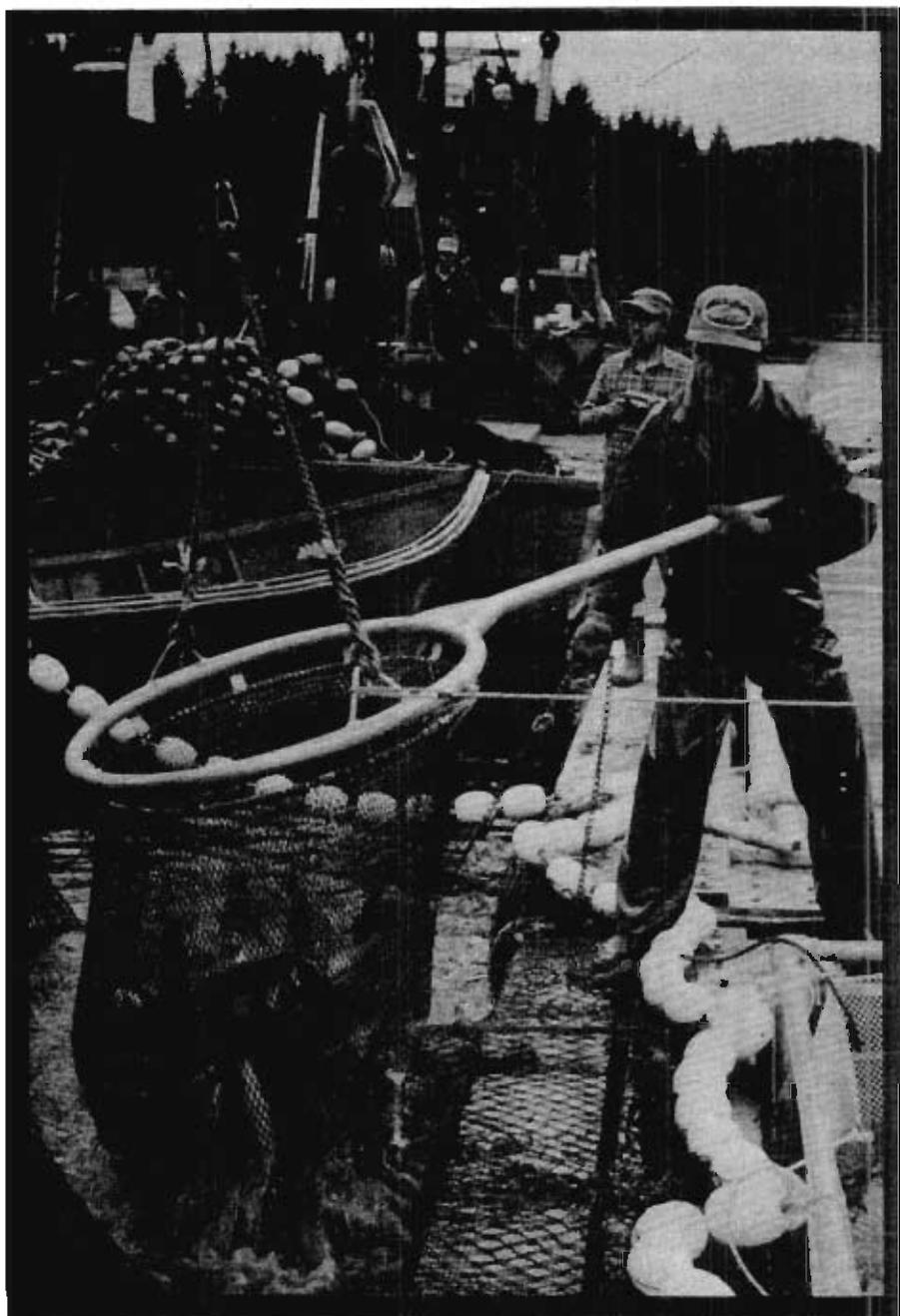


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# Lower Cook Inlet ~ ANNUAL MANAGEMENT REPORT

## Salmon 1981 ~



ALASKA DEPARTMENT OF FISH AND GAME  
Division of Commercial Fisheries  
P.O. Box 234  
Homer, Alaska 99603



ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF COMMERCIAL FISHERIES

ANNUAL  
FINFISH MANAGEMENT REPORT  
- 1981 -  
LOWER COOK INLET

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January, 1982

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## PREFACE

The 1981 Lower Cook Inlet Annual Management Report is the first annual report written since the Cook Inlet area was separated into Upper and Lower Inlet management areas in 1974. A totally new format has been designed and the shellfish sections are now being reported in a separate shellfish Annual Report. The basic objective in producing this document is to provide the Department, public and future management biologists with a better understanding of the Lower Cook Inlet salmon management program.

The extensive reorganization of this report represents our efforts to update and standardize all data available concerning the Lower Inlet salmon fishery. The extensive set of tables presents information previously not published or that were contained in several reports. The fishery statistics contained in this report supercede all information contained in reports prior to 1975 and an effort has been made to standardize the data with data contained in the Cook Inlet Stock Status Report by Ken Middleton, 1981. All catch data for the 1980 and 1981 seasons are preliminary at the time of this writing.

This report contains no confidential information and may be distributed to the public if desired. Corrections or comments on the contents of this report should be directed to the area office in Homer.

Thomas R. Schroeder, Editor  
Area Management Biologist  
Lower Cook Inlet

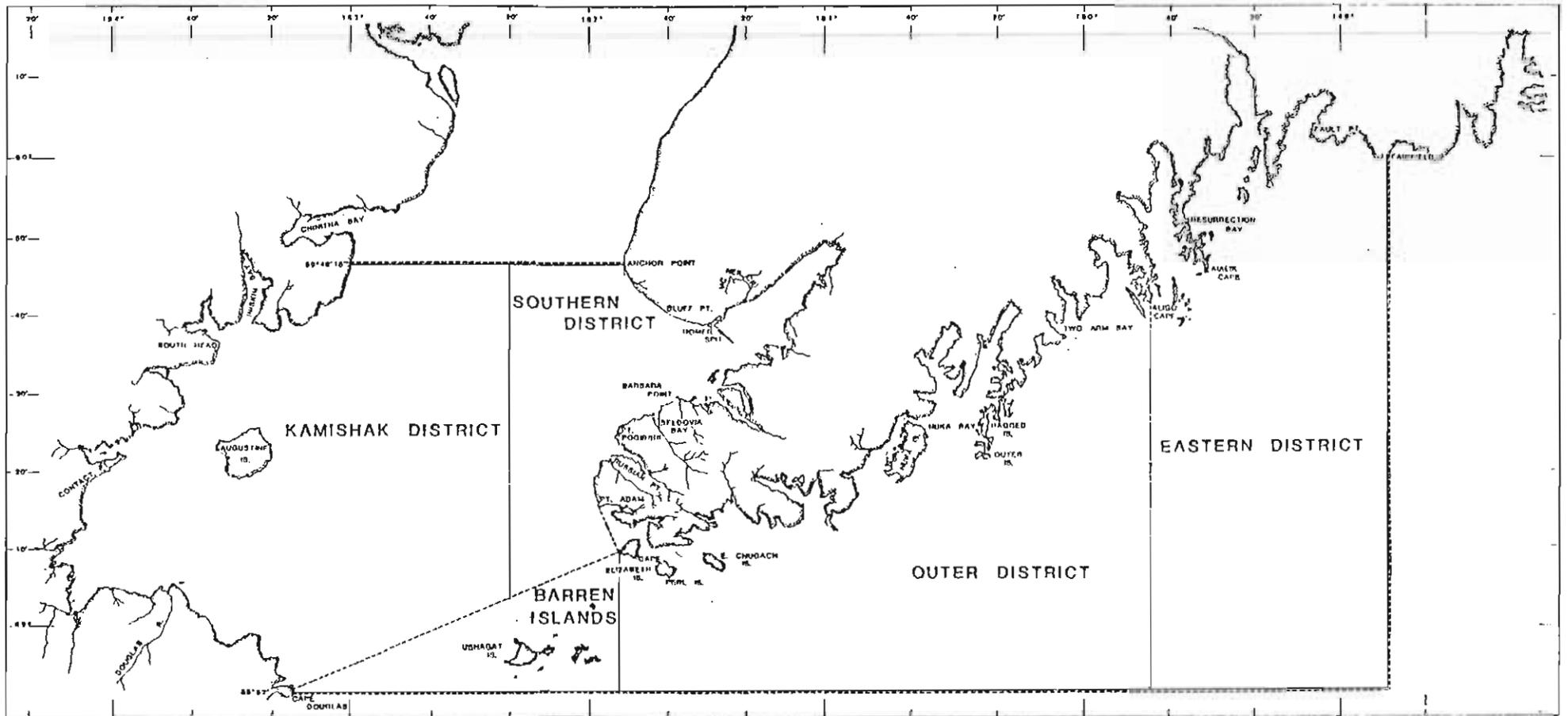


Figure 1. Lower Cook Inlet Management Area.

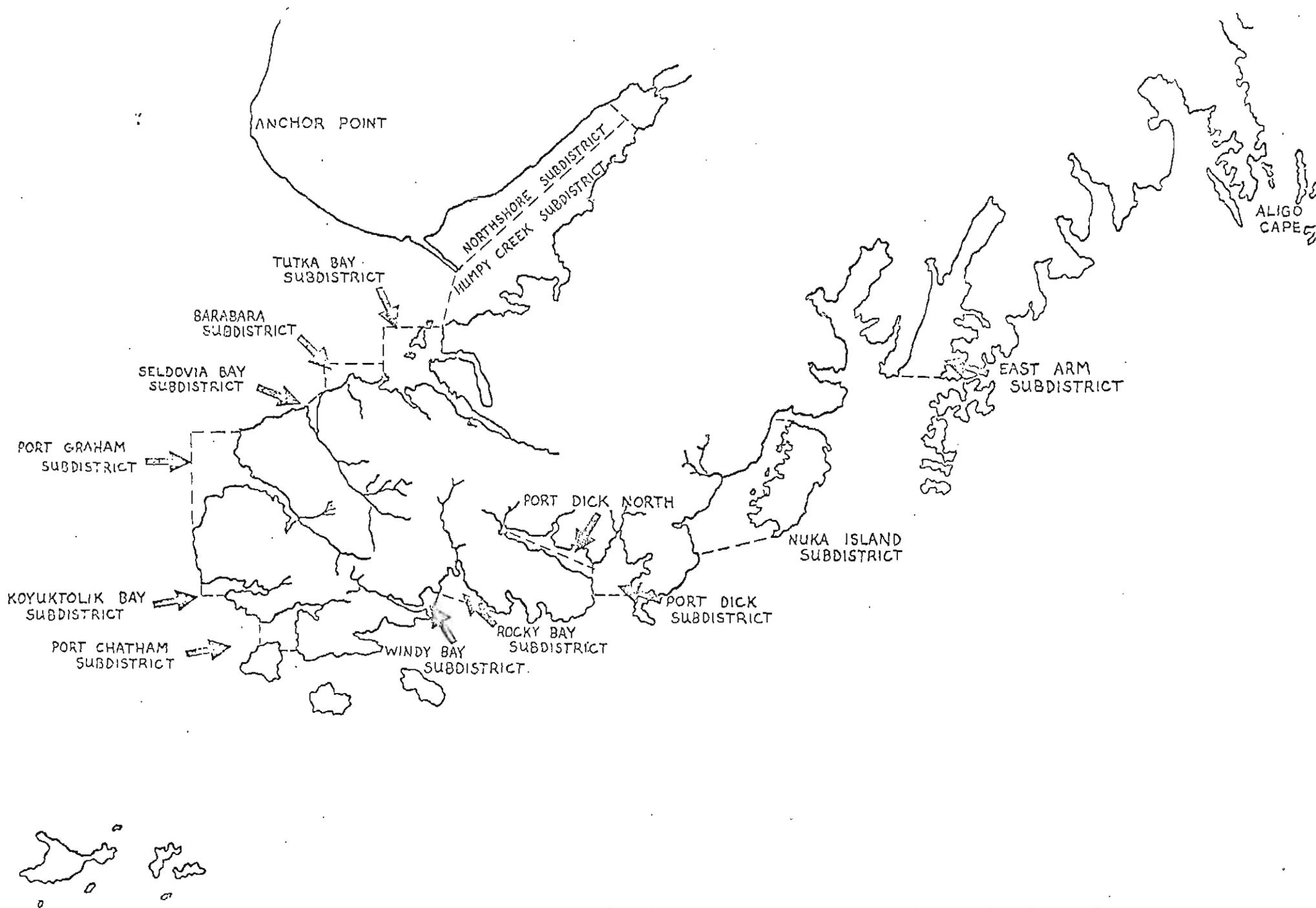


Figure 2. Salmon fishing subdistricts in the Southern and Outer districts of Cook Inlet.

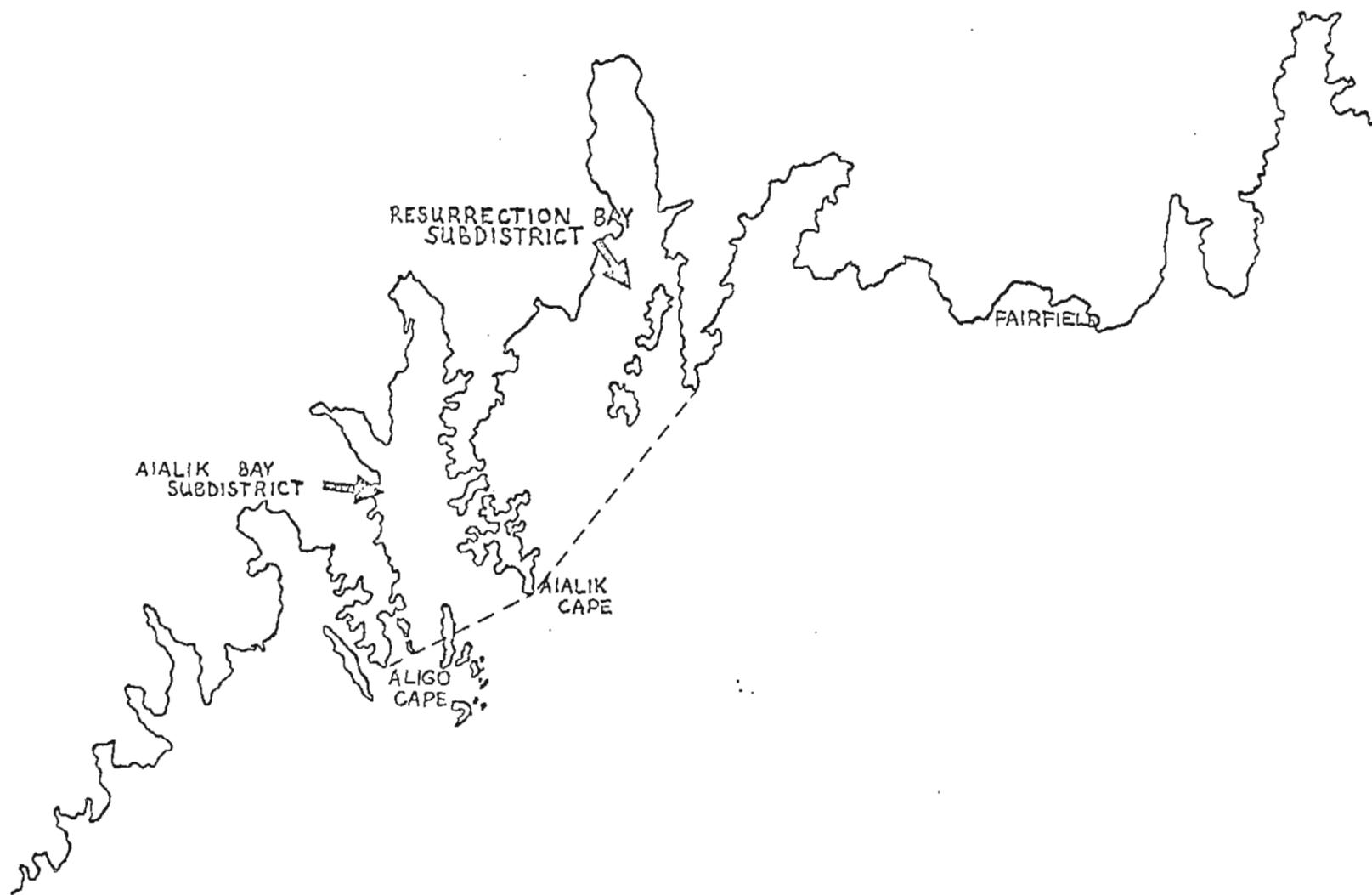


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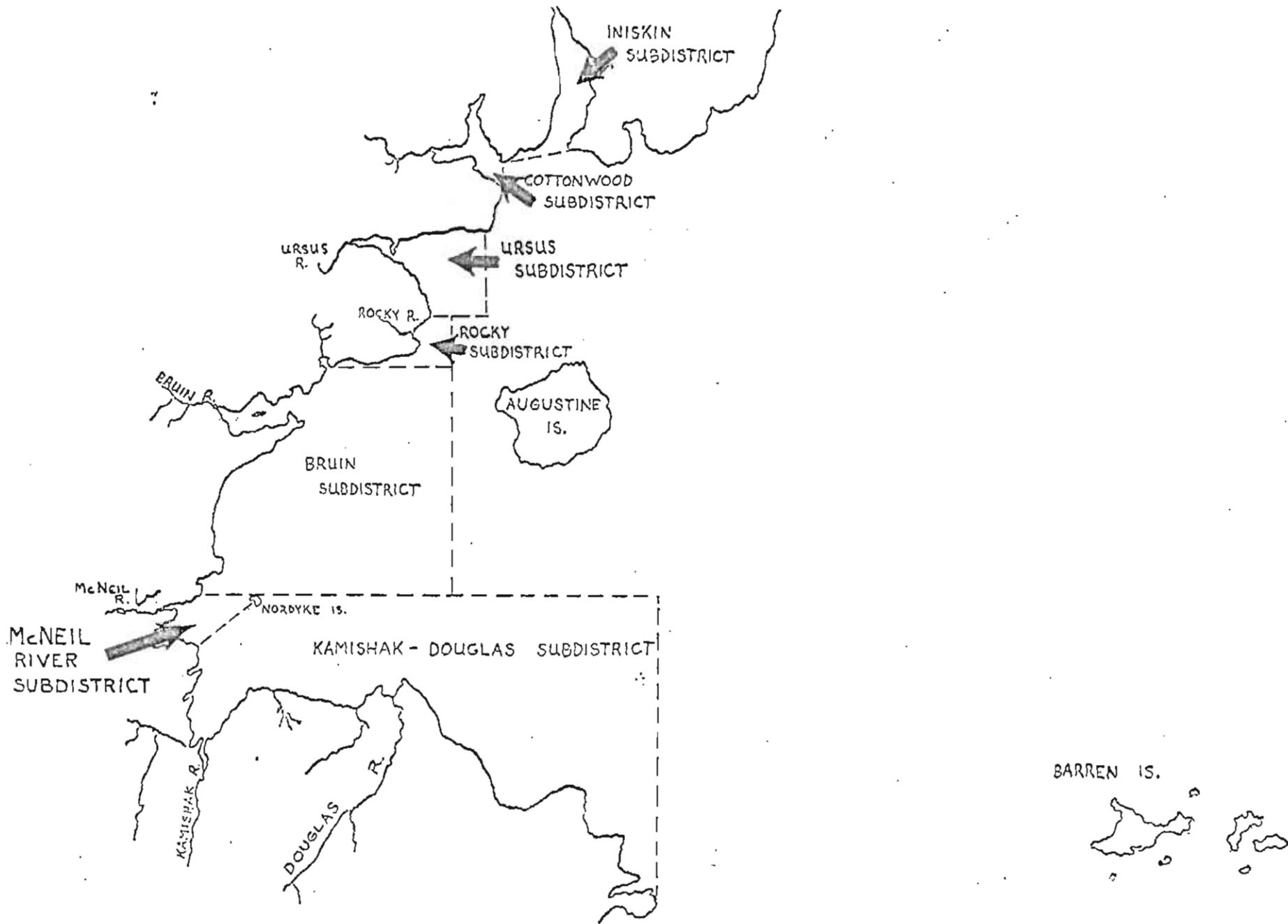


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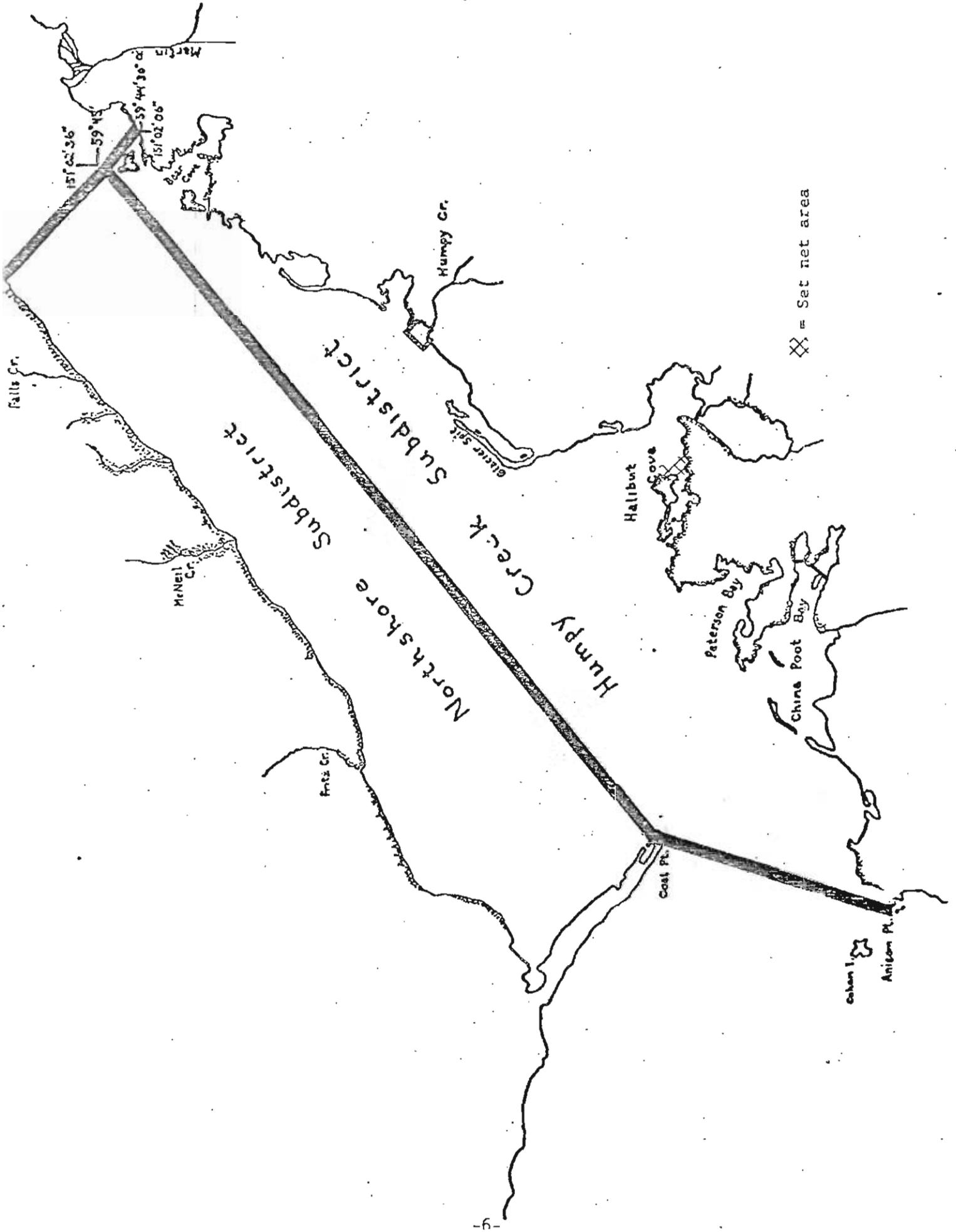


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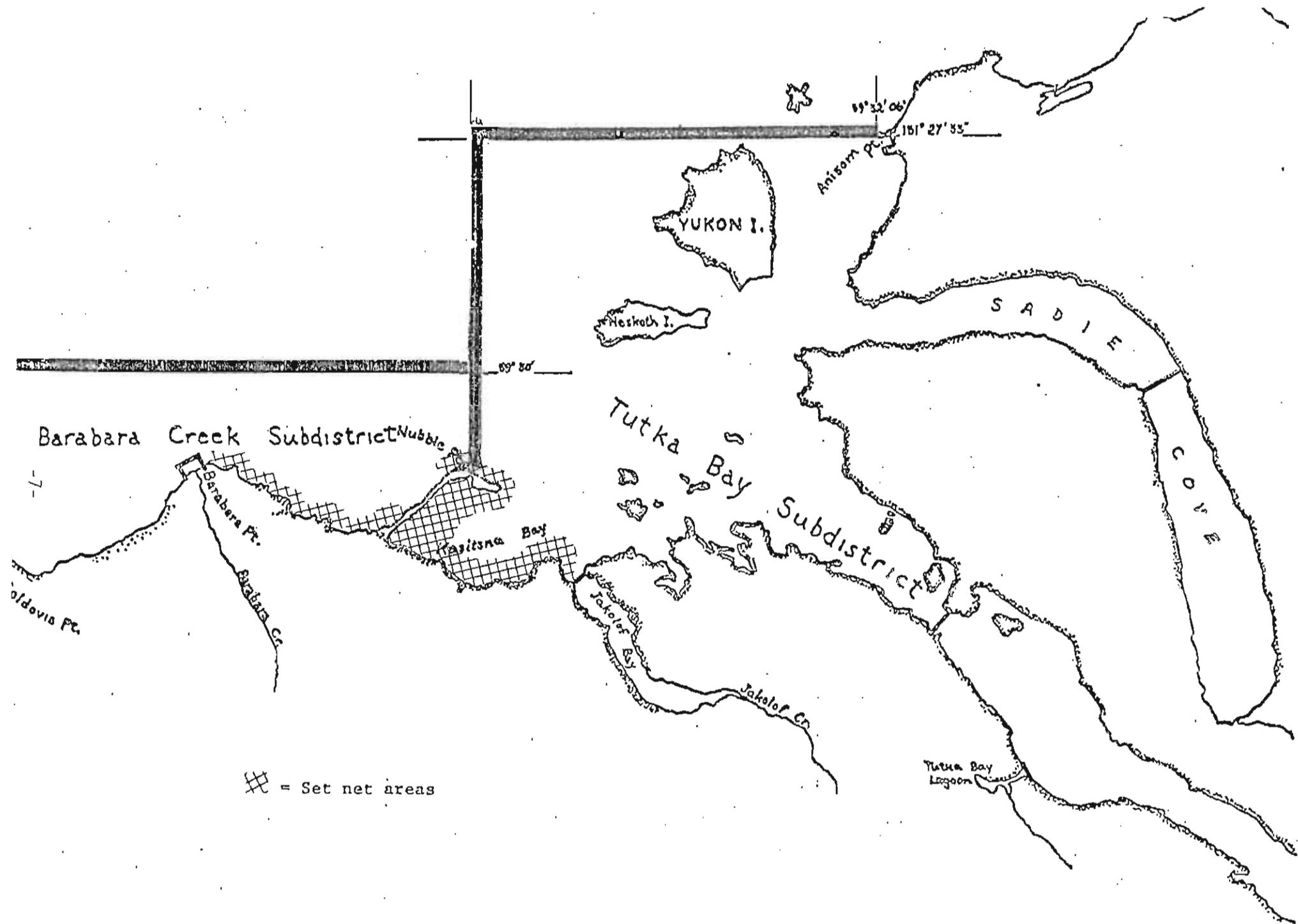
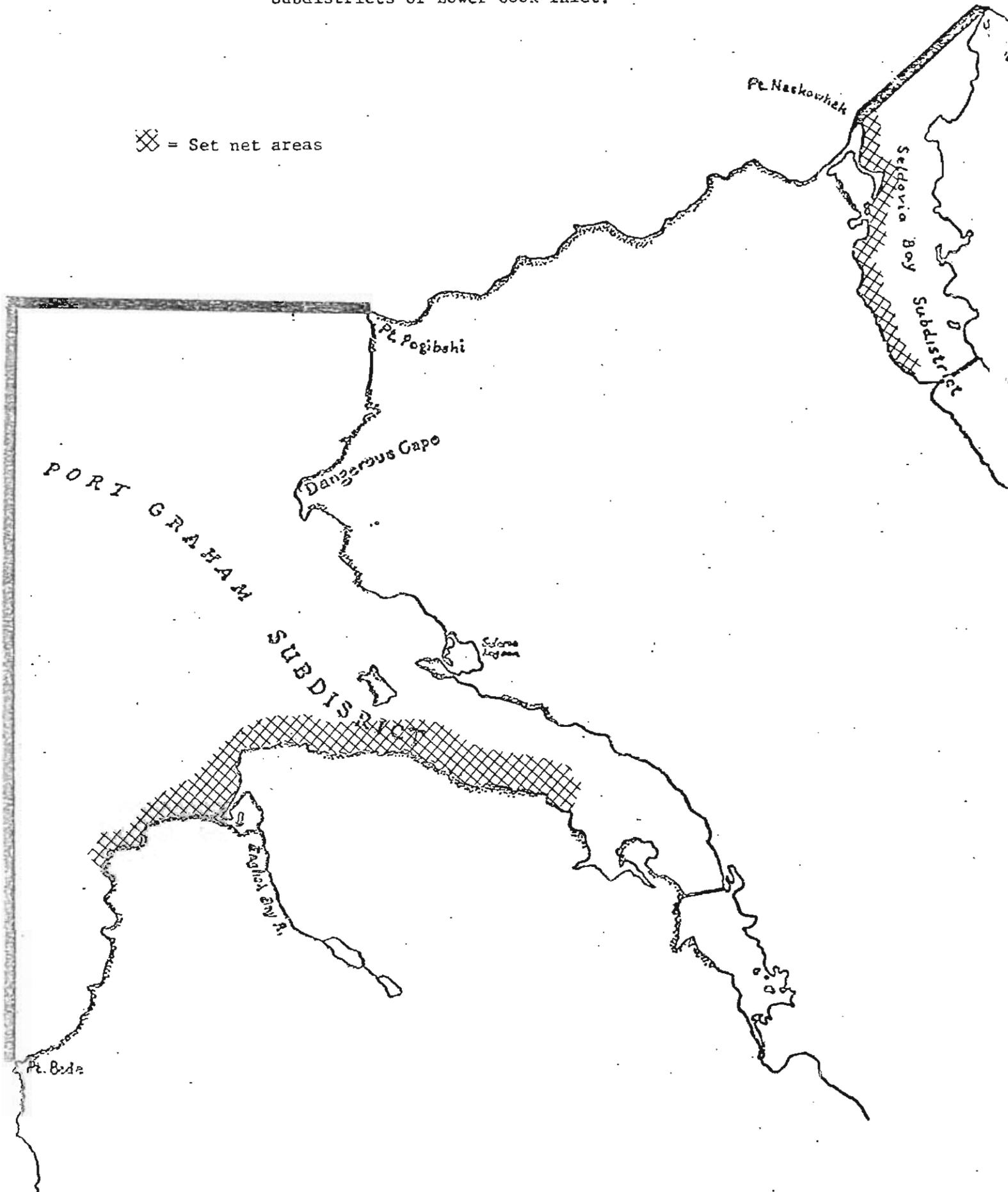


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Figure 7 . Set net locations in the Seldovia Bay and Port Graham Subdistricts of Lower Cook Inlet.

