,674	1,470,145	227,688	3,533,661	996,546	6,239,714
Drift Gillnet	12,695	2,584,163	158,088	54,787	282,319	3,092,052
Set Gillnet	4,450	759,734	112,786	73,382	82,965	1,033,317
Total	**28,819**	**4,814,042**	**498,562**	**3,661,830**	**1,361,830**	**10,365,083**

*Does not include test fish catches but does include catches from Area T fishermen in the Port Heiden-Cinder River overlap area.

Table 7. Southeastern District Mainland fishery, excluding the Northwest Stepovak Section, estimated sockeye interception of Chignik destined salmon, 1990

Date	Total Catch	Catch at 80 Percent	Cumulative Chignik Catch	Percent of Total
July 9[1]	6,866	5,493	5,493	2.5
July 10[1]	10,032	8,026	13,518	3.7
July 13	21,097	16,878	30,396	7.8
July 14	34,607	27,686	58,082	12.8
July 18	34,627	27,702	85,783	12.8
July 19[2]	53,520	42,816	128,599	19.7
July 26	9,842	7,874	136,473	3.6
July 27	11,793	9,434	145,907	4.3
July 31	10,021	8,017	153,924	3.7
August 1	16,234	12,987	166,911	6.0
August 2	4m379	3,503	170,414	1.6
August 6	5,608	4,486	174,901	2.1
August 7	8,700	6,960	181,861	3.2
Sept. 1	4,616	3,693	185,554	1.7
Sept. 2	9,167	7,334	192,887	3.4
Sept. 3	11,700	9,360	202,247	4.3
Sept. 8	539	431	202,678	0.2
Sept. 9	2,910	2,328	205,006	1.1
Sept. 10	2,695	2,156	207,162	1.0
Sept. 11	462	370	207,532	0.2
Sept. 12	1,148	918	208,450	0.4
Sept. 13	1,213	970	209,421	0.4
Sept. 18	1,401	1,121	210,542	0.5
Sept. 19	2,591	2,073	212,614	1.0
Sept. 20	1,682	1,346	213,960	0.6
Sept. 21	1,179	943	214,903	0.4
Sept. 24	1,642	1,314	216,217	0.6
Sept. 28	429	343	216,560	0.2
Oct. 1	281	225	216,785	0.1
Oct. 2	85	68	216,853	0.0
Oct. 3	45	36	216,889	0.0
Oct. 4	69	55	216,944	0.0
Total	271,180	216,944[3]	216,944	100.0

[1]Set gill net gear only is allowed prior to July 11.

[2]After July 25 the allocation method based on the Southeastern District Management Plan is no longer in effect.

[3]Assumed 80% of sockeye catch is destined for Chignik, numbers within the column, when summed, may not equal the total due to rounding.

Table 8. Chignik, Cape Igvak, and Southeastern District Mainland fisheries catches of Chignik destined sockeye salmon, 1964-1990[a].

Year	Chignik Area Catch	Chignik Area %	Cape Igvak Catch	Cape Igvak %	Southeastern District Mainland[b] Catch	Southeastern District Mainland[b] %	Total Catch
1964[c]	557,000	90.57	15,000	2.44	43,000	7.00	615,000
1965[c]	600,000	89.94	11,000	1.65	56,000	8.40	667,000
1966[c]	200,000	87.99	18,000	7.21	12,000	4.81	250,000
1967[c]	462,000	91.48	23,000	4.56	20,000	3.96	505,000
1968[c]	977,000	82.53	136,000	11.48	71,000	5.99	1,184,000
1969[c]	394,000	78.96	98,000	19.63	7,000	1.41	499,000
1970[c]	1,326,000	72.79	427,000	23.46	68,000	3.74	1,821,000
1971[c]	1,016,000	76.97	253,000	19.97	51,000	3.86	1,320,000
1972[c]	379,000	86.32	42,000	9.58	18,000	4.10	439,000
1973[d]	769,000	89.00	57,000	6.60	38,000	4.40	864,000
1974[d]	530,000	73.61	121,000	16.81	69,000	9.58	720,000
1975[d]	116,000	81.69	24,000	16.90	2,000	1.41	142,000
1976[d]	792,000	82.93	118,000	12.36	45,000	4.71	955,000
1977[d]	1,547,000	90.36	129,000	7.54	36,000	2.10	1,712,000
1978[e,f]	1,454,000	85.48	225,000	13.23	22,000	1.29	1,701,000
1979[e,g]	795,000	91.80	14,000	1.62	57,000	6.58	866,000
1980[e,g]	670,000	91.28	0	0.00	64,000	8,72	734,000
1981[e,g]	1,606,000	79.86	282,000	14.02	123,000	6.12	2,011,000
1982[e,g]	1,251,000	84.47	166,000	11.21	64,000	4.32	1,481,000
1983[e,g]	1,451,000	72.70	318,000	15.93	227,000	11.37	1,995,000
1984[e,g]	2,474,000	73.94	449,000	13.42	423,000	12.64	3,346,000
1985[e,f]	696,000	80.18	124,000	14.29	48,000	5.53	868,000
1986[e,f]	1,457,000	82.64	188,000	10.66	118,000	6.69	1,763,000
1987[e,f]	1,660,000	78.04	321,000	15.09	146,000	6.86	2,127,000
1988[e,f]	679,000	95.77	11,000	1.55	19,000	2.68	709,000
1989[e,f]	502,000	99.01	0	0.00	5,000	0.99	507,000
1990[e,f]	1,206,489	83.63	107,622	7.46	128,599	8.91	1,442,710
1985-1990 Average	1,033,333	83.60	125,333	10.14	77,333	6.26	1,236,000

[a]Cape Igvak and Southeastern District Mainland fisheries figures represent 80% of the total sockeye catches for those areas, it is estimated that about 80% of the sockeye caught in the Cape Igvak Section and Southeastern District Mainland are destined for Chignik.

-Continued-

Table 8. (page 2 of 2)

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[b] The Southeastern District Mainland area includes Stepovak, Beaver, and Balboa Bays. This fishery is also referred to as the Balboa-Beaver-Stepovak or Balboa-Stepovak fishery.

[c] Catch and percentage figures are total for the entire season. Prior to 1973, Cape Igvak and Southeastern District Mainland fisheries were regulated by set weekly fishing periods in the regulation book, usually 5 days per week. The situation was sometimes modified due to poor escapements at Chignik.

[d] Catch figures and percentages after 1972 are only through July 25. During 1973 through 1977 all three fisheries were managed on a day for day basis.

[e] Catch figures and percentages after 1972 are only through July 25. Beginning with the 1978 season, the current Cape Igvak Fishery Management Plan as in effect today was implemented. The Cape Igvak fishery was allocated 15.0 percent of the total Chignik destined sockeye catch.

[f] During 1978, seining prior to July 11 was disallowed in Beaver, Balboa, and Stepovak Bays. The set gill net fishery was allowed to fish 3 days per week through July 10, after which the fishery was managed on the basis of local stocks.

[g] During 1979-1984, 5 days per week were allowed in the Southeastern District Mainland Area with a ceiling of 60,000 estimated Chignik destined sockeye, prior to July 11. If the Chignik Area sockeye catch was 1,000,000 or more before July 11, the 60,000 ceiling was to be dropped.

[h] Beginning in 1985, the Southeastern District Mainland Area was allocated 6.2 percent of the total estimated Chignik sockeye catch through July 25. After July 25, Southeastern District Mainland Area is managed on a local stock basis. The allocation was changed to 6.0 percent beginning in 1988. Seining is still not allowed prior to July 11.

Table 9. Percent of sockeye caught by gear type-entire Southeastern District Mainland fishery*

Year	Purse Seine	Set Gillnet	Total Sockeye Catch
1976	9	91	62,000
1977	28	72	53,000
1978	13	87	35,000
1979	28	72	128,000
1980	12	88	131,000
1981	13	87	261,000
1982	7	93	118,000
1983	28	72	396,000
1984	7	93	626,000
1985	14	86	138,000
1986	9	91	246,000
1987	3	97	302,000
1988	21	79	158,000
1989	46	54	282,000
1990	43	57	277,000

*Includes Beaver Bay, Balboa Bay, Southwest Stepovak, Northwest Stepovak, Stepovak Flats, and East Stepovak Sections of the Southeastern District.

Table 10. Orzinski sockeye runs and total Southeastern District Mainland sockeye catches 1979-90.

Year	Orzinski Escapement[a]	Orzinski and American Bay Catch	Balance of Suzy Creek Dent Point Catch	Total Suzy Creek Dent Point Catch	Total Orzinski Run	Total Southeast Mainland Catch
1935[b]	28,474					
1936[b]	31,720					
1937[b]	15,393					
1938[b]	8,675					
1939[b,c]	10,414					
1940[b]	16,414					
1941[b]	8,241					
1979	20,000	11,800	11,600	23,400	43,400	128,200
1980	12,000	9,600	10,000	20,200	32,200	131,200
1981	18,000	19,400	32,600	52,000	70,000	262,200
1982	9,000	6,100	3,400	9,500	18,500	118,000
1983	21,300	10,800	11,600	22,400	43,700	396,500
1984	18,600	18,600	52,300	70,900	89,500	633,300
1985	14,000	5,100	16,300	21,400	35,400	137,900
1986	10,300	12,500	49,200	61,700	72,000	245,500
1987	11,400	14,500	48,700	63,200	74,600	301,000
1988	19,300	14,500	45,000	59,500	78,800	158,400
1989	16,700	18,500	87,600	106,100	122,800	282,300
1990[b]	15,000	1,257	4,796	6,053	21,053	277,460

[a]Escapements are indexed total escapements which means they are likely lower than actual total.

[b]Weir was used to count escapement.

[c]In 1938, adverse weather conditions may have caused only part of the run to be counted.

Table 11. 1990 SHUMAGIN ISLANDS AND SOUTH UNIMAK SOCKEYE AND CHUM SALMON CATCHES - ALL GEAR

	SHUMAGINS		SOUTH UNIMAK	
	Sockeye	Chums	Sockeye	Chums
June 1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13	8,335	1,008	12,444	5,116
14			33,525	11,774
15	3,231	862		
16	28,280	5,075	68,538	18,801
17	44,101	13,553	147,450	41,921
18	44,201	16,344	91,284	25,668
19	9,849	3,846	33,703	9,070
20	9,126	1,465	81,510	28,608
21	42,479	9,015	122,209	57,519
22	65,983	12,333	119,937	35,621
23			106,452	46,784
24			87,941	76,053
25				
26			172,808	92,373
27				
28			13,040	5,950
29				
30				
TOTAL	255,585	63,501	1,090,841	455,258

Table 12. SHUMAGIN ISLAND AND SOUTH UNIMAK JUNE FISHERIES* (Fish in Thousands)

	Sockeye			Chum		
Year	Shumagins	South Unimak	Total	Shumagins	South Unimak	Total
1960	19	137	156	11	84	95
1961	55	199	254	36	157	193
1962	54	272	326	61	209	270
1963	33	116	149	36	81	117
1964	85	159	244	67	161	228
1965	207	568	775	45	121	166
1966	54	528	582	17	215	232
1967	69	186	255	51	73	124
1968	233	342	575	51	115	166
1969	76	781	857	13	254	267
1970	153	1,530	1,683	49	403	452
1971	45	565	610	115	554	669
1972	76	443	519	108	468	576
1973	23	239	263	23	189	212
1974	NF	NF	NF	NF	NF	NF
1975	49	190	239	36	65	101
1976	72	235	307	74	327	401
1977	46	193	239	22	93	115
1978	68	419	487	18	105	123
1979	179	683	862	41	64	105
1980	572	2,731	3,303	71	457	528
1981	351	1,474	1,825	54	521	575
1982	451	1,670	2,121	160	934	1,094
1983	416	1,545	1,961	169	615	784
1984	257	1,131	1,388	109	228	337
1985	367	1,495	1,862	134	345	479
1986	156	314	470	99	252	351
1987	141	652	793	37	406	443
1988	282	474	756	62	465	527
1989	397	1,348	1,745	48	408	456
1990	256	1,091	1,347	64	455	519

*The South Unimak figures include some early July catches.

Table 12A. Shumagin Islands and South Unimak Sockeye Salmon harvests (in thousands of fish) 1911 - 1959.

Year	Shumagin Islands	South Unimak	Total
1911	3	58	61
1912	31	144	175
1913	0	415	415
1914	0	610	610
1915	0	251	251
1916	0	539	539
1917	34	1,322	1,356
1918	44	733	777
1919	32	545	577
1920	60	954	1,014
1921	0	831	831
1922	550	2,775	3,325
1923	343	1,340	1,683
1924	237	971	1,208
1925	374	357	731
1926	491	1,898	2,389
1927	185	455	640
1928 - 1933 Unavailable			
1934	1,019	516	1,535
1935	549	210	759
1936	1,490	1,531	3,021
1937	498	803	1,301
1938	454	164	618
1939	707	474	1,181
1940	713	479	1,192
1941	294	206	496
1942	412	152	546
1943	1,356	428	1,784
1944	264	188	452
1945	375	218	593
1946	257	342	599
1947	229	782	1,011
1948	126	276	402
1949	167	84	251
1950	134	292	426
1951	35	82	117
1952	121	191	312
1953	105	191	296
1954	49	325	374
1955	52	315	367
1956	47	290	337
1957	44	50	94
1958	28	104	132
1959	78	58	136

Table 13. South Unimak June Fishery Daily Sockeye Catches (Figures in Thousands of Fish).

Date	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
June 1						0.3	0.1		0.5							
2							0.3	0.9	3.7							
3		0.1					0.3	0.2	7.1	25.0	2.4					
4							0.6	1.6	9.7	49.2						
5				0.3	0.5		0.0	1.3	39.6		11.8					
6				0.1	1.6		0.6	3.6	80.8							
7		1.0		0.4	0.9			2.4			39.2					
8		1.4	0.3	0.1	1.5	4.1	1.9	3.1					4.4			
9			0.4	0.4	2.5	5.0	6.4	1.6			79.4					
10	1.4	1.3	2.3	0.3	1.7	3.2	6.6	7.2					10.0		147.5	
11		5.1			3.7		47.6	12.7				8.3	17.8	11.5		
12	8.9			5.2	1.6		73.6	13.7	200.7	486.2	200.4					
13			2.7	5.4	18.3		144.1	6.0	290.5	123.2						12.4
14		4.8		16.5	24.2		119.7	3.3	301.1		389.0	55.1	44.2			33.5
15		10.8	4.0	21.3	14.3	53.7	71.8	119.0					47.8	43.1		
16	15.8		24.3	6.0	29.0	250.2	21.0	143.4				30.6		79.1	361.0	68.5
17		15.6	26.6	4.4	33.1	267.2		156.7					85.4			147.5
18	38.5	26.9	29.8	37.0	92.1	313.4		105.5				91.7	66.7	58.9		91.3
19				46.2	71.7	187.8	202.4	131.3	420.3	465.8	181.6				132.6	33.7
20	10.1		68.0	38.8	118.8	198.7	226.3	22.9					56.5		441.2	81.5
21		38.9		38.5	96.1	397.0	218.9	111.5	191.0		258.1	65.6	97.8	82.2		122.2
22		1.3		17.8	20.8	234.9	138.1	120.8					76.5	35.2		119.9
23	40.1	44.0		54.3	22.9	107.2		155.5			333.1	20.5		115.5	265.3	106.5
24	42.9		8.9	29.0	32.6	256.9		170.0				17.3				87.9
25	33.0	14.9	28.0		27.3	146.5		9.3				25.2	45.0			
26		51.0		47.3	21.9	114.5	99.7	124.1					100.3			172.8
27				49.5	20.0	79.6	51.9	75.7						49.0		
28		3.5			14.8	82.6	24.4	23.7								13.0
29		4.5				25.1		81.4								
30		6.5				3.4	18.0	61.4								
July 1		4.1			1.1											
2					0.5											
3					9.6											

Table 14. Shumagin Islands June fishery daily sockeye catches (Figures in thousands of fish).

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
June 1																
2									2.0							
3		0.2							1.6	6.4	7.0					
4		0.1							7.8	16.5						
5									13.0		9.5					
6									7.9							
7		0.3									42.6					
8		0.1	0.1				2.3						0.1			
9			3.4					0.3								
10		0.5	3.7				1.6	1.5					31.6		54.4	
11	2.8	1.0		0.4			26.7	0.9				6.3		7.9		
12				3.7			22.3		90.8	75.1	59.9					
13	2.3		12.1	3.6	6.2		32.7		87.1	39.9						8.3
14		1.1		0.1	12.7		37.0	1.6	78.6		75.5	28.4	23.6			
15		4.5		9.1	12.4	58.1	20.3	14.9						6.1		3.2
16	5.7		4.4	4.9	55.4	40.3	25.8				25.0		12.1	89.2	28.3	
17		5.5		0.2	7.8	31.1		40.7						13.0		44.1
18	23.9	12.5		5.0	8.6	34.4		23.4				14.0		67.7		44.2
19				5.7	16.8	10.1	24.3	42.8	127.7	76.3	53.0				73.8	9.8
20	20.2		26.5	2.6	13.6	20.6	54.2	23.5					55.1		179.6	9.1
21		26.7		2.3	21.3	32.7	43.4	63.8			62.2	22.6		38.6		42.5
22				0.1	7.1	17.4	36.4	98.0								66.0
23		19.7		3.3	8.0	13.4		65.9				23.0		51.9		
24				4.8	4.1	6.3						13.3		50.5		
25					17.8	13.0						23.5				
26				10.1	18.5	73.6		47.7		42.5	26.2		30.2			
27				7.1	10.7	47.1								34.5		
28				5.4	8.7	45.2					30.0					
29						10.7										
30						6.0										
July 1						13.5										
2						29.9										
3						15.6										
4						38.0										

Table 15. SOUTH UNIMAK JUNE FISHERY DAILY CHUM CATCHES (Figures in Thousands of Fish)

Date	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
June 1							0.2		0.8							
2				1.0			0.5	3.6	5.6							
3		0.3					0.6	1.0	7.3	12.9	8.9					
4							1.2	2.7	13.0	32.5						
5				0.1	0.4			3.0	17.3		34.1					
6				0.1	2.6		1.2	9.2	31.2							
7		3.6	0.2	0.4	0.7			10.2			36.0					
8		8.6	0.4	0.1	1.9	0.3	1.8	13.3					4.9			
9			0.9	0.2	1.3	0.4	10.9	4.2			53.0					
10	2.1	13.9	4.2	1.1	1.5	1.6	4.8	10.4					10.9		83.0	
11		55.4			3.4		24.0	19.8				13.8	22.5	18.5		
12	7.0			2.9	0.7		36.0	35.8	88.5	90.7	48.5					
13			2.0	1.9	3.9		48.2	13.5	109.0	23.4						5.1
14		14.9		4.3	7.1		24.1	7.0	99.3		65.7	54.8	24.1			11.8
15		32.8	2.2	5.4	1.9	8.3	10.4	98.2					30.2	35.5		
16	13.4		18.7	2.6	0.7	36.7	7.5	105.0				35.3		70.3	145.9	18.8
17		31.7	12.5	1.6	1.1	41.3		92.0					63.8			41.9
18	8.9	52.0	12.0	7.2	2.2	58.2		57.9				97.5	54.9	49.9		25.7
19				7.7	2.7	34.0	45.6	66.6	169.6	68.4	36.3				38.3	9.1
20	3.3		21.6	3.7	6.8	27.4	39.7	6.4					23.1		119.9	28.6
21		23.4		11.0	7.5	51.9	37.9	52.2	73.3		19.5	32.0	48.0	64.7		57.5
22				2.0	3.3	44.0	26.9	43.4					42.7	26.3		35.6
23	9.4	30.7		10.6	3.1	24.1		55.8			42.7	6.6		109.4	20.5	46.8
24	21.2		6.2	9.3	2.7	52.7		50.6				4.7				76.1
25		14.6	13.4		1.6	24.5		2.3				8.1	24.2			
26		44.1		12.8	2.4	18.3	47.3	43.7					56.6			92.4
27				17.4	2.9	18.5	75.1	42.7						90.2		
28		2.5			0.7	11.4	42.8	7.9								6.0
29		3.4				2.1		45.3								
30		4.5				1.3	34.5	30.6								

Table 16. SHUMAGIN ISLANDS JUNE FISHERY DAILY CHUM CATCHES (Figures in Thousands of Fish)

Date	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
June 1		0.1														
2									4.6							
3		2.3							6.8	2.3	11.3					
4		0.8							6.4	11.8						
5									14.0		13.0					
6									5.4							
7		0.8									31.0					
8		0.1	0.2				3.3									
9	0.2		5.5					1.2								
10		5.4	3.5				1.5	3.2					8.9		22.7	
11	5.2	6.3					8.1	1.6				3.9		0.7		
12				1.6			5.9		34.1	26.8	15.2					
13	1.6		8.4	1.9	1.8		4.3		40.3	13.0						1.0
14		1.3			4.7		3.0	6.2	23.3		20.0	23.0	6.8			
15		7.5		1.8	2.1	5.9	1.4	12.9						0.7		0.9
16	5.3			1.1	1.4	3.3	3.8	12.7				14.2		1.6	6.3	5.1
17		9.9			2.2	6.0		16.2						1.7		13.6
18	12.6	12.6		0.8	2.6	2.9		6.8				12.1		16.0		16.3
19				0.9	4.1	1.5	4.4	9.0	34.3	16.6	10.1				2.3	3.8
20	10.6		4.4	0.6	2.7	1.2	6.2	9.7					13.1		15.9	1.5
21		15.5		0.7	3.,4	2.2	5.6	17.5			15.0	10.9		8.5		9.0
22					1.1	1.1	6.8	30.4								12.3
23		10.9	1.9	1.1	1.2		17.3					13.1		10.6		
24			2.3	0.4	0.9							8.5		13.1		
25				3.5	1.6							13.3				
26			2.9	3.8	7.2		15.6			38.6	8.9		8.2			
27			1.1	3.9	4.9									8.9		
28			0.8	2.2	5.8						9.1					
29					2.5											
30					2.1											

Table 17. SHUMAGIN ISLAND AND SOUTH UNIMAK JUNE FISHERIES (Fish in Thousands)

	SHUMAGINS			UNIMAK			TOTAL		
Year	Sockeye	Chum	Sockeye/ Chum	Sockeye	Chum	Sockeye/ Chum	Sockeye	Chum	Sockeye/ Chum
1960	19	11	1.73	137	84	1.63	156	95	1.64
1961	55	36	1.52	199	157	1.26	254	193	1.32
1962	54	61	.88	272	209	1.30	326	270	1.21
1963	33	36	.91	116	81	1.43	149	117	1.27
1964	85	67	1.27	159	161	0.99	244	228	1.07
1965	207	45	4.60	568	121	4.69	775	166	4.67
1966	54	17	3.18	528	215	2.46	582	232	2.51
1967	69	51	1.35	186	73	2.55	255	124	2.06
1968	233	51	4.57	342	115	2.97	575	166	3.46
1969	76	13	5.85	781	254	3.07	857	267	3.21
1970	153	49	3.12	1,530	403	3.80	1,683	452	3.72
1971	45	115	0.39	565	554	1.02	610	669	0.91
1972	76	108	0.70	443	468	0.95	519	576	0.90
1973	23	23	1.00	239	189	1.26	263	212	1.24
1974	NF	NF	-	NF	NF	-	NF	NF	-
1975	49	36	1.36	190	65	2.92	239	101	2.37
1976	72	74	0.97	235	327	0.72	307	401	0.77
1977	46	22	2.09	193	93	2.08	239	115	2.08
1978	68	18	3.78	419	105	3.99	487	123	3.96
1979	179	41	4.37	683	64	10.67	862	105	8.21
1980	572	71	8.06	2,731	457	5.98	3,303	528	6.26
1981	351	54	6.50	1,474	521	2.83	1,825	575	3.17
1982	451	160	2.82	1,670	934	1.79	2,121	1,094	1.94
1983	416	169	2.46	1,545	615	2.51	1,961	784	2.50
1984	257	109	2.36	1,131	228	4.96	1,388	337	4.12
1985	367	134	2.74	1,495	345	4.33	1,862	479	3.89
1986	156	99	1.58	314	252	1.25	470	351	1.34
1987	141	37	3.81	652	406	1.61	793	443	1.79
1988	282	62	4.55	474	465	1.02	756	527	1.43
1989	397	48	8.27	1,348	408	3.30	1,745	456	3.83
1990	256	64	4.00	1,091	455	2.40	1,347	519	2.60

Table 18. Sockeye per chum South Unimak and Shumagin Islands June fishery.

SOUTH UNIMAK

Year	Purse Seine	Drift Gillnet	Set Gillnet	All Gear
1977	3.1	2.0	4.9	2.1
1978	7.2	3.6	27.5	4.0
1979	24.4	4.5	14.7	10.7
1980	5.8	6.7	54.2	6.0
1981	2.3	3.7	21.4	2.8
1982	2.1	1.5	11.1	1.8
1983	2.3	2.9	12.8	2.5
1984	5.2	4.4	36.4	5.0
1985	6.4	2.8	13.2	4.3
1986	1.3	1.2	6.7	1.2
1987	1.5	1.6	5.2	1.6
1988	0.9	1.0	5.2	1.0
1989	3.8	2.7	12.8	3.3
1990	2.4	2.4	9.3	3.5
Average	4.9	2.9	16.8	3.5

SHUMAGIN ISLANDS

Year	Purse Seine	Set Gillnet	Total
1977	2.0	10.6	2.1
1978	3.8	1.2	3.8
1979	4.2	7.7	4.4
1980	8.0	9.0	8.1
1981	6.2	25.5	6.5
1982	2.8	6.7	2.8
1983	2.4	16.3	2.5
1984	2.2	19.2	2.4
1985	2.7	4.3	2.7
1986	1.4	4.7	1.6
1987	3.1	13.2	3.8
1988	4.1	5.6	4.6
1989	8.1	11.9	8.4
1990	3.7	8.6	4.0
Average	3.9	10.3	4.1

Table 19. Percent composition of sockeye and chum catches by gear type 1977 - 1990

SOUTH UNIMAK JUNE FISHERY

	Sockeye			Chum		
Year	Seine	Drift Gillnet	Set Gillnet	Seine	Drift Gillnet	Set Gillnet
1977	15.0	84.5	0.5	10.8	89.0	0.2
1978	18.1	81.4	0.5	9.9	90.0	0.1
1979	71.0	28.8	0.2	31.0	68.9	0.1
1980	76.0	23.5	0.5	79.0	20.9	0.1
1981	51.0	46.9	2.1	64.0	35.7	0.3
1982	54.0	44.8	1.2	46.0	53.8	0.2
1983	60.0	39.3	0.7	66.0	33.9	0.1
1984	64.0	35.0	1.0	60.0	39.9	0.2
1985	62.0	37.3	0.7	42.0	57.8	0.2
1986	46.7	51.7	1.6	43.8	55.9	0.3
1987	36.5	61.4	2.1	38.4	60.9	0.7
1988	29.8	67.0	3.2	33.6	65.8	0.6
1989	59.4	38.1	2.5	52.1	47.3	0.6
1990	56.8	41.5	1.7	57.9	41.7	0.4
Average	**50.0**	**48.7**	**1.3**	**45.3**	**54.4**	**0.3**

SHUMAGIN ISLANDS JUNE FISHERY

	Sockeye		Chum	
Year	Seine	Set Gillnet	Seine	Set Gillnet
1977	94.9	5.1	99.0	1.0
1978	97.2	2.8	96.3	3.7
1979	92.4	7.6	95.7	4.3
1980	96.4	3.6	96.7	3.3
1981	94.8	5.2	98.7	1.3
1982	97.3	2.7	98.9	1.1
1983	97.4	2.6	99.6	0.4
1984	94.7	5.3	99.3	0.7
1985	95.2	4.8	97.0	3.0
1986	85.0	15.0	95.0	5.0
1987	75.5	24.5	93.0	7.0
1988	62.8	37.2	69.7	30.3
1989	90.9	9.1	93.6	6.4
1990	85.3	14.7	93.1	6.9
Average	**90.0**	**10.0**	**94.7**	**5.3**

Table 20. South Peninsula June fishery vs. actual Bristol Bay harvest, sockeye salmon 1975-1990

Year	Guideline Harvest Level (GHL)	GHL % of Actual Bristol Bay Catch	Actual S. Peninsula Catch	S. Peninsula % of Actual Bristol Bay Catch	Actual Bristol Bay Catch	S. Peninsula GHL if Actual Bristol Bay Catch Was Forecasted
1975	215,000	4.39	239,000	4.88	4,899,000	407,000
1976	425,000	7.56	307,000	5.46	5,619,000	466,000
1977	237,000	4.86	239,000	4.90	4,878,000	405,000
1978	522,000	5.26	487,000	4.91	9,928,000	824,000
1979	1,100,000	5.13	862,000	4.02	21,429,000	1,779,000
1980[a]	3,068,000	12.91	3,303,000	13.90	23,762,000	1,972,000
1981	1,760,000	6,87	1,825,000	7.13	25,503,000	2,125,000
1982	2,258,000	14.95	2,121,000	14.04	15,104,000	1,254,000
1983	1,793,000	4.80	1,961,000	5,25	37,372,000	3,102,000
1984	1,356,000	5.49	1,389,000	5.62	24,710,000	2,051,000
1985	1,685,000	7.11	1,862,000	7.86	23,703,000	1,967,000
1986[b]	1,107,000	6.97	470,000	2.96	15,889,000	1,319,000
1987	775,000	4.83	793,000	4.94	16,048,000	1,332,000
1988[b,c]	1,542,000	11.01	756,000	5.40	14,011,000	1,163,000
1989[c]	1,463,000	5.10	1,745,000	6.08	28,710,000	2,383,000
1990[c]	1,327,000	4.00	1,347,000	4.06	33,165,000	2,752,000

[a] 1980 Bristol Bay sockeye catch would have been much larger had it not been for a lengthy strike.

[b] The guideline harvest level if chum salmon restrictions were not placed on the fishery. Target percentage is 8.3

[c] Bristol Bay catch figures are preliminary.

Table 21. SOUTH UNIMAK JUNE FISHERY VS. ACTUAL BRISTOL BAY HARVEST, SOCKEYE SALMON

Year	Guideline Harvest Level (GHL)	GHL % of Actual Bristol Bay Catch	Actual S. Unimak Catch	S. Unimak % of Actual Bristol Bay Catch	Actual Bristol Bay Catch	S. Unimak GHL if Actual Bristol Bay Catch Was Forecasted
1975	165,000	3.37	190,000	3.88	4,899,000	333,000
1976	350,000	6.23	235,000	3.18	5,619,000	382,000
1977	195,000	4.00	193,000	3.96	4,878,000	332,000
1978	428,000	4.31	419,000	4.22	9,928,000	675,000
1979	900,000	4,20	683,000	3.19	21,429,000	1,457,000
1980[a]	2,513,000	10.58	2,731,000	11.49	23,762,000	1,616,000
1981	1,442,000	5.63	1,474,000	5.76	25,603,000	1,741,000
1982	1,850,000	12.21	1,670,000	11.03	15,146,000	1,030,000
1983	1,469,000	3.93	1,545,000	4.13	37,372,000	2,541,000
1984	1,111,000	4.50	1,132,000	4.58	24,710,000	1,680,000
1985	1,380,000	5.82	1,495,000	6.31	23,703,000	1,612,000
1986[b]	907,000	5.71	314,000	1.98	15,889,000	1,080,000
1987	635,000	3.96	652,000	4.06	16,048,000	1,091,000
1988[bc]	1,263,000	9.01	474,000	3.38	14,011,000	883,000
1989[c]	1,199,000	4.18	1,348,000	4.70	28,710,000	1,952,000
1990[c]	1,087,000	3.28	1,091,000	3.29	33,165,000	2,255,000

[a]1980 Bristol Bay sockeye catch would have been much larger had it not been for a lengthy strike.

[b]The guideline harvest level if chum salmon restrictions were not placed on the fishery. Target percentage is 6.8

[c]1988 through 1990 Bristol Bay catch figures are preliminary.

Table 22. Shumagin Islands June fishery ve. actual Bristol Bay harvest, sockeye salmon, 1975-1990

Year	Guideline Harvest Level (GHL)	GHL % of Actual Bristol Bay Catch	Actual Shumagins Catch	Shumagins % of Actual Bristol Bay Catch	Actual Bristol Bay Catch	Shumagin GHL if Actual Bristol Bay Catch Was Forecasted
1975	50,000	1.02	49,000	1.00	4,899,000	73,000
1976	75,000	1.33	72,000	1.28	5,619,000	84,000
1977	42,000	0.86	46,000	0.94	4,878,000	73,000
1978	94,000	0.95	68,000	0.68	9,928,000	149,000
1979	200,000	0.93	179,000	0.84	21,429,000	321,000
1980[a]	555,000	2.34	572,000	2.41	23,762,000	356,000
1981	318,000	1.24	351,000	1.37	25,603,000	384,000
1982	408,000	2.70	451,000	2.99	15,104,000	227,000
1983	324,000	0.87	416,000	1.11	37,372,000	561,000
1984	245,000	0.99	257,000	1.04	24,710,000	371,000
1985	305,000	1.29	367,000	1.55	23,703,000	356,000
1986[b,c]	200,000	1.26	156,000	0.98	15,889,000	238,000
1987[b]	140,000	0.87	141,000	0.88	16,048,000	241,000
1988[b,c]	279,000	1.99	282,000	2.01	14,011,000	210,000
1989[c]	264,000	0.92	397,000	1.38	28,710,000	431,000
1990[c]	240,000	0.72	256,000	0.77	33,165,000	497,000

[a] 1980 Bristol Bay sockeye catch would have been much larger had it not been for a lengthy strike.

[b] The guideline harvest level if chum salmon restrictions were not placed on the fishery. Target percentage is 1.5.

[c] Bristol Bay catch figures are preliminary.

Table 23. SOUTH UNIMAK-SHUMAGIN ISLANDS JUNE FISHERY REGULATION HISTORY 1962 - 1990.

Year	South Unimak	Shumagin Islands
1962-66	5 days per week	5 days per week
1967-70	7 days per week	7 days per week
1971-72	6:00 A.M. Monday - 6:00 A.M. Saturday	7 days per week
1973	*Four 13 hour fishing periods per week	*Four 13 hour fishing periods per week

Both fisheries were closed by emergency order during June 25-28 due to indications of the Bristol Bay run being below escapement requirements.

1974	No fishery	No fishery
1975-83	*6.8% of predicted Bristol Bay catch	*1.5% of predicted Bristol Bay catch
1984-89		

No more than 96 hours per 7 day period and no more than 72 hours of consecutive fishing time in each fishery (windows).

1986	*6.8% allocation minus June 26-30 segment Windows No fishing before June 11	*1.5% allocation minus June 26-30 segment Windows No fishing before June 11

A 400,000 chum salmon ceiling placed on both fisheries combined.

1987	*Same as during 1984-85 for both fisheries.	
1988-89	*6.8% of predicted Bristol Bay catch Windows	1.5% of predicted Bristol Bay catch Windows

A 500,000 chum salmon ceiling placed on both fisheries combined.

*Each sockeye allocation is broken down into time period guideline harvest levels.

Dates	South Unimak	Shumagin Islands
June 1-11	5%	9%
June 12-18	29%	28%
June 19-25	51%	41%
June 26-30	15%	22%
	100%	100%

continued

Table 23. (page 2 of 2)

1990 The chum ceiling was increased from 500,000 to 600,000.

The "Window Regulations" implemented in 1984 to limit the amount of fishing time that could be allowed were deleted.

The season was delayed until June 13 and the time period sockeye allocations for both fisheries were changed as follows:

June 13-18	35%
June 19-25	45%
June 26-30	20%

The gear depth for seines was limited to 375 meshes of which mesh size may not exceed 3-1/2 inches except for the first 25 meshes above the lead line which may not exceed 7 inches.

The gear depth on gillnets along the South Peninsula was limited to no more than 90 meshes.

Seine leads may not exceed 150 fathoms for the entire Alaska Peninsula.

Table 24. Salmon gear on south side of Alaska Peninsula Area during June, 1976-1990[a]

Year	Purse Seine	Drift Gill Net	Set Gill Net
1976	25	94	16
1977	15	98	16
1978	22	106	17
1979	33	100	22
1980	51	123	24
1981	74	126	32
1982	85	126	33
1983	92	139	41
1984	104	143	52
1985	105	140	51
1986	102	153	50
1987	84	140	62
1988	89	147	63
1989	96	144	65
1990	109	153	65

[a]During the peak of the South Unimak-Shumagin June fishery fishery (June 12-25), approximately 30 - 40 seiners fish the Shumagins. During the few occasions when South Unimak is open and Shumagins closed, nearly the entire purse seine fleet is at Unimak. Drift net effort declines after June 20 as the fleet begins moving to Port Moller.

Table 25. UNITS OF GEAR USED IN ALASKA PENINSULA AREA*

	SEINERS FISHING SOUTH UNIMAK & SHUMAGINS DURING JUNE	SEINERS FISHING UNALASKA ONLY	FISHED NORTH PENINSULA ONLY DURING JUNE	TOTAL JUNE SEINERS
1987	84	1	4	89
1988	89	2	0	91
1989	96	2	0	98
1990	109	3	1	113

	DRIFT GILLNETTERS FISHING SO. UNIMAK & SHUMAGINS DURING JUNE	FISHED NORTH PENINSULA ONLY DURING JUNE (M)	TOTAL AREA M DRIFT GILLNETTERS
1987	140	15	155
1988	147	15	162
1989	144	15	159
1990	153	8	161

	INNER PORT HEIDEN SPRING DRIFT GILLNETTERS (AREA T)	INNER PORT HEIDEN ONLY DRIFT GILLNETTERS (T)	TOTAL INNER PORT HEIDEN DRIFT GILLNETTERS
1987	20	4	24
1988	18	5	23
1989	17	3	20
1990	23	7	30

	AREA T DRIFT GILLNETTERS FISHING ILNIK & OUTER PORT HEIDEN SECTIONS	AREA T DRIFT GILLNETTERS FISHING CINDER RIVER SECTION EXCLUSIVE OF ILNIK & PORT HEIDEN
1987	17	10
1988	19	19
1989	29	14
1990	0	33

	TOTAL AREA T DRIFT GILLNETTERS (SEASON)
1987	51
1988	61
1989	63
1990	63

SET GILLNETTERS (AREA M)

	Sand Point	South Unimak	North Unimak (only)	South Peninsula (Post June only)	Nelson Lagoon	Port Moller to Port Heiden (only)	Total Area M
1987	55	9	1	0	25	7	97
1988	52	11	0	0	28	7	98
1989	51	14	0	0	28	7	100
1990	45	14	0	1	28	6	94

SET GILLNETTERS (AREA T)

	Inner Port Heiden	Cinder River	TOTAL AREA T
1987	5	5	10
1988	6	7	13
1989	5	14	19
1990	5	10	15

*During July and August some gillnet (both drift and set) fishermen who have seine permits hand purse seine pink and chum salmon. Four Sand Point set gillnetters listed are seiners during most of the year. These figures were taken while inseason fish editing and will likely differ from Table 28.

Table 26. Number of Limited Entry Permits[a] and Fishing Effort[b] in the Alaska Peninsula Area

	PURSE SEINE		DRIFT GILLNET			SET GILLNET		
Year	Area M Permits[a] Available	Area M Permits Fished	Area M Permits Available	Area M Permits[c] Fished	Area T Permits Fished	Area M Permits Available	Area M Permits[c] Fished	Area T Permits Fished
1976	114	(90)	155	(119)	(10)	115	(53)	(6)
1977	113	(87)	156	(114)	(16)	108	(57)	(8)
1978	123	(114)	158	(133)	(27)	113	(61)	(8)
1979	123	(130)	161	(167)	(18)	113	(78)	(13)
1980	126	(125)	163	(157)	(24)	113	(88)	(16)
1981	127	(122)	164	(155)	(18)	115	(88)	(21)
1982	127	(119)	164	(159)	(23)	115	(93)	(18)
1983	127	(121)	166	(159)	(18)	114	(94)	(7)
1984	126	(121)	165	(160)	(44)	113	(104)	(15)
1985	127	(123)	165	(161)	(44)	113	(102)	(18)
1986	125	(121)	165	(164)	(37)	114	(100)	(7)
1987	125	(115)	165	(163)	(48)	114	(108)	(9)
1988	125	(114)	165	(162)	(59)	114	(106)	(14)
1989	125	(119)	165	(163)	(64)	114	(111)	(18)
1990	126	(121)	164	(161)	(63)	114	(114)	(15)

[a]Includes both permanent permits and interim use permits. In 1987 there were 6 interim use seine permits, 7 drift gillnet permits and 1 set gillnet permit.

[b]Making at least one delivery during the year.

[c]During a portion of the season, in specific sections, Area T set and drift gillnet fishermen are allowed to fish in the Alaska Peninsula Area, Area M. Therefore the number of permits fished may be higher than the number of Area M permits.

Table 27. SOUTH PENINSULA SALMON RUNS[a]

Year		Kings	Sockeyes	Cohos	Pinks	Chums
1962	Catch	3,300	420,000	12,500	1,965,400	824,800
	Escapement	0	18,800	-	1,598,800	399,400
	Total	3,300	438,800	-	3,564,200	1,224,200
1963	Catch	1,900	204,400	16,500	2,367,700	461,300
	Escapement	0	23,000	-	1,317,900	446,700
	Total	1,900	227,400	-	3,685,600	908,000
1964	Catch	2,000	370,800	13,600	2,740,300	751,000
	Escapement	0	15,700	-	1,436,400	454,800
	Total	2,000	386,500	-	4,176,700	1,205,800
1965	Catch	2,100	915,700	34,200	2,884,100	556,400
	Escapement	0	12,100	-	1,035,400	228,000
	Total	2,100	927,800	-	3,919,500	784,400
1966	Catch	1,400	606,200	6,300	305,800	494,400
	Escapement	0	17,000	-	719,400	422,000
	Total	1,400	623,200	-	1,025,200	916,400
1967	Catch	1,600	294,100	2,900	78,300	245,200
	Escapement	0	16,200	-	445,500	182,900
	Total	1,600	310,300	-	523,800	428,100
1968	Catch	1,400	699,800	31,100	1,287,100	325,300
	Escapement	0	12,800	-	823,300	279,100
	Total	1,400	712,600	-	2,110,400	604,400
1969	Catch	1,900	912,800	10,900	1,219,100	389,200
	Escapement	0	29,500	-	2,474,900	134,600
	Total	1,900	942,300	-	3,694,000	523,800
1970	Catch	1,800	1,794,600	32,200	1,723,400	981,700
	Escapement	0	16,500	-	1,298,900	280,500
	Total	1,800	1,811,100	-	3,022,300	1,262,200
1971	Catch	2,200	715,500	16,800	1,450,100	1,366,600
	Escapement	0	19,400	-	702,700	343,200
	Total	2,200	734,900	-	2,152,800	1,709,800
1972	Catch	1,300	557,800	8,000	78,000	727,500
	Escapement	0	11,900	-	111,400	254,500
	Total	1,300	569,700	-	189,400	982,000

-Continued-

Table 27. (page 2 of 3)

Year		Kings	Sockeyes	Cohos	Pinks	Chums
1973	Catch	400	330,200	6,600	58,300	293,000
	Escapement	0	7,300	-	110,800	505,500
	Total	400	337,500	-	169,100	798,500
1974	Catch	500	204,700	9,400	100,200	71,500
	Escapement	0	95,600	-	284,400	257,300
	Total	500	300,300	-	384,600	328,800
1975	Catch	100	268,400	-	61,700	132,900
	Escapement	0	51,700	-	552,100	193,300
	Total	100	320,100	-	613,800	326,200
1976	Catch	2,100	375,000	200	2,367,000	532,500
	Escapement	0	69,700	-	1,456,400	327,200
	Total	2,100	444,700	-	3,823,400	859,700
1977	Catch	500	311,700	2,100	1,448,600	243,200
	Escapement	0	64,900	-	2,677,800	774,900
	Total	500	376,600	-	4,126,400	1,018,100
1978	Catch	800	579,500	60,700	5,490,000	547,000
	Escapement	0	64,800	-	2,858,700	600,500
	Total	800	644,300	-	8,348,700	1,147,500
1979	Catch	2,100	1,149,700	356,500	6,570,600	483,000
	Escapement	0	53,300	-	2,629,500	411,100
	Total	2,100	1,203,000	-	9,200,100	894,100
1980	Catch	4,800	3,613,000	274,200	7,861,500	1,351,200
	Escapement	0	45,900	-	2,641,600	362,400
	Total	4,800	3,658,900	-	10,503,100	1,713,600
1981	Catch	12,200	2,255,200	162,200	5,035,900	1,770,300
	Escapement	0	45,700	-	2,307,500	381,300
	Total	12,200	2,300,900	-	7,343,400	2,151,600
1982	Catch	9,800	2,346,000	256,000	6,734,900	2,272,500
	Escapement	0	39,200	-	2,293,000	386,900
	Total	9,800	2,385,200	-	9,027,900	2,659,400
1983	Catch	26,900	2,556,600	127,700	2,827,600	1,707,100
	Escapement	0	59,200	-	851,200	446,500
	Total	26,900	2,615,800	-	3,678,800	2,153,600

-Continued-

Table 27. (page 3 of 3)

Year		Kings	Sockeyes	Cohos	Pinks	Chums
1984	Catch	9,200	2,318,000	309,100	11,589,300	1,656,500
	Escapement	0	54,800	-	3,811,600	699,700
	Total	9,200	2,372,800	-	15,400,900	2,356,200
1985	Catch	7,900	2,214,600	172,500	4,433,700	1,393,100
	Escapement	0	49,900	-	1,614,100	503,400
	Total	7,900	2,264,500	-	6,047,800	1,896,500
1986	Catch	5,600	1,223,000	235,900	4,031,500	1,749,700
	Escapement	0	48,000	-	1,716,700	544,600
	Total	5,600	1,271,000	-	5,748,200	2,294,300
1987	Catch	9,200	1,449,900	224,700	1,208,600	1,376,300
	Escapement	0	44,600	-	1,540,500	620,700
	Total	9,200	1,494,500	-	2,749,100	1,997,000
1988	Catch	11,100	1,472,900	505,500	7,044,800	1,905,200
	Escapement	0	74,100	-	2,839,600	496,400
	Total	11,100	1,547,000	-	9,884,400	2,401,600
1989	Catch	7,000	2,660,700	443,800	7,292,700	994,200
	Escapement	0	78,100	-	1,870,900	310,500
	Total	7,000	2,738,800	-	9,163,600	1,304,700
1990	Catch	16,500	2,386,600	307,200	2,865,900	1,237,800
	Escapement	0	95,300	(75.0-100.0)[b]	1,598,400	354,700
	Total	16,500	2,481,900	367.2-397.2[b]	4,464,300	1,592,500

[a]Escapements are indexed totals. Figures in parenthesis are very rough extrapolated estimates.

[b]Numbers of fish in thousands.

Table 28. South Peninsula pink salmon runs.

Year		Not including June Migrants: Southeastern and South Central Districts	Southwestern and Unimak Districts	South Peninsula Totals	June Migrants Included: South Unimak	Shumagins	Total
1962	Catch	922,100	977,300	1,899,400	42,000	24,000	66,000
	Escapement	826,100	772,700	1,598,800			
	Total	1,748,200	1,750,000	3,498,200			
1963	Catch	1,733,900	590,800	2,324,700	14,000	29,000	43,000
	Escapement	886,500	431,400	1,317,900			
	Total	2,620,400	1,022,200	3,642,600			
1964	Catch	1,514,600	1,190,700	2,705,300	18,000	17,000	35,000
	Escapement	902,400	534,000	1,436,700			
	Total	2,417,000	1,724,700	4,141,700			
1965	Catch	2,331,400	474,700	2,806,100	43,000	35,000	78,000
	Escapement	789,900	245,500	1,035,400			
	Total	3,121,300	720,200	3,841,500			
1966	Catch	220,300	68,500	288,800	15,000	2,000	17,000
	Escapement	627,400	92,000	719,400			
	Total	847,700	160,500	1,008,200			
1967	Catch	53,100	4,200	57,300	11,000	10,000	21,000
	Escapement	327,300	118,200	445,500			
	Total	380,400	122,400	502,800			
1968	Catch	863,300	277,800	1,141,100	34,000	112,000	146,000
	Escapement	528,100	295,200	823,300			
	Total	1,391,400	573,000	1,964,400			
1969	Catch	862,800	265,300	1,128,100	68,000	23,000	91,000
	Escapement	1,906,200	568,700	2,474,900			
	Total	2,769,000	834,000	3,603,000			
1970	Catch	1,366,100	250,300	1,616,400	83,000	24,000	107,000
	Escapement	1,007,900	291,000	1,298,900			
	Total	2,374,000	541,300	2,915,300			
1971	Catch	1,212,100	214,000	1,426,100	15,000	9,000	24,000
	Escapement	488,000	214,700	702,700			
	Total	1,700,100	428,700	2,128,800			
1972	Catch	51,200	8,800	60,000	12,000	6,000	18,000
	Escapement	81,800	29,600	111,400			
	Total	133,000	38,400	171,400			
1973	Catch	35,100	1,200	36,300	12,000	10,000	22,000
	Escapement	85,700	25,100	110,800			
	Total	120,800	26,300	147,100			
1974	Catch	95,500	4,700	100,200	0	0	0
	Escapement	238,600	45,800	284,400			
	Total	334,100	50,500	384,600			
1975	Catch	30,400	26,300	56,700	3,000	2,000	5,000
	Escapement	357,800	194,300	552,100			
	Total	388,200	220,600	608,800			

-Continued-

Table 28. (page 2 of 2)

Year		Not including June Migrants: Southeastern and South Central Districts	Southwestern and Unimak Districts	South Peninsula Totals	June Migrants Included: South Unimak	Shumagins	Total
1976	Catch	2,035,900	307,100	2,343,000	18,000	6,000	24,000
	Escapement	1,084,000	372,400	1,456,400			
	Total	3,119,900	679,500	3,799,400			
1977	Catch	1,163,400	280,200	1,443,600	3,000	2,000	5,000
	Escapement	2,168,500	509,300	2,677,800			
	Total	3,331,900	789,500	4,121,400			
1978	Catch	4,067,300	1,332,700	5,400,000	47,000	43,000	90,000
	Escapement	1,966,300	892,400	2,858,700			
	Total	6,033,600	2,225,100	8,258,700			
1979	Catch	4,845,000	1,562,600	6,407,600	57,000	106,000	163,000
	Escapement	2,125,100	504,400	2,629,500			
	Total	6,970,100	2,067,000	9,037,100			
1980	Catch	2,439,600	3,815,600	6,255,200	1,141,000	466,000	1,607,000
	Escapement	1,410,400	1,231,200	2,641,600			
	Total	3,850,000	5,046,800	8,896,800			
1981	Catch	4,196,400	378,500	4,574,900	332,000	129,000	461,000
	Escapement	1,875,000	431,800	2,306,800			
	Total	6,071,400	810,300	6,881,700			
1982	Catch	4,104,900	906,100	5,011,000	1,037,000	687,000	1,724,000
	Escapement	1,533,200	759,800	2,293,000			
	Total	5,638,100	1,665,900	7,304,000			
1983	Catch	2,245,800	526,800	2,772,600	40,000	15,000	55,000
	Escapement	639,200	212,000	851,200			
	Total	2,885,000	738,800	3,623,800			
1984	Catch	6,533,100	4,136,300	10,669,400	490,000	449,000	939,000
	Escapement	2,526,700	1,824,900	3,811,600			
	Total	9,059,800	5,421,200	14,481,000			
1985	Catch	3,324,800	999,900	4,324,700	72,000	37,000	109,000
	Escapement	1,229,300	384,500	1,613,800			
	Total	4,554,100	1,384,400	5,938,500			
1986	Catch	3,066,900	673,500	3,740,400	150,000	141,000	291,000
	Escapement	1,185,500	531,200	1,716,700			
	Total	4,252,400	1,204,700	5,457,100			
1987	Catch	1,143,400	48,100	1,191,500	11,000	6,000	17,000
	Escapement	1,304,400	236,100	1,540,500			
	Total	2,447,800	284,200	2,732,000			
1988	Catch	4,662,300	2,164,100	6,826,400	87,000	132,000	219,000
	Escapement	1,636,500	1,203,100	2,839,600			
	Total	6,298,800	3,367,200	9,666,000			
1989	Catch	5,582,300	1,511,300	7,093,600	154,000	45,000	199,000
	Escapement	1,179,200	691,600	1,870,800			
	Total	6,761,500	2,202,900	8,964,400			
1990	Catch	1,738,600	612,300	2,350,900	444,000	71,000	515,000
	Escapement	1,018,200	580,200	1,598,400			
	Total	2,756,800	1,192,500	3,949,300			

Table 29. South Peninsula chum salmon runs.

Year		Not Including June Migrants: Southeastern and South Central Districts	Southwestern and Unimak Districts	South Peninsula Totals	June Migrants Included: South Unimak	Shumagins	Total
1962	Catch	409,500	155,300	564,800	199,000	61,000	260,000
	Escapement	238,600	160,800	399,400			
	Total	648,100	316,100	964,200			
1963	Catch	278,000	80,300	358,300	67,000	36,000	103,000
	Escapement	263,000	183,700	446,700			
	Total	541,000	264,000	805,000			
1964	Catch	378,800	153,300	532,100	153,000	67,000	220,000
	Escapement	160,800	294,000	454,800			
	Total	539,600	447,300	986,900			
1965	Catch	221,700	150,700	372,400	139,000	45,000	184,000
	Escapement	203,300	24,200	228,000			
	Total	425,000	175,400	600,400			
1966	Catch	221,400	36,000	257,400	220,000	17,000	237,000
	Escapement	354,800	67,200	422,000			
	Total	576,800	103,200	679,400			
1967	Catch	118,700	4,500	123,200	71,000	51,000	122,000
	Escapement	132,800	50,100	182,900			
	Total	251,500	54,600	306,100			
1968	Catch	121,400	47,600	169,000	105,000	51,000	156,000
	Escapement	191,700	87,400	279,100			
	Total	313,100	135,000	448,100			
1969	Catch	95,100	43,300	138,400	238,000	13,000	251,000
	Escapement	96,900	37,700	134,600			
	Total	192,000	81,000	273,000			
1970	Catch	482,400	87,200	569,600	363,000	49,000	412,000
	Escapement	171,700	108,800	280,500			
	Total	654,100	196,000	850,100			
1971	Catch	637,100	117,500	754,600	497,000	115,000	612,000
	Escapement	199,100	144,100	343,200			
	Total	836,200	261,600	1,097,800			
1972	Catch	150,600	55,900	206,500	413,000	108,000	521,000
	Escapement	145,000	109,500	254,500			
	Total	295,600	165,400	461,000			
1973	Catch	67,100	12,100	79,200	178,000	36,000	214,000
	Escapement	130,900	81,600	212,500			
	Total	198,000	93,700	291,700			
1974	Catch	56,600	15,300	71,900	0	0	0
	Escapement	169,800	87,500	257,300			
	Total	226,400	102,800	329,200			
1975	Catch	29,900	4,000	33,900	64,000	35,000	99,000
	Escapement	160,200	33,100	193,300			
	Total	190,100	37,100	227,200			

-Continued-

Table 29. (page 2 of 2)

Year		Not Including June Migrants: Southeastern and South Central Districts	Southwestern and Unimak Districts	South Peninsula Totals	June Migrants Included: South Unimak	Shumagins	Total
1976	Catch	109,400	25,100	134,500	326,000	72,000	398,000
	Escapement	225,300	101,900	327,200			
	Total	334,700	127,000	461,700			
1977	Catch	109,400	18,800	128,200	93,000	22,000	115,000
	Escapement	500,900	274,000	774,900			
	Total	610,300	292,800	903,100			
1978	Catch	341,600	139,800	481,400	47,000	18,000	65,000
	Escapement	386,200	214,300	600,500			
	Total	727,800	254,100	1,081,900			
1979	Catch	280,400	97,600	378,000	64,000	41,000	105,000
	Escapement	302,700	108,400	411,100			
	Total	583,100	206,000	789,100			
1980	Catch	654,200	169,100	823,300	457,000	71,000	528,000
	Escapement	241,600	120,800	362,400			
	Total	895,800	289,900	1,185,700			
1981	Catch	966,100	229,200	1,195,300	521,000	54,000	575,000
	Escapement	234,500	146,800	381,300			
	Total	1,200,600	376,000	1,576,600			
1982	Catch	922,900	253,800	1,176,700	935,000	160,000	1,095,000
	Escapement	203,000	183,900	386,900			
	Total	1,125,900	437,700	1,536,600			
1983	Catch	600,300	322,600	922,900	615,000	169,000	784,000
	Escapement	328,900	117,600	446,500			
	Total	929,200	440,200	1,369,400			
1984	Catch	832,900	486,500	1,319,400	228,000	109,000	337,000
	Escapement	446,000	253,700	699,700			
	Total	1,278,900	740,200	2,019,100			
1985	Catch	539,200	375,700	914,900	345,000	133,000	478,000
	Escapement	284,700	218,800	503,500			
	Total	823,900	594,500	1,418,400			
1986	Catch	981,200	417,400	1,398,600	252,000	99,000	351,000
	Escapement	239,600	305,000	544,600			
	Total	1,220,800	722,400	1,943,200			
1987	Catch	753,200	180,000	933,200	406,000	37,000	443,000
	Escapement	329,200	291,500	620,700			
	Total	1,082,400	471,500	1,553,900			
1988	Catch	826,200	552,300	1,378,500	465,000	62,000	527,000
	Escapement	269,100	227,300	496,400			
	Total	1,095,300	779,600	1,874,900			
1989	Catch	420,900	117,300	538,200	408,000	48,000	456,000
	Escapement	189,200	121,300	310,500			
	Total	610,100	238,600	848,700			
1990	Catch	563,200	601,300	1,164,500	455,000	64,000	519,000
	Escapement	210,900	143,800	354,700			
	Total	774,100	745,100	1,519,200			

Table 30. NORTH PENINSULA SALMON RUNS[a]

Year		Kings	Sockeyes	Cohos	Pinks	Chums
1962	Catch	5,400	249,700	35,200	31,200	34,900
	Escapement	4,400	351,200	-	4,000	150,900
	Total	9,800	600,900	-	35,200	185,800
1963	Catch	3,600	225,200	40,500	6,900	49,900
	Escapement	6,200	351,000	-	4,400	203,200
	Total	9,800	576,200	-	11,300	253,100
1964	Catch	3,600	250,800	36,600	6,800	139,000
	Escapement	25,900	419,900	-	(15,1)	156,100
	Total	29,500	670,700	-	(21,9)	295,100
1965	Catch	6,100	199,500	34,500	2,100	69,700
	Escapement	22,100	238,400	-	900	49,300
	Total	28,200	437,900	-	3,000	119,000
1966	Catch	5,600	245,300	37,300	16,000	82,800
	Escapement	8,200	283,300	-	2,000	149,500
	Total	13,800	528,600	-	18,000	232,300
1967	Catch	5,500	224,700	46,800	700	41,300
	Escapement	12,200	299,700	-	700	122,600
	Total	17,700	524,400	-	1,400	163,900
1968	Catch	4,500	237,100	64,900	200	73,500
	Escapement	15,800	251,300	-	26,500	250,800
	Total	20,300	488,400	-	26,700	324,300
1969	Catch	4,800	321,300	49,100	100	28,100
	Escapement	19,500	575,000	-	4,400	146,800
	Total	24,300	896,300	-	4,500	174,900
1970	Catch	3,200	213,000	26,400	7,800	50,200
	Escapement	8,300	451,500	-	11,100	169,800
	Total	11,500	664,500	-	18,900	220,000
1971	Catch	2,200	354,200	16,800	300	64,200
	Escapement	5,200	435,100	-	8,600	109,400
	Total	7,400	789,300	-	8,900	173,600
1972	Catch	1,800	179,500	8,000	-	84,700
	Escapement	5,000	190,200	-	1,300	124,000
	Total	6,800	369,700	-	1,300	208,700

-Continued-

Table 30. (page 2 of 3)

Year		Kings	Sockeye	Cohos	Pinks	Chums
1973	Catch	4,400	171,800	6,600	300	155,700
	Escapement	4,300	180,200	-	(200)	122,400
	Total	8,700	352,000	-	(500)	278,100
1974	Catch	5,100	247,900	24,000	10,500	35,300
	Escapement	3,000	332,800	-	(23,000)	105,000
	Total	8,100	580,700	-	(33,500)	140,400
1975	Catch	2,100	233,500	28,200	300	8,700
	Escapement	4,600	516,800	-	600	109,200
	Total	6,700	750,300	-	900	117,900
1976	Catch	4,900	641,100	26,000	600	73,600
	Escapement	6,000	532,600	-	37,300	293,400
	Total	10,900	1,173,700	-	37,900	367,000
1977	Catch	5,500	471,100	34,100	900	129,000
	Escapement	7,100	541,100	-	8,500	681,200
	Total	12,600	1,012,200	-	9,400	810,300
1978	Catch	14,200	896,200	63,300	466,600	163,000
	Escapement	13,700	1,213,500	-	96,800	310,500
	Total	27,900	2,109,700	-	563,400	473,700
1979	Catch	17,100	1,979,500	112,300	5,000	65,700
	Escapement	15,800	1,574,000	-	9,300	305,300
	Total	32,900	3,553,500	-	14,300	371,000
1980	Catch	16,800	1,397,100	127,900	301,700	700,200
	Escapement	11,000	1,387,600	-	103,600	769,500
	Total	27,800	2,784,700	-	405,300	1,469,700
1981	Catch	18,300	1,844,900	155,400	11,200	706,800
	Escapement	12,400	1,347,900	-	6,100	535,500
	Total	30,700	3,192,800	-	17,300	1,242,000
1982	Catch	30,100	1,435,300	238,000	12,300	331,100
	Escapement	20,000	718,400	-	51,700	457,600
	Total	50,100	2,153,700	-	64,000	788,700
1983	Catch	29,500	2,093,400	75,100	3,400	348,700
	Escapement	25,700	580,300	-	4,000	392,600
	Total	55,200	2,673,700	-	7,000	741,000

-Continued-

Table 30. (page 3 of 3)

Year		Kings	Sockeye	Cohos	Pinks	Chums
1984	Catch	23,000	1,734,900	198,500	27,400	796,700
	Escapement	17,700	826,000	-	56,600	870,200
	Total	40,700	2,560,900	-	84,000	1,666,900
1985	Catch	23,500	2,600,500	167,800	3,100	671,100
	Escapement	12,900	898,100	-	1,400	344,200
	Total	36,400	3,498,600	-	4,500	1,015,300
1986	Catch	11,700	2,463,700	164,100	22,600	271,200
	Escapement	8,700	580,300	-	13,300	243,600
	Total	20,400	3,044,000	-	35,900	514,800
1987	Catch	14,200	1,209,400	171,800	3,500	368,700
	Escapement	10,700	556,000	-	100	510,900
	Total	24,900	1,765,400	-	3,600	879,600
1988	Catch	16,800	1,528,100	234,000	65,200	393,500
	Escapement	11,700	614,900	(200-300)[b]	43,500	500,300
	Total	28,500	2,143,000	(434-534)[b]	108,700	893,800
1989	Catch	10,900	1,718,800	227,600	4,100	157,100
	Escapement	5,600	814,400	(150-250)[b]	1,900	212,300
	Total	16,500	2,533,200	377.6-477.6)[b]	6,000	369,400
1990	Catch	12,300	2,415,900	192,800	517,700	125,800
	Escapement	7,100	1,032,200	140.0-175.0[b]	132,200	226,400
	Total	19,400	3,448,100	332.8-367.8[b]	649,900	352,200

[a]Escapements are indexed totals. Figures in parenthesis are very rough extrapolated estimates.

[b]Numbers of fish in thousands.

Table 31. Northern District king salmon runs.[a]

Year		Cinder River	Port Heiden	Three Hills & Ilnik	Bear River	Herendeen-Moller Bay	Nelson Lagoon	Caribou Flats & Black Hills	Northern District Totals
1962	Catch	0	400	0	500	700	3,700	0	5,300
	Escapement	0	(1,100)	0	500	0	2,700	(100)	4,400
	Total	0	(1,500)	0	1,000	700	6,400	(100)	9,700
1963	Catch	0	0	0	600	200	2,500	0	3,300
	Escapement	0	(100)	0	200	0	4,000	(1,900)	6,200
	Total	0	(100)	0	800	200	6,500	(1,900)	9,500
1964	Catch	0	0	100	300	0	3,300	0	3,700
	Escapement	5,800	4,200	500	3,000	0	8,400	4,000	25,900
	Total	5,800	4,200	600	3,300	0	11,700	4,000	29,600
1965	Catch	0	1,900	300	100	0	4,000	0	6,300
	Escapement	700	1,000	0	5,400	0	11,900	3,000	22,000
	Total	700	2,900	300	5,500	0	15,900	3,000	28,300
1966	Catch	0	700	0	100	0	2,400	0	3,200
	Escapement	0	(1,300)	0	(300)	0	4,700	1,900	8,200
	Total	0	(2,000)	0	(400)	0	7,100	1,900	11,400
1967	Catch	0	1,400	0	100	400	3,600	0	5,500
	Escapement	(800)	500	300	3,000	0	5,100	1,300	11,000
	Total	(800)	1,900	300	3,100	400	8,700	1,300	16,500
1968	Catch	0	1,000	100	300	1,300	2,800	0	5,500
	Escapement	300	(1,100)	0	2,600	0	7,300	2,700	14,000
	Total	300	(2,100)	100	2,900	1,300	10,100	2,700	19,500
1969	Catch	0	1,400	0	500	500	2,500	0	4,900
	Escapement	(0.8)	(1,100)	0	1,000	0	8,100	1,600	12,600
	Total	(0.8)	(2,500)	0	1,500	500	10,600	1,600	17,500
1970	Catch	0	0	0	200	400	2,600	0	3,200
	Escapement	200	300	300	1,000	0	2,900	2,000	6,700
	Total	200	300	300	1,200	400	5,500	2,000	9,900
1971	Catch	0	0	100	300	400	1,400	0	2,200
	Escapement	100	100	200	800	0	2,300	(1,500)	5,000
	Total	100	100	300	1,100	400	3,700	(1,500)	7,200
1972	Catch	0	0	100	200	200	1,300	0	1,800
	Escapement	700	1,600	0	100	0	1,400	1,000	4,800
	Total	700	1,600	100	300	200	2,700	1,000	6,600
1973	Catch	0	1,600	0	700	300	1,500	0	4,100
	Escapement	600	600	0	100	0	1,500	800	3,600
	Total	600	2,200	0	800	300	3,000	800	7,700
1974	Catch	0	2,500	0	200	200	2,100	0	5,000
	Escapement	500	700	0	300	0	1,100	400	3,000
	Total	500	3,200	0	500	200	3,200	400	8,000
1975	Catch	0	400	0	300	200	1,200	0	2,100
	Escapement	100	900	0	700	0	2,500	400	4,600
	Total	100	1,300	0	1,000	200	3,700	400	6,700
1976	Catch	0	1,500	100	500	600	2,200	0	4,900
	Escapement	1,600	200	0	500	0	3,300	400	6,000
	Total	1,600	1,700	100	1,000	600	5,500	400	10,900

continued

Table 31. (page 2 of 2)

1977	Catch	0	2,500	100	700	500	1,700	0	5,500
	Escapement	100	700	0	0	0	5,600	700	7,100
	Total	100	3,200	100	700	500	7,300	700	12,600
1978	Catch	0	9,500	0	600	700	3,400	0	14,200
	Escapement	1,100	4,200	0	(200)	0	4,200	4,000	13,700
	Total	1,100	13,700	0	(800)	700	7,600	4,000	27,900
1979	Catch	0	9,700	0	1,400	500	5,400	0	17,000
	Escapement	300	(3,200)	0	0	0	11,000	1,500	15,800
	Total	300	(12,900)	0	1,400	500	16,400	1,500	32,800
1980	Catch	0	5,400	100	1,700	900	8,700	0	16,800
	Escapement	(3,000)	(1,600)	0	100	0	5,500	800	(11,000)
	Total	(3,000)	(7,000)	100	1,800	900	14,200	800	(27,800)
1981	Catch	0	6,100	0	1,100	100	11,000	0	18,300
	Escapement	(3,000)	(1,000)	0	2,300	0	5,200	900	(12,400)
	Total	(3,000)	(7,100)	0	3,400	100	16,200	900	(30,700)
1982	Catch	0	11,000	900	2,900	600	13,500	1,200	30,100
	Escapement	(2,500)	(7,500)	0	900	0	7,000	2,100	20,000
	Total	(2,500)	(18,500)	900	3,800	600	20,500	3,300	50,100
1983	Catch	0	6,800	900	8,600	700	12,100	400	29,500
	Escapement	7,200	900	0	(1,500)	0	0	0	0
	Total	7,200	7,700	900	(10,100)	700	24,600	4,000	55,200
1984	Catch	0	6,400	1,300	6,000	600	7,800	800	22,900
	Escapement	400	7,400	0	600	0	6,300	3,000	17,700
	Total	400	13,800	1,300	6,600	600	14,100	3,800	40,600
1985	Catch	0	4,400	1,700	4,800	1,800	10,900	0	23,600
	Escapement	700	4,700	0	1,200	0	3,200	3,200	13,000
	Total	700	9,100	1,700	6,000	1,800	14,100	3,200	36,600
1986	Catch	0	1,800	1,500	2,900	400	4,800	200	11,600
	Escapement	1,700	2,400	0	800	0	1,800	2,100	8,800
	Total	1,700	4,200	1,500	3,700	400	6,600	2,300	20,400
1987	Catch	0	3,200	900	3,800	300	5,800	100	14,100
	Escapement	900	1,400	0	700	0	4,100	3,600	10,700
	Total	900	4,600	900	4,500	300	9,900	3,700	24,800
1988	Catch	0	5,800	800	3,500	200	6,500	0	16,800
	Escapement	400	2,200	200	1,200	0	3,300	3,300	10,600
	Total	400	8,000	1,000	4,700	200	9,800	3,300	27,400
1989	Catch	100	2,900	500	2,200	300	3,800	1,000	10,800
	Escapement	200	800	0	900	0	3,100	600	5,600
	Total	300	3,700	500	3,100	300	6,900	1,600	16,400
1990	Catch	100	4,700	500	2,100	100	3,600	1,100	12,200
	Escapement	1,600	800	0	1,400	0	2,300	1,000	7,100
	Total	1,700	5,500	500	3,500	100	5,900	2,100	19,300

[a]Figures in parenthesis are extrapolated estimates. Escapements are indexed totals.

Table 32. Northwestern District sockeye salmon runs[a].

Year		Izembek-Moffet Bay	Bechevin, Swanson Lagoon & Urilia Bays	Northwestern District Totals
1962	Catch	4,700	4,100	8,800
	Escapement	27,000	(24,000)	(51,000)
	Total	31,700	28,100	(59,800)
1963	Catch	1,700	5,200	6,900
	Escapement	40,000	14,000	54,000
	Total	41,700	19,200	60,900
1964	Catch	4,700	10,300	15,000
	Escapement	50,000	(20,000)	70,000
	Total	54,700	30,300	85,000
1965	Catch	400	14,100	14,500
	Escapement	7,000	6,900	13,900
	Total	7,400	21,000	28,400
1966	Catch	0	16,300	16,300
	Escapement	7,500	12,400	19,900
	Total	7,500	28,700	36,200
1967	Catch	8,100	5,300	13,400
	Escapement	9,000	5,800	14,800
	Total	17,100	11,100	28,200
1968	Catch	11,100	4,600	15,700
	Escapement	10,000	7,800	17,800
	Total	21,100	12,400	33,500
1969	Catch	6,100	3,500	9,600
	Escapement	14,000	39,500	53,500
	Total	20,100	43,000	63,100
1970	Catch	3,100	700	3,800
	Escapement	7,000	(35,000)	(42,000)
	Total	10,100	(35,700)	(45,800)
1971	Catch	6,900	2,400	9,300
	Escapement	4,000	30,000	34,000
	Total	10,900	32,400	43,300

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Table 32. (page 2 of 3)

Year		Izembek-Moffet Bay	Bechevin, Swanson Lagoon & Urilia Bays	Northwestern District Totals
1972	Catch	800	6,200	7,000
	Escapement	5,000	4,800	9,800
	Total	5,800	11,000	16,800
1973	Catch	1,200	2,600	3,800
	Escapement	2,000	5,000	7,000
	Total	3,200	7,600	10,800
1974	Catch	4,700	3,600	8,300
	Escapement	4,000	3,300	7,300
	Total	8,700	6,900	15,600
1975	Catch	1,500	1,500	3,000
	Escapement	7,000	12,300	19,300
	Total	8,500	13,800	22,300
1976	Catch	19,000	1,700	20,700
	Escapement	14,000	21,500	35,500
	Total	33,000	23,200	56,200
1977	Catch	3,100	31,500	34,600
	Escapement	26,500	28,600	55,100
	Total	29,600	60,100	89,700
1978	Catch	15,600	24,500	40,100
	Escapement	17,000	28,000	45,000
	Total	32,600	52,500	85,100
1979	Catch	10,800	63,100	73,900
	Escapement	9,000	33,700	42,700
	Total	19,800	96,800	116,600
1980	Catch	34,200	15,200	49,400
	Escapement	11,500	90,100	101,600
	Total	45,700	105,300	151,000
1981	Catch	30,900	20,100	51,000
	Escapement	12,000	60,700	72,700
	Total	42,900	80,800	123,700

-Continued-

Table 32. (page 3 of 3)

Year		Izembek-Moffet Bay	Bechevin, Swanson Lagoon & Urilia Bays	Northwestern District Totals
1982	Catch	24,500	9,300	33,800
	Escapement	21,500	29,300	50,800
	Total	46,000	38,600	84,600
1983	Catch	15,200	14,300	29,500
	Escapement	18,500	14,200	32,700
	Total	33,700	28,500	62,200
1984	Catch	4,700	197,000	201,700
	Escapement	19,100	70,300	89,400
	Total	23,800	267,300	291,100
1985	Catch	6,200	77,400	83,600
	Escapement	17,200	29,500	46,700
	Total	23,400	106,900	130,300
1986	Catch	19,100	139,200	158,300
	Escapement	15,700	45,700	61,400
	Total	34,800	184,900	219,700
1987	Catch	6,500	137,900	144,400
	Escapement	13,600	36,300	49,900
	Total	20,100	174,200	194,300
1988	Catch	11,500	67,000	78,500
	Escapement	17,300	35,600	0
	Total	28,800	102,600	131,400
1989	Catch	8,600	44,000	52,600
	Escapement	22,500	58,100	80,600
	Total	31,100	102,100	133,200
1990	Catch	39,400	119,500	158,900
	Escapement	33,700	83,100	116,800
	Total	73,100	202,600	275,700

[a] Figures in parenthesis are extrapolated estimates. Escapements are indexed totals.

