

ANNUAL FINFISH MANAGEMENT REPORT

1976 - 1977

LOWER COOK INLET



ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF COMMERCIAL FISHERIES

ANNUAL  
FINFISH MANAGEMENT REPORT  
-1976-1977-  
LOWER COOK INLET

STAFF

Area Management Biologist.....Thomas R. Schroeder  
Assistant Area Management Biologist.....Scott C. Kyle  
Clerk Typist.....Jean Calhoun  
Data Control Clerk.....Hazel Vanderbrink

Regional Office:           333 Raspberry Rd., Anchorage, Alaska 99502  
Area Office:               P.O. Box 234, Homer, Alaska 99603

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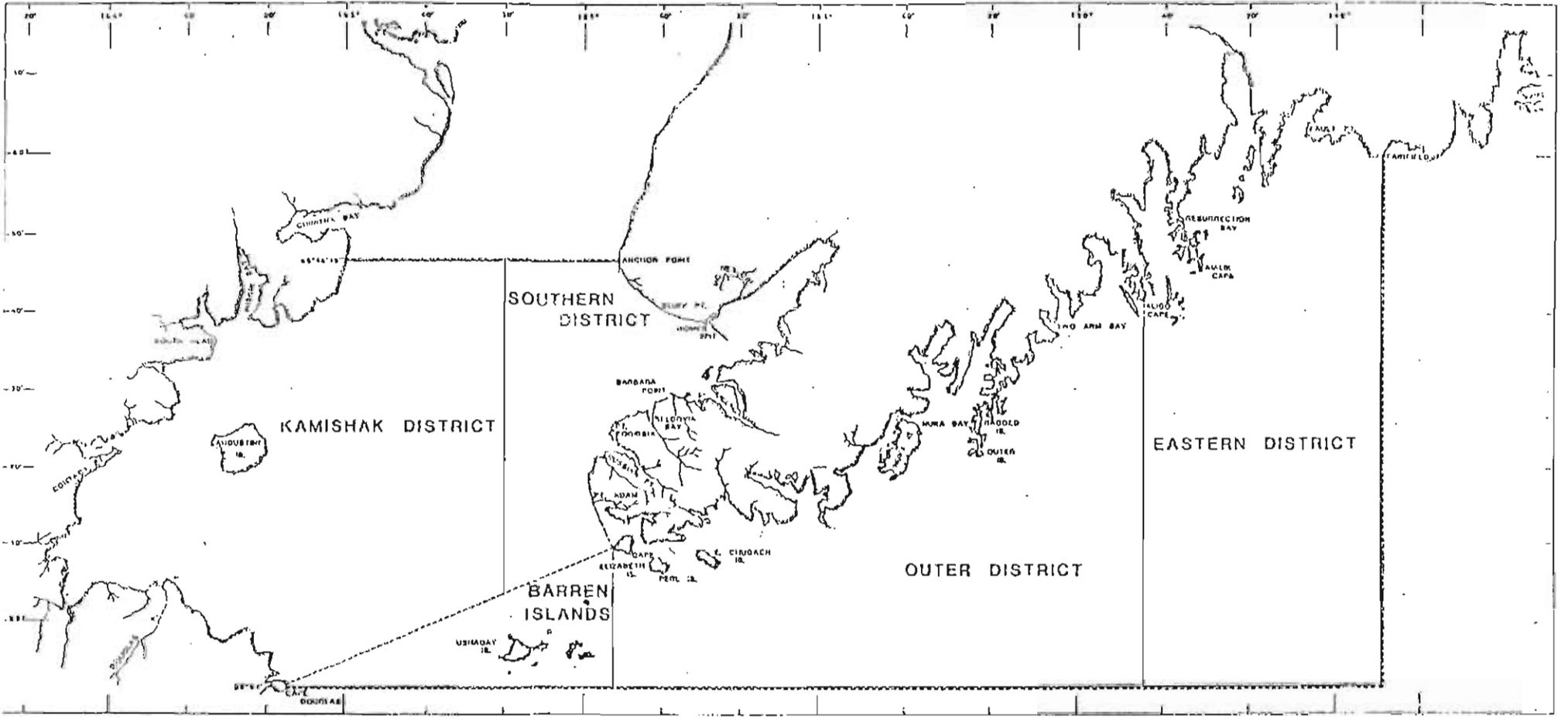


Figure 1. Lower Cook Inlet Management Area.

# ANNUAL MANAGEMENT REPORT

## LOWER COOK INLET

-1976-1977-

### 1976 COMMERCIAL SALMON FISHERY

#### INTRODUCTION

The Lower Cook Inlet management area is comprised of all waters west of the longitude of Cape Fairfield north of the latitude of Cape Douglas and south of the latitude of Anchor Point (Figure 1). The area has been divided into five fishing districts (Southern, Kamishak Bay, Barren Islands, Outer and Eastern) all of which are salmon producers except for the Barren Islands district, which is primarily a shellfish district (Figure 1).

The 1976 Lower Cook Inlet salmon harvest of 249,097 fish was comprised of 450 king, 58,159 sockeye, 3,216 coho, 136,445 pink and 50,822 chum salmon (Table 1). The area continued to show the affects of the severe winters in the early 1970's with the harvest being 65 percent below average. Pink and chum salmon harvests continued to be the primary species affected and harvests of each species were 75 and 57 percent below average respectively (Figures 7 and 9). The Outer district was closed to all pink and chum salmon fishing and the harvest of 19,398 fish, 97 percent of which were sockeye, represented less than 5 percent of the average harvest for this district (Table 1 and 16). The

sockeye harvest was 52 percent above average, but over 58 percent of the fish were caught by Southern district set gillnets which intercept fish bound to Upper Cook Inlet lakes and streams (Table 1 and 13 and Figure 6).

The 1976 pink salmon forecast for the Southern and Outer districts was 780,000 fish (Appendix Table 16). The total return of 197,000 pink salmon was 75 percent below forecast and spawning escapements were considerably below desired levels in many streams (Table 3). The poor return was reflected by the fishing effort and only 53 of 90 salmon permits were fished during the season (Appendix Table 3). Set gillnet effort was similar to the previous year.

Salmon prices remained similar to the previous year with a slight rise in the sockeye price (Appendix Table 5). The ex-vessel value of \$731,000 was above average for the area, but 56 percent below the 1975 level (Appendix Table 4). The 1976 case pack for the entire Cook Inlet area was 80 percent above the previous three years, but was due to stronger returns to Upper Cook Inlet (Appendix Table 7). This season indicated an increasing trend towards the fresh-frozen market in sockeye and pink salmon with the total poundage of fresh-frozen production increasing by 44 percent (Appendix Table 8).

## Southern District

The pink salmon return to the Southern district began to build at a very slow rate in early July. Although the timing of even-year returns are later than odd-year returns, it was obvious, by the end of the first week of July, that the run was going to be considerably under the forecasted return. Set net catches, which appear to be an excellent indicator of run strength, were indicating a return 45 percent below average for the Southern district.

Set gillnets begin fishing the first Monday of June on two 48 hour weekly periods and over 50 percent of their harvest has historically been sockeye salmon (Table 13). Most of these fish, with the exception of the English Bay and Port Graham set nets, intercept sockeye bound for systems in Upper Cook Inlet. With a weak pink return in the Southern district, the set gillnet fishery was closed on July 14. By July 18, the escapement to Tutka Lagoon had progressed to the point that natural escapement needs and egg take requirements for the new FRED hatchery had been achieved and the waters between Barabara Point and Anisom Point were opened to seining and set gillnetting on Tuesday July 20. Seiners harvested 18,000 pink salmon in this area and the Tutka escapement of 11,500 was considered excellent (Tables 3, 6 and 10).