⊗ = Set net areas



ANNUAL MANAGEMENT REPORT  
LOWER COOK INLET AREA

1981

INTRODUCTION

The Lower Cook Inlet management area is comprised of all the waters west of the longitude of Cape Fairfield, north of the latitude of Cape Douglas and south of the latitude of Anchor Point. The area has been divided into five fishing districts all of which are salmon producers except for the Barren Islands district, which is primarily a shellfish district (Figure 1). The remaining four districts have been further divided into 22 subdistricts to facilitate management of discrete stocks of salmon (Figures 2-4).

The 1981 Lower Cook Inlet salmon catch of 3,743,281 was comprised of 347 king, 110,364 sockeye, 10,146 coho, 3,300,805 pink and 321,619 chum salmon. The harvest was 13 percent above the 1979 record harvest of 3,287,500 and was over four times the 28 year average catch for all species (Tables 2 & 17 and Figure 8). The pink salmon harvest was 10 percent above the previous record set in 1979 and the chum salmon harvest was the second highest on record and less than 2,000 fish below the 1964 record harvest (Appendix Tables 14 & 15 & Figures 10 & 12). The sockeye harvest of 110,364 was more than double the average harvest since 1954 (Table 17). The catch was highlighted by a phenomenal return of 1,016,000 pink salmon to the Tutka Bay hatchery facility, a strong chum salmon return to the Dogfish Bay subdistrict and the first odd-year pink salmon harvest in Resurrection Bay since 1955 (Tables 6, 12 & 14 & Figure 13).

The 1981 season was marked by an overall strong return, unusual run timing and strong returns to historically minor producing systems. These

returns necessitated 26 special flare openings in numerous lagoons and confined bays and numerous marker adjustments to harvest the returns in a timely manner (Appendix Table 1). Excellent catches of sockeye salmon were made in several areas and a return to a lake stocking program in China Poot Bay provided an additional 10,000 sockeye to the seine catch. The total catch of 110,364 was the second highest catch on record and over double the average catch since 1954 (Figure 9 and Appendix Table 12).

The pink salmon harvest and total return were 14 and 23.9 percent above the pre-season forecasted levels respectively and were due entirely to the Tutka Bay hatchery return (Appendix Table 17). The total return of 1,016,000 pink salmon was 2-5 times the forecasted return of 215,000 to 448,800 (Table 6). Numerous minor spawning streams in the Port Dick and Nuka Bay areas, which have not produced since the 1964 earthquake, had strong returns and contributed significantly to the total harvest (Tables 4 & 12). The only species returning significantly below expected levels were pink and chum salmon to the Rocky and Windy Bay subdistricts and chum salmon to the northern Kamishak Bay district streams (Tables 12 & 14).

The peak of the fishery had approximately 33 set nets and 77 seiners participating; however, virtually all of the 91 seine permits had been fished by the end of the season. (Appendix Table 3). The fleet was widely dispersed throughout the season except for the first 2½ weeks when fishermen were concentrated in the Tutka Bay subdistrict. Excellent pink salmon escapements were achieved in all major spawning streams, except for Rocky River and Windy Right, and chum salmon escapements were good except for Rocky River and several northern Kamishak district streams (Tables 4, 5 9 & 10 & Figure 11).

The 1981 harvest had an ex-vessel value of \$7.6 million, over five times the historic average value for this fishery, and was due to increased prices

paid to fishermen and high average weights during a peak year return (Appendix Tables 4-6). Case pack and fresh, frozen and cured production data contained in Appendix Tables 7 and 8 are for the entire Cook Inlet area and also include salmon imported from other areas of the State. A record case pack of pinks occurred this year and the total case pack for all species of 383,171 is 44 percent above average. The large case packs since 1976 are a direct result of increasing pink salmon returns in Prince William Sound and Lower Cook Inlet and strong sockeye returns to Upper Cook Inlet from 1976-78. Market conditions have resulted in an increasing trend towards fresh, frozen and cured production in recent years. The 1981 fresh-frozen production of 34,742,709 pounds is over twice the average for Cook Inlet (Appendix Table 8). The increasing trend is related to large imports of sockeye salmon from the Bristol Bay area and increasing quality of pink salmon harvested in Lower Cook Inlet in recent years.

#### SOUTHERN DISTRICT

##### Sockeye Salmon

The Southern District is the only area in Lower Cook Inlet where set gill nets are allowed to be used and, then, only in very limited areas along the southern shore of Kachemak Bay (Figures 5-7). The set net season opens on the first Monday of June with fishing allowed on the standard two 48-hour weekly fishing periods from 6:00 A.M. Monday until 6:00 A.M. Wednesday and from 6:00 A.M. Thursday until 6:00 A.M. Saturday.

Sockeye and pink salmon comprise over 90 percent of the set net catch (Table 16) and sockeye contribute over 75 percent of the income to set gill-netters. The set net fishery on sockeye salmon is primarily an "interception" fishery on fish headed to Upper Cook Inlet spawning systems. Although there

are several minor sockeye producing systems, the only major producer is the English Bay Lakes system; thus, the only set net fishing on totally local sockeye salmon stocks occurs in the Port Graham subdistrict (Figures 2 & 7).

A strong, early sockeye return occurred to the English Bay Lakes system. However, due to poor spawning distribution, which was heavy to the upper two, extremely small lakes, an extensive closure occurred from July 4-13 for set gill netters in the Port Graham subdistrict. Very few additional fish were achieved in the escapement through this closure and the subdistrict was re-opened to allow set nets to harvest pink and chum salmon returns to the area.

Another excellent sockeye salmon return occurred in China Poot Bay to the outlet of Leisure Lake for the second year in a row. The China Poot section of the Humpy Creek subdistrict was opened on June 25 along with the Tutka Bay subdistrict in anticipation of the strong return. Over 10,000 sockeye were caught by seiners with four year old (2-ocean) fish dominating the catch, similar to the 1980 return. Based on mark recoveries, many Leisure Lake fish were caught by seiners in the Tutka Bay subdistrict, but it was not determined whether set nets in this area harvested any of these fish or not. The Leisure Lake return is a research program conducted by the F.R.E.D. Division involving stocking of a barren lake with sockeye salmon fry and fingerling. Tustemena Lake sockeye, incubated at the Crooked Creek Hatchery, have been planted in an attempt to assess the productivity of numerous barren lakes on the Kenai Peninsula as to their potential for rearing juvenile sockeye and coho salmon.

The Southern district sockeye salmon harvest of 78,815 was the second highest on record since 1954 and was over 2½ times the 28 year average (Table 13.)

Set nets accounted for 70 percent of the harvest and their harvest of 54,181 red salmon was the third highest on record (Table 16).

### Pink Salmon

The Southern district pink salmon catch of 1,473,832 was the largest catch on record and was over 50 percent above the 1979 record and over five times the average pink catch for the district (Table 18). The catch was entirely due to the phenomenal return to the Tutka Bay hatchery of 1,016,000 pink salmon (Table 6). The Tutka Bay harvest was 2.4 times the 1979 record harvest in that subdistrict and more than 40 times the post-earthquake average harvest of 25,000 before hatchery returns began in 1978 (Tables 12 & 13). The return to the hatchery represented a survival rate of 15-18 percent for short-term-reared fry and 6-7 percent for direct released fry.

The Tutka Bay subdistrict and the China Poot section of the Humpy Creek subdistrict were opened on June 25 in anticipation of strong hatchery and lake stocking program returns to these areas. The management strategy for the Tutka Bay run was to open the subdistrict early in the run in late June and allow seining up to the mouth of the lagoon to try and slow the buildup of pink salmon in the lagoon. In 1978, 45 percent of the commercial harvest was taken from the lagoon in four special "flare" openings (Table 8). This percent has been gradually reduced by various changes in management techniques, once the staff was confident of the hatchery's success, to where in 1981 only 12 percent of the total harvest was taken during six lagoon openings (Tables 7 & 8). Three of these lagoon openings had to be allowed between July 23 and July 28 when fishing was open seven days per week. However, fleet dispersal in late July allowed fish to move right through the fishery and two additional openings had to be allowed in mid-August.

The Tutka Bay catches started out strong and were similar to 1979 catches during the first two weeks (Table 8). However, the third week's catch of 273,000 pinks was 50 percent above the same period in 1979 and the catch did not begin to drop until the fifth week of fishing. The harvest continued for three weeks longer than 1979 and the last catch occurred on August 17 during the sixth lagoon opening. The management strategy of opening early in the run and allowing fishing up to the mouth of the lagoon along with the concentration of vessels in the Tutka Bay area, appeared to accomplish the desired goal of harvesting the return outside of the lagoon.

Seldovia Bay was not expected to have a large pink salmon run based on alevin densities in the stream during the spring pre-emergent fry sampling (Table 11). The run began building on normal run timing during early July and the first opening was announced for July 6. Although good numbers of pinks had build up inside the closed water area, they did not hold there. No noticeable buildup occurred during the next week and a closure was announced for July 15 in anticipation of the series of minus tides, which usually moves fish out from behind closed water markers. A strong influx of pinks began showing on July 20 and an opening was announced for July 24 at 3:00 P.M. with markers moved further up the bay. Over 27,000 fish were observed inside of the markers with poor aerial survey conditions and this number increased to 56,000 by July 29, even with fishing allowed seven days per week from July 24 through August 1.

Even with the markers moved to a location where little water is left inside them during minus tides, the pinks would not back out. The total catch of 89,000 was the fourth highest recorded harvest for this bay, but was considerably below the previous two odd-year harvests (Table 12). The pink salmon escapement of 62,700 was over double the escapement goal (Table 4).

The Port Graham subdistrict was expected to have an average return of pink salmon. Even though pre-emergent fry levels were considerably above average, due to the flooding and ice scouring that took place, the return was expected to be below the previous two odd-year returns (Tables 11 & 12). The first seine opening for pink salmon was not announced until July 24, but fishing was allowed seven days per week. The pink harvest of 18,000 was the lowest odd-year harvest since 1975 (Table 12). The escapement goal of 20-40,000 was not achieved (Table 4), but the escapement of 18,400 was considerably above the average of 14,800 (Table 9).

A strong pink salmon return occurred to the Humpy Creek subdistrict and resulted in the third highest harvest for this subdistrict on record (Tables 12 & 13). The subdistrict was opened on July 20 after aerial and ground surveys on July 18 indicated an escapement of over 18,000 pinks in the stream. Aerial surveys conducted on July 24 indicated that fish were continuing to move right through the fishery. The markers were covered on July 24 and fishing was allowed seven days per week up to a Department buoy on a grassy knoll at the lower end of the intertidal spawning area. A weir was constructed midway in the intertidal spawning area on July 25 in an attempt to slow the buildup of pinks in the stream. The weir could not be located further upstream due to being unmanned and blocking considerable spawning area.

Large numbers of pinks flushed around the weir on 19 foot plus high tides in late July. Several special openings were allowed between July 28 and August 1 to harvest pinks built up below the weir. Each opening resulted in a harvest of 5-18,000 pinks and eventually the buoy was relocated further upstream, just 15 yards below the weir on August 10.

While the Humpy Creek escapement goal based on 1½-2 spawners per square meter of spawning area is 22-30,000, the target escapement during the past

five years has been 45-50,000. The final 1981 escapement of 115,000 was over double this goal, but would have been similar to the 1979 escapement of 200,000 if a weir had not been constructed. A weir was constructed in 1979, but was made of too light a material and was destroyed by tidal action and the weight of thousands of fish pushing against it (Table 9).

### Miscellaneous Species

Chum salmon are a relatively minor species in the Southern district, but the 1981 harvest of 32,014 was the highest on record since 1954 (Table 18). The majority of the catch came from the Port Graham and Tutka Bay subdistricts (Table 14). Set gillnets caught the majority of the 20,000 chum salmon harvest in Port Graham, but two 24-hour seine openings were allowed on July 7-8 and 10-11 when set net fishing was closed.

The coho harvest of 8,232 was over twice the average with set gill nets harvesting 85 percent of the catch (Tables 1, 3 & 18). The majority of the set net harvest came from returns to the English Bay Lakes system. While escapements are not monitored, harvest data indicates this was the third year of strong returns to this area and adequate escapements appear to have been achieved through the normal weekly closures.

## OUTER DISTRICT

### Sockeye Salmon

The salmon return to the Outer district began with the sockeye return to Delight and Desire Lakes in Nuka Bay (Figure 2). Sockeye salmon began arriving in the area 7-10 days ahead of normal run timing and a flare opening was announced for June 20. A one mile radius closure was put into effect around the mouth of Delight Lake Creek, as it is typically later than the Desire Lake return. The Desire Lake return normally continues through July and when the

escapement reached 6,000 on June 22, markers were removed and fishing was allowed up to the mouth of the creek.

The return appeared to have stopped in early July and a closure was announced for July 4 to acquire the desired escapement. The return to Delight Lake began building and a short one-hour flare opening was allowed on July 10 in McCarty Lagoon. The escapement goals of 10,000 sockeye for each lake were achieved and the East Nuka subdistrict was reopened on July 13. The sockeye salmon harvest in Nuka Bay of 17,800 was good compared to historical harvests in this area, but was far below the expected harvest of 35,000 (Table 15).

Another minor sockeye salmon fishery occurred for the first time in recent history at Anderson Beach Creek, just south of Port Chatham (Figure 2). Aerial surveys on June 27 indicated over 2,000 sockeye salmon were already present in this very small lake system with additional fish available on the beach. An opening was announced for June 29 for a two-mile radius around the mouth of Anderson Beach Creek. Fishing was allowed up to the mouth and resulted in a harvest of around 800 sockeye.

#### Pink Salmon

Very unusual pink salmon run timings and patterns occurred to spawning streams in the Outer district during 1981. While some returns were early and appeared strong, there was no body to the return. Other subdistricts in the same geographic area had late and strong returns or late and weak returns even with excellent escapements in 1979 and high fry densities in 1980.

The Outer district pink salmon harvest of 1,723,717 was the second highest on record (Table 19). Excellent harvests occurred in Port Dick and Nuka Bay areas (Table 12). Returns were considerably below expected levels in the Port Chatham, Windy Bay and Rocky Bay subdistricts and are completely unexplained due to excellent escapement and fry levels observed in 1979 (Tables 9, 11 & 12).

Port Dick Bay has been opened in early July during the past two odd-year returns; however, this year good numbers of pinks did not arrive until after July 10. Port Dick was opened on July 6 primarily to slow the buildup of chum salmon at Island Creek and the bay northeast of a line from Shelter Cove to Middle Creek remained closed. Pink salmon catches began building between July 8-12 and the entire bay was opened on July 20.

Port Dick Head End Creek has two runs of pink salmon during the odd-year returns. The earliest run consists of primarily "upstream" spawners while the second run is primarily "intertidal" spawners. In the past, the upstream spawners have usually moved into the stream in July and are through the counting weir by August 7-10. This year the salmon held off in the bay and did not move into the spawning grounds until August 20-30. Concern over the poor "upstream" escapement prompted a closure on August 12 in an attempt to secure additional upstream spawners.

The fish finally moved far enough onto the flats at the head of the bay to allow the area to be reopened on August 17. Island Creek, which has not had a significant pink salmon run since the earthquake, produced its first pink run of any consequence in the last fifteen years. Over 40,000 pinks were taken in mid to late August and the escapement of 25,000 is the highest since 1964 (Table 9). The subdistrict was closed on August 22 with a total harvest of 1,052,300, the highest odd-year harvest on record, and just below the record set in 1962 (Table 12).

Strong pink salmon returns were expected to the Port Chatham, Windy Bay and Rocky Bay subdistricts based on 1979 escapements and pre-emergent fry densities (Tables 9 & 11). However, the runs were extremely late and when they began showing around July 15-20 there was no strength to the returns. While the pink salmon harvests in both Port Chatham and Windy Bay of 42,000

and 89,000 respectively were the third highest harvests on record, they were far below expected levels and the 1979 record harvests in these subdistricts (Tables 12 & 13). The Rocky Bay subdistrict was opened for only two short openings on July 27 and August 2-3 and very few fish were harvested.

The Nuka Bay area experienced an extremely strong pink salmon return during 1981 and the harvest of 364,200 was triple the previous record set in 1962 (Tables 12 & 13). South Nuka Island Creek and Desire Lake Creek have been the two primary pink salmon producers in recent years. While there are over a dozen other spawning streams in the area, these streams have not produced significant returns since the 1964 earthquake. Fishing has been prohibited on these streams since the early 1970's and finally resulted in excellent returns in 1981.

The East Nuka subdistrict was opened on July 13 and while some pink salmon were caught, this was primarily a sockeye salmon opening. The entire Nuka Bay area was opened on July 20 when a general Outer district opening was announced. The Nuka Island subdistrict was only opened for 6 hours from 1:00 to 7:00 p.m., due to the vulnerability of fish bound for the South Nuka Island spawning stream. A one mile closure was in effect south of the mouth of Petrof Glacier stream. This closure has been an effective tool in recent years as it allows some harvest of salmon bound to this stream while protecting enough for spawning requirements. The Nuka Island opening was subsequently extended at 7:00 p.m. July 20, due to low vessel effort levels and increasing run strength to the various streams in the area and fishing was allowed on the standard two 48 hour periods per week.

Aerial surveys of James Lagoon on July 18 indicated an excellent chum salmon escapement and buildup in the lagoon. An opening on July 20 for 1½ hours

resulted in a pink salmon harvest of over 13,000 and was a total surprise. Surveys flown the very next day indicated a considerable buildup in the lagoon again and a second one-hour opening on July 23 produced another 11,000 pink salmon.

A quick one hour marker adjustment occurred on July 23 at South Nuka Creek to harvest a large buildup of fish on the beach. Additional surveys that day indicated very few new fish moving into the area and the Nuka Island subdistrict was closed at 6:00 a.m. July 24. Weather and poor visibility hindered aerial surveys of the Nuka Bay area, with the exception of South Nuka Creek, and no buildup of fish was observed in the area between July 23-25. A closure was announced for the entire Nuka Bay area above a line from Gore Point to the Pye Islands for July 27.

Aerial surveys of South Nuka Island on July 26 indicated over 85,000 pink salmon schooled on the beach at South Nuka Creek with an additional 25,000 well inside closed waters. Mikes Bay also had a buildup of 20,000 pinks and the Nuka Island subdistrict was reopened on July 27. Markers at South Nuka and Mikes Bay were adjusted for four and two hours respectively and Tonsina Bay was kept closed. Tonsina Bay, Yalik Bay and the East Nuka subdistrict were reopened on July 30 after a significant buildup of salmon in these bays and the markers at South Nuka Creek were permanently moved, well into the mouth of the creek. An aerial survey of Yalik Bay on August 2 indicated that an adequate harvest had been taken from the bay and that the remaining fish were needed for spawning requirements and the bay was closed on August 2. The same aerial survey indicated over 100,000 pinks had built up inside of James Lagoon and a third opening for seven hours on August 3 resulted in a harvest of 85,000 more pink salmon.

Good fishing continued through the first 10 days of August. Heavy rains began causing fish to back out from inside closed waters around August 10-11 and the entire Outer district was closed on August 12 to protect pink salmon needed for spawning requirements. Excellent escapements were achieved in all of the streams in Nuka Bay and should continue to produce at high levels with favorable environmental conditions.

### Chum Salmon

The Outer district chum salmon return was very strong to the two primary systems, Dogfish Bay and Island Creek in Port Dick. The harvest of 226,226 was the second highest on record and over three times the average for the district (Table 19). Rocky River and Petrof Glacier Creek experienced very poor chum salmon returns. Based on escapements in 1977 and the excellent pink salmon returns to these areas in 1979, the 1981 chum returns should have been very strong.

The Dogfish (Koyuktoik) Bay chum salmon return normally begins in early July and runs through late August. Large numbers of chum salmon had already entered the lagoon this year by June 22. The return built rapidly in late June and the Dogfish Bay subdistrict was opened on June 29. A large buildup of chum salmon occurred at the same time in the Port Chatham subdistrict and this subdistrict was subsequently opened on July 7 after adequate numbers of chums were protected inside closed waters.

The numbers of chums in Dogfish Lagoon built rapidly, even with considerable fishing effort, and the first lagoon opening was allowed for 30 minutes on July 10. Chum salmon protected inside closed waters at Port Chatham kept moving out of the closed waters and the total escapement was caught twice in the fishery. This peculiar movement continued and the subdistrict was closed on July 15. Between the July 15-23 closure in Port Chatham, the entire

escapement goal of chums moved out from the closed water area and disappeared. It appears from average weights of the fish, run timing, fish movement patterns and past historical harvest and escapements that the majority of the chum salmon caught in the Port Chatham subdistrict were probably fish bound for Dogfish Bay.

The second Dogfish Lagoon opening occurred on July 20 for ½ hour after numbers had built to over 30,000 in the lagoon. A third lagoon opening was allowed for two hours on July 23 in conjunction with a two-hour opening in Port Chatham to harvest chum and pink salmon that had accumulated in the area. Fishing in the Dogfish Bay subdistrict was extended from the standard two 48-hour periods per week to seven days per week at 3:00 p.m. July 24 and remained open on seven days per week until the district was closed on August 12. Even with continuous fishing, two more lagoon openings were required for two hours on July 26 and one hour on August 3 to harvest the surplus chum salmon.

The preliminary Dogfish Bay harvest of 80,000 chums is the second highest harvest on record. When the Port Chatham fish are added in, the 125,000 harvest surpasses the record 1971 harvest of 116,900 for these two subdistricts (Table 14). Escapements to the streams in Dogfish Lagoon were the highest since the late 1960's (Table 10). These escapements are based on average stream life estimates of 17.5 days for pink salmon. Evidence from other areas of the State have indicated that the stream life for chums may be considerably shorter which would generate higher estimates of spawning chum salmon.

The other major chum salmon producing subdistrict in the Outer district in 1981 was Port Dick. The chum harvest of 77,200 was similar to the 1979 harvest, but was still considerably below the record harvests prior to the 1964 earthquake (Table 14). The major chum salmon spawning stream in Port

Dick is Island Creek with some fairly significant production from Head End Creek during certain years (Table 10).

The Island Creek chum return is normally a July 15 to August 15 return, but in 1981 chums began arriving in the area on June 19. The fish built rapidly during the last week of June and a short 12-hour opening was allowed on June 29. The area was reopened on July 6 on the regular weekly fishing periods. The waters of Port Dick Bay above a line from the western shore of Middle Creek to the eastern point of Shelter Cove were kept closed during both of these openings to allow a buildup of pink salmon at the head end of the bay. One marker movement was allowed for 12 hours on July 10 to harvest chum salmon that had built up inside of the closed waters.

Chum salmon bound for Island Creek move around considerably with various tidal actions, storms and freshwater levels from the creek and become available for harvest even though they may have held inside of the closed waters for a week or two. An additional area between Middle & Island Creeks has been kept closed in past years to protect chums needed for Island Creek escapement. However, in 1981 this additional closure was not necessary. A close eye needs to be kept on this stream as the entire escapement can be lost very quickly. The 1981 chum salmon escapement to Island Creek of 17,500 was the highest on record and the escapement to Head End Creek of 4,100 was good (Table 10).

#### KAMISHAK DISTRICT

The salmon returns to the Kamishak Bay district were good, but even though the total harvest of 119,864 was double the 28 year average (Table 20), many returns were weak or far below expected levels. Returns to spawning streams in the southern portion of the district were generally strong, while the pink salmon return to Bruin Bay and chum returns to spawning streams in the northern portion of the district were poor or greatly below expected

levels. Spawning streams in the Kamishak district have historically had severe fluctuations in their returns and survival rates which have been attributed to the severe environmental conditions prevalent in the area.

### Sockeye Salmon

The southern three subdistricts, Bruin Bay, Kamishak-Douglas and McNeil River, all of which have minor sockeye runs, were opened to seining on June 12 and fishing was allowed through the normal weekend closure. Mikfik Creek in the McNeil River subdistrict is the largest sockeye salmon producer in the Kamishak district at the present time. Three beaver dams had to be removed with dynamite on June 10 to allow salmon to reach the lake. McNeil Lagoon was opened on June 17 and fishing was allowed through the normal Wednesday closure. Very little fishing effort occurred on the Mikfik sockeye and McNeil Lagoon was closed on June 25 to protect early chum salmon headed for McNeil River.

A small sockeye salmon run returns annually to Amakdedori Creek, but very little fishing effort ever occurs on this run. Fishing was allowed up to the mouth of the creek on June 17, but still no harvest occurred. The majority of the 1981 sockeye harvest in Kamishak Bay came from the Kamishak-Douglas subdistrict. Seiners in this subdistrict harvest fish bound for several spawning streams in three different rivers. The sockeye salmon harvest of 4,517 was over 2½ times the average for the district and adequate escapements were achieved in the spawning streams and lakes.

### Pink Salmon

There are three major pink salmon spawning streams in the Kamishak Bay district: Bruin Bay, Sunday Creek and Browns Peak Creek. Occasionally, Kamishak River and Amakdedori Creek will produce some pink salmon, but very

few have been caught from these systems in recent years. The pink salmon harvest of 53,370 was double the average harvest for this district, but was far below the pre-season forecasted harvest of 250,000 (Table 20).

The Bruin Bay subdistrict was opened in early June with the remainder of the southern portion of the district to encourage fishing on the early chum run and in anticipation of a very strong pink salmon return. The 1979 escapement to Bruin River of 200,000 had the potential of producing an extremely large return; however, as the run progressed, it became obvious that this was not going to happen.

When the first pink salmon began arriving in mid July, fishing in the subdistrict was extended to seven days per week. Even with seven to eight boats fishing right up to the markers, and basically "corking" off the river, pinks moved rapidly through the fishery and into the river. The large "pothole" at the end of the intertidal area was first opened on July 25 for five hours in an attempt to slow the buildup in the river. The "pothole" can only be reached on a 17 foot high tide, but to adequately harvest fish an 18 foot or higher high tide is needed. Therefore, this "stop-gap" measure can only be used every other week during a strong run. The "pothole" was opened again on July 31 on a continuous basis after the escapement reached 46,000 and yet, the run could not be stopped and the final escapement was 95,000 (Table 4). The harvest of 42,000 was the highest odd-year harvest on record but considerably below the 1968 and 1980 record levels (Tables 12 & 13).

Sunday Creek in Rocky Cove and Browns Peak Creek in Ursus Cove have produced very large pink salmon runs in past years, but the streams appear to be susceptible to flooding, freezing and "dewatering". Thus, returns have fluctuated wildly from good spawning escapements. The 1981 pink salmon returns began arriving to these streams in early August. The Browns Peak

Creek return progressed slightly faster than Sunday Creek and a chum salmon opening at Browns Peak on July 31-August 1 resulted in a harvest which was 50 percent pink salmon. Both streams were opened for 60 hours from August 9-12 with fishing allowed up to the mouth of both streams. Sunday Creek was reopened on August 13 to the mouth of the creek when the escapement level reached 14,000, but Browns Peak was kept closed until August 17 to protect a weak chum salmon return to Ursus Cove. The Browns Peak escapement reached 17,500 and escapements to both streams were considered excellent. The harvest of 19,000 pink salmon in these two subdistricts was good, but far below the 1969 record (Tables 12 & 13).

#### Chum Salmon

The Kamishak district was expected to have a strong chum run to all spawning systems in 1981 based on escapements achieved in 1977. Returns to streams in the southern part of the district were good, but returns to the northern part of the district were weak. The chum salmon harvest of 60,145 was double the average for the district, but considerably under the 100-125,000 expected harvest (Table 20).

The McNeil River chum salmon run is usually the earliest to arrive. Run timing is normally early to mid-July, but in 1981 there appeared to be two separate segments to the run. Chum salmon began arriving on June 25 and the lagoon was closed to protect the escapement. Catches dropped off quickly in early July and the subdistrict was closed on July 4 with a very poor escapement. Fish from this early run averaged over 12.5 pounds and probably contained a high percentage of five-year-old fish. Aerial surveys on July 7 showed no increase in escapement, but the July 11 survey indicated a strong buildup of chums in the lagoon and the bay.

The subdistrict was reopened on July 14 and fishing time was extended to seven days per week on July 19 after the escapement goal was achieved. Chum salmon from this second run averaged only 9 to 9.5 pounds and were probably the four-year-old segment of the run. The chum salmon escapement of 30,000 was considered excellent (Tables 5 & 10) and the harvest of 30,000 was the second highest on record for this subdistrict (Table 14).