Table 33. Northern District sockeye salmon runs.

Year		Cinder River	Port Heiden	Three Hills & Ilnik	Bear River	Herendeen-Moller Bay	Nelson Lagoon	Caribou Flats & Black Hills	Northern District Totals
1962	Catch	900	17,800	9,700	142,900	0	69,600	0	240,900
	Escapement	5,000	(19,000)	5,900	215,000	100	54,200	1,000	300,200
	Total	5,900	(36,800)	15,600	357,900	100	123,800	1,000	541,100
1963	Catch	0	0	26,600	120,000	0	71,500	0	218,100
	Escapement	1,400	(14,200)	10,400	238,600	100	31,000	(1,300)	297,000
	Total	1,400	(14,200)	37,000	358,600	100	102,500	(1,300)	515,100
1964	Catch	0	6,300	33,300	107,500	0	88,700	0	235,800
	Escapement	1,500	10,000	(6,500)	250,200	200	80,000	1,500	349,900
	Total	1,500	16,300	(39,800)	357,700	200	168,700	1,500	585,700
1965	Catch	0	9,700	58,400	62,400	100	53,800	0	184,400
	Escapement	7,500	30,000	(12,500)	137,000	0	37,000	500	224,500
	Total	7,500	39,700	(70,900)	199,400	100	90,800	500	408,900
1966	Catch	0	8,000	11,000	152,600	0	60,000	0	231,600
	Escapement	3,000	(11,700)	24,300	185,000	600	36,500	2,300	263,400
	Total	3,000	(19,700)	35,300	337,600	600	96,500	2,300	495,000
1967	Catch	0	3,100	0	156,100	12,500	40,200	0	211,900
	Escapement	(3,800)	(12,000)	26,400	200,000	200	42,000	(500)	284,900
	Total	(3,800)	(15,100)	26,400	356,100	12,700	82,200	(500)	496,800
1968	Catch	0	0	78,600	90,500	3,400	51,100	0	223,600
	Escapement	4,100	(15,000)	(15,000)	166,000	400	31,000	(2,000)	233,500
	Total	4,100	(15,000)	(93,600)	256,500	3,800	82,100	(2,000)	457,100
1969	Catch	0	5,200	24,000	205,500	4,400	72,800	0	311,900
	Escapement	(3,800)	(15,000)	(15,600)	406,000	100	78,500	(2,500)	521,500
	Total	(3,800)	(20,200)	(39,600)	611,500	4,500	151,300	(2,500)	833,400
1970	Catch	0	0	44,800	110,000	1,700	52,700	0	209,200
	Escapement	1,500	14,100	16,100	294,000	0	82,400	1,400	409,500
	Total	1,500	14,100	60,900	404,000	1,700	135,100	1,400	618,700
1971	Catch	0	0	57,100	238,600	1,700	47,500	0	344,900
	Escapement	2,000	30,800	26,500	281,000	200	60,100	500	401,100
	Total	2,000	30,800	83,600	519,600	1,900	107,600	500	746,000
1972	Catch	0	0	12,000	136,200	1,100	23,200	0	172,500
	Escapement	400	3,500	13,100	135,400	0	28,000	0	180,400
	Total	400	3,500	25,100	271,600	1,100	51,200	0	352,900
1973	Catch	0	1,500	21,500	117,300	4,200	23,900	0	168,400
	Escapement	1,200	7,200	16,000	130,100	0	18,700	0	173,200
	Total	1,200	8,700	37,500	247,400	4,200	42,600	0	341,600
1974	Catch	0	2,500	47,000	140,900	7,700	25,200	0	223,300
	Escapement	1,300	1,400	14,600	266,500	0	39,900	1,800	325,500
	Total	1,300	3,900	61,600	407,400	7,700	65,100	1,800	548,800
1975	Catch	0	600	8,700	166,000	3,700	51,500	0	230,500
	Escapement	900	5,100	40,800	310,000	100	138,600	2,000	497,500
	Total	900	5,700	49,500	476,000	3,800	190,100	2,000	728,000
1976	Catch	0	5,000	219,700	310,900	9,900	74,900	0	620,400
	Escapement	6,300	30,300	15,700	328,000	500	108,900	7,400	497,100
	Total	6,300	35,300	235,400	638,900	10,400	183,800	7,400	1,117,500

continued

Table 33. (page 2 of 2)

1977	Catch	0	3,400	97,000	268,700	11,000	56,400	0	436,500
	Escapement	3,900	23,600	20,700	265,200	13,500	155,000	4,100	486,500
	Total	3,900	27,000	117,700	533,900	24,500	211,400	4,100	922,500
1978	Catch	0	800	32,200	556,400	53,700	213,400	0	856,500
	Escapement	3,800	18,800	21,200	814,000	4,900	304,300	1,500	1,168,500
	Total	3,800	19,600	53,400	1,370,400	58,600	517,700	1,500	2,025,000
1979	Catch	100	36,900	194,400	1,320,900	32,100	320,900	0	1,905,300
	Escapement	6,000	(46,700)	97,500	1,013,000	5,000	360,100	3,000	1,531,300
	Total	6,100	(83,600)	291,900	2,333,900	37,100	681,000	3,000	3,436,600
1980	Catch	0	24,600	252,200	741,900	10,500	318,500	0	1,347,700
	Escapement	30,000	(47,000)	(100,000)	751,000	1,500	352,600	3,900	1,286,000
	Total	30,000	(71,600)	(352,200)	1,492,900	12,000	671,100	3,900	2,633,700
1981	Catch	0	3,800	68,900	1,327,800	18,600	374,700	0	1,793,800
	Escapement	100,000	(26,600)	(151,000)	741,500	600	251,000	(4,000)	1,274,700
	Total	100,000	(30,400)	(219,000)	2,069,300	19,200	625,700	(4,000)	3,068,500
1982	Catch	0	8,800	142,500	1,009,300	11,300	229,200	400	1,401,500
	Escapement	(13,000)	(62,000)	(43,000)	361,300	500	179,600	6,000	665,400
	Total	(13,000)	(70,800)	(185,500)	1,370,600	11,800	408,800	6,400	2,066,900
1983	Catch	100	100	729,600	1,126,200	15,000	192,900	0	2,063,900
	Escapement	9,000	8,600	40,100	358,000	500	128,800	2,600	547,600
	Total	9,100	8,700	769,700	1,484,200	15,500	321,700	2,600	2,611,500
1984	Catch	0	1,700	743,700	637,400	31,400	118,800	0	1,533,000
	Escapement	16,000	31,100	22,300	414,000	700	251,000	600	735,700
	Catch	16,000	32,800	766,000	1,051,400	32,100	369,800	600	2,268,700
1985	Catch	300	5,100	978,200	822,500	4,500	706,300	0	2,516,900
	Escapement	12,600	45,500	22,700	451,500	700	314,800	3,700	851,500
	Total	12,900	50,600	1,000,900	1,274,000	5,200	1,021,100	3,700	3,368,400
1986	Catch	700	38,000	1,148,800	938,200	1,300	178,400	0	2,305,400
	Escapement	25,700	26,400	66,900	279,400	300	117,900	2,300	518,900
	Total	26,400	64,400	1,215,700	1,217,600	1,600	296,300	2,300	2,824,300
1987	Catch	200	2,300	719,300	214,000	700	128,500	100	1,065,100
	Escapement	15,300	28,300	30,700	266,700	700	155,700	8,700	506,100
	Total	15,500	30,600	750,000	480,700	1,400	284,200	8,800	1,571,200
1988	Catch	0	10,600	753,600	495,000	3,900	186,600	0	1,449,700
	Escapement	2,000	35,900	26,900	347,500	400	142,500	6,900	562,100
	Total	2,000	46,500	780,500	842,500	4,300	329,100	6,900	2,011,800
1989	Catch	800	13,600	749,000	557,800	5,700	325,000	14,300	1,666,200
	Escapement	4,000	11,200	16,700	487,000	500	206,800	7,600	733,800
	Total	4,800	24,800	765,700	1,044,800	6,200	531,800	21,900	2,400,000
1990	Catch	1,200	9,700	941,800	876,200	4,300	410,200	12,600	2,256,000
	Escapement	14,000	26,800	35,800	564,300	400	269,200	5,700	916,200
	Total	15,200	36,500	977,600	1,440,500	4,700	679,400	18,300	3,172,200

Figures in parenthesis are extrapolated estimates. Except for Bear and Nelson Rivers where weir and tower counts are used, escapements are indexed totals.

Table 34. North Peninsula coho salmon catches by district and section 1979-1990.

SECTION	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Dublin Bay	0	0	0	0	0	0	0	0	0	0	0	0
Urilia Bay	0	0	0	0	0	0	0	3,300	7,600	4,800	0	1,300
Swanson Lagoon	6,500	0	500	0	700	12,700	26,200	22,000	8,300	12,300	7,000	4,600
Bechevin Bay	0	100	0	100	700	400	1,400	0	800	100	1,500	0
Izembek-Moffet Bay	0	0	0	0	0	0	0	0	2,900	3,000	100	0
Northwestern District Total	6,500	100	500	100	1,400	13,100	27,600	25,300	19,600	20,200	8,600	5,900
Black Hills	0	0	0	0	0	0	0	0	0	0	0	0
Caribou Flats	0	0	0	0	0	0	0	0	0	0	0	0
Nelson Lagoon	80,000	80,300	133,500	170,700	64,000	113,300	88,200	99,300	83,700	95,400	119,300	79,200
Herendeen-Moller B.	100	100	100	400	400	700	500	0	0	0	0	600
Bear River	1,900	4,900	4,600	11,600	4,200	10,600	15,000	11,300	5,000	15,700	14,500	20,100
Three Hills	100	0	0	200	0	3,000	1,400	1,900	2,100	3,300	1,400	1,100
Ilnik	0	400	0	13,100	2,700	6,200	6,200	5,400	21,300	35,000	26,000	11,400
Inner Port Heiden	16,200	13,300	3,800	18,700	1,700	21,600	15,400	19,400	27,500	27,300	25,900	38,900
Outer Port Heiden	0	0	0	0	0	0	0	1,200	0	8,600	14,300	0
Cinder River	8,000	28,600	12,900	23,400	700	30,000	13,500	300	12,600	28,500	17,500	35,800
Northern District Total	106,300	127,600	154,900	238,100	73,700	185,400	140,200	138,800	152,200	213,800	218,900	187,100
NORTH PENINSULA TOTAL	**112,800**	**127,700**	**155,400**	**238,200**	**75,100**	**198,500**	**167,800**	**164,100**	**171,800**	**234,000**	**227,500**	**193,000**

Table 35. Northwestern District pink salmon runs 1962-1990[a]

Year		Izembek - Moffet Bay	Bechevin, Swanson Lagoon & Urilia Bays	Northwestern District Total
1962	Catch	0	30,800	30,800
	Escapement	0	4,000	4,000
	Total	0	34,800	34,800
1963	Catch	0	6,000	6,000
	Escapement	0	4,400	4,400
	Total	0	10,400	10,400
1964	Catch	100	6,700	6,800
	Escapement	0	(15,000)	(15,000)
	Total	100	21,700	21,800
1965	Catch	0	2,000	2,000
	Escapement	0	900	900
	Total	0	2,900	2,900
1966	Catch	0	16,000	16,000
	Escapement	400	1,300	1,700
	Total	400	17,300	17,700
1967	Catch	0	300	300
	Escapement	200	500	700
	Total	200	800	1,000
1968	Catch	0	0	0
	Escapement	1,500	25,000	26,500
	Total	1,500	25,000	26,500
1969	Catch	0	0	0
	Escapement	2,300	2,100	4,400
	Total	2,300	2,100	4,400
1970	Catch	0	7,800	7,800
	Escapement	0	11,100	11,100
	Total	0	18,900	18,900
1971	Catch	0	300	300
	Escapement	100	8,400	8,500
	Total	100	8,700	8,800
1972	Catch	0	0	0
	Escapement	0	1,200	1,200
	Total	0	1,200	1,200

continued

Table 35. (page 2 of 3)

Year		Izembek - Moffet Bay	Bechevin, Swanson Lagoon & Urilia Bays	Northwestern District Total
1973	Catch	0	0	0
	Escapement	0	(200)	(200)
	Total	0	(200)	(200)
1974	Catch	0	10,300	10,300
	Escapement	0	(23,000)	(23,000)
	Total	0	(33,300)	(33,300)
1975	Catch	0	0	0
	Escapement	100	500	600
	Total	100	500	600
1976	Catch	0	0	0
	Escapement	100	37,200	37,300
	Total	100	37,200	37,300
1977	Catch	0	0	0
	Escapement	200	6,200	6,400
	Total	200	6,200	6,400
1978	Catch	2,200	465,600	467,800
	Escapement	0	90,400	90,400
	Total	2,200	556,000	558,200
1979	Catch	0	1,600	1,600
	Escapement	0	9,300	9,300
	Total	0	10,900	10,900
1980	Catch	0	297,900	297,900
	Escapement	0	94,000	94,000
	Total	0	391,900	391,900
1981	Catch	0	9,100	9,100
	Escapement	0	5,700	5,700
	Total	0	14,800	14,800
1982	Catch	0	5,100	5,100
	Escapement	200	51,500	51,700
	Total	200	56,600	56,800
1983	Catch	0	*1,300	1,300
	Escapement	0	3,900	3,900
	Total	0	5,200	5,200

continued

Table 35. (page 3 of 3)

Year		Izembek - Moffet Bay	Bechevin, Swanson Lagoon & Urilia Bays	Northwestern District Total
1984	Catch	100	9,700	9,800
	Escapement	0	33,000	33,000
	Total	100	42,700	42,800
1985	Catch	0	2,000	2,000
	Escapement	0	1,400	1,400
	Total	0	3,400	3,400
1986	Catch	0	9,900	9,900
	Escapement	0	12,900	12,900
	Total	0	22,800	22,800
1987	Catch	0	0,800	0,800
	Escapement	0	1,100	1,100
	Total	0	1,900	1,900
1988	Catch	1,200	29,000	30,200
	Escapement	1,800	26,700	28,500
	Total	3,000	55,700	58,700
1989	Catch	0	3,200	3,200
	Escapement	0	1,900	1,900
	Total	0	5,100	5,100
1990	Catch	0	100	100
	Escapement	21,800	400	22,200
	Total	21,800	500	22,300

[a]Figures in parenthesis are extrapolated estimates. Escapements are indexed totals.

Table 36. Northwestern District chum salmon runs 1962-1990[a]

Year		Izembek - Moffet Bay	Bechevin, Swanson Lagoon & Urilia Bays	Northwestern District Total
1962	Catch	6,200	8,500	14,700
	Escapement	68,00	48,000	116,500
	Total	74,200	57,000	131,200
1963	Catch	3,200	41,300	44,500
	Escapement	133,500	22,300	155,800
	Total	136,700	63,600	200,300
1964	Catch	60,200	25,700	85,900
	Escapement	95,500	(16,000)	111,500
	Total	155,700	41,700	197,400
1965	Catch	4,700	44,600	49,300
	Escapement	24,000	(1,800)	25,800
	Total	28,700	46,400	75,100
1966	Catch	8,900	47,200	56,100
	Escapement	54,000	10,000	64,000
	Total	62,900	57,200	120,100
1967	Catch	9,900	8,900	18,800
	Escapement	32,800	15,400	48,200
	Total	42,700	24,300	67,000
1968	Catch	48,800	200	49,000
	Escapement	142,700	19,800	162,500
	Total	191,500	20,000	211,500
1969	Catch	4,500	1,400	5,900
	Escapement	95,300	8,000	103,300
	Total	99,800	9,400	109,200
1970	Catch	10,000	2,500	12,500
	Escapement	58,100	(5,600)	63,700
	Total	68,100	8,100	76,200
1971	Catch	36,300	7,500	43,800
	Escapement	54,100	5,900	60,000
	Total	90,400	13,400	103,800
1972	Catch	57,900	1,500	59,400
	Escapement	65,800	11,200	77,000
	Total	123,700	12,700	136,400

continued

Table 36. (page 2 of 3)

Year		Izembek - Moffet Bay	Bechevin, Swanson Lagoon & Urilia Bays	Northwestern District Total
1973	Catch	96,600	6,500	103,100
	Escapement	68,100	(7,500)	75,600
	Total	164,700	(14,000)	178,700
1974	Catch	11,200	3,000	14,200
	Escapement	76,000	(6,100)	82,100
	Total	87,200	9,100	96,300
1975	Catch	3,400	500	3,900
	Escapement	74,300	17,300	91,600
	Total	77,700	17,800	95,500
1976	Catch	38,100	7,900	46,000
	Escapement	127,700	38,300	166,000
	Total	165,800	46,200	212,000
1977	Catch	20,300	22,600	42,900
	Escapement	381,400	54,300	435,700
	Total	401,700	76,900	478,600
1978	Catch	82,300	48,400	130,700
	Escapement	134,100	29,500	163,600
	Total	216,400	77,900	294,300
1979	Catch	17,800	12,500	30,300
	Escapement	178,000	12,400	190,400
	Total	195,800	24,900	220,700
1980	Catch	282,500	85,000	367,500
	Escapement	364,200	41,100	405,300
	Total	646,700	126,100	772,800
1981	Catch	296,400	59,100	355,500
	Escapement	235,000	29,600	264,600
	Total	531,400	88,700	620,100
1982	Catch	57,500	37,700	95,200
	Escapement	166,400	23,800	190,200
	Total	223,900	61,500	285,400

continued

Table 36. (page 3 of 3)

Year		Izembek - Moffet Bay	Bechevin, Swanson Lagoon & Urilia Bays	Northwestern District Total
1983	Catch	154,800	14,900	169,700
	Escapement	173,300	20,200	193,500
	Total	328,100	35,100	363,200
1984	Catch	102,700	79,800	182,500
	Escapement	427,500	33,400	460,900
	Total	530,200	113,200	643,400
1985	Catch	126,600	116,500	243,100
	Escapement	194,700	25,700	220,400
	Total	321,300	142,200	463,500
1986	Catch	69,100	44,500	113,600
	Escapement	142,400	23,300	165,700
	Total	211,500	67,800	279,300
1987	Catch	148,600	64,600	213,200
	Escapement	286,000	55,500	341,500
	Total	434,600	120,100	554,700
1988	Catch	112,200	66,100	178,300
	Escapement	304,400	51,800	356,200
	Total	416,600	117,900	534,500
1989	Catch	14,500	11,300	25,800
	Escapement	90,600	19,400	110,000
	Total	105,100	30,700	135,800
1990	Catch	24,000	6,600	30,600
	Escapement	92,500	18,400	110,900
	Total	116,500	25,000	141,500

[a]Figures in parenthesis are extrapolated estimates. Escapements are indexed totals.

Table 37. NORTHERN DISTRICT CHUM SALMON RUNS (In Thousands of Fish)

Year		Cinder River	Port Heiden	Three Hills & Ilnik	Bear River	Herendeen-Moller Bay	Nelson Lagoon	Caribou Flats & Black Hills	Northern District Totals
1962	Catch	200	8,600	600	7,000	0	3,700	0	20,100
	Escapement	500	(1,900)	(1,500)	1,500	18,300	9,700	(1,000)	34,400
	Total	700	(10,500)	(2,100)	8,500	18,300	13,400	(1,000)	54,500
1963	Catch	0	0	700	600	0	4,100	0	5,400
	Escapement	1,200	(7,400)	(1,500)	(3,000)	26,000	7,000	(1,300)	47,400
	Total	1,200	(7,400)	(2,200)	(3,600)	26,000	11,100	(1,300)	52,800
1964	Catch	0	0	2,300	6,500	39,800	3,400	0	52,000
	Escapement	200	1,000	(1,500)	3,000	35,900	2,000	(1,000)	44,600
	Total	200	1,000	(3,800)	9,500	75,700	5,400	(1,000)	96,600
1965	Catch	0	800	2,300	1,500	13,600	2,200	0	20,400
	Escapement	0	8,500	(1,500)	1,000	8,000	4,000	(500)	23,500
	Total	0	9,300	(3,800)	2,500	21,600	6,200	(500)	43,900
1966	Catch	0	0	300	3,700	17,900	4,800	0	26,700
	Escapement	4,400	(3,400)	(1,500)	1,000	56,200	17,000	2,000	85,500
	Total	4,400	(3,400)	(1,800)	4,700	74,100	21,800	2,000	112,200
1967	Catch	0	0	0	13,600	2,400	5,100	0	21,100
	Escapement	2,500	3,000	9,600	2,500	25,000	29,800	(2,000)	74,400
	Total	2,500	3,000	9,600	16,100	27,400	34,900	(2,000)	95,500
1968	Catch	0	0	3,100	7,500	10,500	3,500	0	24,600
	Escapement	0	(11,000)	0	9,500	47,700	18,100	2,000	88,300
	Total	0	(11,000)	3,100	17,000	58,200	21,600	2,000	112,900
1969	Catch	0	1,200	1,300	10,300	7,800	3,500	0	24,100
	Escapement	2,500	(11,000)	(1,500)	1,000	14,000	13,000	500	43,500
	Total	2,500	(12,200)	(2,800)	11,300	21,800	16,500	500	67,600
1970	Catch	0	0	3,200	14,600	12,200	1,500	0	31,500
	Escapement	1,300	22,000	500	2,000	42,800	36,000	(1,500)	106,100
	Total	1,300	22,000	3,700	16,600	55,000	37,500	(1,500)	137,600
1971	Catch	0	0	2,500	12,900	1,200	3,800	0	20,400
	Escapement	2,500	12,100	800	0	14,500	19,000	(500)	49,400
	Total	2,500	12,100	3,300	12,900	15,700	22,800	(500)	69,800
1972	Catch	0	0	800	14,000	7,300	3,200	0	25,300
	Escapement	5,300	12,200	500	3,700	8,000	16,800	(500)	47,000
	Total	5,300	12,200	1,300	17,700	15,300	20,000	(500)	72,300

continued

Table 37. (page 2 of 3)

Year		Cinder River	Port Heiden	Three Hills & Ilnik	Bear River	Herendeen-Moller Bay	Nelson Lagoon	Caribou Flats & Black Hills	Northern District Totals
1973	Catch	0	2,500	900	34,200	13,200	1,800	0	52,600
	Escapement	600	22,800	800	800	3,700	12,700	0	46,800
	Total	600	25,300	1,700	35,000	16,900	14,500	0	99,400
1974	Catch	0	1,000	1,300	11,400	3,200	500	0	17,400
	Escapement	4,600	4,500	0	1,500	3,700	8,300	400	23,000
	Total	4,600	5,500	1,300	12,900	6,900	8,800	400	4400
1975	Catch	0	0	100	3,800	200	700	0	4,800
	Escapement	300	1,500	2,000	2,000	7,300	4,500	0	17,600
	Total	300	1,500	2,100	5,800	7,500	5,200	0	22,400
1976	Catch	0	1,100	2,900	12,300	5,500	5,800	0	27,600
	Escapement	1,900	30,700	5,700	18,000	28,500	42,500	100	127,400
	Total	1,900	31,800	8,600	30,300	34,000	48,300	100	155,000
1977	Catch	0	0	7,100	32,300	34,800	10,700	0	84,900
	Escapement	(1,700)	32,000	(1,500)	17,000	108,500	83,300	1,500	245,500
	Total	(1,700)	32,000	(8,600)	49,300	143,300	94,000	1,500	330,400
1978	Catch	0	0	1,200	14,600	6,600	10,300	0	32,700
	Escapement	7,400	22,000	(1,500)	(15,500)	89,300	10,200	(1,000)	146,900
	Total	7,400	22,000	(2,700)	(30,100)	95,900	20,500	(1,000)	179,600
1979	Catch	0	800	700	17,400	10,900	5,700	0	35,500
	Escapement	(3,600)	(32,700)	0	7,000	30,600	37,000	4,000	114,900
	Total	(3,600)	(33,500)	700	24,400	41,500	42,700	4,000	150,400
1980	Catch	0	2,600	29,700	161,700	59,600	80,100	0	333,700
	Escapement	(10,000)	0	(10,000)	20,000	116,100	164,000	10,400	364,000
	Total	(10,000)	(36,300)	(39,700)	181,700	175,700	244,100	10,400	697,900
1981	Catch	0	200	7,100	155,000	126,200	62,800	0	351,300
	Escapement	(11,800)	(73,400)	(11,000)	27,200	85,000	57,000	(11,000)	276,400
	Total	(11,800)	(73,600)	(18,100)	182,200	211,200	119,800	(11,000)	627,700
1982	Catch	0	700	21,200	142,400	50,200	21,400	100	236,000
	Escapement	(5,500)	(35,500)	1,000	42,400	152,000	29,100	(2,000)	267,500
	Total	(5,500)	(36,200)	22,200	184,800	202,200	50,500	(2,100)	503,500
1983	Catch	0	0	26,100	87,700	51,300	14,000	0	179,100
	Escapement	17,200	14,500	11,200	(15,000)	126,000	14,000	1,200	199,100
	Total	17,200	14,500	37,300	(102,700)	177,300	28,000	1,200	378,200

continued

Table 37. (page 3 of 3)

Year		Cinder River	Port Heiden	Three Hills & Ilnik	Bear River	Herendeen-Moller Bay	Nelson Lagoon	Caribou Flats & Black Hills	Northern District Totals
1984	Catch	0	200	174,200	242,300	119,200	78,400	0	614,300
	Escapement	13,000	85,000	4,000	7,000	241,300	49,000	10,000	409,300
	Total	13,000	85,200	178,200	249,300	360,500	127,400	10,000	1,023,600
1985	Catch	0	0	86,600	68,300	266,400	6,600	0	427,900
	Escapement	3,200	26,500	200	5,200	71,700	13,000	4,100	123,900
	Total	3,200	26,500	86,800	73,500	338,100	19,600	4,100	551,800
1986	Catch	100	800	38,700	86,700	27,800	3,600	0	157,700
	Escapement	2,200	12,000	0	6,400	55,800	0,800	700	77,900
	Total	2,300	12,800	38,700	93,100	83,600	4,400	700	235,600
1987	Catch	0	1,000	48,000	85,500	14,200	6,700	0	155,400
	Escapement	12,400	55,400	100	5,000	88,600	5,200	4,700	171,400
	Total	12,400	56,400	48,100	90,500	102,800	11,900	4,700	326,800
1988	Catch	0	4,800	48,200	73,700	75,800	12,600	0	215,100
	Escapement	5,300	41,600	100	3,000	76,500	11,000	6,600	144,100
	Total	5,300	46,400	48,300	76,700	152,300	23,600	6,600	359,200
1989	Catch	0	1,200	16,900	40,300	66,000	5,000	1,900	131,300
	Escapement	5,000	8,900	0	3,500	83,400	0,800	700	102,300
	Total	5,000	10,100	16,900	43,800	149,400	5,800	2,600	233,600
1990	Catch	100	300	7,700	26,900	57,100	2,200	800	95,100
	Escapement	4,000	7,000	(200)	1,100	101,600	(1,000)	700	115,600
	Total	4,100	7,300	7,900	28,000	158,700	3,200	1,500	210,700

[a]Figures in parenthesis are extrapolated estimates. Escapements are indexed totals.

Table 38. NELSON LAGOON SALMON RUNS (Fish in Thousands)

	KINGS			SOCKEYES			CHUMS			COHO
Year	Escapement	Catch	Total	Escapement	Catch	Total	Escapement	Catch	Total	Catches
1960	-	5.4	-	48.0	93.5	141.5	15.0	16.3	31.3	31.4
1961	0.3	3.7	4.0	138.2	76.8	215.0	10.1	1.9	12.0	20.3
1962	2.7	3.7	6.4	54.2	69.6	123.8	9.7	3.7	13.4	30.0
1963	4.0	2.5	6.5	31.0	71.5	102.5	7.0	4.1	11.1	33.4
1964	8.4	3.3	11.7	80.0	88.7	168.7	2.0	3.4	5.4	30.2
1965	11.9	4.0	15.9	37.0	53.8	90.8	4.0	2.2	6.2	28.4
1966	4.7	2.4	7.1	36.5	60.0	96.5	17.0	4.8	21.8	27.6
1967	5.1	3.6	8.7	42.0	40.2	82.2	29.8	5.1	34.9	34.8
1968	7.3	2.8	10.1	31.0	51.1	82.1	18.1	3.5	21.6	55.9
1969	8.1	2.5	10.6	78.5	72.8	151.3	13.0	1.5	14.5	34.3
1970	2.9	2.6	5.5	82.4	52.7	135.1	36.0	7.7	43.7	24.7
1971	2.3	1.4	3.7	60.1	47.5	107.6	19.0	3.8	22.8	6.9
1972	1.4	1.3	2.7	28.0	23.2	51.2	16.8	3.2	20.0	7.3
1973	1.5	1.5	3.0	18.7	23.9	42.6	12.7	1.8	14.5	16.6
1974	1.1	2.1	3.2	39.9	25.2	65.1	8.3	0.5	8.8	15.8
1975	2.5	1.2	3.7	138.6	51.5	190.1	4.5	0.7	5.2	21.3
1976	3.3	2.2	5.5	108.9	74.9	183.8	42.5	5.8	48.3	19.3
1977	5.6	1.7	7.3	155.0	56.4	211.4	83.3	10.7	94.0	22.3
1978	4.2	3.4	7.6	304.3	213.4	517.7	10.2	10.3	20.5	30.9
1979	11.0	5.4	16.4	360.1	320.9	681.0	37.0	5.7	42.7	80.0
1980	5.5	8.7	14.2	352.6	318.5	671.1	164.0	80.1	244.1	80.3
1981	5.2	11.0	16.2	251.0	374.7	625.7	57.0	62.8	119.8	133.5
1982	7.0	13.5	20.5	179.6	229.2	408.8	29.1	21.4	50.5	170.7
1983	12.5	12.1	24.6	128.8	192.9	321.7	14.0	14.0	28.0	64.0
1984	6.3	7.8	14.1	251.0	118.8	369.8	49.0	78.4	127.4	113.3
1985	3.2	10.9	14.1	318.5	706.3	1024.8	13.0	6.6	19.6	88.2
1986	1.8	4.8	6.6	117.9	178.4	296.3	1.8	3.6	5.4	99.3
1987	4.1	5.8	9.9	155.7	128.5	284.2	5.2	6.7	11.9	83.7
1988	3.3	6.5	9.8	142.5	186.6	329.1	11.0	12.6	23.6	95.4
1989	3.1	3.8	6.9	206.8	325.0	531.8	0.8	5.0	5.8	119.3
1990	2.3	3.6	5.9	269.2	410.2	679.4	-	2.1	-	79.2

Table 39. DAILY NELSON LAGOON SECTION KING SALMON CATCHES 1979-90 (ALL GEAR)

	1979		1980		1981		1982		1983	
Date	Boats	Catch	Boats	Catch	Boats	Catch	Boats	Catch	Boats	Catch
May 30										
31							5	151		
June 1							5	97		
2							10	159	1	25
3							1	2		
4										
5										
6									9	297
7							17	793	11	309
8							10	400	12	305
9							8	345	11	255
10							9	296		
11					17	1,513				
12					20	1,597				
13	13	1,078							14	1,164
14	13	668					5	96	14	616
15	15	319			20	788	18	778	11	397
16			19	1,813	12	549	23	965	13	579
17			17	786	19	858	22	776		
18	18	236	18	696	20	1,031	22	904		
19	17	358	16	378	18	765				
20	18	393	13	413					15	672
21	22	344					18	885	15	187
22	23	175			23	584	13	604	17	727
23	22	169	21	282	22	461	22	909	18	911
24	21	179	25	658	20	331	21	575	17	866
25	15	157	23	486	19	241	21	457		
26	22	357	25	439	23	308				
27	17	227	19	225	17	254			24	701
28	18	143	23	353	20	219	21	360	25	833
29	11	50	25	448	9	33	25	427	24	489
30	19	71	25	270	24	309	29	557	22	369
July 1	22	66	27	143	18	162	26	410		
2	15	12	17	85	11	12	25	475		
3	25	24	23	174	24	135				
4	17	13	12	57	20	148			23	227
5	19	65	23	114	20	47	28	253	24	369
6	16	38	23	115	14	89	30	257	23	269
7	19	8	23	120	27	119	26	258	24	191
8	20	95	22	108	26	138	25	100	22	176
9	13	18	24	156	26	86				
10	21	27	6	47	12	23				
11	15	6	8	37	22	58			18	78
12	16	9	9	22	15	36	24	50	21	90
13	17	23	15	129	15	19	26	99	22	53
14	11	19	15	34	18	28	23	60	20	37
15	18	6	13	45	10	5	23	50	17	13
SEASON TOTAL		5,399		8,706		10,981		13,488		12,055

continued

Table 39. (page 2 of 3)

	1984		1985		1986		1987		1988	
Date	Boats	Catch	Boats	Catch	Boats	Catch	Boats	Catch	Boats	Catch
May 30									1	7
31										
June 1							17	136		
2							10	94		
3			6	43	6	20	6	61		
4	8	95	4	29	6	10	4	31		
5	11	68	4	12	18	270		204		
6	3	20	6	88					18	296
7	6	23							14	160
8							1	32	14	70
9					12	158	3	41		
10			17	694	10	137	22	502		
11	15	208	3	52	19	191	19	285		
12	15	223	7	100	18	106				
13	10	82	9	119					5	72
14	18	212							4	80
15							24	1,086	11	280
16					2	78			10	340
17			22	821	22	486	23	363		
18	13	396	19	692	26	279	22	358		
19	15	431	18	447	24	333				
20			20	390	27	334			28	721
21			22	499	24	250			25	595
22			19	427	22	157	24	672	24	455
23			17	461	25	330	22	599	27	654
24			29	520	25	277	21	189		
25	12	44	24	321	25	291	26	249		
26	7	8	21	427	26	144				
27	5	3	19	303					29	856
28			20	317					29	599
29							28	251	22	345
30					25	121	30	239	32	295
July 1			31	905	32	264	27	128	22	193
2	10	149	6	230	31	183	31	138		
3	10	83	28	585	27	130				
4			22	324					33	116
5			16	269					26	102
6			24	276			38	172	27	60
7			20	150	33	123			27	61
8			26	359	30	63				
9	28	1,575	18	58			34	89		
10	25	872	29	182						
11	29	685	25	103			41	261	31	41
12	20	134	26	272					39	20
13	27	585	12	47	31	47	27	22	27	10
14	28	605	27	99			23	18	27	7
15	22	304	28	105			25	15	26	7
SEASON TOTAL		7,801		10,850		4,849		5,823		6,474

continued

Table 39. (page 3 of 3)

	1989		1990		1991		1992		1993	
Date	Boats	Catch	Boats	Catch	Boats	Catch	Boats	Catch	Boats	Catch
May 30										
31										
June 1										
2										
3										
4			18	193						
5	18	204	16	163						
6	15	178	11	104						
7	6	74								
8										
9										
10										
11			17	278						
12	24	416	16	346						
13	24	516	18	165						
14	22	423								
15										
16										
17										
18	21	157	22	378						
19	11	30	23	329						
20	6	6	21	209						
21			20	196						
22										
23										
24										
25			28	254						
26	26	75	27	170						
27	26	120	29	204						
28	27	197	30	169						
29	23	207	20	40						
30	30	287								
July 1										
2			37	47						
3	36	221	37	52						
4	34	81	35	59						
5	27	71	35	44						
6	32	53	34	29						
7	29	60	34	34						
8	31	66	31	26						
9	31	32	34	21						
10	32	26	30	18						
11	28	205	29	13						
12	29	20	33	6						
13	30	21	32	4						
14	30	22	28	4						
15	25	5	25	3						
SEASON TOTAL		3,822		3,573						

Table 40. DAILY PORT HEIDEN SECTION KING SALMON CATCHES 1979-90 (ALL GEAR)

	1979		1980		1981		1982		1983	
Date	Boats	Catch	Boats	Catch	Boats	Catch	Boats	Catch	Boats	Catch
May 25					6	94				
26					11	218				
27					10	93				
28	2	14	4	39	7	85				
29	10	524	5	96						
30	10	288								
31	15	577					5	66	11	369
June 1	13	218			12	514	10	139	14	437
2			4	69	14	344	14	221	17	484
3			3	43	13	289	12	220		
4	19	736	12	270	13	117				
5	19	777	17	370						
6	19	561							21	1,069
7	17	724					20	1,194	21	415
8	19	634			16	902	19	721	13	271
9			13	631	17	639	20	603	19	370
10			22	488	17	411	17	447		
11	18	854	21	458	19	519				
12	6	185	20	662						
13	16	1,070							18	1,740
14	17	653					20	2,013	18	720
15	10	372			18	1,050	20	1,589	9	204
16			15	465	17	478	18	1,035	5	217
17			22	679			19	821		
18	14	515	22	559						
19	15	328	22	248						
20	14	265							12	368
21	13	224					17	1,298		
22	2	43			7	141	12	324		
23			11	75	5	181	4	163	1	113
24			9	66			2	79		
25	1	2	8	21						
26	2	63	9	46						
27	5	41	8	61						
28	6	74								
29					2	1				
30			9	3	4	1				
SEASON TOTAL		9,742		5,349		6,077		10,933		6,777

The driftnet fleet moves to the Bristol Bay area during late June. Remaining effort usually consists of several setnets in front of Meshik village.

continued

Table 40. (page 2 of 3)

	1984		1985		1986		1987		1988	
Date	Boats	Catch	Boats	Catch	Boats	Catch	Boats	Catch	Boats	Catch
May 25										
26										
27										
28										
29										
30										
31										
June 1							7	181	1	42
2							8	124		
3					1	5	13	188		
4	13	250			6	61	5	106		
5	14	459			2	40				
6	19	325							17	496
7	20	366							17	556
8							24	568	14	326
9					19	356	29	643		
10			14	544	16	181	33	325		
11	23	1,390	13	457	8	53	6	61		
12	23	785	14	510	3	18				
13	22	601	14	338					17	1,041
14	20	472							12	582
15							24	605	19	271
16					22	431	20	380		
17			21	1,280	9	216				
18	23	893	9	193	13	201				
19	15	412	11	207	6	76				
20	5	174	1	44					19	733
21	1	53							19	1,035
22									17	516
23					1	47				
24			1	323	1	20				
25	1	85	1	153	1	11				
26	1	63	1	132	1	10				
27	1	65	1	149	1	4			16	78
28	1	65			1	12			7	28
29							10	15		
30					1	4	4	5	2	17
SEASON TOTAL		6,458		4,330		1,821		3,217		5,816

The driftnet fleet moves to the Bristol Bay area during late June. Remaining effort usually consists of several setnets in front of Meshik village.

continued

Table 40. (page 3 of 3)

	1989		1990		1991		1992		1993	
Date	Boats	Catch	Boats	Catch	Boats	Catch	Boats	Catch	Boats	Catch
May 25										
26										
27										
28										
29										
30										
31										
June 1										
2										
3										
4										
5	15	354	4	261						
6	13	238	7	284						
7	4	113								
8										
9										
10										
11			13	1,101						
12	18	660	14	861						
13	16	525	10	385						
14	15	318								
15										
16										
17										
18			15	1,484						
19	11	483	8	158						
20	8	176	5	36						
21	2	41								
22										
23										
24										
25			5	87						
26	1	3	7	30						
27			1	8						
28	1	1	1	1						
29			1	0						
30	1	0	1	0						
SEASON TOTAL		2,927		4,699						

Table 41. 1990 Nelson Lagoon Daily Coho Salmon Catches (Numbers of Fish, All Gear).

Date		Permits	Catch
July	23	24	1
	24	20	1
	25	20	0
	26	19	0
	30	27	16
	31	26	14
Aug.	1	24	8
	2	22	9
	3	23	20
	4	17	22
	5	21	67
	6	24	103
	7	22	116
	8	18	88
	9	14	143
	13	1	275
	14	30	1,733
	15	25	941
	20	30	5,353
	21	25	3,892
	22	29	3,361
Aug.	27	33	8,895
	28	32	6,555
	29	32	6,283
Sept.	3	31	16,470
	4	30	10,373
	5	30	7,075
	10	22	2,980
	11	22	2,380
	12	18	1,605
	13	6	419
	14	2	36
SEASON TOTAL			79,234

Table 42. 1990 Inner Port Heiden daily coho salmon catches (numbers of fish, all gear).

Date		Permits	Catch
August	6	2	108
	7	2	86
	13	15	2,191
	14	17	2,872
	15	16	1,962
	20	16	3,879
	21	16	4,714
	22	10	1,527
	27	19	7,134
	28	17	4,644
	29	17	3,015
	30	16	1,595
September	3	14	2,397
	5	15	1,537
	6	7	1,280
		SEASON TOTAL	38,942

Table 43. Sockeye salmon daily and cumulative escapement counts through the Bear Lake weir, 1990.

	Daily			Cumulative			Daily Percent		Cumulative Percent		
Date	Adults	Jacks	Total	Adults	Jacks	Total	Adults	Jacks	Adults	Jacks	Total
June 6	3	1	4	3	1	4	0.0	0.0	0.0	0.0	0.0
7	36	11	47	39	12	51	0.0	0.0	0.0	0.0	0.0
8	57	16	73	96	28	124	0.0	0.0	0.0	0.0	0.0
9	30	7	37	126	35	161	0.0	0.0	0.0	0.0	0.0
10	8	1	9	134	36	170	0.0	0.0	0.0	0.0	0.0
11	18	9	27	152	45	197	0.0	0.0	0.0	0.0	0.0
12	206	44	250	358	89	447	0.0	0.0	0.1	0.0	0.1
13	28	17	45	386	106	492	0.0	0.0	0.1	0.0	0.1
14	333	64	397	719	170	889	0.1	0.0	0.1	0.0	0.2
15	201	54	255	920	224	1,144	0.0	0.0	0.2	0.0	0.2
16	62	30	92	982	254	1,236	0.0	0.0	0.2	0.0	0.2
17	0	0	0	982	254	1,236	0.0	0.0	0.2	0.0	0.2
18	0	0	0	982	254	1,236	0.0	0.0	0.2	0.0	0.2
19	923	164	1,087	1,905	418	2,323	0.2	0.0	0.3	0.1	0.4
20	507	71	578	2,412	489	2,901	0.1	0.0	0.4	0.1	0.5
21	542	38	580	2,954	527	3,481	0.1	0.0	0.5	0.1	0.6
22	121	54	175	3,075	581	3,656	0.0	0.0	0.6	0.1	0.7
23	132	39	171	3,207	620	3,827	0.0	0.0	0.6	0.1	0.7
24	834	112	946	4,041	732	4,773	0.2	0.0	0.7	0.1	0.9
25	306	45	351	4,347	777	5,124	0.1	0.0	0.8	0.1	0.9
26	3,209	181	3,390	7,556	958	8,514	0.6	0.0	1.4	0.2	1.6
27	2,311	140	2,451	9,867	1,098	10,965	0.4	0.0	1.8	0.2	2.0
28	1,827	188	2,015	11,694	1,286	12,980	0.3	0.0	2.1	0.2	2.4
29	695	42	737	12,389	1,328	13,717	0.1	0.0	2.3	0.2	2.5
30	994	61	1,055	13,383	1,389	14,772	0.2	0.0	2.4	0.3	2.7
July 1	2,521	94	2,615	15,904	1,483	17,387	0.5	0.0	2.9	0.3	3.2
2	4,436	258	4,694	20,340	1,741	22,081	0.8	0.0	3.7	0.3	4.0
3	10,445	503	10,948	30,785	2,244	33,029	1.9	0.1	5.6	0.4	6.0
4	8,050	396	8,446	38,835	2,640	41,475	1.5	0.1	7.1	0.5	7.6
5	3,068	174	3,242	41,903	2,814	44,717	0.6	0.0	7.7	0.5	8.2
6	14,809	717	15,526	56,712	3,531	60,243	2.7	0.1	10.4	0.6	11.0
7	20,499	935	21,434	77,211	4,466	81,677	3.7	0.2	14.1	0.8	14.9
8	18,661	1,225	19,886	95,872	5,691	101,563	3.4	0.2	17.5	1.0	18.6
9	11,188	882	12,070	107,060	6,573	113,633	2.0	0.2	19.6	1.2	20.8
10	14,263	540	14,803	121,323	7,113	128,436	2.6	0.1	22.2	1.3	23.5
11	9,517	339	9,856	130,840	7,452	138,292	1.7	0.1	23.9	1.4	25.3
12	4,930	456	5,386	135,770	7,908	143,678	0.9	0.1	24.8	1.4	26.3
13	1,190	23	1,213	136,960	7,931	144,891	0.2	0.0	25.0	1.5	26.5
14	2,341	101	2,442	139,301	8,032	147,333	0.4	0.0	25.5	1.5	26.9
15	3,940	402	4,342	143,241	8,434	151,675	0.7	0.1	26.2	1.5	27.7
16	7,855	539	8,394	151,096	8,973	160,069	1.4	0.1	27.6	1.6	29.3

-Continued-

Table 43. (page 2 of 3)

Date	Daily			Cumulative			Daily Percent		Cumulative Percent		
	Adults	Jacks	Total	Adults	Jacks	Total	Adults	Jacks	Adults	Jacks	Total
July 17	6,621	498	7,119	157,717	9,471	167,188	1.2	0.1	28.8	1.7	30.6
18	10,745	456	11,201	168,462	9,927	178,389	2.0	0.1	30.8	1.8	32.6
19	6,560	348	6,908	175,022	10,275	185,297	1.2	0.1	32.0	1.9	33.9
20	2,813	144	2,957	177,835	10,419	188,254	0.5	0.0	32.5	1.9	34.4
21	10,130	521	10,651	187,965	10,940	198,905	1.9	0.1	34.4	2.0	36.4
22	2,291	103	2,394	190,256	11,043	201,299	0.4	0.0	34.8	2.0	36.8
23	3,003	132	3,135	193,259	11,175	204,434	0.5	0.0	35.3	2.0	37.4
24	2,238	138	2,376	195,497	11,313	206,810	0.4	0.0	35.8	2.1	37.8
25	7,107	432	7,539	202,604	11,745	214,349	1.3	0.1	37.1	2.1	39.2
26	5,791	555	6,346	208,395	12,300	220,695	1.1	0.1	38.1	2.2	40.4
27	2,012	152	2,164	210,407	12,452	222,859	0.4	0.0	38.5	2.3	40.8
28	24,555	1,235	25,790	234,962	13,687	248,649	4.5	0.2	43.0	2.5	45.5
29	13,433	672	14,105	248,395	14,359	262,754	2.5	0.1	45.4	2.6	48.1
30	9,315	475	9,790	257,710	14,834	272,544	1.7	0.1	47.1	2.7	49.8
31	10,823	487	11,310	268,533	15,321	283,854	2.0	0.1	49.1	2.8	51.9
Aug 1	4,274	163	4,437	272,807	15,484	288,291	0.8	0.0	49.9	2.8	52.7
2	4,598	219	4,817	277,405	15,703	293,108	0.8	0.0	50.7	2.9	53.6
3	11,290	498	11,788	288,695	16,201	304,896	2.1	0.1	52.8	3.0	55.8
4	9,714	276	9,990	298,409	16,477	314,886	1.8	0.1	54.6	3.0	57.6
5	7,433	45	7,478	305,842	16,522	322,364	1.4	0.0	55.9	3.0	59.0
6	9,515	235	9,750	315,357	16,757	332,114	1.7	0.0	57.7	3.1	60.7
7	8,325	228	8,553	323,682	16,985	340,667	1.5	0.0	59.2	3.1	62.3
8	3,327	188	3,515	327,009	17,173	344,182	0.6	0.0	59.8	3.1	62.9
9	9,823	280	10,103	336,832	17,453	354,285	1.8	0.1	61.6	3.2	64.8
10	8,394	337	8,731	345,226	17,790	363,016	1.5	0.1	63.1	3.3	66.4
11	659	42	701	345,885	17,832	363,717	0.1	0.0	63.3	3.3	66.5
12	11,735	980	12,715	357,620	18,812	376,432	2.1	0.2	65.4	3.4	68.8
13	8,558	249	8,807	366,178	19,061	385,239	1.6	0.0	67.0	3.5	70.5
14	7,480	378	7,858	373,658	19,439	393,097	1.4	0.1	68.3	3.6	71.9
15	2,000	100	2,100	375,658	19,539	395,197	0.4	0.0	68.7	3.6	72.3
16	3,540	144	3,684	379,198	19,683	398,881	0.6	0.0	69.3	3.6	72.9
17	3,382	122	3,504	382,580	19,805	402,385	0.6	0.0	70.0	3.6	73.6
18	3,085	23	3,108	385,665	19,828	405,493	0.6	0.0	70.5	3.6	74.2
19	19,759	267	20,026	405,424	20,095	425,519	3.6	0.0	74.1	3.7	77.8
20	11,702	235	11,937	417,126	20,330	437,456	2.1	0.0	76.3	3.7	80.0
21	2,159	58	2,217	419,285	20,388	439,673	0.4	0.0	76.7	3.7	80.4
22	508	4	512	419,793	20,392	440,185	0.1	0.0	76.8	3.7	80.5
23	3,469	17	3,486	423,262	20,409	443,671	0.6	0.0	77.4	3.7	81.1
24	2,933	2	2,935	426,195	20,411	446,606	0.5	0.0	77.9	3.7	81.7
25	4,399	63	4,462	430,594	20,474	451,068	0.8	0.0	78.7	3.7	82.5

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Table 43. (page 3 of 3)

Date	Daily			Cumulative			Daily Percent		Cumulative Percent		
	Adults	Jacks	Total	Adults	Jacks	Total	Adults	Jacks	Adults	Jacks	Total
Aug 26	1,941	43	1,984	432,535	20,517	453,052	0.4	0.0	79.1	3.8	82.9
27	2,639	39	2,678	435,174	20,556	455,730	0.5	0.0	79.6	3.8	83.3
28	12,789	142	12,931	447,963	20,698	468,661	2.3	0.0	81.9	3.8	85.7
29	11,542	617	12,159	459,505	21,315	480,820	2.1	0.1	84.0	3.9	87.9
30	10,995	367	11,362	470,500	21,682	492,182	2.0	0.1	86.0	4.0	90.0
Post August 30	53,269	1,349	54,618	523,769	23,031	546,800	9.7	0.2	95.8	4.2	100.0
Total	523,769	23,031	546,800	523,769	23,031	546,800	95.8	4.2	95.8	4.2	100.0

August 30 escapement reflects only a partial daily count.

Counts after August 29 are estimated from the escapement during years when weir counts continued late into the run.

Table 44. Chinook, pink, and chum salmon daily and cumulative escapement counts through the Bear River weir, 1990.

Date		Daily			Cumulative		
		Chinook	Pink	Chum	Chinook	Pink	Chum
July	1	0	0	0	0	0	0
	2	2	0	0	2	0	0
	3	0	0	0	2	0	0
	4	0	6	0	2	6	0
	5	0	2	0	2	8	0
	6	0	7	0	2	15	0
	7	0	4	0	2	19	0
	8	0	5	0	2	24	0
	9	0	3	0	2	27	0
	10	0	9	0	2	36	0
	11	0	2	0	2	38	0
	12	2	2	0	4	40	0
	13	0	0	0	4	40	0
	14	0	6	0	4	46	0
	15	1	12	0	5	58	0
	16	3	60	0	8	118	0
	17	1	15	0	9	133	0
	18	2	48	0	11	181	0
	19	0	15	0	11	196	0
	20	2	22	0	13	218	0
	21	1	91	0	14	309	0
	22	0	22	0	14	331	0
	23	2	17	0	16	348	0
	24	2	33	1	18	381	1
	25	1	62	1	19	443	2
	26	1	114	0	20	557	2
	27	0	25	0	20	582	2
	28	5	160	1	25	742	3
	29	1	114	0	26	856	3
	30	0	60	0	26	916	3
	31	0	74	0	26	990	3
Aug	1	0	57	0	26	1,047	3
	2	0	55	2	26	1,102	5
	3	0	222	2	26	1,324	7
	4	0	10	0	26	1,334	7
	5	3	16	0	29	1,350	7
	6	1	25	0	30	1,375	7
	7	1	49	1	31	1,424	8
	8	0	4	0	31	1,428	8
	9	0	0	5	31	1,428	13
	10	0	5	4	31	1,433	17
	11	0	0	0	31	1,433	17

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Table 44. (page 2 of 2)

Date		Daily			Cumulative		
		Chinook	Pink	Chum	Chinook	Pink	Chum
Aug	12	0	468	25	31	1,901	42
	13	0	82	3	31	1,983	45
	14	1	104	4	32	2,087	49
	15	0	0	0	32	2,087	49
	16	0	4	2	32	2,091	51
	17	0	25	3	32	2,116	54
	18	0	3	4	32	2,119	58
	19	0	37	11	32	2,156	69
	20	0	12	0	32	2,168	69
	21	0	0	0	32	2,168	69
	22	0	0	0	32	2,168	69
	23	1	0	3	33	2,168	72
	24	0	0	7	33	2,168	79
	25	1	0	3	34	2,168	82
	26	0	3	2	34	2,171	84
	27	0	1	1	34	2,172	85
	28	0	0	1	34	2,172	86
	29	0	7	5	34	2,179	91
	30	1	4	3	35	2,183	94
	31	0	9	3	35	2,192	97
Total		35	2,192	97	35	2,192	97

August 31 escapement reflects only a partial daily count.

Table 45. Sockeye salmon daily and cumulative escapement counts through the Nelson River weir, 1990.

	Daily			Cumulative			Daily Percent		Cumulative Percent		
Date	Adults	Jacks	Total	Adults	Jacks	Total	Adults	Jacks	Adults	Jacks	Total
June 5	2	1	3	2	1	3	0.0	0.0	0.0	0.0	0.0
6	0	0	0	2	1	3	0.0	0.0	0.0	0.0	0.0
7	4	0	4	6	1	7	0.0	0.0	0.0	0.0	0.0
8	4	1	5	10	2	12	0.0	0.0	0.0	0.0	0.0
9	18	2	20	28	4	32	0.0	0.0	0.0	0.0	0.0
10	6	1	7	34	5	39	0.0	0.0	0.0	0.0	0.0
11	2	1	3	36	6	42	0.0	0.0	0.0	0.0	0.0
12	10	0	10	46	6	52	0.0	0.0	0.0	0.0	0.0
13	23	8	31	69	14	83	0.0	0.0	0.0	0.0	0.0
14	28	5	33	97	19	116	0.0	0.0	0.0	0.0	0.0
15	298	32	330	395	51	446	0.1	0.0	0.2	0.0	0.2
16	128	12	140	523	63	586	0.1	0.0	0.2	0.0	0.2
17	53	6	59	576	69	645	0.0	0.0	0.2	0.0	0.3
18	120	11	131	696	80	776	0.0	0.0	0.3	0.0	0.3
19	134	11	145	830	91	921	0.1	0.0	0.3	0.0	0.4
20	142	31	173	972	122	1,094	0.1	0.0	0.4	0.1	0.5
21	619	206	825	1,591	328	1,919	0.3	0.1	0.7	0.1	0.8
22	449	114	563	2,040	442	2,482	0.2	0.0	0.8	0.2	1.0
23	1,522	492	2,014	3,562	934	4,496	0.6	0.2	1.5	0.4	1.9
24	2,234	830	3,064	5,796	1,764	7,560	0.9	0.3	2.4	0.7	3.1
25	5,988	1,055	7,043	11,784	2,819	14,603	2.5	0.4	4.9	1.2	6.1
26	3,970	1,484	5,454	15,754	4,303	20,057	1.6	0.6	6.5	1.8	8.3
27	3,576	324	3,900	19,330	4,627	23,957	1.5	0.1	8.0	1.9	10.0
28	4,702	1,820	6,522	24,032	6,447	30,479	2.0	0.8	10.0	2.7	12.7
29	7,726	1,029	8,755	31,758	7,476	39,234	3.2	0.4	13.2	3.1	16.3
30	8,064	1,275	9,339	39,822	8,751	48,573	3.4	0.5	16.5	3.6	20.2
July 1	15,264	1,324	16,588	55,086	10,075	65,161	6.3	0.6	22.9	4.2	27.1
2	14,963	404	15,367	70,049	10,479	80,528	6.2	0.2	29.1	4.4	33.5
3	10,824	654	11,478	80,873	11,133	92,006	4.5	0.3	33.6	4.6	38.2
4	8,139	279	8,418	89,012	11,412	100,424	3.4	0.1	37.0	4.7	41.7
5	8,072	419	8,491	97,084	11,831	108,915	3.4	0.2	40.3	4.9	45.2
6	5,248	112	5,360	102,332	11,943	114,275	2.2	0.0	42.5	5.0	47.5
7	15,336	617	15,953	117,668	12,560	130,228	6.4	0.3	48.9	5.2	54.1
8	13,570	309	13,879	131,238	12,869	144,107	5.6	0.1	54.5	5.3	59.9
9	8,508	255	8,763	139,746	13,124	152,870	3.5	0.1	58.1	5.5	63.5
10	8,483	276	8,759	148,229	13,400	161,629	3.5	0.1	61.6	5.6	67.1
11	3,858	215	4,073	152,087	13,615	165,702	1.6	0.1	63.2	5.7	68.8
12	6,992	630	7,622	159,079	14,245	173,324	2.9	0.3	66.1	5.9	72.0
13	13,505	1,276	14,781	172,584	15,521	188,105	5.6	0.5	71.7	6.4	78.1
14	7,543	477	8,020	180,127	15,998	196,125	3.1	0.2	74.8	6.6	81.5
15	5,237	290	5,527	185,364	16,288	201,652	2.2	0.1	77.0	6.8	83.8

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Table 45. (page 2 of 2)

	Daily			Cumulative			Daily Percent		Cumulative Percent		
Date	Adults	Jacks	Total	Adults	Jacks	Total	Adults	Jacks	Adults	Jacks	Total
July 16	5,993	166	6,159	191,357	16,454	207,811	2.5	0.1	79.5	6.8	86.3
17	4,532	72	4,604	195,889	16,526	212,415	1.9	0.0	81.4	6.9	88.2
18	4,382	70	4,452	200,271	16,596	216,867	1.8	0.0	83.2	6.9	90.1
19	3,103	52	3,155	203,374	16,648	220,022	1.3	0.0	84.5	6.9	91.4
20	3,617	128	3,745	206,991	16,776	223,767	1.5	0.1	86.0	7.0	93.0
21	4,081	79	4,160	211,072	16,855	227,927	1.7	0.0	87.7	7.0	94.7
22	2,676	69	2,745	213,748	16,924	230,672	1.1	0.0	88.8	7.0	95.8
23	1,607	61	1,668	215,355	16,985	232,340	0.7	0.0	89.5	7.1	96.5
24	1,112	53	1,165	216,467	17,038	233,505	0.5	0.0	89.9	7.1	97.0
25	1,102	40	1,142	217,569	17,078	234,647	0.5	0.0	90.4	7.1	97.5
Post July 25	5,908	145	6,053	223,477	17,223	240,700	2.5	0.1	92.8	7.2	100.0
Total	223,477	17,223	240,700	223,477	17,223	240,700	92.8	7.2	92.8	7.2	100.0

July 25 escapement reflects only a partial daily count.

Counts after July 25 are estimated from the escapement during years when weir counts continued late into the run.

Table 46. Chinook, pink, and chum salmon daily and cumulative escapement counts through the Nelson River weir, 1990.

Date		Daily			Cumulative		
		Chinook	Pink	Chum	Chinook	Pink	Chum
June	14	2	0	0	2	0	0
	15	8	0	0	10	0	0
	16	0	0	0	10	0	0
	17	0	0	0	10	0	0
	18	1	0	0	11	0	0
	19	0	0	0	11	0	0
	20	0	0	0	11	0	0
	21	0	0	0	11	0	0
	22	0	0	0	11	0	0
	23	0	0	0	11	0	0
	24	1	0	0	12	0	0
	25	1	0	0	13	0	0
	26	0	0	0	13	0	0
	27	0	0	0	13	0	0
	28	0	0	0	13	0	0
	29	1	2	0	14	2	0
	30	0	0	0	14	2	0
July	1	2	1	0	16	3	0
	2	0	2	0	16	5	0
	3	1	1	0	17	6	0
	4	0	0	0	17	6	0
	5	5	0	0	22	6	0
	6	2	0	0	24	6	0
	7	1	1	0	25	7	0
	8	3	0	0	28	7	0
	9	1	0	1	29	7	1
	10	69	0	1	98	7	2
	11	5	0	0	103	7	2
	12	9	0	1	112	7	3
	13	25	0	16	137	7	19
	14	1	0	1	138	7	20
	15	0	0	1	138	7	21
	16	1	0	3	139	7	24
	17	1	1	7	140	8	31
	18	9	0	9	149	8	40
	19	2	0	5	151	8	45
	20	5	0	8	156	8	53
	21	50	0	63	206	8	116
	22	4	0	13	210	8	129
	23	0	0	15	210	8	144
	24	5	0	26	215	8	170
	25	0	0	47	215	8	217
Total		215	8	217	215	8	217

Post-25 July escapement listed under aerial survey counts.

Table 47. Sockeye salmon daily and cumulative escapement counts through the Orzenoi Lake weir, 1990.

	Daily			Cumulative			Daily Percent		Cumulative Percent		
Date	Adults	Jacks	Total	Adults	Jacks	Total	Adults	Jacks	Adults	Jacks	Total
June 27	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
28	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
29	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
30	0	1	1	0	1	1	0.0	0.0	0.0	0.0	0.0
July 1	2	1	3	2	2	4	0.0	0.0	0.0	0.0	0.0
2	36	4	40	38	6	44	0.2	0.0	0.3	0.0	0.3
3	0	0	0	38	6	44	0.0	0.0	0.3	0.0	0.3
4	0	0	0	38	6	44	0.0	0.0	0.3	0.0	0.3
5	275	11	286	313	17	330	1.8	0.1	2.1	0.1	2.2
6	233	7	240	546	24	570	1.6	0.0	3.6	0.2	3.8
7	52	7	59	598	31	629	0.3	0.0	4.0	0.2	4.2
8	10	0	10	608	31	639	0.1	0.0	4.1	0.2	4.3
9	0	0	0	608	31	639	0.0	0.0	4.1	0.2	4.3
10	120	3	123	728	34	762	0.8	0.0	4.9	0.2	5.1
11	199	9	208	927	43	970	1.3	0.1	6.2	0.3	6.5
12	787	73	860	1,714	116	1,830	5.2	0.5	11.4	0.8	12.2
13	0	0	0	1,714	116	1,830	0.0	0.0	11.4	0.8	12.2
14	3	0	3	1,717	116	1,833	0.0	0.0	11.4	0.8	12.2
15	29	21	50	1,746	137	1,883	0.2	0.1	11.6	0.9	12.6
16	526	27	553	2,272	164	2,436	3.5	0.2	15.1	1.1	16.2
17	39	103	142	2,311	267	2,578	0.3	0.7	15.4	1.8	17.2
18	4,374	199	4,573	6,685	466	7,151	29.2	1.3	44.6	3.1	47.7
19	63	2	65	6,748	468	7,216	0.4	0.0	45.0	3.1	48.1
20	907	92	999	7,655	560	8,215	6.0	0.6	51.0	3.7	54.8
21	774	114	888	8,429	674	9,103	5.2	0.8	56.2	4.5	60.7
22	195	33	228	8,624	707	9,331	1.3	0.2	57.5	4.7	62.2
23	260	22	282	8,884	729	9,613	1.7	0.1	59.2	4.9	64.1
24	666	83	749	9,550	812	10,362	4.4	0.6	63.7	5.4	69.1
25	38	20	58	9,588	832	10,420	0.3	0.1	63.9	5.5	69.5
26	25	4	29	9,613	836	10,449	0.2	0.0	64.1	5.6	69.7
27	8	0	8	9,621	836	10,457	0.1	0.0	64.1	5.6	69.7
28	113	37	150	9,734	873	10,607	0.8	0.2	64.9	5.8	70.7
29	331	68	399	10,065	941	11,006	2.2	0.5	67.1	6.3	73.4
30	385	101	486	10,450	1,042	11,492	2.6	0.7	69.7	6.9	76.6
31	577	92	669	11,027	1,134	12,161	3.8	0.6	73.5	7.6	81.1
Aug 1	0	0	0	11,027	1,134	12,161	0.0	0.0	73.5	7.6	81.1
2	41	6	47	11,068	1,140	12,208	0.3	0.0	73.8	7.6	81.4

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Table 47. (page 2 of 2)

Date	Daily			Cumulative			Daily Percent		Cumulative Percent		
	Adults	Jacks	Total	Adults	Jacks	Total	Adults	Jacks	Adults	Jacks	Total
Aug 3	264	70	334	11,332	1,210	12,542	1.8	0.5	75.5	8.1	83.6
4	142	88	230	11,474	1,298	12,772	0.9	0.6	76.5	8.7	85.1
5	376	150	526	11,850	1,448	13,298	2.5	1.0	79.0	9.7	88.7
6	163	6	169	12,013	1,454	13,467	1.1	0.0	80.1	9.7	89.8
Post Aug 6	1,150	383	1,533	13,163	1,837	15,000	7.7	2.6	87.8	12.2	100.0
Total	13,163	1,837	15,000	13,163	1,837	15,000	87.8	12.2	87.8	12.2	100.0

August 6 escapement reflects only a partial daily count (through noon).

Counts after August 6 are estimated from aerial surveys.

Table 48. Pink and chum salmon daily and cumulative escapement counts through the Orzenoi Lake weir, 1990.

Date		Daily		Cumulative	
		Pink	Chum	Pink	Chum
July	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0
	5	0	0	0	0
	6	0	0	0	0
	7	0	0	0	0
	8	0	0	0	0
	9	0	0	0	0
	10	0	0	0	0
	11	0	0	0	0
	12	0	0	0	0
	13	0	0	0	0
	14	0	0	0	0
	15	0	0	0	0
	16	0	0	0	0
	17	0	0	0	0
	18	0	0	0	0
	19	0	0	0	0
	20	3	0	3	0
	21	21	0	24	0
	22	5	0	29	0
	23	0	0	29	0
	24	13	2	42	2
	25	2	0	44	2
	26	1	0	45	2
	27	0	0	45	2
	28	1	0	46	2
	29	22	0	68	2
	30	1	0	69	2
	31	21	3	90	5
Aug	1	0	0	90	5
	2	3	1	93	6
	3	21	2	114	8
	4	111	5	225	13
	5	245	6	470	19
	6	146	3	616	22
Total		616	22	616	22

August 6 escapement reflects only a partial daily count (through (noon), see aerial surveys for complete counts.

Table 49. Salmon escapement survey counts in the South Peninsula, 1990.