Aerial and ground surveys of Humpy Creek indicated a good escapement had been achieved from the early return to this stream and the area from Gull Rock to Chugachik Island was opened to seining for 48 hours from 6:00 a.m. Thursday July 22 until 6:00 a.m. Saturday July 24. The late run provided the remainder of the escapement goal and the area was reopened to seining at 6:00 a.m. Wednesday August 4 during the normal Wednesday closure and afterwards on the regular weekly periods. The harvest from the Humpy Creek run was 73,100 pink salmon, fifth highest since 1959 and the pink salmon escapement of 27,200 was considered good (Tables 3, 6, 9 and 10).

An aerial survey of Seldovia and Port Graham Bays on July 29 indicated fair numbers of pink salmon on the spawning grounds and additional fish protected inside markers. The entire Southern district was reopened to set gillnet fishing and the area from English Bay to Anisom Point was opened to seining on August 2. Very little harvest occurred in either Seldovia or Port Graham (Table 10) and escapement levels were fair to good in both streams (Tables 2 and 6). The chum salmon return to Port Graham was very poor and the escapement of 400 fish was inadequate (Tables 4 and 11).

The coho salmon harvest of 1,905 was 37 percent below average for the Southern district (Tables 1 and 15). The majority of the fish were taken by set gillnets and the gillnet catch was above average (Table 13).

## OUTER DISTRICT

The Outer district, with the exception of the East Arm of Nuka Bay, was kept closed in 1976 to build up pink and chum salmon stocks depleted by the 1964 earthquake and the severe winter conditions in the early 1970's. A June 28 survey of Delight and Desire Lakes indicated that the escapement goals of 10,000 sockeye for each lake were well on their way to being achieved. The East Arm of Nuka Bay was opened to seining from 12:00 noon Wednesday June 30 until 6:00 a.m. Saturday July 3. An additional one mile radius closure was kept around the mouth of Delight Lake to try and increase the escapement level.

The escapement to Desire Lake was achieved and fishing time was extended to seven days per week. The runs dropped off by mid-July and the area was closed on July 14. The harvest of 18,900 sockeye salmon was the second highest on record and the escapement levels were considered adequate (Tables 5 and 12). A few incidental pink and chum salmon were harvested during the sockeye fishery, but were considered insignificant (Table 1 and 16).

## KAMISHAK DISTRICT

Poor weather prevented early June surveys of the Mikfik Lake area near McNeil River in the Kamishak district. The southern portion of the district south of Nordyke Island was opened to seining on June 17 in anticipation of fair sockeye salmon returns to the area. The first survey of the area on June 18 indicated 3,400 sockeye in Mikfik lake and stream and McNeil Lagoon. The total escapement was estimated at over 6,000 sockeye on a June 21 survey and fishing in the area was extended through the normal weekly closures on June 23-24 and 26-28. The sockeye harvest for the Kamishak district of 3,988 was more than 2-1/2 times the average for the district (Tables 12 and 17). The sockeye escapement of 10,000 fish to Mikfik Lake was double the goal (Table 5). Virtually the entire harvest was from fish headed to the Douglas and Kamishak River systems as these sockeye averaged over 6.8 pounds and Mikfik sockeye normally average under 4.5 pounds.

Chum salmon began arriving at McNeil River after the first week of July. The area continued to remain open after the sockeye opening and the McNeil River chum salmon escapement had reached 5,000 fish by July 12 and over 8,000 fish had been caught. Chums began arriving in the Douglas and Kamishak Rivers the following week and good catches were made through late July. The chum harvests from returns to the Douglas, Kamishak and McNeil Rivers

totalled 34,500 and the harvest was considered excellent when compared to recent years (Table 11). Escapements to these river systems were all considered good (Table 4).

A fair chum salmon return occurred along with the pink salmon return to Bruin Bay River and a 96 hour opening was announced for July 24-28. However, due to the limited effort and good catches of chums in the southern portion of the district, little harvest occurred. Aerial surveys conducted on August 3 indicated the chum salmon escapement in Iniskin River was assured. Iniskin Bay was opened to seining on August 5 and with the minimal fishing effort present in the area, the Kamishak district south of Kerschner Lake was opened to fishing seven days per week.

Additional surveys on August 11 and 16 indicated chum salmon escapements to Cottonwood Creek and Ursus Lagoon were progressing very well. Cottonwood Bay was opened on August 18 with an escapement of 5,000 fish in the stream. A survey of Ursus Lagoon on August 21 indicated the minimum escapement had been achieved and Ursus Cove and Lagoon were opened on August 22. Good chum salmon escapements were achieved in both Ursus Cove and Cottonwood Bay and catches were fair (Tables 4 and 11). The total chum salmon harvest of 48,848 was the third highest on record for the Kamishak district and over twice the average for this area (Table 17).

The coho salmon harvest of 1,111 fish was over three times the

average harvest for the area and was the third consecutive year of excellent harvests (Table 17). Most of the fish were caught incidentally to the chum salmon harvests in the Douglas River and Kamishak River area.

## EASTERN DISTRICT

No sockeye openings were allowed in the Aialik Bay area of the Eastern district in 1976. The return was expected to be low and aerial surveys never accounted for many fish until July 14 by which time all sockeye had already reached Aialik Lake. The escapement of 8,000 was above average and considerably above the escapement goal (Table 5).

A brief seine fishery for pink salmon was allowed in Resurrection Bay for the first time since 1972. Aerial surveys conducted on July 14 and 22 did not indicate any large concentrations or schools of pink salmon in the bay. However, on July 22, the sport fish catch rate of pink salmon was at its peak and was considerably higher than previous years. The use of the recreational fishery catch rates as an indicator of run strength was questionable, and when weather precluded additional aerial surveys between July 27-29, ground surveys of the streams were conducted on August 5 and 6. These surveys indicated that large numbers of pink salmon were already present on the spawning grounds two weeks prior to the normal peak spawning time. The Sport Fish Division was contacted concerning a commercial fishery and possibly conflict with the Seward Silver Salmon Derby and a commercial seine opening was announced for 72 hours from August 9-12.

Five boats participated in the fishery which was held five days prior to the Seward Silver Salmon Derby and was scheduled to close 48 hours prior to the start of the derby. The fishery was marred by considerable conflict between commercial and recreational user groups and the fishery was ordered closed by the division director on August 10, 30 hours after the opening. The harvest of 35,423 pink salmon was the fourth largest on record and 3-1/2 times the average (Table 18).

Sport fishermen concerned with the fate of silver salmon were worried that commercial seiners would harvest considerable numbers of silvers and also affect their catches of pink salmon. Harassment of commercial seining operations did occur in one area where a large portion of the recreational fishing effort was concentrated. Escapements to the major clearwater spawning streams were considered to be excessive (Table 3) and the forced closure resulted in considerable economic loss to local seiners.

As a result of this user group conflict, which had also occurred in prior years, a policy statement for managing the pink salmon resource in Resurrection Bay was presented to the Alaska Board of Fisheries and was subsequently adopted at the December 1976 meeting. The policy recognizes the viability and necessity of a commercial fishery on pink salmon in Resurrection Bay and directs the fishery to be conducted as follows:

1. Commercial fishing for pink salmon will not commence

- until after July 15. The purpose of this strategy is:
- a. To protect early coho salmon from commercial exploitation and assure optimum recreational opportunity for these fish;
  - b. To provide more and better assessment of pink salmon abundance.
2. No commercial fishery will be permitted within 48 hours preceding the start of the derby.
  3. No commercial fishing would be allowed after the derby because of the numbers of coho salmon in the bay at that time. Also, few pink salmon remain in the bay by the end of the derby.
  4. Management will strive for reasonable separation by areas by fishery to reduce user conflicts.
  5. Any commercial fishery will be closely monitored by Commercial Fisheries, Sport Fish and Fish and Wildlife personnel. Fish and Game personnel will be aboard tenders to monitor and make periodic checks of actual seining operations to minimize incidental catches of coho salmon.