The Kamishak-Douglas subdistrict was opened in early June for the sockeye salmon runs and this district remained open throughout the summer on the standard two 48-hour weekly fishing periods. The chum salmon return to the Kamishak River system was not as strong as expected; however, it is possible that some of the chum salmon headed to this area were intercepted near the Douglas River area to the east. The total chum salmon harvest to these two rivers was 22,000, the second highest on record in the relatively short history of fishing in this area (Table 14).

The Iniskin Bay subdistrict was opened to fishing on August 4 after aerial surveys indicated the escapement had reached 2,500. The chum salmon escapement goal for this stream is 5-10,000 (Table 5) and once 2-3,000 fish have reached the clear water area, the subdistrict is opened. Tidal characteristics and weather hinder fishing in this area and considerable fishing has to be allowed before the escapement goal is assured to adequately harvest the return. Other short openings were allowed in Cottonwood Bay and Ursus Cove, but the catches were minimal. The chum returns to these three systems were poor based on the excellent 1977 escapement levels. The escapement goals were achieved in these streams in 1981 (Tables 5 & 10), but this was only accomplished through almost complete closures.

## EASTERN DISTRICT

The salmon harvest in the Eastern district held some pleasant surprises in 1981. The harvest of 62,390 was the second highest odd-year harvest since 1955, excluding the 1969 sockeye salmon return to Bear Lake (Tables 1, 15 & 21).

### Sockeye Salmon

Aialik Bay was opened on June 20-21 for 18 hours after aerial surveys indicated fish present in Aialik Lake, which was 10-14 days ahead of normal run timing. Fishing time was extended on June 22 and allowed on the regular two 48-hour periods per week. The adjusted escapement goal of 2,500 sockeye salmon was reached on June 24 and Aialik Lagoon was opened to fishing on June 25. The lagoon was closed on July 4 after the run had been harvested. The 9,200 sockeye salmon harvest is the largest since 1954, excluding the Bear Lake returns in 1968 and 1969 (Tables 15 & 21).

### Pink Salmon

The Eastern district pink salmon fishery has been primarily an even-year fishery. The 1981 pink salmon harvest of 49,886 was totally unexpected and is the largest odd-year pink harvest since 1955 (Tables 1, 12, 13 & 21). There was definitely a strong return to several streams in the outer part of Resurrection Bay at Thumb Cove and Tonsina Creek which resulted in two short openings on July 30-31 and August 5. However, based on sport fishing catch and effort information from the extreme outer area of Resurrection Bay and the harvest of 18,000 pink salmon in Aialik Bay, it appears that salmon bound for other areas migrated through this area and were harvested. Only one of the major even-year producing streams at the head of Resurrection Bay, Mayor Creek, had a significant number of spawning pink salmon. The two major spawning streams, Bear and Salmon Creek, had only several hundred fish.

Spring Creek, near 4th of July Creek on the eastern shore of the bay, had over 4,000 spawners in it, which is considerably above the usual 200-400 spawners observed in most years.

### Chum Salmon

The Eastern district has very few chum salmon spawning areas. Small spawning areas have been observed in Day Harbor and Aialik Bay, but the two major spawning streams are Tonsina and Clear Creeks in Resurrection Bay. The 1981 chum salmon harvest of 3,234 is the second largest on record (Tables 14 & 21). The majority of the harvest, 2,400, was taken near Tonsina Creek during the July 30 opening while the remaining 800 were taken in Aialik Bay.

### SUBSISTENCE FISHERY

The 1981 subsistence salmon fishery started out in a rather confused manner. The Board of Fisheries adopted a new approach to looking at the priority subsistence fisheries in Cook Inlet in 1981 by adopting ten criteria to be used when reviewing whether a particular subsistence fishery should qualify for the subsistence priority. Only three communities, Port Graham, English Bay and Tyonek qualified for the subsistence priority under these criteria, which eliminated the Kachemak Bay coho gillnet fishery for the third time since 1977. The decision was taken to court by the Kachemak Bay Subsistence Group and Superior Court Judge Paul Jones issued an injunction in July against the State and reinstated the subsistence fishery as it existed prior to 1977.

### English Bay - Port Graham

The Board of Fisheries recognized the communities of Port Graham and English Bay as being true subsistence communities, as defined by the ten adopted criteria, and deserving of the subsistence priority. Testimony from residents of these communities led the Board to adopt new regulations for subsistence fishing in the Port Graham subdistrict of Kachemak Bay.

Two seasons were established: May 10 through June 15 to harvest king and sockeye salmon and August 16 through September 30 for coho salmon. The same gear level as used in the past was allowed: 35 fathoms in length, 45 meshes in depth and a maximum of six inches in mesh size. Permits were required, but were limited to people domiciled in the two communities. No catch limits were put on the permits and the entire Port Graham subdistrict was open to fishing during these two seasons.

The Subsistence Section was responsible for monitoring this fishery. Permits were issued in the form of "catch calendars" to people in each community with 47 permits being issued in Port Graham and 25 being issued in English Bay. Calendars were picked up and catches were tallied on a monthly basis. Catches are presented in Table 22.

Snagging has always been a problem at English Bay River and this year seven people were cited by State Fish & Wildlife Officers for snagging, over-limits and no licenses. During court hearings held requesting dismissal of the charges, testimony from several of these people indicated that they could not obtain adequate numbers of salmon through the subsistence fishery and had to resort to other methods. No comments or complaints were received from the people during the summer that they were having trouble catching enough fish. The court subsequently denied the motion for dismissal and found all of the people guilty of their violations.

#### Kachemak Bay

The subsistence fishery in Kachemak Bay was allowed, as directed by the court, after August 16. Permits were issued to a household and were limited to 25 fish for the head of the household and 10 fish for each legal dependent. All areas were open to fishing unless restricted in the closed water section

of the commercial fishing regulations, except for a three mile stretch of beach between the Anchor River and Troublesome Creek. This closed area was established to limit the incidental catch of steelhead trout. Fishermen were allowed to use 50 fathoms of set gillnet gear, with a maximum of 35 fathoms in any one net, the nets could not be deeper than 45 meshes and were restricted to six inch or smaller mesh size.

The 384 permits issued in 1981 represented a 28 percent decrease from 1980 and was attributed to the "non-commercial set gillnet" fishery that was allowed, also by court order, on the east shore of the Central district of Cook Inlet in August and September (Table 23). This was reflected in the area of residence of the permit holders which showed a decline in the percentage of Anchorage, Kenai/Soldotna and Anchor Point residents that participated in the Kachemak Bay subsistence fishery.

The primary fishing area for the subsistence gillnets has always been along the north shore of Kachemak Bay. The 1981 subsistence salmon harvest of 5,324 was a record as was the coho salmon harvest of 4,314 (Table 24). Over 96 percent of the subsistence coho salmon harvest and 89 percent of the total harvest was taken along the northern shore of the bay (Table 25). Most of the pink salmon taken in this fishery are usually harvested along the south shore of the bay near Glacier Spit and this year 58 percent of the pink harvest came from this area.

This year was the first time money was available for monitoring a portion of the subsistence fishery and to begin spawning ground escapement estimates. The program was put together on very short notice and involved (1) aerial surveys of fishing effort, (2) aerial surveys of spawning ground escapements, and (3) ground surveys from Fritz Creek to the Homer Spit. The ground surveys

were designed to gather information on the number of fishermen fishing a permit, the number of permits fishing a single net, the number of salmon marked or unmarked (Hatchery and Fritz Creek stocked fish) and to begin a C.P.U.E. data base. The CPUE data was calculated as catch per five fathoms of net per tide. Data gathered during this monitoring program are summarized in a report by Davidson, N. 1981.

#### ENHANCEMENT AND REHABILITATION

Numerous salmon enhancement and rehabilitation projects have been conducted in Lower Cook Inlet with varying degrees of success in recent years and many more projects are presently in the planning phase. The Lower Cook Inlet area lends itself to such projects because of the many small bays and lagoons in the area where salmon returns from these projects will segregate from other returns and can be more accurately assessed and managed.

##### Tutka Hatchery

The Tutka Hatchery was constructed in 1975 and while 3.0 million eggs were taken and incubated at Crooked Creek, only 250,000 very weak fry survived to be released in Tutka Lagoon. The hatchery was designed in Phase I for a capacity of 10 million eggs and in 1978 was increased to 20 million eggs. Egg takes from 1976-80 varied between 6 and 16 million. The hatchery was hindered during egg takes by the lack of adequate personnel to take eggs when females were ripe and in 1978-80, 30 to 40 percent mortalities occurred in the brood stock. The hatchery was finally filled to capacity in 1981 when 21.5 million eggs were taken.

Another weak point in the hatchery is the green to eyed egg survival. There appears to be a problem with egg development in females that are forced to ripen in salt water rather than freshwater, as in a natural situation. Eggs

from females ripened in fresh water have had survival rates 20 percent higher than those ripened in salt water and this problem has continued to lower the total fry output of the hatchery.

Total fry releases have varied between 4.3 and 9.8 million fry from 1977-81 with varying percentages of the fry being directly released into the bay or short-term-reared for up to 40 days before being released. An integral part of the hatchery plan was to feed a portion of the fry released each year for a period of time until their body weight had doubled in an attempt to increase ocean survival rates. This appears to have been a tremendous success as survival rates of fry released directly into the estuary have shown survival rates of 2.1 to 6.7 percent while short-term-reared fry have survived at rates of 5 to 17.7 percent. Wild fry, caught and marked from the spawning stream, appear to experience survival rates similar to the direct-released hatchery fry.

While the hatchery has been a tremendous success, with adult returns from 151,000 in 1978 to 1,016,000 in 1981, the hatchery may have the potential to replace lost natural production during years of poor environmental conditions. The 1982 adult return will be the first example of this potential. During the 1981 pre-emergent fry sampling of nine index spawning streams in Lower Cook Inlet, it became obvious that extreme fall flooding in all streams had resulted in loss of production from these streams and the lowest fry levels in 15 years. In an attempt to try and increase the number of returning adults, the number of short-term-reared fish was increased from 5.0 million to 8.5 million. This increase in rearing could result in an additional 175-620,000 adults returning in 1982. Data at the present time indicates that hatchery fry survival rates tend to be low in the "off cycle" years and

high in the "peak cycle" years and the 1982 return will be the first test as to whether the hatchery can break this cyclic phenomenon or not.

Future plans for the hatchery include shifting some of the production to chum salmon. Several problems have to be resolved with rearing before this can become a reality. Another factor to be determined is whether 20 million fry can be released into Tutka Bay or if the bay's rearing capacity has already been taxed to the limit.

#### Leisure Lake

Leisure Lake drains into China Poot Bay on the south side of Kachemak Bay. The lake was stocked with sockeye salmon fingerling from 1976-78 that had been reared during the summer at Halibut Cove Lagoon. Survival of these fingerling to outmigrating smolt ran between 60 and 80 percent and the two significant adult returns in 1980 and 1981 of 14,000 and 11,500 respectively yielded smolt to adult survival rates of 18 to 25 percent.

No stocking occurred in 1979 and in 1980 the program was shifted to fry stocking. The 1980 release in Leisure Lake was 530,000 and when 47 percent of these fry left the lake in 1981 as Age I smolt, and were 50 percent larger than normal Bristol Bay Age I smolt, the stocking density was increased to 1.1 million in 1981. The majority of this return has been four-year-old, two ocean adults and the 1983 adult return to this project should range from 17,500 to 25,000, but could go as high as 45-60,000 if past survival rates occur.

This return has resulted in a substantial monetary benefit to the seine fleet, but has also developed an enthusiastic group of recreational fishermen. In 1980, a dipnet fishery was allowed to harvest sockeye salmon that reached the stream, as they are prevented from reaching the lake by a series of falls 150 yards up the creek from the bay.

Attached is an addendum to the 1981 annual Management Report for Lower Cook Inlet which was omitted during final typing.



from 500-1600 fish. The fish are harvested entirely by a saltwater snag fishery but if large numbers return, it may be necessary to open the lagoon to seining to adequately harvest the return. This is very undesirable due to the potential for a severe user group conflict.

#### Paint River

The most promising, barren system in Lower Cook Inlet, in terms of potential salmon production, is the Paint River system in the Kamishak Bay district. Preliminary work indicates that this river system has a large network of streams and interconnecting lakes with over 20 miles of potential salmon spawning and rearing habitat. A steep falls at the mouth of the river has precluded any natural salmon runs to this system. Another minor falls occurs just below the outlet of a series of lakes 12-15 miles upriver from the ocean. The F.R.E.D. Division has initiated studies to determine the feasibility of constructing a steep pass (fish ladder) at the intertidal falls. This system has the potential of supporting all five species of salmon and even steelhead to some varying degree with an estimated annual production of 1.5 to 2.0 million pink, chum and sockeye salmon.

The F.R.E.D. Division stocked a half million pink salmon fry in the river in 1980 and 1981 to get an estimate of survival of fry over the falls. Very few fish were observed returning in 1981. Eventually, adults may have to be airlifted from nearby spawning streams to start the run. The project has been submitted in the F.Y. 83 C.I.P. budget for construction of the fish pass.

#### Chenik Lake

Perhaps the major sockeye salmon producing system in Lower Cook Inlet in the 1920's-1940's, Chenik Lake presently has only a remnant run of several



### Scurvey Creek

Scurvey Creek was essentially a barren stream in the Outer district of Cook Inlet near Rocky Bay. The stream has over 2.7 miles of excellent salmon spawning area which has been unutilized due to a velocity barrier in a narrow canyon at the intertidal zone of the stream. A combined project between the Commercial Fisheries Division, F.R.E.D. Division and the Cook Inlet Aquaculture Association was developed in 1979 to open the stream for spawning and to start natural runs of pink and chum salmon in the stream above the barrier.

The project began in 1980 with the transplant of 3,000 pink salmon and 500 chum salmon into Scurvey Creek and allowed to spawn naturally in the stream. Port Dick pink salmon and Rocky River chum salmon were used during 1980 and in 1981 3,400 pinks and 1,000 chums from Rocky Bay were again air lifted by helicopter into the stream and allowed to spawn naturally. A natural "stair-step" type of fish pass was carved out of the rock with dynamite which will allow adults returning in 1982 to by-pass the velocity barrier. With normal survival rates experienced in this district, the pink salmon run could build to a run size of 250,000 by 1988. The 1982 pink salmon return is projected to be 9-12,000.

### Halibut Cove

The saltwater rearing facility at Halibut Cove Lagoon has been reduced from a year-round operation to just a summer rearing and release site for king salmon smolt. King salmon smolt releases were below 50,000 prior to 1978 when releases were increased to 100-225,000 per year. Most of the recent year releases were not held and fed in pens, but were released directly into the estuary. Most of the adult kings return as two or three ocean adults and with survival rates observed at Halibut Cove, the 1982 return could range

hundred to a thousand sockeye salmon returning annually. This lake is located several miles north of Paint River in Kamishak Bay and historical records indicate escapements in excess of 50,000 and harvests of up to 100,000 occurred during the 1930's.

A shallow falls at the mouth of the creek presents a partial barrier to sockeye trying to reach the lake. Over the past four decades, this falls may have even selected genetically for smaller fish that were able to get over the falls. In the late 1920's and early 1930's, the federal government used dynamite to keep the stream opened, but when this project was curtailed in the late 1930's, the sockeye salmon return gradually went downhill.

The F.R.E.D. Division began stocking Chenik Lake with sockeye fry in 1978. Annual stockings have occurred, except for 1980, with numbers increasing from 100,000 in 1978 to over 1.0 million in 1981. The lake is very clear and appears low in productivity and a fertilization program may have to be conducted until such time as enough adult carcasses can fertilize the lake naturally and the run reestablishes itself.

#### 4th of July Creek

A marine industrial park has been proposed by the City of Seward in the vicinity of 4th of July Creek in Resurrection Bay. The proposed development will eliminate a small pink and chum salmon spawning stream called Spring Creek and mitigation measures arranged with the city mandated construction of an artificial spawning channel and lagoon on the south side of the diverted 4th of July Creek.

The new spawning area contains approximately three 200 ft. sections of spawning area separated by two holding pools and a large lagoon near the ocean. Adult returns will be started in 1982 to replace the annual production that will be lost from Spring Creek.

### Fritz Creek

Coho salmon smolt have been released in Fritz Creek for the past four years in an attempt to increase the number of coho salmon available for harvest by the sport and subsistence fisheries. Stocking densities have ranged between 21,000 and 57,000 and have consisted of various sizes and age classes. Very little success has occurred to date and the problems have been attributed to parr reversion and the advanced rearing and release of age 0 smolt.

### Delight and Desire Lakes

Numerous lakes have been investigated as potentials for lake fertilization programs and Delight and Desire Lakes in the Nuka Bay area are two such candidates. Preliminary investigations began on these two low productivity lakes in 1977 and they appear to have excellent potential for fertilization. The primary aspect of using these lakes is that the effects can be assessed due to the lack of an interception cape fishery or mixed stock fishery existing on the returns before they reach the mouths of these lakes. One large hurdle has been introduced since the passage of ANILCA. This area is now located in the Kenai Fjords National Park and National Park policy prohibits such programs from being conducted on park lands.

### Miscellaneous

Many other projects are presently being reviewed in the Lower Cook Inlet area. Beluga Slough coho stocking, Caribou and Seldovia Lakes coho stocking, Gore Point Lake stream clearance and stocking with sockeye salmon, Tonsina Bay PNP hatchery, English Bay F.R.E.D. hatchery and Resurrection Bay pink salmon rearing are just a few projects under consideration. The Lower Cook Inlet area has considerable potential for supplemental salmon production through various techniques and most projects presently being reviewed have few management problems. All, however, will continue to impact the present staff and budgets.

## ACKNOWLEDGEMENTS

The author expresses grateful appreciation to the clerical staff, Hazel Vanderbrink, Lynn Drennan and Sally Morris who compiled data and typed the manuscript, but a special thanks is extended to the Tutka Bay Hatchery staff and Homer F.R.E.D. Division employees for providing so many fish to write about.

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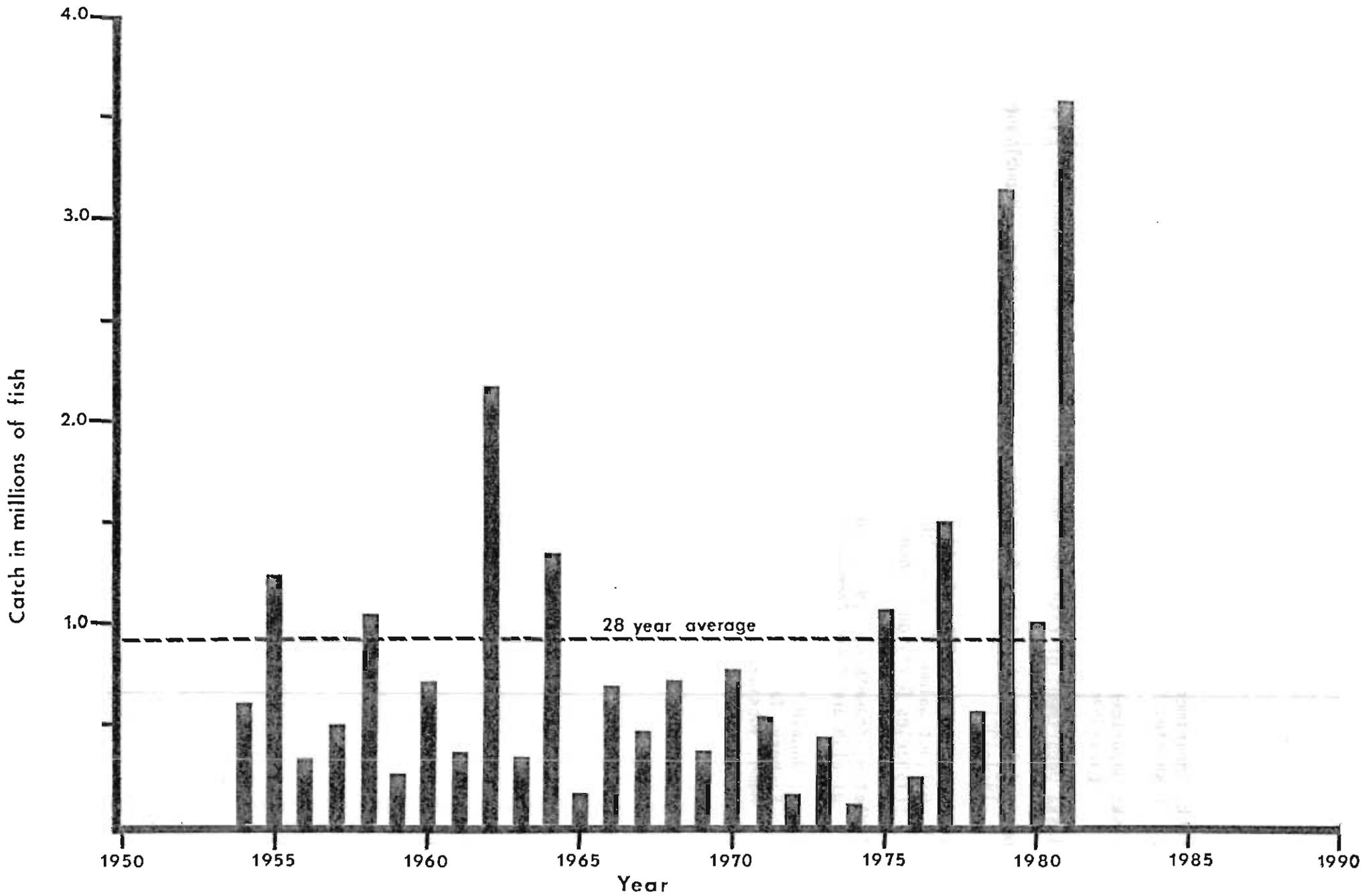


Figure 8. Lower Cook Inlet total salmon catch, 1954-1981.

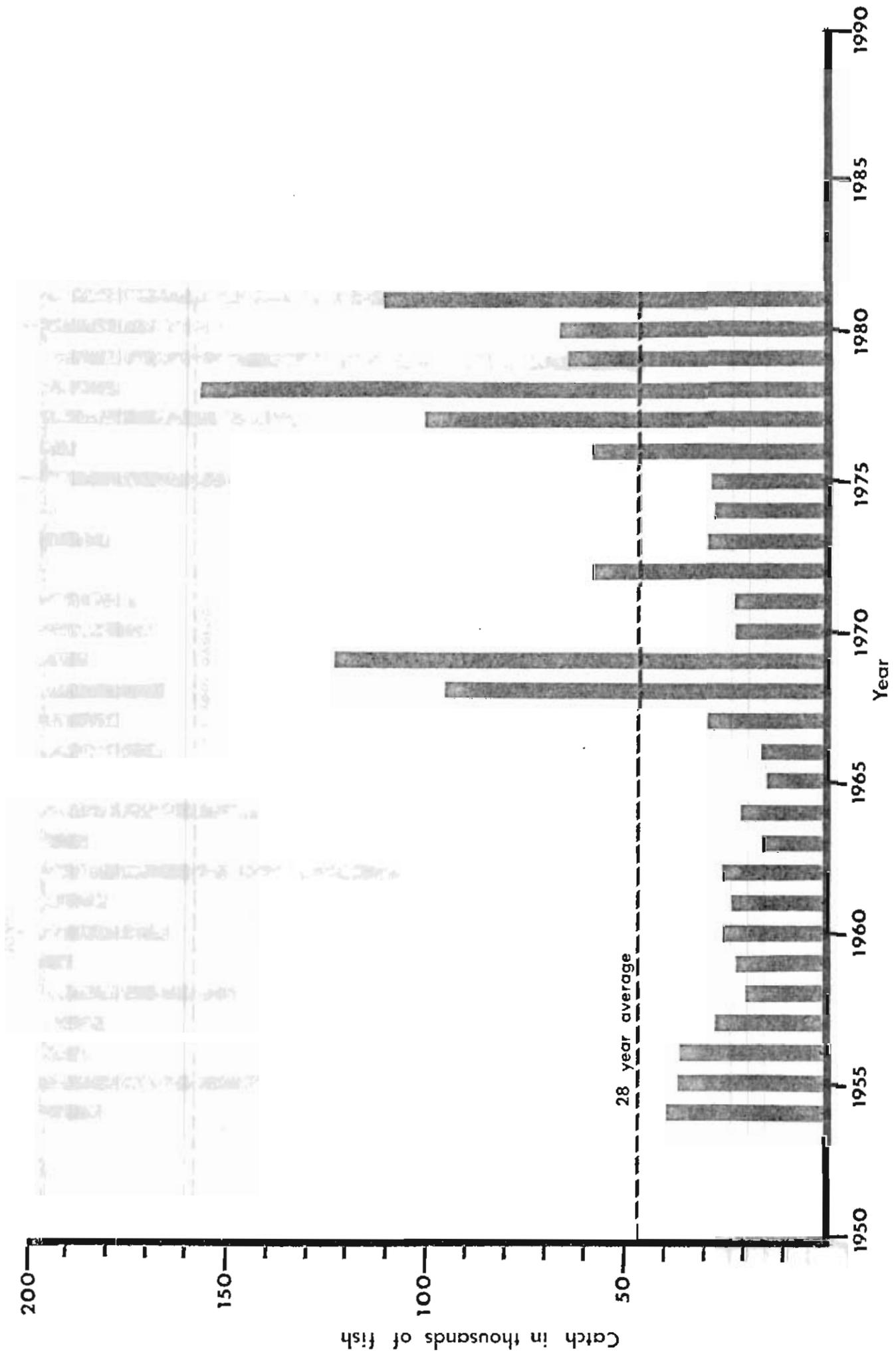


Figure 9 . Lower Cook Inlet sockeye salmon catch, 1954 - 1981.

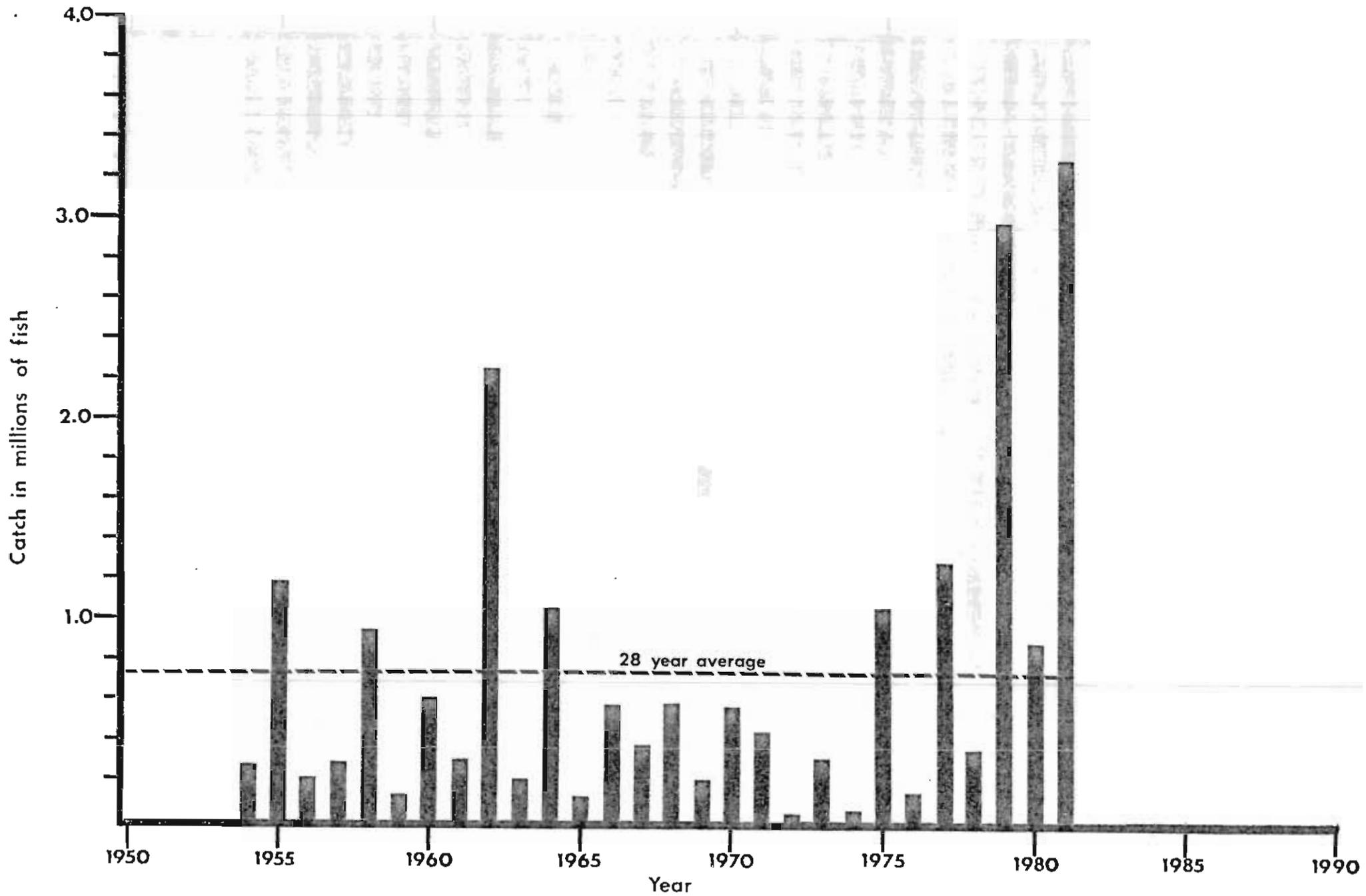


Figure 10. Lower Cook Inlet pink salmon catch 1954 - 1981

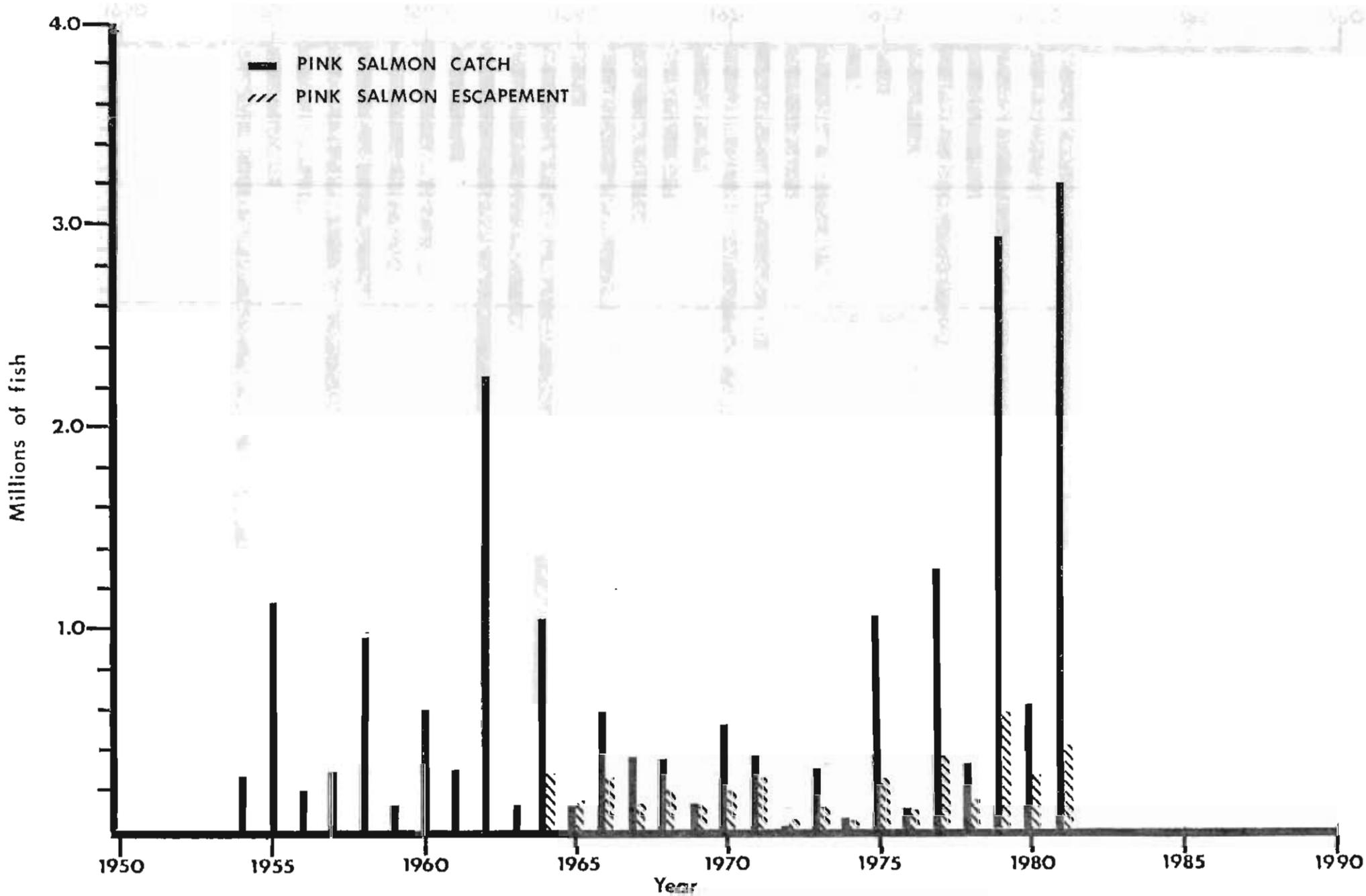


Figure 11. Southern and Outer Districts' pink salmon catch/escapement, 1954 - 1981.