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Species: Sockeye	Coho	Pink	Chum	Observer	Remarks
SOUTHEASTERN DISTRICT										
281-35.07	Bluff Point	Not Surveyed								
281-35.06	Boulder Bay	04-Aug	216	Good	0	0	0	0	McCullough	300 pinks at mouth
		29-Aug	241	Good	0	0	0	800	McCullough	2,500 pinks at mouth, 2,250 pinks in lagoon, few carcasses
		01-Oct	274	Good		1,500			Shaul	500 cohos in stream balance in lagoon, thousands of carcasses, Cherokee survey
281-35.05	Fox Bay	05-Aug	217	Good	0	0	0	0	McCullough	
		29-Aug	241	Good	0	0	1,500	0	McCullough	200 pinks at mouth, 5,000 pinks in lagoon
		01-Oct	274	Good		0			Shaul	Cherokee survey
281-35.04	Fox Bay	04-Aug	216	Good	0	0	50	0	McCullough	100 pinks at mouth
		29-Aug	241	Good	0	0	600	0	McCullough	3,000 pinks at mouth, 2,500 pinks in lagoon
		01-Oct	274	Good		500			Shaul	All cohos in stream; none in lagoon, Cherokee survey
281-35.02	Fox Bay	04-Aug	216	Good	0	0	50	0	McCullough	300 pinks at mouth
		17-Aug	229	Good	0	0	1,400	0	Shaul	Mouth and beach too choppy to survey
		29-Aug	241	Good	0	0	1,600	0	McCullough	5,000 pinks at mouth, few carcasses
		01-Oct	274	Good		200			Shaul	Cherokee survey
281-34.08	Island Bay	04-Aug	216	Good	0	0	0	0	McCullough	
		29-Aug	241	Good	0	0	500	0	McCullough	2,000 pinks at mouth
281-34.07	Island Bay	04-Aug	216	Good	0	0	0	0	McCullough	50 pinks at mouth
		29-Aug	241	Good	0	0	25	0	McCullough	250 pinks at mouth
281-34.06	Island Bay	04-Aug	216	Good	0	0	100	0	McCullough	75 pinks at mouth
		17-Aug	229	Good	0	0	1,300	0	Shaul	1,000 pinks in .05, 300 in .06, beach choppy
		29-Aug	241	Good	0	0	3,500	0	McCullough	5,500 pinks at mouth
		01-Oct	274	Good		150			Shaul	Coho in lower portion of lagoon, Cherokee survey
281-34.05	Island Bay	04-Aug	216	Good	0	0	0	0	McCullough	50 pinks at mouth, 3,000 fish in bay
		17-Aug	229	Good					Shaul	See 17-Aug. survey 34.06
		29-Aug	241	Good	0	0	1750	0	McCullough	5,500 pinks at mouth
		01-Oct	274	Good		150			Shaul	See 01-Oct. survey 34.06

-Continued-

Table 49. (page 2 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Species: Sockeye	Coho	Pink	Chum	Observer	Remarks
281-34.04	Unnamed	04-Aug	216	Good	0	0	0	0	McCullough	
		29-Aug	241	Good	0	0	250	0	McCullough	300 pinks at mouth
281-34.03	Stonehouse	04-Aug	216	Good	0	0	450	0	McCullough	1,500 pinks at mouth
		17-Aug	229	Good	0	0	3,000	0	Shaul	4,500 pinks at mouth, cove choppy
		29-Aug	241	Good	0	0	4,800	0	McCullough	15,000 pinks at mouth, few carcasses, salmon
		01-Oct	274	Good		0			Shaul	Cherokee survey
281-34.02	Osterback	04-Aug	216	Good	0	0	0	0	McCullough	400 pinks at mouth
		17-Aug	229	Good	0	0	5,500	0	Shaul	Mouth and beach too choppy to survey
		29-Aug	241	Good	0	0	3,600	0	McCullough	400 pinks at mouth, no fish past 3 foot falls
		01-Oct	274	Good		20			Shaul	Cherokee survey
281-34.01	Granville-Portage Inlet	04-Aug	216	Good	0	0	0	0	McCullough	
		17-Aug	229	Good	0	0	0	300	Shaul	Jumpers in deep water
		29-Aug	241	Good	0	0	1,200	0	McCullough	200 pinks in lagoon
		10-Sep	253	Good	0	0	430	0	McCullough	450 pink carcasses, good escapement
		21-Sep	264	Good	0	700	0	2,500	Shaul	Coho schooled, chums spawning, Cherokee survey
281-33.05	Stepovak River	04-Aug	216	Good	0	0	0	25	McCullough	Many chums jumping at mouth
		29-Aug	241	Good	0	0	1,500	15,300	McCullough	Some chum carcasses, good escapement but could hold more
		10-Sep	253	Good	0	0	0	9,680	McCullough	Mainstream mouth muddy, clear tributaries on west side of mainstream had better escapement than eastside tributaries
281-33.06	Stepovak Flats	04-Aug	216	Good	0	0	0	0	McCullough	
		29-Aug	241	Good	0	0	0	300	McCullough	
		10-Sep	253	Good	0	250	0	650	McCullough	Stream could hold more fish, especially chums
281-33.04	Big River	04-Aug	216	Good	0	0	0	0	McCullough	No jumpers at mouth
		29-Aug	241	Good	0	0	1,600	900	McCullough	Could hold more fish for escapement
		10-Sep	253	Good	0	0	0	10	McCullough	Mainstream muddy, very poor escapement in clear water tributaries, no chum spawners
		21-Sep	264	Good	0	0	0	0	Shaul	Partial survey - lower 1/2 mile of river, Cherokee survey
281-33.03	Louie's Corner	04-Aug	216	Good	0	0	0	0	McCullough	
		10-Aug	222	Good	0	0	0	200	Owen	500 pinks in bay
		29-Aug	241	Good	0	0	0	4,400	McCullough	3,400 chums at mouth, could hold a few more, good escapement
		10-Sep	253	Good	0	0	0	2,240	McCullough	150 chums at mouth, 550 chum carcasses, system could hold more fish, especially chums
		01-Oct	274	Good		600			Shaul	Cherokee survey

-Continued-

Table 49. (page 3 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
281-33.02	Ramsey Bay	04-Aug	216	Good	0	0	0	0	McCullough	
		29-Aug	241	Good	0	0	0	900	McCullough	30,000 chum between streams 33.02 and 33.01, these were later stolen
		10-Sep	253	Good	0	0	0	880	McCullough	Very poor escapement
		01-Oct	274	Good		300			Shaul	Cherokee survey
281-33.01	Ramsey Bay	04-Aug	216	Good	0	0	0	0	McCullough	
		29-Aug	241	Good	0	0	0	0	McCullough	30,000 chum between streams 33.02 and 33.01, these were later stolen
		10-Sep	253	Good	0	0	0	220	McCullough	Very poor escapement
281-32.07	Grub Gulch	04-Aug	216	Good	0	0	400	0	McCullough	500 pinks at mouth, 5,000 pinks in bay
		10-Aug	222	Good	0	0	2,000	0	Owen	8,000 chums in bay
		29-Aug	241	Good	0	0	25,800	600	McCullough	1,500 pinks at mouth
		10-Sep	253	Good	0	0	4,225	1,050	McCullough	100 cohos at mouth
		21-Sep	264	Good	0	1,100	0	0	Shaul	Cherokee survey
281-32.05	Clark Bay	04-Aug	216	Good	0	0	0	0	McCullough	75 pinks at mouth
		10-Aug	222	Good	0	0	1,500	0	Owen	2,000 pinks at mouth
		17-Aug	229	Good	0	0	1,400	500	Shaul	Bay and mouth choppy
		29-Aug	241	Good	0	0	6,400	0	McCullough	6,000 pinks at mouth
		10-Sep	253	Good	0	0	1,250	900	McCullough	50 cohos at mouth
		21-Sep	264	Good	0	0	0	1,000	Shaul	Cherokee survey
281-32.04	Little Norway	04-Aug	216	Good	0	0	125	0	McCullough	950 pinks at mouth
		10-Aug	222	Good	0	0	700	0	Owen	1,200 pinks at mouth
		17-Aug	229	Good	0	0	2,100	100	Shaul	2,000 pinks and 2,000 chums at mouth
		29-Aug	241	Good	0	0	4,500	1,800	McCullough	1,500 pinks at mouth
		10-Sep	253	Good	0	0	0	10,000	McCullough	1,000 cohos at mouth, very good escapement
		21-Sep	264	Good		400		1,000	Shaul	Cherokee survey
281-31.03	Orzinski (Orzenoi)	28-Jul	209	Good	0	0	0	0	McCullough	Partial survey - lake outlet and stream, 50 salmon at mouth, 100 in stream
	Lake 1	04-Aug	216	Good	300	0	1,100	0	McCullough	4,000 pinks at mouth, sockeye in 2 schools on west side of lake, a few colored along north shore
		10-Aug	222	Good	750	0	0	0	Owen	
		17-Aug	229	Good	0	0	10,000	0	Shaul	
		29-Aug	241	Fair	250	0	14,000	0	McCullough	3,000 pinks at mouth, 3,100 sockeye in lake total Orzenoi escapement about 15,000
		10-Sep	253	Good	0	0	2,000	200	McCullough	6,000 pink carcasses, 15,000 sockeye spawners in lake
		01-Oct	274	Good	1,500	1,200	0	0	Shaul	Sockeye spawning, 1,000 cohos schooled above outlet with 200 in stream, Cherokee survey

-Continued-

Table 49. (page 4 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
281-20.04	Windbound Bay	28-Jul	209	Good	0	0	0	0	McCullough	100 pinks at mouth
		29-Aug	241	Good	0	0	600	0	McCullough	1,200 pinks at mouth
281-20.03	Chichagof Stream	11-Aug	223	Good	0	0	1,500	0	Owen	1,000 chum at mouth, 1,000 chum in bay
		29-Aug	241	Good	0	0	20	0	McCullough	
281-20.02	Chichagof	28-Jul	209	Good	0	0	25	0	McCullough	50 pinks at mouth, 50 pinks in lagoon
		10-Aug	222	Good	0	0	3,300	0	Owen	
		29-Aug	241	Good	0	0	0	3,200	McCullough	25 chums in lagoon
		21-Sep	264	Good	0	300	0	0	Shaul	Coho in lagoon, Cherokee survey
281-20.01	Chichagof Bay	28-Jul	209	Good	0	0	0	0	McCullough	
		10-Aug	222	Good	0	0	1,000	0	Owen	
		29-Aug	241	Good	0	0	4,300	0	McCullough	1,800 pinks at mouth
281-10.04	West Cove	29-Aug	241	Good	0	0	425	0	McCullough	550 pinks at mouth
		06-Sep	249	Good	0	0	1,700	0	Shaul	
281-10.03	Suzy Creek	28-Jul	209	Good	0	0	5,000	0	McCullough	750 pinks at mouth
		08-Aug	220	Good	0	0	13,300	0	Shaul	Most pinks spawning
		10-Aug	222	Good	0	0	21,000	0	Owen	2,000 pinks at mouth
		17-Aug	229	Good	0	0	20,500	0	Shaul	Additional number of carcasses
		29-Aug	241	Good	0	0	21,000	0	McCullough	1,500 pinks at mouth, upper 2/3 of Suzy Creek more carcasses than live fish
		06-Sep	249	Good	0	0	4,300	0	Shaul	
281-10.02	Dorenoi Minor	10-Aug	222	Good	0	0	0	0	Owen	3,000 chums at mouth
		29-Aug	241	Good	0	0	3,600	0	McCullough	1,250 pinks at mouth
		06-Sep	249	Good	0	0	1,700	600	Shaul	
281-10.01	Dorenoi Major	28-Jul	209	Good	0	0	0	0	McCullough	Partial survey, 100 pinks at mouth
		10-Aug	222	Good	0	0	0	0	Owen	1,000 chums at mouth
		29-Aug	241	Good	0	0	6,700	0	McCullough	700 pinks at mouth
		06-Sep	249	Good	0	0	3,300	2,100	Shaul	
		01-Oct	274	Good		700			Shaul	Cherokee survey
283-90.04	San Diego Bay	28-Jul	209	Good	0	0	0	0	McCullough	
		10-Aug	222	Good	0	0	0	500	Owen	100 chums in bay
		29-Aug	241	Good	0	0	0	1,400	McCullough	
283-90.03	San Diego	29-Jul	210	Good	0	0	0	0	McCullough	
		10-Aug	222	Good	0	0	0	50	Owen	6,200 chums in bay

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Table 49. (page 5 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
283-90.04	San Diego Lagoon	28-Jul	209	Good	0	0	0	0	McCullough	
		29-Aug	241	Good	0	0	0	20	McCullough	
283-90.02	Rough Beach	17-Aug	229	Good	0	0	15,000	0	Shaul	
		29-Aug	241	Good	0	0	28,000	0	McCullough	200 pinks at mouth, good escapement
		06-Sep	249	Good	0	2,000	11,700	0	Shaul	1,700 pinks in lower river
283-90.01	Swedania Point	04-Aug	216	Good	0	0	3,000	0	McCullough	2,000 pinks at mouth
		29-Aug	241	Good	0	0	8,500	0	McCullough	100 pinks at mouth
		06-Sep	249	Good	0	500	5,200	0	Shaul	
282-13.01	Unga Spit	Not Surveyed								
282-13.02	Dry Lagoon	28-Jul	209	Good	0	0	0	4,250	McCullough	
		10-Aug	191	Good	0	0	20,000	0	Owen	
		29-Aug	210	Good	0	0	950	0	McCullough	Of 950 pinks: 450 were in A branch and 500 in B branch
		21-Sep	264	Good		2,300			Shaul	Cherokee survey
282-13.03	Bay Point	28-Jul	209	Good	0	0	0	750	McCullough	1,500 chums in lagoon
		29-Aug	241	Good	0	0	10,400	0	McCullough	200 pinks in lagoon, most schooled but some throughout stream
		21-Sep	264	Good		300			Shaul	Cherokee survey
282-13.04	Pinnacle Point	10-Aug	222	Good	0	0	15,000	0	Owen	
		17-Aug	229	Good	0	0	27,000	0	Shaul	
		29-Aug	241	Good	0	0	6,350	0	McCullough	200 pinks at mouth
282-13.05	Unnamed	Not Surveyed								
282-10.02	Apollo Minor	28-Jul	209	Good	0	0	0	0	McCullough	
		29-Aug	241	Good	0	0	1,250	0	McCullough	
282-10.03	Apollo Creek	28-Jul	209	Good	0	0	0	0	McCullough	
		10-Aug	222	Good	0	0	0	100	Owen	
		17-Aug	229	Poor	0	0	1,300	0	Shaul	
		29-Aug	241	Good	0	0	1,300	0	McCullough	200 pinks at mouth
		21-Sep	264	Good		0			Shaul	Cherokee survey

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Table 49. (page 6 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
282-10.04	Acheredin Lake	28-Jul	209	Good	900	0	0	0	McCullough	75 sockeye at mouth, many small schools, some beginning to color
		10-Aug	222	Good	5,500	0	0	0	Owen	
		29-Aug	241	Fair	4,750	0	0	0	McCullough	25 cohos at mouth, water choppy, probably missed some sockeye
		21-Sep	264	Poor		0			Shaul	Poor conditions due to low light angle, Cherokee survey
282-10.10	Unnamed	Not Surveyed								
282-10.11	Apollo Gold Mine	28-Jul	209	Good	0	0	50	0	McCullough	75 pinks at mouth
		10-Aug	222	Good	0	0	0	0	Owen	1,000 chums at mouth
		17-Aug	229	Poor	0	0	2,000	0	Shaul	200 chums at mouth, poor light conditions
		29-Aug	272	Good	0	0	3,500	0	McCullough	150 pinks at mouth
		06-Sep	279	Good	0	0	5,800	0	Shaul	100 chums at mouth
282-10.12	Unga Cape	28-Jul	209	Good	0	0	0	0	McCullough	
282-10.13	Baralof Bay	17-Aug	229	Good	40	0	0	0	Shaul	All spawning along lake shore
		29-Aug	241	Good	10	0	0	50	McCullough	Stream open
		06-Sep	249	Good	0	0	400	0	Shaul	
		21-Sep	264	Good		400			Shaul	Cherokee survey
282-10.14	Squaw Harbor Minor	28-Jul	209	Good	0	0	0	0	McCullough	
		10-Aug	222	Good	0	0	0	0	Owen	
		17-Aug	229	Good	0	0	500	0	Shaul	1,000 pinks at mouth
		29-Aug	241	Good	0	0	1,400	0	McCullough	350 pinks at mouth
		06-Sep	249	Good	0	0	2,000	0	Shaul	
282-10.15	Squaw Harbor Major	28-Jul	209	Good	0	0	0	0	McCullough	
		08-Aug	220	Good	0	0	2,000	0	Shaul	
		10-Aug	222	Good	0	0	300	0	Owen	7,000 pinks in bay
		17-Aug	229	Good	0	0	9,800	0	Shaul	300 pinks at mouth
		29-Aug	241	Good	0	0	21,000	0	McCullough	250 pinks at mouth, good escapement
		06-Sep	249	Good	0	800	16,600	0	Shaul	
		21-Sep	264	Good	0	2,000	3,000	0	Shaul	Cherokee survey

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Table 49. (page 7 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
282-10.16	Ben Green Bight	28-Jul	209	Good	0	0	800	0	McCullough	500 pinks at mouth
		08-Aug	220	Good	0	0	900	0	Shaul	500 pinks along beach
		17-Aug	229	Good	0	0	5,200	0	Shaul	1,000 pinks at mouth
		29-Aug	241	Good	0	0	3,900	0	McCullough	4,000 pinks at mouth
		06-Sep	249	Good	0	0	5,500	0	Shaul	
		21-Sep	264	Good		100			Shaul	Cherokee survey
282-12.10	No Name	28-Jul	209	Good	0	0	0	0	McCullough	5 chums at mouth
		29-Aug	241	Good	0	0	0	0	McCullough	500 carcasses
282-12.09	South Quartz Point	28-Jul	209	Good	0	0	0	0	McCullough	2 chums at mouth
		29-Aug	241	Good	0	0	400	0	McCullough	200 pinks at mouth
282-12.08	South Quartz Point	28-Jul	209	Good	0	0	0	0	McCullough	
		29-Aug	241	Good	0	0	275	0	McCullough	75 pinks at mouth
282-12.07	Zachary Bay	28-Jul	209	Good	0	0	0	0	McCullough	
		29-Aug	241	Good	0	0	125	0	McCullough	50 pinks at mouth
282-12.06	Zachary Bay	28-Jul	209	Good	0	0	0	50	McCullough	
		29-Aug	241	Good	0	0	300	0	McCullough	250 pinks at mouth
282-12.05	Zachary Bay	28-Jul	209	Good	0	0	0	50	McCullough	500 chums at mouth
		29-Aug	241	Good	0	0	2,100	0	McCullough	250 pinks at mouth
282-12.04	Zachary Bay	28-Jul	209	Good	0	0	0	0	McCullough	500 chums at mouth, 50 eagles at mouth of streams .04 and .05
		29-Aug	241	Good	0	0	750	0	McCullough	3,000 pinks at mouth
282-12.03	Zachary Bay	28-Jul	209	Good	0	0	0	0	McCullough	
		29-Aug	241	Good	0	0	200	0	McCullough	150 pinks at mouth, 400 carcasses
282-12.02	Zachary Bay	28-Jul	209	Good	0	0	0	0	McCullough	
		29-Aug	241	Good	0	0	2,500	0	McCullough	50 pinks at mouth
282-12.01	Coal Harbor	28-Jul	209	Good	0	0	0	0	McCullough	
		29-Aug	241	Good	0	0	125	0	McCullough	

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Table 49. (page 8 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
282-10.18	Humbolt Creek	Not Surveyed								
282-11.01	Salmon Ranch	29-Aug	241	Good	0	0	300	0	McCullough	500 pinks at mouth
		06-Sep	249	Good	0	0	2,800	0	Shaul	300 pinks at mouth
282-11.03	Fox Hole	29-Aug	241	Good	0	0	1,650	0	McCullough	250 pinks of the total count were in lagoon
		06-Sep	249	Good	0	0	3,800	0	Shaul	300 pinks at mouth, as many additional carcasses as live pinks
282-11.06	Korovin Island	Not Surveyed								
282-20.00	Sanborn Harbor	Not Surveyed								
282-20.03	Sanborn Harbor	Not Surveyed								
282-20.04	Sanborn Harbor	Not Surveyed								
282-20.05	Falmouth Harbor	Not Surveyed								
283-80.16	Ballast	06-Sep	249	Good	0	0	0	0	Shaul	
283-80.15	Coleman	29-Jul	210	Fair	0	0	0	0	Probasco	
		10-Aug	222	Good	0	0	0	400	Owen	2,000 chums at mouth
		29-Aug	241	Good	0	0	1,800	0	McCullough	2,000 pinks at mouth
		06-Sep	249	Good	0	0	2,300	1,400	Shaul	3,000 chums at mouth
		21-Sep	264	Good		500			Shaul	100 cohos at mouth, Cherokee survey
283-80.14	Johnson	29-Jul	210	Good	0	0	10	0	Probasco	Fair to poor conditions in bay
		10-Aug	222	Good	0	0	0	600	Owen	
		29-Aug	241	Good	0	0	1,800	0	McCullough	2,000 pinks at mouth
		06-Sep	249	Good	0	0	7,000	700	Shaul	2,000 chums at mouth
283-80.12	Foster's Camp	06-Sep	249	Good	0	0	500	0	Shaul	

-Continued-

Table 49. (page 9 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
283-80.11	Monolith Point	10-Aug	222	Good	0	0	0	0	Owen	500 pinks at mouth
		06-Sep	249	Good	0	0	2,000	0	Shaul	
283-80.09	Foster's Creek	10-Aug	222	Good	0	0	7,000	0	Owen	4,000 chums at mouth, 4,500 pinks in bay
		17-Aug	229	Good	0	0	14,000	1,200	Shaul	4,000 pinks at mouth
		29-Aug	241	Good	0	0	13,100	0	McCullough	
		06-Sep	249	Good	0	0	4,100	3,600	Shaul	
		21-Sep	264	Good	0	200	0	0	Shaul	Cherokee survey
283-80.08	Lefthand Bay	10-Aug	222	Good	0	0	8,000	1,200	Owen	4,500 chums and 1,500 pinks at mouth
		17-Aug	229	Good	0	0	5,000	4,000	Shaul	1,000 pinks at mouth
		29-Aug	241	Good	0	250	6,900	0	McCullough	250 cohos at mouth
		06-Sep	249	Good	0	1,900	9,000	1,300	Shaul	
		19-Sep	262	Good		600			Shaul	Cherokee survey
283-80.06	Cape Aliaksin East	17-Aug	229	Good	0	0	7,000	0	Shaul	1,000 pinks at mouth
		29-Aug	241	Good	0	0	11,500	0	McCullough	
283-80.05	Cape Aliaksin Center	17-Aug	229	Good	0	0	800	200	Shaul	100 chums at mouth
		29-Aug	241	Good	0	0	2,400	0	McCullough	
283-80.04	Cape Aliaksin West	17-Aug	229	Good	0	0	9,000	0	Shaul	2,000 pinks at mouth
		29-Aug	241	Good	0	0	5,300	0	McCullough	2,000 pinks at mouth
SOUTH CENTRAL DISTRICT										
283-70.06	Kagayan Flats	19-Aug	231	Good	0	0	0	0	Shaul	Cherokee survey
283-70.05	Beaver River	04-Aug	216	Good	0	0	200	5,300	Shaul	Good conditions
		29-Aug	241	Good	0	0	0	3,600	McCullough	450 chum carcasses, upper reaches could use more fish
		06-Sep	249	Good	0	2,200	6,200	300	Shaul	
		19-Sep	262	Good in tribs., poor in main stem		800			Shaul	400 in pond at first bend, 300 in clear tributary, mainstream muddy
283-70.04	Smiley's	04-Aug	216	Good	0	0	0	0	Shaul	500 pinks at mouth
		29-Aug	241	Good	0	0	800	0	McCullough	

-Continued-

Table 49. (page 10 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
283-70.03	McGinty Point	04-Aug	216	Good	0	0	200	100	Shaul	300 pinks at mouth
		29-Aug	241	Good	0	0	5,600	0	McCullough	
		31-Aug	243	Good	0	0	8,000	0	Berceli	
283-70.02	East of Mino	04-Aug	216	Good	0	0	4,000	0	Shaul	
		31-Aug	243	Good	0	0	7,800	0	Berceli	
283-70.01	Mino Creek	11-Jul	192	Good	0	0	700	380	Berceli	Most fish in lower section, chums schooled near mouth
		27-Jul	208	Good	0	0	15,000	0	Shaul	Grumman Goose survey
		29-Jul	210	Good	0	0	13,400	0	Probasco	All fish in lower creek
		04-Aug	216	Good	0	0	26,900	0	Shaul	25,000 fish were below forks
		08-Aug	220	Good	0	0	73,100	0	Shaul	Many pinks beginning to spawn in lower end, only 7,000 pinks above forks
		31-Aug	243	Good	950	0	59,100	0	Berceli	Partial survey, did not fly upper valleys, fresh fish in lower section, sockeye in C and F lakes
		06-Sep	249	Good	0	200	35,800	0	Shaul	
		01-Oct	274	Good	200	1,900	0	0	Shaul	200 sockeye and 500 coho in F lake, balance of cohos scattered throughout stream
283-62.05	Coal Bay Major	27-Jul	208	Good	0	0	1,500	0	Shaul	1,000 pinks at mouth
		29-Jul	210	Good	0	0	100	0	Probasco	200 pinks at mouth
		04-Aug	216	Good	0	0	8,500	0	Shaul	5,000 pinks at mouth, several thousand fish along beach
		08-Aug	220	Good	0	0	26,000	0	Shaul	Good escapement in lower end, poor in canyon
		31-Aug	243	Good	0	0	15,500	0	Berceli	5,000 carcasses
		06-Sep	249	Good	0	0	16,000	0	Shaul	
		01-Oct	274	Good	0	200	0	0	Shaul	
283-62.04	Coal Bay Minor	29-Jul	210	Good	0	0	0	0	Probasco	
		04-Aug	216	Good	0	0	1,000	0	Shaul	1,000 pinks at mouth
		31-Aug	243	Good	0	0	8,100	0	Berceli	1,500 carcasses
		06-Sep	249	Good	0	0	13,600	0	Shaul	
		01-Oct	274	Good	0	100	0	0	Shaul	
283-62.03	Coal Bay Middle	06-Sep	249	Good	0	0	2,000	0	Shaul	
283-62.02	Coal Bay	06-Sep	249	Good	0	0	4,000	0	Shaul	

-Continued-

Table 49. (page 11 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
283-62.01	Cape Tolstoi	06-Sep	249	Good	0	0	2,800	0	Shaul	2,800 additional carcasses
283-63.16	Settlement Point	11-Jul	192	Good	0	0	140	0	Berceli	
		26-Jul	207	Good	0	0	15,000	0	Shaul	Partial survey - to forks
		29-Jul	210	Good	0	0	34,000	0	Probasco	10,000 pinks at mouth
		04-Aug	216	Good	0	0	56,000	0	Shaul	4,000 pinks at mouth, 31,000 below forks, 5,000 in right fork
		07-Aug	219	Good	0	0	151,000	0	Shaul	11,000 above rapids, 16,000 in fork
		31-Aug	243	Good	0	0	34,350	0	Berceli	About 50,000 carcasses
		06-Sep	249	Good	0	0	53,000	2,000	Shaul	7,000 in fork, very few above white water
		01-Oct	274	Good	0	1,600	0	0	Shaul	In small schools all the way up
283-63.15	Middle Creek	11-Jul	192	Good	0	0	50	0	Berceli	
		26-Jul	207	Good	0	0	5,300	0	Shaul	
		29-Jul	210	Good	0	0	8,000	0	Shaul	200 pinks at mouth
		04-Aug	216	Good	0	0	22,600	0	Shaul	2,600 in fork
		07-Aug	219	Good	0	0	36,000	0	Shaul	8,000 in fork
		31-Aug	243	Good	0	0	10,300	0	Berceli	7,500 additional carcasses
		05-Sep	248	Good	0	0	20,000	0	Shaul	Only 2,000 above forks, engine trouble
283-64.10	Ness Creek	14-Aug	226	Good	0	0	400	0	Shaul	
		31-Aug	243	Good	0	0	2,000	0	Berceli	100 pinks at mouth
		05-Sep	248	Good	0	0	2,600	0	Shaul	300 pinks at mouth, good escapement
283-64.09	Inner Canoe Bay	31-Aug	243	Good	0	0	0	1,600	Berceli	1,600 carcasses
283-64.08	Entrance Creek	04-Aug	216	Good	0	0	1,500	0	Shaul	
		14-Aug	226	Good	0	0	3,500	200	Shaul	5,000 chums at mouth
		31-Aug	243	Good	0	0	3,100	500	Berceli	
		05-Sep	248	Good	0	0	3,900	300	Shaul	400 chums at mouth
283-64.	Wolverine Gulch	31-Aug	243	Good	0	0	1,600	0	Berceli	400 additional carcasses

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Table 49. (page 12 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
283-64.06	Canoe Bay River	11-Jul	192	Good	0	0	0	1,300	Bercelí	1,170 in inner bay along edge of flats, jumpers
		13-Jul	194	Good	200	0	0	2,800	Shaul	1,300 chums at mouth, additional 7,000 chums in inner bay
		26-Jul	207	Good	0	0	0	19,000	Shaul	Inner bay too choppy, poor light
		29-Jul	210	Good	0	0	0	38,000	Probasco	2,000 chums off Entrance creek, 3,500 in Inner Bay
		04-Aug	216	Good	600	0	2,000	43,200	Shaul	4,000 chums at mouth, 200 chums were in Four Bear, additional 14,000 chums in Inner Bay, of which 8,000 were off Blunt Pt. Creek
		31-Aug	243	Good	0	0	2,500	15,200	Bercelí	4,500 chums, 500 pinks, and 3,000 carcasses in Four Bear
		19-Sep	262	Good	0	1,200	0	0	Shaul	
283-64.05	Bluff Point	04-Aug	216	Good	0	0	4,100	1,100	Shaul	8,000 chums at mouth
		14-Aug	226	Good	0	0	10,500	500	Shaul	
		31-Aug	243	Good	0	0	6,000	600	Bercelí	
		05-Sep	248	Good	0	0	12,000	1,000	Shaul	Plus as many carcasses
		19-Sep	262	Good	0	0	0	0	Shaul	
283-63.14	Dry Lagoon	Not Surveyed								
283-63.13	Ruby's Lagoon	29-Aug	241	Good	0	0	600	5,500	Shaul	4,300 chums were in lagoon
		21-Sep	264	Good	0	600	0	0	Shaul	All in lower part of creek
283-63.11	Chinaman Lagoon North	29-Aug	241	Good	0	0	0	400	Shaul	All in lagoon
		21-Sep	264	Good	0	0	0	0	Shaul	Nothing
283-63.10	Chinaman Lagoon Main	29-Aug	241	Good	0	0	0	2,700	Shaul	7,000 chums at mouth
		21-Sep	264	Good	0	200	0	0	Shaul	1,500 cohos at mouth
283-63.09	Chinaman Lagoon	Not surveyed								
283-63.06	Chinaman Lagoon South	29-Aug	241	Good	0	0	0	600	Shaul	300 chums at mouth of 62.05 and 62.06
		21-Sep	264	Good	0	0	0	0	Shaul	300 cohos at mouth
283-63.05	Lower Chinaman Lagoon	29-Aug	241	Good	0	0	0	3,200	Shaul	See remarks under 63.06
		21-Sep	264	Good	0	0	0	0	Shaul	See remarks under 63.06
283-63.04	Chinaman Stream South	29-Aug	241	Good	0	0	600	1,700	Shaul	300 chums at mouth

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Table 49. (page 13 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
283-61.05	Long John Lagoon	06-Sep	249	Good	0	100	0	0	Shaul	100 cohos at mouth
		19-Sep	262	Good	0	1,100	0	0	Shaul	
283-61.04	Spring Fed Lakes	04-Aug	216	Good	540	0	0	0	Shaul	500 chums in lagoon
		29-Aug	241	Good	500	50	0	0	Shaul	
283-61.03	Long John Lagoon	29-Aug	241	Good	0	0	0	0	Shaul	Nothing
283-61.02	Southwest Stream	29-Aug	241	Good	0	0	1,400	1,700	Shaul	Additional 2,000 chums in pothole, 1,000 chums in lagoon
		19-Sep	262	Good	0	1,100	500	500	Shaul	400 of the cohos were in pothole pointed towards 62.02
SOUTHWESTERN DISTRICT										
283-52.10	Dushkin Lagoon	Not Surveyed								
283-52.08	Volcano River	04-Aug	216	Good	0	0	0	100	Shaul	800 chums at mouth
		13-Aug	225	Good	0	0	2,000	400	Shaul	Nothing on Flats, poor escapement
		29-Aug	241	Good	0	0	1,500	5,200	Shaul	6,000 chums at mouth, an additional 3,000 chums between 52.08 and Dushkins
		06-Sep	249	Good	0	0	1,900	10,800	Shaul	7,000 chums at mouth
		01-Oct	274	Good	0	2,000	0	3,000	Shaul	
283-52.07	Volcano Center Sloughs	04-Aug	216	Good	0	0	0	0	Shaul	100 chums at mouth
		13-Aug	225	Good	0	0	300	600	Shaul	3,000 pinks at mouth, poor escapement
		29-Aug	241	Good	0	0	700	200	Shaul	8,000 chums at mouth
		06-Sep	249	Good	0	0	2,400	400	Shaul	8,000 chums at mouth
		01-Oct	274	Good	0	100	0	2,000	Shaul	
283-52.06	West Springholes	04-Aug	216	Good	0	0	300	100	Shaul	800 pinks at mouth
		13-Aug	225	Good	0	0	2,800	200	Shaul	2,000 pinks at mouth
		29-Aug	241	Good	0	0	5,700	100	Shaul	5,000 pinks and 1,000 chums at mouth, plus 5,000 pinks off 52.05 that will likely move to 52.06
		06-Sep	249	Good	0	0	8,500	400	Shaul	2,000 chums at mouth
		01-Oct	274	Good	0	300	0	900	Shaul	
283-52.05	Streamguard Creek	29-Aug	241	Good	0	0	0	100	Shaul	5,000 pinks at mouth, which will likely move to 52.06
		06-Sep	249	Good	0	0	500	500	Shaul	2,000 chums at mouth
		01-Oct	274	Good	0	0	0	0	Shaul	

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Table 49. (page 14 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
283-52.04	Stub Creek	29-Aug	241	Good	0	0	5,000	0	Shaul	1,300 pinks at mouth
		06-Sep	249	Good	0	0	5,000	0	Shaul	1,500 pinks at mouth, good escapement
283-52.03	Little Bear Bay	04-Aug	216	Good	0	0	0	0	Shaul	400 pinks in bay
		29-Aug	241	Good	0	0	0	0	Shaul	4,000 pinks at mouth, additional 5,000 pinks and 2,000 chums in bay
		06-Sep	249	Good	0	0	2,700	700	Shaul	2,000 chums at mouth, 1,000 pinks and 1,000 chums in inner bay
283-52.01	Nikolaski Spit	06-Aug	218	Good	0	0	600	0	Shaul	
		12-Aug	224	Good	0	0	700	0	Shaul	350 pinks at mouth
		17-Aug	229	Good	0	0	1,800	0	Shaul	3,000 pinks at mouth
		06-Sep	249	Good	0	0	12,000	0	Shaul	100 pinks at mouth, good escapement
283-51.06	Dolgoi Harbor Southwest	06-Aug	218	Good	0	0	3,700	0	Shaul	500 pinks at mouth, good escapement for this date
		31-Aug	243	Good	0	0	1,500	0	Berceli	2,000 pinks at mouth, 1,100 along opposite shore, 1,500 additional carcasses in creek
		06-Sep	249	Good	0	0	3,800	0	Shaul	
283-51.05	Dolgoi Harbor South	31-Aug	243	Good	0	0	300	0	Berceli	400 pinks at mouth
283-51.03	Dolgoi Harbor	31-Aug	243	Good	0	0	1,000	0	Berceli	100 pinks at mouth
283-41.01	Belkofski Village	29-Jul	210	Good	0	0	700	0	Shaul	200 pinks at mouth
		04-Aug	216	Good	0	0	2,900	0	Shaul	800 pinks at mouth
		06-Aug	218	Good	0	0	8,100	0	Shaul	3,000 pinks at mouth
		08-Aug	220	Good	0	0	8,000	0	Shaul	3,000 pinks at mouth
		12-Aug	224	Good	0	0	12,200	0	Shaul	
		17-Aug	229	Good	0	0	16,200	0	Shaul	7,000 pinks at mouth
		31-Aug	243	Good	0	0	13,800	0	Berceli	
		06-Sep	249	Good	0	0	14,000	0	Shaul	100 pinks at mouth
		19-Sep	262	Good	0	400	0	0	Shaul	
283-42.12	Rocky River	29-Jul	210	Good	0	0	200	0	Shaul	
		04-Aug	216	Good	0	0	400	0	Shaul	6,000 pinks at mouth
		06-Aug	218	Good	0	0	600	0	Shaul	3,000 pinks at mouth
		08-Aug	220	Good	0	0	500	0	Shaul	8,000 pinks at mouth, skiff tracks at mouth
		12-Aug	224	Good	0	0	1,200	0	Shaul	5,500 pinks at mouth
		17-Aug	229	Good	0	0	10,400	0	Shaul	3,000 pinks at mouth
		31-Aug	243	Good	0	0	13,900	0	Berceli	10,000 pinks at mouth
		06-Sep	249	Good	0	0	13,000	0	Shaul	2,000 pinks at mouth

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Table 49. (page 15 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
283-42.10	Kitchen Anchorage	04-Aug	216	Good	0	0	0	0	Shaul	200 pinks at mouth, 200 pinks along beach, jumpers in deep water
		12-Aug	224	Good	0	0	50	0	Shaul	400 pinks at mouth
		17-Aug	229	Good	0	0	100	0	Shaul	3,000 pinks at mouth, Anchorage blank, but 5-10,000 at south entrance
		29-Aug	241	Good	0	0	2,100	0	Shaul	5,000 pinks at mouth, 2,000 additional pinks along outer south beach
		06-Sep	249	Good	0	0	4,000	0	Shaul	5,000 pinks at mouth, escapement looks good
		19-Sep	262	Good					Shaul	No cohos
283-42.09	Captain's Harbor	12-Aug	224	Good	0	0	0	0	Shaul	1,000 chums and 3,000 pinks at mouth, nothing in creek
		29-Aug	241	Good	0	0	3,000	0	Shaul	3,000 pinks at mouth, 6,000 chums in harbor
		06-Sep	249	Good	0	0	4,000	300	Shaul	1,000 chums at mouth, 2,500 chums in harbor
283-42.07	Belkofski Bay River	12-Aug	224	Good	0	0	0	0	Shaul	Partial survey - lower 1/2 mile
		17-Aug	229	Good	0	0	1,100	2,300	Shaul	Bay and mouth murky, but no jumpers
		29-Aug	241	Good	0	0	2,200	25,000	Shaul	4,000 chums at mouth, additional 6,000 chums in Captain's Harbor
		06-Sep	249	Good	0	0	5,400	27,200	Shaul	4,500 chums at mouth, additional 2,500 chums in Captain's Harbor
		01-Oct	274	Good	0	2,500	0	4,500	Shaul	
283-42.06	Belkofski Bay Beach	17-Aug	229	Good	0	0	1,100	0	Shaul	
		29-Aug	241	Good	0	0	4,600	0	Shaul	Additional 300 pinks along beach
		06-Sep	249	Good	0	0	1,500	0	Shaul	100 pinks at mouth
283-42.05	Belkofski Bay, West	04-Aug	216	Good	0	0	1,100	0	Shaul	300 pinks at mouth
		12-Aug	224	Good	0	0	2,100	0	Shaul	300 pinks at mouth
		29-Aug	241	Good	0	0	3,500	0	Shaul	3,000 pinks at mouth
		06-Sep	249	Good	0	400	5,300	0	Shaul	
		19-Sep	262	Good	0	0	0	0	Shaul	
283-42.03	Indian Head	12-Aug	224	Good	0	0	1,200	0	Shaul	4,000 pinks at mouth
		29-Aug	241	Good	0	0	9,100	0	Shaul	3,000 pinks at mouth, additional 3,500 pinks along beach west of Indian Head
		06-Sep	249	Good	0	0	13,400	0	Shaul	600 pinks at mouth, additional 500 pinks along beach west of Indian Head, looks good
283-33.05	Ram's Creek	12-Aug	224	Good	0	0	800	0	Shaul	1,000 pinks at mouth
		29-Aug	241	Good	0	0	13,000	4,000	Shaul	5,000 pinks at mouth, 5,000 pinks above culvert, additional 6,000 pinks along beach
		06-Sep	249	Good	0	0	15,000	5,000	Shaul	Good escapement
		01-Oct	274	Good		100			Shaul	50 in lake with balance above culvert

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Table 49. (page 16 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
283-33.04	King Cove Lagoon	29-Aug	241	Good	0	0	0	20	Shaul	No sign of fish in lagoon
		06-Sep	249	Good	0	0	0	400	Shaul	500 chums at mouth, 1,400 additional chums in lagoon
		01-Oct	274	Good		100			Shaul	
283-33.03	King Cove Lagoon	29-Aug	241	Good	0	0	0	0	Shaul	
		06-Sep	249	Good	0	0	0	50	Shaul	300 chums at mouth
		01-Oct	274	Good		0			Shaul	
283-31.01	Fox Island Anchorage East	27-Jul	208	Good	0	0	0	0	Shaul	
		29-Jul	210	Good	0	0	200	0	Shaul	2,000 pinks at mouth
		04-Aug	216	Good	0	0	9000	0	Shaul	2,000 pinks at mouth
		06-Aug	218	Good	0	0	17,000	0	Shaul	2,000 pinks at mouth
		08-Aug	220	Good	0	0	18,000	0	Shaul	
		12-Aug	224	Good	0	0	34,500	0	Shaul	Good escapement, nothing at mouth
		31-Aug	243	Good	0	0	17,300	0	Berceli	5,200 additional carcasses
		06-Sep	249	Good	0	0	12,300	0	Shaul	
283-31.02	Fox Island Anchorage Center	06-Aug	218	Good	0	0	1,100	0	Shaul	300 pinks at mouth
		31-Aug	243	Good	0	0	3,500	0	Berceli	1,500 carcasses
		06-Sep	249	Good	0	0	1,800	0	Shaul	
283-31.03	Fox Island Anchorage West	29-Jul	210	Good	0	0	0	0	Shaul	
		04-Aug	216	Good	0	0	5,500	0	Shaul	
		06-Aug	218	Good	0	0	8,800	0	Shaul	2,000 pinks at mouth
		08-Aug	220	Good	0	0	7,800	0	Shaul	
		12-Aug	224	Good	0	0	22,000	0	Shaul	Good escapement, nothing at mouth
		31-Aug	243	Good	0	0	11,000	0	Berceli	
		06-Sep	249	Good	0	0	3,000	0	Shaul	
283-31.05	Paw Cape Creek	04-Aug	216	Good	0	0	500	0	Shaul	
		06-Sep	249	Good	0	0	1,100	0	Shaul	100 additional carcasses
283-31.06	Southern Creek	27-Jul	208	Good	0	0	10,000	0	Shaul	
		29-Jul	210	Good	0	0	12,000	0	Shaul	2,000 pinks at mouth
		04-Aug	216	Good	0	0	32,200	0	Shaul	
		06-Aug	218	Good	0	0	39,000	0	Shaul	
		08-Aug	220	Good	0	0	28,000	0	Shaul	Partial survey, likely 5-15,000 above, fewer in lower 1/2 mile than last survey
		12-Aug	224	Good	0	0	54,000	0	Shaul	Looks fair but could hold many more fish
		31-Aug	243	Good	0	0	25,000	0	Berceli	Many fish in lower section, 7,000 carcasses
		06-Sep	249	Good	0	1,000	28,000	0	Shaul	

-Continued-

Table 49. (page 17 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
283-31.10	Eastern Creek	27-Jul	208	Good	0	0	7,000	0	Shaul	
		29-Jul	210	Good	0	0	9,000	0	Shaul	
		04-Aug	216	Good	0	0	10,900	0	Shaul	500 pinks at mouth
		06-Aug	218	Good	0	0	15,700	0	Shaul	3,000 pinks at mouth
		08-Aug	220	Good	0	0	20,500	0	Shaul	500 pinks at mouth
		12-Aug	224	Good	0	0	34,000	0	Shaul	1,000 pinks at mouth, large numbers in lower end, not fished during recent opening
		31-Aug	243	Good	0	0	10,000	0	Berceli	Many fish in lower end, 3,000 additional carcasses
		06-Sep	249	Good	0	0	4,700	0	Shaul	500 pinks still schooled
283-34.11	Lenard Harbor South	29-Aug	241	Good	0	0	1,400	0	Shaul	Decent escapement
283-34.10	Lenard Harbor	17-Aug	229	Good	0	0	2,400	4,800	Shaul	100 chums at mouth, bay murky, no jumpers
		29-Aug	241	Good	0	0	5,700	2,900	Shaul	1,500 chums at mouth
		19-Sep	262	Good	0	600	1,200	3,000	Shaul	Many chums still schooled
283-34.09	Barney's Creek	17-Aug	229	Good	0	0	6,000	500	Shaul	2,000 pinks at mouth, decent escapement but can hold twice as many
		31-Aug	243	Good	0	0	8,000	900	Shaul	
283-34.07	Kinzarof Lagoon	02-Sep	245	Poor	170	0	0	0	Berceli	Count 150 and 20 in two lakes
		20-Sep	263	Good	0	2,000	0	0	Shaul	Partial survey - large shallow lake approximately 2 mi. above stream mouth
283-34.06	Kinzarof Lagoon	02-Sep	245	Poor	40	0	0	0	Berceli	
283-34.05	Kinzarof Lagoon	02-Sep	245	Poor	40	0	0	0	Berceli	
283-34.03	Trout Creek	20-Aug	263	Good	10	0	700	50	Shaul	Chums in lower end, sockeye and 600 pinks spawning
		03-Sep	246	Good	40	490	80	100	Berceli	50 cohos at mouth, coho in lower end below bridge, 100 chum carcasses
		21-Sep	264	Good	0	700	0	0	Shaul	500 above bridge

-Continued-

Table 49. (page 18 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
283-34.02	Russel Creek	12-Jul	193	Good	0	0	0	700	Shaul	300 in Nurse Lagoon, balance between Nurse Lagoon and lower crossing
		01-Aug	213	Fair	0	0	700	6,800	Shaul	100 chums above weir
		13-Aug	225	Good	0	0	15,000	3,500	Shaul	100 chums above hatchery, all others below, many pinks spawning
		20-Aug	232	Good	0	0	16,500	15,400	Shaul	1,000 chums at mouth, 3,000 chums in Nurse Lagoon, 1,200 chums and 3,000 pinks additional in hatchery
		03-Sep	246	Good	50	0	4,200	4,400	Berceli	300 cohos (?) at mouth, 1,300 chums above weir, 650 carcasses, 50 sockeye in lake
		18-Sep	261	Good	0	600	0	0	Shaul	
		21-Sep	264	Good	0	2,200	0	0	Shaul	1,000 above hatchery
283-34.01	Mortensen	20-Aug	232	Good	1,700	0	0	0	Shaul	200 schooled in creek, balance at creek mouth
		29-Aug	241	Good	800	0	0	0	Shaul	3,000 sockeye at mouth, fish in stream all spawning
		06-Sep	249	Good	1,500	0	0	0	Shaul	700 sockeye at mouth, 100 spawning on west shore of lake
		18-Sep	261	Good	1,900	0	0	0	Shaul	100 sockeye spawning on west side of lake
		29-Sep	272	Good	300	3,000	0	0	Shaul	Cohos in northeast corner of lake
283-32.01	Old Man's Lagoon	01-Aug	213	Good	0	0	0	300	Shaul	Spawning, very poor escapement
		17-Aug	229	Good	0	0	0	1,400	Shaul	300 chums at mouth
		31-Aug	243	Good	0	0	0	450	Berceli	200 additional carcasses
		29-Sep	272	Good	0	0	0	0	Shaul	
283-20.06	Thinpoint Lagoon & Entrance Channel	13-Jul	194	Good	400	0	0	0	Shaul	
		29-Jul	210	Poor	4,000	0	0	0	Shaul	Grumman Goose survey
		01-Aug	213	Good	9,600	0	0	0	Shaul	Fish moving into lake, 6,000 in lower 1/2 of entrance channel
		04-Aug	216	Good	6,800	0	0	0	Shaul	1-200 carcasses, which were probably tidal strandings
		08-Aug	220	Good	8,000	0	0	0	Shaul	
		17-Aug	229	Good	5,000	0	0	0	Shaul	Not much in lower end, most in N-S channel, a few spawners in lake
		29-Aug	241	Good	1,300	400	0	0	Shaul	Species composition uncertain, called fish in lower end cohos and others sockeye
		31-Aug	243	Poor	400	200	0	0	Berceli	100 fish at mouth
		06-Sep	249	Good	0	4,200	0	0	Shaul	300 cohos at mouth
		18-Sep	261	Poor	0	900	0	0	Shaul	

-Continued-

Table 49. (page 19 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
283-20.08	Thinpoint West	Not Surveyed								
283-20.09	Thinpoint Lake Stream	10-Sep	253	Good	4,000	0	0	0	Shaul	2,000 sockeye at mouth
		18-Sep	261	Good	5,200	0	0	0	Shaul	
283-20.10	Thinpoint Lake	10-Sep	253	Good	800	0	0	0	Shaul	
		18-Sep	261	Good	2,800	0	0	0	Shaul	
283-20.04	Southwest Bight	04-Aug	216	Good	0	0	300	0	Shaul	Good sign of fish along beach
		17-Aug	229	Good	0	0	3,000	0	Shaul	Decent escapement
		31-Aug	243	Good	0	0	2,000	0	Berceli	200 additional carcasses
		06-Sep	249	Good	0	0	1,800	0	Shaul	
283-20.03	Verskin's Bight	04-Aug	216	Good	0	0	2,500	0	Shaul	
		17-Aug	229	Good	0	0	11,000	0	Shaul	Good escapement
		31-Aug	243	Good	0	0	2,050	0	Berceli	About as many carcasses
		06-Sep	249	Good	0	0	6,500	0	Shaul	
283-20.01	Sandy Cove Stream	04-Aug	216	Good	0	0	2,000	500	Shaul	1,000 chums and 2000 pinks along beach
		17-Aug	229	Fair	0	0	7,900	3,600	Shaul	Too much surf to survey beach
		29-Aug	241	Good	0	0	8,000	12,000	Shaul	Poor pink escapement but fairly good chum showing, 300 chums along beach
		06-Sep	249	Good	0	0	8,500	16,500	Shaul	
		18-Sep	261	Fair	0	1,000	0	0	Shaul	Some pinks and chums still spawning, cohos all in lower end
283-11.01	Egg Island Stream	17-Aug	229	Good	0	0	2,800	200	Shaul	500 chums at mouth
		29-Aug	241	Good	0	0	3,200	700	Shaul	
283-12.13	Little John Lagoon	17-Aug	229	Good	0	0	200	1,300	Shaul	1,600 chums in lagoon and flats, extensive seal activity
		29-Aug	241	Good	0	0	1,000	2,300	Shaul	2,300 chums at mouth, 500 chums in spring areas, some carcasses, nothing in lagoon except 1,000 chums at mouth of 12.12
		21-Sep	264	Good	0	1,000	0	1,300	Shaul	
283-12.12	Little John Sand Spit	29-Aug	241	Good	0	0	300	100	Shaul	1,000 chums at mouth

-Continued-

Table 49. (page 20 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
283-12.11	Cannery	29-Aug	241	Good	0	0	200	20	Shaul	
		18-Sep	261	Good	0	20	0	0	Shaul	
283-12.05	Middle Lagoon	13-Jul	194	Good	1,300	0	0	0	Shaul	Partial survey-lagoon only, all in channel near mouth, jumpers in pothole
		29-Jul	210	Good	4,000	0	0	0	Shaul	Partial survey-lagoon only, Goose survey, all at upper end of entrance moving up
		01-Aug	213	Good	1,000	0	0	0	Shaul	Partial survey-lagoon only, all fish seen in lower end, jumpers in pothole
		06-Aug	218	Good	2,500	0	0	0	Shaul	Partial survey-lagoon only, jumpers at mouth
		13-Aug	225	Good	0	0	0	0	Shaul	Sign of a few in lake, 10-20 moving up lake outlet, 200 in lower end of lake
		02-Sep	245	Fair	1,350	0	0	0	Berceli	Most near outlet of lake
		10-Sep	253	Good	13,100	0	0	0	Shaul	300 spawning in outlet, heavy spawning along south shore, looks good
		18-Sep	261	Good	13,000	0	0	0	Shaul	Partial survey of lake and outlet, 5,400 spawning along north shore, only 300 observed on north shore on 10-Sep., 700 spawning in outlet
		29-Sep	272	Good	13,100	0	0	0	Shaul	
		11-Oct	284	Good	14,100	0	0	0	Shaul	400 spawning in outlet, remainder spawning along shores
283-12.01	Hansen's	28-Jul	209	Good	0	0	0	0	Shaul	
		04-Aug	216	Good	0	0	600	0	Shaul	1,500 pinks at mouth
		15-Aug	227	Good	630	0	5,800	0	Shaul	1,000 pinks at mouth, 30 reds spawning
		31-Aug	243	Good	0	0	5,100	0	Shaul	All spawning, Cherokee survey
284-60.08	Deadman's Cove	28-Jul	209	Fair	0	0	1,000	0	Shaul	Bad glare, Cherokee survey
		04-Aug	216	Good	700	0	11,000	0	Shaul	
		06-Aug	218	Good	0	0	12,000	0	Shaul	Partial survey up to canyon
		17-Aug	229	Fair	0	0	25,000	0	Shaul	Poor light in upper end, count likely low
		29-Aug	241	Good	0	0	37,000	0	Shaul	27,500 spawning
		06-Sep	249	Good	0	500	20,000	0	Shaul	
		18-Sep	261	Good	1,500	1,700	4,000	0	Shaul	Cohos all below upper valley
284-60.07	Whalebone	02-Jul	183	Good	0	0	0	0	Shaul	Mouth blocked by gravel, lake level high, rain or wind storm needed to open mouth
		18-Sep	261	Good	0	0	0	0	Shaul	Mouth open but too late for sockeye and pinks

-Continued-

Table 49. (page 21 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
284-60.06	Sankin Bay	06-Aug	218	Good	0	0	200	0	Shaul	200 pinks at mouth
		15-Aug	227	Good	0	0	1,000	100	Shaul	
		29-Aug	241	Good	0	0	2,400	300	Shaul	
		18-Sep	261	Good	0	100	0	0	Shaul	
284-60.05	Whirl Point	06-Aug	218	Good	0	0	10	0	Shaul	
		17-Aug	229	Fair	0	0	100	0	Shaul	400 pinks at mouth, possible more, poor light at mouth
		31-Aug	243	Good	0	0	1,700	0	Shaul	
284-60.04	Ikatan River	31-Aug	243	Good	0	0	3,500	200	Shaul	Cherokee survey
284-60.03	Swede's Lake	02-Jul	183	Good	0	0	0	0	Shaul	
		06-Aug	218	Good	1,000	0	0	0	Shaul	Jumpers at mouth, most sockeye spawning
		17-Aug	229	Good	0	0	100	0	Shaul	
		31-Aug	243	Good	0	0	500	0	Shaul	
		18-Sep	261	Good	0	0	0	0	Shaul	No cohos
284-60.01	Ikatan Point	06-Aug	218	Good	0	0	500	0	Shaul	
		17-Aug	229	Good	0	0	6,200	300	Shaul	200 pinks at mouth
		31-Aug	243	Good	0	0	9,600	0	Shaul	2,500 schooled in lower end
		18-Sep	261	Good	0	700	0	0	Shaul	
UNIMAK DISTRICT										
284-50.00	Dora Harbor Left	31-Aug	243	Good	0	0	100	0	Shaul	
284-40.09	Otter Cove North	06-Aug	218	Good	0	0	0	200	Shaul	
		17-Aug	229	Good	0	0	4,000	0	Shaul	
		31-Aug	243	Good	0	0	5,000	0	Shaul	Cherokee survey
		18-Sep	261	Good	0	300	0	0	Shaul	
284-40.08	Otter Cove South	06-Aug	218	Good	0	0	0	300	Shaul	
		17-Aug	229	Good	0	0	1,200	300	Shaul	Chums in lower end
		31-Aug	243	Good	0	0	3,000	0	Shaul	
		18-Sep	261	Good	0	100	0	0	Shaul	
284-40.05	Lazaref River	Not Surveyed								

-Continued-

Table 49. (page 22 of 22).

Stream Number	Stream Name/Location	--Calendar-- Date	Day	Survey Condition	Sockeye	Coho	Pink	Chum	Observer	Remarks
283-10.10065	Sanak Village	17-Sep	260	Good	0	0	500	0	Shaul	
283-10.10070	Sanak Is. W.	17-Sep	260	Good	1,200	0	1,800	0	Shaul	An additional 500 pink carcasses
283-10.10080	Washwomen Creek	17-Sep	260	Good	1,500	0	600	0	Shaul	An additional 2,000 pink carcasses at mouth
283-10.77	Dodd's Bay E.	17-Sep	260	Good	400	0	300	0	Shaul	
283-10.10090	Sandy Bay	17-Sep	260	Good	300	0	0	0	Shaul	
283-10.10100	Salmon Bay	17-Sep	260	Good	4,000	0	0	0	Shaul	400 sockeye in outlet, remainder in lakes and tributaries

1/ See Orzinski weir counts, and total escapement.

Table 50. Salmon escapement survey counts in the Aleutian Islands Management Area, 1990.

Stream Number	Stream Name/Location	Calendar Date	Calendar Day	Survey Condition	Species: Sockeye	Coho	Pink	Chum	Observer	Remarks
302-	Akutan Harbor	Not Surveyed								
302-80.52	Kuliliak Bay Lakes	Not Surveyed								
302-50.60	Kisseien	Not Surveyed								
302-50.50	Erskine Bay	Not Surveyed								
302-40.11	Summer Bay	Not Surveyed								
302-40.10	Humpy Cove	05-Jul	186	Good	0	0	0	0	Quimby	Foot survey
		01-Aug	213	Good	0	0	0	0	Quimby	4,000 pinks at mouth, foot survey
		08-Aug	220	Good	0	0	0	0	Quimby	2,000 pinks at mouth
		19-Aug	231	Good	0	0	10,000	0	Quimby	
		13-Sep	256	Good	0	0	6,000	0	Quimby	Includes carcasses
302-40.09	Summer Bay	04-Jul	185	Good	0	0	0	0	Quimby	Foot survey
		01-Aug	213	Good	0	0	0	0	Quimby	Foot survey, jumpers in bay
		11-Aug	223	Good	0	0	3,000	0	Quimby	
		19-Aug	231	Good	0	0	0	0	Quimby	
		13-Sep	256	Good	0	0	0	0	Quimby	
302-40.08	Unalaska Village	05-Jul	186	Good	0	0	0	0	Quimby	Foot survey
		01-Aug	213	Good	0	0	1,000	0	Quimby	Foot survey, all in churchhole
		08-Aug	220	Good	0	0	5,000	0	Quimby	Foot survey, churchhole and above lake
		12-Aug	224	Good	0	0	13,000	0	Quimby	10,000 in churchhole
		19-Aug	231	Good	0	0	11,800	0	Quimby	3,600 above lake
		13-Sep	256	Good	0	0	5,600	0	Quimby	Partial survey-below lake
302-40.07	Pyramid Creek	01-Sep	244	Good	0	0	300	0	Griffin	Foot survey
302-40.06	Captain's Bay	01-Aug	213	Good	0	0	0	0	Quimby	
		08-Aug	220	Good	0	0	250	0	Quimby	100 pinks at mouth
		11-Aug	223	Good	0	0	3,000	0	Quimby	
		12-Aug	224	Good	0	0	3,000	0	Quimby	Fish at base of falls
		19-Aug	231	Good	0	0	10,000	0	Quimby	
		13-Sep	256	Good	0	0	3,000	0	Quimby	

-Continued-

Table 50. (page 2 of 4)

Stream Number	Stream Name/Location	--Calendar-- Date	Day	-Survey- Condition	---------Species---------- Sockeye	Coho	Pink	Chum	Observer	Remarks
302-40.05	Nateekin River	01-Aug	213	Good	0	0	0	0	Quimby	50 pinks at mouth
		08-Aug	220	Good	0	0	0	0	Quimby	100 pinks at mouth
		09-Aug	221	Good	0	0	250	0	Quimby	Partial survey-1/4 mile, foot survey
		11-Aug	223	Good	0	0	15,000	0	Quimby	6,000 pinks at mouth
		12-Aug	224	Good	0	0	30,000	0	Quimby	300 pinks at mouth
		19-Aug	231	Good	0	0	46,100	0	Quimby	Additional 5,000 along beach and 10,000 in corner by tree
		13-Sep	256	Good	0	0	18,400	0	Quimby	
302-40.03	Makushin Valley	11-Aug	223	Poor	0	0	0	0	Quimby	River silty, 4,000 along beach
		12-Aug	224	Poor	0	0	300	0	Quimby	River silty, all fish observed in clear tributaries
		13-Aug	225	Poor	0	0	5,300	0	Quimby	Low count, river silty, saw fish only at clear edges
302-30.01	Kalekta Bay	Not surveyed								
302-15.07	McLees Lake	13-Sep	256	Good	2,500	0	0	0	Quimby	1,000 in A, 1,500 in B, mostly carcasses
302-15.05	Driftwood Bay	13-Sep	256	Good	0	0	100	0	Quimby	
302-13.10	Volcano Bay	13-Sep	256	Good	0	0	100	0	Quimby	Reports from fishermen and spotters indicated substantial red escapement earlier
302-14.20	Makushin Village	Not surveyed								
302-14.18	Glacier Valley	11-Aug	223	Poor	0	0	250	0	Quimby	Silty, fish in left clear fork
		12-Aug	224	Poor	0	0	300	0	Quimby	Silty, fish in left clear fork
		13-Sep	256	Poor	0	0	0	0	Quimby	Silty, saw no fish
302-14.17	Humpback Bay #2	11-Aug	223	Good	0	0	2,500	0	Quimby	
		13-Sep	256	Good	0	0	20,500	0	Quimby	
302-14.17	Humpback Bay #1	11-Aug	223	Good	0	0	30,000	0	Quimby	20,000 pinks at mouth
		12-Aug	224	Good	0	0	40,000	0	Quimby	30,000 pinks at mouth
		13-Sep	256	Good	0	0	36,500	0	Quimby	
302-14.15	Portage Creek #1	Not surveyed								
302-14.14	Portage Creek #2	Not surveyed								
302-14.13	Portage Creek #3	Not surveyed								

-Continued-

Table 50. (page 3 of 4)

Stream Number	Stream Name/Location	--Calendar-- Date	Day	-Survey- Condition	---------Species---------- Sockeye	Coho	Pink	Chum	Observer	Remarks
302-14.12	Portage Creek #4	11-Aug	223	Good	0	0	2,000	0	Quimby	
		13-Sep	256	Good	0	0	300	0	Quimby	
302-14.11	Cannery Bay	11-Aug	223	Good	0	0	1,250	0	Quimby	
		13-Sep	256	Good	0	0	380	0	Quimby	
302-14.06	Naginak Cove	13-Sep	256	Good	0	0	330	0	Quimby	
302-14.01	Unnamed	13-Sep	256	Good	0	0	0	0	Quimby	
302-13.05	Skan Bay	11-Aug	223	Good	0	0	2,000	0	Quimby	
		09-Sep	252	Good	0	0	4,200	0	Quimby	
302-13.04	Skan Bay	11-Aug	223	Good	0	0	250	0	Quimby	
302-13.03	Skan Bay	09-Sep	252	Good	0	0	2,000	0	Quimby	
302-12.15	Pumicestone Bay	09-Sep	252	Good	0	0	1,100	0	Quimby	
302-12.14	Pumicestone Bay	09-Sep	252	Good	0	0	0	0	Quimby	
302-12.11	Pumicestone Bay	09-Sep	252	Good	0	0	5,700	0	Quimby	
302-12.09	McIver Bight	Not surveyed								
302-12.07	Kashega West A Lake	11-Aug	223	Good	0	0	0	0	Quimby	Partial survey, 5,000 pinks at mouth
		09-Sep	252	Good	16,800	0	48,700	0	Quimby	20,000 pinks in outlet stream, 17,800 pinks in A Lake, 11,100 in B, sockeye in lakes
302-12.07	Kashega Bay B	Not surveyed								
302-12.05	Kismaliuk Bay	Not surveyed								
302-12.04	Kismaliuk Bay	Not surveyed								
302-12.03	Kismaliuk Bay	09-Sep	252	Good	0	0	12,800	0	Quimby	

-Continued-

Table 50. (page 4 of 4)

Stream Number	Stream Name/Location	--Calendar-- Date	Day	-Survey- Condition	---------Species--------- Sockeye	Coho	Pink	Chum	Observer	Remarks
302-12.01	Aspid Bay	09-Sep	252	Good	0	0	6,700	0	Quimby	
302-11.08	Chernofski Harbor	09-Sep	252	Good	0	0	17,400	0	Quimby	An addititonal 3,600 in tributary
302-11.06	Station Bay	09-Sep	252	Good	0	0	5,100	0	Quimby	
302-11.05	Station Bay	09-Sep	252	Good	0	0	1,400	0	Quimby	
302-11.04	Station Bay West Arm	09-Sep	252	Good	0	0	3,500	0	Quimby	
302-11.03	Unnamed	Not surveyed								

Table 51. Salmon escapement survey counts in the North Peninsula, 1990

Stream Number	Stream Name/Location	--Calendar-- Date	Day	-Survey- Condition	Chinook	Sockeye	Coho	Pink	Chum	Observer	Remarks
					----------Species----------						
NORTHWESTERN DISTRICT											
311-30.06	Unnamed	Not Surveyed									
311-30.05	Unnamed	Not Surveyed									
311-30.07	Whaleback	29-Jun	180	Good	0	0	0	0	0	Shaul	Partial survey - outlet channel only, 6-8,000 moving up channel, appears that channel will empty farther west again in 1991
		02-Jul	183	Good	0	3,500	0	0	0	Shaul	All in lake and upper part of outlet channel, no escapement through intense fishing effort (7 seine, 13 drift, 4 set)
		08-Jul	189	Good	0	0	0	0	0	Shaul	None in creek, algae bloom in lagoon, 2,000 sockeye in outlet, fish still coming in
		01-Aug	213	Good	0	40,600	0	0	0	Shaul	32,400 in creek of which 3,000 were spawning, 4,000 at lagoon outlet, 4,200 at outlet channel, looks good
		21-Sep	264	Good	0	0	1,100	0	0	Shaul	Partial survey of lower mile and outlet channel nothing in creek, jumpers at mouth of outlet channel
311-30.08	Christianson Lagoon	08-Jul	189	Good	0	0	0	0	0	Shaul	Partial survey-creek only
		01-Aug	213	Good	0	3,000	0	0	0	Shaul	1,000 dolly varden
		21-Sep	264	Good	0	2,000	200	0	0	Shaul	
311-30.09	Mudhole	02-Jul	183	Good	0	0	0	0	0	Shaul	300 chums in lower portion of lagoon
		08-Jul	189	Good	0	0	0	0	200	Shaul	Spawning, another 500 in lower part of lagoon, plus 200 at mouth
		01-Aug	213	Good	0	600	0	0	0	Shaul	50 sockeye at mouth
		21-Sep	264	Good	0	2,000	0	0	0	Shaul	
311-30.10	Clear Lagoon	08-Jul	189	Fair	0	0	0	0	0	Shaul	Glare in lagoon plus chop, 700 fish in east part of lagoon, plus 200 at outlet
		01-Aug	213	Good	0	300	0	0	200	Shaul	700 sockeye at mouth
		21-Sep	264	Good	0	600	0	0	0	Shaul	
311-40.01	Emil's River	01-Aug	213	Good	0	20	0	0	50	Shaul	
311-40.04	North Creek	01-Aug	213	Good	0	0	0	0	25	Shaul	
		21-Sep	264	Good	0	0	400	0	0	Shaul	

-Continued-

Table 51. (page 2 of 10)

Stream Number	Stream Name/Location	Calendar Date	Calendar Day	Survey Condition	Chinook	Sockeye	Coho	Pink	Chum	Observer	Remarks
311-50.01	Big River	Not surveyed									
311-50.02	Swanson Lagoon	02-Jul	183	Good	0	0	0	0	700	Shaul	Partial survey-creek only
		08-Jul	189	Good	0	0	0	0	1,300	Shaul	Partial survey-creek only, all schooled in lower 1/2 mile
		13-Jul	194	Good	0	0	0	0	1,800	Shaul	Partial survey-creek only
		01-Aug	213	Good	0	800	0	0	1,000	Shaul	3,500 sockeye in upper end of lagoon, 1,250 in outlet. Figures listed in columns to left are for creek only.
		13-Aug	225	Good	0	22,000	0	0	500	Shaul	Chums and 1,100 sockeye in creek, 5,500 sockeye in upper part of lagoon, 400 sockeye schooled near points on south shore, 15,000 sockeye schooled in upper part of outlet, nothing moving up
		29-Aug	241	Good	0	31,000	0	0	100	Shaul	
		05-Sep	248	Fair	0	15,200	500	0	0	Shaul	Cohos and 2,000 sockeye in outlet, 4,700 sockeye in creek, 1,500 spawning in lagoon, rest schooled in upper lagoon, visibility poor in upper part of outlet channel
		21-Sep	264	Good	0	9,400	4,500	0	0	Shaul	4,000 sockeye and 500 coho in creek, 1,000 cohos in outlet channel
		29-Sep	272	Poor	0	0	0	0	0	Shaul	Water too high in lagoon and creek, nothing in outlet
311-60.01	Mike's Valley	29-Jun	180	Good	0	0	0	0	50	Shaul	
		02-Jul	183	Good	0	0	0	0	50	Shaul	
		08-Jul	189	Good	0	0	0	0	100	Shaul	
		13-Jul	194	Good	0	0	0	0	150	Shaul	Partial survey, 200 chums at mouth, 1,000 chums on flats
		01-Aug	213	Good	0	0	0	0	2,300	Shaul	300 chums at mouth, 800 spawning
		13-Aug	225	Good	0	10	0	0	2,400	Shaul	300 chums at mouth, sockeye spawning in upper valley
		29-Aug	241	Good	0	0	0	100	1,400	Shaul	500 chums at mouth, 1,200 chums in lower mile, mostly spawning
		18-Sep	261	Good	0	0	0	0	0	Shaul	Partial survey, nothing
311-60.06	Anderson's	06-Aug	218	Good	0	0	0	400	100	Shaul	
		15-Aug	227	Good	0	0	0	100	400	Shaul	100 chums at mouth, 800 chums along beach
		29-Aug	241	Good	0	0	0	3,800	200	Shaul	
		21-Sep	264	Good	0	0	0	1,000	300	Shaul	

-Continued-

Table 51. (page 3 of 10)

Stream Number	Stream Name/Location	Calendar Date	Calendar Day	Survey Condition	Chinook	Sockeye	Coho	Pink	Chum	Observer	Remarks
					Species						
311-60.07	Traders Cove & .08	28-Jul	209	Good	0	0	0	0	0	Shaul	
		06-Aug	218	Good	0	0	0	0	0	Shaul	5,000 in channel that appeared to be pinks
		15-Aug	227	Good	0	0	0	1,600	100	Shaul	6,000 chums on flats, nothing in channel
		29-Aug	241	Good	0	0	0	11,600	2,300	Shaul	4,000 chums on flats and in channel, jumpers off village
		21-Sep	264	Good	0	0	700	0	700	Shaul	
311-60.12	Warmsprings Bay	15-Aug	227	Good	0	0	0	100	0	Shaul	
		29-Aug	241	Good	0	0	0	0	0	Shaul	Only 450 on flats
		05-Sep	248	Good	0	0	0	0	100	Shaul	300 chums at mouth
		21-Sep	264	Good	0	0	300	0	2,100	Shaul	
311-60.13	Hungry's Creek	08-Aug	220	Good	0	50	0	0	100	Shaul	300 pinks at mouth, sockeye in lakes
		15-Aug	227	Good	0	300	0	2,000	200	Shaul	Partial survey-did not survey lakes
		29-Aug	241	Good	0	0	0	4,800	0	Shaul	
312-20.01	Norma Bay Lakes	29-Aug	241	Good	0	700	0	0	200	Shaul	
312-20.02	Mike's Duck Camp	01-Aug	213	Good	0	0	0	0	700	Shaul	
		29-Aug	241	Good	0	0	0	100	700	Shaul	Nothing in lower end or at mouth
312-20.03	Norma Bay South	01-Aug	213	Good	0	0	0	0	300	Shaul	2,500 chums at mouth
		29-Aug	241	Good	0	0	0	0	2,700	Shaul	2,500 chums at mouth
312-20.04	Norma Bay South	29-Aug	241	Good	0	0	0	0	1,000	Shaul	1,300 chums at mouth
312-20.52	2nd stream W of Frosty Cr.	29-Aug	241	Good	0	50	0	0	200	Shaul	200 chums at mouth
312-20.51	Springs South of Frosty	29-Aug	241	Good	0	0	0	0	1,100	Shaul	
312-20.05	Frosty Creek	12-Jul	193	Good	0	0	0	0	500	Shaul	
		01-Aug	213	Good	0	0	0	0	1,000	Shaul	Very poor escapement
		29-Aug	241	Good	0	0	0	0	6,300	Shaul	200 chums at mouth, poor escapement
312-20.06	Blue Bill Lake	29-Aug	241	Good	0	2,700	0	0	0	Shaul	
		10-Sep	253	Good	0	6,400	0	0	0	Shaul	Good escapment
		11-Oct	284	Good	0	10,000	0	0	0	Shaul	1,500 in Little Blue Bill, thousands of carcasses

-Continued-

Table 51. (page 4 of 10)

Stream Number	Stream Name/Location	--Calendar-- Date	Day	-Survey- Condition	Chinook	Sockeye	Coho	Pink	Chum	Observer	Remarks
					----------Species----------						
312-20.13	Outer Marker Lake	02-Sep	245	Fair	0	410	0	0	0	Berceli	140 in upper lake, 270 in lower lake, windy conditions
		10-Sep	253	Good	0	3,600	0	0	0	Shaul	2,800 in lower lake, spawning
		11-Oct	284	Good	0	1,500	0	0	0	Shaul	800 in lower lake, 700 in upper lake, spawning
312-40.00	Spring fed 2m SW of Joshua Joshua Green R.	Not surveyed									
312-40.01	Joshua Green River	12-Jul	193	Good	0	4,000	0	0	9,500	Shaul	Partial survey-to lake, 1,500 below forks, unusually good visibility
		31-Jul	212	Fair	30	6,400	0	0	3,400	Shaul	Partial survey-A branch, murky but no signs of large numbers of chums
		29-Aug	241	Good	0	6,400	0	300	35,900	Shaul	300 sockeye spawning in lake, fair chum escapement in B (25,900) but very poor in A (9,800), 200 chums below river forks, pinks in A
		29-Sep	272	Poor	0	0	500	0	2,400	Shaul	Chums in lefthand nursery, 400 still schooled, cohos observed in lake
312-40.02	Moffet Springs Creek	12-Jul	193	Good	0	0	0	0	200	Shaul	
		31-Jul	212	Good	0	150	0	0	1,300	Shaul	Sockeye colored, chums below forks
		30-Aug	242	Fair	0	0	0	0	18,250	Berceli	
		02-Sep	245	Good	0	0	0	0	19,400	Berceli	Mostly schooled up below forks
		29-Sep	272	Good	0	0	200	0	300	Shaul	
312-40.03	Moffet Creek	11-Jul	192	Good	0	0	0	0	60	Berceli	All on lower end
		31-Jul	212	Good	0	700	0	0	400	Shaul	All on or near spawning grounds
		31-Aug	243	Fair	0	0	0	1,500	1,850	Berceli	
		02-Sep	245	Good	0	900	0	0	3,170	Berceli	
		29-Sep	272	Good	0	0	700	0	0	Shaul	
NORTHERN DISTRICT											
313-10.02	North Creek	11-Jul	192	Poor	0	0	0	0	0	Berceli	
		13-Jul	194	Good	300	0	0	0	0	Shaul	Water unusually clear in lower end
		02-Sep	245	Good	0	5,100	0	0	320	Berceli	320 chums in B creek, 165 carcasses
		02-Sep	245	Good	0	0	0	0	0	Berceli	800 sockeye in Lake C1, balance in B lakes
		11-Sep	254	Good	0	0	500	0	0	Shaul	
		19-Sep	262	Good	0	0	1,800	0	0	Shaul	
313-10.05	Cathedral River	31-Aug	243	Poor	0	560	0	0	0	Berceli	Partial survey-lakes only, 60 in upper lake, 500 in lower lake, heavy algal bloom

-Continued-

Table 51. (page 5 of 10)

Stream Number	Stream Name/Location	--Calendar-- Date	Day	-Survey- Condition	Species: Chinook	Sockeye	Coho	Pink	Chum	Observer	Remarks
313-10.06	Trader Mt.	Not surveyed									
313-10.11	Black Hills	03-Jul	184	Good	500	0	0	0	0	Shaul	Cherokee survey
		11-Jul	192	Good	140	0	0	0	0	Berceli	Most in one school upstream
		13-Jul	194	Good	500	0	0	0	0	Shaul	
313-10.14	Steelhead	03-Jul	184	Good	400	0	0	0	0	Shaul	Cherokee survey
		11-Jul	192	Good	105	0	0	0	0	Berceli	Most at forks
		13-Jul	194	Good	200	0	0	0	0	Shaul	About 25% were in canyon
313-30.01	David's River	13-Jul	194	Good	400	1,400	0	0	0	Shaul	A few sockeye starting to spawn
		19-Sep	262	Good	0	17,800	500	0	0	Shaul	14,500 in Big Fish Lake, balance in 5 other lakes, most fish (200) dead in upper lake, peak of spawning in others, excellent escapement in Big Fish Lake, fair in others
313-30.02	Caribou River	26-Jul	207	Good	0	2,800	0	0	0	Shaul	Partial survey-Trader Mountain spawning grounds
		06-Aug	218	Good	0	150	0	0	0	Shaul	Divide Lake
313-30.03	Nelson River Hoodoo Lake \1	11-Jul	192	Good	1	0	0	0	0	Berceli	Partial survey-weir to large lakes on left, king survey, saw only 1 school of 500 sockeye
		13-Jul	194	Good	1,800	0	0	0	0	Shaul	King survey, saw several thousand sockeye, includes 350 kings in Peterson Creek
		31-Aug	243	Good	0	0	240	0	0	Berceli	Fish from weir to Caribou junction of River
		05-Sep	248	Fair	0	0	10,000	0	0	Shaul	6,000 cohos from bends below Peterson Creek to weir, poor visibility in lower river, good visibility in upper river
		10-Sep	253	Good	0	0	21,000	0	0	Shaul	Partial survey-Forks to Left Creek, fish up to about 1 mile above weir, 5,000 below Peterson Creek, Cherokee survey
		11-Sep	254	Good	0	0	30,000	0	0	Shaul	All but 1,000 cohos above Peterson Creek, Cessna 180 survey
		19-Sep	262	Good	0	0	20,500	0	0	Shaul	200 in lower end, 1,000 in Lake, balance between Peterson Creek and Left Creek, highest concentration near weir, Cherokee survey
313-30.03	Peterson	11-Jul	192	Good	60	0	0	0	0	Berceli	All kings in first few bends of river near mouth
313-30.77	Coastal Lake	19-Sep	262	Good	0	6,400	0	0	0	Shaul	2,900 in Drill Hole Lake, balance in Coastal Lake