## SUBSISTENCE FISHERY

Subsistence catches of salmon in Kachemak Bay have historically been composed of 75 percent coho salmon. The season has usually opened in mid-August and fishing gear has been concentrated primarily along the northern shore of Kachemak Bay from the boat harbor to Fritz Creek. Over 70 percent of the permits have been issued to Homer residents in past years and when other local communities are included, over 86 percent of the permits are issued to local residents (Table 19).

A 17 percent reduction occurred in the number of permits issued this year, but still remained high for the second consecutive year (Table 20). The coho harvest was 44 percent above average and pink salmon harvests remained high for the second year in a row. The Southern district was closed to commercial and subsistence fishing on September 17.

## ENHANCEMENT AND REHABILITATION

### Tutka Hatchery

This marked the first year of operation for the Tutka Hatchery and the second year of egg takes in Tutka Lagoon. Over 10,800 pink salmon were seined up and put in holding pens in the lagoon and provided 10.41 million green eggs for the hatchery. Assuming egg to fry and fry to adult survival rates of 85 percent and 2 percent respectively, the hatchery could produce an additional 177,000 adult pink salmon in 1978.

### Halibut Cove

The Halibut Cove saltwater rearing facility is still in an infant stage as far as adult salmon returns are concerned. Only 7 king salmon returned this year, but a special opening was allowed in the lagoon to harvest pink salmon that returned from an experimental release of 50,915 Kenai River pink salmon fry in 1975. Over 2000 adult pinks were caught and represented an ocean survival of 4 percent.

### Miscellaneous

Caribou, Seldovia and Leisure Lakes are all part of an on-going lake stocking research project. Caribou Lake was stocked with

155,700 coho fingerling in an attempt to provide additional coho salmon for the sport and subsistence fisheries near the Homer Spit. Seldovia Lake was stocked with 80,307 coho fingerling and returns from this project will enter commercial gillnet and seine fisheries, as well as the recreational and subsistence fisheries. Leisure Lake, which empties into China Foot Bay, was stocked with 59,800 sockeye fingerling. Returns to this project will be harvested primarily by the commercial seine fishery. A method of harvesting surplus sockeye that reach the stream below the barrier falls has not been determined, but large numbers will most likely enter the recreational fishery.

## 1977 COMMERCIAL SALMON FISHERY

### INTRODUCTION

The 1977 Lower Cook Inlet salmon harvest of 1,542,977 was over twice the 24 year average harvest for the area and was the largest harvest since 1962 (Tables 2 and 14 and Figure 5). The harvest was comprised of 217 king, 101,597 sockeye, 3,232 coho, 1,292,153 pink and 145,778 chum salmon with the primary three species, pink, chum and sockeye, all being considerably above average (Table 2 and 14 and Figures 6,7 and 9). The sockeye salmon harvest was over 2-1/2 times the average and the exceptional set gillnet harvest in the Southern district was complimented by good seine harvests in the other three districts to produce the second largest sockeye harvest on record (Tables 2 and 14).

The large pink salmon return was the result of exceptional production from the Port Dick and Windy Bay subdistricts. The total pink return to the Southern and Outer district of 1,652,000 fish was double the pre-season forecast (Appendix Table 16). Approximately 72 of the 82 licensed hand purse seiners fished during the season and the ex-vessel value of \$2,959,000 was a new record and almost 4-1/2 times the average for the Lower Cook Inlet area (Appendix Tables 3 and 4). Prices paid for salmon were similar to the previous two years, except for sockeye salmon which was 12 percent higher (Appendix Table 5). The case pack

figures for the entire Cook Inlet area were the third highest on record and fresh, frozen and cured production continued the recent increasing trend with 15.9 million pounds processed (Appendix Tables 7 and 8). The large case pack and fresh, frozen poundage was due primarily to the exceptional Upper Cook Inlet sockeye salmon return.

## SOUTHERN DISTRICT

### Sockeye Salmon

The sockeye salmon harvest in the Southern district of 54,663 fish was the highest on record and was over 2-1/2 times the average harvest for this district (Tables 2 and 15). The exceptional harvest was due primarily to the strong return to the English Bay Lake system, which set a new record harvest for the Port Graham Bay area (Table 12), and the exceptionally strong sockeye returns to Upper Cook Inlet. Set gillnets harvested virtually the entire sockeye harvest in the Southern district and the harvest of 54,404 was over three times the average (Table 13). The sockeye escapement to English Bay Lakes of 12,500 was within the desired range and was considered good (Table 5).

One significant change made by the Alaska Board of Fisheries in December, 1976 established 21 subdistricts within the four salmon fishing districts of Lower Cook Inlet. This allowed for more precise management of discrete stocks of salmon and also informed fishermen in advance of the actual areas that would be opened by emergency order during the season (Figures 2-4).

### Pink Salmon

The Southern district pink salmon harvest of 156,696 was 21

percent below average and was considered poor compared to the previous odd-year cycle return (Tables 2 and 15). The Humpy Creek and Seldovia Bay harvests were the biggest disappointments, after the 1975 harvests and excellent escapements (Tables 6, 9 and 10).

The Tutka Bay subdistrict remained closed until mid July after enough pink salmon had reached the lagoon to provide enough fish for the hatchery egg take. The accumulation of fish in the lagoon progressed very well from 800 on June 30 to over 11,000 on July 11. The subdistrict was opened on July 11 and fishing was allowed up to the markers located at the HEA powerline. Fishing was extended through the normal Wednesday closure on July 13 and the markers at the HEA powerline were moved to the mouth of the lagoon at 6:00 p.m. Monday July 18. The Tutka Bay harvest of 21,900 pink salmon was average for this subdistrict since the late 1960's, after the affects of the 1964 earthquake became evident (Tables 9 and 10).

Pink salmon began schooling in the upper part of Seldovia Bay in late June. Aerial surveys indicated over 13,000 fish were schooled inside of Powder Island on June 30. Poor counting conditions precluded accurate estimates of fish in early July and a 72 hour opening for Seldovia Bay was announced for July 7-10, after the extreme low tide series was over. An aerial survey of the bay on July 7 indicated over 40,000 fish were schooled inside the Powder Island markers and the markers were moved 300 yards

further in the bay to the point of the long sandy beach near Mike Balough's house. The Seldovia Bay harvest of 47,600 was good, but was far below expectations after the excellent 1975 escapement and alevin densities were compared to the 1975 production (Tables 6, 8 and 9). The escapement of 35,700 was above the upper end of the escapement goal, but was not considered excessive (Table 6).

Port Graham Bay has never produced very large pink salmon returns. It appears that the river must be an unstable spawning area as adult pink salmon rarely go more than several hundred yards above tidal influence, even though there are miles of upstream river area. The record 1975 escapement and alevin density were expected to produce a good return and Port Graham proved to be the only subdistrict in Kachemak Bay to live up to its expectations (Tables 6 and 8).

Fair numbers of pink salmon began arriving in Port Graham Bay in late June and by July 7 aerial surveys indicated 10,000-15,000 fish were already schooled inside markers at the head of the bay. The subdistrict was opened along with the other portions of the Southern district on July 11. The subdistrict remained open on the regular weekly fishing period and the total harvest of 44,800 pink salmon set a new record for this area (Tables 9 and 10). The escapement of 20,600 was considered excellent (Tables 3 and 6).

The Humpy Creek subdistrict, as was the case for Seldovia Bay, was expected to have a strong return in 1977 based on the record 1975 spawning escapement and alevin density (Tables 6 and 8). However, aerial and ground surveys conducted in mid July indicated that the return was not building at a rate necessary to have a large return. The subdistrict remained closed until surveys on July 26 indicated that the low end of the escapement goal would be achieved, and an opening was announced for 48 hours from July 28-30. The escapement reached 30,000 by August 2 and the subdistrict was reopened on August 4. Little fishing effort shifted to Humpy Creek due to the strong Outer district returns and the harvest of 26,900 was low for this area (Tables 9 and 10). The escapement climbed very rapidly in late August and the final escapement of 86,000 was almost three times the upper end of the escapement goal and was very excessive (Tables 3 and 6).