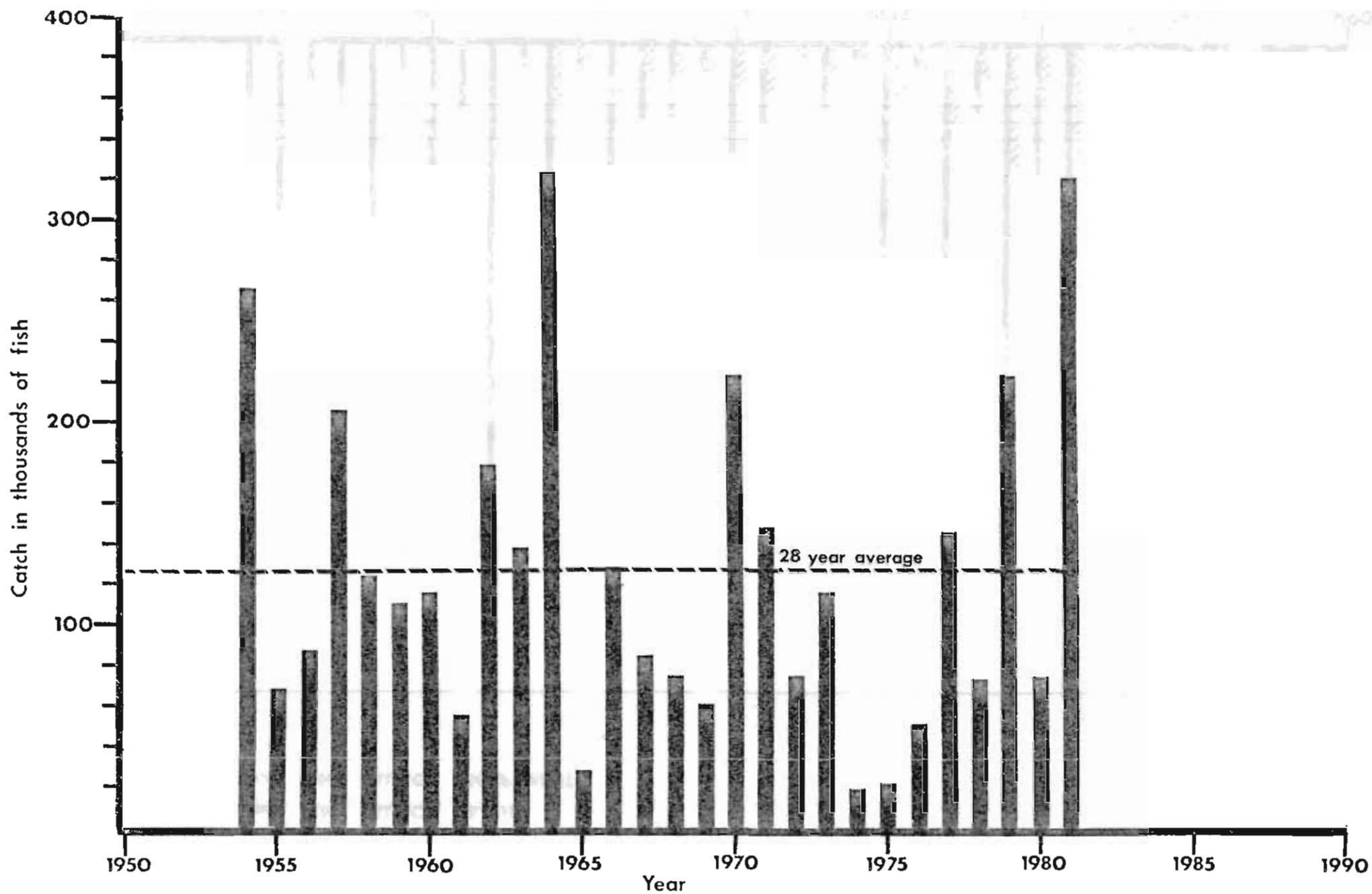


Figure 12. Lower Cook Inlet chum salmon catch, 1954 - 1981.

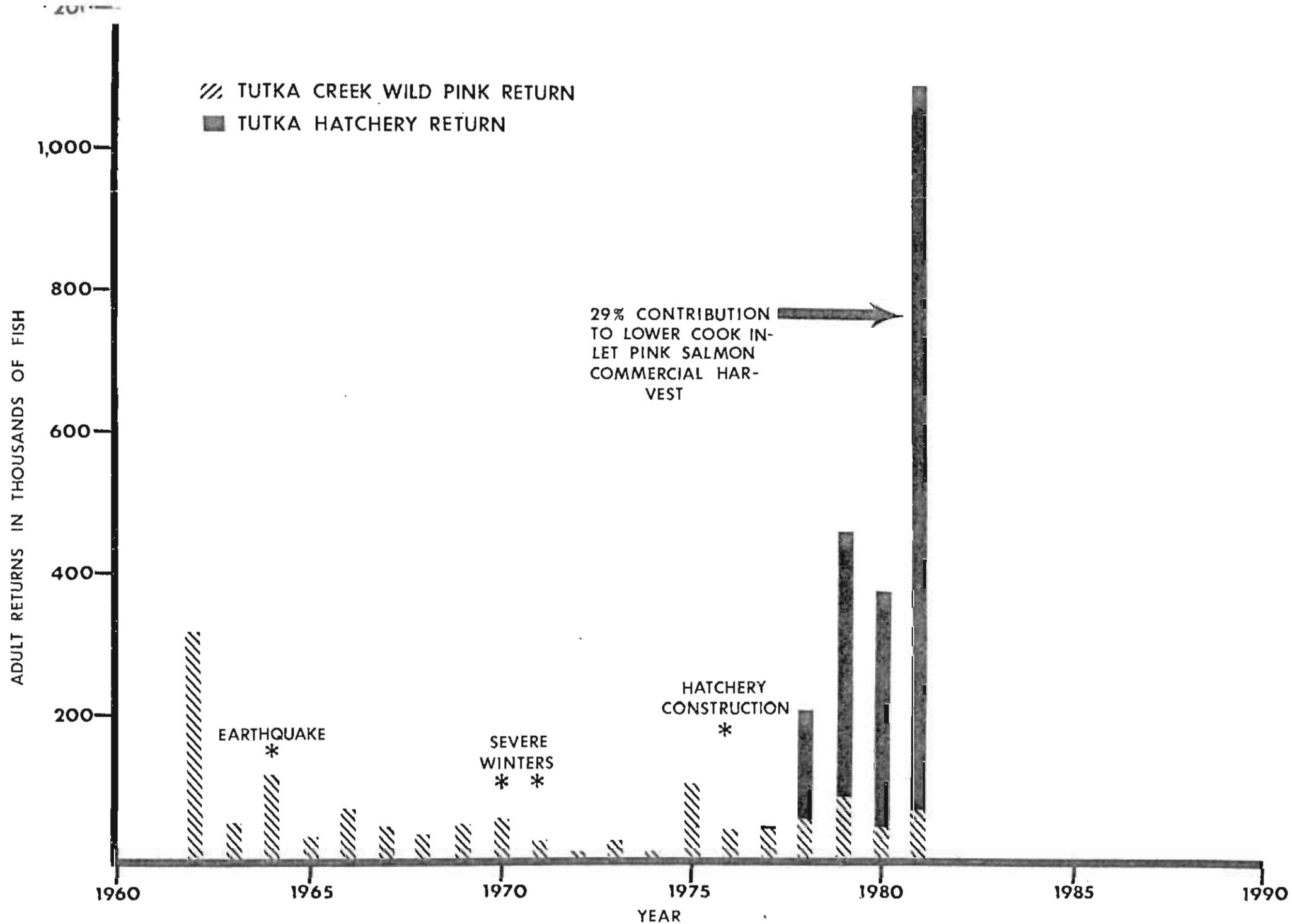


Figure 13. Tutka Creek wild pink salmon returns with recent years' hatchery contribution.



T A B L E S

Table 1. Lower Cook Inlet Salmon Catch by Species, District and Gear, 1981. 1/

|                | <u>King</u> | <u>Sockeye</u> | <u>Coho</u> | <u>Pink</u> | <u>Chum</u> | <u>Total</u> |
|----------------|-------------|----------------|-------------|-------------|-------------|--------------|
| Southern Set   | 256         | 54,181         | 6,993       | 68,541      | 16,734      | 146,705      |
| Seine          | 29          | 24,634         | 1,239       | 1,405,291   | 15,280      | 1,446,473    |
| Southern Total | 285         | 78,815         | 8,232       | 1,473,832   | 32,014      | 1,593,178    |
| Outer          | 61          | 17,762         | 83          | 1,723,717   | 226,226     | 1,967,849    |
| Eastern        | 0           | 9,270          | 0           | 49,886      | 3,234       | 62,390       |
| Kamishak       | 1           | 4,517          | 1,831       | 53,370      | 60,145      | 119,864      |
| TOTAL          | 347         | 110,364        | 10,146      | 3,300,805   | 321,619     | 3,743,281    |

1/ Preliminary data from processors' weekly catch reports.

Table 2. Preliminary Salmon Seine Catches by Species, Statistical Week and District for Lower Cook Inlet, 1981. 1/

| SPECIES                    |             |             |                |             |             |             |              |
|----------------------------|-------------|-------------|----------------|-------------|-------------|-------------|--------------|
| <u>Stat</u><br><u>Week</u> | <u>Date</u> | <u>King</u> | <u>Sockeye</u> | <u>Coho</u> | <u>Pink</u> | <u>Chum</u> | <u>Total</u> |
| <u>EASTERN DISTRICT</u>    |             |             |                |             |             |             |              |
| 26                         | 6/21-6/27   | 0           | 3,068          | 0           | 8           | 19          | 3,095        |
| 27                         | 6/28-7/4    | 0           | 3,846          | 0           | 40          | 86          | 3,972        |
| 28                         | 7/5-7/11    | 0           | 712            | 0           | 886         | 647         | 2,245        |
| 29                         | 7/12-7/18   | 0           | 1,535          | 0           | 3,856       | 50          | 5,441        |
| 30                         | 7/19-7/25   | 0           | 100            | 0           | 14,877      | 17          | 14,994       |
| 31                         | 7/26-8/1    | 0           | 7              | 0           | 27,486      | 2,415       | 29,908       |
| 32                         | 8/2-8/8     | 0           | 2              | 0           | 2,733       | 0           | 2,735        |
| <hr/> Total                |             | 0           | 9,270          | 0           | 49,886      | 3,234       | 62,390       |
| <u>OUTER DISTRICT</u>      |             |             |                |             |             |             |              |
| 25                         | 6/14-6/20   | 1           | 1,875          | 0           | 0           | 72          | 1,948        |
| 26                         | 6/21-6/27   | 0           | 4,565          | 0           | 1           | 237         | 4,803        |
| 27                         | 6/28-7/4    | 24          | 5,828          | 0           | 1,925       | 4,984       | 12,761       |
| 28                         | 7/5-7/11    | 31          | 4,615          | 0           | 38,268      | 70,571      | 113,485      |
| 29                         | 7/12-7/18   | 2           | 155            | 5           | 201,710     | 41,396      | 243,268      |
| 30                         | 7/19-7/25   | 1           | 521            | 1           | 497,662     | 61,475      | 559,660      |
| 31                         | 7/26-8/1    | 1           | 46             | 21          | 554,372     | 34,366      | 588,806      |
| 32                         | 8/2-8/8     | 1           | 156            | 22          | 281,082     | 12,373      | 293,634      |
| 33                         | 8/9-8/15    | 0           | 1              | 4           | 44,183      | 624         | 44,812       |
| 34                         | 8/16-8/22   | 0           | 0              | 30          | 104,514     | 128         | 104,672      |
| <hr/> Total                |             | 61          | 17,762         | 83          | 1,723,717   | 226,226     | 1,967,849    |

1/ Preliminary data from processors' weekly catch reports.

Table 2. Preliminary Salmon Seine Catches by Species, Statistical Week and District for Lower Cook Inlet, 1981. 1/ (Continued)

| Stat<br>Week             | Date      | SPECIES |         |       |           |        | Total     |
|--------------------------|-----------|---------|---------|-------|-----------|--------|-----------|
|                          |           | King    | Sockeye | Coho  | Pink      | Chum   |           |
| <u>SOUTHERN DISTRICT</u> |           |         |         |       |           |        |           |
| 26                       | 6/21-6/27 | 5       | 377     | 0     | 8,648     | 2,885  | 11,915    |
| 27                       | 6/28-7/4  | 3       | 8,635   | 2     | 101,302   | 2,539  | 112,481   |
| 28                       | 7/5-7/11  | 1       | 10,947  | 71    | 273,035   | 5,328  | 289,382   |
| 29                       | 7/12-7/18 | 0       | 4,220   | 199   | 351,835   | 590    | 356,844   |
| 30                       | 7/19-7.25 | 10      | 332     | 59    | 216,491   | 2,014  | 218,906   |
| 31                       | 7/26-8/1  | 10      | 98      | 62    | 214,225   | 1,352  | 215,747   |
| 32                       | 8/2-8/8   | 0       | 21      | 52    | 123,458   | 454    | 123,985   |
| 33                       | 8/9-8/15  | 0       | 4       | 75    | 95,988    | 109    | 96,176    |
| 34                       | 8/16-8/22 | 0       | 0       | 22    | 20,309    | 0      | 20,331    |
| 36                       | 8/30-9/5  | 0       | 0       | 620   | 0         | 9      | 629       |
| 37                       | 9/6-9/12  | 0       | 0       | 77    | 0         | 0      | 77        |
| Total                    |           | 29      | 24,634  | 1,239 | 1,405,291 | 15,280 | 1,446,473 |
| <u>KAMISHAK DISTRICT</u> |           |         |         |       |           |        |           |
| 26                       | 6/21-6/27 | 0       | 4,475   | 0     | 2         | 1,970  | 6,447     |
| 27                       | 6/28-7/4  | 0       | 36      | 0     | 6         | 3,233  | 3,275     |
| 29                       | 7/12-7/18 | 0       | 2       | 0     | 0         | 12,733 | 12,735    |
| 30                       | 7/19-7/25 | 0       | 0       | 1     | 1,335     | 28,949 | 30,285    |
| 31                       | 7/26-8/1  | 0       | 0       | 3     | 2,213     | 260    | 2,476     |
| 32                       | 8/2-8/8   | 0       | 1       | 175   | 5,713     | 7,912  | 13,801    |
| 33                       | 8/9-8/15  | 0       | 0       | 1,387 | 30,899    | 5,015  | 37,301    |
| 34                       | 8/16-8/22 | 1       | 3       | 265   | 13,202    | 73     | 13,544    |
| Total                    |           | 1       | 4,517   | 1,831 | 53,370    | 60,145 | 119,864   |

1/ Preliminary data from processors' weekly catch reports.

Table 2. Preliminary Salmon Seine Catches by Species, Statistical Week and District for Lower Cook Inlet, 1981. 1/ (Continued)

| SPECIES                    |             |             |                |             |             |             |              |
|----------------------------|-------------|-------------|----------------|-------------|-------------|-------------|--------------|
| <u>Stat Week</u>           | <u>Date</u> | <u>King</u> | <u>Sockeye</u> | <u>Coho</u> | <u>Pink</u> | <u>Chum</u> | <u>Total</u> |
| <u>TOTAL ALL DISTRICTS</u> |             |             |                |             |             |             |              |
| 25                         | 6/14-6/20   | 1           | 1,875          | 0           | 0           | 72          | 1,948        |
| 26                         | 6/21-6/27   | 5           | 12,485         | 0           | 8,659       | 5,111       | 26,260       |
| 27                         | 6/28-7/4    | 27          | 18,345         | 2           | 103,273     | 10,842      | 132,489      |
| 28                         | 7/5-7/11    | 32          | 16,274         | 71          | 312,189     | 76,546      | 405,112      |
| 29                         | 7/12-7/18   | 2           | 5,912          | 204         | 557,401     | 54,769      | 618,288      |
| 30                         | 7/19-7/25   | 11          | 953            | 61          | 730,365     | 92,455      | 823,845      |
| 31                         | 7/26-8/1    | 11          | 151            | 86          | 798,296     | 38,393      | 836,937      |
| 32                         | 8/2-8/8     | 1           | 180            | 249         | 412,986     | 20,739      | 434,155      |
| 33                         | 8/9-8/15    | 0           | 5              | 1,466       | 171,070     | 5,748       | 178,289      |
| 34                         | 8/16-8/22   | 1           | 3              | 317         | 138,025     | 201         | 138,547      |
| 36                         | 8/30-9/5    | 0           | 0              | 620         | 0           | 9           | 629          |
| 37                         | 9/6-9/12    | 0           | 0              | 77          | 0           | 0           | 77           |
| <hr/>                      |             |             |                |             |             |             |              |
| Total                      |             | 91          | 56,183         | 3,153       | 3,232,264   | 304,885     | 3,596,576    |

1/ Preliminary data from processors' weekly catch reports.

Table 3. Preliminary Southern District Set Net Catches by Species and Statistical Week, 1981. 1/

| Stat Week | Date      | SPECIES |         |       |        |        | Total   |
|-----------|-----------|---------|---------|-------|--------|--------|---------|
|           |           | King    | Sockeye | Coho  | Pink   | Chum   |         |
| 23        | 5/31-6/6  | 7       | 2,744   | 0     | 2      | 14     | 2,767   |
| 24        | 6/7-6/13  | 13      | 5,682   | 0     | 15     | 88     | 5,798   |
| 25        | 6/14-6/20 | 10      | 5,666   | 0     | 87     | 99     | 5,862   |
| 26        | 6/21-6/27 | 59      | 11,728  | 5     | 1,191  | 626    | 13,609  |
| 27        | 6/28-7/4  | 38      | 10,894  | 6     | 3,440  | 1,802  | 16,180  |
| 28        | 7/5-7/11  | 31      | 8,033   | 222   | 6,291  | 2,861  | 17,438  |
| 29        | 7/12-7/18 | 34      | 5,930   | 1,000 | 11,864 | 3,901  | 22,729  |
| 30        | 7/19-7/25 | 55      | 2,131   | 859   | 16,486 | 3,738  | 23,269  |
| 31        | 7/26-8/1  | 7       | 1,042   | 568   | 13,849 | 2,404  | 17,870  |
| 32        | 8/2-8/8   | 0       | 219     | 87    | 6,056  | 512    | 6,874   |
| 33        | 8/9-8/15  | 1       | 93      | 88    | 7,788  | 333    | 8,303   |
| 34        | 8/16-8/22 | 1       | 2       | 398   | 511    | 240    | 1,152   |
| 35        | 8/23-8/29 | 0       | 11      | 1,177 | 869    | 63     | 2,120   |
| 36        | 8/30-9/5  | 0       | 3       | 1,363 | 88     | 47     | 1,501   |
| 37        | 9/6-9/12  | 0       | 2       | 912   | 4      | 6      | 924     |
| 38        | 9/13-9/19 | 0       | 1       | 308   | 0      | 0      | 309     |
| Total     |           | 256     | 54,181  | 6,993 | 68,541 | 16,734 | 146,705 |

1/ Data Source: Compilation from processors' weekly catch reports.

Table 4. Escapement goals, average observed, and 1981 escapements of pink salmon in Lower Cook Inlet.

| <u>Southern District</u> | <u>Esc. Goal</u>  | <u>Average Esc. 1/</u> | <u>1981 Esc.</u> |
|--------------------------|-------------------|------------------------|------------------|
| Humpy Creek              | 25,000 - 50,000   | 50,000                 | 115,000          |
| Tutka Lagoon             | 6,000 - 10,000    | 12,000                 | 21,100           |
| Seldovia Creek           | 25,000 - 35,000   | 40,000                 | 62,700           |
| Port Graham River        | 20,000 - 40,000   | 15,000                 | 18,400           |
| China Poot Bay           | 5,000             | 9,000                  | 5,000            |
| Barbara Creek            | 18,000 - 24,000   | 5,000                  | 16,800           |
| Total                    | 99,000 - 164,000  | 131,000                | 239,000          |
| <u>Outer District</u>    |                   |                        |                  |
| Rocky River              | 50,000            | 21,000                 | 25,000           |
| Windy Left River         | 30,000 - 50,000   | 17,000                 | 31,300           |
| Windy Right River        | 10,000            | 5,000                  | 4,700            |
| Port Dick Creek          | 20,000 - 100,000  | 47,000                 | 106,000          |
| Island Creek             | 12,000 - 18,000   | 4,000                  | 25,000           |
| South Nuka Creek         | 10,000            | 13,000                 | 16,000           |
| Port Chatham Streams     | 10,000 - 15,000   | 10,000                 | 11,200           |
| Total                    | 142,000 - 253,000 | 117,000                | 219,200          |
| <u>Kamishak District</u> |                   |                        |                  |
| Big Kamishak River       | 20,000            | 31,000                 | ---              |
| Little Kamishak River    | 20,000            | 22,000                 | ---              |
| Amekegori Creek          | 5,000             | 16,000                 | 1,500            |
| Bruin Bay River          | 25,000 - 50,000   | 74,000                 | 95,000           |
| Sunday Creek             | 10,000            | 11,000                 | 14,200           |
| Brown's Peak Creek       | 10,000            | 10,000                 | 17,700           |
| Total                    | 90,000 - 115,000  | 164,000                | 128,400          |
| Lower Cook Inlet Total   | 331,000 - 532,000 | 402,000                | 586,600          |

1/ Average escapement figures are based on weir counts and ground and aerial surveys conducted between 1951 and 1981. For many streams, only several years' data exist.

Table 5. Lower Cook Inlet escapement goals, average observed and 1981 escapements for chum salmon. 1/

| <u>OUTER DISTRICT</u>         | <u>ESCAPEMENT GOAL (RANGE)</u>  | <u>AVERAGE OBSERVED ESCAPEMENT</u> | <u>1981 ESCAPEMENT</u> |
|-------------------------------|---------------------------------|------------------------------------|------------------------|
| Dogfish Lagoon                | 5,000 - 10,000                  | 6,000                              | 11,500                 |
| Port Chatham (streams)        | *                               | 1,500                              | 1,600                  |
| Windy Right River             | *                               | 1,500                              | 900                    |
| Windy Left River              | *                               | 1,300                              | 300                    |
| Rocky River                   | 20,000                          | 9,000                              | 12,500                 |
| Head End Creek                | 4,000                           | 6,400                              | 4,100                  |
| Island Creek                  | 10,000 - 15,000                 | 8,000                              | 17,500                 |
| Middle Creek                  | *                               | 2,000                              | 100                    |
| Petrof River                  | 2,000 - 5,000                   | 3,000                              | 2,400                  |
|                               | <u>41,000 - 54,000</u>          | <u>38,700</u>                      | <u>50,900</u>          |
| <u>KAMISHAK DISTRICT</u>      |                                 |                                    |                        |
| Silver Beach (streams)        | *                               | 4,000                              | 1,200                  |
| Main Left (streams)           | 5,000 - 10,000                  | 6,000                              | 1,900                  |
| Big Kamishak River            | 20,000                          | 13,000                             | 11,000                 |
| Little Kamishak River         | 20,000                          | 9,000                              | 6,000                  |
| McNeil River                  | 10,000 - 20,000                 | 26,000                             | 30,000                 |
| Cottonwood Creek              | 10,000                          | 7,500                              | 9,000                  |
| Iniskin River                 | 10,000                          | 16,000                             | 9,000                  |
| Bruin River                   | 5,000 - 10,000                  | 7,000                              | 10,000                 |
| Rocky Cove (Sunday Creek)     | *                               | 1,000                              | 800                    |
| Ursus Cove (streams)          | 5,000 - 10,000                  | 4,000                              | 10,000                 |
|                               | <u>85,000 - 110,000</u>         | <u>93,500</u>                      | <u>88,900</u>          |
| <u>SOUTHERN DISTRICT</u>      |                                 |                                    |                        |
| Seldovia River                | *                               | 1,200                              | 500                    |
| Port Graham River             | 4,000 - 8,000                   | 1,800                              | 4,800                  |
|                               |                                 | <u>3,000</u>                       | <u>5,300</u>           |
| <b>LOWER COOK INLET TOTAL</b> | <b><u>130,000 - 172,000</u></b> | <b><u>135,200</u></b>              | <b><u>145,100</u></b>  |

\* No established goal

1/Average escapement figures are based on weir counts and ground and aerial surveys conducted between 1951 and 1981. For many streams, only several years' data exist.

Table 6. Preliminary Estimate of Adult Pink Salmon return to Tutka Bay and Lagoon, 1981.

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|                       |                  |          |  |
|-----------------------|------------------|----------|--|
| Commercial Harvest:   |                  |          |  |
| Seine                 | 985,070          |          |  |
| Set Net               | <u>39,769</u>    |          |  |
|                       | 1,024,839        | Subtotal |  |
| Sport Catch           | 6,000            |          |  |
| Escapement:           |                  |          |  |
| Tutka Creek & Channel | 28,000           |          |  |
| Egg-Take              | <u>22,000</u>    |          |  |
| Total Return          | <u>1,080,839</u> |          |  |

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Tutka Lagoon Hatchery Contribution estimated at 1,015,988 or 95% of total run.