-Continued-

Table 51. (page 6 of 10)

Stream Number	Stream Name/Location	--Calendar-- Date	Day	-Survey- Condition	Chinook	Sockeye	Coho	Pink	Chum	Observer	Remarks
					----------Species----------						
314-20.02	Doe Valley	15-Jul	196	Poor	0	0	0	0	0	Berceli	
		13-Aug	225	Good	0	0	0	0	1,200	Shaul	1,000 chums at mouth
314-20.03	Buck Valley	15-Jul	196	Poor	0	0	0	0	0	Berceli	
		13-Aug	225	Good	0	0	0	0	3,000	Shaul	2,000 chums at mouth
314-20.04	Deer Valley	15-Jul	196	Good	0	0	0	0	170	Berceli	Chums mostly schooled on flats
		13-Aug	225	Good	0	20	0	0	9,400	Shaul	2,000 chums at mouth, 1,600 chums in lower East Fork
314-20.05	Portage Valley	13-Aug	225	Good	0	0	0	0	310	Shaul	2,200 chums at mouth, 10 chums in slough in southwest corner of bay
314-20.06	Grass Valley	15-Jul	196	Good	0	0	0	0	30	Berceli	30 chums at mouth, chums in stream all at lower end
		07-Aug	219	Good	0	400	0	0	10,000	Shaul	2,500 chums at mouth, helicopter survey
		13-Aug	225	Good	0	400	0	0	6,800	Shaul	3,000 chums at mouth
314-20.07	Lawrence Valley	15-Jul	196	Good	0	0	0	0	400	Berceli	
		07-Aug	219	Good	0	0	0	100,000	28,000	Shaul	30,000 pinks and chums mixed at mouth, helicopter survey, did not survey left fork
		13-Aug	225	Good	0	0	0	47,000	11,000	Shaul	15,000 chums at mouth, 17,000 were in left fork
314-20.08	Mine Harbor	Not surveyed									
314-20.09	Coal Creek	15-Jul	196	Good	0	0	0	0	0	Berceli	Poor visibility off one mouth, no fish in stream
		07-Aug	219	Good	0	0	0	0	18,500	Shaul	Best escapement in years
314-30.04	Mud Bay	13-Aug	225	Good	0	0	0	0	1,300	Shaul	
314-30.05	Mud Bay	13-Aug	225	Good	0	0	0	0	1,400	Shaul	
314-30.07	Right Head Creek	13-Aug	225	Good	0	0	0	0	700	Shaul	500 chums in east slough
314-30.09	Right Head Creek	13-Aug	225	Good	0	0	0	0	1,500	Shaul	500 chums at mouth

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Table 51. (page 7 of 10)

Stream Number	Stream Name/Location	--Calendar-- Date	Day	-Survey- Condition	Chinook	Sockeye	Coho	Pink	Chum	Observer	Remarks
					----------Species----------						
314-30.10	Left Head Creek	13-Aug	225	Good	0	0	0	0	400	Shaul	
315-10.01	Frank's Lagoon	15-Jul	196	Poor	0	0	0	0	370	Berceli	Heavy algal bloom in lower stream
		26-Jul	207	Poor	0	0	0	0	200	Shaul	
315-10.02	King Salmon	26-Jun	177	Good	300	0	0	0	0	Shaul	Partial survey-1 mi.
		15-Jul	196	Good	400	0	0	0	0	Berceli	Partial survey- to upper bend
		10-Sep	253	Good	0	0	100	0	0	Shaul	Partial survey-1 mi.
315-11.02	Bear River C & E /2	15-Jul	196	Good	270	0	0	0	0	Berceli	Partial survey to D fork, most fish still in lower section
315-12.00	Sandy River & Lake	26-Jun	177	Good	0	6,000	0	0	0	Shaul	Fish along west shore of lake, nothing seen below, 10-15 seals at mouth
		15-Jul	196	Fair	0	17,500	0	0	0	Berceli	Partial survey - Lake section, fish along upper end of lake, choppy, schools appear as blobs
		26-Jul	207	Fair	600	15,000	0	0	0	Shaul	Half on spawning grounds, remainder in lake off drop off, river muddy
316-10.01	Lime Creek	Not surveyed									
316-10.02	Unnamed	Not Surveyed									
316-10.04	Three Hills	26-Jul	207	Good	0	100	0	0	0	Shaul	
316-10.05	Ocean River	01-Jul	182	Good	10	3,000	0	0	0	Shaul	2,200 sockeye schooled in Wildman Lake, 500 at mouth of Wildman branch outlet, balance in lower river, kings in Finger Lake
		06-Jul	187	Good	0	4,200	0	0	0	Manthey	3,800 in Wildman Lake, balance in river
		26-Jul	207	Good	20	4,300	0	0	0	Shaul	Additional fish to those observed on 7/01, 2,200 schooled in Wildman, balance spawning below Finger Lake
		10-Sep	253	Good	0	0	1,000	0	0	Shaul	At mouth of Wildman Lakes tributary
316-10.06	Willie Creek	26-Jun	177	Good	0	2,000	0	0	0	Shaul	All schooled in lake portion, none on spawning grounds
		01-Jul	182	Good	0	6,500	0	0	0	Shaul	None on spawning grounds
		06-Jul	187	Good	0	7,500	0	0	0	Manthey	
		26-Jul	207	Good	0	8,100	0	0	0	Shaul	1,700 spawning, balance in schools
		10-Sep	253	Good	0	0	0	0	0	Shaul	Nothing

-Continued-

Table 51. (page 8 of 10)

Stream Number	Stream Name/Location	--Calendar-- Date	Day	-Survey- Condition	Chinook	Sockeye	Coho	Pink	Chum	Observer	Remarks
					----------Species----------						
316-20.01	Ilnik Estuary &	26-Jun	177	Good	0	7,200	0	0	0	Shaul	6,200 above weir
		01-Jul	182	Good	0	14,400	0	0	0	Shaul	1,000 below weir, none in lower river
		06-Jul	187	Good	0	24,000	0	0	0	Manthey	5,500 below weir, balance up to lake
		26-Jul	207	Good	0	8,000	0	0	0	Shaul	All spawning
		02-Sep	245	Good	0	0	18,300	0	0	Shaul	Partial survey-lake and lagoon, 17,000 in lake near points on beach side
		10-Sep	253	Good	0	0	24,000	0	0	Shaul	Partial survey-lake and lagoon, 1,000 in lagoon, balance in lake well above village
316-20.04	Unangashak River	10-Sep	253	Poor	0	0	0	0	0	Shaul	Too murky
317-2	Charles	28-Jul	209	Good	100	460	0	0	300	Berceli	
317-4 A&B	Bluff Creek	28-Jul	209	Good	320	3,630	0	0	1,530	Berceli	
317-6 A	Highland Creek	28-Jul	209	Good	15	170	0	0	50	Berceli	
317-7 A	Meshik River	01-Jul	182	Poor	100	0	3,800	0	0	Shaul	Partial survey-lower 10 mi., muddy, count likely low
		18-Jul	199	Good	0	22,540	0	0	190	Schmidt	Partial survey - Scottys Island, most fish at Island confluence, few groups upstream, species ID difficult, some or most of these sockeye may have been chum or chinook
		28-Jul	209	Poor	0	0	0	0	340	Berceli	
		28-Aug	240	Good	0	0	0	0	0	Owen	Partial survey-to Plenty Bear
		02-Sep	245	Good	0	0	19,000	0	0	Shaul	Partial survey-to Plenty Bear
317-7 B	Braided Creek	28-Jul	209	Good	70	0	0	0	200	Berceli	
317-7 C	Landlocked Creek	28-Jul	209	Good	0	500	0	0	200	Berceli	
317-7 D	Bluff Creek (branch of Landlocked Cr.)	28-Jul	209	Good	0	5,000	0	0	1,500	Berceli	
317-7 E	Blue Violet Creek	28-Jul	209	Good	30	1,600	0	0	900	Berceli	Blue Violet Creek only
		28-Jul	209	Good	170	1,400	0	0	0	Berceli	Forks of Sleepy and Black creeks
317-7 F	Wolf Creek	28-Jul	209	Good	18	500	0	0	140	Berceli	

-Continued-

Table 51. (page 9 of 10)

Stream Number	Stream Name/Location	--Calendar-- Date	Day	-Survey- Condition	Chinook	Sockeye	Coho	Pink	Chum	Observer	Remarks
					----------Species----------						
317-7 H	Shoe Creek	28-Jul	209	Good	16	0	0	0	470	Berceli	
317-7 K	Unnamed	28-Jul	209	Good	17	770	0	0	0	Berceli	
317-7 L	Unnamed	28-Jul	209	Good	4	300	0	0	0	Berceli	
317-7 M	Unnamed	28-Jul	209	Good	0	1,600	0	0	0	Berceli	30 carcasses
317-7 N	Unnamed	28-Jul	209	Good	34	350	0	0	230	Berceli	
317-7 O	Plenty Bear Creek	28-Jul	209	Poor	36	0	0	0	470	Berceli	Poor lighting
317-7 O-A	Unnamed	28-Jul	209	Good	10	0	0	0	170	Berceli	
317-7 P	Waterfall Creek	28-Jul	209	Poor	0	0	0	0	0	Berceli	Very murky
317-7 R	Rainbow Creek	28-Jul	209	Poor	0	0	0	0	40	Berceli	
317-7 T	Cub Creek	28-Jul	209	Poor	0	0	0	0	0	Berceli	
317-20.09	Barabara Creek	Not Surveyed									
317-20.08	Birthday Creek	28-Jul	209	Good	0	0	0	0	480	Berceli	
318-20.04	Mud Creek	28-Jul	209	Good	0	0	50	0	0	Owen	Two nets completely across creek which were repeatedly pulled out by a sportfisherman
		02-Sep	245	Good	0	0	4,000	0	0	Shaul	Nothing in lower mile
318-20.06	A Cinder River	29-Jul	210	Good	21	3,840	0	0	370	Berceli	Most fish at head of system
		28-Aug	240	Fair	0	0	0	0	0	Owen	
		02-Sep	245	Good	0	0	3,000	0	0	Shaul	
318-20.06	D Lava Creek	29-Jul	210	Good	50	2,870	0	0	400	Berceli	Includes High Creek count
318-20.06	E High Creek	See 20.06									

-Continued-

Table 51. (page 10 of 10)

Stream Number	Stream Name/Location	--Calendar-- Date	Day	-Survey- Condition	Chinook	Sockeye	Coho	Pink	Chum	Observer	Remarks
					----------Species----------						
318-20.06	H Meloy Creek	29-Jul	210	Good	30	1,280	0	0	150	Bercelí	
318-20.06	J Wiggly Creek	29-Jul	210	Good	15	0	0	0	2,200	Bercelí	
318-20.06	K Ray Creek	Not surveyed									
318-20.06	L Creek	29-Jul	210	Good	15	3,840	0	0	350	Bercelí	

1/ See Nelson River weir counts, and total escapement, the highest daily weir count was used for the peak count.

2/ See Bear River weir counts, and total escapement, the highest daily weir count was used for the peak count.

Table 52. South Peninsula sockeye indexed total escapements by section, 1962-1990[a].

Year	Northwest and Southwest Stepovak	Shumagin Islands	Mino Creek-Little Coal Bay	Pavlof Bay	Canoe Bay	Cold Bay	Thin Point	Morzhovoi Bay	Ikatan Bay
1962	5,000	4,000	100	(500)	200	-	-	-	-
1963	7,600	2,700	100	(500)	0	-	-	-	-
1964	5,800	700	0	900	0	-	-	-	-
1965	6,000	2,100	0	1,500	0	-	-	-	-
1966	10,000	900	100	200	0	-	-	-	-
1967	6,200	4,000	0	400	0	-	-	-	-
1968	3,600	2,400	0	400	0	2,300	2,200	1,500	400
1969	19,200	1,600	200	500	0	5,200	2,100	500	200
1970	4,600	4,400	500	1,400	300	1,000	1,100	(2500)	700
1971	11,100	2,800	500	1,300	0	900	1,300	200	1,300
1972	6,500	2,000	0	400	0	1,100	1,300	200	400
1973	1,200	1,000	0	500	0	1,500	700	400	1,000
1974	61,500	7,900	0	200	200	3,500	16,000	5,300	1,000
1975	22,300	11,600	500	1,600	1,600	5,000	6,100	2,200	800
1976	29,700	7,500	1,000	2,800	300	4,900	20,500	1,700	1,300
1977	17,000	9,200	2,000	4,500	500	7,600	17,700	3,800	2,600
1978	22,200	9,000	2,700	2,100	1,500	14,700	7,400	2,600	(2600)
1979	20,000	13,000	200	1,100	1,500	7,800	6,900	700	2,100
1980	12,000	6,300	1,100	1,000	5,500	4,800	12,000	1,300	1,000
1981	18,000	4,000	500	5,500	2,000	5,600	7,500	1,200	1,400
1982	9,100	10,000	800	1,000	1,000	2,600	8,800	4,200	1,700
1983	21,500	10,000	1,600	1,100	5,000	8,000	6,500	3,700	1,800
1984	18,600	10,600	100	700	9,000	6,600	7,000	500	1,800
1985	14,000	7,800	500	900	1,000	5,000	4,600	2,100	3,900
1986	10,500	6,800	100	1,500	2,700	1,800	12,400	5,500	1,800
1987	11,400	2,000	500	1,200	1,300	7,800	8,700	7,000	2,100
1988	19,300	3,100	600	1,900	1,500	9,500	23,500	7,300	2,300
1989	16,700	7,300	600	800	1,100	5,900	21,500	14,300	3,000
1990	15,000	5,900	1,200	1,000	600	6,600	15,000	40,900	1,700

[a]Figures in parenthesis are extrapolated estimates.

Table 53. South Peninsula pink salmon indexed total escapements by section, 1962-1990[a].

Year	Stepovak Flats & East Stepovak	Northwest and Southwest Stepovak	Balboa Bay	Shumagin Islands	Beaver Bay	Mino Creek-Little Coal Bay	Pavlof Bay	Canoe Bay	Volcano Bay	Belkofski Bay	Deer Island	Cold Bay	Thin Point	Morzohvoi Bay	Ikatan Bay	Unimak District	Bechevin[b] Bay
1962	48,000	122,300	(24,500)	112,900	(17,500)	278,700	213,200	9,000	5,000	95,300	229,100	(7,000)	31,300	63,000	170,000	172,000	4,000
1963	87,000	197,000	53,800	52,000	21,700	290,100	158,900	26,000	7,200	150,200	225,300	9,700	(4,000)	15,000	(10,000)	(10,000)	4,400
1964	35,000	155,300	25,200	125,400	30,500	316,000	205,000	(10,000)	5,100	(85,000)	201,000	24,500	39,400	(41,000)	(110,000)	27,500	(15,000)
1965	100,000	160,700	32,000	50,900	8,400	255,100	158,600	24,200	21,000	53,000	135,900	7,000	13,700	6,100	5,000	3,800	900
1966	107,000	191,500	(70,000)	(83,000)	(10,000)	108,600	55,200	2,100	0	30,000	32,600	13,300	5,900	2,000	3,900	4,300	1,300
1967	53,200	67,000	25,100	32,000	1,800	73,000	62,600	12,600	21,000	72,000	15,600	300	5,100	2,500	700	(1,000)	500
1968	25,000	(75,000)	63,600	51,200	(8,000)	96,200	132,600	76,500	(7,200)	54,000	67,000	97,600	9,400	14,000	29,000	17,000	25,000
1969	180,000	369,300	187,200	112,900	29,400	484,900	438,500	104,000	115,000	244,000	185,100	4,000	14,700	1,000	3,500	1,400	2,100
1970	59,000	273,900	38,700	166,500	(15,000)	173,400	186,500	94,900	10,500	65,800	120,500	29,200	7,900	9,300	25,000	22,800	11,100
1971	15,700	101,200	13,600	32,000	(12,000)	190,100	76,200	47,200	13,500	58,100	136,700	200	3,600	800	1,500	300	8,400
1972	1,300	20,900	1,100	9,900	0	13,200	29,400	6,000	7,000	8,000	7,000	1,100	1,100	3,700	1,500	200	1,200
1973	9,500	17,500	(6,000)	12,000	(500)	21,500	10,000	8,700	7,300	6,300	7,100	200	4,000	(200)	0	0	(200)
1974	4,100	41,400	7,500	(40,000)	(6,000)	28,000	106,800	4,800	3,000	10,100	16,100	8,200	1,600	300	2,500	(4,000)	(23,000)
1975	20,000	110,000	8,000	52,200	2,500	90,400	68,900	5,800	70,000	58,600	56,100	1,100	5,200	2,100	1,000	200	500
1976	30,000	204,600	42,500	331,000	(14,000)	116,900	267,000	78,000	117,600	109,600	47,800	50,100	6,000	13,400	10,900	(17,000)	37,200
1977	101,400	360,000	92,700	299,600	82,500	662,000	442,300	129,000	137,500	239,200	101,200	8,300	5,100	8,100	9,500	400	6,200
1978	77,000	449,200	108,200	199,600	60,500	498,100	395,700	178,000	193,800	221,200	184,000	76,900	15,700	90,000	75,000	35,800	90,400
1979	40,000	302,400	133,600	(131,400)	65,700	648,100	543,100	260,800	60,000	139,200	256,100	5,900	6,000	9,000	24,400	3,800	9,300
1980	56,800	344,100	77,700	133,600	32,400	297,500	425,200	43,100	56,200	230,200	350,200	49,600	53,000	76,500	320,500	95,000	94,000
1981	78,800	460,000	82,000	89,600	53,600	700,000	325,000	86,000	107,000	163,600	107,500	7,900	18,200	9,500	17,300	800	5,700
1982	25,000	313,400	50,000	140,000	50,000	419,200	462,300	73,300	41,900	106,300	157,700	95,100	34,900	48,000	187,900	88,000	51,500
1983	42,700	115,300	27,300	51,700	4,000	160,400	172,500	65,300	26,200	50,900	89,400	11,100	15,700	4,400	13,500	800	3,900
1984	101,000	418,100	135,100	165,800	49,200	876,800	708,800	72,000	143,600	207,000	446,000	143,200	77,000	16,500	199,000	52,900	33,300
1985	34,200	216,300	34,500	125,600	23,300	380,200	378,500	36,700	24,200	82,100	206,300	7,100	30,300	8,500	10,500	15,900[c]	1,400
1986	50,700	222,000	41,200	176,000	9,400	239,700	403,800	42,600	78,800	111,600	181,500	29,900	39,700	14,800	58,500	16,400[c]	12,600
1987	89,100	290,500	58,100	174,700	48,800	321,700	282,300	39,200	19,800	50,400	137,400	7,000	7,500	2,900	5,800	5,300	1,100
1988	79,300	450,400	82,200	257,200	47,800	248,900	390,000	80,700	127,500	250,100	482,000	33,900	55,600	21,600	103,900	18,500	26,700
1989	85,900	189,200	74,400	115,000	68,000	453,400	183,200	10,300	37,200	104,500	401,100	86,100	36,400	10,200	6,800	(9,400)	0
1990	69,600	186,100	74,700	154,000	7,200	224,100	262,800	39,700	56,500	132,000	218,000	37,200	38,700	14,700	66,400	16,700[c]	21,800

[a]Figures in parenthesis are extrapolated estimates.

[b]Bechevin Bay is considered part of the North Peninsula.

[c]Includes Sanak Island, which accounted for 15,500, 5,400, and 5,700 during 1985, 1986, and 1990 respectively.

Table 54. South Peninsula chum indexed total escapements by section, 1962-1990[a].

Year	Stepovak Flats & East Stepovak	Northwest and Southwest Stepovak	Balboa Bay	Shumagin Islands	Beaver Bay	Mino Creek-Little Coal Bay	Pavlof Bay	Canoe Bay	Volcano Bay	Belkofski Bay	Deer Island	Cold Bay	Thin Point	Morzohvoi Bay	Ikatan Bay	Unimak District	Bechevin[b] Bay
1962	12,000	14,000	(43,700)	10,000	(6,000)	16,900	(26,500)	109,500	54,900	29,000	0	(13,000)	14,200	7,700	42,000	0	48,500
1963	29,400	71,900	43,900	1,200	0	300	(10,000)	106,300	17,900	104,600	0	46,400	(9,000)	4,800	(1,000)	(0)	22,300
1964	18,000	17,500	24,200	100	4,500	1,500	(25,000)	70,000	70,400	51,700	0	114,300	19,500	37,100	(1,000)	0	(16,000)
1965	60,000	23,500	29,900	1,100	200	100	(15,000)	73,500	6,300	7,000	0	10,400	500	500	0	0	(1,800)
1966	110,000	33,300	(100,000)	0	0	2,000	(20,000)	89,500	29,900	11,000	0	14,300	3,000	7,700	700	600	10,000
1967	15,700	5,500	27,100	1,100	3,300	0	(12,000)	68,100	19,100	21,000	0	5,500	600	3,700	200	(0)	15,400
1968	23,000	(11,100)	31,600	3,700	(6,500)	800	23,300	91,700	(8,700)	29,500	0	31,400	3,100	12,700	2,000	0	19,800
1969	6,000	9,400	16,400	2,400	9,800	0	(5,000)	47,900	2,000	10,000	0	20,100	200	5,200	0	200	8,000
1970	25,000	24,700	29,900	0	(15,000)	100	13,000	64,000	25,200	36,500	0	34,100	6,300	6,400	300	0	(5,600)
1971	56,100	49,900	26,500	300	(20,000)	200	(15,000)	31,100	24,100	65,500	0	25,600	8,600	20,000	300	0	5,900
1972	19,000	20,300	15,100	6,600	5,500	0	8,100	70,400	16,000	37,300	0	25,700	17,000	12,900	400	200	11,200
1973	27,000	4,500	8,700	4,400	(7,500)	800	19,500	58,500	16,000	34,400	0	11,600	10,900	8,000	200	(500)	(7,500)
1974	25,000	11,000	8,200	(1,500)	9,600	400	(22,000)	92,100	27,400	29,100	0	16,400	5,200	7,900	1,000	(500)	(6,100)
1975	24,000	43,100	(9,000)	8,300	4,900	1,500	8,200	61,200	11,500	4,800	0	8,200	800	7,800	0	0	17,300
1976	20,000	19,300	43,100	10,100	(10,400)	0	17,500	104,900	29,500	30,000	0	24,300	7,400	9,900	200	(600)	38,300
1977	126,200	47,300	55,300	14,000	15,000	0	60,100	183,000	76,000	60,300	0	85,000	26,300	25,300	0	1,100	54,300
1978	74,000	76,900	53,300	26,000	7,000	500	43,100	105,400	54,600	32,500	0	103,600	10,400	13,000	200	0	29,500
1979	(50,000)	50,400	28,500	(5,000)	200	0	(17,000)	151,600	41,500	17,800	0	17,300	17,500	12,000	1,800	500	12,400
1980	26,100	44,300	28,300	1,100	19,000	0	15,600	107,200	11,900	31,500	0	50,600	11,800	14,000	0	1,000	41,000
1981	34,000	23,900	42,000	5,500	13,000	0	13,600	102,500	30,400	34,900	0	50,400	19,500	11,500	0	100	29,600
1982	20,000	26,900	14,000	3,000	10,000	0	9,900	119,200	56,000	24,100	0	74,600	15,000	14,000	200	0	20,100
1983	40,200	51,100	46,600	11,800	10,700	0	12,000	156,500	37,700	16,900	0	33,500	21,300	7,700	500	0	15,500
1984	54,200	42,400	35,700	56,300	62,400	0	29,500	165,500	79,800	50,500	0	78,000	23,000	22,400	0	0	30,400
1985	34,800	16,900	17,500	24,300	18,800	0	22,300	150,100	49,300	31,100	0	75,200	44,000	19,200	0	0	21,900
1986	44,300	38,700	33,300	1,500	9,900	0	23,100	88,800	82,000	64,700	0	111,800	39,600	6,500	0	100	15,500
1987	91,000	28,100	35,600	12,600	5,600	4,100	43,000	109,200	69,900	57,400	0	89,100	51,300	23,400	0	400	34,700
1988	21,000	20,700	23,300	7,600	12,000	2,000	44,600	136,800	28,400	63,100	0	101,900	17,500	10,100	5,200	1,100	25,000
1989	55,400	11,700	4,000	26,000	26,000	0	18,200	71,300	15,600	27,900	0	61,000	10,000	3,900	2,500	500	9,100
1990	40,600	34,600	18,500	12,000	8,900	400	28,500	67,400	36,000	45,500	0	34,000	20,100	6,400	800	1,000	13,300

[a]Figures in parenthesis are extrapolated estimates.

[b]Bechevin Bay is considered part of the North Peninsula.

Table 55. Indexed total escapement of sockeye salmon in some North Peninsula Areas (Fish in Thousands)

Year	Ilnik River	Willie Creek	Ocean River	Sandy River	Bear River	Nelson Lagoon	Whaleback Mtn. Creek	Cristianson Lgn. Crks.
1960	7.0	45.0	14.6 [a]	27.5	185.0	48.0	14.5	1.3
1961	4.5	12.6	0.6 [a]	57.3	200.0	138.2	-	-
1962	3.3	2.0	0.1 [a]	25.0	190.0	54.2	-	-
1963	4.6	2.8	2.5 [a]	38.6	200.0	31.0	12.5	0.7
1964	-	2.4	0.6 [a]	40.2	210.0	80.0	16.7	1.5
1965	7.0	2.7	2.3 ?	22.0	115.0	37.0	5.0	0.4
1966	14.0	12.6	4.2 ?	5.0	180.0	36.5	8.7	0.6
1967	14.0	3.8	5.0 ?	30.0	170.0	42.0	-	0.6
1968	11.2	-	0.6 ?	16.0	150.0	31.0	5.0	-
1969	-	-	0.5 [a]	45.0	361.0	78.5	30.0	3.0
1970	7.6	7.0	0.7 [a]	25.0	269.0	82.4	-	-
1971	9.0	16.1	1.0 [a]	30.0	251.0	60.1	27.5	2.0
1972	5.4	6.0	1.7 [b]	8.4	127.0	28.0	2.5	1.4
1973	13.1	1.7	1.2 [b]	5.1	125.0	18.7	4.0	0.1
1974	10.3	1.5	2.7 [b]	16.5	250.0	39.9	2.9	0.2
1975	18.0	5.3	17.2 [b]	40.0	270.0	138.6	10.0	0.4
1976	10.2	4.1	0.8 [a]	43.0	285.0	108.9	18.0	1.4
1977	9.2	8.2	3.2 [a]	50.2	215.0	155.0	12.5	1.2
1978	12.9	5.0	2.8 [a]	64.0	730.0	304.3	10.0	0.2
1979	79.2	6.0	12.0 [a]	61.0	952.0	360.1	24.4	1.0
1980	49.6	20.0	28.0 [a]	76.0	670.8	352.6	75.6	0.3
1981	-	-	- [a]	51.5	689.9	251.0	57.0	2.1
1982	12.0	13.6	16.9 [a]	61.3	300.0	179.6	25.0	0.5
1983	11.8	3.6	13.2 [a]	28.0	329.9	128.8	12.0	1.5
1984	12.4	3.7	- [a]	19.0	394.6	251.0	61.0	2.0
1985	13.1	3.6	4.3 [a]	11.5	440.0	318.5	24.4	1.4
1986	44.5	15.1	7.2 [b]	6.9	273.4	117.9	36.3	0.5
1987	15.2	8.5	7.0 [b]	8.7	252.4	155.7	23.8	0.4
1988	14.0	5.2	7.7 [a]	34.5	310.1	142.5	28.6	1.1
1989	12.0	4.3	0.2 [a]	36.0	451.0	206.8	45.0	1.7
1990	9.4	17.1	9.2 [a]	17.5	546.8	269.2	40.6	5.0

[a] Years Ocean River emptied into Ilnik Lagoon.
[b] Years Ocean River emptied directly into Bering Sea.

Table 56. Indexed total escapement of chum salmon in some major North Peninsula production areas (Fish in Thousands)

Year	Frank's Lagoon	Moller Bay	Herendeen Bay	Nelson Lagoon	Moffet Bay	Izembek Bay	St. Catherine Cove
1960	3.0	27.1	52.5	-	76.4	18.0	5.2
1961	3.5	14.4	24.0	9.1	-	11.0	-
1962	1.5	2.0	16.4	9.7	-	48.0	21.6
1963	0.5	6.4	13.5	7.0	91.5	44.0	6.6
1964	2.2	11.0	25.5	2.0	56.5	42.0	-
1965	1.2	-	5.6	4.0	-	9.5	0.6
1966	0.7	10.7	45.5	17.0	-	19.5	5.0
1967	-	-	19.3	29.8	17.8	15.0	3.6
1968	6.0	(3.6)	45.5	18.1	89.3	52.8	4.4
1969	-	-	10.0	13.0	72.3	23.0	6.3
1970	0.5	11.6	31.2	36.0	(32.3)	25.1	3.1
1971	0	4.4	10.2	19.0	28.0	26.1	3.8
1972	4.3	-	6.0	16.8	29.1	36.7	5.9
1973	0.6	(1.4)	2.8	12.7	41.1	27.0	8.4
1974	1.3	-	2.8	8.3	34.1	41.9	3.5
1975	2.6	(1.2)	6.3	4.5	35.8	38.3	12.7
1976	6.4	9.1	19.4	42.5	90.8	36.5	5.4
1977	10.0	32.2	77.5	83.3	254.9	126.5	14.6
1978	-	(9.8)	64.3	10.2	85.7	48.4	12.0
1979	5.6	13.0	18.0	37.0	130.0	48.0	5.2
1980	17.8	37.2	79.0	164.0	289.3	84.8	13.1
1981	22.1	34.2	50.1	57.0	187.0	48.0	10.0
1982	41.8	8.8	(152.3)	29.1	130.4	38.6	10.8
1983	15.0	16.4	108.0	14.0	115.5	57.2	8.3
1984	6.8	18.6	22.7	49.0	354.2	73.3	7.7
1985	5.2	6.9	64.8	13.0	138.8	59.9	7.5
1986	5.7	11.3	44.5	0.8	121.1	21.3	6.3
1987	4.9	19.6	69.0	5.2	217.6	68.4	17.9
1988	2.0	17.2	59.4	11.0	237.3	67.1	10.7
1989	2.2	6.5	76.9	0.8	57.2	33.4	5.1
1990	0.6	5.3	96.3	-	73.6	18.9	4.3

- Insufficient data for estimate.

() Estimate based on incomplete data.

Table 57. Peak and estimated total salmon escapement counts by district and stream for the South Peninsula, 1990.

Stream Number	Stream Name/Location	Species: Sockeye Peak	Sockeye Total	Coho Peak	Coho Total	Pink Peak	Pink Total	Chum Peak	Chum Total
SOUTHEASTERN DISTRICT									
281-35.07	Bluff Point	0	0	0	0	0	0	0	0
281-35.06	Boulder Bay	0	0	1,500	3,600	2,250	5,000	800	1,648
281-35.05	Fox Bay	0	0	0	0	1,500	6,700	0	0
281-35.04	Fox Bay	0	0	500	1,200	600	6,100	0	0
281-35.02	Fox Bay	0	0	200	480	1,600	6,800	0	0
281-34.08	Island Bay	0	0	0	0	500	2,500	0	0
281-34.07	Island Bay	0	0	0	0	25	275	0	0
281-34.06	Island Bay	0	0	150	360	3,500	9,000	0	0
281-34.05	Island Bay	0	0	150	360	1,750	7,250	0	0
281-34.04	Unnamed	0	0	0	0	250	550	0	0
281-34.03	Stonehouse	0	0	0	0	4,800	20,000	0	0
281-34.02	Osterback	0	0	20	48	5,500	10,757	0	0
281-34.01	Granville-Portage Inlet	0	0	700	1,680	1,200	1,400	2,500	6,793
281-33.05	Stepovak River	0	0	0	0	1,500	1,850	15,300	27,604
281-33.06	Stepovak Flats	0	0	250	600	0	0	650	1,260
281-33.04	Big River	0	0	0	0	1,600	1,973	900	1,114
281-33.03	Louie's Corner	0	0	600	1,440	0	0	4,400	6,539
281-33.02	Ramsey Bay	0	0	300	720	0	0	900	1,902
281-33.01	Ramsey Bay	0	0	0	0	0	0	220	453
281-32.07	Grub Gulch	0	0	1,100	2,640	25,800	30,448	1,050	2,080
281-32.05	Clark Bay	0	0	0	0	6,400	12,400	1,000	2,747
281-32.04	Little Norway	0	0	400	960	4,500	11,280	10,000	20,523

-Continued-

Table 57. (Page 2 of 9)

Stream Number	Stream Name/Location	Species							
		Sockeye		Coho		Pink		Chum	
		Peak	Total	Peak	Total	Peak	Total	Peak	Total
281-31.03	Orzinski (Orzenoi) Lake /1	4,573	15,000	1,200	2,880	14,000	22,269	200	412
281-20.04	Windbound Bay	0	0	0	0	600	1,800	0	0
281-20.03	Chichagof Stream	0	0	0	0	1,500	1,663	0	0
281-20.02	Chichagof	0	0	300	720	3,300	3,532	3,200	4,480
281-20.01	Chichagof Bay	0	0	0	0	4,300	7,580	0	0
281-10.04	West Cove	0	0	0	0	1,700	3,349	0	0
281-10.03	Suzy Creek	0	0	0	0	21,000	43,426	0	0
281-10.02	Dorenoi Minor	0	0	0	0	3,600	8,764	600	686
281-10.01	Dorenoi Major	0	0	0	0	6,700	16,457	2,100	2,400
283-90.04	San Diego Bay	0	0	0	0	0	0	1,400	2,840
283-90.03	San Diego	0	0	0	0	0	0	50	103
283-90.04	San Diego Lagoon	0	0	0	0	0	0	20	41
283-90.02	Rough Beach	0	0	2,000	4,800	28,000	35,220	0	0
283-90.01	Swedania Point	0	0	500	1,200	8,500	10,782	0	0
282-13.01	Unga Spit	Not Surveyed							
282-13.02	Dry Lagoon	0	0	2,300	5,520	20,000	21,967	4,250	8,755
282-13.03	Bay Point	0	0	300	720	10,400	22,187	750	2,250
282-13.04	Pinnacle Point	0	0	0	0	27,000	28,296	0	0
282-13.05	Unnamed	Not Surveyed							
282-10.02	Apollo Minor	0	0	0	0	1,250	2,667	0	0
282-10.03	Apollo Creek	0	0	0	0	1,300	1,500	100	100
282-10.04	Acheredin Lake	5,500	6,875	0	0	0	0	0	0
282-10.11	Apollo Gold Mine	0	0	0	0	5,800	9,487	0	0

-Continued-

Table 57. (Page 3 of 9)

Stream Number	Stream Name/Location	Species							
		Sockeye		Coho		Pink		Chum	
		Peak	Total	Peak	Total	Peak	Total	Peak	Total
282-10.12	Unga Cape	0	0	0	0	0	0	0	0
282-10.13	Baralof Bay	40	50	400	960	400	788	50	50
282-10.14	Squaw Harbor Minor	0	0	0	0	2,000	3,567	0	0
282-10.15	Squaw Harbor Major	0	0	2,000	4,800	21,000	35,721	0	0
282-10.16	Ben Green Bight	0	0	100	240	5,500	18,000	0	0
282-12.10	No Name	0	0	0	0	500	500	0	0
282-12.09	South Quartz Point	0	0	0	0	400	600	0	0
282-12.08	South Quartz Point	0	0	0	0	275	350	0	0
282-12.07	Zachary Bay	0	0	0	0	125	175	0	0
282-12.06	Zachary Bay	0	0	0	0	300	550	50	50
282-12.05	Zachary Bay	0	0	0	0	2,100	2,350	50	550
282-12.04	Zachary Bay	0	0	0	0	750	3,750	500	500
282-12.03	Zachary Bay	0	0	0	0	200	750	0	0
282-12.02	Zachary Bay	0	0	0	0	2,500	2,550	0	0
282-12.01	Coal Harbor	0	0	0	0	125	246	0	0
282-10.18	Humbolt Creek	Not Surveyed							
282-11.01	Salmon Ranch	0	0	0	0	2,800	3,100	0	0
282-11.03	Fox Hole	0	0	0	0	3,800	4,400	0	0
282-11.06	Korovin Island	Not Surveyed							
282-20.00	Sanborn Harbor	Not Surveyed							
282-20.03	Sanborn Harbor	Not Surveyed							
282-20.04	Sanborn Harbor	Not Surveyed							
282-20.05	Falmouth Harbor	Not Surveyed							

-Continued-

Table 57. (Page 4 of 9)

Stream Number	Stream Name/Location	Species: Sockeye Peak	Sockeye Total	Coho Peak	Coho Total	Pink Peak	Pink Total	Chum Peak	Chum Total
283-80.16	Ballast	0	0	0	0	0	0	0	0
283-80.15	Coleman	0	0	500	1,200	2,300	4,467	1,400	4,400
283-80.14	Johnson	0	0	0	0	7,000	13,790	700	2,700
283-80.12	Foster's Camp	0	0	0	0	500	985	0	0
283-80.11	Monolith Point	0	0	0	0	2,000	3,940	0	0
283-80.09	Foster's Creek	0	0	200	480	14,000	24,010	3,600	7,416
283-80.08	Lefthand Bay	0	0	1,900	4,560	9,000	32,067	4,000	4,000
283-80.06	Cape Aliaksin East	0	0	0	0	11,500	21,800	0	0
283-80.05	Cape Aliaksin Center	0	0	0	0	2,400	2,880	200	300
283-80.04	Cape Aliaksin West	0	0	0	0	9,000	12,870	0	0
283-70.05	Beaver River	0	0	2,200	5,280	6,200	12,214	5,300	11,117
283-70.04	Smiley's	0	0	0	0	800	1,576	0	0
SOUTHEASTERN DISTRICT TOTAL		10,113	21,925	17,570	42,168	322,700	569,434	60,940	114,696
SOUTH CENTRAL DISTRICT									
283-70.03	McGinty Point	0	0	0	0	8,000	11,493	100	133
283-70.02	East of Mino Creek	0	0	0	0	7,800	25,240	0	0
283-70.01	Mino Creek	950	1,188	1,900	4,560	73,100	166,787	380	380
283-62.05	Coal Bay Major	0	0	200	480	26,000	58,627	0	0
283-62.04	Coal Bay Minor	0	0	100	240	13,600	24,063	0	0
283-62.03	Coal Bay Middle	0	0	0	0	2,000	3,940	0	0
283-62.02	Coal Bay	0	0	0	0	4,000	7,880	0	0

-Continued-

Table 57. (Page 5 of 9)

Stream Number	Stream Name/Location	Species							
		Sockeye		Coho		Pink		Chum	
		Peak	Total	Peak	Total	Peak	Total	Peak	Total
283-62.01	Cape Tolstoi	0	0	0	0	2,800	5,600	0	0
283-63.16	Settlement Point	0	0	1,600	3,840	151,000	269,105	2,000	4,120
283-63.15	Middle Creek	0	0	0	0	22,600	68,077	0	0
283-64.10	Ness Creek	0	0	0	0	2,600	4,367	0	0
283-64.09	Inner Canoe Bay	0	0	0	0	0	0	1,600	3,200
283-64.08	Entrance Creek	0	0	0	0	3,900	13,897	500	5,200
283-64.	Wolverine Gulch	0	0	0	0	1,600	2,000	0	0
283-64.06	Canoe Bay River	600	1,200	1,200	2,880	2,500	6,033	43,200	93,922
283-64.05	Bluff Point	0	0	0	0	12,000	23,692	1,100	2,440
283-63.14	Dry Lagoon	Not Surveyed							
283-63.13	Ruby's Lagoon	0	0	600	1,440	600	760	5,500	6,967
283-63.11	Chinaman Lagoon North	0	0	0	0	0	0	400	507
283-63.10	Chinaman Lagoon Main	0	0	200	480	0	0	2,700	9,700
283-63.09	Chinaman Lagoon	Not Surveyed							
283-63.06	Chinaman Lagoon South	0	0	0	0	0	0	600	760
283-63.05	Lower Chinaman Lagoon	0	0	0	0	0	0	3,200	4,053
283-63.04	Chinaman Stream South	0	0	0	0	600	1,182	1,700	2,000
283-61.05	Long John Lagoon	0	0	1,100	2,640	0	0	0	0
283-61.04	Spring Fed Lakes	540	1,080	50	120	0	0	0	0
283-61.03	Long John Lagoon	0	0	0	0	0	0	0	0
283-61.02	Southwest Stream	0	0	1,100	2,640	1,400	2,224	1,700	3,700
SOUTH CENTRAL DISTRICT TOTAL		2,090	3,468	8,050	19,320	336,100	694,967	64,680	137,082

-Continued-

Table 57. (Page 6 of 9)

Stream Number	Stream Name/Location	Species: Sockeye Peak	Sockeye Total	Coho Peak	Coho Total	Pink Peak	Pink Total	Chum Peak	Chum Total
SOUTHWESTERN DISTRICT									
283-52.10	Dushkin Lagoon	Not Surveyed							
283-52.08	Volcano River	0	0	2,000	4,800	2,000	4,957	10,800	19,875
283-52.07	Volcano Center Sloughs	0	0	100	240	2,400	3,450	2,000	8,400
283-52.06	West Springholes	0	0	300	720	8,500	16,344	900	2,993
283-52.05	Streamguard Creek	0	0	0	0	500	550	500	2,500
283-52.04	Stub Creek	0	0	0	0	5,000	8,217	0	0
283-52.03	Little Bear Bay	0	0	0	0	2,700	5,319	700	2,700
283-52.01	Nikolaski Spit	0	0	0	0	12,000	20,353	0	0
283-51.06	Dolgoi Harbor Southwest	0	0	0	0	3,800	14,487	0	0
283-51.05	Dolgoi Harbor South	0	0	0	0	300	700	0	0
283-51.03	Dolgoi Harbor	0	0	0	0	1,000	1,100	0	0
283-41.01	Belkofski Village	0	0	400	960	16,200	35,625	0	0
283-42.12	Rocky River	0	0	0	0	13,900	25,680	0	0
283-42.10	Kitchen Anchorage	0	0	0	0	4,000	9,000	0	0
283-42.09	Captain's Harbor	0	0	0	0	4,000	7,133	300	1,300
283-42.07	Belkofski Bay River	0	0	2,500	6,000	5,400	8,287	27,200	52,093
283-42.06	Belkofski Bay Beach	0	0	0	0	4,600	4,600	0	0
283-42.05	Belkofski Bay West	0	0	400	960	5,300	8,993	0	0
283-42.03	Indian Head	0	0	0	0	13,400	23,880	0	0
283-33.05	Ram's Creek	0	0	100	240	15,000	30,633	5,000	9,333
283-33.04	King Cove Lagoon	0	0	100	240	0	0	400	900
283-33.03	King Cove Lagoon	0	0	0	0	0	0	50	350

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Table 57. (Page 7 of 9)

Stream Number	Stream Name/Location	Species							
		Sockeye		Coho		Pink		Chum	
		Peak	Total	Peak	Total	Peak	Total	Peak	Total
283-31.01	Fox Island Anchorage East	0	0	0	0	34,500	57,698	0	0
283-31.02	Fox Island Anchorage Center	0	0	0	0	3,500	5,695	0	0
283-31.03	Fox Island Anchorage West	0	0	0	0	22,000	31,058	0	0
283-31.05	Paw Cape Creek	0	0	0	0	1,100	4,020	0	0
283-31.06	Southern Creek	0	0	1,000	2,400	54,000	111,620	0	0
283-31.10	Eastern Creek	0	0	0	0	34,000	49,774	0	0
283-34.11	Lenard Harbor South	0	0	0	0	1,400	2,758	0	0
283-34.10	Lenard Harbor	0	0	0	0	5,700	8,992	4,800	11,110
283-34.09	Barney's Creek	0	0	0	0	8,000	19,067	900	2,500
283-34.07	Kinzarof Lagoon	170	340	2,000	4,800	0	0	0	0
283-34.06	Kinzarof Lagoon	40	80	0	0	0	0	0	0
283-34.05	Kinzarof Lagoon	40	80	0	0	0	0	0	0
283-34.03	Trout Creek	40	80	700	1,680	700	762	50	153
283-34.02	Russel Creek	0	0	2,200	5,280	16,500	35,110	15,400	20,517
283-34.01	Mortensen	1,900	3,800	3,000	7,200	0	0	0	0
283-32.01	Old Man's Lagoon	0	0	0	0	0	0	1,400	2,249
283-20.06	Thinpoint Lagoon & Entrance Channel	9,600	19,200	4,200	10,080	0	0	0	0
283-20.08	Thinpoint West	Not Surveyed							
283-20.09	Thinpoint Lake Stream	5,200	10,400	0	0	0	0	0	0
283-20.10	Thinpoint Lake	2,800	5,600	0	0	0	0	0	0
283-20.04	Southwest Bight	0	0	0	0	3,000	5,438	0	0
283-20.03	Verskin's Bight	0	0	0	0	11,000	17,219	0	0
283-20.01	Sandy Cove Stream	0	0	1,000	2,400	8,500	26,578	16,500	36,070

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Table 57. (Page 8 of 9)

Stream Number	Stream Name/Location	Species							
		Sockeye		Coho		Pink		Chum	
		Peak	Total	Peak	Total	Peak	Total	Peak	Total
283-11.01	Egg Island Stream	0	0	0	0	3,200	7,600	700	784
283-12.13	Little John Lagoon	0	0	1,000	2,400	1,000	1,267	2,300	5,500
283-12.12	Little John Sand Spit	0	0	0	0	300	591	100	1,100
283-12.11	Cannery	0	0	20	48	200	233	20	23
283-12.05	Middle Lagoon	14,100	28,200	0	0	0	0	0	0
283-12.01	Hansen's	630	1,260	0	0	5,800	10,850	0	0
283-60.08	Deadman's Cove	1,500	3,000	1,700	4,080	37,000	69,078	0	0
284-60.07	Whalebone	0	0	0	0	0	0	0	0
284-60.06	Sankin Bay	0	0	100	240	2,400	3,562	300	417
284-60.05	Whirl Point	0	0	0	0	1,700	2,851	0	0
284-60.04	Ikatan River	0	0	0	0	3,500	6,895	200	412
284-60.03	Swede's Lake	1,000	2,000	0	0	500	617	0	0
284-60.01	Ikatan Point	0	0	700	1,680	9,600	15,607	300	618
SOUTHWESTERN DISTRICT TOTAL		37,020	74,040	23,520	56,448	389,100	724,248	90,820	181,897
UNIMAK DISTRICT									
284-50.00	Dora Harbor Left	0	0	0	0	100	197	0	0
284-40.09	Otter Cove North	0	0	300	720	5,000	8,667	200	200
284-40.08	Otter Cove South	0	0	100	240	3,000	4,200	300	510
284-40.05	Lazaref River	Not Surveyed							
283-10.10065	Sanak Village	0	0	0	0	500	985	0	0
283-10.10070	Sanak Is. W.	1,200	2,400	0	0	1,800	2,300	0	0
283-10.10080	Washwomen Creek	1,500	3,000	0	0	600	2,600	0	0

-Continued-

Table 57. (Page 9 of 9)

Stream Number	Stream Name/Location	Species: Sockeye Peak	Sockeye Total	Coho Peak	Coho Total	Pink Peak	Pink Total	Chum Peak	Chum Total
283-10.??	Dodd's Bay E.	400	800	0	0	300	591	0	0
283-10.10090	Sandy Bay	300	600	0	0	0	0	0	0
283-10.10100	Salmon Bay	4,000	8,000	0	0	0	0	0	0
UNIMAK DISTRICT TOTAL		7,400	14,800	400	960	11,300	19,540	500	710
TOTAL SOUTH PENINSULA		56,623	114,233	51,740	124,176	1,066,200	2,021,975	222,240	445,502

/1 See Orzinski (Orzenoi) Lake weir counts, and total escapement; the highest daily weir count was used for the peak count.

7 day stream life used for pink salmon escapements on the Kupreanof Peninsula.

15 day stream life used for all pink and chum salmon escapements except of Kupreanof Peninsula pink escapements.

For all pink and chum salmon escapements with only a peak count or where the computed value was less than the peak count, an expansion factor of 1.97 was used for pink salmon and an expansion factor of 1.75 was used for chum salmon. The values were derived from the ratio of Peak Count to Estimated Total Escapement for streams other than Kupreanof Peninsula streams where ascending, peak count, and descending counts were available.

Sockeye escapements were determined by an expansion factor of 1.25 for Acheredin Lake, Baralof Bay, and Mino Creek. All other sockeye escapements were determined by an expansion factor of 2.0 .

Table 58. Peak and estimated total salmon escapement counts in the Aleutian Islands Area, 1990.

Stream Number	Stream Name/Location	Species: Sockeye Peak	Sockeye Total	Coho Peak	Coho Total	Pink Peak	Pink Total	Chum Peak	Chum Total
302-	Akutan Harbor	Not surveyed							
302-80.52	Kuliliak Bay Lakes	Not surveyed							
302-50.60	Kisseien	Not surveyed							
302-50.50	Erskine Bay	Not surveyed							
302-40.11	Summer Bay	Not surveyed							
302-40.10	Humpy Cove	0	0	0	0	10,000	20,000	0	0
302-40.09	Summer Bay	0	0	0	0	3,000	6,060	0	0
302-40.08	Unalaska	0	0	0	0	13,000	16,387	0	0
302-40.07	Pyramid Creek	0	0	0	0	300	606	0	0
302-40.06	Captain's Bay	0	0	0	0	10,000	15,521	0	0
302-40.05	Nateekin River	0	0	0	0	46,100	83,290	0	0
302-40.03	Makushin Valley	0	0	0	0	5,300	10,706	0	0
302-30.01	Kalekta Bay	Not surveyed							
302-15.07	McLees Lake	2,500	5,000	0	0	0	0	0	0
302-15.05	Driftwood Bay	0	0	0	0	100	202	0	0
302-13.10	Volcano Bay	0	0	0	0	100	202	0	0
302-14.20	Makushin Village	Not surveyed							
302-14.18	Glacier Valley	0	0	0	0	300	606	0	0
302-14.17	Humpback Bay #2	0	0	0	0	20,500	51,364	0	0
302-14.17	Humpback Bay #1	0	0	0	0	40,000	105,183	0	0
302-14.15	Portage Creek #1	Not surveyed							
302-14.14	Portage Creek #2	Not surveyed							
302-14.13	Portage Creek #3	Not surveyed							
302-14.12	Portage Creek #4	0	0	0	0	2,000	3,588	0	0
302-14.11	Cannery Bay	0	0	0	0	1,250	2,601	0	0
302-14.06	Naginak Cove	0	0	0	0	330	667	0	0
302-14.01	Unnamed	0	0	0	0	0	0	0	0
302-13.05	Skan Bay	0	0	0	0	4,200	13,987	0	0
302-13.04	Skan Bay	0	0	0	0	250	505	0	0
302-13.03	Skan Bay	0	0	0	0	2,000	4,040	0	0
302-12.15	Pumicestone Bay	0	0	0	0	1,100	2,222	0	0
302-12.14	Pumicestone Bay	0	0	0	0	0	0	0	0
302-12.11	Pumicestone Bay	0	0	0	0	5,700	11,514	0	0
302-12.09	McIver Bight	Not surveyed							

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Table 58. (Page 2 of 2)

Stream Number	Stream Name/Location	Species: Sockeye Peak	Sockeye Total	Coho Peak	Coho Total	Pink Peak	Pink Total	Chum Peak	Chum Total
302-12.09	Kashega West A Lake	16,800	33,600	0	0	48,700	98,374	0	0
302-12.07	Kashega Bay B	Not surveyed							
302-12.05	Kismaliuk Bay	Not surveyed							
302-12.04	Kismaliuk Bay	Not surveyed							
302-12.03	Kismaliuk Bay	0	0	0	0	12,800	25,856	0	0
302-12.01	Aspid Bay	0	0	0	0	6,700	13,534	0	0
302-11.08	Chernofski Harbor	0	0	0	0	17,400	42,420	0	0
302-11.06	Station Bay	0	0	0	0	5,100	10,302	0	0
302-11.05	Station Bay	0	0	0	0	1,400	2,828	0	0
302-11.04	Station Bay West Arm	0	0	0	0	3,500	7,070	0	0
302-11.03	Unnamed	Not surveyed							
Aleutian Islands Management Area Total		19,300	38,600	0	0	261,130	549,635	0	0

Sockeye estimated total escapement = Peak x 2.0 .

Pink salmon calculated using a 15 day stream life; where peak counts were greater than the calculated escapement, the peak count was expanded by 2.02 (determined by using the ratio of peak count to total estimated escapement from ascending, peak count, and descenting counts from Unalaska Creek, Captain's Harbor Creek, Nateekin River, and Humpback Bay #1 Creek).

Table 59. Peak escapement counts and estimated total salmon escapement by district and stream for the North Peninsula, 1990.

Stream Number	Stream Name/Location	Species: Chinook Peak	Chinook Total	Sockeye Peak	Sockeye Total	Coho Peak	Coho Total	Pink Peak	Pink Total	Chum Peak	Chum Total
NORTHWESTERN DISTRICT											
311-30.06	Unnamed	Not Surveyed									
311-30.05	Unnamed	Not Surveyed									
311-30.07	Whaleback	0	0	40,600	50,750	1,100	2,640	0	0	0	0
311-30.08	Christianson	0	0	3,000	3,750	200	480	0	0	0	0
311-30.09	Mudhole	0	0	2,000	4,000	0	0	0	0	200	400
311-30.10	Clear Lagoon	0	0	600	1,200	0	0	0	0	200	500
311-40.01	Emil's River	0	0	20	40	0	0	0	0	50	50
311-40.04	North Creek	0	0	0	0	400	960	0	0	25	55
311-50.01	Big River	Not Surveyed									
311-50.02	Swanson Lagoon	0	0	31,000	38,750	4,500	10,800	0	0	1,800	3,797
311-60.01	Mike's Valley	0	0	10	20	0	0	100	120	2,400	6,498
311-60.06	Anderson's	0	0	0	0	0	0	3,800	6,124	400	973
311-60.07	Traders Cove & .08	0	0	0	0	700	1,680	11,600	15,533	2,300	3685
311-60.12	Warmsprings Bay	0	0	0	0	300	720	100	100	2,100	2,393
311-60.13	Hungry's Creek	0	0	300	600	0	0	4,800	7,280	200	200
312-20.01	Norma Bay	0	0	700	1,400	0	0	0	0	200	544
312-20.02	Mike's Duck Camp	0	0	0	0	0	0	100	187	700	2,207
312-20.03	Norma Bay South	0	0	0	0	0	0	0	0	2,700	5,670
312-20.04	Norma Bay South	0	0	0	0	0	0	0	0	1,000	2,300
312-20.52	2nd stream W of Frosty Cr.	0	0	50	100	0	0	0	0	200	400
312-20.51	Springs South of Frosty Cr	0	0	0	0	0	0	0	0	1,100	2,992
312-20.05	Frosty Creek	0	0	0	0	0	0	0	0	6,300	16,127
312-20.06	Blue Bill Lake	0	0	10,000	20,000	0	0	0	0	0	0

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Table 59. (Page 2 of 5)

Stream Number	Stream Name/Location	Species: Chinook Peak	Chinook Total	Sockeye Peak	Sockeye Total	Coho Peak	Coho Total	Pink Peak	Pink Total	Chum Peak	Chum Total
312-20.13	Outer Marker Lake	0	0	3,600	7,200	0	0	0	0	0	0
312-40.00	Spring fed 2 mi. SW of Joshua Green River	Not Surveyed									
312-40.01	Joshua Green River	30	58	6,400	12,800	500	1,200	300	960	35,900	154,780
312-40.02	Moffet Springs Creek	0	0	150	300	200	480	0	0	19,400	42,028
312-40.03	Moffet Creek	0	0	900	1,125	700	1,680	1,500	1,650	3,170	5,826
NORTHWESTERN DISTRICT TOTAL		30	58	99,330	142,035	8,600	20,640	22,300	31,954	80,345	251,425
NORTHERN DISTRICT											
313-10.02	North Creek	300	576	5,100	6,375	1,800	4,320	0	0	320	640
313-10.05	Cathedral River	0	0	560	1,120	0	0	0	0	0	0
313-10.06	Trader Mt.	Not Surveyed									
313-10.11	Black Hills	500	960	0	0	0	0	0	0	0	0
313-10.14	Steelhead	400	768	0	0	0	0	0	0	0	0
313-30.01	David's River	400	768	17,800	22,250	500	1,200	0	0	0	0
313-30.02	Caribou River	0	0	2,800	5,600	0	0	0	0	0	0
313-30.03	Nelson River /1	1,800	3,456	16,588	240,700	30,000	72,000	2	8	63	217
313-30.03	Petterson	60	115	0	0	0	0	0	0	0	0
313-30.??	Coastal Lake	0	0	6,400	12,800	0	0	0	0	0	0
314.20.02	Doe Valley	0	0	0	0	0	0	0	0	1,200	2,200
314.20.03	Buck Valley	0	0	0	0	0	0	0	0	3,000	5,000
314-20.04	Deer Valley	0	0	20	40	0	0	0	0	9,400	18,513
314-20.05	Portage Valley	0	0	0	0	0	0	0	0	310	2,510
314-20.06	Grass Valley	0	0	400	500	0	0	0	0	10,000	13,941
314-20.07	Lawrence Creek	0	0	0	0	0	0	100,000	114,403	28,000	31,010

-Continued-

Table 59. (Page 3 of 5)

Stream Number	Stream Name/Location	Species: Chinook Peak	Chinook Total	Sockeye Peak	Sockeye Total	Coho Peak	Coho Total	Pink Peak	Pink Total	Chum Peak	Chum Total
314-20.08	Mine Harbor	Not Surveyed									
314-20.09	Coal Creek	0	0	0	0	0	0	0	0	18,500	28,367
314-30.04	Mud Bay	0	0	0	0	0	0	0	0	1,300	3,536
314-30.05	Mud Bay	0	0	0	0	0	0	0	0	1,400	3,808
314-30.07	Right Head Creek	0	0	0	0	0	0	0	0	700	1,904
314-30.09	Right Head Creek	0	0	0	0	0	0	0	0	1,500	5,440
314-30.10	Left Head Creek	0	0	0	0	0	0	0	0	400	1,088
315-10.01	Frank's Lagoon	0	0	0	0	0	0	0	0	370	1,006
315-10.02	King Salmon	400	768	0	0	100	240	0	0	0	0
315-11.02	Bear River C & E /2	270	518	25,790	546,800	0	0	468	2,192	25	97
315-12.00	Sandy River and Lake	600	1,152	17,500	21,875	0	0	0	0	0	0
316-10.01	Lime Creek	Not Surveyed									
316-10.02	Unnamed	Not Surveyed									
316-10.04	Three Hills	0	0	100	200	0	0	0	0	0	0
316-10.05	Ocean River	20	38	4,300	8,600	1,000	2,400	0	0	0	0
316-10.06	Willie Creek	0	0	8,100	10,125	0	0	0	0	0	0
316-20.01	Ilnik River /3	0	0	24,000	30,000	24,000	57,600	0	0	0	0
316-20.04	Unangashak River	0	0	0	0	0	0	0	0	0	0
317-2	Charles Creek	100	192	460	920	0	0	0	0	300	816
317-4 A&B	Bluff Creek	320	614	3,630	7,260	0	0	0	0	1,530	4,162
317-6 A	Highland Creek	15	29	170	340	0	0	0	0	50	136
317-7	Meshik River	100	192	22,540	45,080	19,000	45,600	0	0	340	636
317-7 B	Braided Creek	70	134	0	0	0	0	0	0	200	544
317-7 C	Landlocked Creek	0	0	500	1,000	0	0	0	0	200	544

-Continued-

Table 59. (Page 4 of 5)

Stream Number	Stream Name/Location	Species: Chinook Peak	Chinook Total	Sockeye Peak	Sockeye Total	Coho Peak	Coho Total	Pink Peak	Pink Total	Chum Peak	Chum Total
317-7 D	Bluff Creek	0	0	5,000	10,000	0	0	0	0	1,500	4,080
317-7 E	Blue Violet Creek	200	384	3,000	6,000	0	0	0	0	900	2,448
317-7 F	Wolf Creek	18	35	500	1,000	0	0	0	0	140	381
317-7 H	Shoe Creek	16	31	0	0	0	0	0	0	470	1,278
317-7 K	Unnamed	17	33	770	1,540	0	0	0	0	0	0
317-7 L	Unnamed	4	8	300	600	0	0	0	0	0	0
317-7 M	Unnamed	0	0	1,600	3,200	0	0	0	0	0	0
317-7 N	Unnamed	34	65	350	700	0	0	0	0	230	626
317-7 O	Plenty Bear Creek	36	69	0	0	0	0	0	0	470	1,278
317-7 O-A	Plenty Bear Creek	10	19	0	0	0	0	0	0	170	462
317-7 P	Waterfall Creek	0	0	0	0	0	0	0	0	0	0
317-7 R	Rainbow Creek	0	0	0	0	0	0	0	0	40	109
317-7 T	Cub Creek	0	0	0	0	0	0	0	0	0	0
317-20.09	Barabara Creek	Not Surveyed									
317-20.08	Birthday Creek	0	0	0	0	0	0	0	0	480	1,306
318-20.04	Mud Creek	0	0	0	0	4,000	9,600	0	0	0	0
318-20.06	Cinder River	21	40	3,840	7,680	3,000	7,200	0	0	370	555
318-20.06	Lava Creek	50	96	2,870	5,740	0	0	0	0	400	1,088
318-20.06	High Creek	See 20.06									
318-20.06	Meloy Creek	30	58	1,280	2,560	0	0	0	0	150	408

-Continued-

Table 59. (Page 5 of 5)

Stream Number	Stream Name/Location	Species: Chinook Peak	Chinook Total	Sockeye Peak	Sockeye Total	Coho Peak	Coho Total	Pink Peak	Pink Total	Chum Peak	Chum Total
318-20.06	Wiggly Creek	15	29	0	0	0	0	0	0	2,200	5,984
318-20.06	Ray Creek	Not Surveyed									
318-20.06	L Creek	15	29	3,840	7,680	0	0	0	0	350	952
NORTHERN DISTRICT TOTAL		5,821	11,177	180,108	1,008,285	83,400	200,160	100,470	116,603	86,978	147,069
NORTH PENINSULA TOTAL		5,851	11,234	279,438	1,150,320	92,000	220,800	122,770	148,556	167,323	398,494

1/ See Nelson River tower counts, and total escapement, the highest daily weir count was used for the peak sockeye, pink, and chum counts; chinook and coho estimates are expanded from aerial surveys.

2/ See Bear River tower counts, and total escapement, the highest daily weir count was used for the peak sockeye, pink, and chum counts; chinook and coho estimates are expanded from aerial surveys.

3/ See Ilnik River tower counts, and total escapement, the highest daily weir count was used for the peak sockeye count; the coho estimate is expanded from aerial surveys.

Chum and pink salmon calculated using a 15 day stream life, where peak counts were greater than the calculated escapement the peak count was expanded by 2.72 (determined by using the ratio of peak count to total estimated escapement from ascending, peak count, and descenting counts from Swanson Lagoon, Mike's Valley, Joshua Green River, Moffet Springs, and Lawrence Creek).

Chinook estimated total escapement (peak x 1.92), sockeye (peak x 1.25; clear streams and peak x 2.0; other streams), coho (peak x 2.4). Escapement determined from spawner abundance curves derived from aerial escapement surveys under fair or better visiability conditions and as assumed, 7 day average stream life for chum salmon in Swanson Lagoon, and a 15 day average stream life for all other chum and pink salmon. The peak count was used in instances when the peak count exceeded the computed estimate.

A zero indicates no fish were present while a blank indicates fish were present but not counted.

Sockeye escapements were determined by an expansion factor of 1.25 for Whaleback Mountain Creek, Swanson Lagoon, Moffet Creek, North Creek, David's River, Grass Valley, Sandy Lake, Willie Creek, and Ilnik Estuary. All other sockeye escapements were determined by an expansion factor of 2.0.

Table 60. Sandy River Sockeye Escapement Age Composition. (Fish in thousands)

Age Class	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
0.1	-	-	-	-	-	-		-		-
0.2	-	-	-	-	-	-		-		-
0.3	-	-	-	-	-	-		-		-
0.4	-	-	-	-	-	-		-		-
1.1	-	-	-	2.3	0.1	-		-		0.3
1.2	31.8	13.8	8.4	36.4	18.5	10.9		2.1		21.4
1.3	16.0	53.6	37.5	16.7	7.4	7.7		4.4		11.8
1.4	-	0.4	-	-	-	-		-		-
2.1	-	-	-	0.3	-	-		-		-
2.2	5.8	3.3	2.8	0.8	2.0	0.2		0.1		0.6
2.3	7.4	4.5	2.8	4.8	-	0.2		0.3		0.1
2.4	-	-	-	-	-	-		-		-
3.1	-	-	-	-	-	-		-		-
3.2	-	0.4	-	-	-	-		-		-
3.3	-	-	-	-	-	-		-		-
3.4	-	-	-	-	-	-		-		-
TOTAL	61.0	76.0	51.5	61.3	28.0	19.0	11.5	6.9	8.7	34.5

The 1988 and 1989 information was obtained from scale samples, otoliths were used during previous years. Escapements are indexed totals.

continued

Table 60. (page 2 of 2)

Age Class	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
0.1	-	-								
0.2	0.1	-								
0.3	0.1	-								
0.4	-	-								
1.1	0.1	-								
1.2	7.7	-								
1.3	25.7	-								
1.4	-	-								
2.1	0.3	-								
2.2	0.4	-								
2.3	1.6	-								
2.4	-	-								
3.1	-	-								
3.2	-	-								
3.3	-	-								
3.4	-	-								
TOTAL	36.0	**17.5**								

The 1988 and 1989 information was obtained from scale samples, otoliths were used during previous years. Escapements are indexed totals.

Table 61. Bear River Sockeye Escapement Age Composition. (Fish in thousands)

Age Class	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
0.1	-	-	-	-	-	-	-	-	-	-
0.2	-	-	-	-	-	-	-	-	-	-
0.3	-	-	-	-	-	-	-	0.3	-	-
0.4	-	-	-	-	-	-	-	-	-	-
1.1	6.7	7.6	-	2.5	0.1	8.5	0.8	-	-	0.1
1.2	40.3	34.9	128.9	4.5	6.6	12.1	16.1	9.5	6.5	1.1
1.3	3.1	9.4	37.8	15.4	2.1	4.9	30.2	12.6	33.9	14.9
1.4	-	-	-	-	0.3	0.4	-	-	0.2	0.1
2.1	95.1	44.3	14.6	55.9	40.3	141.7	36.8	3.2	0.5	28.7
2.2	660.7	480.4	397.1	95.9	154.4	167.7	299.7	159.1	132.8	126.0
2.3	144.6	93.3	111.5	125.7	119.6	59.3	52.9	88.3	77.5	138.9
2.4	-	-	-	-	1.4	-	1.5	0.4	1.0	0.2
3.1	-	-	-	-	-	-	-	-	-	-
3.2	-	0.9	-	0.1	4.7	-	2.0	-	-	0.1
3.3	1.5	-	-	-	0.4	-	-	-	-	-
3.4	-	-	-	-	-	-	-	-	-	-
TOTAL	952.0	670.8	689.9	300.0	329.9	394.6	440.0	273.4	252.4	310.1

continued

Table 61. (page 2 of 2)

Age Class	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
0.1	-	-								
0.2	-	-								
0.3	-	-								
0.4	-	-								
1.1	1.0	-								
1.2	14.0	61.1								
1.3	1.3	11.5								
1.4	2.7	-								
2.1	37.5	6.3								
2.2	265.8	338.9								
2.3	123.2	109.3								
2.4	4.8	0.9								
3.1	-	-								
3.2	0.5	17.7								
3.3	0.2	0.4								
3.4	-	-								
TOTAL	451.0	546.8								

Table 62. Nelson (Sapsuk) Sockeye Escapement Age Composition. (Fish in thousands)

Age Class	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
0.1	-	-	-	-	-	-	-	-	-	-
0.2	-	-	-	-	-	-	-	-	-	-
0.3	-	-	-	-	-	-	-	0.7	-	0.8
0.4	-	-	-	-	-	-	-	-	-	-
1.1	2.3	6.7	-	16.2	0.4	1.0	-	-	-	1.7
1.2	52.2	13.8	28.6	0.6	4.1	14.0	13.2	1.8	26.9	25.3
1.3	-	66.0	16.3	11.4	7.9	34.1	14.5	9.2	14.2	19.7
1.4	-	-	-	-	0.4	-	-	-	-	-
2.1	49.7	13.8	9.0	13.9	5.2	41.8	42.8	2.8	0.8	17.7
2.2	146.7	191.2	152.9	14.7	41.0	94.4	210.9	18.4	96.4	36.6
2.3	55.9	43.9	36.9	114.8	40.2	58.8	32.9	83.9	3.9	32.6
2.4	43.3	-	-	-	-	-	-	0.2	-	-
3.1	-	-	-	-	-	-	-	-	-	-
3.2	-	-	0.5	-	0.4	-	-	-	-	0.6
3.3	-	-	-	-	0.4	-	-	-	-	-
3.4	-	-	-	-	-	-	-	-	-	-
TOTAL	352.1	335.4	244.2	171.6	124.0	244.1	314.3	117.0	142.2	135.0

continued

Table 62. (page 2 of 2)

Age Class	1989	1990*	1991	1992	1993	1994	1995	1996	1997	1998
0.1	-	-								
0.2	-	-								
0.3	-	1.6								
0.4	-	0.1								
1.1	0.3	-								
1.2	27.7	7.8								
1.3	15.1	37.5								
1.4	-	0.2								
2.1	6.8	-								
2.2	131.4	79.9								
2.3	11.0	107.3								
2.4	0.5	1.2								
3.1	0.1	-								
3.2	0.1	4.0								
3.3	-	1.1								
3.4	-	-								
TOTAL	193.0	240.7								

*In 1990, Nelson Lagoon catch samples were used as the escapement samples were lost in the mail. The catch samples were taken by gillnet gear and are not an accurate measure of escapement age composition.

Table 63. URILIA BAY, MESHIK RIVER, ILNIK LAGOON AND ORZENOI SOCKEYE PERCENT AGE COMPOSITION, 1986-1988

URILIA BAY

Year	0.2	0.3	0.4	1.1	1.2	1.3	1.4	2.2	2.3	2.4
*1986	1.1	45.1	0.1	0	3.6	48.1	0.5	0.1	1.4	0
*1987	0.2	50.7	0	0	6.5	39.5	1.4	0	0.5	0
*1988	8.2	21.9	2.2	0	9.6	55.5	0	0.7	1.9	0
*1989	2.7	44.5	0.6	0	9.6	40.6	0.6	0.6	0.8	0
*1990	3.1	46.2	1.9	0	6.2	39.1	0.2	0.5	2.8	0

SWANSON LAGOON

Year	0.2	0.3	0.4	1.1	1.2	1.3	1.4	2.2	2.3	2.4
*1990	0	6.6	0	0	10.0	48.7	1.1	6.3	27.3	0

*Samples are from commercial catch, dominantly seine caught

ILNIK LAGOON

Year	0.2	0.3	0.4	1.1	1.2	1.3	1.4	2.2	2.3	2.4
1986	0.9	53.9	0	0	1.3	37.3	0.1	0.9	5.5	0
1987	2.3	40.7	7.0	0	1.2	44.2	1.2	1.2	2.3	0
1988	1.7	40.6	1.5	0.2	5.8	43.0	2.0	0.9	3.9	0.4
1989	0.6	3.2	4.8	0.3	3.8	73.3	3.8	2.5	7.6	0
1990	0	7.8	0.8	0	50.6	23.7	5.3	6.1	5.7	0

MESHIK RIVER

Year	0.2	0.3	0.4	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4
1988	4.0	28.4	41.1	0	0.9	9.3	12.0	0	0.6	1.5	2.2
1989	2.5	20.7	1.0	0	7.8	47.9	1.2	0.6	1.9	16.3	0.2
1990	-	-	-	-	-	-	-	-	-	-	-

ORZENOI (ORZINSKI) RIVER

Year	0.2	0.3	0.4	1.1	1.2	1.3	1.4	2.1	2.2	2.3	3.3
1990	0	0	0	0.4	48.4	12.5	0.4	2.8	21.0	14.1	0.4

Table 64. 1990 Alaska Peninsula Area Estimated Subsistence Catches

Community	Permits Issued	Permits Returned	Percent Returned	Projected Harvest (Fish) King	Sockeye	Coho	Pink	Chum	Total
Sand Point	80	60	75.0	160	5,648	620	429	1,051	7,908
King Cove	43	33	76.7	24	1,054	2,832	265	367	4,542
Cold Bay	14	11	78.6	0	322	70	1	22	415
False Pass	9	8	88.9	1	170	193	19	79	462
Nelson Lagoon	8	7	87.5	11	291	224	0	0	526
Port Moller Port Heiden	3	3	100.0	21	107	20	0	27	175
Sub-Total	**166**	**128**	**77.1**	**217**	**7,592**	**3,959**	**714**	**1,546**	**14,028**
Non-local Alaska Residents	35	29	82.9	29	996	70	22	43	1,160
Total Alaska Peninsula Area	**201**	**157**	**78.1**	**246**	**8,588**	**4,029**	**736**	**1,589**	**15,188**
Unalaska									
Local Residents	94	36	38.3	4	2,357	681	1,428	100	4,570
Non-local Residents	2	1	50.0	0	0	0	0	0	0
Total Unalaska	**96**	**37**	**38.5**	**4**	**2,357**	**681**	**1,428**	**100**	**4,570**

Average Subsistence Salmon Catch Per Successful Permit

Community	King	Sockeye	Coho	Pink	Chum	Total
Sand Point	3.1	108.6	11.9	8.2	20.2	152.1
King Cove	0.7	31.0	83.3	7.8	10.8	133.6
Cold Bay	0	24.8	5.4	0.1	1.7	32.0
False Pass	0.1	25.2	28.7	2.8	11.7	68.5
Nelson Lagoon	1.4	36.4	28.0	0	0	65.8
Port Moller Port Heiden	10.5	53.5	10.0	0	13.5	87.5
Unalaska	0.1	28.4	8.2	17.2	1.2	55.1
Non-local Alaska Residents	6.3	31.6	2.3	0.7	9.6	50.5

Table 65. Subsistence Salmon Harvest by Species (in Numbers of Fish) by Community - Alaska Peninsula Area and Unalaska.