#### Miscellaneous Species

Chum salmon are normally harvested incidentally to pink salmon during directed pink salmon openings in the Southern district and very few specific openings occur to harvest just chum salmon. The 1977 Southern district chum salmon harvest of 6,723 was only one third of the average harvest for this district, but was the highest chum harvest since 1970 (Tables 2 and 15). The majority of the fish were caught in the Fort Graham subdistrict and the 5,000 fish harvest was the second highest on record (Table 11).

The chum salmon escapement to Port Graham River was 5,200 and was the highest chum salmon escapement on record (Tables 4 and 7).

The coho salmon harvest in the Southern district was poor. Only 1,239 coho were caught in 1977, but was more a reflection of the lack of seine effort in the Southern district and processors to purchase set net caught fish in late August and September than it was resource availability (Tables 2, 13 and 15).

## OUTER DISTRICT

### Sockeye Salmon

A strong sockeye salmon return was expected to Delight and Desire Lakes located in the East Nuka subdistrict (Figure 2). Excellent escapements to both lakes in 1972, coupled with favorable ocean survival rates in recent years were expected to produce a sockeye harvest of 20,000-30,000 fish from this area.

The first aerial survey of these lakes was flown on June 14. No fish were observed near Delight Lake, but 200 fish were counted at Desire. Surveys on June 21 and 25 indicated strong buildups of fish at both lakes with over 4,000 sockeye estimated in Desire Lake and 11,000 schooled off the mouth on June 25. An opening by flare was announced for 12:00 noon June 26 and the East Nuka subdistrict was opened to seining seven days per week. McCarty Lagoon located at the mouth of Delight Lake Creek remained closed as sockeye were slow to move into this lake system. The opening day's harvest in the East Nuka subdistrict reached 8,600 sockeye. By July 7, the escapement goal at Desire Lake had been achieved and the harvest had reached 17,000 fish; however, with the escapement to Delight Lake still progressing very slowly, the McCarty Lagoon area was kept closed and fishing time was reduced to the regular two 48 hour weekly periods on July 11.

The East Nuka subdistrict was closed on July 16 to allow escapement from the latter portion of the sockeye run and to allow early arriving pink salmon to move into the creek at Desire. Large numbers of sockeye again began accumulating off the mouth of Desire Lake Creek and the subdistrict was reopened for 48 hours on July 25-27. The final sockeye harvest reached 32,500 and was 25 percent above the previous record harvest set in 1972 (Table 12). An additional 1,200 sockeye were delivered in the Port Dick area, but most probably were East Nuka Bay fish. The escapement of 10,700 to Desire Lake was good, but the Delight Lake escapement of 5,200 fell short of the goal (Table 5).

#### Pink Salmon

The Outer district pink salmon harvest of 1,127,800 was the second highest harvest on record and the largest since the record harvest of 1962 (Tables 2 and 16). A strong return was expected to this district based on 1975 brood year alevin densities and the harvest was over 3 1/2 times the average for the district. The majority of the harvest occurred in the Port Dick Bay subdistrict, but excellent catches were made in the Windy Bay and Nuka Bays subdistricts (Table 9).

The pink salmon return to Dogfish Bay streams has always been relatively minor compared to the primary return of chum salmon. Various fishing times were allowed to harvest chum salmon in this subdistrict, but the four hour lagoon opening allowed by flare on

August 4, resulted in the third highest pink salmon harvest on record. Approximately 5,000 pinks were harvested during the short opening and good escapements were also achieved (Table 9).

No specific emergency orders were issued to specifically open the Port Chatham subdistrict in 1977. The subdistrict was opened during several fishing periods, which opened the entire Outer district, but little fishing effort or harvest occurred. Fishing markers were kept to the outer portion of the bay and prevented harvest of the majority of the fish which were schooled in the upper part of the bay. Only 1,400 pink salmon were harvested, but escapements to the four spawning streams exceeded 14,000 pink salmon (Table 3).

The two spawning streams in Windy Bay produced a very strong pink salmon return in 1977. The resulting harvest of 173,200 was a record for this subdistrict and was more than double the previous high harvest in 1962 (Tables 9 and 10). Fish began arriving in Windy Bay in late June and, during the first week of July, aerial surveys indicated an increase of schooled fish in the bay from 1,400 on July 5 to 19,000 on July 8. The subdistrict was opened to seining on July 11 and by July 12 there were over 47,000 fish schooled inside the markers.

Little fishing effort shifted to Windy Bay due to the strong catches in Port Dick. Only one vessel was present in Windy Bay on July 15 and with over 25,000 pinks schooled in the small

embayment on Windy Right, where the escapement goal was only 10,000, the vessel was allowed to make a set inside the markers. The markers were then moved out the bay to protect the remaining fish during the minus tides, which normally would cause fish to back out of the shallow bay area.

As the adults began moving onto the spawning grounds in Windy Left, it became evident that the escapement goal of 10,000 fish was too low. Windy Left has extensive spawning area above the forks, which is located 300-400 yards above intertidal influence. Past spawning escapements rarely utilized much of the area in either of these two forks, but in 1977 fish readily moved up each fork and the escapement goal was increased by an additional 25,000-35,000 fish.

Markers were adjusted further into the bay on July 21, but severe rain storms and flooding precluded accurate estimates of escapement and the markers were moved back out the bay on July 25. The subdistrict was closed on July 28, but was reopened on August 1 after the flooding subsided and fish moved back inside the markers. The final escapements of 47,300 for Windy Left and 11,100 for Windy Right were excellent (Tables 3 and 6).

The pink salmon return to Rocky River was not strong, but did provide the best escapement since 1968 (Table 6). The 36,700 fish escapement did not reach the goal of 50,000, but was considered good. The harvest of 11,600 was mostly taken during the second

opening of the subdistrict which was primarily directed at the chum salmon return. The subdistrict fishery will be discussed in detail under the chum salmon section.

The Port Dick harvest of 880,300 was the second highest on record and the best since the 1962 record harvest (Tables 9 and 10). The escapement goal of 24,000 was adjusted upwards in 1971, but did not produce good results, most probably due to the extreme winter weather in the early 1970's, which reduced the freshwater and ocean survival rates of pink salmon fry. The goal was adjusted upwards again in 1975 and was broken down into a goal of 20,000 intertidal spawners and 60,000-80,000 upstream spawners. The 1977 return strength confirmed the need for a larger spawning escapement and 109,300 pink salmon reached the stream, which was the largest spawning escapement on record (Tables 3 and 6).

The Port Dick odd-year pink salmon return is composed of two separate runs: (1) an early July return which appears to be the upstream spawning run; and (2) a late July to mid August run which appears to be the intertidal spawning run. This pattern holds true in even-year returns which are 95 percent intertidal spawners and do not arrive until late July.

Pink salmon began arriving in Port Dick Bay in late June and by June 29 over 17,000 fish were schooled along beaches at the head of the bay. By July 5, over 40,000 pink salmon were schooled inside markers at the head of the bay and the subdistrict, except

for the Port Dick North section, was opened for 72 hours from July 7-10. Even with intensive fishing effort, over 60,000 pink salmon accumulated along the northern shore of the bay from Middle Creek to the markers at the head of the bay by July 9. With a harvest of 150,000 and over 100,000 fish on the flats at the head of the bay, a short two hour opening was allowed by flare on July 9 along the north shore of Port Dick Bay from Middle Creek to "Tent Town" Point. The harvest during this opening was only 15,000 fish as the "skitterish" pink salmon sounded out of the nets along the steep sided shoreline. Fishing time was extended for an additional five days from July 11-16 as escapements increased and catches remained strong. The Port Dick North section had been kept closed during early July to protect chum salmon schooled along the beaches which were headed to Island Creek. The portion of the Port Dick North section from Middle Creek to the upper bay markers was finally opened on July 18 when fishing in the subdistrict was extended.