Table 7. Summary of Emergency Tutka Lagoon Openings for Pink Salmon, 1981.

| <u>Date</u> | <u>Duration</u> | <u>Boats</u>     | <u>Fish</u>           |
|-------------|-----------------|------------------|-----------------------|
| July 17     | 1 Hour          | 34               | 44,000                |
| July 23     | 1.5 Hours       | 17               | 33,400                |
| July 27     | 2 Hours         | 6                | 12,000                |
| July 28     | 1.5 Hours       | 4                | 10,000                |
| August 11   | 7 Hours         | 2                | 13,500                |
| August 17   | <u>4 Hours</u>  | <u>2</u>         | <u>7,240</u>          |
| Total       | 11 Hours        | 66 <sup>1/</sup> | <u><u>120,140</u></u> |

1/ Total Boat Effort

Table 8. Tutka Bay (241-16) Pink Salmon Seine Catches by Statistical Week.

| Week              | 1978               |             | 1979               |             | 1980               |             | 1981 1/            |             |
|-------------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|
|                   | Entire Subdistrict | Lagoon Only |
| 25                |                    |             |                    |             |                    |             |                    |             |
| 26                |                    |             | 3,786              |             | 3,691              |             | 8,612              |             |
| 27                |                    |             | 129,659            |             | 17,630             |             | 101,301            |             |
| 28                | 24,683             |             | 178,178            | 68,500      | 76,810             |             | 243,100            |             |
| 29                | 19,077             |             | 50,873             | 24,000      | 130,608            | 35,074      | 301,530            | 42,000      |
| 30                | 83,681             | 47,143      | 22,574             | 20,700      | 34,669             |             | 164,094            | 35,000      |
| 31                | 19,980             | 17,143      | 15,392             | 14,500      | 22,014             | 20,500      | 100,613            | 12,000      |
| 32                | 12,357             | 11,100      |                    |             | 22,755             | 21,481      | 40,911             | 10,000      |
| 33                | 818                |             |                    |             |                    |             | 16,966             | 13,700      |
| 34                |                    |             |                    |             |                    |             | 7,543              | 7,243       |
| Total Seine Catch | 160,596            | 75,386      | 400,462            | 127,700     | 308,177            | 77,055      | 984,670            | 119,943     |
| Set Net Catch     | 7,266              |             | 21,354             |             | 13,336             |             | 39,729             |             |
| Sport Catch       | ---                |             | 2,000              |             | 5,000              |             | 6,000              |             |
| Egg Take          | 21,100             |             | 21,200             |             | 26,897             |             | 22,000             |             |
| Escapement        | 15,000             |             | 10,600             |             | 17,300             |             | 28,000             |             |
| Total Return      | 203,962            |             | 455,616            |             | 370,710            |             | 1,080,399          |             |

1/ Preliminary Data only

Table 9. Estimated Pink Salmon Escapements in Thousands of Fish for the Nine Index Streams in the Southern and Outer Districts of Cook Inlet. 1/

| YEAR          | HUMPY   | TUTKA 3/ | SELDOVIA | PORT GRAHAM | WINDY LEFT 6/ | WINDY RIGHT | ROCKY 8/ | PORT DICK 6/ | ISLAND CREEK | TOTAL                             |
|---------------|---------|----------|----------|-------------|---------------|-------------|----------|--------------|--------------|-----------------------------------|
| 1964          | 18.5 2/ | 20.0     | 60.0     | 16.0        | 7.7           | 6.2         | 80.0     | 31.5         | 30.0         | 269.9                             |
| 1965          | 28.0    | 20.0     | 30.0     | 1.5         | 10.0          | 2.0         | .3       | 50.0         | .5           | 142.3                             |
| 1966          | 30.0    | 12.0     | 86.0     | 24.0        | 7.0           | 7.0         | 44.0     | 35.0         | 7.0          | 252.0                             |
| 1967          | 25.0    | 7.0      | 55.0     | 2.0         | 6.0           | 6.0         | 1.0      | 20.0         | .5           | 122.5                             |
| 1968          | 24.7    | 7.9      | 53.2     | 24.4        | 6.9           | 2.8         | 43.1     | 29.0         | 4.3          | 196.3                             |
| 1969          | 5.4     | 6.5      | 60.0     | 4.0         | 23.0          | 3.2         | 1.0      | 12.0         | .1           | 115.2                             |
| 1970          | 55.2    | 6.5      | 23.0     | 16.6        | 13.0          | 2.1         | 32.0     | 34.5         | 5.5          | 188.4                             |
| 1971          | 45.0    | 16.7     | 31.1     | 13.2        | 35.4          | 13.0        | 1.6      | 97.8 2/      | .1           | 253.9                             |
| 1972          | 13.8    | 1.5      | 5.8      | 2.4         | .4            | .1          | 8.2      | 10.0 2/      | 1.7          | 43.9                              |
| 1973          | 36.9    | 6.5      | 14.5     | 7.0         | 12.9          | 4.6         | 2.0      | 26.4 2/      | .5           | 111.3                             |
| 1974          | 17.4    | 2.6      | 13.7     | 2.8         | .1            | .1          | 1.5      | 1.5 2/       | .5           | 40.2                              |
| 1975          | 64.0    | 17.6     | 36.2     | 27.3        | 18.7          | 9.7         | 4.4      | 62.8 2/      | .1           | 240.8                             |
| 1976          | 27.2    | 11.5     | 25.6     | 6.5         | 0.2           | 0.2         | 2.7      | 12.7         | 0.0          | 86.6                              |
| 1977          | 86.0    | 14.0     | 35.7 4/  | 20.6 4/     | 47.3          | 11.1        | 36.7     | 109.3        | 0.6          | 361.3                             |
| 1978          | 46.1    | 15.0     | 24.6     | 6.7         | 1.1           | 0.3         | 8.2      | 44.9         | 0.4          | 147.3                             |
| 1979          | 200.0   | 10.6     | 43.8     | 32.7        | 74.8          | 10.4        | 85.5 4/  | 116.9        | 0.5          | 574.7                             |
| 1980          | 64.4    | 17.3     | 65.5     | 40.2        | 10.9          | 3.3         | 6.4 4/   | 56.1 7/      | 2.2          | 266.3                             |
| 1981          | 115.0   | 21.1     | 62.7     | 18.4        | 31.3          | 4.7         | 25.0     | 106.0        | 25.0         | 409.2                             |
| Total         | 902.6   | 214.3    | 726.4    | 266.3       | 306.7         | 86.8        | 383.1    | 853.4        | 79.5         | 3,819.1                           |
| Avg           | 50.1    | 11.9     | 40.4     | 14.8        | 17.0          | 4.8         | 21.3     | 47.4         | 4.4          | 212.2                             |
| Escape. Range | 22.5-30 | 4.5-7 5/ | 24-30    | 20-40       | 7.5-10        | 7.5-10      | 37.5-50  | 22.5-30      | 10-15        | 156-222 even yr<br>221-317 odd yr |

1/ Escapement estimate derived from peak counts or calculated from counts made throughout the spawning season.

When series counts were available, the total fish/days was divided by average stream life (2.5 weeks to estimate total escapement).

2/ Weir counts.

3/ Does not contain F.R.E.D. egg facility adult harvests of 3,400 in 1975; 10,814 pinks in 1976, 6,528 in 1977, 21,100 in 1978, 21,200 in 1979, 26,897 in 1980 and 20,606 in 1981.

4/ Due to flooding, expanded aerial survey counts were used to fill vacancies in ground counts.

5/ An additional 20,000 adults are needed for hatchery egg-take requirements.

6/ Escapement ranges have been increased to 25-35,000 for Windy Left and 70-100,000 in Port Dick in years where large numbers of upstream spawners return.

7/ 3,000 pinks transplanted in Scurvey Creek in 1980.

8/ 500 and 1,000 chums transplanted in Scurvey Creek in 1980 and 1981, respectively, along with 3,600 pinks in 1981.

Table 10. Estimated Chum Salmon Escapements in Thousands of Fish in the Major Spawning Systems in Lower Cook Inlet. 1/

| YEAR    | PORT GRAHAM | DOGFISH LAGOON | ROCKY RIVER | PT DICK HEAD | ISLAND CREEK | BIG KAMISHAK | LITTLE KAMISHAK | McNEIL RIVER | BRUIN BAY | URSUS COVE | COTTONWOOD CREEK | INISKIN BAY | TOTAL   |
|---------|-------------|----------------|-------------|--------------|--------------|--------------|-----------------|--------------|-----------|------------|------------------|-------------|---------|
| 1964    | 1.0         | 12.0           | 5.0         | 8.0          | 8.0          | 25.0         | *               | 90.0         | *         | *          | *                | 11.0        | 160.0   |
| 1965    | *           | 3.5            | *           | 3.5          | 4.0          | *            | *               | *            | *         | *          | *                | 0.7         | 11.7    |
| 1966    | *           | 11.0           | 7.0         | 4.0          | 6.0          | 5.0          | 0.5             | *            | *         | *          | *                | *           | 33.5    |
| 1967    | *           | 15.0           | 5.0         | 3.0          | 5.0          | *            | *               | *            | *         | *          | *                | *           | 28.0    |
| 1968    | 1.5         | 1.5            | 3.0         | 20.0         | 1.5          | *            | *               | *            | *         | *          | 5.0              | 5.0         | 37.5    |
| 1969    | *           | *              | 3.0         | 4.5          | 4.0          | *            | *               | *            | *         | *          | *                | *           | 11.5    |
| 1970    | 0.9         | 5.0            | *           | 6.0          | 8.5          | *            | *               | *            | *         | *          | 0.6              | *           | 21.0    |
| 1971    | 1.0         | 5.0            | 7.0         | 3.0          | 3.5          | *            | *               | *            | 1.0       | *          | 9.0              | 13.0        | 42.5    |
| 1972    | 1.5         | 3.0            | 3.0         | 6.0          | 2.0          | *            | *               | *            | 1.0       | 1.6        | 4.0              | 10.0        | 32.1    |
| 1973    | 2.0         | 1.0            | 2.0         | 9.0          | 7.0          | 4.0          | 1.0             | 10.0         | 8.0       | 3.0        | 4.0              | 12.0        | 63.0    |
| 1974    | 0.5         | 0.6            | 1.0         | 0.8          | 5.0          | 7.1          | 0.6             | 1.5          | 3.0       | 3.5        | 2.5              | 7.0         | 33.1    |
| 1975    | 3.0         | 5.0            | 25.0        | 4.0          | 7.4          | 1.1          | 1.9             | 1.5          | 1.5       | 5.0        | 8.0              | 7.0         | 70.4    |
| 1976    | 0.4         | 3.0            | 12.0        | 1.5          | 1.0          | 24.0         | 21.0            | 10.0         | 4.0       | 6.0        | 5.0              | 13.5        | 101.4   |
| 1977    | 5.2         | 6.4            | 10.5        | 5.0          | 11.1         | *            | *               | 20.0         | 18.0      | 9.3        | 10.0             | 4.4         | 99.9    |
| 1978    | 4.8         | 9.3            | 6.3         | 8.9          | 16.9         | 23.0         | 30.0            | 45.0         | 4.0       | 9.7        | 12.5             | 11.4        | 181.8   |
| 1979    | 2.2         | 8.2            | 35.0        | 4.0          | 16.8         | 15.0         | 15.0            | 8.0          | 15.0      | 5.0        | 2.5              | 4.0         | 130.7   |
| 1980    | 1.1         | 4.0            | 23.0        | 4.2          | 10.9         | 10.0         | 13.0            | 8.0          | 15.0      | 8.0        | 4.2              | 9.3         | 110.7   |
| 1981    | 4.8         | 11.5           | 12.5        | 4.1          | 17.5         | 11.0         | 6.0             | 30.0         | 10.0      | 10.0       | 9.0              | 9.0         | 135.4   |
| 18 Year |             |                |             |              |              |              |                 |              |           |            |                  |             |         |
| Total   | 29.9        | 105.0          | 160.3       | 99.5         | 136.1        | 125.2        | 89.0            | 224.0        | 30.5      | 61.1       | 76.3             | 117.3       | 1,304.2 |
| Avg     | 2.1         | 6.2            | 10.0        | 5.5          | 7.6          | 12.5         | 9.9             | 22.4         | 7.3       | 6.1        | 5.9              | 8.4         | 72.5    |
| Escape. |             |                |             |              |              |              |                 |              |           |            |                  |             |         |
| Goal    | 4.0-5.0     | 10-15          | 20-40       | 4.0-5.0      | 10-15        | 20-50        | 20-30           | 20-50        | 5-10      | 8-12       | 10-15            | 10-15       | 141-262 |

\* No surveys conducted due to numerous factors: i.e. weather, money.

1/ Most of these estimated escapements are either peak counts from aerial surveys or adjusted figures from aerial surveys based on survey conditions and time of surveys.

Table 11. Pink salmon alevin density by brood year for index streams in the Southern and Outer districts of Cook Inlet, 1964-1980 7/

| YEAR | HUMPY    | TUTKA  | SELDOVIA | PORT GRAHAM | WINDY LEFT | WINDY RIGHT | ROCKY    | PORT DICK | ISLAND CREEK | CHINA POOT 1/ | AVE. 9/ |
|------|----------|--------|----------|-------------|------------|-------------|----------|-----------|--------------|---------------|---------|
| 1964 | 199.1    | 195.8  | 284.1    | 242.1       | 100.1      | 75.3        | 131.3    | 222.7     | 80.7         | 0.0 6/        | 170.1   |
| 1965 | 245.7    | 154.7  | 151.3    | 40.5        | 21.2       | 48.4        | 0.0 2/   | 149.6     | 0.0          | 244.3         | 90.2    |
| 1966 | 131.3    | 120.5  | 136.6    | 165.7       | 28.3       | 13.9        | 11.4     | 43.4      | 67.4         | 673.8         | 79.8    |
| 1967 | 42.0     | 40.5   | 177.8 3/ | 58.1        | 39.8       | 83.9        | 0.0 2/   | 319.6     | 0.0          | 973.8         | 84.6    |
| 1968 | 628.4 5/ | 516.5  | 506.5    | 302.2       | 94.6       | 195.2       | 142.0 0/ | 236.1     | 67.3         | 1,933.6       | 298.8   |
| 1969 | 161.4 5/ | 348.0  | 493.2    | 247.9       | 325.8      | 779.0       | 0.0 2/   | 195.8     | 0.0          | 0.0 6/        | 283.5   |
| 1970 | 517.6    | 0.0 6/ | 0.0 6/   | 106.3       | 44.1       | 67.8        | 0.0 6/   | 62.4      | 23.7         | 0.0 6/        |         |
| 1972 | 94.7     | 149.3  | 208.3    | 79.2        | 0.0 2/     | 0.0 2/      | 18.0     | 39.8      | 11.8         | 1,035.1       | 66.8    |
| 1973 | 377.6    | 495.4  | 405.1    | 187.6       | 157.7      | 422.2       | 0.0      | 90.6      | 0.0 2/       | 0.0 6/        | 237.4   |
| 1974 | 391.1    | 584.3  | 553.2    | 167.7       | 0.0 2/     | 0.0 2/      | 0.2      | 25.4      | 0.0 2/       | 1,181.5       | 191.3   |
| 1975 | 724.1    | 581.3  | 368.1 8/ | 379.6       | 174.5      | 448.9       | 22.6     | 192.2 8/  | 0.0 2/       | 1,667.8       | 321.3   |
| 1976 | 214.0    | 372.8  | 315.7    | 85.7        | 0.0 2/     | 0.0 2/      | 0.5      | 144.5     | 0.0 2/       | 445.7         | 125.9   |
| 1977 | 1,005.5  | 353.2  | 398.0    | 207.8       | 405.0      | 611.3       | 30.4 8/  | 480.0     | 1.7          | 951.9         | 388.1   |
| 1978 | 306.8    | 491.2  | 394.8    | 191.7 10/   | 27.0 11/   | 27.0        | 29.8     | 208.5     | 4.5          | 657.1         | 186.8   |
| 1979 | 764.6    | 342.0  | 279.2    | 283.9       | 198.2 12/  | 260.4 12/   | 204.4    | 561.5     | 68.5         | 268.6         | 329.2   |
| 1980 | 68.4     | 194.5  | 179.6    | 161.7       | 162.8      | 148.1       | 0.0 13/  | 62.3      | 91.1         | 45.2          | 118.7   |

|       |         |         |         |         |         |         |       |         |       |          |         |
|-------|---------|---------|---------|---------|---------|---------|-------|---------|-------|----------|---------|
| Total | 5,872.3 | 4,950.0 | 4,850.5 | 2,907.7 | 1,779.1 | 3,181.4 | 590.4 | 3,034.4 | 416.7 | 10,081.4 | 2,993.0 |
| Avg.  | 367.0   | 309.4   | 303.2   | 181.7   | 111.2   | 198.8   | 42.2  | 189.7   | 26.0  | 630.1    | 192.1   |

- 1/ This stream was not used in further calculations (weighted averages).
- 2/ Estimated zero fry density since escapements were estimated to be below 300 spawners.
- 3/ Used average pre-emergent fry density from previous two odd years. Not sampled for 1967.
- 4/ Average even-year density from years 1962, 1964 and 1966.
- 5/ Used sample size of 150 points.
- 6/ Not sampled due to ice conditions.
- 7/ Sampling invalid due to lateness in 1971.
- 8/ Possibly had some early outmigration of pink salmon fry.
- 9/ Averages do not include China Poot.
- 10/ Incomplete sampling due to high water.
- 11/ Not sampled - assumed to be similar to Windy Right.
- 12/ Sampled late. Fry already emerged.
- 13/ Not sampled due to weather.

Table 12. Pink Salmon Catches for Lower Cook Inlet in Thousands of Fish by Bay During Odd Numbered Years. 1/

| Catch Location          | 1959         | 1961         | 1963         | 1965         | 1967         | 1969         | 1971         | 1973         | 1975           | 1977           | 1979           | 1981 2/        |
|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|----------------|----------------|
| Humpy Creek             | 13.2         | 67.9         | 57.4         | 13.8         | 40.4         | 0.6          | 11.4         | 44.3         | 339.4          | 26.9           | 298.0          | 250.0          |
| Tutka Bay               | 14.4         | 106.8        | 37.7         | 44.6         | 31.6         | 32.4         | 10.3         | 20.0         | 89.2           | 21.9           | 411.3          | 1,020.0        |
| Seldovia Bay            | 4.9          | 15.1         | 1.6          | 19.2         | 11.7         | 28.7         | 27.3         | 19.4         | 429.6          | 47.6           | 140.8          | 89.0           |
| Port Graham Bay         | 5.3          | 1.0          | 2.7          | 12.4         | 5.1          | 2.0          | 1.0          | 13.9         | 18.3           | 44.8           | 124.7          | 18.0           |
| Dogfish Bay             | 1.6          | 0            | 0            | 0.1          | 2.3          | 0            | 10.4         | 0.3          | 0              | 5.0            | 7.4            | 3.0            |
| Port Chatham            | 1.2          | 0            | 0.8          | 0            | 0            | 0            | 26.3         | 12.0         | 16.0           | 1.4            | 174.4          | 42.0           |
| Windy Bay               | 3.1          | 2.2          | 0            | 5.4          | 0            | 0            | 57.3         | 68.5         | 18.1           | 173.2          | 551.4          | 89.0           |
| Rocky Bay               | 2.3          | 0            | 1.4          | 0.1          | 0            | 0            | 0.1          | 0.2          | 0              | 11.6           | 122.2          | 3.0            |
| Port Dick Bay           | 28.2         | 92.9         | 19.0         | 15.3         | 259.9        | 51.5         | 94.6         | 96.6         | 90.3           | 880.3          | 962.9          | 1,052.3        |
| Nuka Bay                | 33.3         | 2.0          | 0.3          | 0            | 0.1          | 0            | 119.7        | 8.1          | 35.4           | 56.3           | 121.7          | 364.2          |
| Resurrection Bay        | 8.4          | 0            | 0            | 0            | 1.2          | 0            | 0            | 0            | 0              | 0              | 0              | 32.0           |
| Bruin Bay               | 0            | 0            | 12.3         | 0.9          | 2.1          | 0            | 11.7         | 0            | 0              | 6.2            | 40.3           | 42.0           |
| Rocky-Ursus Coves       | 3.7          | 2.7          | 44.2         | 0            | 13.0         | 52.8         | 16.4         | 7.9          | 0              | 0              | 14.4           | 19.0           |
| Iniskin-Cottonwood Bays | 1.5          | 3.3          | 21.8         | 0            | 0.1          | 26.0         | 0            | 4.7          | 0              | 0.1            | 0.2            | 0              |
| Miscellaneous           | 3.6          | 9.5          | 4.4          | 3.8          | 8.0          | 8.4          | 6.4          | 11.5         | 27.1           | 16.9           | 16.8           | 277.3          |
| <b>Total</b>            | <b>124.7</b> | <b>303.4</b> | <b>203.6</b> | <b>115.6</b> | <b>375.5</b> | <b>202.4</b> | <b>392.9</b> | <b>307.4</b> | <b>1,063.4</b> | <b>1,292.2</b> | <b>2,986.5</b> | <b>3,300.8</b> |

1/ Data source IBM computer runs, 1959-81.

2/ Preliminary data.

Table 13. Pink Salmon Catches for Lower Cook Inlet in Thousands of Fish by Bay During Even Numbered Years. 1/

| Catch Location          | 1960         | 1962           | 1964           | 1966         | 1968         | 1970         | 1972        | 1974        | 1976         | 1978         | 1980 2/      |
|-------------------------|--------------|----------------|----------------|--------------|--------------|--------------|-------------|-------------|--------------|--------------|--------------|
| Humpy Creek             | 71.6         | 108.8          | 82.4           | 40.7         | 43.9         | 114.1        | 2.1         | 35.4        | 73.1         | 44.0         | 65.2         |
| Tutka Bay               | 87.6         | 279.5          | 100.9          | 53.5         | 26.9         | 43.9         | 5.2         | 5.5         | 18.0         | 167.9        | 321.0        |
| Seldovia Bay            | 42.6         | 142.8          | 37.4           | 44.1         | 23.6         | 28.6         | 0.2         | 3.5         | 3.0          | 35.4         | 75.0         |
| Port Graham Bay         | 7.1          | 18.1           | 38.4           | 5.1          | 23.0         | 12.5         | 1.1         | 4.5         | 3.9          | 4.0          | 18.0         |
| Dogfish Bay             | 1.8          | 1.4            | 0.1            | 7.1          | 0            | 9.8          | 0.3         | 0           | 0            | 0            | 4.7          |
| Port Chatham            | 15.7         | 102.2          | 67.1           | 6.7          | 10.0         | 1.9          | 0           | 0           | 0            | 0            | 1.8          |
| Windy Bay               | 29.2         | 85.5           | 68.6           | 20.1         | 3.4          | 0.8          | 0           | 0           | 0            | 0            | 0            |
| Rocky Bay               | 17.0         | 225.9          | 53.2           | 0            | 10.8         | 39.8         | 0           | 0           | 0            | 0            | 1.4          |
| Port Dick Bay           | 257.4        | 1,118.3        | 526.3          | 296.8        | 55.0         | 193.8        | 0           | 0.6         | 0            | 63.6         | 112.4        |
| Nuka Bay                | 26.6         | 129.8          | 23.8           | 0            | 90.2         | 48.4         | 0.3         | 0.7         | 0.1          | 6.3          | 12.8         |
| Resurrection Bay        | 5.8          | 0.1            | 0.3            | 0            | 37.4         | 40.2         | 18.2        | 0           | 35.4         | 29.7         | 156.0        |
| Bruin Bay               | 2.6          | 0              | 0              | 0            | 126.2        | 10.2         | 0           | 0           | 0            | 0            | 125.0        |
| Rocky-Ursus Coves       | 6.6          | 3.2            | 13.5           | 2.9          | 18.0         | 7.5          | 0           | 0           | 0            | 0.1          | 0            |
| Iniskin-Cottonwood Bays | 2.1          | 3.2            | 4.3            | 0            | 9.9          | 3.5          | 0           | 0           | 0.1          | 0.1          | 0            |
| Miscellaneous           | 37.9         | 29.5           | 39.1           | 102.2        | 107.1        | 19.3         | 1.3         | 0.4         | 2.8          | 1.5          | 1.5          |
| <b>Total</b>            | <b>611.6</b> | <b>2,248.3</b> | <b>1,055.4</b> | <b>579.2</b> | <b>585.4</b> | <b>574.3</b> | <b>28.7</b> | <b>50.6</b> | <b>136.4</b> | <b>352.6</b> | <b>894.8</b> |

1/ Data source IBM computer runs, 1960-80.

2/ Preliminary data.

Table 14. Chum Salmon Catches for Lower Cook Inlet in Thousands of Fish by Bay by Year. 1/

| Catch Location     | 1959  | 1960  | 1961 | 1962  | 1963  | 1964  | 1965 | 1966  | 1967 | 1968 | 1969 |
|--------------------|-------|-------|------|-------|-------|-------|------|-------|------|------|------|
| Tutka              | 0.1   | 2.4   | 1.8  | 2.9   | 2.4   | 5.6   | 1.1  | 3.9   | 4.0  | 1.3  | 0.7  |
| Port Graham        | 2.3   | 1.8   | 0.5  | 4.0   | 3.8   | 2.1   | 0.9  | 5.3   | 3.0  | 2.3  | 1.3  |
| Dogfish            | 4.9   | 0.4   | 0.1  | 0     | 0.2   | 0     | 0    | 7.0   | 15.3 | 0.1  | 0    |
| Port Chatham       | 1.0   | 2.5   | 0    | 2.8   | 4.3   | 5.2   | 0    | 17.8  | 0    | 1.0  | 0    |
| Rocky-Windy        | 14.9  | 6.4   | 2.2  | 8.5   | 0.3   | 33.8  | 8.1  | 1.7   | 0    | 0.5  | 0    |
| Port Dick          | 42.4  | 53.9  | 36.8 | 112.0 | 110.8 | 227.4 | 14.2 | 60.9  | 36.0 | 10.9 | 5.4  |
| Nuka               | 1.7   | 8.4   | 1.7  | 0.5   | 1.5   | 0     | 0    | 0     | 1.5  | 6.9  | 0    |
| Resurrection       | 0.1   | 0.5   | 0    | 0     | 0     | 0     | 0    | 0     | 0.1  | 0.7  | 0    |
| Douglas River      | 0.2   | 0     | 0    | 0     | 0     | 0     | 0    | 0     | 0    | 0    | 0    |
| Kamishak River     | 0     | 0     | 0    | 0     | 0     | 0     | 0    | 0     | 0    | 3.7  | 0    |
| McNeil River       | 0     | 0.4   | 0    | 0     | 0     | 2.7   | 0.9  | 0     | 0.4  | 8.3  | 4.4  |
| Bruin              | 0     | 0.3   | 0.5  | 0     | 0.1   | 0     | 0.4  | 0     | 1.0  | 7.5  | 0    |
| Ursus-Rocky Coves  | 8.5   | 8.6   | 1.8  | 1.1   | 2.8   | 1.2   | 0    | 4.0   | 2.9  | 1.0  | 3.6  |
| Cottonwood-Iniskin | 12.1  | 35.4  | 10.2 | 41.7  | 10.9  | 38.4  | 0    | 0     | 19.0 | 25.5 | 44.4 |
| Miscellaneous      | 23.7  | 0     | 0    | 5.8   | 1.4   | 6.9   | 2.5  | 28.5  | 2.2  | 5.4  | 1.4  |
| Total              | 110.8 | 116.1 | 55.6 | 179.3 | 138.5 | 323.3 | 28.1 | 129.1 | 85.4 | 75.1 | 61.2 |

Table 14. Chum Salmon Catches for Lower Cook Inlet in Thousands of Fish by Bay by Year. 1/ (continued)

| Catch Location     | 1970         | 1971         | 1972        | 1973         | 1974        | 1975        | 1976        | 1977         | 1978        | 1979         | 1980 2/     | 1981 2/      |
|--------------------|--------------|--------------|-------------|--------------|-------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|
| Tutka              | 1.6          | 0.5          | 1.3         | 0.8          | 1.4         | 2.0         | 0.9         | 0.8          | 2.6         | 4.9          | 1.8         | 7.0          |
| Port Graham        | 4.8          | 2.0          | 3.2         | 2.6          | 1.0         | 2.2         | 0.5         | 5.0          | 2.4         | 4.3          | 2.3         | 20.0         |
| Dogfish            | 50.9         | 114.5        | 41.1        | 0.4          | 0           | 0           | 0           | 9.4          | 0           | 8.4          | 2.6         | 80.0         |
| Port Chatham       | 0.1          | 2.4          | 0           | 0.2          | 0           | 0.6         | 0           | 0.1          | 0           | 1.7          | 1.3         | 45.0         |
| Rocky-Windy        | 39.4         | 1.4          | 0           | 0.9          | 0           | 0.3         | 0           | 17.7         | 0           | 76.7         | 2.1         | 5.2          |
| Port Dick          | 21.8         | 0.7          | 0           | 33.4         | 8.1         | 6.8         | 0           | 25.6         | 9.1         | 79.0         | 21.0        | 77.2         |
| Nuka               | 5.9          | 0.1          | 2.3         | 40.8         | 3.9         | 3.6         | 0.4         | 17.4         | 0.4         | 14.7         | 7.8         | 0            |
| Resurrection       | 0.6          | 0.4          | 0.7         | 0            | 0           | 0           | 0           | 0            | 0.1         | 0            | 0.8         | 3.2          |
| Douglas River      | 0            | 0            | 0           | 0            | 0           | 0.1         | 7.1         | 4.0          | 2.9         | 0.7          | 8.1         | 17.0         |
| Kamishak River     | 0            | 0            | 2.4         | 0            | 0           | 0           | 10.5        | 0            | 23.9        | 17.8         | 2.8         | 5.0          |
| McNeil River       | 1.9          | 0            | 2.3         | 0            | 2.0         | 0           | 16.9        | 38.5         | 4.9         | 6.5          | 6.3         | 30.0         |
| Bruin              | 12.8         | 1.6          | 1.8         | 0            | 0.7         | 0           | 0           | 0            | 0           | 4.0          | 8.0         | 8.0          |
| Ursus-Rocky Coves  | 8.9          | 10.3         | 0.2         | 5.7          | 0           | 2.0         | 2.8         | 7.8          | 1.9         | 0.5          | 0           | 0            |
| Cottonwood-Iniskin | 71.9         | 14.5         | 19.7        | 29.9         | 0           | 2.8         | 11.5        | 15.3         | 14.9        | 0.2          | 0           | 0            |
| Miscellaneous      | 3.6          | 0.2          | 0.5         | 0.8          | 2.1         | 1.2         | 0.2         | 4.2          | 10.4        | 3.6          | 10.0        | 24.0         |
| <b>Total</b>       | <b>224.2</b> | <b>148.6</b> | <b>75.5</b> | <b>115.5</b> | <b>19.2</b> | <b>21.6</b> | <b>50.8</b> | <b>145.8</b> | <b>73.5</b> | <b>223.0</b> | <b>74.9</b> | <b>321.6</b> |

1/ Data source IBM computer runs, 1959-81.