SAND POINT

Year	Permits Issued	King	Sockeye	Coho	Pink	Chum	Total
1985	60	30	1,410	1,686	420	1,146	4,692
1986	75	45	2,505	1,208	1,560	1,005	6,323
1987	84	87	2,018	1,508	1,160	1,114	5,887
1988	74	146	2,694	853	1,326	1,175	6,194
1989	86	53	6,347	1,050	731	1,149	9,330
1990	80	160	5,648	620	429	1,051	7,908

KING COVE

Year	Permits Issued	King	Sockeye	Coho	Pink	Chum	Total
1985	39	0	784	3,292	105	20	4,201
1986	24	2	1,834	919	14	120	2,889
1987	39	3	2,320	1,662	206	334	4,525
1988	28	3	555	2,855	265	43	3,721
1989	39	3	1,982	1,973	294	690	4,942
1990	43	24	1,054	2,832	265	367	4,542

COLD BAY

Year	Permits Issued	King	Sockeye	Coho	Pink	Chum	Total
1985	10	0	293	84	34	3	414
1986	18	0	184	264	14	26	488
1987	10	0	293	84	34	3	414
1988	24	0	737	66	2	0	805
1989	18	0	231	55	4	22	312
1990	14	0	322	70	1	22	415

FALSE PASS

Year	Permits Issued	King	Sockeye	Coho	Pink	Chum	Total
1985	10	30	578	1,858	13	395	2,874
1986	12	13	158	215	188	299	873
1987	12	14	103	443	163	389	1,112
1988	10	11	401	834	29	192	1,467
1989	7	0	231	55	4	22	312
1990	9	1	170	193	19	79	462

continued

Table 65. (page 2 of 2)

NELSON LAGOON/PORT MOLLER

Year	Permits Issued	King	Sockeye	Coho	Pink	Chum	Total
1985	9	5	207	252	2	0	466
1986	9	13	284	302	3	5	607
1987	10	22	245	254	5	14	540
1988	13	26	284	184	0	25	519
1989	9	21	250	227	0	11	509
1990	8	11	291	224	0	0	526

PORT HEIDEN

Year	Permits Issued	King	Sockeye	Coho	Pink	Chum	Total
1985	6	9	176	0	0	0	185
1986	4	28	282	0	0	0	310
1987	10	66	193	229	0	36	524
1988	10	69	268	134	23	105	599
1989	4	7	222	28	1	4	262
1990	3	21	107	20	0	27	175

TOTAL ALASKA PENINSULA AREA

Year	Permits Issued	King	Sockeye	Coho	Pink	Chum	Total
1985	134	74	3,448	7,172	574	1,564	12,832
1986	142	101	5,247	2,908	1,779	1,455	11,490
1987	185	192	5,499	4,251	1,547	1,941	13,430
1988	159	255	4,939	4,926	1,645	1,540	13,305
1989	163	88	9,368	3,433	1,205	1,923	16,017
1990	166	217	7,592	3,959	714	1,546	14,028

UNALASKA

Year	Permits Issued	King	Sockeye	Coho	Pink	Chum	Total
1985	65	0	897	208	1,293	20	2,418
1986	121	0	3,449	847	2,468	375	7,139
1987	81	0	1,097	378	1,780	151	3,406
1988	74	1	962	390	2,626	83	4,062
1989	70	2	1,064	470	1,292	36	2,864
1990	94	4	2,357	681	1,428	100	4,570

Table 66. 1990 Mortensen's Lagoon Subsistence and Commercial Sockeye and Coho Salmon Harvests.

	Estimate Permits	Sockeye	Coho
Cold Bay Residents	13	322	70
King Cove Residents	0	0	0
Out of Area Residents	14	423	25
Total	27	745	95

The number of permit holders fishing Mortensen's Lagoon and the number of fish caught are extrapolated from returned permits.

	Boats	Sockeye	Coho
Commercial Catch	3	21	0

The commercial catch includes all of statistical area 283-32, some of the fish may be going to systems other than Mortensen's Lagoon.

Escapements

Sockeye (Indexed Total)	Coho Peak
6,200	3,000

Table 67. 1990 Thin Point Cove Sockeye and Coho Harvests

Subsistence Fishery

Estimate Permit Holders[a]	Sockeye	Coho
29	751	2,578

Commercial Fishery

Permit Holders[b]		
12	388	12,327
Total Harvest	1,139	14,905

[a]The number of subsistence permit holders fishing Thin Point Cove and the number of Fish caught are extrapolated from permit returns. All subsistence fishermen fishing Thin Point Cove during 1990 are estimated to be King Cove residents.

[b]The commercial information came from fish tickets.

The indexed total sockeye escapement was 15,000. This figure is probably close to but slightly under the actual figure. The peak coho escapement estimate was 4,200, however the total escapement was probably somewhat higher.

Table 68. 1990 REESE BAY (UNALASKA ISLAND) SUBSISTENCE SALMON HARVEST

Estimated Permits[a]	Sockeyes	Cohos	Pinks
12	1,421	160	160

[a]The number of permit holders and number of fish caught are extrapolated from returned permits.

Table 69. ESTIMATED MORTENSEN LAGOON, THIN POINT COVE, AND REESE BAY SUBSISTENCE HARVESTS, 1982 - 1990

	Mortensen's Lagoon (Estimated)			Thin Point Cove (Estimated)			Reese (Wislow) Bay (Estimated)		
Year	Permits	Sockeye	Coho	Permits	Sockeye	Coho	Permits	Sockeye	Coho
1982	30	590	1,145	-	-	-	-	-	
1983	41	300	1,600	-	-	-	-	-	
1984	27	745	500	-	-	-	-	-	
1985	22	590	831	-	-	-	23	669	0
1986	12	362	178	15	1,586	656	54	2,824	0
1987	22	604	254	15	1,226	966	20	806	0
1988	21	737	66	17	488	2,196	21	792	0
1989	19	420	28	17	1,479	1,239	12	436	16
1990	27	745	95	29	751	2,578	12	1,421	160
AVERAGE	25	566	522	19	1,106	1,527	24	1,158	29

Table 70. Average Subsistence Salmon Harvest (in Numbers of Fish) Per Successful Permit Holder Alaska Peninsula Area and Unalaska.

Community	1987	1988	1989	1990
Sand Point	101	119	123	152
King Cove	156	149	155	134
Cold Bay	43	38	25	32
False Pass	101	163	126	69
Nelson Lagoon/ Port Moller	77	58	57	66
Port Heiden	52	86	87	88
Unalaska	79	78	58	55

Table 71. 1990 Estimated Adak-Kagalaska Islands Personal Use Salmon Catches.

Permit Holders	61
Number of Returned Permits	29 (47.5%)
Number of Returned Permits Reporting Catch	14 (48.3% of returned permits)
Estimated Number of Permit Holders That Caught Salmon	29

Average Catch Per Successful Permit Holder

Kings	Sockeye	Coho	Pinks	Chums	Total
0	27.1	1.6	1.4	0	30.1

Estimated Total Catch

Kings	Sockeye	Coho	Pinks	Chums	Total
0	800	47	41	0	888

Table . Adak-Kagalaska Islands Estimated Personal Use Salmon Catches 1988-90

Year	Permits Issued	Permits Returned	Percent Returned	Estimated Catch					
				Kings	Sockeyes	Cohos	Pinks	Chums	Total
1988	43	29	67.4	0	503	23	150	0	676
1989	64	47	73.3	0	382	0	117	0	499
1990	61	29	47.5	0	800	47	41	0	888

ALASKA PENINSULA AND ALEUTIAN ISLANDS MANAGEMENT AREAS SAC ROE HERRING REPORT, 1990

By

James N. McCullough

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ABSTRACT

By regulation the 1990 herring sac roe season extends from April 15 through July 15 in Alaska Peninsula and Aleutian Islands waters. However, the opening of the Unimak, Akutan, and Unalaska Districts and that portion of the Umnak District located east of Samalga Pass occurred from April 15 through June 15; the Port Moller District was opened from May 30 through July 15; and the Sand Point, Pavlof, King Cove, Adak, Amak, and Port Heiden Districts were opened from April 15 through July 15.

In 1990, commercial catches occurred in North Peninsula waters from June 4 through June 19 and in South Peninsula waters from May 14 to June 14. No sac roe harvest occurred in the Aleutian Islands Management Area. The North Peninsula catch was 272.8 tons and the South Peninsula catch was 312.2 tons, producing a total Alaska Peninsula catch of 585.1 tons. The 1990 catch was 38.9% below the recent 5 year average of 957.6 tons. Nine purse seine vessels made 54 deliveries to two companies that purchased herring. The average roe recovery was 7.53% for the North Peninsula, 9.24% for the South Peninsula, and overall was 8.45%. The average price per ton was $600 for 10% roe recovery and ± $60 for each percentage point above or below 10%, giving an ex-vessel value of about $296,646 for the Alaska Peninsula. A total biomass estimate for the North Peninsula was not possible due to unfavorable survey conditions; at least 588 tons were observed in the Port Moller District. A total biomass estimate for the South Peninsula was not possible due to budget constraints; in areas where good surveys occurred the biomass increased from prior years.

KEY WORDS: Alaska Peninsula, Aleutian Islands, herring, catch, age, length, weight, sex

INTRODUCTION

The Alaska Peninsula and Aleutian Islands Management Areas (Figure 1) are described as Management Area "M" and are divided into three subareas; (1) the South Peninsula, consisting of Pacific Ocean coastal waters extending west of Kupreanof Point to Scotch Cap; (2) the Aleutian Islands, consisting of Pacific Ocean and Bering Sea waters extending west of Unimak Pass to the international dateline; and (3) the North Peninsula, consisting of Bering Sea waters extending west from Cape Menshikof to Cape Sarichef (Figures 2-6).

The North Peninsula is comprised of three districts and 23 statistical areas. The South Peninsula is comprised of four districts and 44 statistical areas, while the Aleutian Islands is comprised of four districts and 40 statistical areas. Commercial herring fishing normally begins about the last week of May in North Peninsula waters, about mid-May in South Peninsula waters, while the Aleutian Islands have had no reported sac roe harvest since at least 1979.

The majority of fishing effort in the North Peninsula occurs in the Bear River, Port Moller Bay, and Herendeen Bay Sections, while most of the effort in South Peninsula waters occurs in the Shumagin Islands and Stepovak, Pavlof, and Canoe Bays.

From 1981 through 1990, ADF&G has deployed field crews in the Alaska Peninsula for the purpose of collecting data and to monitor the fishery. Crews have been successful in collecting samples and documenting spawning areas and substrate. Aerial surveys have been used with limited success to monitor the fishery, primarily due to the large area involved, weather, water conditions, and the sporadic and currently unpredictable appearance of the herring. In the nine years that the Alaska Department of Fish and Game (ADF&G) has been conducting aerial surveys in the Alaska Peninsula, only surveys flown in 1989 are thought to have provided an accurate assessment of the total spawning biomass in the Port Moller area (personal communication, L. Schwarz, ADF&G, Division of Commercial Fisheries, 211 Mission Road, Kodiak, Alaska 99615).

Aerial surveys of the Port Moller area by Alaska Department of Fish and Game (ADF&G) personnel in 1976 reported numerous schools of herring in Herendeen Bay (Warner and Shafford 1979). The known presence of commercial quantities of sac roe herring in North Peninsula waters occurred in 1982 when 514 tons were harvested (Table 1). From 1985-89, an average of 631.1 tons have been harvested each year in the sac roe fishery. Most (54.3%) of the catch was taken from Herendeen and Moller Bays, while most of the balance of the catch (42.2%) was taken off the Bering Sea coast between Entrance Point and the Seal Islands (Table 2). Prior to 1982, fishing vessels destined to or returning from the Togiak herring fishery frequently looked for herring in the Port Moller area but they made no deliveries. Since 1982, a commercial sac roe fishery has developed in both Moller and Herendeen Bays and the Bering Sea coast eastward from Port Moller (Table 2). The run timing of the North Peninsula stocks appear to be later than the Togiak stocks.

The South Peninsula herring sac roe fishery continues to develope since it began in 1979, with about 29% of the 1990 catch harvested from areas that had only one prior landing reported in 1989 (Tables 1,3). Significant landings occurred in 1980 (454 tons), and peaked in 1981 (716 tons). The Board of Fisheries closed

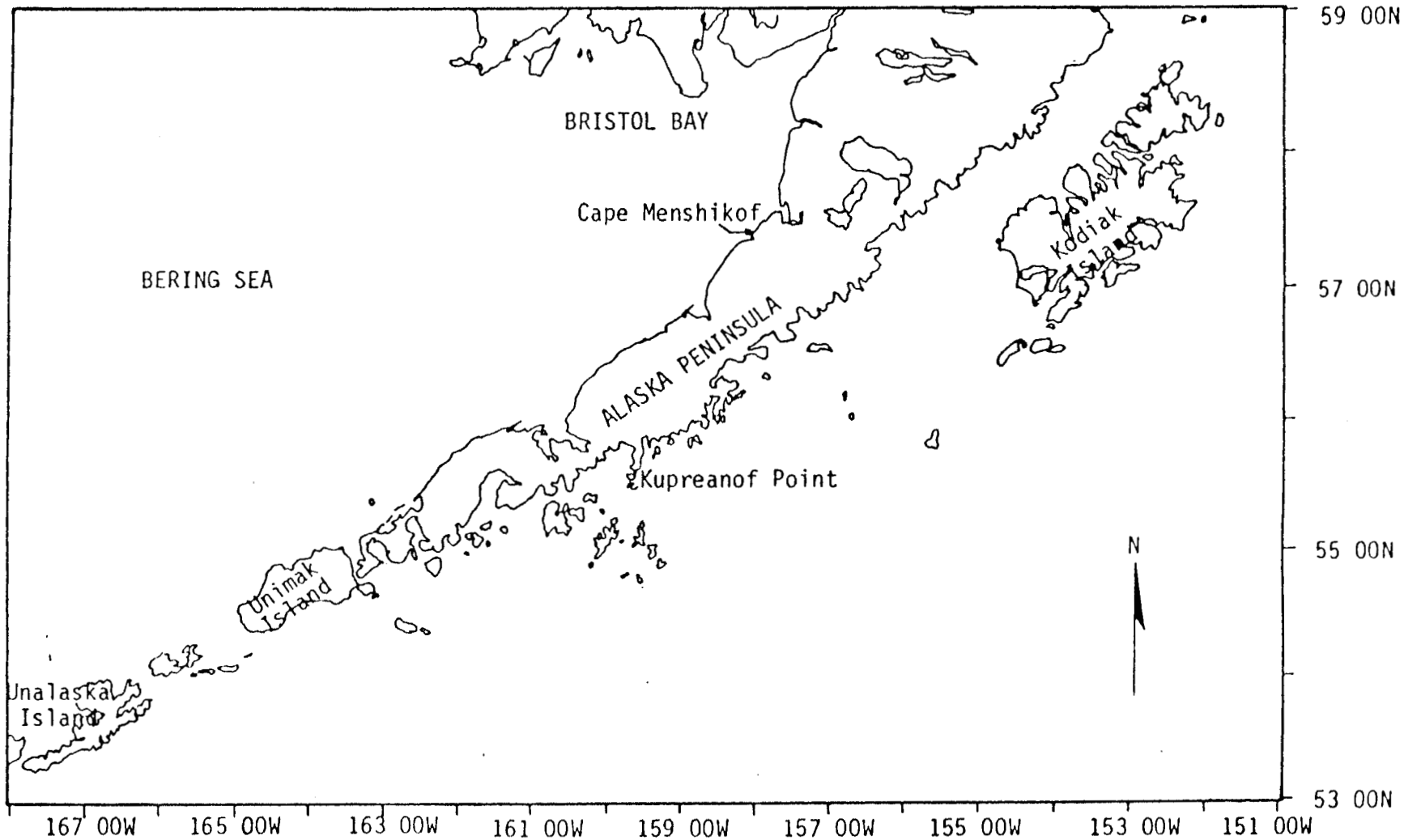

Figure 1. Map of the Alaska Peninsula and Eastern Aleutian Islands Management Areas, the study area on the Pacific Ocean portion of the map is from Kupreanof Point to Unalaska Island and on the Bering Sea from Unalaska Island to Cape Menshikof.

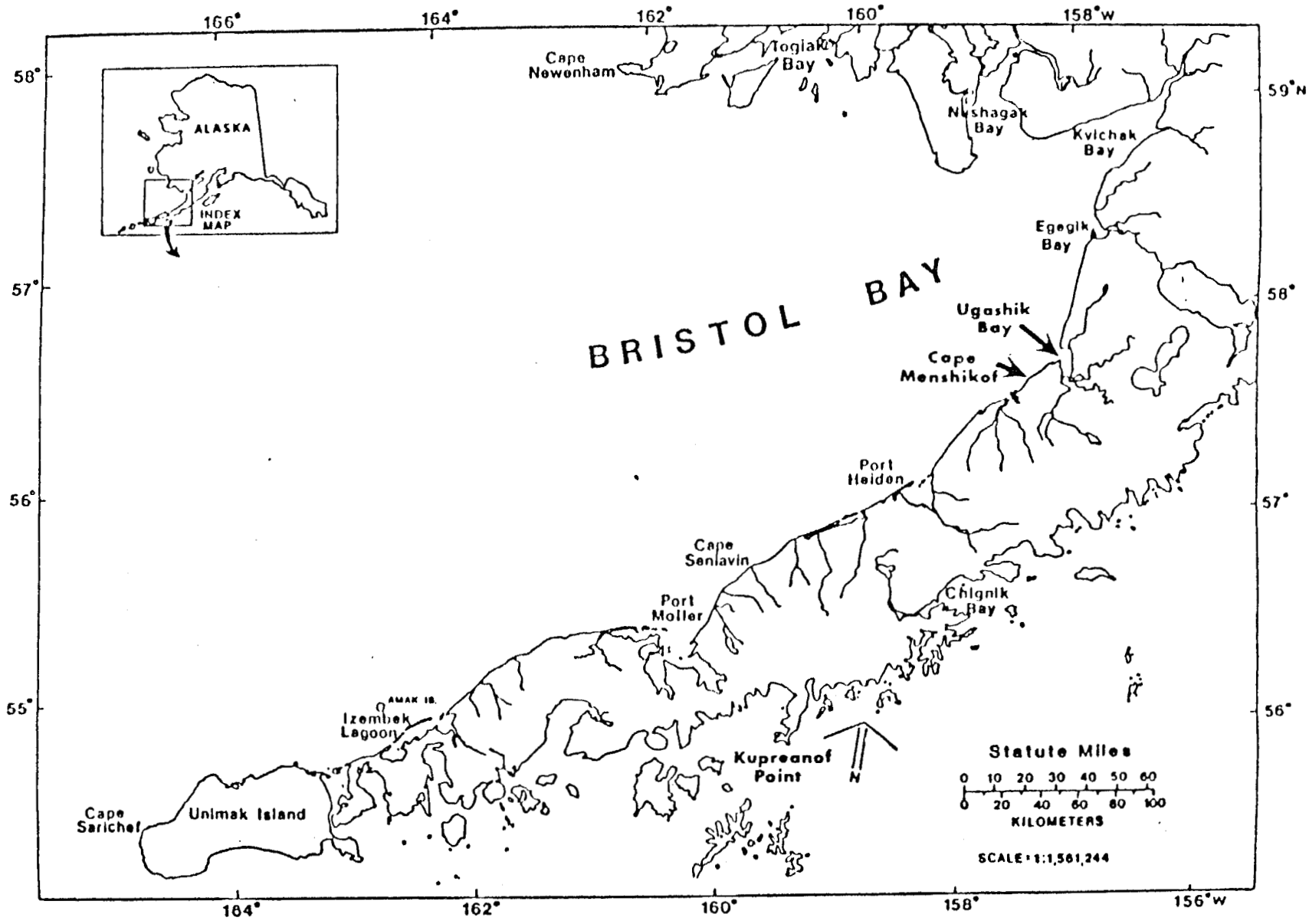

Figure 2. Map of the Alaska Peninsula Area from Kvichak Bay to Unimak Island.

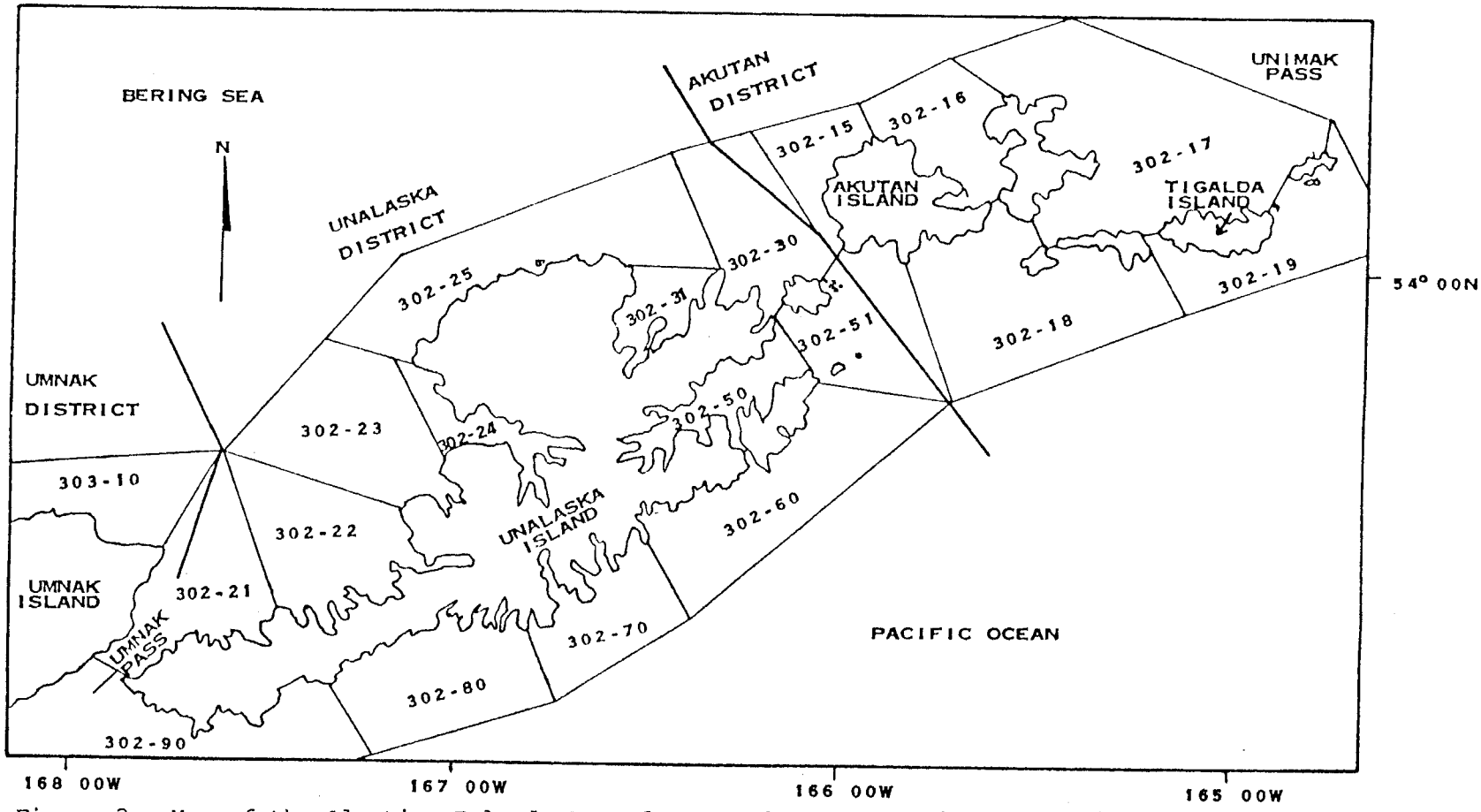

Figure 3. Map of the Aleutian Islands Area from Unmak Pass to Unimak Pass with the statistical herring fishing areas shown.

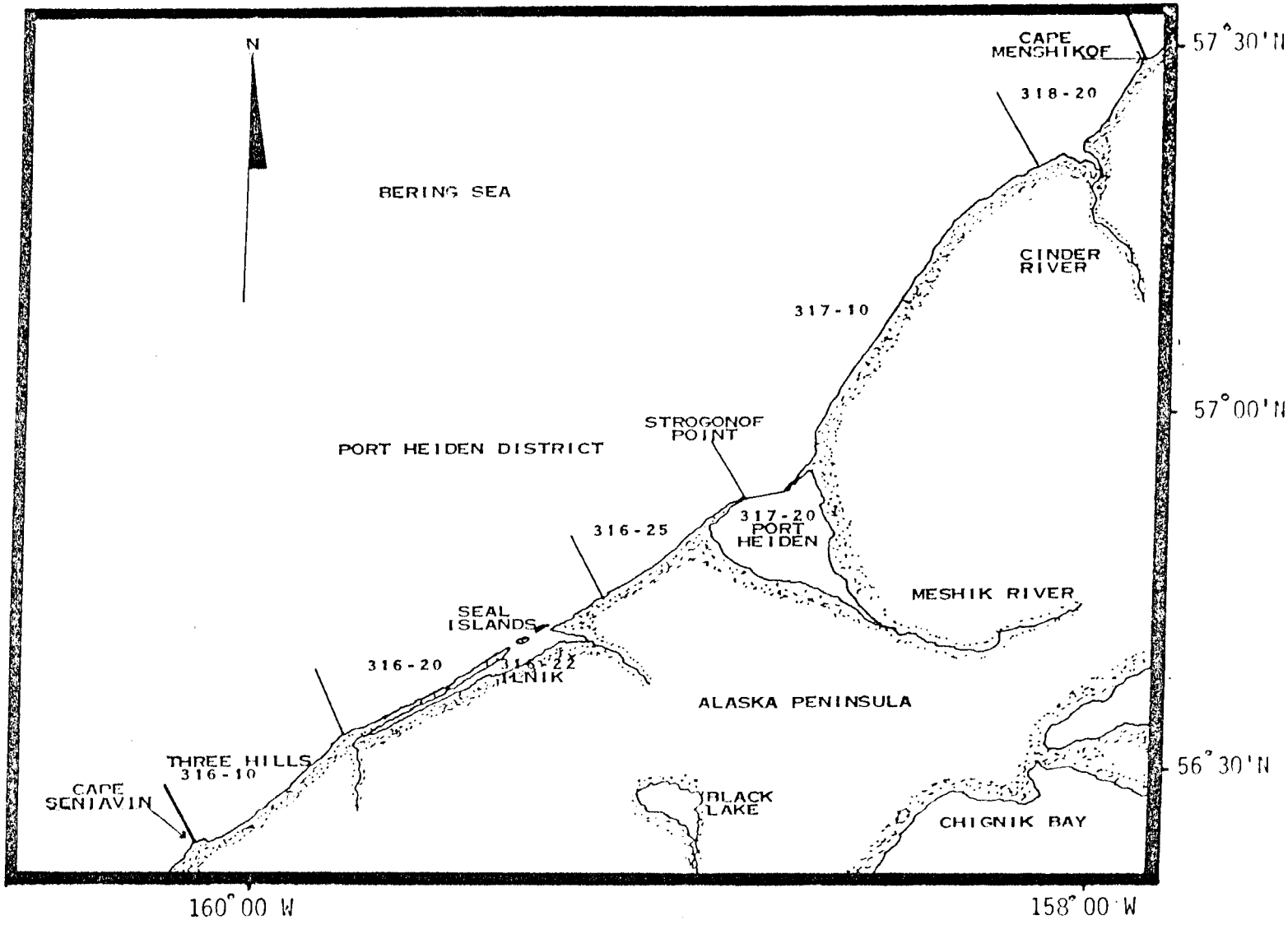

Figure 4. Map of the Alaska Peninsula Area from Cape Seniavin to Cape Menshikof with the statistical herring fishing areas shown.

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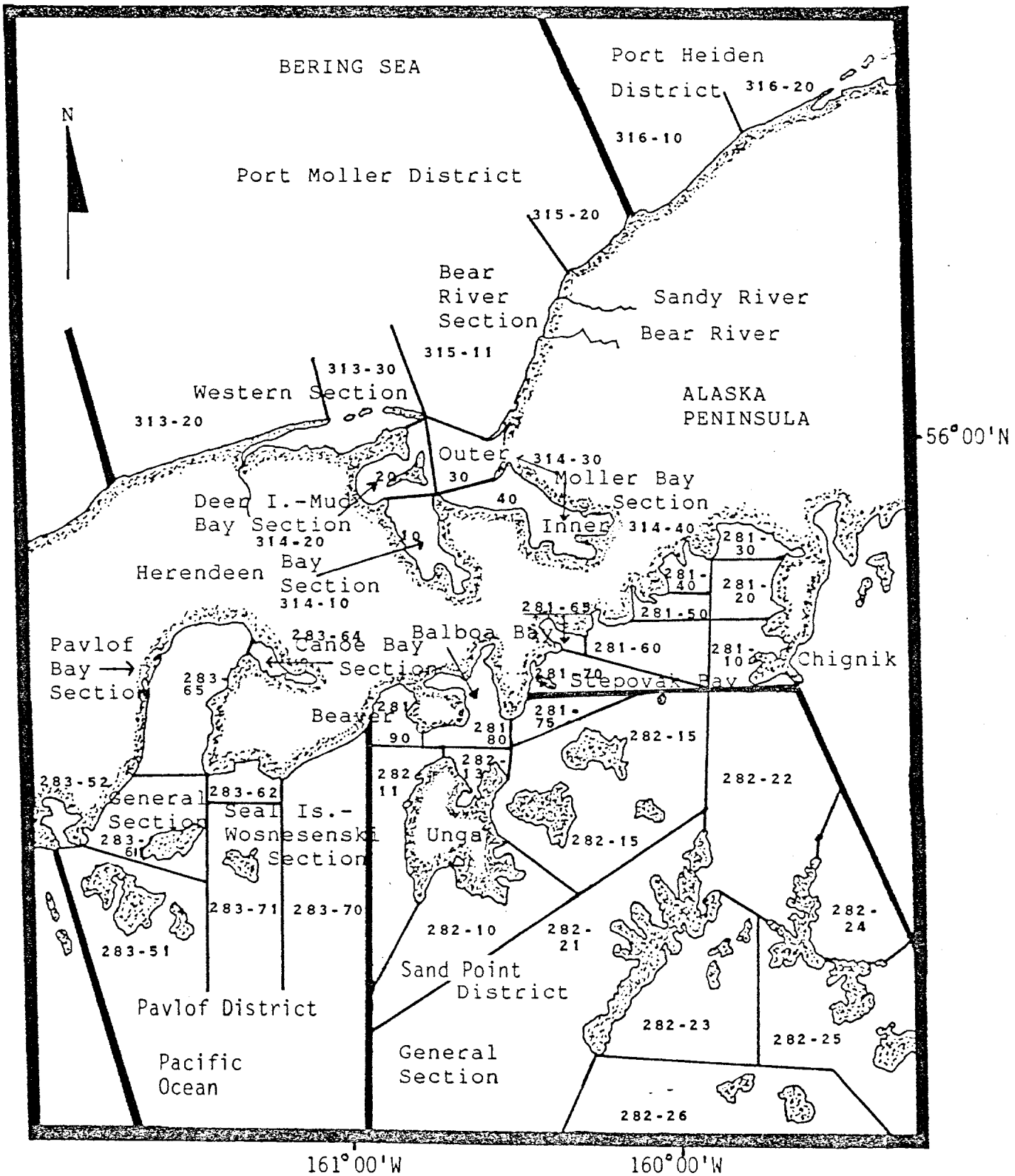

Figure 5. Map of the Alaska Peninsula Area from Bear Bay to Kupreanof Point with the statistical herring fishing areas shown.

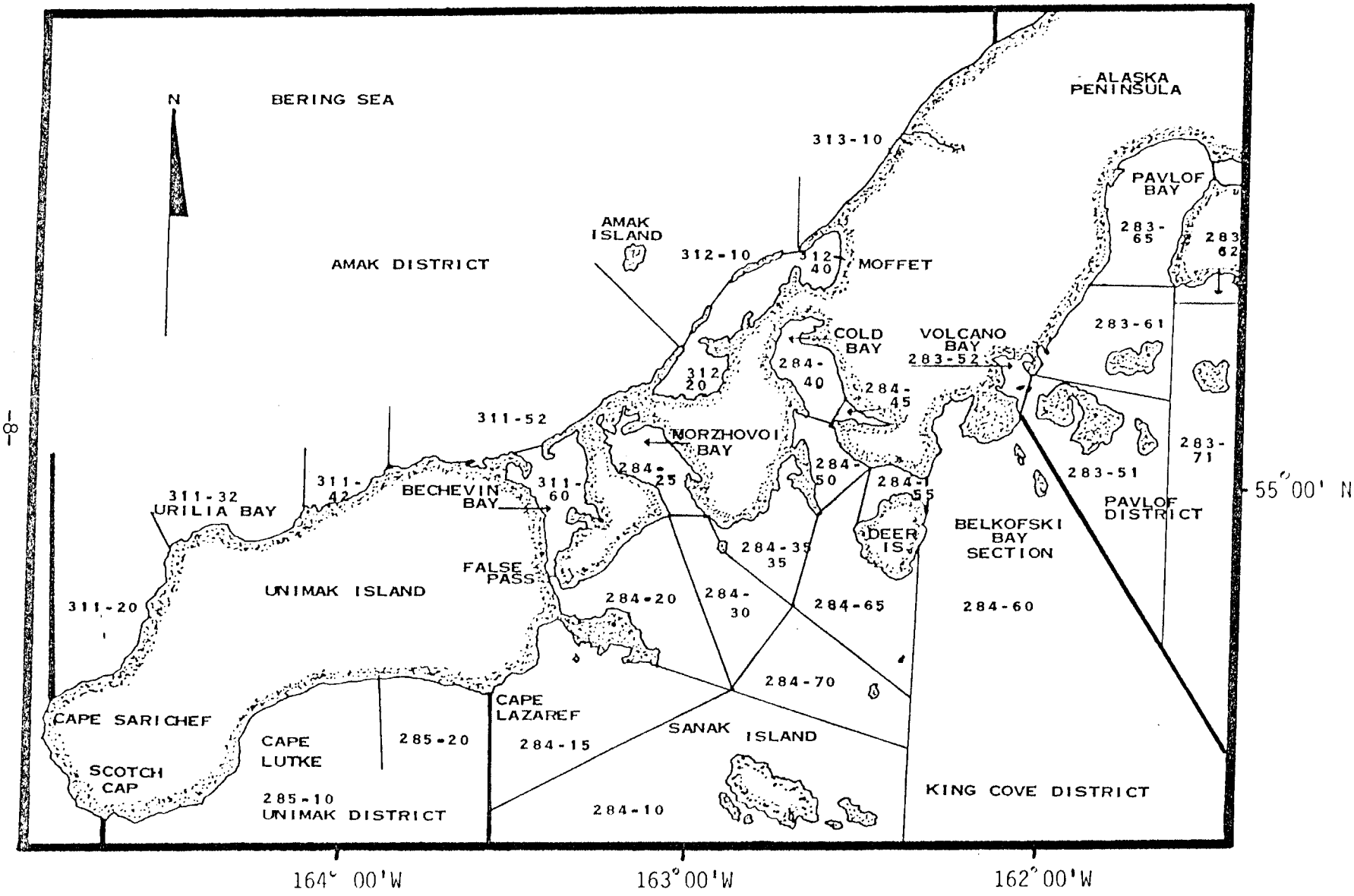

Figure 6. Map of the Alaska Peninsula Area from Cape Sarichef to Pavlof Bay with the statistical herring fishing areas shown.

Table 1. Alaska Peninsula Management Area herring sac roe catch by time period and area, 1979-90 (short tons).

Year	South Peninsula	South Peninsula Time Period	North Peninsula	North Peninsula Time Period	Total
1979	10.1	July 4-July 4	0.0		10.1
1980	453.0	May 18-July 14	0.0		453.0
1981	787.0	May 9-June 23	0.0		787.0
1982	176.2	May 31-June 14	513.5	May 31-June 12	689.7
1983	0.0		637.5	May 9-May 29	637.5
1984	210.4	May 13-June 1	431.2	May 24-June 8	641.6
1985	345.0	June 1-June 11	716.0	May 24-June 4	1,061.0
1986	281.5	June 7-June 14	888.9	May 18-May 30	1,170.4
1987	319.0	June 8-June 19	512.4	May 9-June 5	831.4
1988	376.8	May 31-June 20	293.7	May 17-June 15	670.5
1989	310.0	May 13-June 19	744.7	May 28-June 23	1,054.7
Average	326.5 a/		631.1		957.6
1990	312.2	May 14-June 14	272.8	June 4-June 19	585.0

a/ Five year 1985-89 average

Table 2. North Peninsula commercial herring sac roe catch by geographic area, 1982-90 (short tons).

Year	Deer Island	Herendeen Bay	Moller Bay	Bear River Bering Sea Coast	Total
1982	0.0	287.5	180.0	46.0	513.5
1983	0.0	520.5	36.0	81.0	637.5
1984	0.0	181.0	250.2	0.0	431.2
1985	73.0	100.0	256.0	287.0	716.0
1986	41.5	112.5	261.4	473.5	888.9
1987	0.0	160.8 a/	344.3	7.3	512.4
1988	0.0	8.2	285.5	0.0	293.7
1989	0.0	67.0	116.3	561.4	744.7
1985-89 Average	22.9	89.7	252.7	265.8	631.1
1990	0.0	155.8	117.1	0.0	272.8

a/ at least 11 tons were caught in the Deer Island-Mud Bay Section.

Table 3. South Peninsula commercial herring sac roe catch by geographic area, 1980-90 (short tons).

Year	Stepovak Bay a/	Balboa Bay	Pavlof Bay	Canoe Bay	Volcano-Dolgoi	Belkofski Bay	Lenard Harbor	Dolgoi Harbor	Shumagin Islands	Total
1980	195	132	114	12						453.0
1981	122	36	225	206	65	23	110			787.0
1982		5.0		171.2						176.2
1983 b/										0.0
1984	30.0	25.0		155.4						210.4
1985	11.0		95.0	239.0						345.0
1986 c/			61.0	140.5	13.0	8.0	59.0			281.5
1987 c/			92.0	118.0		38.0	59.0	12.0		319.0
1988	d/ 0.3	11.0	69.0	236.5	17.0	12.0	31.0			376.5
1989	39.0	17.0	53.0	148.0			9.0	5.0	39.0	310.0
1985-89 Average	16.7	14.0	74.0	176.4	15.0	19.3	39.5	8.5	39.0	252.3
1990	71.7	20.8		120.4		3.2	5.9		90.4	312.2

a/ The 1984-88 catches came from Ramsey Bay, the 1989 catch came from Granville Bay.

b/ In 1983 the South Peninsula sac roe fishery was closed, all herring catches were allocated to a food and bait fishery that did not develop.

c/ Stepovak Bay (Kupreanof Point to Swedania Point) was closed from 1986-87 due to the herring biomass being below the threshold required for a commercial fishery.

d/ Seven tons of green herring were dumped on May 7, and an additional two tons were dumped on May 11.

the South Peninsula sac roe fishery in 1983, allocating all catches to a food and bait fishery that failed to develop. Since 1984, the Board of Fisheries allocated the catch between the sac roe fishery (75% of the allowable harvest) and the food and bait fishery (25% of the allowable harvest). To date there has been no food and bait deliveries. During years in which commercial harvests occurred, landings were reported from 18 geographically separated locations, of these locations only Canoe Bay produced an annual harvest (Table 3).

The objectives of this report were: (1) to present the numbers of herring in the commercial catch for each statistical day in the Alaska Peninsula and Aleutian Islands Management Areas during 1990; (2) to estimate the age, and sex composition of harvests; (3) to estimate the mean length and weight of gonads and herring harvested in commercial fisheries; and (4) to estimate the biomass of herring within each area. This information will provide a data base for developing brood tables, forecasting runs, and evaluating management goals. This report is intended as a reference document; interpretation and discussion of the data are therefore limited.

METHODS

Commercial catch data were compiled by the Division of Commercial Fisheries of the Alaska Department of Fish and Game (ADF&G). These data were based on computer tabulations originating from individual sale receipts (fish tickets) given to fishermen at the time of delivery. Fish tickets and the computer generated summaries were edited by ADF&G Alaska Peninsula staff for errors and omissions. Because extended fish ticket editing is usually required to finalize the data for any given year, later reports may contain minor differences in the catch information listed in this report.

Catches were sampled throughout the season from harvests in the fishing areas. Catch sampling occurred at Port Moller, Cold Bay, and Sand Point. Herring were randomly sampled, usually collected from the holds of tender vessels to minimize scale loss. The harvest area of each tender sampled was determined through vessel operator interviews and fish ticket information.

Tender operators purchased fish from catcher vessels operating in combine with them. Since all catch sampling occurred before sorting within the cannery, there was no preselection of herring other than from delivery areas; although not tested, each sample was assumed to be representative of the harvest within a sample area. While this insured that samples were randomly selected from each tender sampled, the samples may not be characteristic of the population structure because the distribution of the population is unknown in the fishery.

Age compositions were computed for the catch for each area sampled. Age was determined by examining scales (Warner and Shafford 1970). Scales were taken from the preferred area which was located on the left side of the herring three rows below the lateral line and three scales posterior to the center of the operculum plate (Anonymous 1986). One scale was taken from each herring. Ages were recorded in actual fish age in years. The accuracy of age determination was not tested.

Standard length measurements were taken from the anterior most portion of the fish, including the lower jaw with the mouth closed, to the end of the vertebra (hypural plate) using a meter stick with 1 mm gradations and reading the measuring device to within 1 mm. Accuracy of a length measurement was within $\pm$ 5 mm. Mean lengths were calculated from an unweighted composite of the data collected from each area sampled.

Weight measurements of fish were taken using a triple beam balance with 1.0 g gradations and reading the scale device to within 1.0 g. Accuracy of a weight measurement was within $\pm$ 1.0 g. Mean weights were calculated from an unweighted composite of the data collected from each area sampled.

Sex compositions and sexual maturity were computed for each area sampled. Sex and sexual maturity was determined by either squeezing the fish or by internal observation of the gonads. Sexual maturity of herring were classified as: (1) virgin herring, (2) virgin herring with small sexual organs, (3) gonads occupying about half the ventral cavity, (4) gonads almost as long as body cavity, (5) gonads fill body cavity, (6) ripe gonads, (7) spent herring, and (8) recovering spent herring.

Biomass estimates of herring schools occurred during aerial surveys. The methodology of these surveys is described by Anonymous (1986). Observers fly at a recommended altitude of 1,500 feet and count the number of schools of herring and measure the length and width of each school. Each school is classified into one of three size classes based on its surface area: small schools with an area $\leq$50 m^2; medium-sized schools with a surface area >50 m^2 and $\leq$450 m^2; and large schools with a surface area >450 m^2. The number of schools in each size-class are converted to Relative Abundance Indices (RAI) by assuming that one small school equals one RAI, one medium-sized school equals five RAI, and one large school equals surface area/50 m^2. Aerial observers also classify the conditions on each survey with a rating system: one equals excellent, two equals good, three equals fair, four equals poor, five equals unsatisfactory. A conversion factor of 1.52 short tons/RAI is used for schools observed in water depths of 16 feet or less and 2.58 short tons/RAI is used for schools observed in water depths of 16 to 26 feet. In deep water, no attempt was made to convert RAI units into tonnages due to the lack of data. Conversion factors were calculated from surveys of schools of known biomass and surface area in known water depths that were conducted with commercial fishing vessels in Bristol Bay in 1983. If more than one survey of an area was conducted in a single day, then the largest number of RAI's recorded in each area was chosen as the most accurate index of biomass, because observers were more likely to underestimate the biomass than they were to overestimate the biomass. Some schools of fish, especially in the Bering Sea and Stepovak Bay, may have been capelin or other finfish.

Harvest guidelines were established preseason and were based on past fishing performance, age class data, and biomass estimates from ADF&G and industry aerial surveys (Table 4). Areas where little or no data on stock biomass was known were open for exploration.

RESULTS

Table 4. Alaska Peninsula Management Area herring sac roe catch by guideline levels, 1990 (short tons). a/

Area	Guideline Harvest		
	Sac Roe	Food/Bait	Total
South Peninsula			
Sand Point District			
Stepovak Bay Section	56	19	75
Balboa Bay Section	15	5	20
Beaver Bay Section	23	7	30
Pavlof District			
Pavlof Bay Section	75	25	100
Canoe Bay Section	113	37	150
General Section (Volcano Bay)	23	7	30
King Cove District			
Belkofski Section	23	7	30
Cold Bay Section	45	15	60
Deer Passage Section	23	7	30
Total	396	129	525
North Peninsula			
Port Moller District b/			
Herendeen Bay Section	75		75
Inner Moller Bay Section	75		75
Outer Moller Bay Section	100		100
Bear River Section			
Total	250		250
Total	646	129	775

a/The Aleutian Islands Management Area is open for exploration, no deliveries have occurred. Guideline harvest levels have not been established for areas open for exploration.

b/Herring abundance in the Port Moller District is difficult to estimate. If the Alaska Department of Fish and Game documents a herring biomass larger than expected the guideline harvest level will be adjusted inseason. Catches in the Port Heiden District may be subtracted from the Port Moller District guideline harvest if it is suspected that the herring are traveling into the Port Moller District.

In 1990, 54 landings were made in the Alaska Peninsula Management Area by nine purse seine permit holders. The 1990 catch of 585.1 tons of herring was about 38.9% lower than the 1985-89 average harvest and about half the 1989 catch (Table 1). The decreased catch was primarily due to below average Bering Sea Coast (Bear River Section) and Moller Bay catches.

In 1990, 19 purse seine permit holders indicated an interest in fishing in the Alaska Peninsula during the sac roe season. However, only nine purse seine permit holders made at least one landing. This was a decrease of eight purse seine permit holders making deliveries and three companies buying herring from the 1989 level.

The total 1990 commercial herring sac roe catch for the Alaska Peninsula and Aleutian Islands Management Areas was 585.1 tons, with an ex-vessel value of about $296,646.

Fishing Effort

Fishing effort during the last few years has stabilized, except in the Port Moller and Shumagin Islands areas.

In the Port Moller District during the 1986-88 seasons there was an average of 52 vessels present, although only a few permit holders actually made landings. Fishermen often stop in Port Moller on their way from the Togiak herring fishery for a few days to explore for herring stocks. In 1986 a trend began of increasing fishing effort effectively harvesting the early returning fish stocks. In order to shift fishing pressure from the earlier arriving stocks, to the later more abundant stocks, the Port Moller District opening was delayed until May 30 in 1989 and 1990. However, the fishery may have opened prior to May 30 by emergency order if a large biomass of herring was documented in the area. The later opening date in the past two seasons has caused a trend of decreasing effort. Fishermen returning from Togiak tend to pursue halibut or salmon fisheries rather than wait for the Port Moller herring fishery to open.

In 1990, a total of 10 tenders representing five processing companies registered for the Port Moller fishery. At least 19 purse seine skippers indicated interest in fishing for herring in the Port Moller District although only 5 purse seine permit holders made at least one delivery.

In areas open for exploration (Port Heiden District, Amak District, Unimak District, and General Sections of the King Cove and Sand Point Districts) liberal fishing time was allowed to give fishermen the opportunity to find and exploit unknown herring stocks. The liberal fishing time resulted in above average (1985-89) catches in the General Section of the Sand Point District (Table 3).

North Peninsula

The 1990 projected guideline herring harvest for the North Peninsula fisheries was 250 tons (Table 4), which does not include herring harvested in sections open

for exploration (Shaul 1990, ADF&G 1990). The Port Heiden and Amak Districts were open for exploration continuously from April 15 through July 15. The Bear River and Outer Moller Bay Sections of the Port Moller District were open from May 30 through July 15. The Herendeen Bay and Deer Island-Mud Bay Sections of the Port Moller District were open from May 30 through 10:00 AM June 19, while the Inner Moller Bay Section was open from May 30 to 8:00 PM June 6 and from 9:00 PM June 14 through July 15.

Commercial catches of herring from Port Moller from 1982 to 1990 were landed from May 9 to June 23 (Figure 5, Table 1). Most catches were taken during a time period of 20 days or less. In 1990, the commercial catch occurred in two locations: Inner Moller Bay (117.1 tons; Table 5) and Herendeen Bay (155.8 tons). Herring appeared to be running late, and the first landing occurred on June 4 with a 56.0 ton catch (Table 5). In the Port Moller District from June 4 to June 19, 272.8 tons were harvested by five purse seine permit holders. The average roe recovery was 7.53% with an average price of $600/ton for 10% roe recovery, making the ex-vessel value of the fishery worth $123,251. About 19 purse seine permit holders indicated interest in fishing Port Moller waters, but only five purse seine permit holders made deliveries.

The first ADF&G aerial survey to document a biomass of herring occurred on May 23 in the Bear River Section (Table 6). ADF&G first documented herring in Moller Bay on June 7 (46 tons). By June 6, a total of 114.1 tons had been harvested in Moller Bay and the Inner Moller Bay Section was closed. On June 14, an additional 387 tons were observed in Inner Moller Bay Section, and the section was reopened for a guideline harvest of an additional 50 tons. On June 18, 3.0 tons were caught in Inner Moller Bay Section. Fishermen continued looking for herring for about two more days, but the schools were a mixture of ripe and spawnouts and no further catches occurred. In Herendeen Bay, aerial surveys did not document any herring until June 10. From June 10-12, small schools of herring (10-20 tons) moved into Herendeen Bay, although by June 10, 7.2 tons had already been caught. ADF&G surveys on June 10-12 documented 155 tons of herring biomass (Table 6). The Herendeen Bay and Deer Island-Mud Bay Sections were closed on June 19, with a total catch of 155.8 tons.

Intensive aerial surveys to document spawning biomass and locations are not possible due to the large area, weather, muddy water, currently unpredictable appearance of herring. Also, the later portion of the fishery takes place during the beginning of the June sockeye salmon fishery when personnel is limited. NOAA conducted trawling for herring larva and found hatched larva in Moller Bay that were deposited at least 10 days before the first observed biomass.

There were industry reports of small amounts of herring spawning and leaving the area from May 31 through June 19. On May 26, commercial spotter pilots reported 30-40,000 tons of capelin near Cinder River in the Port Heiden District. On May 31 in the Outer Moller Bay Section, a purse seine vessel set and released a school of juvenile (age 2) herring. On June 1, in the Inner Moller Bay Section, a 20 ton set on spent herring occurred, which were released. On June 2, industry reported 200-300 tons of mixed spawned out/green/ripe herring near Egg Island in Inner Moller Bay. The fish were set on and released. Commercial spotters also reported 225 tons of immature herring (2 year-olds) in 3 schools in Outer Moller Bay. On June 4, fishermen reported 120-130 tons of mixed ripe/spawnouts in 8 schools by Egg Island, 120 tons of ripe herring in Inner Moller Bay Section, 150 tons of green/ripe/spawnouts in 12 schools in Mud Bay Section, and 125-150

Table 5. North Peninsula commercial herring sac roe catch by area, day, and percent roe, 1990 (short tons).

Area	Date	Catch	Percent Roe
Inner Moller Bay	June 4	56.0	6.83
	June 5	20.9	7.85
	June 6	37.2	7.34
	June 18	3.0	7.71
Total		117.1	7.19
Herendeen Bay	June 8	7.2	7.30
	June 11	12.8	7.90
	June 12	12.8	7.90
	June 13	10.8	8.50
	June 18	93.0	7.71
	June 19	19.2	7.80
Total		155.8	7.79
Total		272.8	7.53

Table 6. Alaska Department of Fish and Game North Peninsula aerial herring biomass surveys, 1990 (short tons).

	Deer Island			Herendeen Bay			Moller Bay			Bear River		
Date	RAIa/	Tonsb/	Ratingc/	RAIa/	Tonsb/	Ratingc/	RAIa/	Tonsb/	Ratingc/	RAIa/	Tonsb/	Ratingc/
May 21							0	0	1	0	0	2
May 23	0	0	1	0	0	1	0	0	1	5	8	1
May 25							0	0	2	0	0	2
May 31										0	0	2
June 1	0	0	2	0	0	2	0	0	2	10	26	1
June 2							30	46	3			
June 5	0	0	3	0	0	3	0	0	3	0	0	3
June 7							25	38	2			
June 8	0	0	2	0	0	2						
June 10	0	0	3	12	31	3	15	39	2			
June 12	0	0	2	60	155 /d	2	0	0	2			
June 14							150	387 /d	2			

RAI units express the surface area of herring schools in terms of small schools (surface area equal to 532 square feet). For example, 10 RAI units are equivalent to 10 small herring schools, each with a surface area of 538 square feet.

a/Relative Abundance Index (RAI): small school (less than 538 square feet) = 1 RAI unit
medium school (532 square feet to 4,841 square feet) = 5 RAI units
large school (square feet/538 square feet)

b/Tons: RAI units are miltiplied by 1.52 (schools in water less than 16 feet of depth).
RAI units are miltiplied by 2.58 (schools in water 16 to 26 feet of depth).

c/Rating of survey: 1) Excellent, (2) Good, (3) Fair, (4) Poor, (5) Unsatisfactory

d/Used in calculating peak biomass estimate.

tons of spawnouts in Herendeen Bay. The spawnouts in Herendeen Bay were small 3-4 year old herring. Industry reported on June 8, 80 tons of spawnouts in Inner Moller Bay Section south of Harbor Point. On June 10, industry reported 2 large and 4 small schools going into Inner Moller Bay, totaling 110 tons. On June 11, industry reported 40 tons (2 schools) in Left Head Bay (Moller Bay), one school of 40 tons (spawnouts) in Herendeen Bay near Shingle Point, and 12 schools each of about 10 tons (three of these schools were caught for 25 tons) in Mud Bay Section. On June 16, industry surveys indicated more herring (400-500 tons) moving into Inner Moller Bay Section. On June 17-18, several sets were made in Inner Moller Bay, with most of the herring released because the schools were mixed ripe/spawnouts.

Table 6 lists ADF&G aerial surveys. From May 21 through June 14, 12 aerial surveys were flown in the Port Moller District. In past years biomass estimates have been difficult due to survey conditions, and the rapid arrival and departure of fish. In 1990, fish were visible in substantial numbers on six different surveys. Aerial survey estimates added with the catch of 114.1 tons taken prior to the June 14 survey resulted in an estimated biomass of 501 tons for Moller Bay. Herring spotted in Herendeen on June 12 were added to the catch of 20 tons harvested prior to the June 12 aerial survey resulted in an estimated biomass of 175 tons. This data established the biomass at 676 tons, resulting in an exploitation rate to 40%. On May 28, NOAA caught three herring larva near Egg Island in Inner Moller Bay from eggs that were probably laid on May 15-17. NOAA larva data indicated herring spawned in Moller Bay before any fish were observed. The last survey ADF&G flew was on June 14, it is possible that additional herring arrived in the area after the last survey date. These data indicate that the 676 ton estimate is a minimum estimate.

No herring were caught in the Amak and Port Heiden Districts nor in the Bear River or Outer Moller Bay Sections, although effort occurred in the Bear River and Outer Moller Bay Sections. Most of the fish observed in the Bear River Section were capelin, while most herring observed in the Outer Moller Bay Section were juveniles.

The Inner Moller and Herendeen Bays fishery was dominated by age 6 herring (Table 7, 8; Figure 7). Herendeen Bay catches had 57% age 6 and 15% age 7 herring, while Inner Moller Bay had 49% age 6 and 16% age 7 herring. Age 3 herring which are typically only partially recruited into the fishery as age 3 herring comprised 14% of the Herendeen Bay catch and 13% of the Inner Moller Bay catch. Typically a Bering Sea year class is not fully recruited into the fishery until age 5. The amount of age 3 herring in the catches in 1990 should produce substantial catches of age 4 herring in 1991 and again as age 5 herring in 1992. The age 2 herring caught in Outer Moller Bay were juvenile herring, a few herring were kept for ageing purposes from a purse seine set that later released all other herring from that set.

Two small schools of herring, each about five tons, were observer spawning at low tide in the Inner Moller Bay area. The schools were located Southwest of Harbor Point in shallow water, spawning among sand bars. No vegetation was visible from the air where spawning occurred. On June 7, industry reported two schools each of about 10 tons spawning in the sand Southwest of Harbor Point. On June 9, industry reported 30-40 tons of herring spawning on ell grass in the northeast corner of Inner Moller Bay Section. An ADF&G survey on June 10 saw

Table 7. Estimated age comosition of herring catches from the North Peninsula by area and percent, 1985-90.

Year	Ages 2	3	4	5	6	7	8	9	10	11+
Herendeen Bay										
1985	0	5	49	21	15	6	4	0	0	0
1986	0	0	3	25	13	20	21	17	1	0
1987	0	2	4	22	24	17	13	10	6	2
1988	0	3	23	30	22	9	4	3	3	2
1989	0	0	2	62	22	5	1	1	0	7
1990	0	14	3	1	57	15	3	1	1	5
Inner Moller Bay										
1985	0	1	12	8	15	33	27	2	0	1
1986	0	1	7	21	12	18	19	20	1	1
1987	0	2	11	13	22	12	11	17	11	0
1988	0	1	30	29	12	6	5	5	8	5
1989	0	1	1	67	19	3	1	2	2	4
1990	0	13	4	2	49	16	5	2	2	6
Outer Moller-Bering Sea Coast										
1985	0	1	26	16	20	17	17	1	1	0
1986	0	0	2	22	13	21	23	18	1	0
1987	0	2	48	9	14	5	11	8	3	0
1988	No catch in this section									
1989	0	0	0	6	26	6	24	7	10	21
1990	90	10	0	0	0	0	0	0	0	0

Table 8. Estimated age comosition of herring purse seine catches from the North Peninsula by area and day, 1990.

Date	Sample Size	Ages 2	3	4	5	6	7	8	9	10	11+
Herendeen Bay											
June 8	62	0.0	12.9	3.2	1.6	58.1	9.7	4.8	1.6	1.6	6.5
June 11	63	0.0	4.8	0.0	1.6	60.3	23.8	3.2	0.0	0.0	6.3
June 19	46	0.0	28.3	6.5	0.0	50.0	8.7	0.0	2.2	2.2	2.2
Total	171	0.0	14.0	2.9	1.2	56.7	14.6	2.9	1.2	1.2	5.3
Inner Moller Bay											
June 2	21	0.0	4.8	4.8	0.0	38.1	19.0	0.0	4.8	4.8	23.8
June 5	239	0.4	12.1	4.2	2.1	44.8	14.6	7.9	2.9	2.1	8.8
June 6	82	0.0	3.7	3.7	2.4	53.7	22.0	4.9	2.4	3.7	3.7
June 14	84	1.2	13.1	4.8	2.4	56.0	19.0	1.2	0.0	0.0	2.4
June 17	69	0.0	27.5	0.0	4.3	53.6	11.6	2.9	0.0	0.0	0.0
Total	495	0.4	12.7	3.6	2.4	49.1	16.4	5.3	2.0	1.8	6.3
Outer Moller-Bering Sea Coast											
May 31	10	90.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	10	90.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

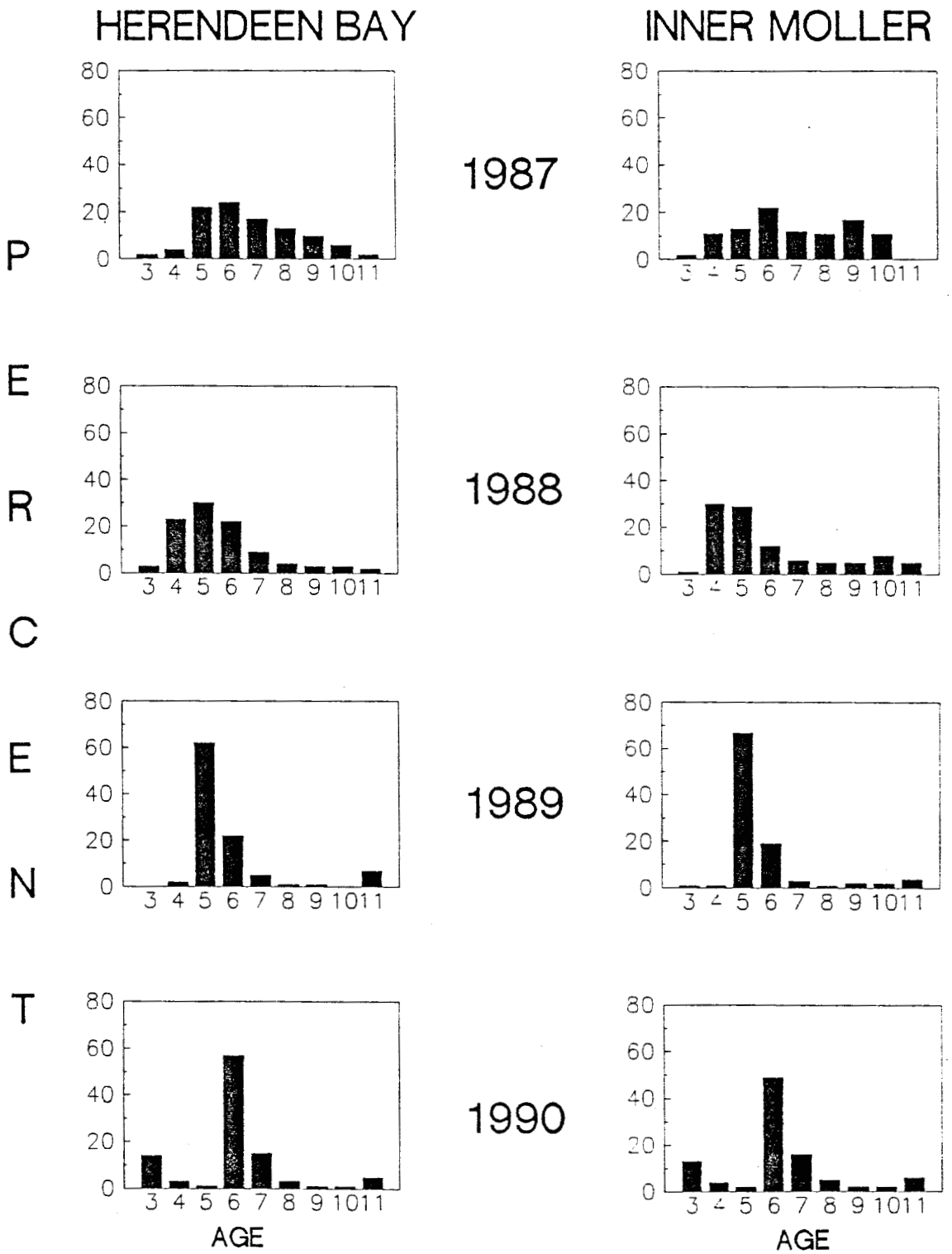

Figure 7. Age distribution of annual herring sac roe catches from Herendeen and Inner Moller Bays, 1987-90.

what was likely the same school near Harbor Point. On June 11, industry reported 40-60 tons of herring spawning in Inner Moller Bay Section near Harbor Spit.

South Peninsula

The 1990 projected guideline herring harvest for the South Peninsula fisheries was 396 tons (Table 4), which does not include herring harvested in sections open for exploration (Shaul 1990, ADF&G 1990). The Shumagin Islands Section and Unimak District were open for exploration. The South Peninsula herring fisheries were open seven days a week through the closure of the sac roe season (July 15) except for the outer portion of the Shumagin Islands Section which closed on May 27, Stepovak Bay which closed June 7, Swedania Point-Balboa Bay Section which closed June 5, and Canoe Bay which closed June 9.

Commercial catches of herring from the South Peninsula from 1980 to 1990 were landed from May 9 to June 23 (Table 1). Most catches were taken during a time period of 20 days or less. In 1990, the commercial catch occurred in six locations: Stepovak Bay (71.7 tons), Shumagin Islands (90.4 tons), Balboa Bay (20.8 tons), Canoe Bay (120.4 tons), Belkofski Bay (3.2 tons), and Leonard Harbor (5.9 tons; Table 3). From May 14 to June 14, 312.2 tons were harvested by six purse seine permit holders. The average roe recovery was 9.24%, with an average price of $600/ton for 10% roe recovery, making the ex-vessel value of the fishery worth $173,395 (Table 9).

The first ADF&G survey to document a biomass of herring occurred on May 21 in Balboa Bay, where 30 tons were observed (Table 10). By May 28, 20.8 tons of herring had been caught in Balboa Bay and the Swedania Point-Balboa Bay Section was closed (Table 9). On June 3, an additional 152 tons of herring were observed in Balboa Bay and the Section was reopened but no more catches occurred. By June 7, 71.1 tons of herring had been caught in Stepovak Bay. An aerial survey of Stepovak Bay on June 7 resulted in an estimate of 600 tons, but the bay remained closed. ADF&G has restricted catches in Stepovak Bay in an attempt to rebuild stocks since their collapse due to the food and bait fishery in 1982. The outer Shumagin Islands were closed on May 27, after a catch of 90.4 tons. ADF&G attempted several surveys of the Shumagin Islands, but the only good survey was on May 21 and that survey failed to identify any herring. In Canoe Bay, the catch of herring was 120.4 tons by June 9 and the fishery was closed. Aerial surveys of Canoe Bay on June 10-12 resulted in an estimate of 387 tons of herring remaining in the bay after the fishery.

Intensive aerial surveys to document spawning biomass and locations are not possible due to the large area, weather, muddy water, currently unpredictable appearance of herring, and the later portion of the fishery takes place during the beginning of the June sockeye salmon fishery when personnel is limited. Table 10 lists surveys that were flown. In 1990, herring were visible in substantial numbers on five different surveys.

The biomass of 182 tons observed in Balboa Bay on May 21 and June 3 was used to estimate the spawning biomass of 182 tons. In Stepovak Bay, the June 7 observed 600 tons and the catch of 71.7 tons were used to determine the spawning biomass of 672 tons. In Canoe Bay, the aerial estimate of 387 tons and the catch prior

Table 9. South Peninsula commercial herring sac roe catch by area, day, and percent roe, 1990 (short tons).

Area		Date	Tons	Roe Percent
Stepovak Bay				
		May 20	22.9	9.20
		May 23	3.0	9.50
		June 5	16.6	9.42
		June 8	29.2	8.77
	Total		71.7	9.09
Balboa Bay				
		May 14	3.0	9.10
		May 20	0.5	9.20
		May 23	5.0	9.50
		May 28	12.3	11.40
	Total		20.8	10.56
Shumagin Islands				
		May 14	36.7	9.10
		May 26	53.7	9.84
	Total		90.4	9.54
Canoe Bay				
		May 29	4.0	9.10
		June 3	14.6	8.79
		June 5	5.5	9.42
		June 8	37.3	8.77
		June 9	59.0	8.94
	Total		120.4	8.90
Belkofski Bay				
		June 3	3.2	8.79
	Total		3.2	8.79
Leonard Harbor				
		June 14	5.9	9.23
	Total		5.9	9.23
Total			312.4	9.24

Table 10. Alaska Department of Fish and Game South Peninsula aerial biomass surveys, 1990 (short tons).

Date	Stepovak Bay			Balboa Bay			Beaver Bay			Shumagin Islands			Canoe Bay			Pavlof Bay		
	RAIa/	Tonsb/	Ratingc/	RAIa/	Tonsb/	Ratingc/	RAIa/	Tonsb/	Ratingc/	RAIa/	Tonsb/	Ratingc/	RAIa/	Tonsb/	Ratingc/	RAIa/	Tonsb/	Ratingc/
May 21	0	0	2	20	30 d/	1				0	0	1						
June 1													0	0	1	0	0	1
June 3				100	152 d/	2	0	0	1									
June 7	395	600 d/	2															
June 10													110	284	2			
June 12													150	387 d/	2	0	0	2

RAI units express the surface area of herring schools in terms of small schools (surface area equal to 532 square feet). For example, 10 RAI units are equivalent to 10 small herring schools, each with a surface area of 538 square feet.

a/Relative Abundance Index (RAI): small school (less than 538 square feet) = 1 RAI unit
medium school (532 square feet to 4,841 square feet) = 5 RAI units
large school (square feet/538 square feet)

b/Tons: RAI units are miltiplied by 1.52 (schools in water less than 16 feet of depth).
RAI units are miltiplied by 2.58 (schools in water 16 to 26 feet of depth).

c/Rating of survey: 1) Excellent, (2) Good, (3) Fair, (4) Poor, (5) Unsatisfactory

d/ Used in calculating peak biomass estimate.

to the survey of 120.4 tons resulted in a spawning biomass of 507 tons. These estimates plus the catches in the Shumagin Islands, Belkofski Bay, and Leonard Harbor resulted in a minimum biomass estimate of 1,460 tons for the South Peninsula. There were industry reports of herring spawning and leaving fishing areas from mid-May through late June, especially in the Shumagin Islands and Canoe Bay, where ADF&G aerial surveys were thought to either completely miss the herring or produced only a partial biomass estimate. The harvest of 312.4 tons represents a 21% exploitation rate of the 1,460 ton minimum biomass estimate. The 1,460 ton minimum biomass estimate may be well below the actual biomass.

The Stepovak Bay, Balboa Bay, Shumagin Islands, and Leonard Harbor fisheries were dominated by age 5 and age 6 herring (Table 11, 12, Figure 8). The Canoe Bay fishery was dominated by age 3, 5, and 6 herring. In Canoe Bay for 1991, age 4 and age 6 herring should produce most of the commercial catch.

No juvenile herring schools nor spawning were observed by ADF&G personnel in South Peninsula waters.

Table 11. Estimated age comosition of herring catches from the South Peninsula by area and percent, 1985-90.

Year	Ages 2	3	4	5	6	7	8	9	10	11
Stepovak Bay										
1985	No samples									
1986	No catch									
1987	No catch									
1988	0	5	78	17	0	0	1	0	0	0
1989	0	3	31	50	13	0	0	0	2	0
1990	1	6	8	28	50	7	1	0	1	1
Balboa										
1988	0	32	50	9	0	1	3	1	2	3
1989	No samples									
1990	0	4	7	22	59	4	0	4	0	0
Shumagin Islands										
1989	0	1	15	79	1	0	0	3	0	2
1990	0	4	0	26	67	2	0	0	0	1
Canoe Bay										
1985	0	1	3	81	7	6	1	1	0	1
1986	0	6	0	3	82	6	2	0	1	0
1987	0	25	28	1	5	34	3	3	0	0
1988	0	24	31	20	0	1	16	4	2	1
1989	0	6	56	22	9	0	0	5	1	1
1990	0	23	5	49	17	5	0	0	1	0
Pavlof Bay										
1985	No samples									
1986	No samples									
1987	0	6	18	5	11	48	9	2	1	0
1988	0	34	50	5	0	2	7	0	2	0
1989	No samples									
1990	No catch									
Leonard Harbor										
1986	0	3	0	3	83	7	4	0	0	0
1987	0	67	5	0	3	25	0	0	0	0
1988	No samples									
1989	No samples									
1990	0	3	2	35	46	6	0	3	6	0

Table 12. Estimated age comosition of herring purse seine catches from the South Peninsula by area and day, 1990.