Severe rain storms began on July 25 and caused extensive flooding in the area and precluded accurate aerial estimates of salmon. The Port Dick weir was destroyed on July 26 and when the weather cleared on July 28, all of the fish that had been schooled inside the markers at the head of the bay, had backed all the way down the bay past Island Creek. The subdistrict was closed at 6:00 p.m. July 28 to allow fish to reschool at the head of the bay. The subdistrict was reopened on August 1, but severe flooding occurred again on August 2 and 3 and the subdistrict was closed

again on August 6. The pink salmon harvest was just over 850,000 and the subdistrict was kept closed until the escapement to the Head End Creek had been achieved. Port Dick Bay was reopened on August 15, but fishing effort remained low and catches dropped off rapidly. Right Hand Creek at the head of the bay also received an excellent escapement of 8,000 pink salmon.

The return to South Nuka Island Creek followed a similar run pattern to Port Dick. Pink salmon began arriving in late June and by July 8 over 12,000 fish were schooled along the beach. The Nuka Island subdistrict was opened from July 7-10 but little fishing effort occurred due to the strong sockeye harvest at Delight and Desire Lakes and the pink harvests at Port Dick. Fishing effort did shift to South Nuka when fishing time was extended on July 11. Decreasing tides began causing the pink salmon schooled in the creek at the upper end of the intertidal area to back out and the subdistrict was closed on July 13 prior to the extreme minus tides. Over 5,000 pinks moved into the creek at South Nuka during the closure by July 20 and the subdistrict was reopened on July 21. Poor weather precluded conducting aerial or ground surveys of the stream to verify the escapement and the area was closed again at 6:00 a.m. on July 28. The weather broke on July 28 and a survey of South Nuka Creek indicated that the escapement goal had been achieved and the subdistrict was reopened at 6:00 p.m. July 28 with markers moved up to the creek mouth.

The Nuka Bay harvest of 56,300 was taken primarily at South Nuka Creek and was very good for this small stream (Tables 9 and 10). The escapement of 11,100 was slightly above the goal and was considered excellent (Table 3).

### Chum Salmon

The Outer district chum salmon harvest of 70,167 was average for the district and was the first decent catch since 1973 (Tables 2 and 16). The majority of the harvest occurred from Rocky Bay to Nuka Bay and chum salmon escapements were considered good (Tables 4 and 7).

None of the chum runs appeared to show any signs of strength in early July. Chum salmon began arriving in several subdistricts in late June and early July and aerial survey estimates between July 8-10 indicated the majority of the spawning escapements at Dogfish Bay and Rocky Bay were assured. Fair numbers of fish were schooled along the northern shoreline of Port Dick Bay, but very few fish were holding inside the markers at Island Creek.

All major chum salmon producing subdistricts, except for Island Creek in Port Dick, were opened to fishing from July 11-16 during the general opening for the Outer District. The Dogfish Bay return continued to build during July, but weather prevented accurate assessment of the buildup in the lagoon. An aerial

survey on July 29 indicated that over 20,000 chum salmon were schooled inside Dogfish Lagoon and a four hour opening by flare was announced for August 4. Seventeen boats participated during the opening and the harvest contained over 5,000 pink salmon and the final chum salmon harvest for the Dogfish Bay subdistrict was 9,400 (Table 11).

The Rocky River chum salmon return was not strong, but a four-fold increase in the numbers of chum salmon in a three day period from July 5 to 8, prompted an opening on July 11-16. However, an aerial survey of the area on July 14 indicated that many of the fish, which were protected inside the fishing markers, had backed out into the fishery and had been caught. The subdistrict was closed immediately at 2:00 p.m. on July 14 and remained closed until pink salmon began arriving on July 19. The harvest of 17,700 chum salmon from this area was the largest since 1970 and was the third highest on record (Table 11) The escapement goal of 20,000 was not achieved, but the escapement of 10,500 was good when compared with past escapements for this stream (Tables 4 and 7).

The Port Dick chum return was considered good and the 25,600 fish harvest was the second highest in the last 10 years (Table 11). Chum salmon bound for the primary chum salmon spawning stream at Island Creek usually school along beaches on the northern shore of Port Dick Bay, as far up the bay as "Tent Town Point". The Port Dick North section was kept closed when the remainder of the

subdistrict was opened on July 7 to harvest the strong pink salmon return. Chums gradually began moving inside the markers at Island Creek and the portion of this North shore section west of Middle Creek was opened on July 18. The entire northern shoreline of the bay was finally opened on July 21 with over 6,900 chum salmon schooled inside the markers at Island Creek. The final Island Creek chum salmon escapement of 11,100 was considered excellent and was the largest on record for this stream (Tables 4 and 7). The Head End Creek escapement of 5,000 was average.

The only other significant chum salmon return to the Outer district occurs at Petrof Glacier Creek in Nuka Bay. Assessment of the return is often difficult at this extremely, glacially influenced area. Adult escapement cannot normally be determined until after fish move onto the clearwater spawning streams which flow into the glacial river. Fishing was allowed in this area from July 7-13 and after July 18 on the regular weekly fishing periods. Marker placements protected large numbers of adults schooled along the beach south of the creek mouth throughout the fishery. The harvest of 17,700 chum salmon in the Nuka Bay area came primarily from the Petrof return. The 3,500 fish escapement was above average and in the middle of the escapement goal (Tables 4 and 11).

## KAMISHAK DISTRICT

### Sockeye Salmon

The Kamishak-Douglas subdistrict was opened to fishing on June 16 in anticipation of a good sockeye salmon return to Mikfik Lake. Poor weather prevented aerial surveys of the area until June 15. Over 3,500 sockeye were observed in the lower, intertidal portion of the creek during that survey, but no fish had reached the lake, as yet. No fishing effort occurred at Mikfik Creek, located at McNeil River, and a June 21 aerial survey indicated over 9,000 sockeye had reached the lake with additional fish still remaining in the intertidal lagoon area. Fishing was extended to seven days per week and McNeil Lagoon was opened to fishing on June 23, but no fishing effort occurred on the Mikfik return.

The total sockeye harvest for the Kamishak Bay district of 7,425 was the second highest on record and five times the average (Tables 2, 12 and 17). Over 2,100 sockeye were reported as harvested from the Mikfik area. Comparison of the average weights of these fish, 7.55 pounds, that normally average 4.0 pounds or less, with those reported from the Kamishak and Douglas Rivers, 7.78 pounds, indicated that all of the sockeye were probably taken from the Kamishak River and Douglas River returns.

The Mikfik Lake sockeye escapement was estimated at 9,800 and was almost double the escapement goal of 5,000 fish (Table 5). Fair escapements were also achieved in various streams of the Douglas River system and at Amakdedori Creek. High muddy water throughout the summer prevented salmon escapement estimates in the Kamishak River system (Table 5).

### Pink Salmon

The pink salmon returns to the Kamishak district were rather insignificant in 1977. The harvest of 6,308 was low and less than one third of the average (Tables 2 and 17). Virtually the entire harvest came from the Bruin Bay return.

The Bruin Bay subdistrict was opened to fishing seven days per week on July 7 prior to the arrival of any pink salmon. The strong chum salmon returns to other subdistricts kept fishing effort in Bruin Bay at a minimum. The pink salmon escapement to Bruin Bay River of 60,000 was above the goal but was considered excellent (Table 3). Although no fishing was allowed on pink salmon returns to Sunday Creek and Brown's Peak Creek, good escapements were achieved in both streams which should provide harvestable returns in the future (Table 3).