2/ Preliminary data.

Table 15. Sockeye Salmon Catches for Lower Cook Inlet in Thousands of Fish by Bay by Year. 1/

| Catch Location   | 1959        | 1960        | 1961        | 1962        | 1963        | 1964        | 1965        | 1966        | 1967        | 1968        | 1969         | 1970        |
|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|
| Resurrection Bay | 0           | 0.1         | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 74.5        | 99.4         | 1.7         |
| Aialik Bay       | 1.3         | 0.2         | 4.3         | 2.6         | 0.5         | 0           | 0           | 0           | 0           | 0           | 0            | 3.1         |
| Nuka Bay         | 8.3         | 6.7         | 8.2         | 5.1         | 0.5         | 0           | 2.0         | 0           | 2.2         | 1.5         | 0            | 1.0         |
| Humpy Creek      | 1.3         | 1.4         | 0.8         | 2.0         | 1.1         | 0.7         | 1.4         | 1.5         | 1.9         | 2.7         | 1.6          | 1.3         |
| Tutka Bay        | 1.1         | 1.7         | 3.0         | 5.2         | 2.9         | 9.0         | 5.2         | 6.0         | 11.8        | 6.3         | 4.9          | 6.0         |
| Seldovia Bay     | 0.4         | 1.2         | 1.2         | 1.7         | 1.2         | 2.1         | 0.9         | 1.0         | 2.2         | 1.9         | 0.8          | 1.2         |
| Port Graham Bay  | 6.6         | 7.8         | 5.2         | 6.8         | 7.8         | 5.5         | 3.5         | 2.7         | 10.4        | 7.7         | 4.3          | 3.7         |
| Kamishak Bay     | 1.5         | 0.8         | 0           | 0           | 0           | 2.0         | 0.8         | 0           | 0.2         | 0.5         | 10.7         | 2.9         |
| Miscellaneous    | 1.1         | 4.8         | 1.0         | 1.9         | 1.1         | 1.4         | 2.0         | 4.1         | 3.0         | 0.1         | 11.0         | 1.4         |
| <b>Total</b>     | <b>21.6</b> | <b>24.7</b> | <b>22.8</b> | <b>25.3</b> | <b>15.1</b> | <b>20.7</b> | <b>14.0</b> | <b>15.3</b> | <b>29.0</b> | <b>95.2</b> | <b>122.8</b> | <b>22.3</b> |

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Table 15. Sockeye Salmon Catches for Lower Cook Inlet in Thousands of Fish by Bay by Year. 1/ (continued)

| Catch Location   | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977  | 1978  | 1979 | 1980 2/ | 1981 2/ |
|------------------|------|------|------|------|------|------|-------|-------|------|---------|---------|
| Resurrection Bay | 2.2  | 0.1  | 0    | 0    | 0    | 0    | 0     | 0     | 0    | 0       | 0       |
| Aialik Bay       | 0    | 0.3  | 3.1  | 0.2  | 0.6  | 0    | 5.8   | 0     | 0    | 0.1     | 9.2     |
| Nuka Bay         | 1.6  | 26.1 | 1.5  | 0.2  | 0    | 18.9 | 32.5  | 10.7  | 24.4 | 21.5    | 17.8    |
| Humpy Creek      | 1.3  | 3.7  | 2.1  | 3.0  | 3.5  | 5.4  | 3.8   | 12.9  | 6.2  | 11.5    | 13.0    |
| Tutka Bay        | 10.0 | 14.8 | 8.1  | 10.8 | 12.6 | 14.2 | 21.0  | 92.1  | 15.6 | 13.0    | 32.0    |
| Seldovia Bay     | 1.5  | 2.3  | 2.2  | 2.3  | 2.1  | 2.1  | 3.0   | 5.6   | 2.6  | 1.6     | 2.5     |
| Port Graham Bay  | 5.6  | 10.5 | 11.7 | 10.9 | 9.2  | 13.6 | 26.6  | 30.5  | 12.9 | 16.5    | 31.0    |
| Kamishak Bay     | 0    | 0    | 0    | 0    | 0    | 4.0  | 7.4   | 4.6   | 1.8  | 2.2     | 4.5     |
| Miscellaneous    | 0    | 1.0  | 5.0  | 0    | 1.0  | 0    | 0     | 0     | 9.0  | 0       | 4.0     |
| Total            | 22.2 | 57.9 | 29.2 | 27.4 | 28.1 | 58.2 | 100.1 | 156.4 | 64.4 | 66.4    | 110.4   |

1/ Data source IBM computer runs, 1959-81.

2/ Preliminary data.

Table 16. Salmon Catches by Species for Set Gill Nets in the Southern District of Lower Cook Inlet, 1958-1981. 1/

| YEAR        | KINGS | SOCKEYE | COHOS  | PINKS   | CHUMS  | TOTAL     |
|-------------|-------|---------|--------|---------|--------|-----------|
| 1958        | 42    | 3,872   | 165    | 2,293   | 2,274  | 8,646     |
| 1959        | 49    | 6,148   | 377    | 4,342   | 361    | 11,277    |
| 1960        | 6     | 7,007   | 398    | 3,894   | 347    | 11,652    |
| 1961        | 15    | 8,631   | 216    | 8,201   | 425    | 17,488    |
| 1962        | 13    | 11,793  | 1,281  | 12,207  | 1,558  | 26,852    |
| 1963        | 9     | 8,305   | 314    | 1,490   | 812    | 10,930    |
| 1964        | 5     | 16,632  | 1,576  | 25,935  | 1,972  | 46,120    |
| 1965        | 9     | 10,998  | 314    | 7,267   | 679    | 19,267    |
| 1966        | 31    | 10,317  | 505    | 24,981  | 1,790  | 37,624    |
| 1967        | 112   | 22,097  | 504    | 13,962  | 1,929  | 38,604    |
| 1968        | 31    | 15,741  | 1,431  | 12,614  | 1,289  | 31,106    |
| 1969        | 33    | 11,570  | 246    | 10,717  | 1,298  | 23,864    |
| 1970        | 26    | 11,455  | 1,154  | 18,512  | 1,575  | 32,722    |
| 1971        | 41    | 18,398  | 1,449  | 8,564   | 1,352  | 29,804    |
| 1972        | 69    | 31,340  | 323    | 6,303   | 2,819  | 40,854    |
| 1973        | 134   | 23,970  | 1,089  | 20,222  | 2,374  | 47,789    |
| 1974        | 175   | 26,996  | 3,010  | 11,097  | 2,713  | 43,991    |
| 1975        | 96    | 26,588  | 2,337  | 49,490  | 4,020  | 82,531    |
| 1976        | 176   | 33,993  | 1,321  | 13,431  | 1,353  | 50,274    |
| 1977        | 175   | 54,404  | 869    | 38,064  | 2,765  | 96,277    |
| 1978        | 1,052 | 86,934  | 3,053  | 11,556  | 4,117  | 106,712   |
| 1979        | 483   | 34,367  | 7,595  | 69,368  | 5,266  | 117,079   |
| 1980 2/     | 194   | 28,089  | 7,557  | 22,969  | 2,387  | 61,196    |
| 1981 2/     | 256   | 54,181  | 6,993  | 68,541  | 16,734 | 146,705   |
| 24 Yr Total | 3,232 | 563,826 | 44,077 | 466,020 | 62,209 | 1,139,364 |
| 24 Yr Avg   | 135   | 23,493  | 1,837  | 19,418  | 2,592  | 47,474    |
| % of Total  | 0.28  | 49.49   | 3.87   | 40.90   | 5.46   | 100.00    |

1/ Data source: Final IBM computer runs 1958-1979.

2/ Preliminary data.

Table 17. Lower Cook Inlet Salmon Catches By Species, 1954-1981. 1/

| <u>Year</u>    | <u>King</u> | <u>Sockeye</u> | <u>Coho</u> | <u>Pink</u> | <u>Chum</u> | <u>Total</u> |
|----------------|-------------|----------------|-------------|-------------|-------------|--------------|
| 1954           | 1,545       | 39,626         | 15,159      | 270,744     | 265,591     | 592,665      |
| 1955           | 573         | 36,600         | 9,675       | 1,184,328   | 68,710      | 1,299,886    |
| 1956           | 333         | 36,306         | 9,345       | 207,920     | 88,218      | 342,122      |
| 1957           | 419         | 26,917         | 1,765       | 285,613     | 206,450     | 521,164      |
| 1958           | 120         | 19,450         | 1,796       | 949,766     | 124,482     | 1,095,614    |
| 1959           | 132         | 21,637         | 6,352       | 124,748     | 110,838     | 263,707      |
| 1960           | 27          | 24,726         | 2,692       | 611,647     | 116,082     | 755,174      |
| 1961           | 41          | 22,776         | 1,619       | 303,377     | 55,593      | 383,406      |
| 1962           | 60          | 25,286         | 7,727       | 2,248,341   | 179,259     | 2,460,673    |
| 1963           | 96          | 15,121         | 6,736       | 203,616     | 138,510     | 364,079      |
| 1964           | 91          | 20,654         | 9,460       | 1,055,417   | 323,335     | 1,408,957    |
| 1965           | 10          | 14,002         | 862         | 115,598     | 28,076      | 158,548      |
| 1966           | 62          | 15,333         | 5,411       | 579,240     | 129,062     | 729,108      |
| 1967           | 176         | 29,044         | 2,726       | 375,488     | 85,445      | 492,879      |
| 1968           | 64          | 95,242         | 4,883       | 585,441     | 75,134      | 760,764      |
| 1969           | 64          | 122,796        | 623         | 202,444     | 61,203      | 387,130      |
| 1970           | 107         | 22,312         | 4,860       | 574,284     | 224,158     | 825,721      |
| 1971           | 73          | 22,234         | 4,561       | 392,871     | 148,602     | 568,341      |
| 1972           | 88          | 57,897         | 2,234       | 28,663      | 75,543      | 164,425      |
| 1973           | 145         | 29,209         | 2,101       | 307,403     | 115,513     | 454,371      |
| 1974           | 183         | 27,428         | 6,514       | 50,601      | 19,210      | 103,936      |
| 1975           | 143         | 28,142         | 6,211       | 1,063,432   | 21,646      | 1,119,574    |
| 1976           | 450         | 58,159         | 3,216       | 136,445     | 50,822      | 249,092      |
| 1977           | 217         | 100,058        | 2,872       | 1,292,153   | 145,778     | 1,541,078    |
| 1978           | 1,747       | 156,404        | 6,529       | 352,561     | 73,518      | 590,759      |
| 1979           | 1,238       | 64,417         | 12,250      | 2,986,534   | 223,028     | 3,287,467    |
| 1980 <u>2/</u> | 401         | 66,360         | 11,411      | 894,819     | 74,851      | 1,047,842    |
| 1981 <u>2/</u> | 347         | 110,364        | 10,146      | 3,300,805   | 321,619     | 3,743,281    |
| <hr/>          |             |                |             |             |             |              |
| 28 Yr Total    | 8,952       | 1,308,500      | 159,736     | 20,684,299  | 3,550,276   | 25,711,763   |
| 28 Yr Avg      | 320         | 46,732         | 5,705       | 738,725     | 126,796     | 918,277      |
| % of Total     | 0.03        | 5.09           | 0.62        | 80.45       | 13.81       | 100.00       |

1/ Data source: Final IBM computer runs, 1954-1981, and processor catch reports.

2/ Preliminary data.

Table 18. Southern District Salmon Catch By Species 1954-1981. 1/

| <u>Year</u> | <u>King</u> | <u>Sockeye</u> | <u>Coho</u> | <u>Pink</u> | <u>Chum</u> | <u>Total</u> |
|-------------|-------------|----------------|-------------|-------------|-------------|--------------|
| 1954        | 1,532       | 22,913         | 12,235      | 180,977     | 150,769     | 368,426      |
| 1955        | 562         | 30,848         | 3,230       | 565,216     | 24,398      | 624,254      |
| 1956        | 310         | 33,054         | 4,693       | 150,486     | 53,515      | 242,058      |
| 1957        | 286         | 19,431         | 1,507       | 130,511     | 57,403      | 209,138      |
| 1958        | 119         | 17,731         | 1,713       | 209,798     | 24,096      | 253,457      |
| 1959        | 71          | 7,720          | 709         | 50,244      | 13,967      | 72,711       |
| 1960        | 12          | 12,239         | 1,237       | 209,989     | 4,100       | 227,577      |
| 1961        | 39          | 10,104         | 1,149       | 191,867     | 2,916       | 206,075      |
| 1962        | 58          | 16,569         | 2,095       | 564,050     | 9,078       | 591,850      |
| 1963        | 88          | 13,142         | 4,020       | 99,820      | 7,523       | 124,593      |
| 1964        | 84          | 17,283         | 8,905       | 266,412     | 11,529      | 304,213      |
| 1965        | 10          | 11,185         | 733         | 90,260      | 2,458       | 104,646      |
| 1966        | 60          | 12,192         | 4,807       | 177,544     | 28,754      | 223,357      |
| 1967        | 173         | 26,349         | 2,379       | 92,793      | 23,416      | 145,110      |
| 1968        | 61          | 18,716         | 4,671       | 154,033     | 4,403       | 181,884      |
| 1969        | 59          | 12,578         | 485         | 70,753      | 2,600       | 86,475       |
| 1970        | 91          | 13,480         | 3,705       | 208,114     | 8,174       | 233,564      |
| 1971        | 41          | 18,403         | 3,151       | 50,066      | 2,857       | 74,518       |
| 1972        | 69          | 31,345         | 1,283       | 9,126       | 4,936       | 46,759       |
| 1973        | 139         | 24,145         | 1,241       | 97,574      | 3,588       | 126,687      |
| 1974        | 182         | 27,029         | 3,054       | 48,875      | 2,725       | 81,865       |
| 1975        | 142         | 27,393         | 3,039       | 893,709     | 5,428       | 929,711      |
| 1976        | 442         | 35,280         | 1,905       | 99,817      | 1,517       | 138,961      |
| 1977        | 182         | 53,124         | 1,239       | 156,696     | 6,723       | 217,964      |
| 1978        | 1,511       | 141,088        | 4,318       | 251,761     | 5,525       | 404,203      |
| 1979        | 1,199       | 37,342         | 10,688      | 982,529     | 12,759      | 1,044,517    |
| 1980 2/     | 389         | 41,555         | 9,266       | 480,603     | 4,376       | 536,189      |
| 1981 2/     | 285         | 78,815         | 8,232       | 1,473,832   | 32,014      | 1,593,178    |
| <hr/>       |             |                |             |             |             |              |
| 28 Yr Total | 8,196       | 811,053        | 105,689     | 7,957,455   | 511,547     | 9,393,940    |
| 28 Yr Avg   | 293         | 28,966         | 3,775       | 284,195     | 18,270      | 335,498      |
| % of Total  | 0.09        | 8.63           | 1.12        | 84.71       | 5.45        | 100.00       |

1/ Data source: Final IBM computer runs, 1954-1981, and processor catch reports.

2/ Preliminary data.

Table 19. Outer District Salmon Catch By Species, 1954-1981. 1/

| <u>Year</u> | <u>King</u> | <u>Sockeye</u> | <u>Coho</u> | <u>Pink</u> | <u>Chum</u> | <u>Total</u> |
|-------------|-------------|----------------|-------------|-------------|-------------|--------------|
| 1954        | 13          | 4927           | 368         | 82,205      | 112,877     | 200,390      |
| 1955        | 7           | 701            | 277         | 557,997     | 40,887      | 599,869      |
| 1956        | 23          | 2,889          | 190         | 42,368      | 19,248      | 64,718       |
| 1957        | 13          | 2,982          | 110         | 149,197     | 138,171     | 290,473      |
| 1958        | 1           | 1,719          | 83          | 739,768     | 100,386     | 841,957      |
| 1959        | 3           | 8,049          | 109         | 69,054      | 59,996      | 137,211      |
| 1960        | 4           | 11,614         | 574         | 381,375     | 67,187      | 460,754      |
| 1961        | 2           | 12,671         | 456         | 105,491     | 40,212      | 158,832      |
| 1962        | 2           | 8,697          | 1,893       | 1,684,023   | 126,767     | 1,821,382    |
| 1963        | 6           | 1,974          | 369         | 21,471      | 117,095     | 140,915      |
| 1964        | 2           | 1,370          | 431         | 767,473     | 269,514     | 1,038,790    |
| 1965        | 0           | 2,009          | 7           | 21,886      | 22,443      | 46,345       |
| 1966        | 1           | 3,120          | 357         | 398,751     | 87,620      | 489,849      |
| 1967        | 2           | 2,165          | 70          | 262,258     | 37,533      | 302,028      |
| 1968        | 1           | 1,550          | 106         | 191,691     | 20,398      | 213,746      |
| 1969        | 0           | 92             | 11          | 51,533      | 5,400       | 57,036       |
| 1970        | 5           | 4,177          | 243         | 302,831     | 118,746     | 426,002      |
| 1971        | 11          | 1,630          | 174         | 310,710     | 118,995     | 431,520      |
| 1972        | 7           | 26,423         | 17          | 1,005       | 43,490      | 70,942       |
| 1973        | 1           | 5,063          | 31          | 197,259     | 76,341      | 278,695      |
| 1974        | 1           | 399            | 28          | 1,678       | 11,931      | 14,037       |
| 1975        | 0           | 720            | 7           | 160,291     | 11,350      | 172,368      |
| 1976        | 7           | 18,886         | 0           | 93          | 412         | 19,398       |
| 1977        | 34          | 33,733         | 1,528       | 1,127,800   | 70,167      | 1,233,262    |
| 1978        | 236         | 10,695         | 45          | 70,080      | 19,224      | 100,280      |
| 1979        | 30          | 25,297         | 150         | 1,945,521   | 180,558     | 2,151,556    |
| 1980 2/     | 12          | 22,577         | 114         | 129,730     | 27,850      | 180,283      |
| 1981 2/     | 61          | 17,762         | 83          | 1,723,717   | 226,226     | 1,967,849    |
| <hr/>       |             |                |             |             |             |              |
| 28 Yr Total | 485         | 233,891        | 7,831       | 11,497,256  | 2,171,024   | 13,910,487   |
| 28 Yr Avg   | 17          | 8,353          | 280         | 410,616     | 77,537      | 496,803      |
| % of Total  | +           | 1.68           | 0.06        | 82.65       | 15.61       | 100.00       |

1/ Data source: Final IBM computer runs, 1954-1981, and processor catch reports.

2/ Preliminary data.

Table 20. Kamishak Bay District Salmon Catches By Species, 1954-1981. 1/

| <u>Year</u>    | <u>King</u> | <u>Sockeye</u> | <u>Coho</u> | <u>Pink</u> | <u>Chum</u> | <u>Total</u> |
|----------------|-------------|----------------|-------------|-------------|-------------|--------------|
| 1954           | 0           | 0              | 0           | 0           | 0           | 0            |
| 1955           | 0           | 2              | 8           | 5,121       | 278         | 5,409        |
| 1956           | 0           | 67             | 701         | 193         | 14,936      | 15,897       |
| 1957           | 0           | 4,335          | 29          | 5,905       | 10,856      | 21,125       |
| 1958           | 0           | 0              | 0           | 0           | 0           | 0            |
| 1959           | 0           | 1,549          | 43          | 5,325       | 23,574      | 30,491       |
| 1960           | 11          | 768            | 28          | 11,563      | 44,328      | 56,698       |
| 1961           | 0           | 1              | 14          | 6,019       | 12,465      | 18,499       |
| 1962           | 0           | 20             | 11          | 219         | 43,404      | 43,654       |
| 1963           | 2           | 4              | 97          | 82,314      | 13,892      | 96,309       |
| 1964           | 5           | 1,979          | 115         | 20,719      | 42,280      | 65,098       |
| 1965           | 0           | 808            | 122         | 3,452       | 3,175       | 7,557        |
| 1966           | 1           | 21             | 247         | 2,945       | 12,688      | 15,902       |
| 1967           | 1           | 182            | 74          | 17,340      | 24,221      | 41,818       |
| 1968           | 0           | 492            | 101         | 198,253     | 49,461      | 248,307      |
| 1969           | 2           | 10,723         | 121         | 80,157      | 53,193      | 144,196      |
| 1970           | 0           | 2,888          | 220         | 23,113      | 96,605      | 122,826      |
| 1971           | 0           | 3              | 121         | 32,094      | 26,327      | 58,545       |
| 1972           | 0           | 47             | 31          | 342         | 26,374      | 26,794       |
| 1973           | 0           | 1              | 28          | 12,568      | 35,584      | 48,181       |
| 1974           | 0           | 0              | 2,915       | 48          | 4,554       | 7,517        |
| 1975           | 0           | 29             | 3,041       | 9,432       | 4,868       | 17,370       |
| 1976           | 1           | 3,988          | 1,111       | 1,112       | 48,848      | 55,060       |
| 1977           | 1           | 7,425          | 105         | 6,308       | 65,659      | 79,498       |
| 1978           | 0           | 4,619          | 1,584       | 982         | 48,669      | 55,854       |
| 1979           | 9           | 1,778          | 1,116       | 58,484      | 29,711      | 91,098       |
| 1980 <u>2/</u> | 0           | 2,213          | 2,013       | 127,723     | 41,790      | 173,739      |
| 1981 <u>2/</u> | 1           | 4,517          | 1,831       | 53,370      | 60,145      | 119,864      |
| <hr/>          |             |                |             |             |             |              |
| 28 Yr Total    | 34          | 48,459         | 15,827      | 765,101     | 837,885     | 1,667,306    |
| 28 Yr Avg      | 1           | 1,731          | 565         | 27,325      | 29,924      | 59,547       |
| % of Total     | +           | 2.91           | 0.95        | 45.89       | 50.25       | 100.00       |

1/ Data source: Final IBM computer runs, 1954-1981, and processor catch reports.

2/ Preliminary data.

Table 21. Eastern District Salmon Catches By Species, 1954-1981. 1/

| <u>Year</u>    | <u>King</u> | <u>Sockeye</u> | <u>Coho</u> | <u>Pink</u> | <u>Chum</u> | <u>Total</u> |
|----------------|-------------|----------------|-------------|-------------|-------------|--------------|
| 1954           | 0           | 11,786         | 2,556       | 7,562       | 1,945       | 23,849       |
| 1955           | 4           | 5,049          | 6,160       | 55,994      | 3,147       | 70,354       |
| 1956           | 0           | 296            | 3,761       | 14,873      | 519         | 19,449       |
| 1957           | 120         | 169            | 119         | 0           | 20          | 428          |
| 1958           | 0           | 0              | 0           | 200         | 0           | 200          |
| 1959           | 58          | 4,319          | 5,491       | 125         | 13,301      | 23,294       |
| 1960           | 0           | 105            | 853         | 8,720       | 467         | 10,145       |
| 1961           | 0           | 0              | 0           | 0           | 0           | 0            |
| 1962           | 0           | 0              | 3,728       | 49          | 10          | 3,787        |
| 1963           | 0           | 1              | 2,250       | 11          | 0           | 2,262        |
| 1964           | 0           | 22             | 9           | 813         | 12          | 856          |
| 1965           | 0           | 0              | 0           | 0           | 0           | 0            |
| 1966           | 0           | 0              | 0           | 0           | 0           | 0            |
| 1967           | 0           | 348            | 203         | 3,097       | 275         | 3,923        |
| 1968           | 2           | 74,484         | 5           | 41,464      | 872         | 116,827      |
| 1969           | 3           | 99,403         | 6           | 1           | 10          | 99,423       |
| 1970           | 11          | 1,767          | 692         | 40,226      | 633         | 43,329       |
| 1971           | 21          | 2,198          | 1,115       | 1           | 423         | 3,758        |
| 1972           | 12          | 82             | 903         | 18,190      | 743         | 19,930       |
| 1973           | 5           | 0              | 801         | 2           | 0           | 808          |
| 1974           | 0           | 0              | 517         | 0           | 0           | 517          |
| 1975           | 1           | 0              | 124         | 0           | 0           | 125          |
| 1976           | 0           | 5              | 200         | 35,423      | 45          | 35,673       |
| 1977           | 0           | 5,776          | 0           | 1,349       | 3,229       | 10,354       |
| 1978           | 0           | 2              | 582         | 29,738      | 100         | 30,422       |
| 1979           | 0           | 0              | 296         | 0           | 0           | 296          |
| 1980 <u>2/</u> | 0           | 15             | 18          | 156,763     | 835         | 157,631      |
| 1981 <u>2/</u> | 0           | 9,270          | 0           | 49,886      | 3,234       | 62,390       |
| <hr/>          |             |                |             |             |             |              |
| 28 Yr Total    | 237         | 215,097        | 30,389      | 464,487     | 29,820      | 740,030      |
| 28 Yr Avg      | 8           | 7,682          | 1,085       | 16,589      | 1,065       | 26,430       |
| % of Total     | 0.03        | 29.07          | 4.11        | 62.76       | 4.03        | 100.00       |

1/ Data source: Final IBM computer runs, 1954-1981, and processor catch reports.

2/ Preliminary data.

Table 22.

Subsistence salmon harvest by species and month at Port Graham and English Bay, 1981. 1/

| Month     | % Calendars Returned | <u>Port Graham</u> |         |      |      |      | Total |
|-----------|----------------------|--------------------|---------|------|------|------|-------|
|           |                      | King               | Sockeye | Coho | Pink | Chum |       |
| May       | 84                   | 31                 | 543     | 0    | 0    | 0    | 574   |
| June      | 71                   | 11                 | 923     | 0    | 7    | 6    | 947   |
| July      | 71                   | 74                 | 209     | 0    | 74   | 92   | 449   |
| August    | 77                   | 0                  | 19      | 173  | 176  | 50   | 418   |
| September | 78                   | 0                  | 0       | 452  | 41   | 2    | 495   |
| Total     |                      | 116                | 1,694   | 625  | 298  | 150  | 2,883 |

| Month     | % Calendars Returned | <u>English Bay</u> |         |      |      |      | Total |
|-----------|----------------------|--------------------|---------|------|------|------|-------|
|           |                      | King               | Sockeye | Coho | Pink | Chum |       |
| May       | 77                   | 1                  | 609     | 0    | 0    | 0    | 610   |
| June      | 57                   | 10                 | 330     | 0    | 14   | 0    | 354   |
| July      | 70                   | 10                 | 53      | 1    | 92   | 5    | 161   |
| August    | 70                   | 3                  | 58      | 99   | 376  | 14   | 550   |
| September | 63                   | 0                  | 25      | 214  | 139  | 0    | 378   |
| Total     |                      | 24                 | 1,075   | 314  | 621  | 19   | 2,053 |

1/ Preliminary data. 47 permits issued at Port Graham and 29 at English Bay.

Table 23. Summary of Subsistence Fishermen in Lower Cook Inlet by Area of Residence.

| Area Residence<br>of Permittee | 1973 |      | 1975 |      | 1976 |      | 1977 |      | 1978 |      | 1979 |      | 1980 |      | 1981 |      |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                                | #    | %    | #    | %    | #    | %    | #    | %    | #    | %    | #    | %    | #    | %    | #    | %    |
| Homer                          | 108  | 73.0 | 118  | 75.2 | 182  | 70.0 | 153  | 77.3 | 214  | 68.8 | 276  | 62.7 | 310  | 58.2 | 274  | 71.4 |
| Anchorage Area                 | 20   | 13.5 | 13   | 8.3  | 24   | 9.2  | 8    | 4.0  | 40   | 12.9 | 67   | 15.2 | 81   | 15.2 | 43   | 11.2 |
| Halibut Cove                   | 6    | 4.1  | 6    | 3.8  | 9    | 3.5  | 8    | 4.0  | 5    | 1.6  | 2    | 0.5  | 0    | 0    | 8    | 2.1  |
| Anchor Point                   | 4    | 2.7  | 7    | 4.5  | 25   | 9.6  | 17   | 8.6  | 30   | 9.6  | 61   | 13.9 | 80   | 15.0 | 37   | 9.6  |
| Seldovia                       | 1    | 0.7  | 5    | 3.2  | 5    | 1.9  | 7    | 3.6  | 12   | 3.8  | 3    | 0.7  | 7    | 1.3  | 3    | 0.8  |
| Port Graham &<br>English Bay   | 3    | 2.0  | 2    | 1.3  | 4    | 1.5  | 0    | 0    | 3    | 1.0  | 0    | 0    | 0    | 0    | 1    | 0.3  |
| Kenai-Soldotna                 | 5    | 3.4  | 4    | 2.5  | 6    | 2.3  | 2    | 1.0  | 4    | 1.3  | 11   | 2.5  | 42   | 7.9  | 14   | 3.6  |
| Other                          | 1    | 0.7  | 2    | 1.3  | 5    | 1.9  | 3    | 1.6  | 3    | 1.0  | 20   | 4.6  | 13   | 2.4  | 4    | 1.0  |
| Total Permits<br>Issued        | 148  |      | 157  |      | 260  |      | 198  |      | 311  |      | 440  |      | 533  |      | 384  |      |

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Table 24. Subsistence Fishery Catches for the Southern District of Cook Inlet, 1969-1981. 1/

| YEAR             | ISSUED | RETURNED | PERMITS NOT<br>FISHED | PERCENT<br>RETURNED | KING | RED | COHO   | PINK  | CHUM | OTHER   | TOTAL  |
|------------------|--------|----------|-----------------------|---------------------|------|-----|--------|-------|------|---------|--------|
| 1969             | 47     | 44       | 9                     | 93.6                | 0    | 9   | 752    | 38    | 0    | 17      | 816    |
| 1970             | 78     | 73       | 18                    | 93.6                | 0    | 12  | 1,179  | 143   | 13   | 39      | 1,386  |
| 1971             | 112    | 95       | 42                    | 84.8                | 2    | 16  | 1,549  | 44    | 7    | 20      | 1,638  |
| 1972             | 135    | 105      | 41                    | 77.8                | 1    | 11  | 975    | 48    | 69   | 19      | 1,123  |
| 1973             | 143    | 128      | 46                    | 89.5                | 0    | 18  | 1,304  | 84    | 40   | 9       | 1,455  |
| 1974             | 147    | 118      | 66                    | 80.3                | 0    | 16  | 376    | 43    | 77   | 27      | 539    |
| 1975             | 292    | 276      | 55                    | 94.5                | 4    | 47  | 1,960  | 632   | 61   | 95      | 2,799  |
| 1976             | 242    | 221      | 83                    | 91.3                | 16   | 46  | 1,962  | 1,513 | 56   | 75      | 3,668  |
| 1977             | 197    | 179      | 42                    | 90.9                | 12   | 46  | 2,216  | 639   | 119  | 84      | 3,116  |
| 1978             | 311    | 264      | 113                   | 84.9                | 4    | 35  | 2,482  | 595   | 34   | 89      | 3,239  |
| 1979             | 437    | 401      | 163                   | 91.8                | 6    | 37  | 2,118  | 2,251 | 41   | 130     | 4,583  |
| 1980 3/          | 533    | 494      | 195                   | 92.7                | 43   | 32  | 3,491  | 1,021 | 25   | 153 2/  | 4,765  |
| 1981             | 384    | 374      | 100                   | 97.4                | 25   | 64  | 4,314  | 732   | 89   | +100 4/ | 5,324  |
| 13 Year<br>Total | 3,058  | 2,772    | 973                   | ---                 | 113  | 389 | 24,678 | 7,783 | 631  | 857     | 34,451 |
| 13 Yr Avg        | 235    | 213      | 75                    | 89.5                | 9    | 30  | 1,898  | 599   | 49   | 66      | 2,651  |

1/ A subsistence fishery occurred in Resurrection Bay from 1970 to 1972 with a total catch of 222 salmon of which 92 percent were red salmon.