Date	Sample Size	Ages 2	3	4	5	6	7	8	9	10	11
Stepovak Bay											
May 21	61	0.0	9.8	9.8	39.3	32.8	6.6	0.0	0.0	0.0	1.6
May 23	58	0.0	10.3	6.9	25.9	56.9	0.0	0.0	0.0	0.0	0.0
June 1	25	0.0	0.0	8.0	32.0	36.0	20.0	4.0	0.0	0.0	0.0
June 7	57	1.8	0.0	5.3	15.8	66.7	7.0	0.0	0.0	1.8	1.8
Total	201	0.5	6.0	7.5	27.9	49.8	6.5	0.5	0.0	0.5	1.0
Balboa Bay											
May 23	54	0.0	3.7	7.4	22.2	59.3	3.7	0.0	3.7	0.0	0.0
Total	54	0.0	3.7	7.4	22.2	59.3	3.7	0.0	3.7	0.0	0.0
Shumagin Islands											
May 16	111	0.0	2.7	0.0	29.7	64.9	1.8	0.0	0.0	0.0	0.9
May 27	59	0.0	6.8	0.0	18.6	71.2	3.4	0.0	0.0	0.0	0.0
Total	170	0.0	4.1	0.0	25.9	67.1	2.4	0.0	0.0	0.0	0.6
Canoe Bay											
May 29	27	0.0	37.0	14.8	25.9	14.8	3.7	0.0	0.0	3.7	0.0
June 1	126	0.0	15.9	5.6	57.9	16.7	4.0	0.0	0.0	0.0	0.0
June 2	76	0.0	42.1	7.9	31.6	13.2	3.9	0.0	0.0	0.0	1.3
June 3	30	0.0	80.0	6.7	10.0	0.0	3.3	0.0	0.0	0.0	0.0
June 8	129	0.0	1.6	0.0	65.1	23.3	7.8	0.0	0.0	2.3	0.0
Total	388	0.0	22.7	4.9	49.2	16.8	5.2	0.0	0.0	1.0	0.3
Leonard Harbor											
June 14	66	0.0	3.0	1.5	34.8	45.5	6.1	0.0	3.0	6.1	0.0
Total	66	0.0	3.0	1.5	34.8	45.5	6.1	0.0	3.0	6.1	0.0

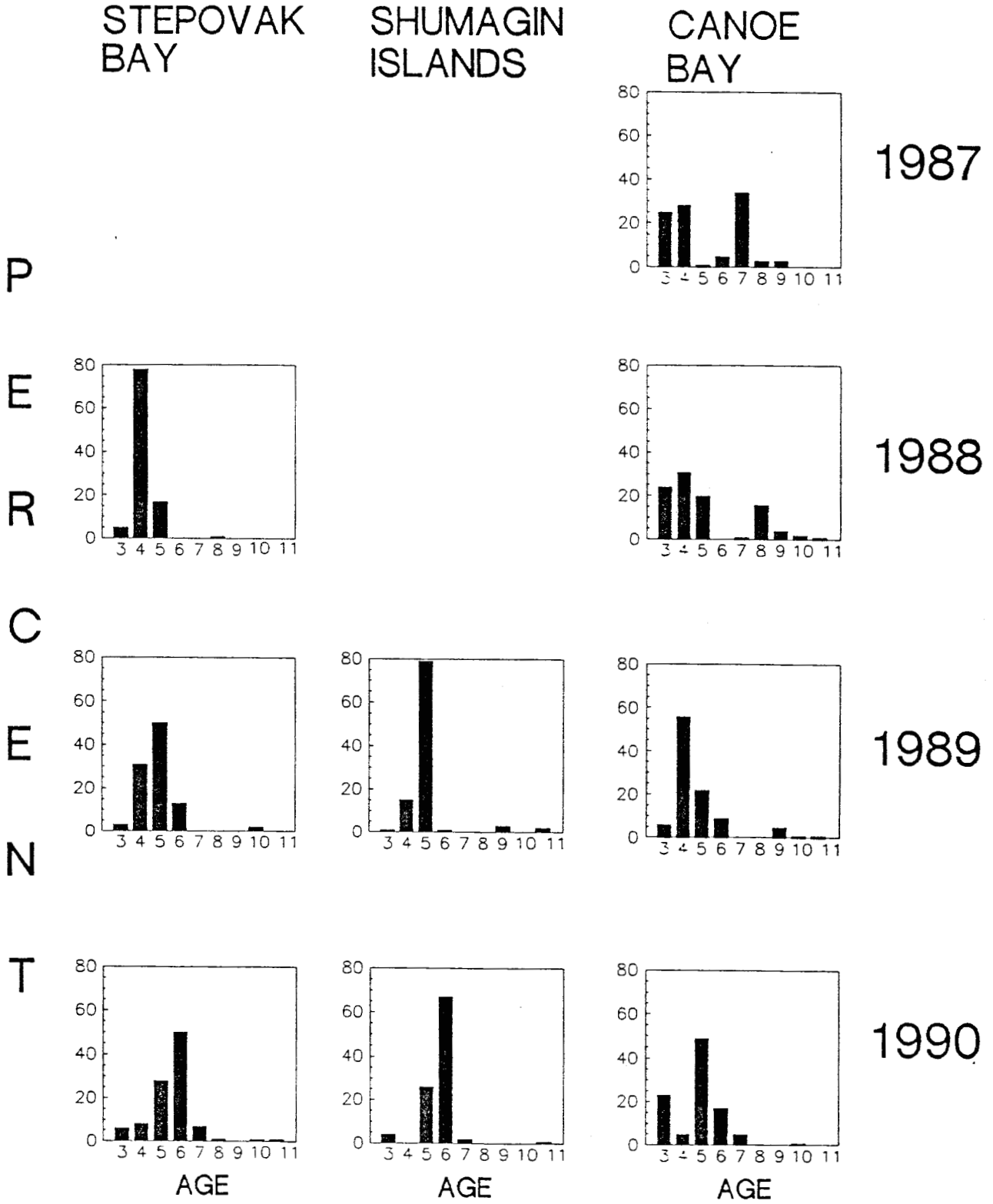

Figure 8. Age distribution of annual herring sac roe catches from Stepovak Bay, Shumagin Islands, and Canoe Bay, 1987-90.

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EASTERN ALEUTIAN ISLANDS "DUTCH HARBOR" FOOD AND BAIT HERRING FISHERY

REPORT TO THE BOARD OF FISHERIES

By

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Regional Information Report[1] No. 4K90-34

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ABSTRACT

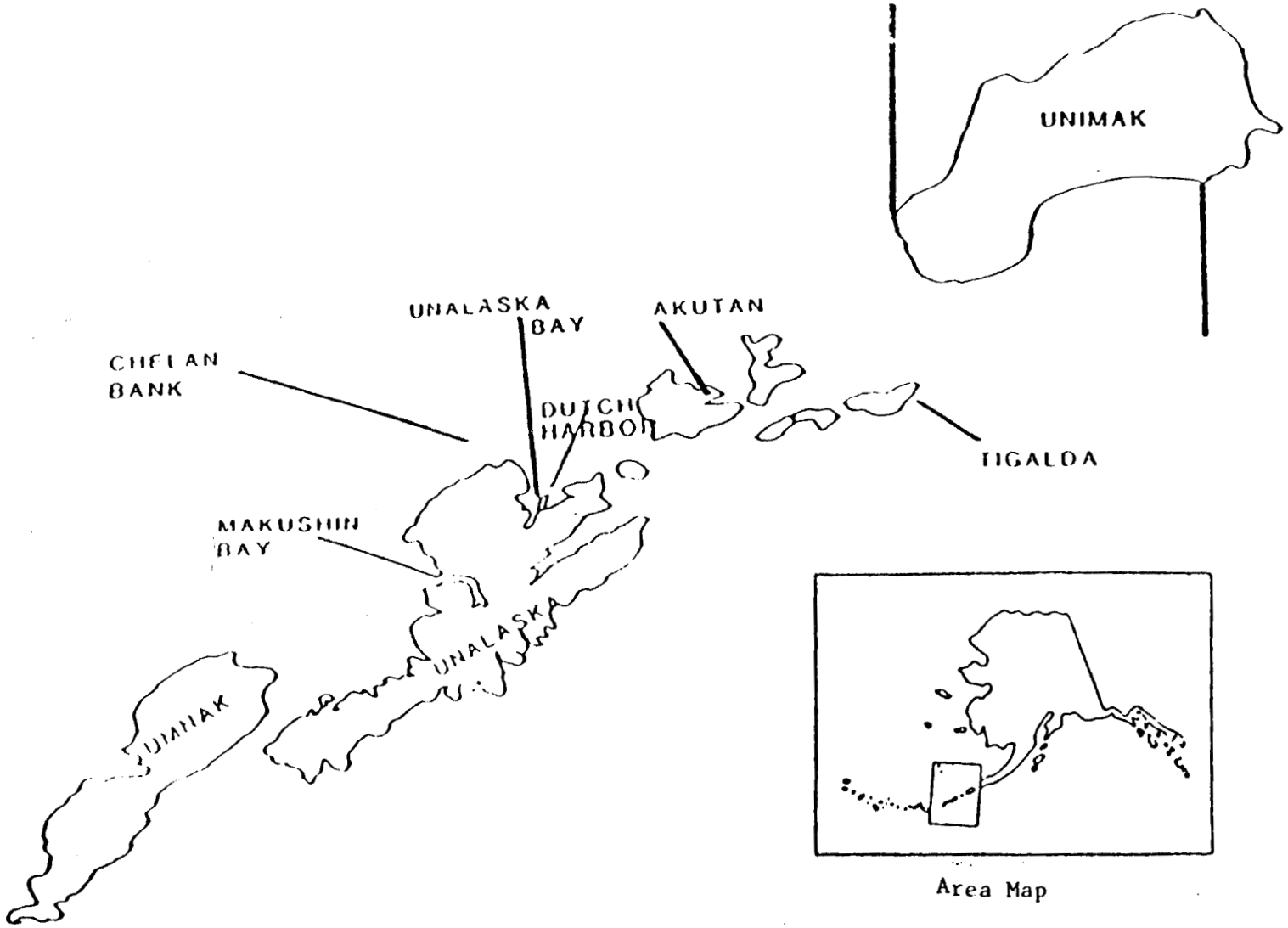
The 1990 Dutch Harbor food and bait herring opening date was changed from July 16 to August 15 by the Board of Fisheries. The harvest quota was set at 903 short tons. The fishery started August 15, 1990, at 12:01 AM with seven seiners and eight tenders participating. The fishery closed after twelve hours (12:00 Noon August 15, 1990), with a harvest of 820 short tons. The entire harvest was processed as bait herring. The seven vessels participating in the fishery averaged 117 tons. Five different processing companies purchased the herring.

Key words: Aleutian Islands, herring, catch.

INTRODUCTION

The Eastern Aleutian Islands herring food and bait fishery occurs near Unalaska and Akutan Islands, primarily in the vicinity of Unalaska and Akutan Bays (Figure 1). By regulation, the Bering Sea Management Plan applies to the Unimak, Akutan, and Unalaska Districts, and the Umnak District east of Samalga Pass. This management plan has been in effect since 1981. Historically, the Dutch Harbor Food and Bait fishery occurred from 1929 to 1938 (Table 1).

Historically, the industry was a mixture of gill net and seine gear, holding pounds, and numerous small, shore-based hand packing operations. A large portion of the catch was brined for either food or bait purposes; some product was frozen. Seine gear provided the bulk of the herring harvest. Currently, fishing gear consists of purse seine vessels, which use large seines up to 250 fathoms long and 25 to 35 fathoms deep. The entire 1981 - 1986 harvest was taken by purse seine. One gill net permit holder participated in the 1987 and 1988 season, and two gill net permit holders participated in the 1989 season. Purse seine vessels average about 50 feet in keel length and most also participate in the area M salmon fishery. Fish finding electronics (sonar) aboard these vessels are critical to the fishing operation, much as the airplane is critical to the sac-roe fishery. Generally there is a fairly free exchange of information between all the permit holders involved. Fleet efficiency is also enhanced by its ability to spread out and conduct "sonar searches" over a fairly large area when herring concentrations leave traditional fishing areas.



SAMALGA PASS

Figure 1. Waters included in the Dutch Harbor herring food and bait fisheries management plan.

Table 1. Peninsula and Aleutian Islands Management Area Eastern Aleutian Islands Herring Food/Bait Fishery Historical Industry Summary By Year, 1929-1990.

Year	Harvest In Short Tons	No. Processors	No. Boats	No. Landings	Tons Per Boat	Tons Per Landing	$ Per Ton	$ Value (Millions)	$ Per Vessel (Millions)
1929	1,259	*	*	*	*	*	*	*	*
1930	1,916	*	*	*	*	*	*	*	*
1931	1,056	12	26	*	*	*	*	*	*
1932	2,510	12	30	*	*	*	*	*	*
1933	1,585	12	38	*	*	*	*	*	*
1934	1,533	9	*	*	*	*	*	*	*
1935	2,412	10	*	*	*	*	*	*	*
1936	1,379	8	*	*	*	*	*	*	*
1937	579	*	*	*	*	*	*	*	*
1938	513	*	*	*	*	*	*	*	*
1939-44	NO FISHERY								
1945	75	*	*	*	*	*	*	*	*
1946-80	NO FISHERY								
1981	704	2	2	16	352	44	300	0.211	0.11
1982	3,565	6	7	95	509	38	300	1.020	0.15
1983	3,567	5	8	96	446	37	232	8.828	0.10
1984	3,578	5	9	61	398	59	210	0.751	0.68
1985	3,480	3	6	78	560	45	162	0.564	0.09
1986	2,394	4	7	53	342	45	254	0.600	0.09
1987	2,503	4	8	45	373	56	300	0.751	0.09
1988	2,004	6	8[a]	59	251	34	252	0.505	0.06
1989	3,081	5	9[b]	69	342	45	283	0.873	0.09
1990	820	5	7	8	117	103	350	0.287	0.04
1929-38 Average	1,474	11	31	*	*	*	*	*	*
1981-90 Average	2,570	5	7	58	369	51	264	1.439	0.15

* Data not available.
[a] Seven seiners and one gill netter participated.
[b] Seven seiners and two gill netters participated.

When herring concentrations leave the usual harvest locations, the industry follows the herring with floating processors and tenders. Processing efficiency and product quality may decline when this occurs. Harvest locations have extended over approximately 90 miles, from Tigalda Island to Makushin Bay (Figure 1). The majority of the harvest, however, has occurred within a five mile radius of shore-based processing facilities in Unalaska and Akutan Bays.

Two similarities between the current and historical fisheries are the quality problems associated with feeding herring and the availability of herring. Feed problems were overcome in the historical fishery by the use of holding pounds, where seine caught herring were held until their stomachs became empty. Gill net caught herring required special handling to prevent spoilage. In the current fishery, the use of shaved ice and super-chilled seawater in conjunction with rapid processing alleviates most of the feed related problems. When feeding conditions are severe, the processors have suspended buying. Historically, (1929-1938), the availability of herring was categorized into an early summer run (late June to late July) and a late summer run (late August to early September). This pattern does not seem to apply in the current fishery (1981-1990), as herring have been harvested from July 16 through September 15.

Shore-based processors purchase the majority of the herring harvested. Floating processors have been used each year; however, they are limited by daily handling capacities, which are considerably less than that of the shore-based plants. All of the processors associated with the herring fishery have floating processors and are diversified into bottomfish, salmon, halibut, black cod, scallops, and the Bering Sea and Peninsula crab fisheries. In 1988, some

herring were tendered to the King Cove shore plant, and in 1989 and 1990 to the Sand Point shore plant.

The values shown in Table 1 represent estimates of total ex-vessel value. Generally, the ex-vessel value for bait herring has exceeded that for food herring. Industry information indicates that foreign food markets currently have multiple sources of herring from European and Canadian stocks which have been cycling high in recent years. While Eastern Aleutian food herring are a suitable and desirable product, an ample and more reliable supply of food herring from other countries currently dominates the market. The bait product from this fishery has a more stable market which is used locally and in other fishing ports of Alaska for the longline and crab fisheries. Bait demands have been increasing in recent years and a premium price is placed on quality bait which is fresh and has high oil content. Overall, the ex-vessel value of bait herring has remained more stable than that for food.

HARVEST STRATEGY

The harvest strategy of the Dutch Harbor food and bait herring fishery has evolved since it was re-established in 1981 (Table 2). During the 1981 and 1982 seasons, there were no harvest restrictions. From 1983 to 1985 the Board of Fisheries implemented a harvest ceiling of 3,527 tons per year due to biological concern over multiple exploitation on Eastern Bering Sea spawning stocks, specifically the Bristol Bay, Nelson Island, and Port Moller stocks. Scale pattern analysis studies identified these stocks as comprising the

Table 2. Dutch Harbor Food and Bait Herring Fishery (Short Tons), 1981-1990.

Year	Preseason Togiak Spawning Biomass	Harvest Quota	Food and Bait Harvest	% Spawning Biomass Harvested
1981	159,000	NONE	704	.4
1982	98,000	NONE	3,565	3.6
1983	142,000	3,525[a]	3,567	2.5
1984	115,000	3,525	3,578	3.1
1985	132,000	3,525	3,480	2.6
1986	96,000	2,453[a]	2,394	2.5
1987	88,000	2,332[b]	2,503	2.8
1988	132,000	3,100[c]	2,004	1.6
1989	100,108	3,100[c]	3,081	3.0
1990	72,000	903[c]	820	1.1
Average	113,411	2,808	2,570	23.2

[a] Harvest ceiling of 3,525 established by Board of Fisheries.
[b] Harvest quota set by ADF&G. Reduced proportionate with the drop from the 1985 Togiak spawning biomass level.
[c] Harvest quota set under provisions of the Bering Sea Herring Fisheries Management Plan.

Eastern Aleutian herring biomass. The extensive sac-roe fisheries occurring on these stocks coupled with the food and bait fishery on different proportions of these same stocks creates an element of biological concern and possible exploitation above the board's 20% guideline policy. In 1986, a modification of the harvest ceiling was implemented by the Alaska Department of Fish and Game in response to the Board of Fisheries concern for the possible diminishing nature of the contributing stocks (primarily Togiak, to which the bulk of the Eastern Aleutian catch is estimated to be comprised). Concern was triggered by a possible lack of recruitment in the spawning stocks. The 1986 harvest allocation in the Eastern Aleutians was reduced by 30% (2,453 ton limit). This reduction was commensurate with the percentage reduction of the observed available Togiak spawning biomass between the springs of 1985 and 1986. The 1987 harvest allocation was 2,332 tons, which was in line with the 1985 to 1987 reduction on observed Togiak spawning biomass.

In 1988, the Alaska Board of Fisheries implemented a Bering Sea Herring Fisheries Management Plan, which established criteria for calculating the Dutch Harbor food and bait quota.

To ensure the conservation of herring stocks, the board adopted a requirement that the overall exploitation of a herring stock should not exceed 20% of the spawning biomass. In the case of the Togiak spawning stock, an allocation between the sac-roe fishery, spawn on kelp fishery, and the Dutch Harbor food an bait fishery was established so that the catch did not exceed 20% of the observed spawning biomass. The number of fishermen involved and the value of the fishery were factors considered by the Board when it made the allocations.

The Bering Sea Management Plan defines under what conditions and to what extent there will be a Dutch Harbor food and bait fishery. The elements governing the food and bait fishery are listed below:

1. The Dutch Harbor food and bait fishery quota is determined through the following calculations:

   A. The desired exploitation rate (maximum of 20%) is applied to the estimated Togiak spawning biomass. This figure represents the total combined allowable harvest to be extracted by the Togiak sac-roe fishery, spawn on kelp fishery, and the Dutch Harbor food and bait fishery.

   B. The spawn on kelp fishery is allocated 1,500 tons of herring.

   C. The Dutch Harbor fishery is allocated 7% of the remaining allowable harvest (after the 1,500 ton spawn on kelp allocation has been subtracted from the total allowable harvest).

   D. The Togiak herring sac-roe harvest allocation is the remainder of the total allowable harvest after the spawn on kelp and Dutch Harbor allocation have been subtracted.

2. If the herring sac-roe harvest in the Togiak District exceeds its allocation by more than 20%, the department shall deduct the amount of herring that exceeds the Togiak District herringsac-roe allocation from the Dutch Harbor fishery allocation for that season.

3. If the Togiak District herring sac-roe fisheries do not harvest their allocation, the unharvested amount of herring will be added to the Dutch Harbor fishery allocation. When an increase of the Dutch Harbor fishery allocation is made under this section, the total allocated harvest may not exceed 3,100 short tons.

4. When the Togiak District spawning stock is below its threshold (35,000 tons), the Dutch Harbor fishery will be closed for that season.

1990 FISHERY

Using the newly adopted Bering Sea Herring Management Plan and the revised Togiak spawning biomass, a preseason harvest quota of 903 short tons was calculated for the Dutch Harbor herring fishery:

72,008	Estimated 1990 Togiak Spawning Biomass
x 20%	Desired Exploitation
14,400	Total Allowable Harvest
- 1,500	Spawn on Kelp Allocation
12,900	Tons Remaining Allowable Harvest
x 7%	
903	Dutch Harbor Food and Bait Fishery

The fishery was opened by regulation (the Board of Fisheries changed the opening date from July 16 to August 15) to continuous fishing at 12:01 AM August 15, with seven seine vessels and eight tenders participating. Five companies were registered to buy herring.

Herring were accessible for harvest on August 15, and the entire fleet found a large school of herring at Cape Cheerful while en route to Makushin Bay. By 9:00 AM, August 15, the fleet had an estimated 940 tons seined up or on board tenders. It was decided to close the fishery at 12:00 Noon, August 15, 1990 (Table 3) in order to prevent over harvesting the allocation. After editing fish tickets, the total catch was 820 short tons, leaving 83 tons unharvested. By the time all fish tickets were received in the Dutch Harbor office, the herring fleet had departed for other fisheries and the balance of the quota (83 tons) was not attained. The entire harvest was processed as bait herring.

Fishermen were paid $350.00 per ton making the ex-vessels value of the fishery at $287,000.00.

Herring quality was good and they were a desirable size. The herring averaged about one pound and were twelve to fourteen inches in length.

MANAGEMENT PLAN REVIEW AND 1991 HARVEST PROJECTIONS

The current management plan, adopted in 1988, generated food and bait allocations of 1,700 tons in 1988 and 1,300 tons in 1989. In both years the allocation was increased to

Table 3. Alaska Peninsula/Aleutian Islands Management Area Eastern Aleutians Herring Food/Bait Fishery Harvest Dates By Year, 1981-1990

Year	Landing Date First	Landing Date Last	Days Fished	Seine Vessels	Total Harvest
1981	8/03	8/23	21	2	704
1982	8/05	9/12	39	6	3,565
1983	7/23	9/06	46	5	3,567
1984	7/17	7/27	11	5	3,578
1985	7/17	8/11	26	3	3,480
1986	7/16	7/28	13	4	2,394
1987	7/16	7/23	4[a]	9[b]	2,503
1988	7/16	9/18	21	8[b]	2,004
1989	7/16	8/05	19[c]	9[d]	3,081
1990	8/15	8/15	0.5	7	820
Average			20	6	2,570

[a] Closed 7/19, reopened for 14 hours on 7/23.
[b] Includes one gill netter.
[c] Closed 7/26, reopened 7/27 until August 5.
[d] Includes two gill netters.

3,100 tons because the allowable Togiak sac-roe harvest was not taken. In 1990, the allowable Togiak sac-roe harvest was attained, therefore the allocation remained at 903 tons.

Based on the projected 1991 Togiak spawning biomass of 54,772 tons the Dutch Harbor food and bait quota will be 662 tons. However, this figure could change if the biomass projection is inaccurate or if the desired 1991 sac-roe harvest is not achieved.

COMPANIES PURCHASING SALMON AND HERRING
IN ALASKA PENINSULA AND ALEUTIAN ISLANDS AREAS DURING 1990

(S) Salmon (H) Herring

	Company Name and Home Office	Processing Plants
(S)(H)	Alyeska Seafoods P.O. Box C-5030 Seattle, WA 98105 (206) 547-2100	Unalaska Shoreplant 581-1211 or 1212
(S)	ANPAC, Inc. P.O. Box 92520 Anchorage, AK 99509 (907) 561-1399	NUSHAGAK WSA 3638 Anchorage Shoreplant
(S)	Crusader Fisheries, Inc. 4259 22nd Avenue West Seattle, WA 98199 (206) 281-7022	CRUSADER WSJ 4610 SEA LEGEND WYH 5118
(S)	Farwest Fisheries, Inc. 1300 Dexter Avenue N. Suite 100 Seattle, WA 98109 (206) 285-0300	Naknek Shoreplant
(S)(H)	Icicle Seafoods 4019 21st Avenue W. Seattle, WA 98199 (206) 282-0988	DISCOVERY STAR EVENING STAR
(S)	Layfayette Fisheries 4259 22nd Avenue West Seattle, WA 98199-1206 (206) 281-7022	PRIBILOF WRQF
(S)	New West Fisheries, Inc. 601 West Chestnut St. Bellingham, WA 98225 (206)734-9050	NEW WEST
(S)	North Coast Seafood Processors P.O. Box 17538 Seattle, WA 98107 (206) 789-5108	POLAR BEAR WE6476
(H)	Oceanic Seafoods Company 8221 44th Avenue West Mukilteo, WA 98275 (206) 745-3398	HARVESTER BARGE WXN 3719

COMPANIES PURCHASING SALMON AND HERRING
IN ALASKA PENINSULA AND ALEUTIAN ISLANDS AREAS DURING 1990

(S) Salmon (H) Herring

	Company Name and Home Office	Processing Plants
(S)	Palisades Fisheries, Inc. 500 Fairview Avenue North Seattle, WA 98109 (206) 628-0820	PALISADES KUS536355
(S)(H)	Peter Pan Seafoods, Inc. 2200 Sixth Avenue, Suite 1000 Seattle, WA 98121-1820 (206) 728-6000	King Cove Shoreplant (907) 497-2274 Port Moller Shoreplant (907) 987-2203 BLUE WAVE WTQ5140
(S)	Sonny's Refrigeration P.O. Box 496 Pilot Point, AK 99649 (907) 797-2218	Pilot Point Shoreplant
(S)(H)	Trident Seafoods Corp. 5303 Shilshole Ave. N.W. Seattle, WA 98107 (206) 783-3818	Sand Point Shoreplant (907) 383-4848 Akutan Shoreplant (907) 698-2212 NEPTUNE WRC8312 BILLIKIN WYX2752 TEMPEST WQZ4061
(S)(H)	Unisea, Inc. P.O. Box 97019 Redmond, WA 98073-9719 (206) 881-8181	UNISEA (in Dutch Harbor)
(S)	Woodbine Alaska Fish Co. P.O. Box 218 Naknek, AK 99633 (707) 374-5912 (907) 246-4241	WOODBINE WRA9590

ARTICLE 10.—STATISTICAL AREA M

ALASKA PENINSULA-ALEUTIAN ISLAND AREA.

5 AAC 27.600. DESCRIPTION OF AREA. Statistical Area M includes all waters bound on the east by a line extending southeast (135°) from the southernmost tip of Kupreanof Point, on the west by the International Date Line, and on the north by a line extending west from the westernmost tip of Cape Menshikof.

5AAC 27.605. DESCRIPTION OF DISTRICTS AND SECTIONS. (a) Sand Point District: all waters on the south (Pacific) side of the Alaska Peninsula between the western boundary of the Chignik Area and 161° W. long.

(1) Stepovak Bay Section: all waters of the Sand Point District located north of 55°32′ N. lat. and east of 160°30′ W. long.

(2) Swedania Point-Balboa Bay Section: all waters of the Sand Point District located between 160°31′ W. long. and 160° 47′ W. long., and north of 55°26′ N. lat.

(3) Point Aliaksin-Beaver Bay Section: all waters of the Sand Point District located between 160°47′W. long. and 161° W. long., and north of 55°26′ N. lat.

(4) General Section: all other waters of the Sand Point District.

(b) Pavlof District: all waters on the south (Pacific) side of the Alaska Peninsula between 161° W. long. and a line extending 150° from 55°05′ 54″ N. lat., 161°59′ W. long. through Inner and Outer Iliasik Islands, including Bear and Volcano Bays.

(1) Canoe Bay Section: all waters of Canoe Bay east of 161°21′ 45″ W. long.

(2) Pavlof Bay Section: all waters of Pavlof Bay north of 55°21′ 42″ N. lat. (latitude of Cape Tolstoi), excluding the Canoe Bay and Seal Cape—Wosnesenski Sections.

(3) Seal Cape-Wosnesenski Section: all waters of the Pavlof District located between 161°W. long. and 161°30″ W. long. (longitude of Cape Tolstoi).

(4) General Section: all other waters of the Pavlof District.

(c) King Cove District: all waters of the south (Pacific) side of the Alaska Peninsula between a line extending 150° from 55°05′ 54″ N. lat., 161°59′ W. long. through Inner and Outer Iliasik Islands and 163°30′ W. long., including waters of Isanotski Strait south of a line from Nichols Point to the False Pass dock.

(1) Belkofski Section: all waters of the King Cove District east of 162°15′ W. long. (longitude of Bold Cape).

(2) Deer Passage Section: all waters of the King Cove District between 162°15′ W. long. (longitude of Bold Cape) and 162°25′ W. long (longitude of Vodapoini Point), and north of 54°55′ N. lat., excluding all waters of Lenard Harbor.

(3) Cold Bay Section: all waters of the King Cove District bounded by a line from Thin Point to Vodapoini Point.

(4) General Section: all other waters of the King Cove District.

(d) Unimak District: all waters on the southside of Unimak Island between 163°30′ W. long. and the longitude of Scotch Cap Light.

(e) Akutan District: all waters extending west of Unimak Island to and including Akutan Pass.

(f) Unalaska District: all waters west of Akutan Pass to and including Umnak Pass.

(1) Unalaska Bay Section: all waters of the Unalaska Bay District enclosed by a line from Priest Rock at 54°00′24″ N. lat., 166°22′42″ W. long. to Cape Cheerful at 54°00′33″ N. lat., 166°37′45″ W. long.

(2) General Section: all waters of the Unalaska District not included in the Unalaska Bay Section.

(g) Umnak District: all waters west of Umnak Pass to and including Atka Pass.

(h) Adak District: all waters west of Atka Pass to the terminus of the Aleutian Islands.

(i) Amak District: all Bering Sea waters south and west of Cape Lieskof (55°47′ N. lat., 162°04′ W. long.) to the longitude of Cape Sarichef Light, including all waters of Bechevin Bay and Isanotski Strait north of a line from the False Pass Cannery dock to the tip of Nichols Point.

(j) Port Moller District: all Bering Sea waters between the latitude of Cape Lieskof and the latitude of Cape Seniavin (56°24′ N. lat.).

(1) Western Section: all waters of the Port Moller District west of the longitude of Wolf Point on Walrus Island, excluding the waters of Herendeen Bay and Deer Island—Mud Bay Sections.

(2) Deer Island—Mud Bay Section: all waters of the Port Moller District bounded by a line from the northernmost tip of Point Edward to the southernmost tip of Wolf Point on Walrus Island to Point Divide (55°53′10″ N. lat., 160°47′ W. long.) to the northernmost tip of Black Point.

(3) Herendeen Bay Section: all waters of Herendeen Bay south of a line from the northernmost tip of Black Point to Point Divide (55°53′10″ N. lat., 160°47′ W. long.).

(4) Inner Port Moller Bay Section: all waters of Port Moller Bay enclosed by a line from Point Divide (55°53′10″ N. lat., 160°47′ W. long.), to Harbor Point (55°55′ N. lat., 160°34′30″ W. long.).

(5) Outer Port Moller Bay Section: all waters of the Port Moller District south and east of a line from Point Divide (55°53′10″ N. lat., 160°47′ W. long.) to the southern-

most tip of Wolf Point on Walrus Island to the southernmost tip of Entrance Point (55°59'30" N. lat., 160°34' W. long.).

(6) Bear River Section: all Bering Sea waters between the longitude of Wolf Point on Walrus Island and Cape Seniavin Light, excluding the waters of the Herendeen Bay, Deer Island-Mud Bay, Outer Port Moller Bay, and Inner Port Moller Bay Sections.

(k) Port Heiden District: all waters between the latitude of Cape Seniavin (56°24' N. lat.) and the latitude of Cape Menshikof (57°31'20" N. lat.).

5 AAC 27.610. FISHING SEASONS AND PERIODS. (a) In the Sand Point, Pavlof, King Cove, Unimak, Akutan, Unalaska, Umnak, and Adak Districts, herring may be taken from April 15 through July 15 (sac-roe season) and from August 15 through February 28 (food and bait season).

(c) In the Amak, Port Moller, and Port Heiden Districts, herring may be taken from April 15 through July 15 (sac roe season) and from August 15 through February 28 (food and bait season).

(d) Herring may be taken only during periods established by emergency order.

5 AAC 27.630. GEAR. Herring may be taken only by purse seines and gill nets.

5 AAC 27.631. GILL NET SPECIFICATIONS AND OPERATIONS. (a) During the herring sac roe season, the aggregate length of herring gill nets in use by a herring CFEC permit holder may not exceed 150 fathoms.

(b) The interim-use or entry permit holder must be physically present while the gill net is being fished.

(c) Each drift gill net in operation must have a buoy at one end and the opposite end must be attached to the fishing vessel. Each set gill net in operation must be anchored and buoyed at both ends. Each buoy must be plainly and legibly marked with the permanent vessel license plate number (ADF&G number) of the vessel operating the gear. The buoy may bear only a single number and this number must be that of the vessel used in operating the gear. The numbers must be painted on the top one-third of the buoy in numerals at least four inches in height, one-half inch in width and in a color contrasting to that of the buoy. The buoy markings must be visible on the buoy above the water surface.

5 AAC 27.632. SEINE SPECIFICATIONS AND OPERATIONS. During the herring sac roe season, no purse seine may be more than 1,000 meshes in depth and more than 100 fathoms in length. During the herring food and bait season, no purse seine may be more than 250 fathoms in length.

5 AAC 27.650. WATERS CLOSED TO HERRING FISHING. (a) Herring may not be taken from June 25 through September 30 in any waters closed to salmon fishing.

5 AAC 27.660. HARVEST STRATEGY. (b) The department shall manage the Sand Point, Pavlof, and King Cove Districts so that 75 percent of the estimated guideline harvest level of 1,200 s. tons is taken during the sac-roe season and 25 percent is taken during

the food and bait season. If the 75 percent is not taken during the sac-roe season, then the amount of herring not taken may be allowed to be taken during the food and bait season. The department shall adjust the guideline harvest level based on herring biomass assessments conducted during the sac-roe season.

5 AAC 27.662. BUYER AND TENDER REPORTING REQUIREMENTS. In addition to the requirements of 5 AAC 39.130(f) each tender operator and each buyer or his agents shall report in person to and register with a local representative of the department upon arrival in the statistical area before commencing operations and before changing location of the operation. Each buyer shall:

(1) identify all vessels to be employed in transporting or processing herring and shall register such vessels with a local representative of the department located in the statistical area before transporting or processing of herring;

(2) make daily reports of all herring purchased from fishermen, and other processing records as specified by a local representative of the department; and

(3) submit fish tickets before departure from the area and no later than 10 days after termination of buying operations in the area, or as otherwise specified by a local representative of the department.

Emergency Order No. 4-F-M-CDB-01-90

Effective Date: April 15, 1990

EXPLANATION:

This emergency order establishes weekly commercial herring sac-roe season fishing periods a follows for the Alaska Peninsula-Aleutian Islands Area:

(1) Port Moller District.

(A) April 15 - July 15. No open fishing periods, unless established by subsequent emergency order.

(2) Unimak, Akutan and Unalaska Districts, and that portion of the Umnak District located east of Samalga Pass.

(A) April 15 - June 15. Herring may be taken during Sunday through Saturday.

(B) June 16 - July 15. No open fishing periods.

(3) In the balance of the area, not listed in (1) or (2), herring may be taken during Sunday through Saturday.

JUSTIFICATION:

Fishing time is needed to allow herring sac-roe harvests in the Alaska Peninsula-Aleutian Islands Area during most of the sac-roe season. Effort is anticipated to be light Therefore, until conditions indicate more conservative measures are needed, seven fishing days per week can be allowed in most of the area without jeopardizing the resource. The reason that portions of the area will remain closed during part of the season is as follows:

(A) Umnak District east of Samalga Pass, Unimak District, Akutan District, and Unalaska District during June 16 through July 15.

This area is managed on a food/bait fishery allocation during the food/bait season beginning July 16, which is managed on the basis of Togiak (Bristol Bay Area) spawning stocks. During some years food/bait (non local spawning) stocks are present well before July 16. The closure from June 16 through July 15 will prevent food/bait herring being harvested prior to the food/bait season. If sac-roe stocks are discovered during June 16 - July 15 appropriate locations can be opened to herring fishing by subsequent emergency order.

(B) It appears that there are two Port Moller District herring stocks. The early stock has been subjected to intense pressure during recent years while the later and much larger stock ha been subjected to very little exploitation. Until such a time that a large early biomass is observed or until such a time that the

large late biomass is anticipated to arrive (probably after May 29), the time and duration of fishing periods will depend on such factors as observed biomass, the amount of anticipated effort, weather, and tides.

Emergency Order No. 4-F-M-CDB-02-90

Effective Date: May 27, 1990

EXPLANATION:

This emergency order closes commercial herring fishing in the Shumagin Islands waters located southeast of West Nagai Strait from noon May 27, 1990 through April 14, 1991. This closure includes all waters of Nagai Island and the waters surrounding all islands of the Shumagin Islands located southeast of Nagai Island.

JUSTIFICATION:

The herring harvest in the Outer Shumagin Islands is 110-115 tons. The Department is concerned that the resource could be overexploited, based on present knowledge, if further harvests are allowed at this time. Therefore the Outer Shumagin Islands should remain closed until such time the observed stock abundance justifies additional fishing.

Emergency Order No. 4-F-M-CDB-03-90

Effective Date: April 15, 1990

EXPLANATION:

This emergency order opens the commercial herring fishing season in the Port Moller District effective May 30 through July 15 and allows continuous fishing during that time. This emergency order supersedes emergency order number 4-F-M-01-90 in regards to the Port Moller District.

JUSTIFICATION:

The 1990 Peninsula-Aleutians Herring Sac-Roe Fishery Management Plan states that the Port Moller District herring fishery will open on May 30. The closure prior to May 30 is to protect small stocks which have been heavily exploited in the past. A large biomass of herring arrives during some seasons at the end of May. An opening after May 29 will give the fleet the opportunity to harvest the large stock when and if it arrives. These herring tend to appear suddenly, spawn, and disappear in a very short time. There are presently only 12 vessels on the grounds and over half will likely depart for salmon within the very near future

Emergency Order No. 4-F-M-CDB-04-90

Effective Date: May 30, 1990

EXPLANATION:

This emergency order closes commercial herring fishing in the Swedania Point-Balboa Bay Section from 3:00 P.M. May 30, 1990 through February 28, 1991.

JUSTIFICATION:

The 1990 Peninsula-Aleutian Herring Sac-Roe Fishery Management Plan states that the guideline harvest level for the Swedania Point-Balboa Section is 15 tons for the sac-roe season and 20 tons for the entire season. The reported harvest is approximately 17-18 tons which exceeds the sac-roe guideline harvest level and is so close to the total season allowable harvest that further fishing cannot be allowed without placing the resource in jeopardy. Therefore the Swedania Point-Balboa Bay Section should remain closed until the 1991 herring sac-roe season.

Emergency Order No. 4-F-M-CDB-05-90

Effective Date: June 4, 1990

EXPLANATION:

This emergency order reopens commercial herring fishing for 3 hours beginning 10:00 A.M. June 4, in the Swedania Point-Balboa Bay Section. This emergency order supersedes emergency order number 4-F-M-CDB-04-90.

JUSTIFICATION:

A very recent survey of Balboa Bay indicates a biomass of 150-160 tons of herring have moved into the bay. This reduces the 1990 exploitation rate to less than 9 percent. Another 20 tons of herring can be taken without exceeding the maximum exploitation rate of 20% as established by the Alaska Board of Fisheries. At the present time the catching power of the fleet is so limited in the vicinity that it is doubtful if more than 20 tons of herring will be taken in three hours. The herring need to be harvested quickly or it is likely they will be spawned out.

Emergency Order No. 4-F-M-CDB-06-90

Effective Date: June 5, 1990

EXPLANATION:

This emergency order reopens the Swedania Point-Balboa Bay Section to commercial herring fishing during the open season effective noon June 5, 1990 through February 28, 1991. This emergency order supersedes emergency order number 4-F-M-CDB-05-90.

JUSTIFICATION:

Recent surveys have indicated an increased herring biomass in Balboa Bay which reduces the exploitation rate top under 9%. A 3 hour fishery during June 4 produced no catch due to a mixture of spawnouts and "green" herring. The fishery should be reopened to allow a harvest when and if more ripe herring enter Balboa Bay.

Emergency Order No. 4-F-M-CDB-07-90

Effective Date: June 6, 1990

EXPLANATION:

This emergency order closes the Inner Port Moller Bay Section to commercial herring fishing effective 8:00 P.M. June 6, 1990 through February 28,, 1991.

JUSTIFICATION:

The 1990 Peninsula-Aleutians Herring Sac-Roe Fishery Management Plan states that the guideline harvest level for the Inner Port Moller Bay Section is 75 tons of herring. The harvest through June 5 is 68 tons and it is estimated that the harvest will reach 75 tons by 8:00 P.M.

Emergency Order No. 4-F-M-CDB-08-90

Effective Date: June 7, 1990

EXPLANATION:

This emergency order closes the Stepovak Bay Section to commercial herring fishing from 8:00 P.M. June 7, 1990 through February 28, 1991.

JUSTIFICATION:

The 1990 Peninsula-Aleutians Herring Sac-Roe Fishery Management Plan states that the guideline harvest level for the Stepovak Bay

Section is 56 tons during the sac-roe season and 75 tons for the entire season. The present harvest is estimated at 70 tons. It is not feasible to harvest the balance during the food and bait season without risking overexploitation of the resource.

Emergency Order No. 4-F-M-CDB-09-90

Effective Date: June 9, 1990

EXPLANATION:

This emergency order closes the Canoe Bay Section to commercial herring fishing from 7:30 P.M. June 6 through August 14.

JUSTIFICATION:

The 1990 Peninsula-Aleutians Herring Sac-Roe Fishery Management Plan states that the guideline harvest level for the Canoe Bay Section is 113 tons. The documented catch is presently 93 tons and is projected to exceed 113 tons by 7:30 P.M.

Emergency Order No. 4-F-M-CDB-13-90

Effective Date: June 14, 1990

EXPLANATION:

This emergency order supersedes emergency order 4-F-M-CDB-07-90 by reopening the Inner Port Moller Bay Section to commercial herring fishing from 9:00 P.M. June 14 through July 15.

JUSTIFICATION:

An estimated 500 tons of herring have moved into Inner Port Moller Bay. This increases the estimated biomass to the level where an additional 50 tons of herring may be taken.

Emergency Order 4-F-M-SDP-01-90

Effective Date: June 19, 1990

EXPLANATION:

This emergency order closes the Deer Island-Mud Bay and Herendeen Bay Sections to commercial herring fishing effective 10:00 A.M. June 19, 1990 through February 28, 1991.

JUSTIFICATION:

The 1990 Peninsula-Aleutian Herring Sac-Roe Management Plan states that the guideline harvest level for the Deer Island-Mud

Bay-Herendeen Bay vicinity is 75 tons. The reported catch is now at 144 tons.

Emergency Order No. 4-F-M-SDP-08-90

Effective Date: August 15, 1990

EXPLANATION:

This emergency order establishes the fishing period as 24 hours per day 7 days per week for the Alaska Peninsula and Aleutian Islands Management Areas herring food and bait fishery.

This emergency order also closes the Sand Point District food and bait herring season.

This emergency order supersedes emergency orders number: 4-F-M-CDB-02-90 and 4-F-M-CDB-08-90.

JUSTIFICATION:

Fishing time is needed to harvest herring during the open season. Effort is anticipated to be light. If conditions warrant, changes can be made by subsequent emergency order.

The sac-roe herring harvest was 72 tons in Stepovak Bay, 90 tons in the Shumagin Islands, and 21 tons in Balboa Bay. The exploitation rate of the observed spawning biomass in the Sand Point District was not sufficient to allow a food and bait fishery.

Emergency Order No. 4-F-M-DUT-01-90

Effective Date: 12:00 A.M. August 15, 1990

EXPLANATION:

This emergency order closes the 1990 Eastern Aleutians food and bait herring season.

JUSTIFICATION:

The Eastern Aleutians food and bait herring season guideline harvest level is 903 short tons. Based on preliminary estimated reports from tenders and fishing vessels ten hours into the fishery, the estimated catch is verified at 940 short tons. Due to the large availability of fish at Cape Cheerful and the entire fleet of seven seiners and eight tenders concentrating their efforts in that area, it is desirable to close the fishery at 1200 hours August 15, 1990, in order to prevent overharvesting the season guideline level.

Emergency Order No. 4-F-M-SDP-13-90

Effective Date: 1:00 P.M. October 29, 1990

EXPLANATION:

This emergency order supersedes emergency order 4-F-DUT-01-90 by reopening the food and bait herring fishery in the Pavlof, King Cove and Unimak Districts. This emergency order also closes the food and bait herring fishing season in the Amak, Port Moller, and Port Heiden Districts. This emergency order also continues the closure of the 1990 Eastern Aleutians food and bait herring season.

JUSTIFICATION:

Emergency Order No. 4-F-M-DUT-01-90 was in error, the intent of the emergency order was: to close the North Peninsula; Amak, Port Moller, and Port Heiden Districts concurrently with the closure of the Eastern Aleutians food and bait herring fishery; to leave open the South Alaska Peninsula: Pavlof, King Cove and Unimak Districts; and to leave closed the Sand Point District.

The Eastern Aleutians food and bait herring season guideline harvest level was 903 short tons. Based on preliminary estimated reports from tenders and fishing vessels, the estimated catch was 940 short tons on August 15, 1990 and the fishery was closed effective 12:00 Noon, Wednesday August 15, 1990. In prior years the Amak, Port Moller, and Port Heiden Districts were closed to herring fishing concurrently with the closure of the Eastern Aleutians herring season. The closure of the Amak, Port Moller, and Port Heiden Districts concurrently with the Eastern Aleutians

ALASKA PENINSULA AREA

CHAPTER 09.—ALASKA PENINSULA AREA

ARTICLE 1.—DESCRIPTION OF AREA.

5 AAC 09.001. APPLICATION OF THIS CHAPTER. Requirements set forth in this chapter apply to commercial fishing only, unless otherwise specified. Subsistence fishing regulations affecting commercial fishing vessels or affecting any other commercial fishing activity are set forth in the subsistence fishing regulations in 5 AAC 01 and 5 AAC 02.

5 AAC 09.100. DESCRIPTION OF AREA. The Alaska Peninsula Area includes all waters of Alaska from Cape Menshikof to Cape Sarichef Light and from a line extending from Scotch Cap through the easternmost tip of Ugamak Island to a line extending 135° southeast from Kupreanof Point.

ARTICLE 2. FISHING DISTRICTS AND SECTIONS.

5 AAC 09.200. FISHING DISTRICTS AND SECTIONS. (a) The Northern District includes all waters on the north (Bering Sea) side of the Alaska Peninsula between the westernmost tip of Cape Menshikof and the southernmost tip of Moffet Point:

(1) Cinder River Section: All waters of the Northern District east of 158°20′ W. long.;

(2) Port Heiden Sections:

(A) Outer Port Heiden Section: all waters of the Northern District located between 158°20′ W. long. and the longitude of Strogonof Point (158°51′ W. long), exclusive of the Inner Port Heiden Section;

(B) Inner Port Heiden Section: all waters of Port Heiden Bay south and east of a line from Strogonof Point at 56°53′16″ N. lat., 158°50′36″ W. long. to the mainland shore of the northeast entrance to the bay at 56°56′31″ N. lat., 158°40′44″ W. long.;

(3) Ilnik Section: all waters between the longitude of Strogonof Point (158°51′ W.long.) and the longitude of Three Hills (159°50′ W.long.);

(4) Three Hills Section: all waters between the longitude of Three Hills (159°50′ W.long.) and the longitude of Cape Seniavin Light (160°06′ W.long.);

(5) Bear River Section: all waters between the longitude of Cape Seniavin Light (160°06′ W.long. and the longitude of Wolf Point (160°48′30″ W.long.), excluding the waters of the Herendeen-Moller Bay Section;

(6) Herendeen-Moller Bay Section: all waters south of a line extending from Entrance Point to Wolf Point to Point Edward on Cape Rozhnof;

(7) Nelson Lagoon Section: all waters of Nelson Lagoon inside the bars and inside a line extending from Lagoon Point to Wolf Point to Point Edward on Cape Rozhnof;

(8) Caribou Flats Section: all waters between Wolf Point and a point at 55°53′40″ N.lat., 161°49′ W.long., approximately 22 nautical miles west of Nelson Lagoon Village and exclusive of the waters comprising the Nelson Lagoon section;

(9) Black Hills Section: all waters between 55°53′40″ N.lat., 161°49′ W.long., and Moffet Point.

(b) The Northwestern District: all waters on the north (Bering Sea) side of the Alaska Peninsula between Moffet Point and Cape Sarichef Light on Unimak Island, including Bechevin Bay and the waters of Isanotski Strait north of a line from the False Pass cannery dock to Nichols Point.

(1) Izembek-Moffet Bay Section: all waters between Moffet Point and Cape Galazenap;

(2) Bechevin Bay Section: all waters between Cape Galazenap and Chunak Point, including Bechevin Bay and the waters of Isanotski Strait north of a line from the False Pass cannery dock to Nichols Point;

(3) Swanson Lagoon Section: all waters on the north side of Unimak Island between the easternmost edge of Chunak Point (55°02′ N. lat., 163°27′ W. long.) and east of the longitude of Otter Point (163°47′ W. long.), excluding the waters of the Bechevin Bay Section;

(4) Urilia Bay Section: all waters on the north side of Unimak Island west of the longitude of Otter Point (163°47′ W. long.) and east of the northernmost tip of Cape Mordvinof (54°56′ N. lat., 164°25′45″ W. long.), including Peterson and Christianson Lagoons;

(5) Dublin Bay Section: all waters on the northwest side of Unimak Island east of the northernmost tip of Cape Mordvinof and west of Cape Sarichef Light (54° 35′50″ N. lat., 164° 55′ 30″ W. long.).

(c) The Unimak District includes all waters on the south side of Unimak Island between a line extending from Scotch Cap (54°24′ N. lat., 164°47′36″ W. long.) through the easternmost tip of Ugamak Island (54°12′42″ N. lat., 164°45′48″ W. long.), and a line extending 115° from Cape Pankof Light (54°39′36″ N. lat., 163°03′36″ W. long), including the Sanak Islands;

(1) Cape Lutke Section: all waters of the Unimak District east of a line extending from Scotch Cap (54°24′ N. lat., 164°47′36″ W. long) through the easternmost tip of Ugamak Island (54°12′42″ N. lat., 164°45′48″ W. long.), and west of the longitude of Rock Island (163°37′18″ W. long.);

(2) Otter Cove Section: all waters of the Unimak District east of the longitude of Rock Island (163°37′18″ W. long.) and north of 54°30′ N. lat.;

(3) Sanak Island Section: all waters of the Unimak District east of the longitude of Rock Island (163°37′18″ W. long.) and south of 54°30′ N. lat..

(d) Southwestern District: all waters on the south side of the Alaska Peninsula north and east of a line extending 115° from Pankof Light (54°39'36" N. lat., 163°03'36" W. long.) and west of a line extending 106° from Arch Point Light (55°12'20" N. lat., 161°54'15" W. long.) to the western boundary of the Southeastern District (longitude of McGinty Point: 160°59' W. long.), including Inner Iliasik, Outer Iliasik, Goloi, Dolgoi, Poperechoi, and Deer Islands, all waters of Ikatan Bay, and all waters of Isanotski Strait south of a line from the False Pass cannery dock (54°51'30" N. lat., 163°24'30" W. long.) to Nichols Point (54°51'30" N. lat., 163°23'10" W. long.);

(1) Ikatan Bay Section: all waters of the Southwestern District located south and west of a line from Kenmore Head (54°57' N. lat., 163°01'40" W. long.) to Hague Rock (54°33'10" N. lat., 162°24' W. long.), and west of a line extending true south from Hague Rock;

(2) Morzhovoi Bay Section: all waters of Morzhovoi Bay north of a line from Kenmore Head to Cape Tachilni (54°56' N. lat., 162°52'30" W. long.);

(3) Thin Point Section: all waters of the Southwestern District east of Kenmore Head (54°57' N. lat., 163°01'40" W. long.) and west of Thin Point (54°57'30" N. lat., 162°33'30" W. long.), excluding waters of the Ikatan, Morzhovoi, and Cold Bay Sections;

(4) Cold Bay Section: all waters north of a line from Thin Point to Vodapoini Point;

(5) Deer Island Section: all waters within one nautical mile of Deer Island;

(6) Belkofski Bay Section: all waters between Vodapoini Point and Moss Cape, including Inner and Outer Iliasik Islands but excluding the waters of the Deer Island section;

(7) Volcano Bay Section: all waters between Moss Cape and Arch Point including Goloi, Dolgoi and Poperechnoi Islands;

(8) General Section: all other waters of the Southwestern district.

(e) South Central District: all waters on the south side of the Alaska Peninsula north and east of a line extending 106° from Arch Point Light (55°12'20" N. lat., 161°54'15" W. long.), and west of a line extending south from McGinty Point (55°27'30" N. lat., 160°59' W. long.), including Ukolnoi and Wosnesenski Islands;

(1) Pavlof Bay Section: all waters of Pavlof Bay, excluding the Canoe Bay section, and all other waters of the district west of the longitude of Cape Tolstoi (161°30' W.long.);

(2) Canoe Bay Section: all waters of Canoe Bay enclosed by a line from a point at 55°35'37" N.lat., 161°21'33" W.long. to a point at 55°35'41" N.lat., 161°21'40" W.long.;

(3) Mino Creek-Little Coal Bay Section: all waters of the district, excluding those of the Pavlof Bay and Canoe Bay sections, between the longitude of McGinty Point (160°59' W.long.) and the longitude of Cape Tolstoi (161°30' W.long.);

(f) Southeastern District: all waters on the south side of the Alaska Peninsula east of a line extending south from McGinty Point (55°27'30" N. lat., 160°59' W. long.), and west of a line extending 135° from Kupreanof Point (55°34' N. lat., 159°36' W. long.), including all of the Shumagin Islands;

(1) Beaver Bay Section: all waters of the Southeastern District east of the longitude of McGinty Point (160°59' W. long.), west of 160°49' W. long., and north of 55°26' N. lat.;

(2) Balboa Bay Section: all waters of the Southeastern District east of 160°49' W. long., north of 55°26' N. lat., and west of the longitude of Swedania Point (160°31'30" W. long.);

(3) Shumagin Islands Section: all waters of the Southeastern District east of the longitude of McGinty Point (160°59'W. long.), west of a line extending 135° from Kupreanof Point (55°34' N. lat., 159°36' W. long.), south of a line from 55°26' N. lat., 160°31'30" W. long., to 55°32'12" N. lat., 160°02'36" W. long. (approximately 1 nautical mile north of Karpa Island), and east to the Alaska Peninsula Area boundary (a line extending 135° from Kupreanof Point), excluding the Beaver Bay, Balboa Bay, and Southwest Stepovak Sections:

(4) Southwest Stepovak Section: all waters of the Southeastern District south of the latitude of 55°37'20" N. lat., west of 159°52' W. long., north of Shumagin Islands Section, and east of the Balboa Bay Section;

(5) Northwest Stepovak Section: all waters of the Southeastern District north of 55°37'20" N. lat. and west of the longitude of Dent Point (159°52' W. long.);

(6) Stepovak Flats Section: all waters of the Southeastern District north of 55°48'18" N. lat. and east of the longitude of Dent Point (159°52' W. long.);

(7) East Stepovak Section: all waters of the Southeastern District south of 55°48'18" N. lat., east of the longitude of Dent Point (159°52' W. long.), north of 55°32'12" N. lat., and west of a line extending 135° from Kupreanof Point (55°34' N. lat., 159°36' W. long.).

ARTICLE 3.—SALMON FISHERY

5 AAC 09.301. SEAWARD BOUNDARY OF DISTRICTS. For the purpose of managing the historical salmon net fishery in the vicinity of False Pass and Unimak Bight, the outer boundary of the Southwestern and Unimak Districts is a line three miles seaward from a line commencing at 54°26'45" N.lat., 162°53' W.long., near the western end of Sanak Island to Cape Lutke on Unimak Island. The seaward boundary of all other districts is a line three miles seaward of the baseline described in 5 AAC 39.975(13).

5 AAC 09.310. FISHING SEASONS. (a) In the Northern District, salmon may be taken as follows:

(1) Cinder River Section

(A) from May 1 through September 30 within the lagoon into which Cinder River drains (locally known as False Ugashik or Shagong);

(B) from August 1 through September 30 throughout this section;

(2) Port Heiden Sections:

(A) Inner Point Heiden Section: from May 1 through September 30;

(B) Outer Port Heiden Section: from August 1 through September 30;

(3) Ilnik Section

(A) from May 1 through September 30 within Ilnik Lagoon and all waters inside the Seal Islands;

(B) for all waters west of Unangashak Bluffs at Loran line 9990-Y-33265 and the longitude of Three Hills (159°50′ W. long.) from July 5 through July 15.

(C) from July 15 through September 30 throughout the remainder of this section.

(4) Three Hills Section: from June 25 through September 30;

(5) Bear River Section: from May 1 through September 30;

(6) Herendeen-Moller Bay Section: from May 1 through July 20 with the exception that within the bight enclosed by a line from Entrance Point to Harbor Point salmon may be taken from May 1 through September 30;

(7) Nelson Lagoon Section: from May 1 through September 30;

(8) Caribou Flats Section: no open season;

(9) Black Hills Section: from May 1 through September 30.

(b) In the Northwestern District, salmon may be taken only from June 1 through August 10, except that

(1) in the Dublin Bay Section, salmon may be taken only from July 10 through August 10;

(2) in the Bechevin Bay Section, salmon may be taken only from June 1 through September 30;

(3) after September 1, the salmon fishery season will be opened by emergency order.

(c) In the Unimak District, salmon may be taken only from June 1 through September 30.

(d) In the Southwestern District, salmon may be taken only from June 1 through September 30.

(e) In the South Central District, salmon may be taken only from June 1 through September 30.

(f) In the Southeastern District, salmon may be taken only from June 1 through September 30.

5 AAC 09.320. FISHING PERIODS. (a) In the Northern District, salmon may be taken from 6:00 a.m. Monday until 6:00 p.m. Thursday, except as follows:

(1) in the Black Hills and Caribou Flats Sections, salmon may be taken from 6:00 a.m. Monday until 6:00 p.m. Friday;

(2) in the Nelson Lagoon Section, salmon may be taken

(A) during the period May 1 through June 15, from 6:00 a.m. Monday until 12:00 midnight Wednesday;

(B) during the period June 16 through August 15, from 6:00 a.m. Monday until 12:00 midnight Thursday;

(C) after August 15, from 6:00 a.m. Monday until 12:00 midnight Wednesday;

(3) in the Cinder River, Outer Port Heiden, Inner Port Heiden, and Ilnik Sections salmon may be taken from 6:00 a.m. Monday until 6:00 p.m. Wednesday.

(4) before July 1 in the Three Hills and Bear River Sections salmon may be taken from 6:00 a.m. Monday until 6:00 p.m. Wednesday.

(b) Salmon may be taken only during the open season in the Northwestern District in the

(1) Izembek-Moffet Bay Section: from 6:00 a.m. Monday until 6:00 p.m. Thursday;

(2) Bechevin Bay Section: only during fishing periods established by emergency order;

(3) Urilia Bay Section: from 6:00 a.m. Monday until 6:00 p.m. Thursday.

(4) Dublin Bay Section, from 6:00 a.m. Monday until 6:00 p.m. Thursday.

(5) Swanson Lagoon Sections: from 6:00 a.m. Monday until 6:00 p.m. Thursday.

(c) Salmon may be taken during the open season in the Unimak District during fishing periods established by emergency order.

(d) Salmon may be taken only during the open season in the Southwestern District only during fishing periods established by emergency order.

(e) Salmon may be taken only during the open season in the South Central District only during fishing periods established by emergency order.

(f) Salmon may be taken only during the open season in the Southeastern District only during fishing periods established by emergency order.

5 AAC 09.330. GEAR. (a) In the Northern District salmon may be taken:

(1) in the Cinder River Section: with drift gill nets or set gill nets only;

(2) in the Inner and Outer Port Heiden Sections: with drift gill nets or set gill nets only;

(3) in the Ilnik Section: with drift gill nets or set gill nets only;

(4) in the Three Hills Section: with drift gill nets only;

(5) in the Bear River Section: with drift gill nets, purse seines and hand purse seines;

(6) in the Herendeen-Moller Bay Section: with drift gill nets, set gill nets, purse seines and hand purse seines;

(7) in the Nelson Lagoon Section: with drift gill nets or set gill nets;

(8) in the Caribou Flats Section: with drift gill nets or set gill nets;

(9) in the Black Hills Section; with drift gill nets or set gill nets only;

(b) in the Northwestern District, salmon may be taken with drift gill nets, set gill nets, purse seines and hand purse seines.

(c) In the Unimak District, salmon may be taken with drift gill nets, set gill nets, purse seines and hand purse seines.

(1) salmon may be taken by gill net gear during periods when the seine fishery is closed by emergency order due to the presence of immature salmon.

(d) In the Southwestern District, salmon may be taken with purse seines, hand purse seines and set gill nets except that

(1) salmon may also be taken with drift gill nets west of a line from Kenmore Head to Hague Rocks to the easternmost tip of the Sanak Islands;

(2) salmon may be taken by gill net gear during periods when the seine fishery is closed by emergency order due to the presence of immature salmon.

(e) In the South Central District, salmon may be taken with set gill nets, purse seines and hand purse seines, except that

(2) within Canoe Bay, salmon may be taken only with purse seines and hand purse seines;

(3) salmon may be taken by set gill net gear during periods when the seine fishery is closed by emergency order due to the presence of immature salmon.

(f) In the Southeastern District, salmon may be taken only with set gill nets, purse seines and hand purse seines except that

(1) salmon may be taken only with purse seines and hand purse seines in the area between Popof Head and Dark Cliffs (Popof Island) from June 1 through August 31; except that salmon may be taken by set gill net during periods when the seine fishery is closed by emergency order due to the presence of immature salmon.

(3) salmon may be taken only with set gill nets from June 1 through July 10 in the Beaver Bay, Balboa Bay, Southwest Stepovak, Northwest Stepovak, Stepovak Flats, and East Stepovak Sections;

(4) salmon may be taken by set gill net during periods when the seine fishery is closed by emergency order due to presence of immature salmon.

5 AAC 09.331. GILL NET SPECIFICATIONS AND OPERATION. (a) The size and operation of drift gill nets is as follows:

(1) the aggregate length of drift gill nets on a salmon fishing boat or in use by such boat shall be no more than 200 fathoms in length;

(2) the mesh size of drift gill nets shall not be less than five and one-quarter inches, except that in the Caribou Flats Section the mesh size of drift gill nets shall not be less than eight and one-half inches;

(3) in the Unimak and Southwestern Districts no drift gill net may exceed 90 meshes in depth, except no drift gill net used in the Nelson Lagoon Section may exceed 29 meshes in depth, prior to August 16 and 38 meshes in depth from August 16 through September 30.

(4) for the Northern and Northwestern Districts the maximum depth limit for drift gill nets shall be 70 meshes. Leadline weights on drift gill nets fishing in this area are restricted so that no more than 60 fathoms of a single (1) leadline will be allowed per 50 fathoms of corkline. No portion of this leadline may exceed 1.5 pounds per fathom.

(b) The size and operation of set gill nets is as follows:

(1) a set gill net may be no more than 100 fathoms in length; the aggregate length of set gill nets operated by a CFEC permit holder may be no more than 200 fathoms; no more than two gill net sites may be operated by a CFEC permit holder except that in the

(A) Inner Port Heiden Section a set gill net may be no more than 50 fathoms in length; the aggregate length of set gill nets operated by a CFEC permit holder may be no more than 100 fathoms; and no more than two gill net sites may be operated by a CFEC permit holder;

(B) Ilnik Lagoon (portion of the Ilnik Section) a set gill net may be no more than 50 fathoms in length; the aggregate length of set gill nets operated by a CFEC permit holder may be no more than 150 fathoms; and no more than three gill net sites may be operated by a CFEC permit holder;

(C) In the Unimak, Southwestern, Southcentral and Southeastern Districts the maximum depth of set gill nets shall not be over 90 meshes.

(2) set gill nets shall be operated in substantially a straight line; no more than 30 fathoms of each set gill net may be used as a single hook;

(3) the mesh size of set gill nets shall not be less than five and one-quarter inches, except that in the Caribou Flats Section the mesh size of set gill nets shall not be less than eight and one-half inches;

(4) the maximum depth of set gill nets used in the Nelson Lagoon Section shall not be over 29 meshes;

(5) in the Unimak, Southwestern, South Central, and Southeastern Districts, 10 fathoms of seine webbing may be used on the shoreward end of a set gill net; the shoreward end of the seine webbing must be attached to the beach above low tide.

(6) During hours of darkness, each set gill net must be marked with at least one red light on the seaward end of the net, and at least one red light on both ends of the net if that net is more than 300 feet from shore.

5 AAC 09.332. SEINE SPECIFICATIONS AND OPERATION. (a) Purse seines and hand purse seines may not be less than 100 fathoms nor more than 250 fathoms in length. The maximum depth of a purse seine and hand purse seine may not exceed 375 meshes in depth. Seine mesh may not be more that 3½ inches except the first 25 meshes above the lead line may not be more than 7 inches.

(b) Leads may not be less than 50 fathoms nor more than 150 fathoms in length. Only one lead may be used with a seine. A lead may be attached to only one end of a seine, and the lead may not be attached to the boat end of the seine.

5 AAC 09.334. IDENTIFICATION OF GEAR. (a) Each drift gill net in operation must have at each end a bright red keg, buoy or cluster of floats plainly and legibly marked with the permanent vessel license plate (ADF&G) number of the vessel operating the gear as well as the initials of the operator.

(b) Each set gill net in operation must be identified as required by 5 AAC 39.280.

5 AAC 09.335. MINIMUM DISTANCE BETWEEN UNITS OF GEAR. No part of a set gill net may be set or operated within 900 feet of any part of another set gill net, except that in the

(1) Inner Port Heiden Section no part of a set gill net may be set or operated within 600 feet of any part of another set gill net;

(2) Nelson Lagoon Section no part of a set gill net may be set or operated within 1,800 feet of any part of another operating set gill net.

5 AAC 09.350. CLOSED WATERS. Salmon may not be taken in the following locations:

(1) Meshik River: all waters upstream of a line crossing the river from a point at 56°47'04" N.lat., 158°41'06" W.long., to 56°47'58" N.lat., 158°38'45" W.long.; this is approximately one-half nautical mile upstream from the mean high tide mouth and approximately at the lower line of permanent grass growth;

(2) Sandy River

(A) May 1 through July 26; within 2,000 yards of the terminus of the river;

(B) July 27 through September 30: within 500 yards of the terminus of the river;

(3) Bear River

(A) May 1 through August 8: within 1,000 yards of the terminus of the river;

(B) August 9 through September 30: within 500 yards of the terminus of the river;

(4) Frank's Lagoon: all waters of the lagoon and within 500 yards outside the entrance;

(5) Bechevin Bay

(A) Saint Catherine Cove (Mike's Creek): all waters within 1,000 yards of the stream located at 55°00'48" N.lat., 163°31'33" W.long.;

(B) Trader's Cove: all waters north and east of a line from Morzhovoi Village (54°54"45" N.lat., 163°18'15" W.long.) to the base of Trader Mountain (55°00'05" N.lat., 163°18'22" W.long.);

(C) Warmsprings Bay: all waters southeast of a line from a point on the south shore of the bay at 54°56'28 N.lat., 163°15'45" W.long., to a point on the north shore of the bay at 54°57'16" N.lat., 163°15'33" W.long.;

(6) Christianson's Lagoon: all waters of the lagoon and its exit channel upstream from a point located 500 yards above the exit channel terminus at the ocean shoreline.

(7) Ikatan Bay: all waters within 1,000 yards of the stream at 54°45'15" N.lat., 163°15'15" W.long. on the north shore of the Ikatan Peninsula which exits from Swede's Lake;

(8) Morzhovoi Bay: all waters including Littlejohn Lagoon north and west of a line from the easternmost tip of Kenmore Head to Reynolds Head (55°9' N.lat., 162°57'51" W.long.) before July 7; beginning July 7:

(A) Middle Lagoon: all waters of the lagoon and within 1,000 yards of its entrance;

(B) Littlejohn Lagoon: all waters of the lagoon and within 500 yards of its entrance at the narrows;

(9) Thin Point Cove and Lagoon: all waters north and west of a line from the tip of Thin Point westward to a point on the shore at 54°57'30" N.lat., 162°43'15" W.long.;

(10) Cold Bay

(A) Old Man Lagoon, Mortensen Lagoon and Nurse Lagoon: all waters of the lagoons and within 500 yards outside their entrances;

(B) Lenard Harbor: all water east of a line from a point on the south shore at 55°06' N.lat., 162°23' W.long., to a point on the north shore at 55°07' N.lat., 162°23' W.long., and within 1,000 yards of any salmon stream;

(C) Kinzarof Lagoon area: all waters north of a line from 55°13'25" N.lat., 162°43'25" W.long., to 55°16'10" N.lat., 162°34'25" W.long.;

(11) Deer Island

(A) all waters within 200 yards of the stream located at 54°55'41" N.lat., 162°14'12" W.long. and locally known as Eastern Creek.

(B) all waters within 200 yards of the stream located at 54°51'44" N.lat., 162°22'07" W.long. and locally known as Southern Creek;

(12) Belkofski Bay: all waters north and east of a line from 55°09'22" N.lat., 162°08'12" W.long., to 55°08'08" N.lat., 162°07'03" W.long., then to 55°07'20" N.lat., 162°07'39" W.long.;

(13) Volcano and Bear Bay

(A) all waters north of a line from 55°13'24" N.lat., 162°01'24" W.long., to 55°13'51" N.lat., 161°58' W.long.;

(B) all waters of Bear Bay west of 162° W.long. and locally known as Little Bear Bay;

(14) Longjohn Lagoon: all waters of the lagoon and within 500 yards outside its entrance;

(15) Pavlof Bay

(A) Chinaman Lagoon and Jackson Lagoon: all waters of the lagoons and within 1,000 yards outside their entrances;

(B) Dry Lagoon: all waters of the lagoon and within 500 yards of its entrance;

(C) Canoe Bay: all waters east of 161°14'12" W. long.;

(16) Balboa Bay

(A) all waters north of a line extending west from Reef Point;

(B) all waters of Lefthand Bay west of a line from 55°31'36" N.lat., 160°42'54" W.long., to 55°33'12" N.lat., 160°42'06" W.long.;

(17) Zachary Bay: all waters of the inner bay south and west of a line extending from the inner edge of the grass line of the sand spit to the west of the tip of the prominent point of land approximately one and one-third nautical miles inside Quartz Point;

(18) San Diego Bay: all waters of a lagoon at the head of the bay and within 500 yards outside the lagoon's entrance except that from July 19 through August 31 the closure includes all waters west of a line from the reef at 55°33'08" N.lat., 160°26'30" W.long., to the headland at 55°34'02" N.lat., 160°25'48" W.long.;

(19) Dorenoi Bay

(A) through July 25, all waters north and west of a line from the tip of Renshaw Point to the opposite shore at 55°38'30" N. lat., 160°19' W. long.;

(B) after July 25, all waters within 500 yards of the terminus of any salmon stream;

(20) Chichagof Bay: all waters of the lagoon and within 500 yards of the lagoon entrance;

(21) Orzinski Bay (Orzenoi): within 1,000 yards of any salmon stream;

(22) Grub Gulch: all waters north and east of a line from 55°48'18" N.lat., 159°56'06" W.long. to 55°49'00" N.lat., 159°58'12" W.long.;

(23) Stepovak Bay: from June 1 through July 28, all waters within 500 yards of any salmon stream or lagoon unless otherwise specified; from July 29 through September 30, all waters north of a line extending east from the tip of Dent Point to a point on the Kupreanof Peninsula at 55°47' N.lat., 159°38'30" W.long.;

(24) Bay Point: all waters of the lagoon and within 500 yards of the lagoon entrance;

(25) Amak Island and adjacent Sea Lion Rocks: all waters within three nautical miles of these islands and elevations;

(27) Applegate Cove-Norma Bay: all waters south of a line from 55°14'08" N.lat., 162°53' W.long., to the southwest extremity of Norma Bay at 55°10'50" N.lat., 163°05'07" W.long.; this boundary aligns with the Cold Bay VORTAL cone and the headland located approximately two nautical miles south of the radar domes near Grant Point.

(28) Ilnik Lagoon: all waters of Ilnik Lagoon and Lake west of 159°30'12" W.long.;

(29) Herendeen Bay

(A) from May 1 through July 20, all waters within 500 yards of any salmon stream unless otherwise specified;

(B) after July 20, all waters south of the latitude of Bold Bluff Point (55°45'15" N.lat.) and within 500 yards of all salmon streams north of 55°45'15" N.lat.

(30) Nelson Lagoon: all waters of the lagoon and river (called Caribou, Nelson, and Lagoon River) flowing into the upper (west) end of Nelson Lagoon, upstream of a line from 55°57'20" N.lat., 161°22'15" W.long. to 55°57'45" N.lat., 161°22'40" W.long.

(31) Caribou Flats: all waters of the Caribou Flats Section;

(32) Cape Menshikof: all waters of the Cinder River Section located north of Loran C line 9990-Y-32920;

(33) King Salmon River:

(A) from May 1 through July 15, all waters within 1000 yards of the stream terminus;

(B) after July 15, all waters within 500 yards of the stream terminus.

5 AAC 09.355. SALMON PROCESSOR AND BUYER REPORTING REQUIREMENTS. The operator of a floating salmon processing vessel or tender, or of a shorebased processing operation, and a company employing aircraft used for transporting salmon, shall report in person, or by radio or telephone, to a local representative of the department located in the management area of intended operation before the start of processing or buying operations. The report must include the location and the date of intended operation, and identify and describe each vessel or other method of transport employed in hauling or processing salmon.