### Chum Salmon

The Kamishak district experienced very strong chum salmon return

to several streams in 1977. The district harvest of 65,659 chum salmon was the second highest on record since 1954 and was just under three times the historic average catch (Tables 2 and 17). The majority of the chum harvest, 38,500, came from the McNeil River return with the Ursus Cove, Cottonwood Bay and Iniskin Bay contributing another 23,000 fish (Table 11). A new record harvest would probably have been established this year if severe storms had not prevented fishing for over three weeks during the peak of the run. Excellent escapements were achieved in most spawning streams, except Iniskin River, and escapement estimates for the two Kamishak Rivers was impossible due to high muddy water conditions throughout the summer (Table 4).

The first major chum run to arrive in the district is usually the McNeil River return. These fish normally begin arriving during the first week of July and the run is usually over by July 15-25, depending on run strength. The McNeil River area, located in the Kamishak-Douglas subdistrict, was left open in anticipation of the chum return. Over 12,000 chums were caught during the first week of July and the escapement appeared to be progressing well with over 6,000 fish in the river on July 8 and 10,000 by July 11. The catch increased an additional 26,000 chums during the second week and, with little increase in escapement observed during the July 14 survey, it became obvious that the fleet was stopping the run entirely.

The McNeil River portion of the subdistrict was closed on July 18

for 72 hours and this closure was extended an additional 48 hours until July 23. The entire subdistrict was reopened on July 23 after the 20,000 chum salmon escapement goal to McNeil River had been achieved. Very few fish were available for harvest and no effort occurred due to better catches in other subdistricts. The 38,500 chum salmon harvest at McNeil River was a record for the area and the 20,000 fish escapement was considered excellent (Tables 4, 7 and 11).

Severe weather prevented fishing on chum returns to the large Kamishak and Douglas River systems and only 4,000 fish were harvested from those runs (Table 11). Escapement estimates were also impossible on the majority of the spawning streams in these systems due to flooding. After the storms abated, the returns to streams in the northern portion of the district began arriving and returns to Ursus Cove and Cottonwood Bay appeared strong in early August. After pink salmon escapements had been achieved to Sunday Creek and Brown's Peak Creek, the Ursus Cove and Rocky Cove subdistricts were open to fishing on August 4, seven days per week.

Strong winds prevented low altitude estimates of chum salmon in Ursus Lagoon, but numerous "jumpers" and schools were observed indicating good numbers were present. The weather continued to hinder fishing efforts and only 1 1/2 - 3 days of fishing were possible during a week. Good numbers of chums were also moving into Cottonwood Creek in Cottonwood Bay and also into Iniskin

Creek and the entire Kamishak district was opened to fishing seven days per week on August 8.

Catches of chum salmon were steady in all of the northern districts for two weeks. The streams cleared and the winds finally allowed accurate estimates of fish on August 22. The escapements to Ursus Cove Lagoon streams were assured with over 6,500 fish in the two creeks and over 4,000 additional fish in the lagoon. Ursus Cove Lagoon was opened immediately at 8:00 p.m. August 22 up to the mouth of the right hand creek. The chum salmon harvest of 7,800 fish from the Ursus and Rocky Cove subdistricts were all taken from the Ursus Cove area and the escapement of 9,300 chums to Ursus Lagoon streams was considered excellent (Tables 4 and 7).

The stream in Cottonwood Bay also received an excellent escapement of 10,000 chum salmon and the markers at the head of the bay were removed at 8:00 p.m. August 22. The return to Iniskin River fell short of the escapement goal and the 4,400 chum salmon escapement was considered poor (Tables 4 and 11). Additional protection will have to be provided for this return in the future. The majority of the harvest of 15,300 chum salmon from the Cottonwood Bay and Iniskin Bay subdistricts came from Cottonwood Bay (Table 11).

## EASTERN DISTRICT

Fishing activity in the Eastern district in 1977 was rather quiet. The district is primarily an even-year pink salmon producer in Resurrection Bay and the only returns in 1977 were to rather small systems in Aialik Bay. The Aialik Bay subdistrict was opened to fishing on June 26 seven days per week after a June 25 aerial survey indicated over 1,500 sockeye salmon had already reached Aialik Lake and Lagoon. By June 29 the escapement goal of 5,000 sockeye had been achieved and the lagoon was opened to seining at 2:00 p.m. June 29. Fishing time was reduced to the regular two 48 hour weekly periods on July 11 to allow some escapement from the latter portion of the run.

The harvest of 5,776 sockeye set a new record harvest for Aialik Bay and the escapement of 5,000 sockeye was considered good (Tables 5 and 12). Very small pink and chum salmon returns occur to numerous, small streams in Aialik bay and the harvest of 1,349 pink and 3,229 chum salmon were incidental to the sockeye fishery (Tables 1 and 18). The chum salmon harvest was very high for this district and was three times the historic average (Table 18).

## SUBSISTENCE

The 1977 Kachemak Bay subsistence fishery started out in a rather confused state. The Board of Fisheries eliminated the fishery at their December, 1976 meeting, but the Alaska Courts issued an injunction on August 9 and directed the Department to conduct the fishery as it did in 1976. The Northshore subdistrict of Kachemak Bay was opened to subsistence fishing on August 16 and a closed area from Anchor Point to Miller's Landing was imposed. This closure was adjusted to allow fishing between Miller's Landing and a marker 1 1/2 miles east of the Homer Spit and was imposed to reduce the incidental catch of steelhead bound for the Anchor River.

The total of 197 permits issued this year represented a 19 percent reduction from the previous year and was probably due to the late timing of the court decision and injunction (Table 20). The harvest of 3,116 fish was slightly below the previous year, but still 70 percent above average (Table 20). The coho harvest was slightly higher than 1976 and was the third consecutive year of large coho harvests. The reduction in total harvest was due primarily to the lower pink salmon harvest, which reflected run strengths to Southern district streams. The fishery was closed on September 17 after catches dropped off and most fishermen had quit fishing.

## ENHANCEMENT AND REHABILITATION

### Tutka Hatchery

The Tutka Hatchery released 4,299,100 pink salmon fry in 1977 which represented an extremely poor survival from an egg take of 10.41 million in 1976. However, a major catastrophe occurred in the spring of 1977 when the short-term-rearing pens, which held over 2.9 million pink salmon fry, were blown loose of their moorings during a storm. The pens ended up dry on the outgoing tide and it was assumed that 100 percent mortality had occurred on the fry.

A total of 6,528 pink salmon were taken for hatchery brood stock and 7.0 million eggs were taken for the hatchery. Low survival from green to eyed eggs continues to be a problem and a weak point in the hatchery procedure. This is being attributed to the ripening of adults in the lagoon saltwater environment and the delayed fertilization of eggs in the hatchery. Experiments are being conducted to alleviate this problem.

### Halibut Cove Lagoon

The Halibut Cove Lagoon saltwater rearing facility was again operated in 1977 with primary emphasis on king and coho rearing. This year was the first year where king and coho smolt were only

held and fed for two weeks prior to release. A total of 49,929 king and 7,244 coho smolt were finally released.

A second experiment involved saltwater rearing sockeye fry. Approximately 152,000 sockeye fry were held in various test groups from June until September. Several groups contacted vibrio and experienced high mortalities. Approximately 60,000 sockeye fingerling were released in Leisure Lake in September and an additional 48,000 were released at the floats in Halibut Cove Lagoon. A third experiment involved vibrio vaccine tests on pink salmon. Tutka Lagoon fish were transported to HCL in early May and were held and fed for approximately six weeks before being released. A total of 342,000 pink fry of the original 400,000 test group were marked and released in Halibut Cove Lagoon.