2/ Steelhead.

3/ Data for 1980 do not contain 953 reds and 5 pinks taken in the China Poot dipt net fishery. 220 permits were issued, 206 returned and 112 did not fish.

4/ Additional flounders were caught, but not counted.

(Compiled 2-1-82)

Table 25. Subsistence Fishery Catches for the Southern District of Cook Inlet by Beach Area for 1981.

| Beach Area                    | PERMITS |              |              | Kings | Reds | Cohos | Pinks | Chums | Other <u>1/</u> | Total Catch |
|-------------------------------|---------|--------------|--------------|-------|------|-------|-------|-------|-----------------|-------------|
|                               | Issued  | Not Returned | Did Not Fish |       |      |       |       |       |                 |             |
| Homer Spit                    | 84      | 7            | 28           | 20    | 20   | 350   | 102   | 6     | 0               | 498         |
| Mud Bay to<br>Fritz Creek     | 131     | 1            | 30           | 2     | 25   | 2,240 | 87    | 41    | 97              | 2,492       |
| Northwest Shore               | 26      | 1            | 13           | 3     | 3    | 54    | 19    | 24    | 3 <u>2/</u>     | 106         |
| Fritz Creek to<br>Swift Creek | 100     | 7            | 17           | 0     | 15   | 1,498 | 124   | 15    | 0               | 1,652       |
| Bear Cove to<br>Neptune Bay   | 34      | 3            | 9            | 0     | 0    | 142   | 364   | 0     | 0               | 506         |
| Tutka Bay area                | 9       | 1            | 3            | 0     | 1    | 30    | 36    | 3     | 0               | 70          |
| Total                         | 384     | 10           | 100          | 25    | 64   | 4,314 | 732   | 89    | 100             | 5,324       |

1/ Unidentified, flounders and 1 dolly.

2/ Plus flounders not counted

|     |     |
|-----|-----|
| 1   | 1   |
| 2   | 2   |
| 3   | 3   |
| 4   | 4   |
| 5   | 5   |
| 6   | 6   |
| 7   | 7   |
| 8   | 8   |
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| 96  | 96  |
| 97  | 97  |
| 98  | 98  |
| 99  | 99  |
| 100 | 100 |

APPENDIX TABLES

Appendix Table 1. Emergency Order Commercial Fishing Periods in Lower Cook Inlet, 1981.

| <u>Number</u> | <u>Date</u> | <u>Description</u>   |
|---------------|-------------|--|
| 2H-017-81     | June 11     | Opened the Bruin Bay, McNeil and Kamishak-Douglas subdistricts at 6:00 a.m. June 12 and extended through normal weekend closure on June 13-15.   |
| 2H-018-81     | June 16     | Extended fishing in Bruin Bay, McNeil and Kamishak-Douglas subdistricts during normal midweek closure on June 17.  |
| 2H-019-81     | June 16     | Allowed fishing in McNeil River Lagoon and up to the mouth of Amakdedori Creek 6:00 a.m. Wednesday, June 17.   |
| 2H-020-81     | June 17     | Opened the East Nuka and Aialik Bay subdistricts for 18 hours, 12 noon Saturday June 20 until 6 a.m. June 21 and from 6:00 a.m. June 22 on regular two 48 hour periods per week. East Nuka opening was by flare and a one mile radius closure was in effect around the mouth of Delight Lake Creek.        |
| 2H-021-81     | June 17     | Adjusted weekly periods for East Nuka and Aialik subdistrict openings.   |
| 2H-024-81     | June 23     | Opened the Tutka Bay subdistrict and the China Poot section of the Humpy Creek subdistrict 6 a.m. Thursday, June 25. Fishing allowed up to the mouth of Tutka Lagoon and up to markers at China Poot Creek. Also allowed fishing in Aialik Lagoon and up to the mouth at Desire Lake Creek 6 a.m. June 25. |
| 2H-025-81     | June 25     | Closed McNeil River Lagoon 6:00 p.m. June 25.  |
| 2H-026-81     | June 28     | Opened Dogfish Bay subdistrict and waters within a 2 mile radius of Anderson Beach Creek 6:00 a.m. Monday, June 29. Fishing allowed up to mouth of Anderson Beach Creek.   |
| 2H-027-81     | June 28     | Opened waters of Port Dick subdistrict for 12 hours 9 a.m. until 9 p.m. Monday, June 29 southwest of a line from a marker on the northwest shore of Middle Creek to the southeast point of Shelter Cove.   |

Appendix Table 1. Emergency Order Commercial Fishing Periods in Lower Cook Inlet, 1981. (continued)

| <u>Number</u> | <u>Date</u> | <u>Description</u>  |
|---------------|-------------|---|
| 2H-028-81     | July 4      | Closed the Port Graham subdistrict to set gill net fishing and closed Aialik Lagoon and the East Nuka and McNeil River sub-districts to seining on July 4.  |
| 2H-029-81     | July 4      | Opened the Seldovia Bay subdistrict and waters of the Port Dick subdistrict southeast of the Middle Creek to Shelter Cove line at 6:00 a.m. Monday, July 6.   |
| 2H-030-81     | July 6      | Opened the Port Chatham subdistrict 6:00 a.m. Tuesday July 7 and opened the Port Graham Bay subdistrict to seining for 24 hours from 6:00 a.m. Tuesday, July 7 until 6:00 a.m. Wednesday, July 8 southeast of the Whitney-Fidalgo dock.   |
| 2H-032-81     | July 9      | Opened McCarty Lagoon in the East Nuka sub-district by flare for 1 hour at 3:00 p.m. Friday, July 10. Opened Dogfish Lagoon for 30 minutes by flare from 8:30-9:00 p.m. Friday, July 10. Moved markers at Island Creek in Port Dick by flare for 12 hours from 6:00 p.m. Friday, July 10 until 6:00 a.m. Saturday, July 11. |
| 2H-033-81     | July 9      | Opened the Port Graham subdistrict to seining for 24 hours from 6:00 a.m. Friday, July 10 until 6:00 a.m. Saturday, July 11 southeast of the Whitney-Fidalgo dock.  |
| 2H-034-81     | July 11     | Reopened the Port Graham subdistrict to set gill net fishing and the East Nuka sub-district to seining 6:00 a.m. Monday, July 13.   |
| 2H-035-81     | July 13     | Reopened McNeil River subdistrict 6:00 a.m. Tuesday, July 14.   |
| 2H-037-81     | July 14     | Closed Seldovia Bay and Port Chatham sub-districts 6:00 a.m. Wednesday, July 15.  |
| 2H-038-81     | July 16     | Opened Tutka Lagoon for one hour from 9:00 until 10:00 a.m. Friday, July 17.  |

Appendix Table 1. Emergency Order Commercial Fishing Periods in Lower Cook Inlet, 1981. (continued)

| <u>Number</u> | <u>Date</u> | <u>Description</u>   |
|---------------|-------------|--|
| 2H-039-81     | July 18     | Opened Humpy Creek subdistrict 6:00 a.m. Monday, July 20. Opened entire Outer district except for the Rocky Bay, Port Chatham and Nuka Island subdistricts at 6:00 a.m. Monday, July 20. Opened Nuka Island subdistrict for 6 hours from 1:00 until 7:00 p.m. Monday, July 20. A one mile closure was in effect south of the mouth of Petrof Glacier Creek.  |
| 2H-040-81     | July 18     | Opened James Lagoon for 1½ hours from 2:30 until 4:00 p.m. Monday, July 20 and Dogfish Lagoon for 30 minutes from 3:30 until 4:00 p.m. Monday, July 20.  |
| 2H-041-81     | July 19     | Opens McNeil River and Bruin Bay subdistricts to fishing seven days per week at 9:00 a.m. Sunday, July 19.   |
| 2H-042-81     | July 20     | Extends fishing time in Nuka Island subdistrict at 7:00 p.m. Monday, July 20 on regular weekly periods and put a two mile radius closure around the mouth of Petrof Glacier Creek.   |
| 2H-043-81     | July 22     | Opens Dogfish Lagoon by flare and the Port Chatham subdistrict for two hours from 6:00 a.m. until 8:00 a.m. Thursday, July 23. Opens James Lagoon by flare for 30 minutes from 3:30 until 4:00 p.m. July 23. Opens Barabara Creek subdistrict by flare for one hour from 7:00 until 8:00 a.m. Thursday, July 23. Opens Tutka Lagoon by flare for 1½ hours from 5:00 until 6:30 a.m. Thursday, July 23. Adjusts markers at South Nuka Island Creek by flare for one hour from 1:00 until 2:00 p.m. Thursday, July 23. |
| 2H-046-81     | July 23     | Closes the Nuka Island subdistrict at 6:00 a.m. Friday, July 24.   |
| 2H-047-81     | July 24     | Opens Barabara Creek subdistrict for 15 hours from 3:00 p.m. Friday, July 24 until 6:00 a.m. Saturday, July 25.  |

Appendix Table 1. Emergency Order Commercial Fishing Periods in Lower Cook Inlet, 1981. (continued)

| <u>Number</u> | <u>Date</u> | <u>Description</u>   |
|---------------|-------------|--|
| 2H-048-81     | July 24     | Opens the entire Southern district except the Northshore and Barabara Creek sub-districts at 3:00 p.m. Friday, July 24 and allows fishing seven days per week in the Southern district and the Dogfish Bay sub-district. Markers are adjusted at Seldovia Bay and Humpy Creek. |
| 2H-049-81     | July 28     | Opens Resurrection Bay for 48 hours from 6:00 a.m. Thursday, July 30 until 6:00 a.m. Saturday, August 1.   |
| 2H-051-81     | July 25     | Opens the Rocky Bay subdistrict for 12 hours from 6:00 a.m. until 6:00 p.m. Monday, July 27, but Scurvey Creek section kept closed.  |
| 2H-052-81     | July 25     | Closes the entire Nuka Bay area north of a line from Gore Point to the Pye Islands at 6:00 a.m. Monday, July 27.   |
| 2H-053-81     | July 26     | Opens the Port Chatham and Nuka Island subdistricts at 6:00 a.m. Monday, July 27. Tonsina Bay is kept closed and markers are adjusted at Mikes Bay and South Nuka Island Creek. Opens Dogfish Lagoon by flare for 2 hours from 8:00 until 10:00 p.m. Sunday, July 26.          |
| 2H-054-81     | July 27     | Opens Barabara Creek subdistrict 6:00 p.m. Monday, July 27.  |
| 2H-055-81     | July 28     | Opens Tutka Lagoon for 1½ hours from 10:30 until 12:00 noon Tuesday, July 28 and allows fishing up to the mouth of 4th of July Creek in the Southern district at 3:00 p.m. Tuesday, July 28.   |
| 2H-056-81     | July 29     | Opens Tonsina Bay, Yalik Bay and the East Nuka subdistrict at 3:00 p.m. Thursday, July 30 and moves markers at South Nuka Island Creek at 12 noon Thursday, July 30.   |
| 2H-057-81     | July 30     | Closes Resurrection Bay after 24 hours of fishing at 6:00 a.m. Friday, July 31.  |
| 2H-059-81     | July 30     | Puts the Southern district back to fishing on the standard two 48-hour periods per week at 6:00 a.m. Saturday, August 1.   |

Appendix Table 1. Emergency Order Commercial Fishing Periods in Lower Cook Inlet, 1981. (continued)

| <u>Number</u> | <u>Date</u> | <u>Description</u>  |
|---------------|-------------|---|
| 2H-060-81     | July 30     | Moves markers in China Poot Bay back to the HEA power lines at 6:00 a.m. Monday, August 3.  |
| 2H-061-81     | July 25     | Opens the "Pothole" in Bruin Bay River for 5 hours from 7:00 p.m. until 12 midnight Tuesday, July 25.   |
| 2H-062-81     | July 28     | Allows fishing up to the weir in Humpy Creek for 3 hours from 9:00 p.m. until 12 midnight Tuesday, July 28.   |
| 2H-063-81     | July 29     | Allows fishing up to the weir in Humpy Creek for 5 hours from 9:00 a.m. until 2:00 p.m. Wednesday, July 29.   |
| 2H-064-81     | July 30     | Allows fishing up to the weir in Humpy Creek from 12 noon Thursday, July 30 until 6:00 a.m. Saturday, August 1.   |
| 2H-065-81     | July 31     | Opens fishing in the "Pothole" in Bruin Bay River at 12 noon Friday, July 31 until further notice.  |
| 2H-066-81     | July 31     | Opens the Ursus Cove subdistrict and allows fishing up to the mouth of Browns Peak Creek for 15 hours from 3:00 p.m. Friday, July 31 until 6:00 a.m. Saturday, August 1.  |
| 2H-067-81     | July 27     | Opens Tutka Lagoon by flare for two hours from 10:00 a.m. until 12:00 noon Monday, July 27.   |
| 2H-068-81     | August 2    | Opens James Lagoon for 7 hours from 6:00 a.m. until 1:00 p.m. Monday, August 3 and opens Dogfish Lagoon for 1 hour from 3:30 until 4:30 p.m. Monday, August 3.  |
| 2H-069-81     | August 1    | Closes Yalik Bay and the Port Chatham and Windy Bay subdistricts and the northeast portion of Port Dick east of the Middle Creek to Shelter Cove line August 2. Opens the Rocky Bay subdistrict at 12:00 noon Sunday, August 2. |
| 2H-070-81     | August 3    | Opens the Iniskin Bay subdistrict at 6:00 a.m. Tuesday, August 4.   |

Appendix Table 1. Emergency Order Commercial Fishing Periods in Lower Cook Inlet, 1981. (continued)

| <u>Number</u> | <u>Date</u>  | <u>Description</u>   |
|---------------|--------------|--|
| 2H-070(a)-81  | August 4     | Opens Thumb Cove in Resurrection Bay for 1 hour from 6:00 until 7:00 a.m. Wednesday, August 5.   |
| 2H-071-81     | August 9     | Opens Ursus and Rocky Cove subdistricts for 60 hours from 6:00 p.m. Sunday, August 9, until 6:00 a.m. Wednesday, August 12. Opens the Cottonwood Bay subdistrict for 48 hours from 6:00 a.m. Monday, August 10 until 6:00 a.m. Wednesday, August 12. Allows fishing up to the mouths of Sunday Creek and Browns Peak Creek and moves the markers at China Poot Bay to the markers at the mouth of the creek on August 9. |
| 2H-074-81     | August 10    | Moves the markers in Humpy Creek to 15 yards below the weir at 3:00 p.m. August 10.  |
| 2H-075-81     | August 11    | Opens Tutka Lagoon to seining for 7 hours from 11:00 a.m. until 6:00 p.m. Tuesday, August 11.  |
| 2H-076-81     | August 12    | Closes the entire Outer and Eastern districts on Wednesday, August 12.   |
| 2H-078-81     | August 12    | Opens the Rocky Cove subdistrict at 6:00 a.m. Thursday, August 13 and allows fishing up to the mouth of Sunday Creek.  |
| 2H-079-81     | August 16    | Opens the Ursus Cove subdistrict at 6:00 a.m. Monday, August 17.   |
| 2H-080-81     | August 17    | Opens Tutka Lagoon for 4 hours from 1:00 until 5:00 p.m. Monday, August 17.  |
| 2H-081-81     | August 16    | Opens the Port Dick subdistrict from 12:00 noon Monday, August 17 until 6:00 a.m. Saturday, August 22 and adjusts markers at Island Creek and the head of Port Dick Bay.   |
| 2H-085-81     | September 15 | Closes the Port Graham subdistrict at 6:00 a.m. Wednesday, September 30 and closes the remainder of the Southern district at 6:00 a.m. Saturday, September 19.   |

Appendix Table 2. Commercial processors and buyers operating in Lower Cook Inlet.

| Salmon, 1981 <u>1/</u>  |                 |                                  |  |
|---|-----------------|----------------------------------|--|
| <u>Name of Operator</u>   | <u>Location</u> | <u>No. of Lines</u> <u>2/</u>    | <u>Comments</u>  |
|   |                 | <u>A - 0 - Size</u>              |  |
| 1. Alaska Sea Ventures<br>Box 2677<br>Homer, AK 99603   | Homer           | none                             | fresh/frozen at plant<br>in Homer  |
| 2. Anchorage Seafoods<br>Box 10-614<br>Anchorage, AK 99511                                      | Anchorage       | none                             | fresh/frozen at plant<br>in Anchorage  |
| 3. Bay Rim America<br>(not on I to O list)<br>Kodiak, AK  | Kodiak          | unknown                          | tendered to Kodiak   |
| 4. Camford Fisheries Inc.<br>Box 2543<br>Homer, AK 99603  | Homer           | none                             | fresh/frozen at plant<br>in Homer  |
| 5. D & D Marine dba<br>C Foods<br>Box 455<br>Homer, AK 99603                                    | Homer           | none                             | fresh/frozen at plant<br>in Homer  |
| 6. Homer Seafoods, Inc.<br>Box 2193<br>Homer, AK 99603  | Homer           | none                             | fresh buyer  |
| 7. Kodiak King Crab<br>Box 1457<br>Kodiak, AK 99615   | Kodiak          | 1 1 ½ lb. flat<br>1 1 1 lb. tall | tendered to Kodiak<br>can/freeze   |
| 8. Martins Seafoods<br>800 Ocean Dock Rd.<br>Anchorage, AK 99501<br>(not on I to O list for CI) | Anchorage       | none                             | fresh/frozen at plant<br>in Anchorage  |
| 9. Sea Catch<br>Box 4340<br>Kenai, AK 99611   | Kenai           | none                             | tendered to Kenai<br>plant for freezing  |
| 10. Seward Fisheries<br>Box 398<br>Homer, AK 99603  | Ninilchik       | none                             | buying station and<br>trucked to Seward for<br>canning & Homer for<br>freezing |
| 11. Seward Fisheries<br>Box 7<br>Seward, AK 99664   | Seward          | 1 1 1 lb. tall<br>1 1 ½ flat     | canning & freezing &<br>reduction at Seward                                    |

Appendix Table 2. Commercial processors and buyers operating in Lower Cook Inlet  
(Continued)

| <u>Name of Operator</u>  | <u>Location</u> | <u>No. of Lines</u> <sup>2/</sup><br><u>A - 0 - Size</u> | <u>Comments</u>  |
|--|-----------------|--|--|
| 12. Whitney Fidalgo Seafoods<br>Box C99308<br>2360 W. Commodore Way<br>Seattle, WA 98199 | Homer           | none   | frozen, fresh & sent<br>on to Anchorage plants<br>for freezing or canning. |
| 13. Whitney Fidalgo Seafoods<br>Box C99308<br>2360 W. Commodore Way<br>Seattle, WA 98199 | Port Graham     | 1 1 1 lb. tall<br>1 1 ¼ lb. flat                         | canning  |

1/ Indicates operators with either a physical plant or processing facility or those operators from other areas buying fish and/or providing tender service for fishermen in districts away from the facility.

2/ A indicates the number of canning lines available for operation. 0 indicates the number of canning lines actually operated.

Appendix Table 3. Fishing licenses and permits issued and fished in Lower Cook Inlet, 1960 - 1981.

| Year  | SEINES       |                  |                | Total | Seines Fished | Set Nets Fished |
|-------|--------------|------------------|----------------|-------|---------------|-----------------|
|       | Gear License | Permanent Permit | Interim Permit |       |               |                 |
| 1960  | 95           |                  |                | 95    |               |                 |
| 1961  | 89           |                  |                | 89    |               |                 |
| 1962  | 91           |                  |                | 91    |               |                 |
| 1963  | 112          |                  |                | 112   |               |                 |
| 1964  | 108          |                  |                | 108   |               |                 |
| 1965  | 72           |                  |                | 72    |               |                 |
| 1966  | 77           |                  |                | 77    | 75            |                 |
| 1967  | 58           |                  |                | 58    | 54            |                 |
| 1968  | 91           |                  |                | 91    | 88            |                 |
| 1969  | 75           |                  |                | 75    | 17            |                 |
| 1970  | 89           |                  |                | 89    | 9             |                 |
| 1971  | 81           |                  |                | 81    | 32            |                 |
| 1972  | 83           |                  |                | 83    | 52            |                 |
| 1973  | 86           |                  |                | 86    | 49            |                 |
| 1974  | 110          |                  |                | 110   | 49            | 32              |
| 1975  |              | 40               | 48             | 88    | 63            | 27              |
| 1976  |              | 74               | 16             | 90    | 53            | 25              |
| 1977  |              | 70               | 12             | 82    | 72            | 26              |
| 1978  |              | 77               | 9              | 86    | 72            | 39              |
| 1979  |              | 82               | 5              | 87    | 75            | 38              |
| 1980  |              | 81               | 10             | 91    | 83 1/         | 40 1/           |
| 1981  |              | 80               | 11             | 91    | 91 1/         | 40 1/           |
| Total | 1,317        | 504              | 111            | 1,932 | 934           | 267             |
| Avg.  | 88           | 72               | 16             | 88    | 58            | 33              |

1/ Preliminary

Data Source: CFEC microfiche printouts and final IBM computer runs.

Appendix Table 4. Exvessel Value of Lower Cook Inlet Commercial Salmon Harvest in Thousands of Dollars by Species, 1960-1981. 1/

| Year    | King | Sockeye | Coho | Pink   | Chum  | Total  |
|---------|------|---------|------|--------|-------|--------|
| 1960    | 0    | 36      | 3    | 287    | 127   | 453    |
| 1961    | 0    | 33      | 2    | 144    | 36    | 215    |
| 1962    | 0    | 37      | 8    | 1,056  | 108   | 1,209  |
| 1963    | 1    | 22      | 7    | 87     | 84    | 201    |
| 1964    | 0    | 30      | 9    | 369    | 194   | 602    |
| 1965    | 0    | 21      | 1    | 34     | 20    | 76     |
| 1966    | 0    | 23      | 5    | 237    | 82    | 347    |
| 1967    | 1    | 45      | 3    | 157    | 58    | 264    |
| 1968    | 0    | 152     | 5    | 311    | 57    | 525    |
| 1969    | 0    | 219     | 1    | 137    | 46    | 403    |
| 1970    | 1    | 35      | 6    | 273    | 215   | 530    |
| 1971    | 1    | 38      | 7    | 248    | 144   | 438    |
| 1972    | 1    | 130     | 6    | 22     | 146   | 305    |
| 1973    | 3    | 113     | 5    | 310    | 251   | 682    |
| 1974    | 5    | 283     | 30   | 100    | 77    | 495    |
| 1975    | 3    | 106     | 27   | 1,456  | 71    | 1,663  |
| 1976    | 7    | 287     | 13   | 207    | 217   | 731    |
| 1977    | 7    | 620     | 9    | 1,719  | 604   | 2,959  |
| 1978    | 62   | 1,516   | 47   | 370    | 360   | 2,355  |
| 1979    | 37   | 644     | 80   | 4,460  | 1,107 | 6,328  |
| 1980    | 11   | 321     | 56   | 1,088  | 304   | 1,780  |
| 1981    | 6    | 776     | 55   | 5,519  | 1,209 | 7,565  |
| Total   | 146  | 5,487   | 385  | 18,591 | 5,517 | 30,126 |
| Average | 7    | 249     | 18   | 845    | 251   | 1,369  |

1/ Values obtained by using the formula: average price per lb. X average weight of fish X catch = Exvessel value.

Appendix Table 5. Average Salmon Price per Pound by Species in Dollars, Lower Cook Inlet. 1/

| YEAR | KING           | SOCKEYE | COHO | PINK | CHUM |
|------|----------------|---------|------|------|------|
| 1960 | 0.25 <u>2/</u> | 0.27    | 0.18 | 0.15 | 0.16 |
| 1961 | 0.24 <u>2/</u> | 0.24    | 0.15 | 0.11 | 0.08 |
| 1962 | 0.23 <u>2/</u> | 0.27    | 0.16 | 0.15 | 0.07 |
| 1963 | 0.25 <u>2/</u> | 0.27    | 0.15 | 0.13 | 0.08 |
| 1964 | 0.24 <u>2/</u> | 0.27    | 0.15 | 0.10 | 0.07 |
| 1965 | 0.22 <u>2/</u> | 0.24    | 0.11 | 0.08 | 0.08 |
| 1966 | 0.22 <u>2/</u> | 0.24    | 0.14 | 0.11 | 0.08 |
| 1967 | 0.26           | 0.26    | 0.15 | 0.11 | 0.08 |
| 1968 | 0.00           | 0.25    | 0.17 | 0.18 | 0.09 |
| 1969 | 0.00           | 0.27    | 0.23 | 0.17 | 0.13 |
| 1970 | 0.35           | 0.27    | 0.18 | 0.12 | 0.13 |
| 1971 | 0.53           | 0.28    | 0.24 | 0.18 | 0.15 |
| 1972 | 0.45           | 0.36    | 0.44 | 0.20 | 0.28 |
| 1973 | 0.93           | 0.48    | 0.39 | 0.27 | 0.29 |
| 1974 | 0.76           | 1.54    | 0.72 | 0.48 | 0.56 |
| 1975 | 0.61           | 0.61    | 0.49 | 0.37 | 0.43 |
| 1976 | 0.91           | 0.77    | 0.59 | 0.37 | 0.48 |
| 1977 | 1.07           | 0.86    | 0.55 | 0.35 | 0.45 |
| 1978 | 1.09           | 1.31    | 0.97 | 0.30 | 0.54 |
| 1979 | 1.54           | 1.53    | 0.89 | 0.43 | 0.60 |
| 1980 | 1.30           | 0.88    | 0.85 | 0.38 | 0.52 |
| 1981 | 1.35           | 1.05    | 0.65 | 0.44 | 0.47 |

1/ 1960-1974 values obtained (except as noted) by using formula:  
 - Avg.price/lb X Avg.weight/fish X Catch = Exvessel value.  
 - Exvessel and catch values obtained from Tables 34 & 39 in Lower Cook Inlet status report.  
 - Avg weight/fish from commercial fish catch & production statistical leaflet for Cook Inlet.  
 - Values do not reflect any retroactive price increases paid after the fishing seasons.

2/ Values obtained by using formula:  
 - Avg price/lb =  $\frac{\text{Avg price/fish}}{\text{Avg weight/fish}}$   
 - Avg weight/fish from statistical leaflet  
 - Avg price/fish from annual management reports.

Appendix Table 6. Salmon Average Weight/Fish in Pounds,  
Lower Cook Inlet. 1/

| YEAR           | KING | SOCKEYE | COHO | PINK | CHUM |
|----------------|------|---------|------|------|------|
| 1960           | 20.2 | 5.4     | 6.2  | 3.2  | 6.8  |
| 1961           | 20.5 | 6.0     | 8.2  | 4.5  | 7.8  |
| 1962           | 21.5 | 5.4     | 6.4  | 3.2  | 8.0  |
| 1963           | 19.7 | 5.4     | 7.1  | 3.4  | 7.2  |
| 1964           | 20.8 | 5.4     | 6.3  | 3.5  | 8.4  |
| 1965           | 22.2 | 6.2     | 10.1 | 3.6  | 8.7  |
| 1966           | 23.1 | 5.9     | 6.4  | 3.6  | 7.5  |
| 1967           | 21.9 | 6.0     | 7.2  | 3.9  | 8.1  |
| 1968           | 26.2 | 6.3     | 5.9  | 3.0  | 8.3  |
| 1969           | 18.2 | 6.7     | 7.0  | 3.9  | 7.3  |
| 1970           | 26.6 | 5.8     | 6.8  | 3.9  | 7.1  |
| 1971           | 25.9 | 6.0     | 6.3  | 3.5  | 6.6  |
| 1972           | 25.0 | 6.2     | 6.1  | 3.9  | 6.9  |
| 1973           | 22.3 | 8.1     | 6.1  | 3.7  | 7.4  |
| 1974           | 36.1 | 6.7     | 6.4  | 4.1  | 7.2  |
| 1975           | 33.2 | 6.2     | 8.8  | 3.7  | 7.6  |
| 1976           | 16.1 | 6.4     | 7.0  | 4.1  | 8.9  |
| 1977           | 30.1 | 7.2     | 5.9  | 3.8  | 9.2  |
| 1978           | 32.3 | 7.4     | 8.2  | 3.5  | 8.6  |
| 1979           | 18.9 | 6.3     | 6.2  | 3.5  | 8.2  |
| 1980           | 21.7 | 5.5     | 5.2  | 3.2  | 7.8  |
| 1981 <u>2/</u> | 12.5 | 6.7     | 8.3  | 3.8  | 8.0  |
| 22 Yr Average  | 23.4 | 6.2     | 6.9  | 3.7  | 7.8  |

1/ 1960-1974 values obtained from commercial fish catch & production statistical leaflets for all Cook Inlet.