5 AAC 09.360. SOUTHEASTERN DISTRICT SALMON MANAGEMENT PLAN. (a) This plan pertains to the management of the interception of Chignik River sockeye salmon caught in the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections. Before July 11, only set gillnet gear may be used in these sections. For the purpose of this plan, local runs include only those salmon in the waters inside of a line from Renshaw Point to the mouth of Osterback Creek.

(b) In years when a harvestable surplus for the first (Black Lake) and second (Chignik Lake) runs of Chignik River system sockeye salmon is expected to be less than 600,000, no commercial salmon fishery is allowed in the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections, as described in 5 AAC 09.200(f), until a harvest of 300,000 sockeye salmon in the Chignik Area, as described in 5 AAC 15.100, is achieved. After July 8, after at least 300,000 sockeye salmon have been harvested in the Chignik Area, and if escapement goals are being met, the department shall manage the fishery so that the number of sockeye salmon harvested in the Chignik Area will be at least 600,000 and the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections approaches as near as possible 6 percent of the total Chignik sockeye salmon catch.

(c) In years when a harvestable surplus beyond escapement goals for the first and second runs of Chignik River system sockeye salmon is expected to be more than 600,000, but the first run fails to develop as predicted and it is determined that a total sockeye salmon harvest in the Chignik Area of 600,000 or more may not be achieved, the commercial

salmon fishery in the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections must be curtailed in order to allow at least a minimum harvest in the Chignik Area of 300,000 sockeye salmon by July 9 if that number of fish are determined to be surplus to the escapement goals of the Chignik River system. After July 8 and after at least 300,000 sockeye salmon have been harvested in the Chignik Area, and if escapement goals are being met, the department shall manage the fishery so that the number of sockeye salmon harvested in the Chignik Area is at least 600,000 and the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections approaches as near as possible 6 percent of the total Chignik sockeye salmon catch.

(d) In years when a harvestable surplus beyond the escapement goals for the first and second runs of Chignik River system sockeye salmon is expected to be more than 600,000 and the department determines that the runs are as strong as expected, the department shall manage the fishery so that the number of sockeye salmon taken in the East Stepovak, West Stepovak, Balboa Bay, and Beaver Bay Sections approaches as near as possible 6 percent of the total Chignik sockeye salmon catch.

(e) The estimate of sockeye salmon destined for the Chignik River has been determined to be 80 percent of the sockeye salmon harvested along the mainland from the easternmost tip of McGinty Point to Suzy Creek and from the Stepovak Flats and the East Stepovak Sections. The remaining sockeye salmon taken in the mainland fishery have been determined to be destined for Orzinski Bay.

(f) The total Chignik sockeye salmon catch constitutes those sockeye salmon caught within the Chignik Area, plus 80 percent of the sockeye salmon caught in the East Stepovak, Stepovak Flats, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections, as described in 5 AAC 09.200(f), plus 80 percent of the sockeye salmon caught in the Cape Igvak Section of the Kodiak Area. The percentage of Chignik sockeye salmon may be permitted to fluctuate above or below 6 percent at any time before July 25.

(g) This allocation method is in effect through July 25. The first fishing period of the commercial salmon fishing season in the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections may not occur before the first fishing period of the commercial salmon fishing season in the Chignik Area. After July 25, commercial salmon fishing in the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections may be allowed on local stocks.

(h) During the period from approximately June 26 to July 9, the strength of the second run of the Chignik River system sockeye salmon cannot be evaluated. In order to prevent overharvest of the second run, the department may disallow or severely restrict commercial salmon fishing in the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections during this period.

(i) The department shall announce commercial salmon fishing periods by emergency order. The department shall give at least one day's notice before the opening of a commercial salmon fishing period, unless it is an extension of a fishing period in progress.

5 AAC 09.365. SOUTH UNIMAK AND SHUMAGIN ISLANDS JUNE SALMON MANAGEMENT PLAN. (a) Mixed stocks of salmon bound for distant systems have historically been intercepted in significant numbers along the Alaska Peninsula. To ensure that none of these runs are overharvested, it is necessary to restrain their interception.

(b) The Alaska Board of Fisheries has established sockeye guideline harvest levels on the South Unimak and Shumagin Islands interception fisheries during June, which are based on percentages of the latest projected Bristol Bay inshore sockeye harvest as published by the Department of Fish and Game. The South Unimak fishery takes place in the Unimak District and the Ikatan Bay and Bechevin Bay Sections, as described in 5 AAC 09.200(c),(d)(1) and (b)(2), of this chapter, plus the following waters of the Southwestern district outside of the Ikatan Bay Section and not included under 5 AAC 09.350.:

(1) all waters north and west of a line from Cape Pankof light to Thin point (54°57'26" N. lat., 162°33'121" W. long.).

(2) all waters enclosed by a line from Thin point (54°57'26" N. lat., 162°33'12" W. long.) to the northernmost tip of Stag Point (54°10' N. lat., 161°53'45" W. long.) on Deer island to the southernmost tip of Dolgoi Cape (55°03'45" N. lat., 161°44' W. long.) on Dolgoi Island and from the northernmost tip of Bluff Point (55°10' N. lat., 161°53'45" W. long.) on Dolgoi Island to Arch Point Light (55°12'20" N. lat., 161°54'15" W. long.) The Shumagin Islands fishery takes place in the Shumagin Islands Section, as described in 5 AAC 09.200(f)(3) of this chapter. Consistent with the board's Policy Statement on Management of Mixed Stock Salmon Fisheries and traditional harvest patterns, the maximum percentage allowed for the South Unimak fishery is 6.8 percent and for the Shumagin Islands fishery, 1.5 percent. The forecasts for Bristol Bay are sometimes updated as more information becomes available, just before the South Unimak and Shumagin Islands season, and exact numbers of fish cannot be given before the opening of each fishery.

(c) The sockeye guideline harvest levels are distributed proportionally over the June runs to avoid excessive impacts on any segment of the runs. The total allowable harvest in each area shall be harvested according to the following guideline ranges established for the following time periods:

Time Period	Guideline Harvest
June 13-18	35%
June 19-25	45%
June 26-30	20%
	100%

(d) Fishing periods will be announced by field emergency order, and will be adjusted to keep the harvest within the guidelines for each time period. If catches in either fishery fall below the guidelines in the first time period, those unharvested sockeye, up to a maximum of five percent of the total guideline harvest level for that fishery will be added to the total guideline harvest level for the second time period. If guideline harvest levels are inadvertently exceeded during any given fishing period, the excess will be a portion of the total guideline harvest level. If, during the last fishing period, the staff determines that no significant fishing occurred due to weather conditions, the staff may, it its discretion, permit fishing to continue after June 30.

(e) The South Unimak and Shumagin Island June salmon fishery targets on the more abundant and valuable sockeye salmon. The board recognizes that the harvest of other salmon species is incidental to the sockeye harvest. The board has determined that this incidental harvest is unavoidable and cannot be regulated with the present level of knowledge regarding this fishery. The board will not support any significant increase in the interception rate of chum salmon taken in the South Unimak and Shumagin Islands June salmon fishery. These stocks are probably fully utilized in existing terminal fisheries of long standing. This determination is consistent with the philosophy contained in the board's Policy Statement on Management of Mixed Stock Salmon Fisheries. The board recognizes that the conservation and allocation of non-targeted salmon stocks may be a concern during some years, but does not have the data to ensure specific corrective action at this time (January 1990).

(f) The department shall close the June fishery before the sockeye guideline harvest levels are taken if incidental harvest of chum salmon reaches 600,000 fish. The documented contribution of Russell Creek Hatchery chum salmon to the June fishery shall be added on over the existing chum salmon numerical quota beginning in 1993.

DEPARTMENT OF FISH AND GAME POLICY ON THE INCIDENTAL HARVEST OF IMMATURE SALMON IN THE SOUTH PENINSULA AREA OF THE ALASKA PENINSULA/ALEUTIAN ISLANDS AREA. Commercial purse seine fisheries occuring in the South Peninsula Area of the Alaska Peninsula Management Area, at sporadic times, incidentally harvest immature salmon while targeting on mature runs of salmon. The department believes that these immature salmon are of North American origin comprised of a wide variety of stocks which are presently fully utilized in existing fisheries. The department's intent is to minimize an excessive by-catch of immature salmon. Therefore, the department will close, by emergency order, areas of the South Peninsula when the incidental by-catch of immature salmon are considered excessive. In making this decision the department will consider average immatures per set, fleet distribution and historical dates of occurance. The department will utilize results from subsistence and commercial openings in order to evaluate the abundance of immature salmon and their possible presence in future openings.

ARTICLE 5.—SMELT FISHERY

5 AAC 09.510. FISHING SEASON. There is no closed season on smelt.

ALEUTIAN ISLANDS AREA

CHAPTER 12.—ALEUTIAN ISLANDS AREA

ARTICLE 1.—DESCRIPTION OF AREA

5 AAC 12.001. APPLICATION OF THIS CHAPTER. Requirements set forth in this chapter apply to commercial fishing only, unless otherwise specified. Subsistence fishing regulations affecting commercial fishing vessels or affecting any other commercial fishing activity are set forth in the subsistence fishing regulations in 5 AAC 01 and 5 AAC 02.

5 AAC 12.100. DESCRIPTION OF AREA. The Aleutian Islands Area includes all waters of Alaska in the Aleutian Islands west of Cape Sarichef Light and west of a line extending from Scotch Cap through the easternmost tip of Ugamak Island.

ARTICLE 2.—FISHING DISTRICTS AND SECTIONS

5 AAC 12.200. DESCRIPTION OF DISTRICTS AND SECTIONS. (a) Akutan District: all waters between Scotch Cap and Cape Sarichef Light and extending west to and including Akutan Pass. South of Scotch Cap Light, the eastern boundary of the district is a line extending from Scotch Cap through the easternmost tip of Ugamak Island.

(b) Unalaska District: all waters west of Akutan Pass to and including Umnak Pass;

(1) Beaver Inlet Section: all waters between Cape Sedanka and Cape Kalekta and including Unalga Island;

(2) Unalaska Bay Section: all waters between Cape Kalekta and Cape Kovrizhka;

(3) Makushin Bay Section: all waters between Cape Kovrizhka and Spray Cape;

(4) Kashega Bay Section: all waters between Spray Cape and Konets Head;

(5) Southern Section: all waters between Konets Head and Cape Sedanka.

(c) Umnak District: all waters west of Umnak Pass to and including Atka Pass.

(d) Adak District: all waters west of Atka Pass to the terminus of the Aleutian Islands.

ARTICLE 3.—SALMON FISHERY

5 AAC 12.310. FISHING SEASONS. Salmon may be taken only from July 10 through September 30, except that in the Kashega Bay Section, salmon may be taken only from June 1 through September 30.

5 AAC 12.320. WEEKLY FISHING PERIODS. Salmon may be taken only as follows:

(1) June 1 through July 18, from 6:00 a.m. Monday until 6:00 p.m. Friday;

(2) from July 19 through September 30, salmon may be taken during open season only during fishing periods established by emergency order;

5 AAC 12.330. GEAR. Salmon may be taken by purse seines, hand purse seines and beach seines.

5 AAC 12.332. SEINE SPECIFICATIONS AND OPERATION. (a) Purse seines and hand purse seines may not be less than 100 fathoms nor more than 250 fathoms in length.

(b) Beach seines may not be less than 100 fathoms in length and 3 fathoms in depth, nor more than 250 fathoms in length and 12 fathoms in depth.

(c) No lead may be less than 25 fathoms nor more than 150 fathoms in length.

5 AAC 12.350. CLOSED WATERS. The waters of Inner Iliulik Harbor and Margrets Bay between the Unalaska-Dutch Harbor bridge and 166-f8-32' W. long. are closed to the taking of salmon.

5 AAC 12.355. SALMON PROCESSOR AND BUYER REPORTING REQUIREMENTS. The operator of a floating salmon processing vessel or tender, or a shorebased processing operation, and a company employing aircraft used for transporting salmon, shall report in person, or by radio or telephone, to a local representative of the department located in the management area of intended operation before the start of processing or buying operations. The report must include the location and the date of intended operation, and identify and describe each vessel or other method of transport employed in hauling or processing salmon.

Emergency Order No. 4-F-M-CDB-10-90

Effective Date: June 13, 1990

EXPLANATION:

This emergency order allows commercial salmon fishing from 6:00 A.M. until 10:00 P.M. during June 13 in the South Unimak and Shumagin Islands fisheries.

JUSTIFICATION:

The Alaska Board of Fisheries has established sockeye guideline harvest levels of 1.5% for the Shumagin Islands and 6.8% for the South Unimak June salmon fisheries based on the Department of Fish and Game's forecast for the Bristol Bay inshore salmon harvest. The total sockeye allocations to each fishery are broken down into time period guideline harvest levels. The June 13 - 18 allocations are 84,000 and 381,000 to the Shumagin Islands and South Unimak fisheries respectively. A fishing period during June 13 will give the fishermen an opportunity to harvest their allocations.

Emergency Order No. 4-F-M-CDB-11-90

Effective Date: June 13, 1990

EXPLANATION:

This emergency order extends the commercial salmon fishing period 24 hours until 10:00 P.M. June 14 in the South Unimak fishery.

JUSTIFICATION:

High northwest winds are preventing most of the fleet from fishing at South Unimak. The few fishermen able to fish are reporting very poor catches. More fishing time is needed for the South Unimak fleet to take it's June 13 - 18 allocation of 381,000 sockeye. Winds are reported to be moderate in the Shumagin Islands, so that fishery will not be extended at this time.

Emergency Order No. 4-F-M-CDB-12-90

Effective Date: June 15, 1990

EXPLANATION:

This emergency order establishes a 6:00 A.M. June 15 until 10:00 P.M. June 16 commercial salmon fishing period in the Shumagin Islands Section.

JUSTIFICATION:

The June 13 - 18 sockeye allocation for the Shumagin Islands fishery is 84,000 fish. A fishing period on June 13 produced a harvest of only 8,100 sockeye. More fishing time is needed to enable fishermen to harvest their allocation.

Emergency Order No. 4-F-M-CDB-14-90

Effective Date: June 16, 1990

EXPLANATION:

This emergency order establishes a 6:00 A.M. June 16 until 10:00 P.M. June 17 commercial salmon fishing period in the South Unimak fishery.

JUSTIFICATION:

The South Unimak sockeye harvest through June 14 is only 46,000 fish. More fishing time is needed for fishermen top harvest their June 13 - 18 South Unimak sockeye allocation of 381,000 fish.

Emergency Order No. 4-F-M-CDB-15-90

Effective Date: June 16, 1990

EXPLANATION:

This emergency order extends the present salmon fishing period in the Shumagin Islands Section for another 24 hours until 10:00 P.M. June 17.

JUSTIFICATION:

The June 13-18 sockeye allocation for the Shumagin Islands fishery is 84,000 fish. To date only 12,000 sockeye have been harvested. More fishing time is needed to enable fishermen to harvest their allocation.

Emergency Order No. 4-F-M-CDB-16-90

Effective Date: June 17, 1990

EXPLANATION:

This emergency order extends commercial salmon fishing time 24 hours until 10:00 P.M. June 18 in the South Unimak and Shumagin Island fisheries.

JUSTIFICATION:

The June 13 - 18 sockeye allocations are 84,000 and 381,000 for the Shumagin Islands and South Unimak fisheries respectively. To date 43,000 sockeye have been taken in the Shumagins and 110,000 have been harvested at South Unimak. More fishing time is needed for the fishermen to harvest their allocations.

Emergency Order No. 4-F-M-CDB-17-90

Effective Date: June 18, 1990

EXPLANATION:

This emergency order extends commercial salmon fishing time 24 hours until 10:00 P.M. June 19 in the South Unimak and Shumagin Island fisheries.

JUSTIFICATION:

The June 19-25 sockeye guideline harvest levels for the Shumagin Islands and South Unimak fisheries are 108,000 and 489,000 fish respectively. Fishing time is needed for the fishermen to harvest their allocations.

Emergency Order No. 4-F-M-CDB-18-90

Effective Date: June 19, 1990

EXPLANATION:

This emergency order extends commercial fishing time 24 hours until 10:00 P.M. June 20 in the South Unimak and Shumagin Island fisheries.

JUSTIFICATION:

The June 19-25 sockeye guideline harvest levels for the Shumagin Islands and South Unimak fisheries are 108,000 and 489,000 fish respectively. The June 18 catch rates were much lower than those of June 17 and high winds are predicted for the afternoon of June 19. More fishing time is needed for the fishermen to harvest their June 19-25 sockeye allocations.

Emergency Order No. 4-F-M-CDB-19-90

Effective Date: June 20, 1990

EXPLANATION:

This emergency order extends commercial salmon fishing time 24 hours until 10:00 P.M. June 21 in the South Unimak and Shumagin Islands fisheries.

JUSTIFICATION:

The June 19-25 sockeye guideline harvest levels for the Shumagin Islands and South Unimak fisheries are 108,000 and 489,000 fish respectively. The June 19 sockeye catch was only 10,000 in the Shumagins and 45,000 at South Unimak. Weather is also preventing many fishermen from fishing. More fishing time is needed for the fishermen to harvest their sockeye allocations.

Emergency Order No. 4-F-M-CDB-20-90

Effective Date: June 21, 1990

EXPLANATION:

This emergency order extends commercial salmon fishing 24 hours until 10:00 P.M. June 22 in the South Unimak and Shumagin Island fisheries.

JUSTIFICATION:

The June 19-25 sockeye guideline harvest levels for the Shumagin Islands and South Unimak fisheries are 108,000 and 489,000 fish respectively. The June 19-20 sockeye catch was only 19,000 in the Shumagins and 118,000 at South Unimak. Weather is also preventing many fishermen from fishing. More fishing time is needed for the fishermen to harvest their sockeye allocations.

Emergency Order No. 4-F-M-CDB-21-90

Effective Date: June 22, 1990

EXPLANATION:

This emergency order extends commercial salmon fishing 24 hours until 10:00 P.M. June 23 in the South Unimak fishery.

JUSTIFICATION:

The guideline harvest levels for the June 19-25 period is 489,000 sockeye at South Unimak. There are only 27,000 unharvested sockeye from the June 13-18 period which may be taken during the June 19-25 period. To date, the June 19-25 sockeye harvest is 230,000. More fishing time is needed for the fishermen to harvest their sockeye allocations.

Emergency Order No. 4-F-M-CDB-22-90

Effective Date: June 23, 1990

EXPLANATION:

This emergency order extends commercial salmon fishing 24 hours until 10:00 P.M. June 24 in the South Unimak fishery.

JUSTIFICATION:

The guideline harvest level for the June 19-25 period is 489,000 sockeye at South Unimak. There are also 27,000 unharvested sockeye from the June 13-18 period which may be taken during the June 19-25 period. To date, the June 19-25 sockeye harvest is 350,000. There is also a 600,000 chum salmon ceiling placed on both South Unimak and Shumagin Island fisheries combined. The chum to sockeye ratio is presently low but can greatly increase towards the end of the month. Sockeye catches sometimes decrease substantially about June 24-25 at South Unimak. Winds are predicted to be light during June 24. A 24 hour extension of the fishery at this time should enable the fishermen to easily reach their June 13-25 sockeye allocation while minimizing the incidental chum harvest.

Emergency Order No. 4-F-M-CDB-23-90

Effective Date: June 24, 1990

EXPLANATION:

This emergency order closes the commercial salmon fishing season in that portion of the Bear River Section located between the south regulatory marker at King Salmon River and the north regulatory marker at Sandy River.

JUSTIFICATION:

The Bear River sockeye escapement is less than 4,000 which is poor for this date. The Sandy River sockeye escapement is difficult to monitor and the run is of very short duration making it vulnerable to overfishing. Most of the Alaska Peninsula drift gillnet fleet is anticipated to fish in the vicinity of Port Moller on June 25. A greatly expanded closed waters area is needed to obtain desired escapements.

Emergency Order No. 4-F-M-CDB-24-90

Effective Date: June 26, 1990

EXPLANATION:

This emergency order establishes a 6:00 AlM. until 10:00 P.M. commercial salmon fishing period during June 26 in the South Unimak fishery.

JUSTIFICATION:

There are approximately 175,000 unharvested sockeye left for the South Unimak June fishery. There is a 600,000 chum salmon ceiling for the South Unimak and Shumagin Island fisheries combined. To date, the combined chum catch is approximately 410,000. The harvest during June 24 indicated that the chum abundance is increasing. A 16 hour fishery during June 26 will allow the fishermen to harvest a portion of their remaining sockeye allocation and a chance to evaluate the incidental chum harvest before allowing more fishing time.

Emergency Order No. 4-F-M-CDB-25-90

Effective Date: June 28, 1990

EXPLANATION:

This emergency order establishes a 5:00 P.M. until 10:00 P.M. commercial salmon fishing period during June 28 in the South Unimak fishery.

JUSTIFICATION:

There are approximately 14,000 unharvested sockeye left in the South Unimak fisheries quota. Although a 16 hour fishing period on June 26 produced a harvest of 161,000 sockeye, it is anticipated that the catch rate should drop considerably by June 28 due to projected reduction of gear and fish abundance. A 5 hour fishing period during June 28 should produce a harvest of approximately 14,000 sockeye. The combined South Unimak-Shumagin chum harvest is 103,000 below the catch ceiling of 600,000.

Emergency Order No. 4-F-M-CDB-26-90

Effective Date: June 27, 1990

EXPLANATION:

This emergency order extends commercial salmon fishing time 48 hours until 6:00 P.M. Friday during the week of June 24-30 in the Inner Port Heiden Section.

JUSTIFICATION:

The effort level at Port Heiden consists of less than 4 gillnet fishermen. No fishing occurred during Tuesday and Wednesday due to a lack of buyers. A 48 hour extension will enable fishermen an opportunity to make up for lost fishing time and test run for strength.

Emergency Order No. 4-F-M-CDB-27-90

Effective Date: June 28, 1990

EXPLANATION:

This emergency order extends commercial fishing time 24 hours until 12:00 P.M. midnight Friday during the week of June 24-30 in the Nelson Lagoon Section.

JUSTIFICATION:

The sockeye escapement through the Nelson River weir is 24,000 through June 27 and achievement of the June 30 goal of 30,000 appears certain. Catches during the first 3 days of the week have averaged 11,000 sockeye per day. A daily harvest of 5,000 per day at this time would indicate a strong run. More fishing time is needed to harvest the resource.

Emergency Order No. 4-F-M-CDB-28-90

Effective Date: July 2, 1990

EXPLANATION:

This emergency order establishes 6:00 A.M. Monday - 6:00 P.M. Thursday commercial salmon fishing periods in the Bechevin Bay Section during July

JUSTIFICATION:

Local chum salmon runs should be entering the Bechevin Bay Section at this time. It is desirable at this time to have fishing periods in the Bechevin Bay Section that are the same as in adjacent Swanson Lagoon and Izembek-Moffet Bay Sections to spread effort out over all three sections.

Emergency Order No. 4-F-M-CDB-29-90

Effective Date: July 2, 1990

EXPLANATION:

This emergency order closes commercial salmon fishing until further notice in the Bear River, Three Hills, and Herendeen-Moller Bay Sections.

JUSTIFICATION:

The sockeye escapement into Bear River is less than 15,000 fish and there is no indication of substantial numbers of fish near the stream terminus. The sockeye escapement goal through July 15 is 110,000 to 125,000 fish. The peak of the run occurs during July 3 - 8. The fishery needs to be closed until a substantial portion of the fish needed for escapement are in closed waters. Much of the Herendeen-Moller Bay Section is managed for chum salmon, and allowing a fishery there while the Bear River and Three Hills Sections are closed could likely draw so much gear that the resource would be overexploited. The Herendeen-Moller Bay Section chum run is anticipated to be only moderately strong at best.

Emergency Order No. 4-F-M-CDB-30-90

Effective Date: July 4, 1990

EXPLANATION:

This emergency order closes the commercial salmon fishing season in the Urilia Bay Section during July 4 through September 30.

JUSTIFICATION:

The Urilia Bay Section is receiving an unusually intense amount of fishing pressure due to the closure of the Port Moller fishery. An effort level of 8 seiners, 13 gillnetters, and 4 set gillnetters. No fish were observed escaping into the lower end of the Christenson Lagoon outlet channel, and the number in Christenson Lagoon is unknown. The sockeye run received intense fishing pressure during the previous week and should be past its peak. The Urilia Bay Section should be closed at this time to prevent the resource from being overexploited.

Emergency Order No. 4-F-M-CDB-31-90

Effective Date: July 4, 1990

EXPLANATION:

This emergency order extends commercial salmon fishing time until 12:00 midnight Friday during the week of July 1 - 7 in Ilnik Lagoon.

JUSTIFICATION:

The Ilnik sockeye escapement is estimated to be 26,000 which is above the minimum end of the season escapement goal of 25,000 to 50,000. Effort is light, consisting of only 3 set gillnet fishermen and their catches indicate that sockeye are still entering the system in good numbers. More fishing can be allowed at this time without jeopardizing the resource.

Emergency Order No. 4-F-M-CDB-32-90

Effective Date: July 6, 1990

EXPLANATION:

This emergency order establishes a 5:00 A.M. until 10:00 P.M. commercial salmon fishing period during July 6 in the Shumagin Islands Section, South Central District, Southwestern District, Otter Cove Section, and Sanak Island Section.

JUSTIFICATION:

Fishing time is needed to test the strength of the local chum salmon runs.

The closed waters in Cold Bay needs to be expanded to enable Russel Creek Hatchery to obtain adequate brood stock and to satisfy natural spawning requirements.

Emergency Order No. 4-F-M-CDB-33-90

Effective Date: July 5, 1990

EXPLANATION:

This emergency order extends commercial fishing time 24 hours until 12:00 P.M. July 6 in the Nelson Lagoon Section and reopens the Inner Port Heiden Section to commercial salmon fishing from 11:00 A.M. Thursday July 5 until 6:00 P.M. Wednesday July 11.

JUSTIFICATION:

The Nelson Lagoon sockeye escapement through the weir (through July 4) is 89,000 (excluding jacks) which is close to the July 10 interim escapement goal of 90,000. Additional fishing time can be allowed at this time without jeopardizing the season escapement goal of 100,000 to 150,000.

Effort in the Inner Port Heiden Section consists of only one set gillnet fisherman who has to fly his fish 100 miles to market. Catch rates appear strong under the circumstances. A recent survey indicated a decent sockeye escapement in the Meshik River although the river was too muddy for a complete survey. More fishing time can be allowed without jeopardizing the resource.

Emergency Order No. 4-F-M-CDB-34-90

Effective Date: July 6, 1990

EXPLANATION:

This emergency order allows continuous commercial salmon fishing until 12:00 P.M. Thursday July 12 in the Nelson Lagoon Section. This emergency order supersedes emergency order 4-F-M-CDB-33-90 in regards to the Nelson Lagoon Section.

JUSTIFICATION:

The minimum end of the Nelson Lagoon season sockeye escapement goal has been reached, with an accumulated escapement of 109,000 through July 5. Daily counts have remained high despite continuous fishing and it's projected that the minimum (150,000) end of the sockeye escapement goal will be reached. More fishing time is needed to harvest the resource.

Emergency Order No. 4-F-M-SDP-02-90

Effective Date: July 7, 1990

EXPLANATION:

This emergency order changes the required 36 hour notice to a 12 hour notice prior to the first commercial salmon fishing period in the Southeastern District Mainland fishery: East Stepovak, Stepovak Flats, Northwest Stepovak, Balboa Bay and Beaver Bay sections.

JUSTIFICATION:

The Southeastern District Mainland fishery is managed on the basis of Chignik sockeye prior to July 26 as described under 5 AAC 09.360.

The harvest of Chignik sockeye through July 6 is 620,171 salmon. The late Chignik sockeye run is predicted to produce a harvest of 727,000 salmon. It is anticipated that the assessment of the strength of the late Chignik sockeye run will be determined by July 9. If this assessment results in the determination of a harvestable surplus then a reduction in the required hours of notice prior to the first opening to 12 hours is necessary to allow for the optimum opportunity for Area M fishermen to harvest the 6% allocation of Chignik destined sockeye as outlined in the Southeastern District Management Plan. This reduction in time will also make it possible to coincide a commercial salmon opening in the Southeastern District Mainland with an announced opening for most of the remainder of the South Alaska Peninsula, which will allow for an even distribution of the commercial fishing fleet throughout this area.

Emergency Order No. 4-F-M-CDB-35-90

Effective Date: July 9, 1990

EXPLANATION:

This emergency order establishes a 5:00 A.M. July 9 until 10:00 P.M. July 10 commercial salmon fishing period in the Shumagin Islands Section, South Central District, Southwestern District, Otter Cove Section, and Sanak Island Section. Fishing in the Otter Cove and Sanak Island Section is limited to gillnet gear only.

JUSTIFICATION:

The July 6 fishing period indicated that large numbers of chums are moving into the area. Catch per seiner in the Shumagin Islands was the highest that it has been for chums in at least the previous four years during July 6. The stream watchman reports large numbers of chums already in closed waters at Canoe Bay. Fishing time is needed to harvest the resource.

Substantial numbers of immature chums were taken by seiners in the Otter Cove and Sanak Island Sections during July 6. Those fish have not matured to their potential size and are not acceptable to processors. Continued fishing by seine gear in these locations would be wasteful and could impact subsequent years chum returns. Immature chum are small enough to pass through gill net gear.

Emergency Order No. 4-F-M-SDP-03-90

Effective Date: July 9, 1990

EXPLANATION:

This emergency order allows a 5:00 A.M. Monday July 9 until 10:00 P.M. Tuesday July 10 salmon fishing period in the Southeastern District Mainland fishery.

This emergency order also expands the closed waters at the outlet of Orzinski Lake to include all waters within Orzinski Bay north of a line drawn from Elephant Point to Waterfall Point.

JUSTIFICATION:

Except for the Northwest Stepovak Section, which is managed on the basis of Orzinski Lake sockeye, the Southeastern District Mainland fishery is managed on the basis of Chignik sockeye prior to July 26 as described under 5 AAC 09.360.

To date the sockeye harvest in Chignik is 629,669 salmon and the late run sockeye escapement is 12,319 salmon. Early indications of run strength for the 1990 late Chignik sockeye run shows that at this time there is a harvestable surplus of late run Chignik sockeye beyond escapement requirements. A 5:00 A.M. July 9 until 10:00 P.M. July 10 fishing period in the Southeastern District Mainland Area will give fishermen the opportunity to catch their allocation (6% of the total Chignik destined harvest prior to July 26) and a chance to harvest a portion of the early run into Orzinski Lake.

Foot surveys by Orzinski weir personnel indicate a build-up of salmon near the lake outlet. Orzinski Bay needs to be closed to protect the salmon near the lake outlet. Opening the remainder of the Northwest Stepovak Section will give fishermen the opportunity to catch a portion of the run into Orzinski Lake and will provide a test of the strength of the Orzinski Lake sockeye run.

Additional fishing time in the Northwest Stepovak Section will be based on escapement into Orzinski Lake and further assessments of any salmon surplus to escapement requirements.

Emergency Order No. 4-F-M-CDB-36-90

Effective Date: July 8, 1990

EXPLANATION:

This emergency order allows a Noon July 8 until 6:00 P.M. July 11 commercial salmon fishery in the Herendeen-Moller Section and that portion of the Northern District located between Cape Seniavin and Unangashak Bluffs.

JUSTIFICATION:

The Ilnik sockeye escapement is estimated to be 31,000 which is inside the escapement goal range of 25,000 to 50,000. The Bear River sockeye escapement is 81,000 and the daily counts are increasing. The Bear River July 15 sockeye goal of 110,000 to 125,000 can now be reached with leaving the Bear River Section closed but allowing harvesting of Bear River sockeye in the nearby sections. More fishing time can be allowed in the Ilnik Section at this time without jeopardizing either Ilnik or Bear River escapements.

Emergency Order No. 4-F-M-CDB-37-90

Effective Date: July 12, 1990

EXPLANATION:

This emergency order allows continuous commercial salmon fishing time until 12;00 Midnight July 26 in the Nelson Lagoon Section.

JUSTIFICATION:

The Nelson Lagoon sockeye escapement through the weir is 140,000 as of 9:00 A.M. July 10. The upper end of the season escapement goal range of 100,000 to 150,000 will be surpassed even while allowing continuous fishing time. More fishing time is needed to harvest the resource.

Emergency Order No. 4-F-M-CDB-38-90

Effective Date: July 11, 1990

EXPLANATION:

This emergency order establishes a July 11 through July 15 commercial salmon fishing period in that portion of the Bear River Section (outside of the area between Sandy River and King Salmon River) where the fishing season was not closed by emergency order 4-F-M-CDB-23-90.

The fishing period in the Inner Port Heiden, Ilnik, Three Hills, and Herendeen-Moller Bay section is extended through July 15.

JUSTIFICATION:

Both Ilnik and Bear River sockeye escapements are within their goals through July 15. The July 10 Bear River count is slow and retention of the King Salmon River to Sandy River closure is necessary at this time to insure that the optimum through July 15 escapement of 125,000 be reached. Effort at Port Heiden consists of only one set gillnetter even though the sockeye run is strong

and he is only able to fish every other day due to market problems. More fishing time and area is needed to harvest the resource.

Emergency Order No. 4-F-M-CDB-39-90

Effective Date: July 11, 1990

EXPLANATION:

This emergency order reopens the commercial salmon fishing season in that portion of the Bear River Section located between Sandy River and King Salmon River effective 11:00 A.M. July 11. The closed waters at Bear River are reduced to the stream terminus effective 11:00 A.M. July 11 through 12:00 P.M. July 15.

JUSTIFICATION:

As of July 11, the maximum end of the July 15 Bear River sockeye escapement goal of 110,000 to 125,000 has been met. More fishing area is needed to harvest the resource. After July 15, management based on another segment of the Bear River escapement begins.

Emergency Order No. 4-F-M-CDB-40-90

Effective Date: July 13, 1990

EXPLANATION:

This emergency order establishes a 5:00 A.M. July 13 until 10:00 P.M. July 14 commercial salmon fishing period in the Shumagin Islands Section, South Central District, Southwestern District, Otter Cove Section, and Sanak Island Section. Fishing in the Otter Cove and Sanak Island Section is limited to gill net gear only.

JUSTIFICATION:

Catches along the capes indicate that large numbers of chums are moving into the area. The July 6 catch per seiner was the highest that it has been in the Shumagin Islands for at least the previous four years. High winds plagued the July 9-10 fishing period, but large numbers of chums were still harvested. Fishing time is needed to harvest the resource.

Substantial numbers of immature chums were taken by seiners in the Otter Cove and Sanak Island Sections during July 6. Those fish have not matured to their potential size and are not acceptable to processors. Continued fishing by seine gear in

these locations would be wasteful and could impact subsequent years chum returns. Immature chum are small enough to pass through gill net gear.

Emergency Order No. 4-F-M-SDP-04-90

Effective Date: July 13, 1990

EXPLANATION:

This emergency order allows a 5:00 A.M. Friday July 13 until 10:00 P.M. Saturday July 14 salmon fishing period in the Southeastern District Mainland fishery:

East Stepovak
Stepovak Flats
Southwest Stepovak
Balboa Bay
Beaver Bay

JUSTIFICATION:

Except for the Northwest Stepovak Section, which is managed on the basis of Orzinski Lake sockeye, the Southeastern District Mainland fishery is managed on the basis of Chignik sockeye prior to July 26 as described under 5 AAC 09.360.

To date the sockeye harvest in Chignik is 626,669 salmon and the late run sockeye escapement through July 20 is 59,147 salmon. The late run sockeye escapement goal through July 10 is 40,000 sockeye. The 5:00 A.M. July 9 through 10:00 P.M. July 10 opening in the Southeastern District Mainland fishery produced a harvest of 13,066 estimated sockeye salmon destined for the Chignik River. The Southeastern District Mainland fishery to date has harvested 2.0% of this allocation (6.0% of the total Chignik destined harvest prior to July 26 is allocated to Southeastern District Mainland fishermen).

A 5:00 A.M. July 13 until 10:00 P.M. July 14 fishing period in the Southeastern District Mainland Area outside the Northwest Stepovak Section will give fishermen the opportunity to catch their allocation.

The sockeye escapement into Orzinski Lake through July 10 was 762 salmon which is below the desired escapement level for this date. An aerial survey flown during the morning of July 11 indicated an increasing build up of salmon near the lake's outlet. A closure of the Northwest Stepovak Section is needed at this time to obtain desired escapements.

Emergency Order No. 4-F-M-CDB-41-90

Effective Date: July 15, 1990

EXPLANATION:

This emergency order extends continuous commercial salmon fishing time until 6:00 P.M. Thursday July 19 in the Bear River, Three Hills, Ilnik, Inner Port Heiden, and Herendeen-Moller Bay Sections.

JUSTIFICATION:

The present fishing period is scheduled to close at 12:00 P.M. July 15 and the weekly fishing period by the regulation book begins by 6:00 A.M. July 16. A six hour closure seems unnecessary at this time. The Bear River sockeye run is strong and late with catches increasing at a time when the fishery is normally in a decline. The Bear River pre July 16 escapement is presently 147,000 as compared to the maximum goal of 125,000. The July 16 - August 5 goal is only 40,000 to 50,000. More fishing time is needed at this time to harvest the large number of sockeye present. Daily escapements are presently at a level where the July 16 - August 5 goal can be reached while allowing extensive fishing time. Effort in the Inner Port Heiden Section is still limited to one set gillnetter, who has only been able to fish part time because of market problems. The Herendeen Bay chum run is strong and the fish should be harvested while in good condition and before the scheduled season closure on July 20.

Emergency Order No. 4-F-M-CDB-42-90

Effective Date: July 18, 1990

EXPLANATION:

This emergency order establishes a 5:00 A.M. July 18 until 10:00 P.M. July 19 commercial salmon fishing period in the Shumagin Islands Section, South Central District, Southwestern District, Otter Cove Section, and Sanak Island Section. Fishing in the Shumagin Islands, Sanak Island, and Otter Cove Sections is limited to gill net gear only.

JUSTIFICATION:

Pink salmon should be entering the South Peninsula at this time. A season harvest of 8,000,000 fish is projected. Fishing time is needed to enable fishermen to harvest the resource and test run strength. The Shumagin Islands, Sanak Island, and Otter Cove Sections will be open to gill net gear only due to the presence of immature salmon. Catching immature salmon is wasteful and could impact subsequent runs. Immature salmon are small enough to pass through set gill net gear.

Emergency Order No 4-F-M-SDP-05-90

Effective Date: July 18, 1990

EXPLANATION:

This emergency order allows a 5:00 A.M. Wednesday July 18 until 10:00 P.M. Thursday July 19 salmon fishing period in the following sections of the Southeastern District:

East Stepovak
Stepovak Flats
Southwest Stepovak
Balboa Bay
Beaver Day

JUSTIFICATION:

Except for the Northwest Stepovak Section, which is managed on the basis of Orzinski Lake sockeye, the Southeastern District Mainland fishery is managed on the basis of Chignik sockeye prior to July 26 as described under 5 AAC 09.360.

Through July 14 the reported sockeye harvest in Chignik is 805,451 salmon and the late run sockeye escapement through July 15 is 101,065 salmon. The late run sockeye escapement goal at Chignik through July 15 is 75,000 to 80,000 salmon. The 5:00 A.M. July 13 through 10:00 P.M. July 14 opening in the Southeastern District Mainland fishery accumulated harvest through July 15 is 47,935 sockeye of Chignik origin or 5.43% (6.0% of the total Chignik destined harvest prior to July 26 is allocated to the Southeastern District Mainland fishermen). Cape Igvak in the Kodiak Management Area is currently open and scheduled to close Friday July 20 while portions of the Chignik Management Area are open and scheduled to close Wednesday July 18. Catches from the Kodiak and Chignik Management Areas will lower the percent harvest in the Southeastern District Mainland Area.

A 5:00 A.M. July 18 until 10:00 P.M. July 19 fishing period in the Southeastern District Mainland Area will give fishermen the opportunity to catch their allocation.

The sockeye escapement into Orzinski Lake through July 15 was 1,883 sockeye which is below the desired escapement level for this date. Foot surveys by weir personnel indicated some salmon in the bay near the stream terminus. A closure of the Northwest Stepovak Section is needed at this time to obtain desired escapement.

Emergency Order No. 4-F-M-CDB-43-90

Effective Date: July 19, 1990

EXPLANATION:

This emergency order extends continuous commercial salmon fishing time during the open season until 6:00 P.M. Thursday July 26 in the Bear River, Three Hills, Ilnik and Herendeen-Moller Bay Sections.

JUSTIFICATION:

The Bear River sockeye escapement goal for the July 16-August 5 period is 40,000 to 50,000. The July 16-17 escapement totaled 15,500 with another 3,200 counted through the weir during the early morning of July 18. At this rate, the July 16-August 5 escapement goal will soon be exceeded even while allowing continuous fishing time.

Emergency Order No. 4-F-M-CDB-44-90

Effective Date: July 18, 1990

EXPLANATION:

This emergency order extends the present commercial salmon fishing period until 10:00 P.M. July 22 in the Aleutian Islands Area.

JUSTIFICATION:

The Aleutian Islands pink salmon run normally begins about July 22. There is no longer a cannery at Unalaska, consequently the fish must be of freezing quality. A large pink return is anticipated during 1990. Fishing time should be liberal early in the season when fish quality is high and the run is beginning to build. Effort is anticipated to consist of less than 4 seiners during July 19-22.

Emergency Order No. 4-F-M-CDB-45-90

Effective Date: July 19, 1990

EXPLANATION:

This emergency order allows continuous fishing time until 6:00 P.M. August 1 in the Inner Port Heiden Section.

JUSTIFICATION:

A survey on July 18 indicates that the Meshik River sockeye escapement is at least 22,500 which is above the goal of 5,000 to 20,000. Fishing effort consists of only one set gill net fishermen. More fishing time is needed to harvest the resource. The Inner Port Heiden Section will be managed for coho salmon after July.

Emergency Order No. 4-F-M-CDB-46-90

Effective Date: July 21, 1990

EXPLANATION:

This emergency order closes the commercial salmon fishing season in the Bechevin Bay and Swanson Lagoon Sections after July 20.

JUSTIFICATION:

Chum salmon escapements into Swanson Lagoon and St. Catherine Cove are at a very low level, totaling less than 25% of the desired escapement goals for this date. The harvest of chums in Bechevin Bay and Swanson Lagoon during this past week was very poor, totaling less than 2,000 fish The sockeye catch at Swanson Lagoon was also very poor, totaling less than 500 fish. The season should be closed at this time to protect Swanson Lagoon and Bechevin Bay stocks.

Emergency Order No. 4-F-M-SDP-06-90

Effective Date: July 21, 1990

EXPLANATION:

This emergency order changes the required 18 hour notice to a 12 hour notice prior to the opening of any commercial salmon fishing period after the first commercial fishing period in the Northwest Stepovak Section of the Southeastern District Mainland fishery.

JUSTIFICATION:

The Northwest Stepovak Section is managed on the basis of Orzinski Lake sockeye salmon. To date the sockeye escapement is 8,215. Average sockeye escapement for the last three days is 1,879 salmon. The department has an escapement goal of 10,000-20,000 sockeye for Orzinski Lake. Reducing the required notice to at least 12 hours before the opening of a commercial salmon fishing period, unless it is an extension of a fishing period in progress, may allow the department to have a fishing period in the Northwest Stepovak Section during the 5:00 A.M. Monday July 23 until 10:00 P.M. Wednesday July 25 general fishing period in

the South Peninsula. Opening the Northwest Stepovak Section while fishing occurs in other portions of the South Peninsula will reduce gear conflicts and fishing pressure in the area.

Emergency Order No. 4-F-M-CDB-47-90

Effective Date: July 20, 1990

EXPLANATION:

This emergency order extends the present commercial salmon fishing period until 10:00 P.M. July 24 in the Aleutian Islands Area.

JUSTIFICATION:

The Aleutian Islands pink salmon run normally begins about July 22. There is no longer a cannery at Unalaska, consequently the fish must be of freezing quality. A large pink run is anticipated during 1990. Fishing time should be liberal early in the season when fish quality is high and the run is beginning to build. To date, there are no salmon fishing boats ready to operate in the Aleutian Islands. Weather and high winds are expected to continue through July 22. A two day extension is needed for fishermen to test run strength.

Emergency Order No. 4-F-M-CDB-48-90

Effective Date: July 23, 1990

EXPLANATION:

This emergency order establishes a 5:00 A.M. July 23 until 10:00 P.M. July 25 commercial salmon fishing period in the Shumagin Islands Section, South Central District, Southwestern District, Otter Cove Section and Sanak Island Section. Fishing in the Sanak Island and Otter Cove Sections is limited to gill net gear only.

JUSTIFICATION:

Pink salmon are entering the South Peninsula at this time. A season harvest of 8,000,000 fish is projected. Fishing time is needed to enable fishermen to harvest the resource and test run strength. The Sanak Island and Otter Cove Sections will be open to gill net gear only due to the presence of immature salmon. Catching immature salmon is wasteful and could impact subsequent runs. Immature salmon are small enough to pass through gill net gear.

Emergency Order No. 4-F-M-CDB-49-90

Effective Date: July 23, 1990

EXPLANATION:

This emergency order closes the Shumagin Islands to seining effective 10:30 P.M. July 23 until the end of the present fishing period which ends 10:00 P.M. July 25. This emergency order supersedes emergency order 4-F-M-CDB-48-90.

JUSTIFICATION:

Observations by the Alaska Department of Fish and Game during the late afternoon of July 23 indicated that the seiners were gilling between 75 and 180 immature salmon per set in the Shumagin Islands. This is a waste of a valuable resource. To prevent further waste, the Shumagin seine fishery should be closed at this time.

Emergency Order No. 4-F-M-CDB-50-90

Effective Date: July 24, 1990

EXPLANATION:

This emergency order allows continuous fishing until 6:00 P.M. August 9 in the Bear River Section, Three Hills Section, Ilnik Section and that portion of the Herendeen-Moller Bay Section enclosed by a line from Harbor Point to Entrance Point. The closed waters at Bear River is reduced to include only those waters upstream from the stream terminus.

JUSTIFICATION:

The Bear River sockeye escapement has exceeded the maximum end of the July 16-August 5 goal of 40,000 to 50,000. More fishing time and area is needed to harvest the resource.

Emergency Order No. 4-F-M-CDB-51-90

Effective Date: July 24, 1990

EXPLANATION:

This emergency order extends the present commercial salmon fishing period until 10:00 P.M. July 26 in the Aleutian Islands Area.

JUSTIFICATION:

The Aleutian Islands pink salmon run normally begins about July 22. There is no longer a cannery at Unalaska, consequently the fish must be of freezing quality. A large pink run is anticipated during 1990. Fishing time should be liberal early in the season when fish quality is high and the run is beginning to build. To date, there has been no salmon fishing boats ready to operate in the Aleutian Islands. A two day extension is needed for fishermen to test run strength.

Emergency Order No. 4-F-M-CDB-52-90

Effective Date: July 25, 1990

EXPLANATION:

This emergency order:

1. Reopens the Shumagin Islands Section to commercial salmon fishing with seine gear effective 4:00 P.M. July 25.

2. Extends commercial salmon fishing time until 10:00 P.M. July 27 in the Otter Cove and Sanak Island Sections (by gill net only), Southwestern District, and Shumagin Islands Section.

3. Establishes a 5:00 A.M. July 26 until 10:00 P.M. July 27 commercial salmon fishing period in the Beaver Bay, Balboa Bay, Southwest Stepovak, Northwest Stepovak and East Stepovak Sections.

This emergency order supersedes emergency order number 4-F-M-CDB-49-90.

JUSTIFICATION:

Test fishing during the morning of July 25 indicated that immature salmon are no longer present in substantial numbers in the Shumagin Islands. The Shumagin Islands Section can once again be open to seining without causing wastage. Fishing time is needed to allow seine gear to test pink salmon run strength in the Shumagins.

According to the Southeastern District Mainland Management Plan, Beaver, Balboa, and Stepovak Bays are to be managed on a local stock basis after July 25. Fishing time is needed to allow for a harvest of pink salmon in these bays. Earlier catches indicated that Stepovak Flats chum runs are weak and that section should remain closed.

Effort for pink salmon in the Southwestern District and Otter Cove and Sanak Island Sections has so far been light and indications are that the pink salmon runs are just getting

underway. More fishing time can be allowed at this time to enable fishermen to test run strength. The South Central District has received substantial fishing pressure and catches indicate the runs of both pinks and chums are weak. South Central District pink salmon are early stocks and no more fishing should be allowed at this time until escapements can be evaluated.

Emergency Order No. 4-F-M-SDP-07-90

Effective Date: July 26, 1990

EXPLANATION:

This emergency order changes the date from July 29 to July 26 through September 30 for waters at the head of Stepovak Bay to be closed to commercial salmon fishing.

JUSTIFICATION:

The tip of Dent Point is not defined in the regulation book and this has created confusion among fishermen. Chum salmon catches and aerial surveys indicate chum salmon run strength to be weaker than expected. A conservative interpretation of the boundary with a longitude and latitude will accurately define the closure line and protect schooling chum salmon at the head of the bay. The Shumagin Islands Section may be closed to purse seine gear, which would result in intensive fishing pressure on these chum salmon stocks. An earlier required closure to the head of Stepovak Bay is needed to insure adequate escapement.

Emergency Order No. 4-F-M-CDB-53-90

Effective Date: July 30, 1990

EXPLANATION:

This emergency order establishes a 5:00 AS.M. July 30 until 10:00 P.M. July 31 commercial salmon fishing period in the Unalaska District and a 5:00 A.M. July 30 until 10:00 P.M. August 3 fishing period in the Umnak and Adak Districts.

JUSTIFICATION:

There are indications that pink salmon runs are late over much of the state. Very few salmon were found during the pervious fishing period, which ended on July 26 in the Aleutians. Effort continues to be light and a two day fishery during July 30-31 will give the fleet another chance to test run strength. Large unexploited pink salmon runs sometimes occur in the Umnak and Adak Districts, a 5 day fishing period will give the fleet an opportunity to test these districts if Unalaska runs are not strong.

Emergency Order No. 4-F-M-CDB-54-90

Effective Date: July 31, 1990

EXPLANATION:

This emergency order establishes a 5:00 A.M. July 31, until 10:00 P.M. August 1 commercial salmon fishing period in the Southeastern, South Central and Southwestern Districts and the Otter Cove and Sanak Island Sections of the Unimak District.

JUSTIFICATION:

Fishing time is needed to harvest South Peninsula pink salmon and to test run strength. Catches during the last fishing period indicated that the pink run is strong but may be well below the 8,000,000 catch projection.

Emergency Order No. 4-F-M-CDB-55-90

Effective Date: July 31, 1990

EXPLANATION:

This emergency order extends commercial salmon fishing time 24 hours until 10:00 P.M. August 1 in the Unalaska District.

JUSTIFICATION:

Fishing effort at Unalaska consists of only 4-5 boats and catches on July 30 indicate that a substantial amount of pink salmon are moving into the area. Weather is preventing fishing in much of the prime fishing area on July 31. A 24 hour extension will enable fishermen to make up for fishing time lost during July 31.

Emergency Order No. 4-F-M-CDB-56-90

Effective Date: August 1, 1990

EXPLANATION:

This emergency order extends commercial salmon fishing time 24 hours until 10:00 P.M. August 2 in the Southeastern, South Central and Southwestern Districts and the Otter Cove and Sanak Island Sections of the Unimak District.

JUSTIFICATION:

High northwest winds are preventing fishing throughout much of the south side of the Alaska Peninsula during August 1. Catches of pink salmon during July 31 indicate that large numbers of pink salmon are entering the area. More fishing time is justified to make up for time being lost and to harvest the resource.

Emergency Order No. 4-F-M-CDB-57-90

Effective Date: August 2, 1990

EXPLANATION:

This emergency order extends the commercial salmon fishing period 24 hours until midnight Friday during the week of July 29-August 4 in the Nelson Lagoon Section.

JUSTIFICATION:

Nelson Lagoon sockeye harvests are averaging 6,000 to 8,000 fish per day which indicates that the late run is exceptionally strong. Normal catches for this date are 1,000 to 3,000 sockeye per day. Fishermen are also less efficient this season due to an unusual amount of vegetation in the water. A 24 hour extension of fishing time can be allowed at this time without endangering the resource.

Emergency Order No. 4-F-M-CDB-58-90

Effective Date: August 2, 1990

EXPLANATION:

This emergency order allows continuous commercial salmon fishing time from 6:00 A.M. Monday July 30 until 12:00 P.M. Thursday August 9 in the Nelson Lagoon Section.

JUSTIFICATION:

Late run Nelson Lagoon sockeye catches continue at a high rate. Daily harvests are equaling or exceeding weekly catches during previous years. Vegetation in the water is reducing catch efficiency and there is a 30% reduction in units of gear from the amount operating during the run. Escapement rates were high during the early run. Escapement rates were high during the early run despite continuous fishing time Even though there is no weir on the late system, the above factors indicate that more fishing time can be allowed without jeopardizing the resource.

Emergency Order No. 4-F-M-CDB-59-90

Effective Date: August 5, 1990

EXPLANATION:

This emergency order closes the commercial salmon fishing season in the Izembek-Moffet Bay Section after August 4.

JUSTIFICATION:

Izembek-Moffet Bay chum escapements are very poor and catches during the past week indicate that only small numbers of chums are entering the section. Other North Peninsula chum runs are weak, making the possibility of a strong run of very late fish doubtful. Izembek-Moffet Bay sockeye stocks have been fished extensively and it will be weeks before the escapements can be observed in some systems.

Emergency Order No. 4-F-M-CDB-60-90

Effective Date: August 6, 1990

EXPLANATION:

This emergency order establishes a 5:00 A.M. August 6 until 10:00 P.M. August 7 commercial salmon fishing period in the East Stepovak Section, Shumagin Islands Section, that portion of the south side of the Alaska Peninsula Area located west of McGinty Point, and the Aleutian Islands Area.

JUSTIFICATION:

Pink salmon escapements into early streams are strong in part of the Alaska Peninsula Area and there is good sign of fish in deep water. Catches during the end of the previous Unalaska fishing period indicate that large numbers of pink salmon runs are late throughout much of Alaska, including the Alaska Peninsula and Aleutian Islands. An August 6-7 fishing period can test the run and allow a harvest but still allow plenty of time to achieve strong escapements in some areas. Escapement data and catches during the previous fishing period indicate that pink salmon runs are weak along the mainland portion of the Southeastern District between McGinty Point and Dent Point and this area should not be opened at this time.

Emergency order No. 4-F-M-CDB-61-90

Effective Date: August 7, 1990

EXPLANATION:

This emergency order extends commercial salmon fishing 48 hours until 10:00 P.M. August 9 in the Aleutian Islands Area.

JUSTIFICATION:

Purse seine catches during August 6 averaged 28,000 each indicating a very strong run. Effort presently consists of only 3 purse seiners and 3 hand purse seiners. Weather is reported to be a problem during August 7. The percentage of males observed

by the Department in the catch exceeded 75% which indicates the run is only beginning. More fishing time is needed to harvest the resource at this time while quality is high.

Emergency Order No. 4-F-M-CDB-62-90

Effective Date: August 8, 1990

EXPLANATION:

This emergency order extends continuous commercial salmon fishing time for the balance of the 1990 season in the Bear River, Three Hills, and Herendeen-Moller Bay Sections. The season is reopened effective noon August 8 through September 30 in that portion of the Herendeen-Moller Bay Section, located outside of a line from Entrance Point to Harbor Point. The closed waters in Herendeen Bay is changed to include those waters enclosed by a line from the northern tip of Bold Bluff Point to Black Point and all waters enclosed by a line from the northern tip of Gull Point to a point located 1/2 nautical mile northwest of Lawrence Valley Creek's terminus.

JUSTIFICATION:

Sockeye escapements continue at a high rate even with continuous fishing up to the terminus of Bear River. The post August 9 Bear River sockeye escapement goal of 50,000 to 75,000 will soon be surpassed. An unusually large run of pink salmon is entering Herendeen Bay. Pink salmon have never been recorded in commercial numbers before in Herendeen Bay, which is a chum salmon producer. The Lawrence Valley pink salmon escapement is estimated at 100,000 and large numbers of pink salmon are in deep water. Chum salmon escapements are healthy but the streams can hold more chums. Continuous fishing time can be allowed to harvest pinks if large terminal closures are in place to protect chums.

Emergency Order No. 4-F-M-CDB-63-90

Effective Date: August 10, 1990

EXPLANATION:

This emergency order establishes a 5:00 A.M. August 10 until 10:00 P.M. August 11 commercial salmon fishing period in the Pavlof Bay section Canoe Bay Section, Southwestern District and Unimak District.

JUSTIFICATION:

Pink salmon escapements into early systems are generally healthy in that portion of the south side of the Alaska Peninsula Area

located west of Cape Tolstoi. The timing of the pink salmon run is late. A two day fishery will enable the fleet to harvest early pinks and test late run strength. The streams in Dolgoi Harbor have excellent escapements and more fishing time is justified to harvest the resource. Fish caught off Cape Tolstoi are considered destined to systems to the east where the runs are weak, consequently no fishing time should be allowed off Cape Tolstoi at this time.

Emergency Order No. 4-F-M-CDB-64-90

Effective Date: August 13, 1990

EXPLANATION:

This emergency order:

1. Establishes a 3:00 P.M. August 13 until 10:00 P.M. August 14 commercial salmon fishing period in the Aleutian Islands Area.

2. Expands the closed waters at Nateekin River to include all of Nateekin Bay.

3. Reduces the closed waters at Unalaska Creek (Iliulik River) to include only those waters within 200 yards of the stream terminus.

JUSTIFICATION:

Recent surveys indicated that large numbers of pink salmon are entering at least portions of the Aleutian Islands. A 31 hour fishing period will give the fleet an opportunity to test run strength and harvest the resource. The Iliulik River pink salmon escapement is estimated to be at least 12,000 which is a healthy escapement for this system and justifies more fishing area. The Nateekin River escapement is estimated to be 30,000 pink salmon. The Nateekin pink salmon escapement should be at least 50,000 to 100,000 at this date, consequently all of Nateekin Bay should be closed at this time.

Emergency Order No. 4-F-M-CDB-65-90

Effective Date: August 29, 1990

EXPLANATION:

This emergency order:

1. Closes the commercial salmon fishing season in the Cinder River Section after the present fishing period ends at 6:00 P.M. August 29.

2. Extends the present commercial salmon fishing period 24 hours until 6:00 P.M. August 30 in the Inner Port Heiden and Ilnik Sections.

JUSTIFICATION:

The Cinder River Section is receiving an unusually high amount of fishing effort, consisting of 40-50 drift gillnet vessels and 8-10 set gillnetters. There have been reports of fishing in closed waters and gillnets (unattended) were recently observed by ADF&G in closed waters. A recent survey indicated no coho in Cinder River and only 50 fish in Mud Creek. The Cinder River Section should remain closed until a substantial number of coho are observed in the streams.

The daily harvests of coho in the Inner Port Heiden Section are at twice the level of the previous two seasons and the amount of gear is normal (20-25 units) for this date. In the past, good coho escapements have been achieved while allowing liberal fishing time. Effort in the Ilnik Section is very light, consisting of only three set gillnetters and daily catches of 600-900 fish are good for this date. A 24 hour extension can be granted at this time in the Inner Port Heiden and Ilnik Sections without jeopardizing the resource.

Emergency Order No. 4-F-M-SDP-09-90

Effective Date: September 1, 1990

EXPLANATION:

This emergency order establishes a 6:00 A.M. September 1 until 9:00 P.M. September 3 commercial salmon fishing period in the Southeastern District.

JUSTIFICATION:

Fishing time is needed to harvest coho salmon which are entering local bays at this time. Pink salmon and chum salmon should nearly all be in closed waters by this date. Set gillnet effort should not affect pink salmon escapements and purse seine effort within bays is expected to be light.

Emergency Order No. 4-F-M-CDB-66-90

Effective Date: September 1, 1990

EXPLANATION:

This emergency order:

1. Reopens the commercial salmon fishing season in the Urilia Bay and Swanson Lagoon Sections, superseding emergency orders 4-F-M-CDB-30 and 46-90, effective September 1.

2. Establishes an 8:00 A.M. September 1 until 9:00 P.M. September 4 commercial salmon fishing period in the following locations:

   a. that portion of the Cold Bay section located south of a line from Kelp Point to 55°08' N.lat., 162°37'12" W. long.

   b. that portion of the Belkofski Bay section located west of the southern tip of Morgan Point.

   c. Thin Point, Morzhovoi Bay, and Ikatan Bay Sections and Unimak District.

   d. Urilia Bay and Swanson Lagoon Sections.

3. Reduces the closed waters in Thin Point Cove to include only those waters within 1,000 yards of Thin Point Lagoon's entrance and within 500 yards of the other salmon stream entering Thin Point Cove.

4. Closes all of Swanson Lagoon, it's outlet channel, and all waters within 100 yards of the outlet channel terminus.

JUSTIFICATION:

Coho salmon are now entering portions of the South Peninsula and Northwestern District. chum salmon are still entering some locations and some of the runs are weak. Consequently much area should remain closed to fishing. Fishing time is justified to harvest coho in locations where fishing will not harvest chums from weak runs. The sockeye run at Thin Point Cove is over and more fishing area is needed for fishermen to harvest coho.

Large numbers of sockeye are ripening in Swanson Lagoon and outlet channel. The fish are poor quality and are needed for escapement. Fishermen can still harvest coho outside the lagoon and it's outlet.

Emergency Order No. 4-F-M-CDB-67-90

Effective Date: September 4, 1990

EXPLANATION: This emergency order extends commercial salmon fishing time 48 hours until 9:00 P.M. Thursday September 6 in the following locations.

1. Urilia Bay and Swanson Lagoon Sections.

2. Unimak District.

3. Ikatan Bay, Morzhovoi Bay, and Thin Point Sections.

4. that portion of the Cold Bay section located south of a line from Kelp Point to 55°08' N. lat., 162°35'12" W. long.

5. that portion of the Belkofski Bay section located west of the southern tip of Morgan Point.

JUSTIFICATION:

Fishing effort has been very light due to high winds. When weather has been fishable, harvests indicate strong coho runs. More fishing time can be allowed at this time to make up for time lost to weather.

Emergency Order No. 4-F-M-CDB-68-90

Effective Date: September 5, 1990

EXPLANATION:

This emergency order allows continuous commercial salmon fishing in the Inner Port Heiden and Ilnik Sections from 6:00 A.M. September 3 until the end of the 1990 season.

JUSTIFICATION:

Recent surveys indicate that coho escapements are 18,000 and 19,000 into the Ilnik Lagoon and Meshik River systems respectively. These escapements are at the escapement goal levels for each system. Much fishing time is lost to weather this time of year. More fishing time is justified to harvest the resource.

Emergency Order No. 4-F-M-CDB-69-90

Effective Date: September 6, 1990

EXPLANATION:

This emergency order extends commercial fishing time 72 hours until 9:00 P.M. Sunday September 9 in the following locations:

1. Urilia Bay and Swanson Lagoon Sections.

2. Unimak District.

3. Ikatan Bay, Morzhovoi Bay, and Thin Point Sections.

4. that portion of the Cold Bay section located south of a line from Kelp Point to 55°08' N. lat., 162°35'12" W. long.

5. that portion of the Belkofski Bay section located west of the southern tip of Morgan Point.

The closure at Swanson Lagoon in reduced so that the lagoon outlet channel is no longer closed.

JUSTIFICATION:

High winds are preventing fishermen from fishing more than half the time allowed. Effort is light and catches indicate a strong coho run. More fishing time is needed to allow fishermen to make up for time lost to weather. Most of the sockeye previously in the Swanson Lagoon outlet channel have moved up into the lagoon. More fishing time is needed to harvest Swanson Lagoon coho as effort outside the outlet channel consists of only one set gillnetter who can only fish occasionally due to weather.

Emergency Order No. 4-F-M-SDP-10-90

Effective Date: September 8, 1990

EXPLANATION:

This emergency order establishes a 12:00 Noon September 8 until 8:00 P.M. September 11 commercial salmon fishing period for the Southeastern District.

JUSTIFICATION:

Fishing time is needed to harvest coho salmon which are entering local bays at this time. Pink salmon escapements are within the desired escapement range. Set gillnet effort should not affect pink and chum salmon escapements. Purse seine effort is expected to be light and the additional closed waters areas should protect chum salmon escapements.

During the September 1-3 commercial opening the Department of Public Safety, Fish and Wildlife Protection Division had no enforcement personnel in the South Peninsula Area. Plans are for the enforcement personnel of the Fish and Wildlife Protection Division to be present in the Southeastern District Area for the remainder of the 1990 salmon season. With enforcement personnel present the Alaska Department of Fish and Game will have additional openings based upon coho salmon catches and escapements with a substantial decrease in the potential; of commercial fishermen harvesting salmon needed for escapement purposes inside of closed waters.

Emergency Order No. 4-F-M-SDP-11-90

Effective Date: September 11, 1990

EXPLANATION:

This emergency order extends commercial salmon fishing time 48 hours until 8:00 P.M. September 13 for the Southeastern District.

JUSTIFICATION:

Southeastern District coho salmon escapements at this time are good. The ratio of coho salmon to other species is improving. On September 1 the sockeye to coho ratio was 5.5:1.0, while on September 9 the sockeye to coho ratio was 4.7:1.0. Effort is anticipated to continue to decrease. On September 1 effort was 7 purse seine and 28 set gillnet deliveries, while on September 9 effort was 1 purse seine and gillnet deliveries. Coho runs this week should be able to support the present level of effort with a five day commercial fishery. On September 8 high winds kept most of the fleet in port, only 5 set gillnet deliveries occurred and the total catch was only 324 sockeye and 44 coho.

Emergency Order No. 4-F-M-CDB-70-90

Effective Date: September 12, 1990

EXPLANATION:

This emergency order establishes a 10:00 A.M. September 12 until 9:00 P.M. September 13 commercial salmon fishing period in the Thin Point Section.

JUSTIFICATION:

Weather has prevented much fishing activity in the Thin Point Section during the previous fishing period. Catches on September 9 indicated a substantial number of coho salmon are still coming in. The coho escapement into Thin Point Lagoon is estimated to be at least 4,000 which is a healthy escapement, considering that some of these fish will be used for subsistence. Another commercial salmon fishing period can be allowed at this time to

catch coho entering the system while leaving enough fish in closed waters to satisfy escapement and subsistence needs.

Emergency Order No. 4-F-M-CDB-71-90

Effective Date: September 12, 1990

EXPLANATION:

This emergency order allows continuous commercial fishing during the balance of the 1990 fishing season in the Nelson Lagoon Section.

JUSTIFICATION:

A recent survey indicated that the Sapsuk River coho escapement is 30,000 which is the upper end of the escapement goal for that system. More fishing time is needed to harvest the resource.

Emergency Order No. 4-F-M-SDP-12-90

Effective Date: September 17, 1990

EXPLANATION:

This emergency order establishes 8:00 A.M. Monday until 8:00 P.M. Friday commercial salmon fishing periods for the Southeastern District. This emergency order also extends the commercial salmon fishing season from October 1 until October 31 in the Southeastern District.

JUSTIFICATION:

Fishing time is needed to harvest coho salmon which are entering local bays at this time. Effort continues to decrease throughout the district. On September 10 effort was one purse seine and 41 set gillnet deliveries, while on September 11 effort decreased to 22 set gillnet deliveries. September and October weather will likely reduce actual fishing days to about 3 days per week.

Chum salmon escapements in Stepovak Bay are now considered poor because of illegal fishing that occurred on September 1-3. A closure at this time of the entire district would not substantially improve chum salmon escapements, the chum runs for 1990 are essentially complete. Chum salmon catches in the Southeastern District Mainland fishery are ranging from about 50 to 300 (September 8-11) salmon per day. The additional closed waters areas should protect those few chum salmon coming in and those still milling near the mouths of streams. A coho escapement survey flown on September 10 indicated that for this time period, coho escapements for those streams surveyed was adequate.

During the September 1-3 commercial opening the Department of Public Safety, Fish and Wildlife Protection Division had no enforcement personnel in the South Peninsula Area. Plans are for the enforcement personnel of the Fish and Wildlife Protection Division to be present in the Southeastern District Area for the remainder of the 1990 salmon season. With enforcement personnel present the Alaska Department of Fish and Game will have additional openings based upon coho salmon catches and escapements with a substantial decrease in the potential; of commercial fishermen harvesting salmon needed for escapement purposes inside of closed waters.

MISCELLANEOUS ACTIVITY OR OBSERVATIONS

Russel Creek Hatchery collected 270,000 coho, 5,000,000 pink, and 6,000,000 chum salmon eggs during 1990. Most of the coho eggs were taken from fish appearing in spawning condition at the hatchery in December.

The effort on groundfish species has reached the point where seasons are getting shorter either due to the quota being taken or the by-catch of prohibited species becoming excessive.

Stellers Sea Lions are now listed as a threatened species. The South Unimak drift gillnet fleet was required to carry observers during 1990 as some people suspected that this fleet was impacting sea lions. Only one case of entanglement (non-fatal) was observed and it was decided to drop the observer requirement for South Unimak drift gillnetters in 1991.

The wolf population appears lower than it had been during recent years. Perhaps a recent rabies outbreak had an impact.

The Lower Alaska Peninsula caribou herd still remains at a low level although there apparently was a recruitment in 1990. Small numbers of caribou were observed on the north side of Unimak Island. The Upper Peninsula herd remains at a high level.

The willow ptarmigan population at Cold Bay seemed to be higher than during the previous two years.

The crowberry crop was very poor. Wild strawberries and salmon berries were very abundant. There was a moderate amount of blueberries.

The Sand Point office living facilities underwent extensive repair during the fall. The foundation and floor were rotten.

A new roof was placed on trailer #1 at Cold Bay and two 20 foot cargo vans were purchased to store supplies and equipment.

The Thin Point Cove tent platform washed away during the winter. A new platform was constructed in its place.

Mark Air began flying into Cold Bay and Sand Point during the spring from Anchorage. A Dash 7 was utilized on the Sand Point run which nearly duplicates the Reeve Aleutian Airways schedule. There is still no scheduled service between Sand Point and Cold Bay. Mark Air provided stops in Cold Bay on one of its Anchorage-Dutch Harbor and return trips, this was reduced to only a stop on the way to Dutch Harbor by October.

A tragic note was the death of Emil (Buddy) Gunderson Jr. after eating clams containing paralytic shellfish poisoning during late June at Dushkin Lagoon.

1990 FIELD PERSONNEL

Employee		Title and/or Location/Duty
Arnie Shaul H, M	FB III	Alaska Peninsula (excluding Southeastern District) Area Salmon Management Biologist, also South Peninsula herring management biologist prior to June 10.
Jim McCullough, H, M	FB III	Alaska Peninsula Herring Management Biologist and Southeastern District Salmon Management Biologist.
Alan Quimby, H, M	FB II	Aleutian Islands Area Management Biologist.
Bob Berceli, H, M	FB II	Assistant Area Management Biologist, Cold Bay
Mark Stopha, H, M	FB II	Assistant Area Management Biologist, Sand Point
Bob Murphy, R	FB II	Area Salmon Research Biologist
Hal Terry, H, M		Airplane Pilot I
Steve Krueger, H, M	FB I	Sand Point Office, Nelson River
Chris Sundby, H, M	FB I	Canoe Bay, Middle Lagoon, Thin Point
Judy Brandt, M	FB I	Ilnik
J.D. Johnson, H, M	FB I	Cold Bay Office, Nelson River
Bob Zanella, M	FB I	Orzenoi
Tracy McKinion, R	FB I	Port Moller
Mark Weinberger, R	FB I	King Cove, Port Moller
Toni Abagian, R	FB I	Sand Point
Kenyon Pope, M	FT III	South Unimak, Canoe Bay
David Skordelis, M	FT III	Orzenoi
Brian Westgate, M	FT III	Nelson River
Malcolm Bennett, M	FT III	Bear Lake
Andy DeValpine, M	FT III	Ilnik
Dave Almond, R	FT III	Port Moller
Amy Emerson, R	FT II	Sand Point

1990 FIELD PERSONNEL

Employee		Title and/or Location/Duty
Jon Goodwin, M	FT I	Bear Lake
Lisa Lave, R	FT I	Port Moller
Gregory Gregg, R	FT I	King Cove
Louis McQueen, R	FT I	Port Moller

H = Herring
M = Management
R = Research

INTRODUCTION

This book contains schedules of predicted tide changes with better fishing days indicated with DOTS of increasing size. Also contained are many pages of interesting and valuable information for ship captains, fishermen, sportsmen and visitors to the Pacific Coast. BE SURE to refer to CORRECTION TABLE to adjust time and height to your location.

Tide schedules are furnished by the National Ocean Survey, National Oceanic & Atmospheric Administration from calculations established by the known and predictable forces at established reference stations and are corrected periodically from studies of actual observations. The publisher of Det's Fishing Guide is constantly in touch with this and other government agencies in its efforts to maintain up to date, accurate information.

"HIGH" Tide predictions are on the LEFT hand pages.

"LOW" Tide predictions are on the RIGHT hand pages.

"A.M." Times are mornings from 0:00 (Midnight) to NOON and are printed in light face type.

"P.M." Times are afternoons and evenings from NOON to 0:00 (Midnight) and are printed in BOLD TYPE.

"FT." represents the height of the tide water in feet and tenths of a foot above, or — below, a fixed reference point of 0.0 Zero.