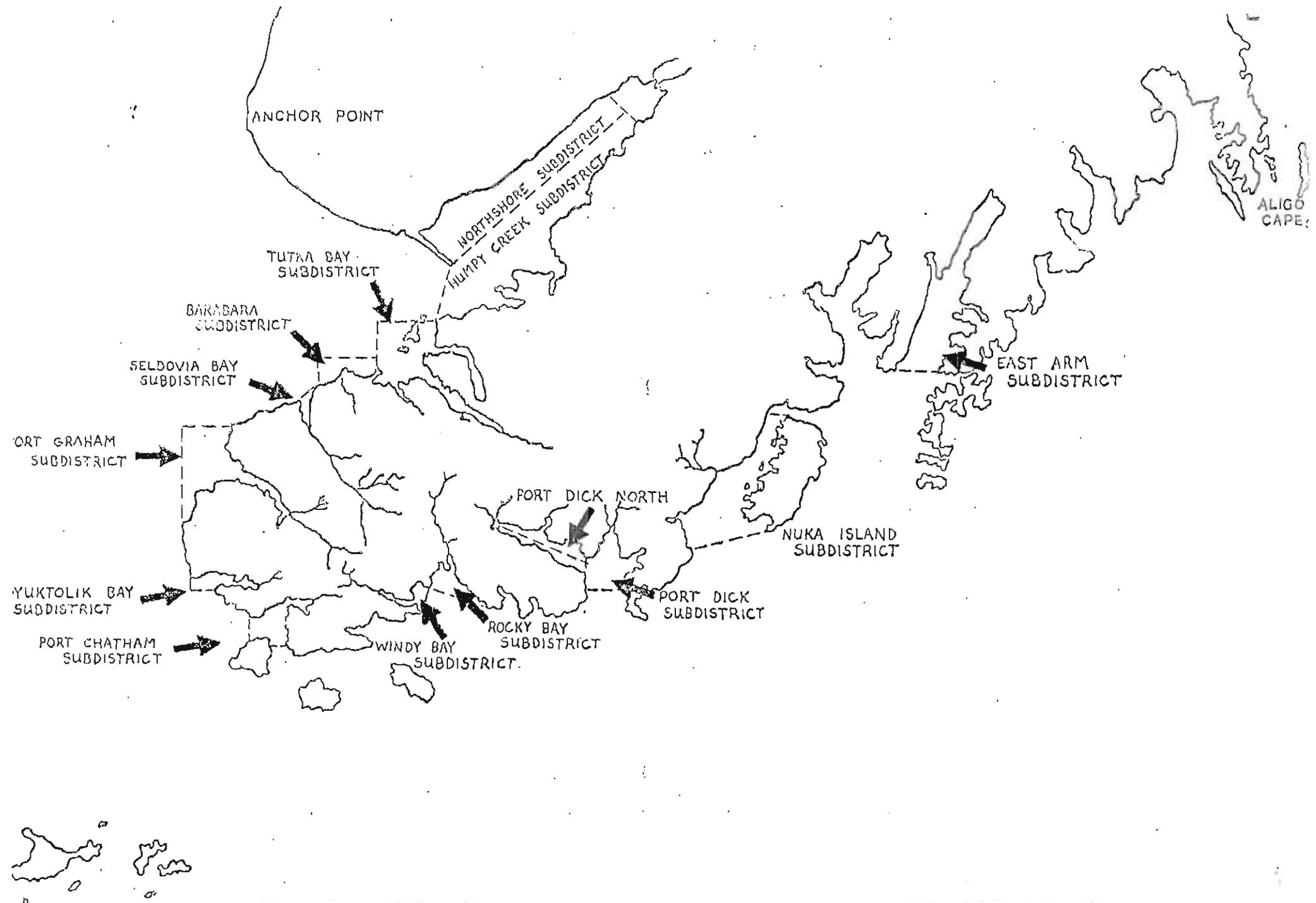


Figure 2. Salmon fishing subdistricts in the Southern and Outer districts of Cook Inlet.

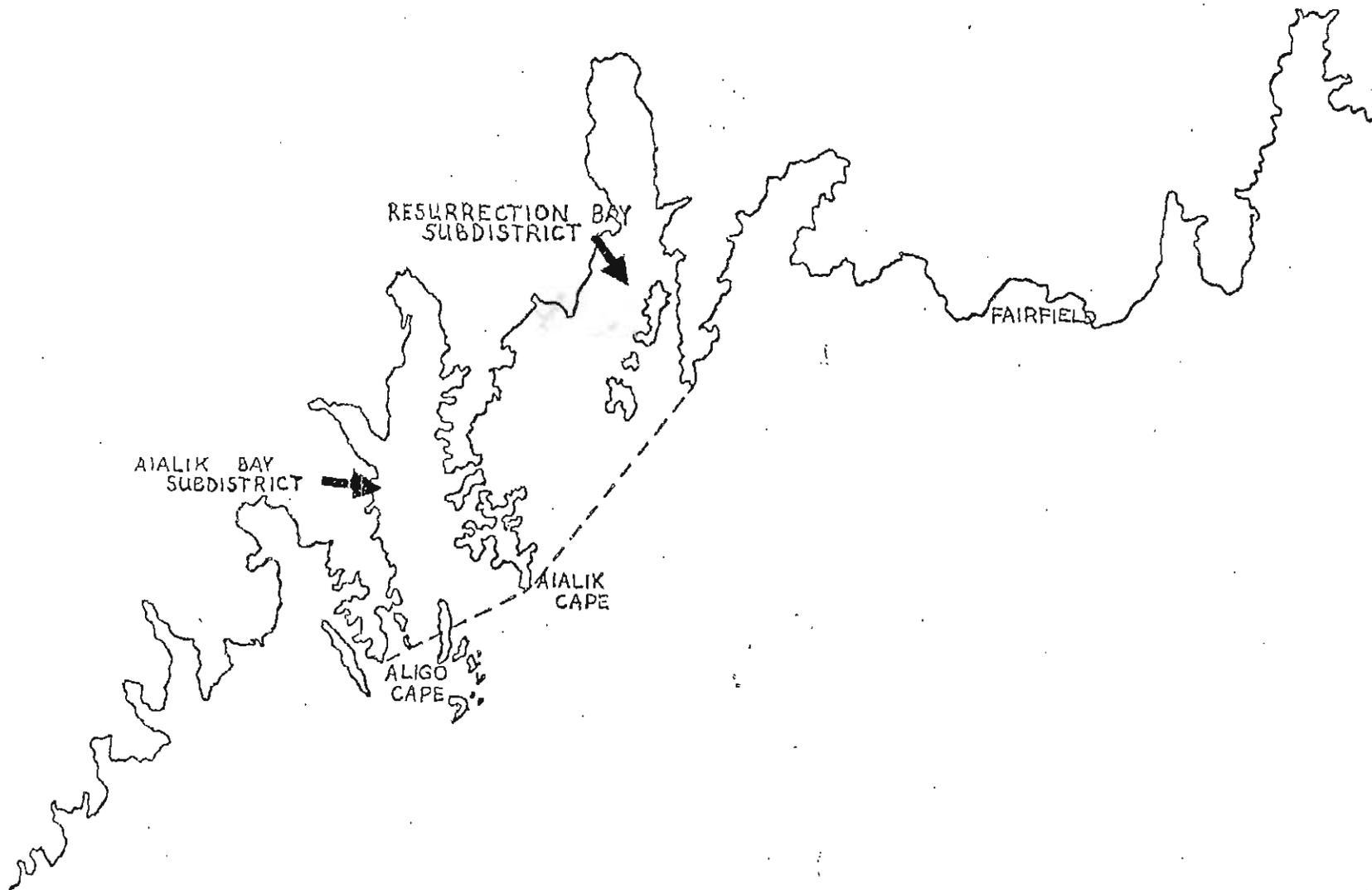


Figure 3. Salmon fishing subdistricts in the Eastern district of Cook Inlet.