2/ Values obtained from preliminary data.

Appendix Table 7. Salmon Case Pack by Species, Cook Inlet, 1960-1981. 1/

| YEAR           | 48 1-lb. Cans per Case |           |         |           |           |           |
|----------------|------------------------|-----------|---------|-----------|-----------|-----------|
|                | KING                   | RED       | COHO    | PINK      | CHUM      | TOTAL     |
| 1960           | 9,279                  | 65,478    | 24,091  | 87,575    | 62,709    | 249,132   |
| 1961           | 12,942                 | 88,687    | 10,673  | 30,401    | 39,092    | 181,795   |
| 1962           | 8,721                  | 89,231    | 28,611  | 208,392   | 107,724   | 442,679   |
| 1963           | 8,138                  | 74,185    | 20,898  | 13,509    | 46,209    | 162,939   |
| 1964           | 921                    | 75,944    | 40,137  | 188,373   | 135,465   | 440,841   |
| 1965           | 1,221                  | 109,663   | 11,999  | 5,911     | 27,187    | 155,981   |
| 1966           | 1,472                  | 142,987   | 22,985  | 102,796   | 49,680    | 319,920   |
| 1967           | 1,909                  | 118,853   | 15,355  | 21,492    | 38,654    | 196,263   |
| 1968           | 447                    | 58,365    | 29,290  | 104,382   | 122,164   | 314,648   |
| 1969           | 1,277                  | 43,408    | 6,985   | 86,038    | 26,580    | 164,288   |
| 1970           | 412                    | 78,453    | 19,010  | 80,572    | 73,633    | 252,080   |
| 1971           | 1,036                  | 68,357    | 8,847   | 91,880    | 52,223    | 222,343   |
| 1972           | 396                    | 101,105   | 10,109  | 25,195    | 56,527    | 193,332   |
| 1973           | 712                    | 53,954    | 7,049   | 47,829    | 87,214    | 196,758   |
| 1974           | 1,193                  | 52,990    | 13,482  | 44,610    | 85,283    | 197,563   |
| 1975           | 169                    | 60,359    | 6,298   | 55,454    | 40,491    | 162,771   |
| 1976           | 872                    | 127,434   | 11,238  | 103,260   | 51,171    | 293,975   |
| 1977           | 780                    | 232,956   | 9,558   | 104,088   | 92,284    | 439,666   |
| 1978           | 1,070                  | 156,803   | 8,525   | 155,460   | 56,339    | 378,197   |
| 1979           | 457                    | 104,022   | 2,386   | 249,422   | 26,190    | 382,477   |
| 1980           | 4,860                  | 144,742   | 6,367   | 231,897   | 27,967    | 415,833   |
| 1981 <u>2/</u> | 215                    | 40,959    | 4,271   | 291,968   | 45,753    | 383,171   |
| Total          | 58,499                 | 2,088,935 | 318,164 | 2,330,504 | 1,350,550 | 6,146,652 |
| Average        | 2,659                  | 94,952    | 14,462  | 105,932   | 61,389    | 265,864   |

1/ Includes Cook Inlet salmon and salmon imported from other areas and processed in Cook Inlet.

2/ Preliminary data.

Appendix Table B. Commercial Production of fresh, frozen and cured salmon by species, Cook Inlet, 1960-1981. 1/

| Production in Pounds |           |            |            |            |            |             |
|----------------------|-----------|------------|------------|------------|------------|-------------|
| Year                 | King      | Sockeye    | Coho       | Pink       | Chum       | Total       |
| 1971                 | 1,122,833 | 858,298    | 230,995    | 29,043     | 2,147,814  | 4,388,983   |
| 1972                 | 697,871   | 661,537    | 126,717    | 647,952    | 1,904,750  | 4,038,827   |
| 1973                 | 434,283   | 2,251,760  | 478,334    | 326,169    | 5,032,885  | 8,523,431   |
| 1974                 | 474,170   | 1,239,399  | 964,636    | 1,164,061  | 4,902,531  | 8,744,797   |
| 1975                 | 274,563   | 1,490,354  | 851,260    | 581,883    | 5,923,465  | 9,121,525   |
| 1976                 | 511,231   | 5,428,655  | 684,206    | 2,274,473  | 4,243,440  | 13,142,005  |
| 1977                 | 842,240   | 8,265,220  | 754,610    | 580,070    | 5,439,190  | 15,881,330  |
| 1978                 | 1,463,785 | 20,243,930 | 1,475,932  | 5,533,116  | 7,533,722  | 36,250,485  |
| 1979                 | 426,710   | 9,479,792  | 1,578,032  | 2,375,713  | 4,076,813  | 17,937,060  |
| 1980                 | 729,612   | 13,523,357 | 1,780,131  | 4,272,809  | 3,947,040  | 24,252,949  |
| 1981                 | 711,934   | 18,813,717 | 3,663,104  | 3,285,847  | 8,268,107  | 34,742,709  |
| Total                | 7,689,232 | 82,256,019 | 12,587,957 | 21,071,136 | 53,419,757 | 177,024,101 |
| Average              | 699,021   | 7,477,820  | 1,144,360  | 1,915,558  | 4,856,342  | 16,093,100  |

1/ Includes Cook Inlet salmon and salmon imported from other areas and processed in Cook Inlet.

Appendix Table 9.

Pink salmon alevin density by brood year for non-index salmon streams in Lower Cook Inlet

| YEAR | MAYOR | BEAR            | SALMON | CLEAR | TONSINA | BARBARA | SOUTH NUKA |
|------|-------|-----------------|--------|-------|---------|---------|------------|
| 1974 | ---   | ---             | ---    | ---   | ---     | ---     | ---        |
| 1975 | ---   | ---             | ---    | ---   | ---     | 500.3   | 318.5      |
| 1976 | 19.9  | 293.7           | 50.6   | ---   | ---     | ---     | ---        |
| 1977 | ---   | ---             | ---    | ---   | ---     | ---     | 741.2      |
| 1978 | 39.0  | 871.6 <u>1/</u> | ---    | 3.2   | 89.6    | ---     | ---        |
| 1979 | ---   | ---             | ---    | ---   | ---     | ---     | ---        |
| 1980 | 161.7 | 538.4           | 238.3  | ---   | 188.6   | ---     | ---        |

1/ Incomplete sampling due to ice

Appendix Table 10. Lower Cook Inlet Total Salmon Catches by District, 1954-1981. 1/

| <u>Year</u>    | <u>Southern</u> | <u>Outer</u> | <u>Kamishak</u> | <u>Eastern</u> | <u>Total</u> |
|----------------|-----------------|--------------|-----------------|----------------|--------------|
| 1954           | 368,426         | 200,390      | 0               | 23,849         | 592,665      |
| 1955           | 624,254         | 599,869      | 5,409           | 70,354         | 1,299,886    |
| 1956           | 242,058         | 64,718       | 15,897          | 19,449         | 342,122      |
| 1957           | 209,138         | 290,473      | 21,125          | 428            | 521,164      |
| 1958           | 253,457         | 841,957      | 0               | 200            | 1,095,614    |
| 1959           | 72,711          | 137,211      | 30,491          | 23,294         | 263,707      |
| 1960           | 227,577         | 460,754      | 56,698          | 10,145         | 755,174      |
| 1961           | 206,075         | 158,832      | 18,499          | 0              | 383,406      |
| 1962           | 591,850         | 1,821,382    | 43,654          | 3,787          | 2,460,673    |
| 1963           | 124,593         | 140,915      | 96,309          | 2,262          | 364,079      |
| 1964           | 304,213         | 1,038,790    | 65,098          | 856            | 1,408,957    |
| 1965           | 104,646         | 46,345       | 7,557           | 0              | 158,548      |
| 1966           | 223,357         | 489,849      | 15,902          | 0              | 729,108      |
| 1967           | 145,110         | 302,028      | 41,818          | 3,923          | 492,879      |
| 1968           | 181,884         | 213,746      | 248,307         | 116,827        | 760,764      |
| 1969           | 86,475          | 57,036       | 144,196         | 99,423         | 387,130      |
| 1970           | 233,564         | 426,002      | 122,826         | 43,329         | 825,721      |
| 1971           | 74,518          | 431,520      | 58,545          | 3,758          | 568,341      |
| 1972           | 46,759          | 70,942       | 26,794          | 19,930         | 164,425      |
| 1973           | 126,687         | 278,695      | 48,181          | 808            | 454,371      |
| 1974           | 81,865          | 14,037       | 7,517           | 517            | 103,936      |
| 1975           | 929,711         | 172,368      | 17,370          | 125            | 1,119,574    |
| 1976           | 138,961         | 19,398       | 55,060          | 35,673         | 249,092      |
| 1977           | 217,964         | 1,233,262    | 79,498          | 10,354         | 1,541,078    |
| 1978           | 404,203         | 100,280      | 55,854          | 30,422         | 590,759      |
| 1979           | 1,044,517       | 2,151,556    | 91,098          | 296            | 3,287,467    |
| 1980 <u>2/</u> | 536,189         | 180,283      | 173,739         | 157,631        | 1,047,842    |
| 1981 <u>2/</u> | 1,593,178       | 1,967,849    | 119,864         | 62,390         | 3,743,281    |
| <hr/>          |                 |              |                 |                |              |
| 28 Yr          |                 |              |                 |                |              |
| Total          | 9,393,940       | 13,910,487   | 1,667,306       | 740,030        | 25,711,763   |
| 28 Yr Avg      | 335,498         | 496,803      | 59,547          | 26,430         | 918,277      |
| % of Total     | 36.54           | 54.10        | 6.48            | 2.88           | 100.00       |

1/ Data source: Final IBM computer runs, 1954-1981, and processor catch reports.

2/ Preliminary data.

Appendix Table 11. King Salmon Catches by District for Lower Cook Inlet, 1954-1981. 1/

| <u>Year</u>    | <u>Southern</u> | <u>Outer</u> | <u>Kamishak</u> | <u>Eastern</u> | <u>Total</u> |
|----------------|-----------------|--------------|-----------------|----------------|--------------|
| 1954           | 1532            | 13           | 0               | 0              | 1,545        |
| 1955           | 562             | 7            | 0               | 4              | 573          |
| 1956           | 310             | 23           | 0               | 0              | 333          |
| 1957           | 286             | 13           | 0               | 120            | 419          |
| 1958           | 119             | 1            | 0               | 0              | 120          |
| 1959           | 71              | 3            | 0               | 58             | 132          |
| 1960           | 12              | 4            | 11              | 0              | 27           |
| 1961           | 39              | 2            | 0               | 0              | 41           |
| 1962           | 58              | 2            | 0               | 0              | 60           |
| 1963           | 88              | 6            | 2               | 0              | 96           |
| 1964           | 84              | 2            | 5               | 0              | 91           |
| 1965           | 10              | 0            | 0               | 0              | 10           |
| 1966           | 60              | 1            | 1               | 0              | 62           |
| 1967           | 173             | 2            | 1               | 0              | 176          |
| 1968           | 61              | 1            | 0               | 2              | 64           |
| 1969           | 59              | 0            | 2               | 3              | 64           |
| 1970           | 91              | 5            | 0               | 11             | 107          |
| 1971           | 41              | 11           | 0               | 21             | 73           |
| 1972           | 69              | 7            | 0               | 12             | 88           |
| 1973           | 139             | 1            | 0               | 5              | 145          |
| 1974           | 182             | 1            | 0               | 0              | 183          |
| 1975           | 142             | 0            | 0               | 1              | 143          |
| 1976           | 442             | 7            | 1               | 0              | 450          |
| 1977           | 182             | 34           | 1               | 0              | 217          |
| 1978           | 1,511           | 236          | 0               | 0              | 1,747        |
| 1979           | 1,199           | 30           | 9               | 0              | 1,238        |
| 1980 <u>2/</u> | 389             | 12           | 0               | 0              | 401          |
| 1981 <u>2/</u> | 285             | 61           | 1               | 0              | 347          |
| <hr/>          |                 |              |                 |                |              |
| 28 Yr Total    | 8,196           | 485          | 34              | 237            | 8,952        |
| 28 Yr Avg      | 293             | 17           | 1               | 8              | 320          |
| % of Total     | 91.55           | 5.42         | 0.38            | 2.65           | 100.00       |

1/ Data source: Final IBM computer runs, 1954-1981, and processor catch reports.

2/ Preliminary data.

Appendix Table 12. Sockeye Salmon Catches by District for Lower Cook Inlet, 1954-1981. 1/

| Year       | Southern | Outer   | Kamishak | Eastern | Total     |
|------------|----------|---------|----------|---------|-----------|
| 1954       | 22,913   | 4,927   | 0        | 11,786  | 39,626    |
| 1955       | 30,848   | 701     | 2        | 5,049   | 36,600    |
| 1956       | 33,054   | 2,889   | 67       | 296     | 36,306    |
| 1957       | 19,431   | 2,982   | 4,335    | 169     | 26,917    |
| 1958       | 17,731   | 1,719   | 0        | 0       | 19,450    |
| 1959       | 7,720    | 8,049   | 1,549    | 4,319   | 21,637    |
| 1960       | 12,239   | 11,614  | 768      | 105     | 24,726    |
| 1961       | 10,104   | 12,671  | 1        | 0       | 22,776    |
| 1962       | 16,569   | 8,697   | 20       | 0       | 25,286    |
| 1963       | 13,142   | 1,974   | 4        | 1       | 15,121    |
| 1964       | 17,283   | 1,370   | 1,979    | 22      | 20,654    |
| 1965       | 11,185   | 2,009   | 808      | 0       | 14,002    |
| 1966       | 12,192   | 3,120   | 21       | 0       | 15,333    |
| 1967       | 26,349   | 2,165   | 182      | 348     | 29,044    |
| 1968       | 18,716   | 1,550   | 492      | 74,484  | 95,242    |
| 1969       | 12,578   | 92      | 10,723   | 99,403  | 122,796   |
| 1970       | 13,480   | 4,177   | 2,888    | 1,767   | 22,312    |
| 1971       | 18,403   | 1,630   | 3        | 2,198   | 22,234    |
| 1972       | 31,345   | 26,423  | 47       | 82      | 57,897    |
| 1973       | 24,145   | 5,063   | 1        | 0       | 29,209    |
| 1974       | 27,029   | 399     | 0        | 0       | 27,428    |
| 1975       | 27,393   | 720     | 29       | 0       | 28,142    |
| 1976       | 35,280   | 18,886  | 3,988    | 5       | 58,159    |
| 1977       | 53,124   | 33,733  | 7,425    | 5,776   | 100,058   |
| 1978       | 141,088  | 10,695  | 4,619    | 2       | 156,404   |
| 1979       | 37,342   | 25,297  | 1,778    | 0       | 64,417    |
| 1980 2/    | 41,555   | 22,577  | 2,213    | 15      | 66,360    |
| 1981 2/    | 78,815   | 17,762  | 4,517    | 9,270   | 110,364   |
| <hr/>      |          |         |          |         |           |
| 28 Yr      |          |         |          |         |           |
| Total      | 811,053  | 233,891 | 48,459   | 215,097 | 1,308,500 |
| 28 Yr Avg  | 28,966   | 8,353   | 1,731    | 7,682   | 46,732    |
| % of Total | 61.98    | 17.88   | 3.70     | 16.44   | 100.00    |

1/ Data source: Final IBM computer runs, 1954-1981, and processor catch reports.

2/ Preliminary data.

Appendix Table 13. Coho Salmon Catches by District for Lower Cook Inlet, 1954-1981. 1/

| <u>Year</u>    | <u>Southern</u> | <u>Outer</u> | <u>Kamishak</u> | <u>Eastern</u> | <u>Total</u> |
|----------------|-----------------|--------------|-----------------|----------------|--------------|
| 1954           | 12,235          | 368          | 0               | 2,556          | 15,159       |
| 1955           | 3,230           | 277          | 8               | 6,160          | 9,675        |
| 1956           | 4,693           | 190          | 701             | 3,761          | 9,345        |
| 1957           | 1,507           | 110          | 29              | 119            | 1,765        |
| 1958           | 1,713           | 83           | 0               | 0              | 1,796        |
| 1959           | 709             | 109          | 43              | 5,491          | 6,352        |
| 1960           | 1,237           | 574          | 28              | 853            | 2,692        |
| 1961           | 1,149           | 456          | 14              | 0              | 1,619        |
| 1962           | 2,095           | 1,893        | 11              | 3,728          | 7,727        |
| 1963           | 4,020           | 369          | 97              | 2,250          | 6,736        |
| 1964           | 8,905           | 431          | 115             | 9              | 9,460        |
| 1965           | 733             | 7            | 122             | 0              | 862          |
| 1966           | 4,807           | 357          | 247             | 0              | 5,411        |
| 1967           | 2,379           | 70           | 74              | 203            | 2,726        |
| 1968           | 4,671           | 106          | 101             | 5              | 4,883        |
| 1969           | 485             | 11           | 121             | 6              | 623          |
| 1970           | 3,705           | 243          | 220             | 692            | 4,860        |
| 1971           | 3,151           | 174          | 121             | 1,115          | 4,561        |
| 1972           | 1,283           | 17           | 31              | 903            | 2,234        |
| 1973           | 1,241           | 31           | 28              | 801            | 2,101        |
| 1974           | 3,054           | 28           | 2,915           | 517            | 6,514        |
| 1975           | 3,039           | 7            | 3,041           | 124            | 6,211        |
| 1976           | 1,905           | 0            | 1,111           | 200            | 3,216        |
| 1977           | 1,239           | 1,528        | 105             | 0              | 2,872        |
| 1978           | 4,318           | 45           | 1,584           | 582            | 6,529        |
| 1979           | 10,688          | 150          | 1,116           | 296            | 12,250       |
| 1980 <u>2/</u> | 9,266           | 114          | 2,013           | 18             | 11,411       |
| 1981 <u>2/</u> | 8,232           | 83           | 1,831           | 0              | 10,146       |
| <hr/>          |                 |              |                 |                |              |
| 28 Yr          |                 |              |                 |                |              |
| Total          | 105,689         | 7,831        | 15,827          | 30,389         | 159,736      |
| 28 Yr Avg      | 3,775           | 280          | 565             | 1,085          | 5,705        |
| % of Total     | 66.17           | 4.90         | 9.91            | 19.02          | 100.00       |

1/ Data source: Final IBM computer runs, 1954-1981, and processor catch reports.

2/ Preliminary data.

Appendix Table 14. Pink Salmon Catches by District for Lower Cook Inlet, 1954-1981. 1/

| <u>Year</u>    | <u>Southern</u> | <u>Outer</u> | <u>Kamishak</u> | <u>Eastern</u> | <u>Total</u> |
|----------------|-----------------|--------------|-----------------|----------------|--------------|
| 1954           | 180,977         | 82,205       | 0               | 7,562          | 270,744      |
| 1955           | 565,216         | 557,997      | 5,121           | 55,994         | 1,184,328    |
| 1956           | 150,486         | 42,368       | 193             | 14,873         | 207,920      |
| 1957           | 130,511         | 149,197      | 5,905           | 0              | 285,613      |
| 1958           | 209,798         | 739,768      | 0               | 200            | 949,766      |
| 1959           | 50,244          | 69,054       | 5,325           | 125            | 124,748      |
| 1960           | 209,989         | 381,375      | 11,563          | 8,720          | 611,647      |
| 1961           | 191,867         | 105,491      | 6,019           | 0              | 303,377      |
| 1962           | 564,050         | 1,684,023    | 219             | 49             | 2,248,341    |
| 1963           | 99,820          | 21,471       | 82,314          | 11             | 203,616      |
| 1964           | 266,412         | 767,473      | 20,719          | 813            | 1,055,417    |
| 1965           | 90,260          | 21,886       | 3,452           | 0              | 115,598      |
| 1966           | 177,544         | 398,751      | 2,945           | 0              | 579,240      |
| 1967           | 92,793          | 262,258      | 17,340          | 3,097          | 375,488      |
| 1968           | 154,033         | 191,691      | 198,253         | 41,464         | 585,441      |
| 1969           | 70,753          | 51,533       | 80,157          | 1              | 202,444      |
| 1970           | 208,114         | 302,831      | 23,113          | 40,226         | 574,284      |
| 1971           | 50,066          | 310,710      | 32,094          | 1              | 392,871      |
| 1972           | 9,126           | 1,005        | 342             | 18,190         | 28,663       |
| 1973           | 97,574          | 197,259      | 12,568          | 2              | 307,403      |
| 1974           | 48,875          | 1,678        | 48              | 0              | 50,601       |
| 1975           | 893,709         | 160,291      | 9,432           | 0              | 1,063,432    |
| 1976           | 99,817          | 93           | 1,112           | 35,423         | 136,445      |
| 1977           | 156,696         | 1,127,800    | 6,308           | 1,349          | 1,292,153    |
| 1978           | 251,761         | 70,080       | 982             | 29,738         | 352,561      |
| 1979           | 982,529         | 1,945,521    | 58,484          | 0              | 2,986,534    |
| 1980 <u>2/</u> | 480,603         | 129,730      | 127,723         | 156,763        | 894,819      |
| 1981 <u>2/</u> | 1,473,832       | 1,723,717    | 53,370          | 49,886         | 3,300,805    |
| <hr/>          |                 |              |                 |                |              |
| 28 Yr          |                 |              |                 |                |              |
| Total          | 7,957,455       | 11,497,256   | 765,101         | 464,487        | 20,684,299   |
| 28 Yr Avg      | 284,195         | 410,616      | 27,325          | 16,589         | 738,725      |
| % of Total     | 38.47           | 55.58        | 3.70            | 2.25           | 100.00       |

1/ Data source: Final IBM computer runs, 1954-1981, and processor catch reports.

2/ Preliminary data.

Appendix Table 15. Chum Salmon Catches by District for Lower Cook Inlet, 1954-1981. 1/

| <u>Year</u>    | <u>Southern</u> | <u>Outer</u> | <u>Kamishak</u> | <u>Eastern</u> | <u>Total</u> |
|----------------|-----------------|--------------|-----------------|----------------|--------------|
| 1954           | 150,769         | 112,877      | 0               | 1,945          | 265,591      |
| 1955           | 24,398          | 40,887       | 278             | 3,147          | 68,710       |
| 1956           | 53,515          | 19,248       | 14,936          | 519            | 88,218       |
| 1957           | 57,403          | 138,171      | 10,856          | 20             | 206,450      |
| 1958           | 24,096          | 100,386      | 0               | 0              | 124,482      |
| 1959           | 13,967          | 59,996       | 23,574          | 13,301         | 110,838      |
| 1960           | 4,100           | 67,187       | 44,328          | 467            | 116,082      |
| 1961           | 2,916           | 40,212       | 12,465          | 0              | 55,593       |
| 1962           | 9,078           | 126,767      | 43,404          | 10             | 179,259      |
| 1963           | 7,523           | 117,095      | 13,892          | 0              | 138,510      |
| 1964           | 11,529          | 269,514      | 42,280          | 12             | 323,335      |
| 1965           | 2,458           | 22,443       | 3,175           | 0              | 28,076       |
| 1966           | 28,754          | 87,620       | 12,688          | 0              | 129,062      |
| 1967           | 23,416          | 37,533       | 24,221          | 275            | 85,445       |
| 1968           | 4,403           | 20,398       | 49,461          | 872            | 75,134       |
| 1969           | 2,600           | 5,400        | 53,193          | 10             | 61,203       |
| 1970           | 8,174           | 118,746      | 96,605          | 633            | 224,158      |
| 1971           | 2,857           | 118,995      | 26,327          | 423            | 148,602      |
| 1972           | 4,936           | 43,490       | 26,374          | 743            | 75,543       |
| 1973           | 3,588           | 76,341       | 35,584          | 0              | 115,513      |
| 1974           | 2,725           | 11,931       | 4,554           | 0              | 19,210       |
| 1975           | 5,428           | 11,350       | 4,868           | 0              | 21,646       |
| 1976           | 1,517           | 412          | 48,848          | 45             | 50,822       |
| 1977           | 6,723           | 70,167       | 65,659          | 3,229          | 145,778      |
| 1978           | 5,525           | 19,224       | 48,669          | 100            | 73,518       |
| 1979           | 12,759          | 180,558      | 29,711          | 0              | 223,028      |
| 1980 <u>2/</u> | 4,356           | 27,850       | 41,790          | 835            | 74,851       |
| 1981 <u>2/</u> | 32,014          | 226,226      | 60,145          | 3,234          | 321,619      |
| <hr/>          |                 |              |                 |                |              |
| 28-Yr          |                 |              |                 |                |              |
| Total          | 511,547         | 2,171,024    | 837,885         | 29,820         | 3,550,276    |
| 28 Yr Avg      | 18,270          | 77,537       | 29,924          | 1,065          | 126,796      |
| % of Total     | 14.41           | 61.15        | 23.60           | 0.84           | 100.00       |

1/ Data source: Final IBM computer runs, 1954-1981, and processor catch reports.

2/ Preliminary data.

Appendix Table 16. Pink Salmon Catches in Thousands of Fish for All Fishing Districts in Lower Cook Inlet, 1936 - 1981. 1/

| YEAR | CATCH     | YEAR         | CATCH          | YEAR           | CATCH |
|------|-----------|--------------|----------------|----------------|-------|
| 1936 | 526       | 1956         | 208            | 1976           | 136   |
| 1937 | 457       | 1957         | 286            | 1977           | 1,292 |
| 1938 | 345       | 1958         | 950            | 1978           | 353   |
| 1939 | 292       | 1959         | 124            | 1979           | 2,987 |
| 1940 | 1,659     | 1960         | 612            | 1980 <u>2/</u> | 895   |
| 1941 | 692       | 1961         | 303            | 1981 <u>2/</u> | 3,301 |
| 1942 | 695       | 1962         | 2,248          |                |       |
| 1943 | 1,361     | 1963         | 204            |                |       |
| 1944 | 1,446     | 1964         | 1,055          |                |       |
| 1945 | 1,302     | 1965         | 116            |                |       |
| 1946 | 870       | 1966         | 579            |                |       |
| 1947 | 1,396     | 1967         | 375            |                |       |
| 1948 | 591       | 1968         | 585            |                |       |
| 1949 | 366       | 1969         | 202            |                |       |
| 1950 | 311       | 1970         | 574            |                |       |
| 1951 | 378       | 1971         | 393            |                |       |
| 1952 | 972       | 1972         | 29             |                |       |
| 1953 | 513       | 1973         | 307            |                |       |
| 1954 | 271       | 1974         | 51             |                |       |
| 1955 | 1,184     | 1975         | 1,063          |                |       |
|      |           | <u>TOTAL</u> | <u>AVERAGE</u> |                |       |
|      | 46 Year   | 34,855       | 758            |                |       |
|      | Odd year  | 18,894       | 821            |                |       |
|      | Even Year | 15,961       | 694            |                |       |

1/ Data source: 1953-63 data very sketchy - U.S. F&WS Statistical Digest #50 and INPFC Document #1134, Rick & Ball; ADF&G computer runs 1960-1979.

2/ Preliminary data.

Appendix Table 17. Summary of return per spawner and forecast variations which have occurred in the pink salmon runs to the Southern and Outer districts of Cook Inlet, 1964 - 1979.

| Brood Year     | Escapement | Return  | Return/ Spawner | Forecast        | Variation From Forecast |
|----------------|------------|---------|-----------------|-----------------|-------------------------|
| 1964           | 269.9      | 828     | 3.07            | 1,300           | - 36.3                  |
| 1965           | 142.3      | 478     | 3.36            | 500             | - 4.4                   |
| 1966           | 252.0      | 542     | 2.15            | 462             | + 17.3                  |
| 1967           | 122.5      | 238     | 1.94            | 500             | - 52.4                  |
| 1968           | 196.3      | 699     | 3.56            | 2,000           | - 65.0                  |
| 1969           | 115.2      | 615     | 5.34            | 640             | - 3.9                   |
| 1972           | 43.9       | 91      | 2.07            | 340             | - 73.5                  |
| 1973           | 111.3      | 1,298   | 11.66           | 620             | + 109.4                 |
| 1974           | 40.2       | 197     | 4.90            | 780             | - 74.9                  |
| 1975           | 240.8      | 1,652   | 6.86            | 845             | + 102.0                 |
| 1976           | 86.6       | 488     | 3.90 <u>2/</u>  | 635             | - 24.0                  |
| 1977 <u>1/</u> | 361.3      | 3,507   | 8.67 <u>2/</u>  | 1,647 <u>3/</u> | + 112.9                 |
| 1978 <u>1/</u> | 147.3      | 899     | 3.96 <u>2/</u>  | 1,295 <u>3/</u> | - 30.6                  |
| 1979 <u>1/</u> | 574.7      | 3,706   | 4.68 <u>2/</u>  | 2,992 <u>3/</u> | + 23.9                  |
| Total          | 2,704.3    | 15,238  | 66.12           | 14,556          |                         |
| Average        | 193.2      | 1,088.4 | 4.72            | 1,039.7         | + 0.04                  |

1/ Preliminary data.

2/ Calculated by subtracting hatchery return from total return: 150,000 in 1978, 370,000 in 1979, 315,000 in 1980 & 1,019,000 in 1981.

3/ Includes projected hatchery return.