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NOTICE

The tide tables and the corrections in this book have been figured based on the premise of average weather. Be aware that conditions not considered average for the area will effect the published predictions.

During times of storm or extreme conditions, the mariner is well advised to keep informed of local weather forecasts as they relate to the effects on these tide tables.

NUSHAGAK BAY DISTRICT
CORRECTION TABLE

To correct the TIME and HEIGHT for HIGH or LOW tides for the points given below, add or subtract TIME and FEET from the NUSHAGAK District Tide Table.

	TIME High	TIME Low	FEET High	FEET Low
BRISTOL BAY				
Port Moller (Entrance Point)	—4:23	—4:50	*.56	*.90
Port Heiden	—3:03	—2:35	*0.62	*1.04
EGEGIK RIVER				
Entrance	—1:20	—1:13	*.92	*.92
Egegik	—1:04	+0:36	*.85	*.32
Middle Bluff				
Kvichak Bay	—0:50	—0:50	0.0	0.0
NAKNEK RIVER				
Entrance#	—0:19	+0:29	+2.0#	—0.3
Morakas Point	—0:11	+1:37	*.90	*.36
Omakstalia Point	+0:12	+3:35	*.37	*.12
Naknek Air Base	+0:57	+4:46	*.13	*.06
KVICHAK RIVER				
Naknek	+0:04	+2:01	*.80	*.38
Kvichak	+0:35	+3:49	*.43	*.36
Levelock	+1:27	+4:34	*.60	*.30
NUSHAGAK BAY				
Protection Point	—0:12	—0:22	—2.6	0.0
Snag Point	+0:49	+1:07	+0.2	—0.4
Black Rock, Walrus Islands	+0:07	—0:07	—10.1	*.70
ST. LAWRENCE ISLAND				
Northeast Cape	—1:57	—2:22	*.12	*.08
Fossil River Ent.	—2:06	—2:34	*.08	*.08
Nivrakpak Lagoon Entrance	—2:33	—2:57	*.06	*.06

#No Low water falls below —2 feet.
* Multiply height of District Tide by proper ratio to correct height of High or Low Tides.

HIGH Tides NUSHAGAK District — JULY 1990

DATE Day	DOT'S GUIDE	A.M. TIME	A.M. FT.	P.M. TIME	P.M. FT.
1 SUN	●	10:52	17.8	....	....
2 Mon	●	0:16	17.6	11:34	16.6
3 Tues	•	1:11	18.1	12:15	15.6
4 Wed	•	2:02	18.5	12:54	14.7
5 Thur	•	2:49	18.9	1:36	14.0
6 Fri	•	3:34	19.1	2:19	13.5
7 Sat	•	4:20	19.3	3:01	13.1
8 SUN	•	4:58	19.5	3:44	12.8
9 Mon	•	5:36	19.6	4:33	12.7
10 Tues	•	6:11	19.7	5:26	12.7
11 Wed	•	6:45	19.6	6:19	13.1
12 Thur	•	7:18	19.5	7:17	13.7
13 Fri	•	7:54	19.3	8:17	14.8
14 Sat	•	8:28	19.0	9:15	16.0
15 SUN	●	9:06	18.7	10:17	17.4
16 Mon	●	9:49	18.3	11:16	18.8
17 Tues	●	10:35	18.0	....	....
18 Wed	●	0:15	20.0	11:26	17.7
19 Thur	●	1:13	21.0	12:18	17.4
20 Fri	●	2:12	21.7	1:21	17.1
21 Sat	●	3:09	22.2	2:21	16.8
22 SUN	●	4:05	22.3	3:26	16.5
23 Mon	●	4:58	22.3	4:31	16.2
24 Tues	●	5:48	21.9	5:38	16.1
25 Wed	●	6:37	21.3	6:45	16.1
26 Thur	●	7:24	20.5	7:50	16.3
27 Fri	●	8:09	19.5	8:52	16.7
28 Sat	●	8:52	18.5	9:51	17.1
29 SUN	●	9:34	17.4	10:48	17.5
30 Mon	•	10:13	16.5	11:40	17.8
31 Tues	•	10:54	15.7	....	....

• BIGGER THE DOT — BETTER THE FISHING

LOW Tides NUSHAGAK District — JULY 1990

DATE Day	DOT'S GUIDE	A.M. TIME	A.M. FT.	P.M. TIME	P.M. FT.
1 SUN	●	5:00	5.5	5:32	-0.1
2 Mon	●	5:57	6.6	6:15	-0.3
3 Tues	●	6:53	7.4	6:57	-0.4
4 Wed	•	7:49	8.0	7:40	-0.3
5 Thur	•	8:43	8.4	8:23	-0.2
6 Fri	•	9:33	8.5	9:05	-0.1
7 Sat	•	10:22	8.5	9:46	0.2
8 SUN	•	11:11	8.2	10:28	0.5
9 Mon	•	11:53	7.8	11:10	0.9
10 Tues	•	12:35	7.1	11:54	1.5
11 Wed	•	....	....	1:17	0.0
12 Thur	•	0:41	2.2	1:55	4.9
13 Fri	•	1:28	3.1	2:31	3.5
14 Sat	●	2:19	4.0	3:13	1.8
15 SUN	●	3:15	5.0	3:55	0.1
16 Mon	●	4:14	5.8	4:41	-1.4
17 Tues	●	5:13	6.5	5:29	-2.6
18 Wed	●	6:13	6.9	6:21	-3.6
19 Thur	●	7:13	7.1	7:15	-4.3
20 Fri	●	8:13	7.0	8:10	-4.5
21 Sat	●	9:14	6.6	9:06	-4.1
22 SUN	●	10:13	5.9	10:03	-3.3
23 Mon	●	11:09	5.0	11:00	-2.1
24 Tues	●	12:04	4.1	11:57	-0.7
25 Wed	●	....	....	12:57	3.1
26 Thur	●	0:55	0.9	1:49	2.2
27 Fri	●	1:50	2.5	2:37	1.4
28 Sat	●	2:46	3.9	3:23	0.9
29 SUN	●	3:40	5.2	4:09	0.5
30 Mon	●	4:36	6.2	4:51	0.3
31 Tues	●	5:28	7.0	5:37	0.1

ALASKA DAYLIGHT TIME

HIGH Tides NUSHAGAK District — MAY 1990

DATE Day	DOT'S GUIDE	A.M. TIME	A.M. FT.	P.M. TIME	P.M. FT.
1 Tues	●	9:35	22.9	9:31	16.2
2 Wed	●	10:28	22.1	10:38	16.3
3 Thur	●	11:21	21.1	11:43	16.5
4 Fri	●	....	....	12:10	19.9
5 Sat	●	0:50	16.9	12:58	18.6
6 SUN	●	1:52	17.3	1:43	17.2
7 Mon	●	2:53	17.9	2:26	15.9
8 Tues	●	3:47	18.4	3:08	14.7
9 Wed	•	4:36	18.8	3:47	13.8
10 Thur	•	5:20	19.1	4:29	13.0
11 Fri	•	6:00	19.4	5:07	12.5
12 Sat	•	6:42	19.5	5:43	12.2
13 SUN	•	7:17	19.6	6:25	12.1
14 Mon	•	7:55	19.7	7:07	12.2
15 Tues	•	8:31	19.7	7:53	12.4
16 Wed	•	9:07	19.7	8:45	12.8
17 Thur	•	9:42	19.6	9:39	13.5
18 Fri	•	10:21	19.4	10:39	14.5
19 Sat	•	10:58	19.0	11:40	15.9
20 SUN	•	11:39	18.6	....	....
21 Mon	●	0:42	17.5	12:21	18.1
22 Tues	●	1:42	19.2	1:07	17.6
23 Wed	●	2:41	20.8	1:58	17.1
24 Thur	●	3:40	22.2	2:54	16.7
25 Fri	●	4:39	23.2	3:54	16.4
26 Sat	●	5:36	23.8	4:55	16.1
27 SUN	●	6:32	24.0	6:01	16.0
28 Mon	●	7:25	23.9	7:07	15.8
29 Tues	●	8:18	23.4	8:14	15.8
30 Wed	●	9:11	22.6	9:22	15.9
31 Thur	●	10:00	21.6	10:29	16.2

• BIGGER THE DOT — BETTER THE FISHING

LOW Tides NUSHAGAK District — MAY 1990

DATE Day	DOT'S GUIDE	A.M. TIME	A.M. FT.	P.M. TIME	P.M. FT.
1 Tues	●	2:48	-2.4	3:57	3.8
2 Wed	●	3:47	-1.1	4:52	2.6
3 Thur	●	4:46	0.4	5:45	2.0
4 Fri	●	5:47	2.0	6:37	1.4
5 Sat	●	6:46	3.5	7:24	1.0
6 SUN	●	7:45	4.8	8:10	0.7
7 Mon	●	8:44	5.9	8:56	0.7
8 Tues	●	9:41	6.6	9:35	0.7
9 Wed	•	10:37	7.1	10:17	0.8
10 Thur	•	11:27	7.3	10:56	1.1
11 Fri	•	12:16	7.4	11:36	1.2
12 Sat	•	....	....	1:00	7.4
13 SUN	•	0:15	1.4	1:43	7.3
14 Mon	•	0:54	1.5	2:25	7.1
15 Tues	•	1:36	1.7	3:04	6.7
16 Wed	•	2:18	2.0	3:45	6.0
17 Thur	•	3:03	2.4	4:21	5.0
18 Fri	•	3:52	3.0	5:03	3.8
19 Sat	•	4:45	3.8	5:41	2.3
20 SUN	•	5:44	4.6	6:24	0.7
21 Mon	•	6:44	5.3	7:09	-1.0
22 Tues	•	7:45	5.9	7:58	-2.5
23 Wed	•	8:49	6.3	8:49	-3.7
24 Thur	•	9:51	6.3	9:41	-4.4
25 Fri	●	10:51	6.1	10:36	-4.7
26 Sat	●	11:50	5.6	11:33	-4.5
27 SUN	●	....	....	12:49	5.0
28 Mon	●	0:30	-3.8	1:47	4.2
29 Tues	●	1:29	-2.7	2:43	3.3
30 Wed	●	2:28	-1.2	3:36	2.3
31 Thur	●	3:25	0.6	4:28	1.5

ALASKA DAYLIGHT TIME

HIGH Tides NUSHAGAK District — AUGUST 1990

DATE Day	DOT'S GUIDE	A.M. TIME	A.M. FT.	P.M. TIME	P.M. FT.
1 Wed	•	0:32	18.1	11:36	15.1
2 Thur	•	1:18	18.3	12:18	14.6
3 Fri	•	2:05	18.5	1:00	14.2
4 Sat	•	2:51	18.7	1:44	14.0
5 SUN	•	3:33	18.8	2:29	13.8
6 Mon	•	4:14	18.9	3:22	13.7
7 Tues	•	4:50	18.9	4:14	13.9
8 Wed	•	5:25	18.8	5:10	14.3
9 Thur	•	6:01	18.7	6:08	15.1
10 Fri	●	6:38	18.5	7:07	16.1
11 Sat	●	7:15	18.2	8:04	17.2
12 SUN	●	7:56	18.0	9:03	18.4
13 Mon	●	8:39	17.8	10:02	19.5
14 Tues	●	9:27	17.6	11:00	20.3
15 Wed	●	10:19	17.5	11:59	20.9
16 Thur	●	11:15	17.3	....	....
17 Fri	●	0:55	21.2	12:14	17.2
18 Sat	●	1:53	21.3	1:16	17.0
19 SUN	●	2:48	21.2	2:21	18.8
20 Mon	●	3:41	21.0	3:25	16.7
21 Tues	●	4:32	20.5	4:31	16.6
22 Wed	●	5:21	19.8	5:34	16.8
23 Thur	●	6:06	19.0	6:35	17.0
24 Fri	●	6:51	18.0	7:34	17.3
25 Sat	●	7:34	17.1	8:28	17.6
26 SUN	•	8:14	16.3	9:20	17.9
27 Mon	•	8:55	15.6	10:09	18.0
28 Tues	•	9:36	15.1	10:57	18.1
29 Wed	•	10:15	14.7	11:43	18.2
30 Thur	•	10:57	14.5	....	....
31 Fri	•	0:30	18.2	11:40	14.4

• BIGGER THE DOT — BETTER THE FISHING

LOW Tides NUSHAGAK District — AUGUST 1990

DATE Day	DOT'S GUIDE	A.M. TIME	A.M. FT.	P.M. TIME	P.M. FT.
1 Wed	•	6:21	7.6	6:19	0.1
2 Thur	•	7:12	8.0	7:04	0.0
3 Fri	•	8:02	8.2	7:46	0.1
4 Sat	•	8:51	8.2	8:32	0.3
5 SUN	•	9:39	8.0	9:15	0.6
6 Mon	•	10:25	7.5	9:59	1.0
7 Tues	•	11:07	6.8	10:45	1.6
8 Wed	•	11:49	5.8	11:33	2.2
9 Thur	•	....	....	12:31	4.5
10 Fri	●	0:23	3.1	1:10	3.1
11 Sat	●	1:15	3.9	1:52	1.5
12 SUN	●	2:11	4.7	2:39	0.0
13 Mon	●	3:07	5.4	3:26	-1.4
14 Tues	●	4:04	5.9	4:15	-2.5
15 Wed	●	5:03	6.3	5:08	-3.2
16 Thur	●	6:00	6.4	6:04	-3.5
17 Fri	●	6:57	6.3	7:00	-3.4
18 Sat	●	7:58	6.0	7:58	-2.9
19 SUN	●	8:55	5.4	8:54	-2.0
20 Mon	●	9:51	4.6	9:53	-0.9
21 Tues	●	10:46	3.8	10:48	0.4
22 Wed	●	11:39	3.0	11:47	1.8
23 Thur	●	....	....	12:27	2.3
24 Fri	●	0:39	3.1	1:13	1.8
25 Sat	●	1:34	4.2	1:57	1.5
26 SUN	●	2:27	5.1	2:41	1.2
27 Mon	●	3:19	5.9	3:24	1.1
28 Tues	●	4:09	6.5	4:09	1.0
29 Wed	●	4:58	7.0	4:52	0.9
30 Thur	●	5:45	7.3	5:38	0.8
31 Fri	●	6:33	7.4	6:23	0.9

ALASKA DAYLIGHT TIME

HIGH Tides NUSHAGAK District — JUNE 1990

DATE Day	DOT'S GUIDE	A.M. TIME	A.M. FT.	P.M. TIME	P.M. FT.
1 Fri	●	10:46	20.3	11:36	16.6
2 Sat	●	11:32	19.0	....	....
3 SUN	●	0:41	17.2	12:17	17.6
4 Mon	●	1:37	17.9	12:59	16.3
5 Tues	●	2:36	18.4	1:40	15.1
6 Wed	•	3:25	18.9	2:22	14.1
7 Thur	•	4:13	19.3	3:01	13.3
8 Fri	•	4:55	19.5	3:39	12.7
9 Sat	•	5:34	19.7	4:21	12.3
10 SUN	•	6:13	19.8	5:01	12.1
11 Mon	•	6:48	19.9	5:49	12.0
12 Tues	•	7:24	19.9	6:38	12.1
13 Wed	•	7:56	19.9	7:32	12.5
14 Thur	•	8:28	19.8	8:28	13.2
15 Fri	•	9:05	19.6	9:27	14.3
16 Sat	•	9:39	19.3	10:29	15.6
17 SUN	●	10:19	18.9	11:29	17.2
18 Mon	●	11:00	18.4	....	....
19 Tues	●	0:29	18.8	11:48	17.9
20 Wed	●	1:29	20.4	12:38	17.5
21 Thur	●	2:29	21.6	1:34	17.1
22 Fri	●	3:26	22.6	2:32	16.7
23 Sat	●	4:23	23.2	3:35	16.4
24 SUN	●	5:19	23.5	4:40	16.1
25 Mon	●	6:11	23.4	5:47	15.9
26 Tues	●	7:04	23.0	6:55	15.8
27 Wed	●	7:54	22.4	8:01	15.8
28 Thur	●	8:40	21.5	9:09	16.1
29 Fri	●	9:27	20.3	10:15	16.5
30 Sat	●	10:10	19.1	11:17	17.0

• BIGGER THE DOT — BETTER THE FISHING

LOW Tides NUSHAGAK District — JUNE 1990

DATE Day	DOT'S GUIDE	A.M. TIME	A.M. FT.	P.M. TIME	P.M. FT.
1 Fri	●	4:26	2.3	5:18	0.7
2 Sat	●	5:25	4.0	6:07	0.2
3 SUN	●	6:24	5.4	6:53	-0.1
4 Mon	●	7:24	6.6	7:35	-0.2
5 Tues	●	8:21	7.3	8:18	-0.1
6 Wed	•	9:17	7.8	8:59	0.0
7 Thur	•	10:09	8.1	9:40	0.2
8 Fri	•	10:59	8.1	10:19	0.4
9 Sat	•	11:46	8.1	11:01	0.6
10 SUN	•	12:32	7.9	11:40	0.9
11 Mon	•	....	....	1:14	7.5
12 Tues	•	0:21	1.3	1:53	6.9
13 Wed	•	1:00	1.8	2:34	6.0
14 Thur	•	1:46	2.4	3:10	5.0
15 Fri	•	2:35	3.2	3:49	3.6
16 Sat	•	3:27	4.1	4:28	1.9
17 SUN	•	4:24	5.0	5:10	0.2
18 Mon	●	5:25	5.9	5:55	-1.5
19 Tues	●	6:27	6.6	6:42	-2.9
20 Wed	●	7:30	7.0	7:32	-4.1
21 Thur	●	8:31	7.1	8:27	-4.8
22 Fri	●	9:32	6.9	9:21	-5.0
23 Sat	●	10:32	6.4	10:17	-4.7
24 SUN	●	11:31	5.7	11:14	-3.9
25 Mon	●	....	....	12:30	4.8
26 Tues	●	0:12	-2.7	1:26	3.7
27 Wed	●	1:10	-1.2	2:18	2.6
28 Thur	●	2:06	0.6	3:10	1.7
29 Fri	●	3:05	2.3	3:59	0.9
30 Sat	●	4:01	4.0	4:46	0.3

ALASKA DAYLIGHT TIME

HIGH Tides NUSHAGAK District — SEPTEMBER 1990

DATE Day	DOT'S GUIDE	A.M. TIME	A.M. FT.	P.M. TIME	P.M. FT.
1 Sat	•	1:15	18.2	12:26	14.4
2 SUN	•	1:57	18.3	1:17	14.4
3 Mon	•	2:38	18.2	2:09	14.6
4 Tues	•	3:19	18.1	3:03	15.1
5 Wed	•	3:56	18.0	3:59	15.8
6 Thur	•	4:35	17.7	4:59	16.7
7 Fri	●	5:17	17.5	5:54	17.8
8 Sat	●	5:56	17.2	6:53	19.0
9 SUN	●	6:41	17.1	7:50	20.0
10 Mon	●	7:27	17.0	8:47	20.8
11 Tues	●	8:19	16.9	9:43	21.3
12 Wed	●	9:14	17.0	10:42	21.5
13 Thur	●	10:13	17.0	11:38	21.4
14 Fri	●	11:13	17.0	....	....
15 Sat	●	0:34	21.2	12:15	16.9
16 SUN	●	1:28	20.7	1:21	16.9
17 Mon	●	2:21	20.1	2:27	17.0
18 Tues	●	3:14	19.3	3:31	17.2
19 Wed	●	4:00	18.4	4:32	17.5
20 Thur	●	4:49	17.4	5:32	17.9
21 Fri	●	5:31	16.4	6:24	18.2
22 Sat	●	6:16	15.5	7:13	18.5
23 SUN	●	6:55	14.8	8:02	18.6
24 Mon	●	7:37	14.2	8:47	18.7
25 Tues	•	8:15	13.9	9:29	18.7
26 Wed	•	8:57	13.8	10:12	18.6
27 Thur	•	9:38	13.8	10:54	18.5
28 Fri	•	10:21	13.9	11:38	18.4
29 Sat	•	11:07	14.1	....	....
30 SUN	•	0:20	18.3	12:03	14.4

• BIGGER THE DOT — BETTER THE FISHING

LOW Tides NUSHAGAK District — SEPTEMBER 1990

DATE Day	DOT'S GUIDE	A.M. TIME	A.M. FT.	P.M. TIME	P.M. FT.
1 Sat	•	7:19	7.4	7:00	1.0
2 SUN	•	8:08	7.1	7:56	1.3
3 Mon	•	8:53	6.6	8:45	1.7
4 Tues	•	9:36	5.8	9:32	2.2
5 Wed	•	10:18	4.7	10:23	2.9
6 Thur	•	11:00	3.5	11:18	3.5
7 Fri	•	11:45	2.1	....	....
8 Sat	●	0:11	4.1	12:30	0.7
9 SUN	●	1:06	4.7	1:16	-0.6
10 Mon	●	2:01	5.1	2:05	-1.7
11 Tues	●	3:00	5.3	2:58	-2.4
12 Wed	●	3:55	5.5	3:54	-2.9
13 Thur	●	4:51	5.4	4:50	-2.7
14 Fri	●	5:46	5.1	5:48	-2.3
15 Sat	●	6:45	4.7	6:47	-1.5
16 SUN	●	7:41	4.1	7:46	-0.5
17 Mon	●	8:36	3.5	8:45	0.8
18 Tues	●	9:29	2.8	9:41	2.0
19 Wed	●	10:18	2.3	10:46	3.2
20 Thur	●	11:06	1.9	11:37	4.1
21 Fri	●	11:51	1.7	....	....
22 Sat	●	0:30	4.9	12:34	1.6
23 SUN	●	1:23	5.6	1:17	1.6
24 Mon	●	2:10	6.0	2:00	1.6
25 Tues	●	2:59	6.4	2:41	1.6
26 Wed	●	3:42	6.6	3:25	1.6
27 Thur	●	4:27	6.7	4:08	1.6
28 Fri	●	5:13	6.7	4:54	1.7
29 Sat	●	5:57	6.5	5:43	2.0
30 SUN	•	6:40	6.1	6:29	2.3

ALASKA DAYLIGHT TIME

KODIAK DISTRICT CORRECTION TABLE (1)

	TIME HIGH	TIME LOW	FEET HIGH	FEET LOW
KODIAK AND AFOGNAK ISLANDS				
Andrew B., Shuyak I.	[illegible]	[illegible] 48	[illegible] 8	+0 4
Perenosa Bay	+0 3[illegible]	[illegible] 4[illegible]	+2 8	+0 4
Seal Bay	[illegible]	[illegible]	[illegible]	+0 4
Tonki Bay	+0 16	+0 29	+2 6	+0 3
Marmot Is., Marmot St.	+0 22	+0 1[illegible]	+1 [illegible]	+0 1
[illegible] Bay	+0 16	+0 24	+0 4	[illegible]
Kazakof B., Marmot B.	[illegible]	[illegible]	+0 9	+0 3
Fox Bay, Whale Is.	+0 2[illegible]	+0 40	+1 5	+0 3
Kizhuyak Bay	+0 3[illegible]	+0 24	+1 1	+0 1
Kizhuyak Point	+0 04	+0 12	+0 9	+0 2
Ouzinkie, Spruce Is.	0 01	0 01	+0 5	+0 1
Spruce Is. (N. side)	+0 06	+0 11	+0 7	+0 2
Kodiak Harbor		Kodiak Schedule		
St. Paul Harbor	0 07	[illegible] 3	[illegible]	+0 1
Womens Bay	+0 04	+0 0[illegible]	+0 3	+0 1
Ugak B. (Saltery Cove)	[illegible]	0 17	0 0	0 0
Port Hobron, Sitkalidak Island	0 14	0 03	0 0	+0 2
Three Saints Bay	0 16	[illegible]	+0 1	+0 2
Jap Bay	0 13	0 06	0 0	+0 2
Sitkinak Lagoon	0 16	+0 10	0 7	+0 2
Lazy Bay, Alitak Bay	+0 02	+0 18	*1 41	*1 41
Moser B. (Trap Pt.)	+0 13	+0 32	*1 39	*1 39
Olga Bay (Cannery)	+3 48	+4 16	*0 14	*0 14
ALASKA PENINSULA				
Kanatak Lagoon, Pt. H	+0 26	+0 54	+3 3	+0 4
Lees Cabins, Wide B.	+0 26	+0 35	+3 5	+0 3
Anchorage Bay	+0 24	+0 43	+0 5	+0 4
Three Star Point	+0 32	+0 40	*0 93	*0 93
Chiachi Is. (east side)	+0 26	-0 40	*0 92	*0 92
Kupreanof Harbor, Paul Island	+0 23	+0 38	*0 92	*0 92
Fox B., Kupreanof P.	-0 22	-0 36	*0 89	*0 89
Dent Pt., Stepovak Bay	-0 21	-0 36	*0 89	*0 89
SHUMAGIN ISLANDS				
Korovin Is. (east side)	-0 26	-0 52	*0 92	*0 92
Sanborn H., Nagai Is.	-0 37	-0 37	*0 86	*0 86
Mist H., Nagai Is.	-0 35	-0 38	*0 83	*0 83
Pirate Cove, Popof Is.	-0 42	-0 43	*0 88	*0 88
Sand Point, Popof Is.	-0 30	-0 42	*0 87	*0 87
Zachary Bay, Unga Is.	-0 34	-0 49	*0 88	*0 88
Albatross A., Balboa B.	-0 32	-0 43	*0 91	*0 91
Beaver Bay	-0 37	-0 42	*0 87	*0 87
Seal Cape, Coal Bay	-0 34	-0 45	*0 84	*0 84
Ukolnoi Island	0 41	-0 40	*0 83	*0 83
Dolgoi H., Dolgoi Is.	-0 44	-0 40	*0 79	*0 79
Settlement Pt., Pav. B.	-0 43	-0 48	*0 84	*0 84
Canoe Bay, Pavlof B.	-1 36	-1 30	*0 76	*0 76
King Cove	-0 40	-0 42	*0 80	*0 80
Lenard Harbor, Cold B.	-0 46	-0 57	*0 85	*0 85
Cold Bay	-0 49	-1 03	*0 84	*0 84
Morzhovoi Bay	[illegible]	-1 43	*0 80	*0 80

*Multiply by this ratio.

KODIAK DISTRICT CORRECTION TABLE (2)

	TIME HIGH	TIME LOW	FEET HIGH	FEET LOW
ALASKA PENINSULA, Continued				
SANAK ISLANDS				
Peterson Bay	-0 29	-0 32	*0 73	*0 73
Sanak Harbor	-0 48	-0 43	*0 78	*0 78
ALEUTIAN ISLANDS				
UNIMAK ISLAND				
Dora Harbor	-0 49	-0 55	*0 77	*0 77
Ikatan Bay	-0 43	-0 45	*0 78	*0 78
BERING SEA				
ST. LAWRENCE ISLAND				
Moghoweyik River Ent.	-8 16	-9 21	*0 20	*0 20
Powooiliak Point	-5 55	-6 05	*0 28	*0 28
Maknik Lagoon Ent.	-1 31	-1 50	*0 22	*0 20
Tachikuga B., Nunivak	5 00	4 33	*0 51	*0 51
Kokechik Bay	-0 01	-0 28	*0 77	*0 77
Cape Romanzof	-0 24	-0 03	*0 80	*0 80
Black, Black River	-1 35	-1 52	*0 59	*0 59
NORTON SOUND				
Kwikluak Pass, Y.R.	-3 47	-5 34	*0 20	*0 10
Kawanak Pass Ent., Y.R.	-4 26	-5 23	*0 22	*0 20
ARCTIC OCEAN				
Kiwalik, Kotzebue Sd.	-6 20	-6 10	*0 32	*0 30
Point Barrow	0 33	0 23	*0 05	*0 05
Flaxman Island	0 53	0 25	*0 08	*0 08
Herschel Is., Mac'zie	1 32	1 34		
Tuktoyaktuk, Mac'zie	1 26	0 51		

*Multiply by this ratio.

‡Along the Arctic coast of Alaska east of Cape Lisburne the mean range is about ½ foot.

MEMORANDA

HIGH Tides KODIAK District — JULY 1990

Date	Day	Dots Guide	AM Time	AM Ft	PM Time	PM Ft
1	SUN	●	9:55	5.0	9:56	7.8
2	Mon	●	11:20	4.9	10:45	7.9
3	Tues	•	12:34p	5.1	11:35	8.1
4	Wed	•	....	...	1:27	5.4
5	Thur	•	0:24	8.4	2:09	5.8
6	Fri	•	1:06	8.7	2:47	6.1
7	Sat	•	1:48	9.0	3:19	6.4
8	SUN	•	2:25	9.1	3:51	6.7
9	Mon	•	3:02	9.2	4:23	7.0
10	Tues	•	3:38	9.0	4:55	7.3
11	Wed	•	4:16	8.7	5:27	7.5
12	Thur	•	4:55	8.2	6:01	7.8
13	Fri	•	5:41	7.5	6:38	8.0
14	Sat	●	6:33	6.7	7:16	8.3
15	SUN	●	7:39	5.9	8:05	8.5
16	Mon	●	9:01	5.2	9:03	8.7
17	Tues	●	10:40	5.1	10:11	9.0
18	Wed	●	12:07p	5.4	11:20	9.4
19	Thur	●	....	...	1:11	5.9
20	Fri	●	0:23	9.8	2:04	6.5
21	Sat	●	1:21	10.1	2:49	7.1
22	SUN	●	2:13	10.3	3:31	7.6
23	Mon	●	3:00	10.1	4:10	7.9
24	Tues	●	3:46	9.7	4:47	8.2
25	Wed	●	4:31	9.0	5:24	8.3
26	Thur	●	5:15	8.1	6:01	8.2
27	Fri	●	6:00	7.1	6:35	8.1
28	Sat	●	6:49	6.2	7:15	7.9
29	SUN	●	7:47	5.3	8:00	7.6
30	Mon	●	9:06	4.7	8:53	7.5
31	Tues	•	10:48	4.5	9:57	7.5

● BIGGER THE DOT — BETTER THE FISHING

LOW Tides KODIAK District — JULY 1990

Date	Day	Dots Guide	AM Time	AM Ft	PM Time	PM Ft
1	SUN	●	3:59	1.7	3:05	2.6
2	Mon	●	5:06	1.3	3:58	3.1
3	Tues	•	6:05	0.8	4:59	3.4
4	Wed	•	6:52	0.2	5:58	3.4
5	Thur	•	7:36	-0.3	6:47	3.3
6	Fri	•	8:12	-0.7	7:37	3.1
7	Sat	•	8:47	-1.1	8:17	2.8
8	SUN	•	9:22	-1.3	8:58	2.6
9	Mon	•	9:54	-1.4	9:38	2.4
10	Tues	•	10:27	-1.3	10:17	2.2
11	Wed	•	10:57	-1.0	11:02	1.9
12	Thur	•	11:27	-0.6	11:50	1.8
13	Fri	•	....	...	12:04	0.0
14	Sat	●	0:43	1.6	12:41	0.7
15	SUN	●	1:49	1.3	1:23	1.5
16	Mon	●	3:01	1.0	2:16	2.2
17	Tues	●	4:20	0.4	3:25	2.8
18	Wed	●	5:33	-0.3	4:44	3.1
19	Thur	●	6:39	-1.1	5:57	2.9
20	Fri	●	7:33	-1.7	7:03	2.5
21	Sat	●	8:20	-2.2	8:01	2.1
22	SUN	●	9:04	-2.3	8:54	1.6
23	Mon	●	9:45	-2.1	9:40	1.3
24	Tues	●	10:22	-1.7	10:28	1.2
25	Wed	●	10:57	-1.0	11:15	1.2
26	Thur	●	11:32	-0.2	....	...
27	Fri	●	0:01	1.3	12:04	0.6
28	Sat	●	0:53	1.5	12:35	1.5
29	SUN	●	1:52	1.6	1:10	2.3
30	Mon	●	3:01	1.7	1:55	3.0
31	Tues	•	4:21	1.5	2:54	3.6

ALASKA DAYLIGHT TIME

HIGH Tides KODIAK District — MAY 1990

Date	Day	Dots Guide	AM Time	AM Ft	PM Time	PM Ft
1	Tues	●	7:15	7.8	9:09	6.4
2	Wed	●	8:34	7.1	10:13	6.8
3	Thur	●	9:57	6.6	11:06	7.2
4	Fri	●	11:12	6.5	11:49	7.7
5	Sat	●	....	...	12:15	6.6
6	SUN	●	0:26	8.2	1:06	6.7
7	Mon	●	0:58	8.5	1:50	6.8
8	Tues	●	1:30	8.8	2:30	6.8
9	Wed	•	2:01	9.0	3:08	6.8
10	Thur	•	2:30	9.0	3:47	6.7
11	Fri	•	3:03	9.0	4:22	6.6
12	Sat	•	3:33	8.9	5:01	6.4
13	SUN	•	4:08	8.6	5:40	6.1
14	Mon	•	4:44	8.3	6:25	6.0
15	Tues	•	5:23	7.9	7:17	6.0
16	Wed	•	6:12	7.4	8:09	6.1
17	Thur	•	7:10	6.9	9:02	6.5
18	Fri	•	8:29	6.5	9:50	7.1
19	Sat	•	9:52	6.3	10:38	7.8
20	SUN	•	11:10	6.4	11:25	8.6
21	Mon	●	....	...	12:20	6.6
22	Tues	●	0:08	9.4	1:21	6.9
23	Wed	●	0:55	10.1	2:14	7.2
24	Thur	●	1:43	10.6	3:06	7.3
25	Fri	●	2:29	10.8	3:58	7.4
26	Sat	●	3:18	10.7	4:49	7.3
27	SUN	●	4:08	10.2	5:40	7.2
28	Mon	●	5:01	9.5	6:35	7.1
29	Tues	●	5:56	8.6	7:31	7.1
30	Wed	●	6:55	7.6	8:23	7.2
31	Thur	●	8:05	6.7	9:18	7.4

● BIGGER THE DOT — BETTER THE FISHING

LOW Tides KODIAK District — MAY 1990

Date	Day	Dots Guide	AM Time	AM Ft	PM Time	PM Ft
1	Tues	●	1:06	3.1	2:16	0.1
2	Wed	●	2:33	3.2	3:23	0.6
3	Thur	●	4:03	2.8	4:26	1.0
4	Fri	●	5:15	2.1	5:17	1.3
5	Sat	●	6:11	1.3	6:03	1.5
6	SUN	●	6:58	0.6	6:42	1.8
7	Mon	●	7:35	-0.1	7:17	1.9
8	Tues	●	8:11	-0.5	7:50	2.1
9	Wed	•	8:45	-0.9	8:24	2.2
10	Thur	•	9:18	-1.0	8:56	2.5
11	Fri	•	9:53	-1.0	9:28	2.7
12	Sat	•	10:31	-0.8	10:03	2.9
13	SUN	•	11:08	-0.6	10:36	3.1
14	Mon	•	11:47	-0.3	11:21	3.3
15	Tues	•	....	...	12:29	0.0
16	Wed	•	0:13	3.5	1:17	0.4
17	Thur	•	1:20	3.5	2:08	0.7
18	Fri	•	2:41	3.1	3:05	1.0
19	Sat	•	3:58	2.3	4:01	1.3
20	SUN	•	5:05	1.2	4:54	1.5
21	Mon	●	6:05	0.0	5:46	1.7
22	Tues	●	7:00	-1.1	6:39	1.8
23	Wed	●	7:48	-2.1	7:27	1.8
24	Thur	●	8:37	-2.7	8:17	1.9
25	Fri	●	9:28	-2.9	9:07	2.0
26	Sat	●	10:18	-2.7	9:57	2.2
27	SUN	●	11:07	-2.3	10:52	2.4
28	Mon	●	11:56	-1.6	11:53	2.6
29	Tues	●	....	...	12:46	-0.8
30	Wed	●	0:59	2.7	1:38	0.0
31	Thur	●	2:13	2.7	2:31	0.8

ALASKA DAYLIGHT TIME

HIGH Tides KODIAK District — AUGUST 1990

Date	Day	Dots Guide	AM Time	AM Ft	PM Time	PM Ft
1	Wed	•	12:15p	4.8	11:03	7.7
2	Thur	•	1:08p	5.2	11:59	8.1
3	Fri	•	....	...	1:47	5.7
4	Sat	•	0:47	8.5	2:19	6.3
5	SUN	•	1:29	8.9	2:49	6.8
6	Mon	•	2:09	9.1	3:19	7.3
7	Tues	•	2:48	9.2	3:47	7.7
8	Wed	•	3:26	9.1	4:15	8.1
9	Thur	•	4:04	8.8	4:45	8.5
10	Fri	•	4:46	8.2	5:16	8.7
11	Sat	●	5:31	7.4	5:53	8.8
12	SUN	●	6:24	6.5	6:35	8.8
13	Mon	●	7:30	5.6	7:28	8.7
14	Tues	●	8:58	5.0	8:37	8.5
15	Wed	●	10:48	5.0	9:55	8.5
16	Thur	●	12:07p	5.5	11:15	8.8
17	Fri	●	....	...	1:05	6.2
18	Sat	●	0:21	9.2	1:48	6.9
19	SUN	●	1:16	9.5	2:27	7.5
20	Mon	●	2:06	9.6	3:02	8.1
21	Tues	●	2:50	9.5	3:36	8.5
22	Wed	●	3:32	9.1	4:06	8.7
23	Thur	●	4:12	8.5	4:38	8.7
24	Fri	●	4:53	7.7	5:08	8.5
25	Sat	●	5:32	6.9	5:40	8.3
26	SUN	•	6:15	6.1	6:12	7.9
27	Mon	•	7:08	5.3	6:54	7.5
28	Tues	•	8:21	4.6	7:47	7.2
29	Wed	•	10.17	4.5	9:05	7.0
30	Thur	•	11:43	4.8	10:27	7.2
31	Fri	•	12:36p	5.4	11:33	7.6

● BIGGER THE DOT — BETTER THE FISHING

LOW Tides KODIAK District — AUGUST 1990

Date	Day	Dots Guide	AM Time	AM Ft	PM Time	PM Ft
1	Wed	•	5:33	1.1	4:17	3.8
2	Thur	•	6:29	0.6	5:33	3.6
3	Fri	•	7:13	0.0	6:31	3.3
4	Sat	•	7:50	-0.5	7:21	2.8
5	SUN	•	8:23	-0.9	8:02	2.3
6	Mon	•	8:55	-1.2	8:42	1.8
7	Tues	•	9:23	-1.3	9:21	1.4
8	Wed	•	9:53	-1.1	10:02	0.9
9	Thur	•	10:25	-0.8	10:43	0.7
10	Fri	•	10:55	-0.2	11:29	0.5
11	Sat	●	11:30	0.5	....	...
12	SUN	●	0:24	0.4	12:06	1.3
13	Mon	●	1:26	0.5	12:49	2.1
14	Tues	●	2:39	0.6	1:47	2.8
15	Wed	●	4:08	0.3	3:09	3.3
16	Thur	●	5:28	-0.2	4:43	3.3
17	Fri	●	6:31	-0.7	6:02	2.8
18	Sat	●	7:21	-1.2	7:05	2.1
19	SUN	●	8:03	-1.5	7:57	1.4
20	Mon	●	8:42	-1.5	8:44	0.9
21	Tues	●	9:16	-1.3	9:26	0.5
22	Wed	●	9:49	-0.8	10:08	0.3
23	Thur	●	10:20	-0.2	10:47	0.3
24	Fri	●	10:48	0.5	11:27	0.5
25	Sat	●	11:17	1.3	....	...
26	SUN	•	0:11	0.8	11:45a	2.0
27	Mon	•	1:02	1.2	12:17	2.7
28	Tues	•	2:05	1.6	12:57	3.3
29	Wed	•	3:25	1.7	2:03	3.8
30	Thur	•	4:51	1.4	3:46	4.0
31	Fri	•	5:51	0.9	5:14	3.6

ALASKA DAYLIGHT TIME

HIGH Tides KODIAK District — JUNE 1990

Date	Day	Dots Guide	AM Time	AM Ft	PM Time	PM Ft
1	Fri	●	9:20	6.0	10:09	7.6
2	Sat	●	10:37	5.6	10:55	7.9
3	SUN	●	11:50	5.6	11:37	8.2
4	Mon	●	....	...	12:47	5.7
5	Tues	●	0:15	8.4	1:37	5.9
6	Wed	•	0:52	8.7	2:20	6.1
7	Thur	•	1:29	8.9	3:00	6.3
8	Fri	•	2:06	9.0	3:38	6.4
9	Sat	•	2:42	9.1	4:12	6.5
10	SUN	•	3:15	9.0	4:49	6.5
11	Mon	•	3:53	8.8	5:27	6.6
12	Tues	•	4:28	8.5	6:03	6.7
13	Wed	•	5:07	8.1	6:41	6.8
14	Thur	•	5:56	7.5	7:20	7.1
15	Fri	•	6:51	6.9	8:05	7.5
16	Sat	•	8:00	6.2	8:54	7.9
17	SUN	●	9:22	5.7	9:47	8.4
18	Mon	●	10:50	5.6	10:40	9.0
19	Tues	●	12:07p	5.8	11:36	9.6
20	Wed	●	....	...	1:13	6.2
21	Thur	●	0:31	10.1	2:12	6.6
22	Fri	●	1:27	10.5	3:01	7.0
23	Sat	●	2:19	10.6	3:50	7.3
24	SUN	●	3:11	10.5	4:35	7.5
25	Mon	●	3:57	10.0	5:21	7.6
26	Tues	●	4:47	9.3	6:03	7.7
27	Wed	●	5:37	8.4	6:48	7.8
28	Thur	●	6:30	7.4	7:33	7.7
29	Fri	●	7:26	6.4	8:16	7.7
30	Sat	●	8:34	5.5	9:05	7.7

● BIGGER THE DOT — BETTER THE FISHING

LOW Tides KODIAK District — JUNE 1990

Date	Day	Dots Guide	AM Time	AM Ft	PM Time	PM Ft
1	Fri	●	3:31	2.4	3:23	1.5
2	Sat	●	4:43	1.8	4:14	2.1
3	SUN	●	5:43	1.2	5:03	2.5
4	Mon	●	6:31	0.5	5:52	2.7
5	Tues	●	7:13	-0.1	6:34	2.9
6	Wed	•	7:52	-0.5	7:16	2.9
7	Thur	•	8:30	-0.9	7:55	2.9
8	Fri	•	9:05	-1.1	8:30	2.9
9	Sat	•	9:40	-1.2	9:12	2.9
10	SUN	•	10:15	-1.2	9:48	2.9
11	Mon	•	10:51	-1.1	10:30	3.0
12	Tues	•	11:26	-0.8	11:13	3.0
13	Wed	•	....	...	12:02	-0.6
14	Thur	•	0:06	2.9	12:41	0.0
15	Fri	•	1:07	2.7	1:23	0.5
16	Sat	•	2:13	2.3	2:09	1.1
17	SUN	●	3:27	1.6	3:03	1.7
18	Mon	●	4:40	0.7	4:01	2.2
19	Tues	●	5:45	-0.3	5:06	2.5
20	Wed	●	6:44	-1.3	6:07	2.5
21	Thur	●	7:40	-2.1	7:08	2.4
22	Fri	●	8:31	-2.6	8:04	2.2
23	Sat	●	9:20	-2.7	8:57	2.1
24	SUN	●	10:06	-2.6	9:50	2.0
25	Mon	●	10:49	-2.2	10:44	1.9
26	Tues	●	11:32	-1.5	11:39	2.0
27	Wed	●	....	...	12:12	-0.7
28	Thur	●	0:35	2.1	12:53	0.2
29	Fri	●	1:39	2.1	1:31	1.1
30	Sat	●	2:45	2.0	2:13	1.9

ALASKA DAYLIGHT TIME

HIGH Tides KODIAK District — SEPTEMBER 1990

Date	Day	Dots Guide	AM Time	AM Ft	PM Time	PM Ft
1	Sat	•	....	...	1:09	6.0
2	SUN	•	0:23	8.1	1:38	6.7
3	Mon	•	1:08	8.6	2:05	7.4
4	Tues	•	1:50	8.9	2:33	8.0
5	Wed	•	2:31	9.0	3:02	8.6
6	Thur	•	3:10	8.9	3:33	9.1
7	Fri	●	3:52	8.5	4:04	9.4
8	Sat	●	4:35	8.0	4:39	9.5
9	SUN	●	5:24	7.2	5:18	9.4
10	Mon	●	6:20	6.3	6:04	9.0
11	Tues	●	7:31	5.5	7:04	8.6
12	Wed	●	9:06	5.1	8:21	8.1
13	Thur	●	10:45	5.4	9:53	8.0
14	Fri	●	11:54	6.0	11:13	8.2
15	Sat	●	....	...	12:44	6.8
16	SUN	●	0:18	8.5	1:19	7.5
17	Mon	●	1:11	8.7	1:54	8.1
18	Tues	●	1:57	8.8	2:26	8.6
19	Wed	●	2:38	8.6	2:57	8.9
20	Thur	●	3:18	8.3	3:26	9.0
21	Fri	●	3:54	7.9	3:54	9.0
22	Sat	●	4:33	7.3	4:20	8.7
23	SUN	•	5:10	6.7	4:51	8.4
24	Mon	•	5:52	6.0	5:24	8.0
25	Tues	•	6:41	5.3	6:01	7.5
26	Wed	•	7:52	4.9	6:54	7.1
27	Thur	•	9:28	4.8	8:12	6.7
28	Fri	•	10:56	5.1	9:41	6.7
29	Sat	•	11:43	5.7	10:57	7.0
30	SUN	•	12:18p	6.5	11:54	7.5

● BIGGER THE DOT — BETTER THE FISHING

LOW Tides KODIAK District — SEPTEMBER 1990

Date	Day	Dots Guide	AM Time	AM Ft	PM Time	PM Ft
1	Sat	•	6:37	0.3	6:14	3.0
2	SUN	•	7:13	-0.2	7:00	2.3
3	Mon	•	7:45	-0.5	7:42	1.5
4	Tues	•	8:17	-0.7	8:22	0.7
5	Wed	•	8:47	-0.7	9:01	0.0
6	Thur	•	9:19	-0.5	9:42	-0.5
7	Fri	●	9:51	-0.1	10:26	-0.8
8	Sat	●	10:23	0.5	11:13	-0.8
9	SUN	●	11:01	1.2	....	...
10	Mon	●	0:05	-0.5	11:40a	2.0
11	Tues	●	1:07	-0.1	12:29	2.7
12	Wed	●	2:24	0.3	1:41	3.3
13	Thur	●	3:53	0.3	3:24	3.6
14	Fri	●	5:12	0.1	4:58	3.1
15	Sat	●	6:11	-0.2	6:10	2.3
16	SUN	●	6:58	-0.5	7:04	1.4
17	Mon	●	7:37	-0.5	7:50	0.6
18	Tues	●	8:12	-0.4	8:30	0.0
19	Wed	●	8:43	-0.1	9:07	-0.3
20	Thur	●	9:12	0.3	9:42	-0.5
21	Fri	●	9:41	0.8	10:18	-0.4
22	Sat	●	10:09	1.4	10:55	-0.2
23	SUN	•	10:38	2.0	11:34	0.2
24	Mon	•	11:06	2.6	....	...
25	Tues	•	0:20	0.7	11:35a	3.1
26	Wed	•	1:15	1.2	12:24	3.6
27	Thur	•	2:28	1.5	1:34	4.0
28	Fri	•	3:50	1.5	3:22	4.0
29	Sat	•	4:56	1.2	4:50	3.5
30	SUN	•	5:45	0.8	5:50	2.6

ALASKA DAYLIGHT TIME

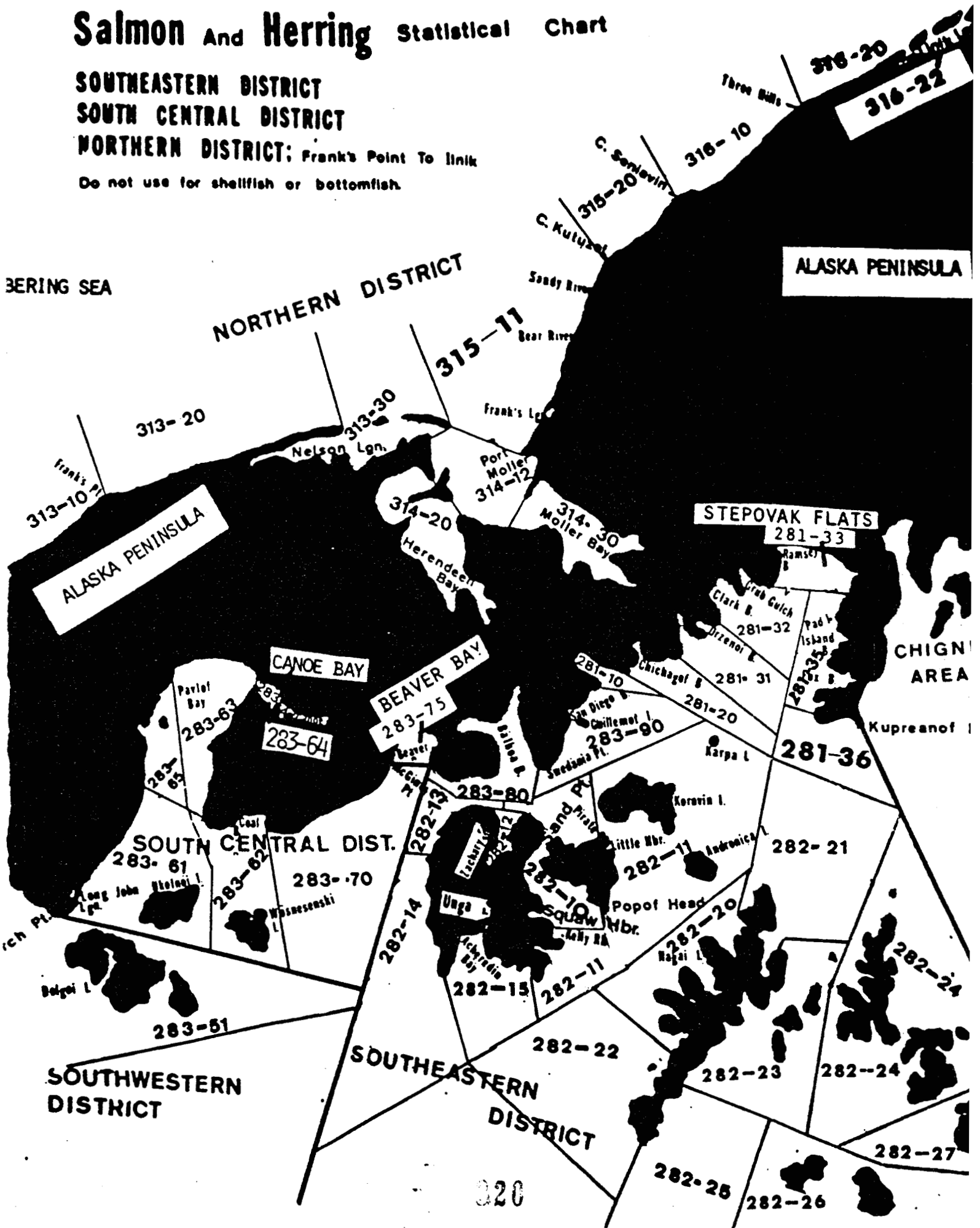
ALASKA PENINSULA AREA

ALASKA DEPARTMENT OF FISH AND GAME
APRIL 1990

Salmon And Herring Statistical Chart

SOUTHEASTERN DISTRICT
SOUTH CENTRAL DISTRICT
NORTHERN DISTRICT: Frank's Point To Iinik

Do not use for shellfish or bottomfish.



ALASKA PENINSULA AREA

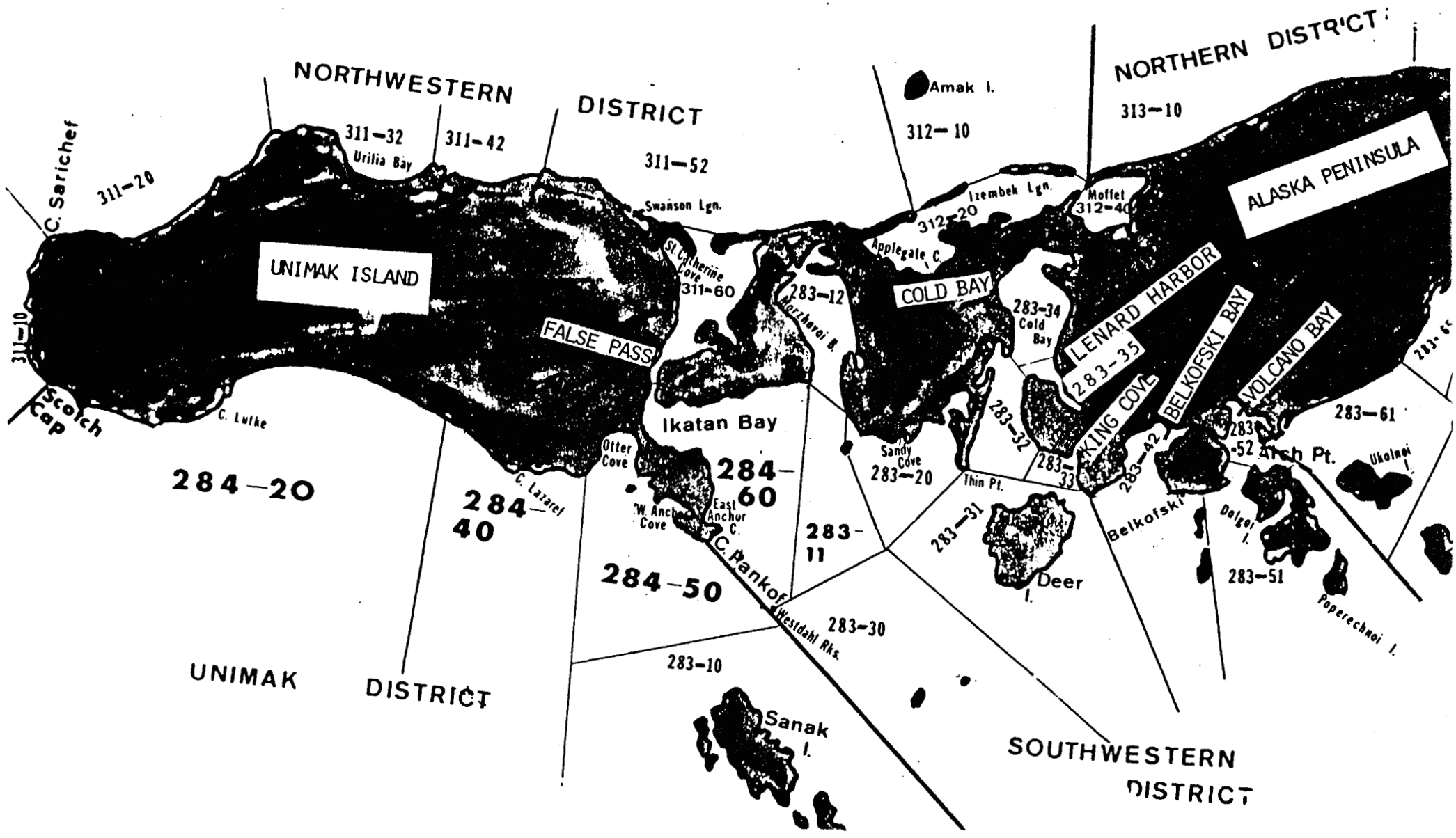
Salmon And Herring Statistical Chart

ALASKA DEPARTMENT OF FISH AND GAME
APRIL 1986

NORTWESTERN, UNIMAK, And SOUTHWESTERN DISTRICTS

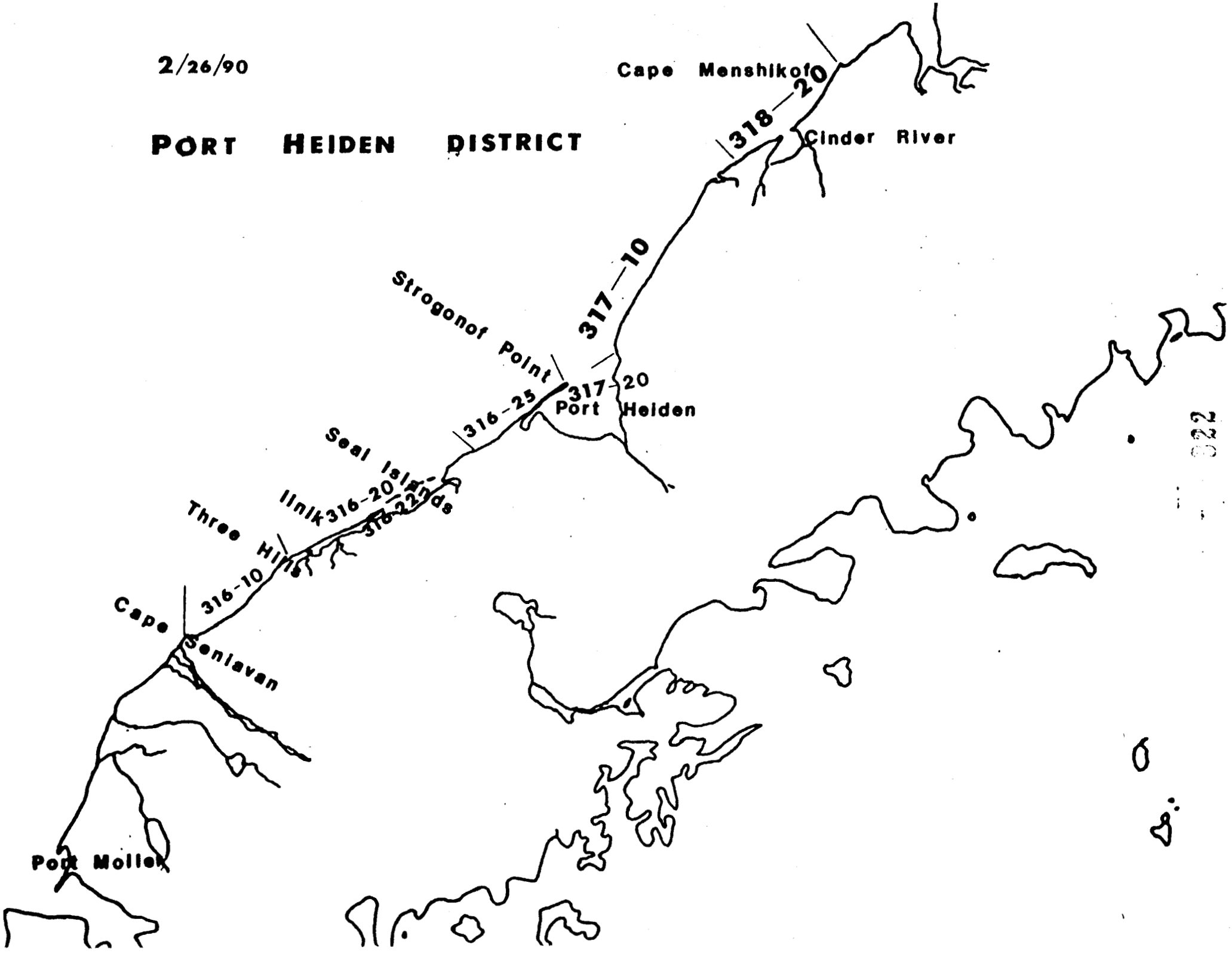
BERING SEA

Do not use for shellfish or bottomfish.



2/26/90

PORT HEIDEN DISTRICT



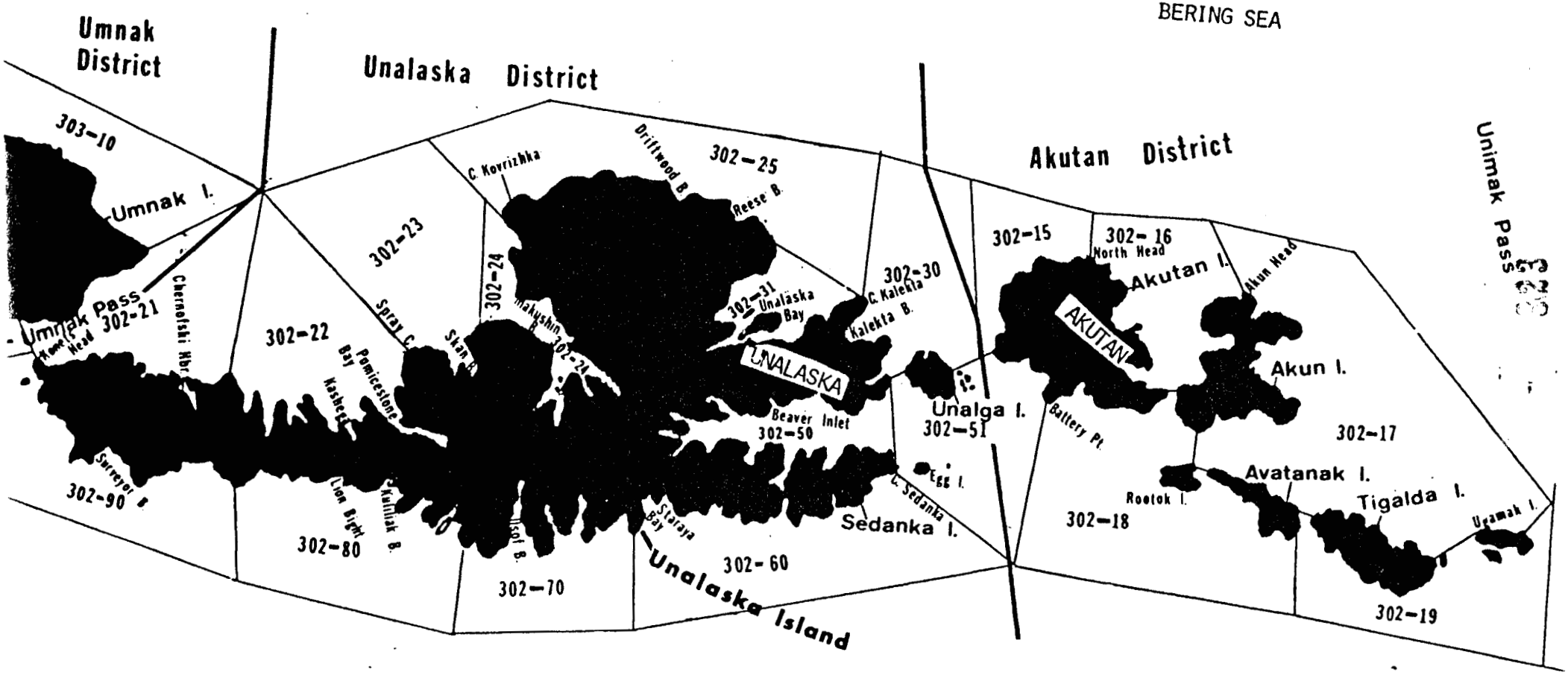
022

ALEUTIAN ISLANDS AREA

UNALASKA AND AKUTAN DISTRICTS

Statistical Chart For SALMON And HERRING

Do not use for shellfish or bottomfish.



ALASKA DEPARTMENT OF FISH AND GAME
APRIL 1979

CALENDAR WEEKS TO BE USED FOR CATCH STATISTICS

STAT WEEK	YEAR/DATE 1987	YEAR/DATE 1988	YEAR/DATE 1989	YEAR/DATE 1990	YEAR/DATE 1991	YEAR/DATE 1992	YEAR/DATE 1993	YEAR/DATE 1994	YEAR/DATE 1995
1	0101 - 0103	0101 - 0102	0101 - 0107	0101 - 0106	0101 - 0105	0101 - 0104	0101 - 0102	0101 - 0101	0101 - 0107
2	0104 - 0110	0103 - 0109	0108 - 0114	0107 - 0113	0106 - 0112	0105 - 0111	0103 - 0109	0102 - 0108	0108 - 0114
3	0111 - 0117	0110 - 0116	0115 - 0121	0114 - 0120	0113 - 0119	0112 - 0118	0110 - 0116	0109 - 0115	0115 - 0121
4	0118 - 0124	0117 - 0123	0122 - 0128	0121 - 0127	0120 - 0126	0119 - 0125	0117 - 0123	0116 - 0122	0122 - 0128
5	0125 - 0131	0124 - 0130	0129 - 0204	0128 - 0203	0127 - 0202	0126 - 0201	0124 - 0130	0123 - 0129	0129 - 0204
6	0201 - 0207	0131 - 0206	0205 - 0211	0204 - 0210	0203 - 0209	0202 - 0208	0131 - 0206	0130 - 0205	0205 - 0211
7	0208 - 0214	0207 - 0213	0212 - 0218	0211 - 0217	0210 - 0216	0209 - 0215	0207 - 0213	0206 - 0212	0212 - 0218
8	0215 - 0221	0214 - 0220	0219 - 0225	0218 - 0224	0217 - 0223	0216 - 0222	0214 - 0220	0213 - 0219	0219 - 0225
9	0222 - 0228	0221 - 0227	0226 - 0304	0225 - 0303	0224 - 0302	0223 - 0229	0221 - 0227	0220 - 0226	0226 - 0304
10	0301 - 0307	0228 - 0305	0305 - 0311	0304 - 0310	0303 - 0309	0301 - 0307	0228 - 0306	0227 - 0305	0305 - 0311
11	0308 - 0314	0306 - 0312	0312 - 0318	0311 - 0317	0310 - 0316	0308 - 0314	0307 - 0313	0306 - 0312	0312 - 0318
12	0315 - 0321	0313 - 0319	0319 - 0325	0318 - 0324	0317 - 0323	0315 - 0321	0314 - 0320	0313 - 0319	0319 - 0325
13	0322 - 0328	0320 - 0326	0326 - 0401	0325 - 0331	0324 - 0330	0322 - 0328	0321 - 0327	0320 - 0326	0326 - 0401
14	0329 - 0404	0327 - 0402	0402 - 0408	0401 - 0407	0331 - 0406	0329 - 0404	0328 - 0403	0327 - 0402	0402 - 0408
15	0405 - 0411	0403 - 0409	0409 - 0415	0408 - 0414	0407 - 0413	0405 - 0411	0404 - 0410	0403 - 0409	0409 - 0415
16	0412 - 0418	0410 - 0416	0416 - 0422	0415 - 0421	0414 - 0420	0412 - 0418	0411 - 0417	0410 - 0416	0416 - 0422
17	0419 - 0425	0417 - 0423	0423 - 0429	0422 - 0428	0421 - 0427	0419 - 0425	0418 - 0424	0417 - 0423	0423 - 0429
18	0426 - 0502	0424 - 0430	0430 - 0506	0429 - 0505	0428 - 0504	0426 - 0502	0425 - 0501	0424 - 0430	0430 - 0506
19	0503 - 0509	0501 - 0507	0507 - 0513	0506 - 0512	0505 - 0511	0503 - 0509	0502 - 0508	0501 - 0507	0507 - 0513
20	0510 - 0516	0508 - 0514	0514 - 0520	0513 - 0519	0512 - 0518	0510 - 0516	0509 - 0515	0508 - 0514	0514 - 0520
21	0517 - 0523	0515 - 0521	0521 - 0527	0520 - 0526	0519 - 0525	0517 - 0523	0516 - 0522	0515 - 0521	0521 - 0527
22	0524 - 0530	0522 - 0528	0528 - 0603	0527 - 0602	0526 - 0601	0524 - 0530	0523 - 0529	0522 - 0528	0528 - 0603
23	0531 - 0606	0529 - 0604	0604 - 0610	0603 - 0609	0602 - 0608	0531 - 0606	0530 - 0605	0529 - 0604	0604 - 0610
24	0607 - 0613	0605 - 0611	0611 - 0617	0610 - 0616	0609 - 0615	0607 - 0613	0606 - 0612	0605 - 0611	0611 - 0617
25	0614 - 0620	0612 - 0618	0618 - 0624	0617 - 0623	0616 - 0622	0614 - 0620	0613 - 0619	0612 - 0618	0618 - 0624
26	0621 - 0627	0619 - 0625	0625 - 0701	0624 - 0630	0623 - 0629	0621 - 0627	0620 - 0626	0619 - 0625	0625 - 0701
27	0628 - 0704	0626 - 0702	0702 - 0708	0701 - 0707	0630 - 0706	0628 - 0704	0627 - 0703	0626 - 0702	0702 - 0708
28	0705 - 0711	0703 - 0709	0709 - 0715	0708 - 0714	0707 - 0713	0705 - 0711	0704 - 0710	0703 - 0709	0709 - 0715
29	0712 - 0718	0710 - 0716	0716 - 0722	0715 - 0721	0714 - 0720	0712 - 0718	0711 - 0717	0710 - 0716	0716 - 0722
30	0719 - 0725	0717 - 0723	0723 - 0729	0722 - 0728	0721 - 0727	0719 - 0725	0718 - 0724	0717 - 0723	0723 - 0729
31	0726 - 0801	0724 - 0730	0730 - 0805	0729 - 0804	0728 - 0803	0726 - 0801	0725 - 0731	0724 - 0730	0730 - 0805
32	0802 - 0808	0731 - 0806	0806 - 0812	0805 - 0811	0804 - 0810	0802 - 0808	0801 - 0807	0731 - 0806	0806 - 0812
33	0809 - 0815	0807 - 0813	0813 - 0819	0812 - 0818	0811 - 0817	0809 - 0815	0808 - 0814	0807 - 0813	0813 - 0819
34	0816 - 0822	0814 - 0820	0820 - 0826	0819 - 0825	0818 - 0824	0816 - 0822	0815 - 0821	0814 - 0820	0820 - 0826
35	0823 - 0829	0821 - 0827	0827 - 0902	0826 - 0901	0825 - 0831	0823 - 0829	0822 - 0828	0821 - 0827	0827 - 0902
36	0830 - 0905	0828 - 0903	0903 - 0909	0902 - 0908	0901 - 0907	0830 - 0905	0829 - 0904	0828 - 0903	0903 - 0909
37	0906 - 0912	0904 - 0910	0910 - 0916	0909 - 0915	0908 - 0914	0906 - 0912	0905 - 0911	0904 - 0910	0910 - 0916
38	0913 - 0919	0911 - 0917	0917 - 0923	0916 - 0922	0915 - 0921	0913 - 0919	0912 - 0918	0911 - 0917	0917 - 0923
39	0920 - 0926	0918 - 0924	0924 - 0930	0923 - 0929	0922 - 0928	0920 - 0926	0919 - 0925	0918 - 0924	0924 - 0930
40	0927 - 1003	0925 - 1001	1001 - 1007	0930 - 1006	0929 - 1005	0927 - 1003	0926 - 1002	0925 - 1001	1001 - 1007
41	1004 - 1010	1002 - 1008	1008 - 1014	1007 - 1013	1006 - 1012	1004 - 1010	1003 - 1009	1002 - 1008	1008 - 1014
42	1011 - 1017	1009 - 1015	1015 - 1021	1014 - 1020	1013 - 1019	1011 - 1017	1010 - 1016	1009 - 1015	1015 - 1021
43	1018 - 1024	1016 - 1022	1022 - 1028	1021 - 1027	1020 - 1026	1018 - 1024	1017 - 1023	1016 - 1022	1022 - 1028
44	1025 - 1031	1023 - 1029	1029 - 1104	1028 - 1103	1027 - 1102	1025 - 1031	1024 - 1030	1023 - 1029	1029 - 1104
45	1101 - 1107	1030 - 1105	1105 - 1111	1104 - 1110	1103 - 1109	1101 - 1107	1031 - 1106	1030 - 1105	1105 - 1111
46	1108 - 1114	1106 - 1112	1112 - 1118	1111 - 1117	1110 - 1116	1108 - 1114	1107 - 1113	1106 - 1112	1112 - 1118
47	1115 - 1121	1113 - 1119	1119 - 1125	1118 - 1124	1117 - 1123	1115 - 1121	1114 - 1120	1113 - 1119	1119 - 1125
48	1122 - 1128	1120 - 1126	1126 - 1202	1125 - 1201	1124 - 1130	1122 - 1128	1121 - 1127	1120 - 1126	1126 - 1202
49	1129 - 1205	1127 - 1203	1203 - 1209	1202 - 1208	1201 - 1207	1129 - 1205	1128 - 1204	1127 - 1203	1203 - 1209
50	1206 - 1212	1204 - 1210	1210 - 1216	1209 - 1215	1208 - 1214	1206 - 1212	1205 - 1211	1204 - 1210	1210 - 1216
51	1213 - 1219	1211 - 1217	1217 - 1223	1216 - 1222	1215 - 1221	1213 - 1219	1212 - 1218	1211 - 1217	1217 - 1223
52	1220 - 1226	1218 - 1224	1224 - 1230	1223 - 1229	1222 - 1228	1220 - 1226	1219 - 1225	1218 - 1224	1224 - 1230
53	1227 - 1231	1225 - 1231	1231 - 1231	1230 - 1231	1229 - 1231	1227 - 1231	1226 - 1231	1225 - 1231	1231 - 1231

Table . PERMANENT SALMON WEEKS

Due to a change in statistical weeks from year to year, beginning with the 1990 season, salmon catches will be kept in seven day periods which will be called permanent salmon weeks and will remain the same each season. The permanent salmon weeks are the same as the 1987 statistical weeks.

Week	Duration
A	April 26-May 2
B	May 3-9
C	May 10-16
D	May 17-23
E	May 24-30
F	May 31-June 6
G	June 7-13
H	June 14-20
I	June 21-27
J	June 28-July 4
K	July 5-11
L	July 12-18
M	July 19-25
N	July 26-August 1
O	August 2-8
P	August 9-15
Q	August 16-22
R	August 23-29
S	August 30-September 5
T	September 6-12
U	September 13-19
V	September 20-26
W	September 27-October 3
X	October 4-10

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