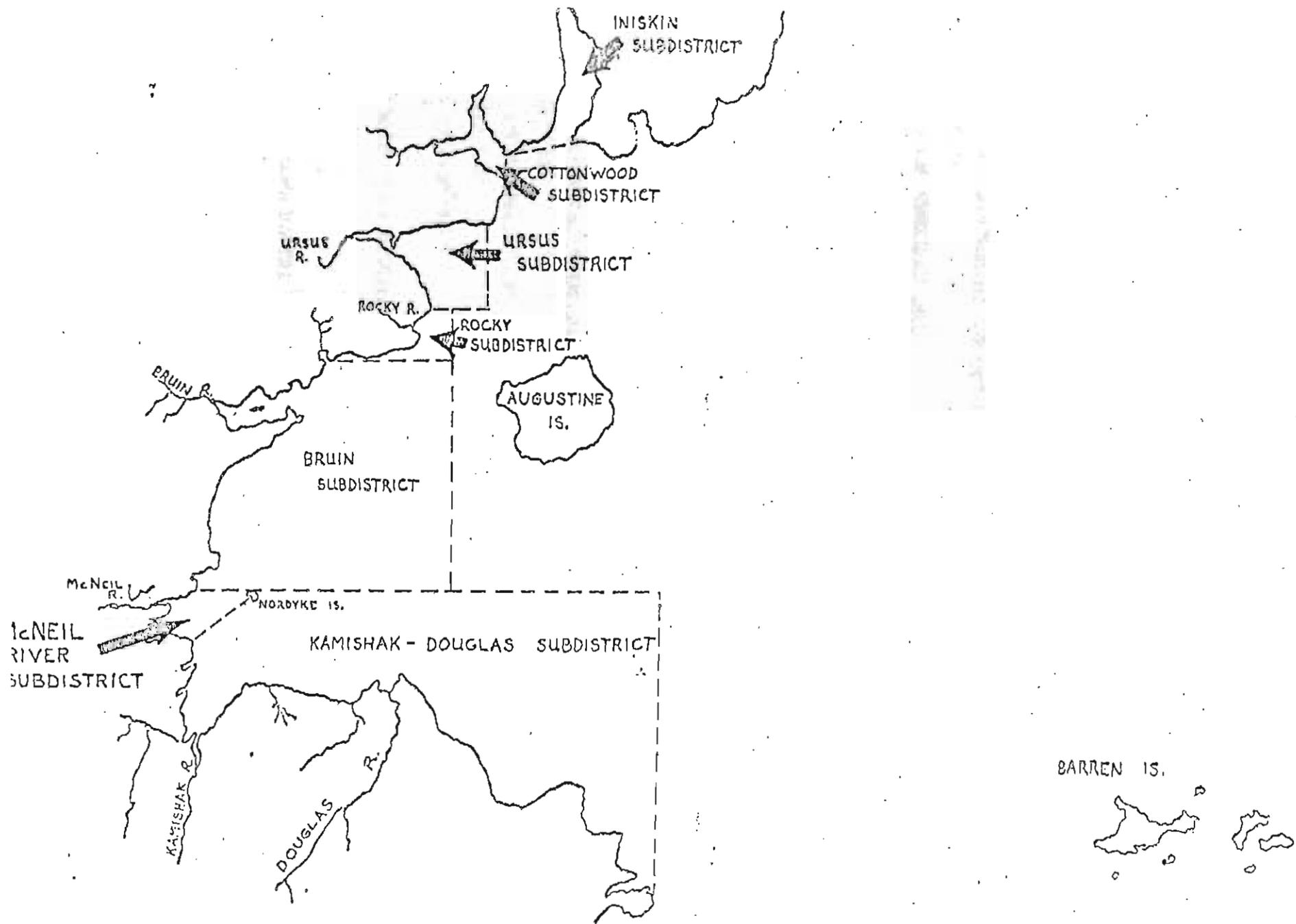


Figure 4, Salmon fishing subdistricts in the Kamishak Bay district of Cook Inlet.

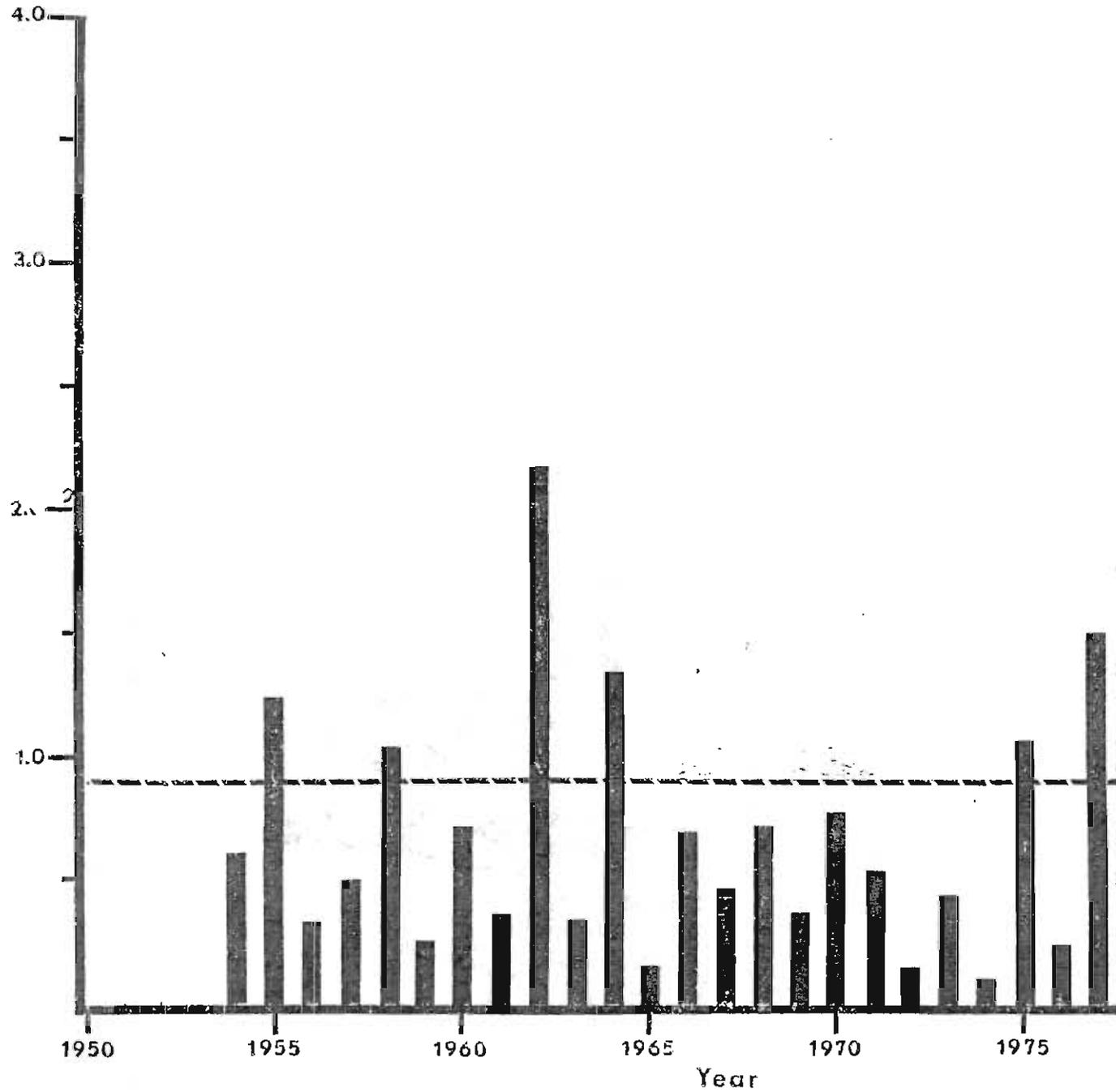


Figure 5 . Lower Cook Inlet total salmon catch, 1954-..

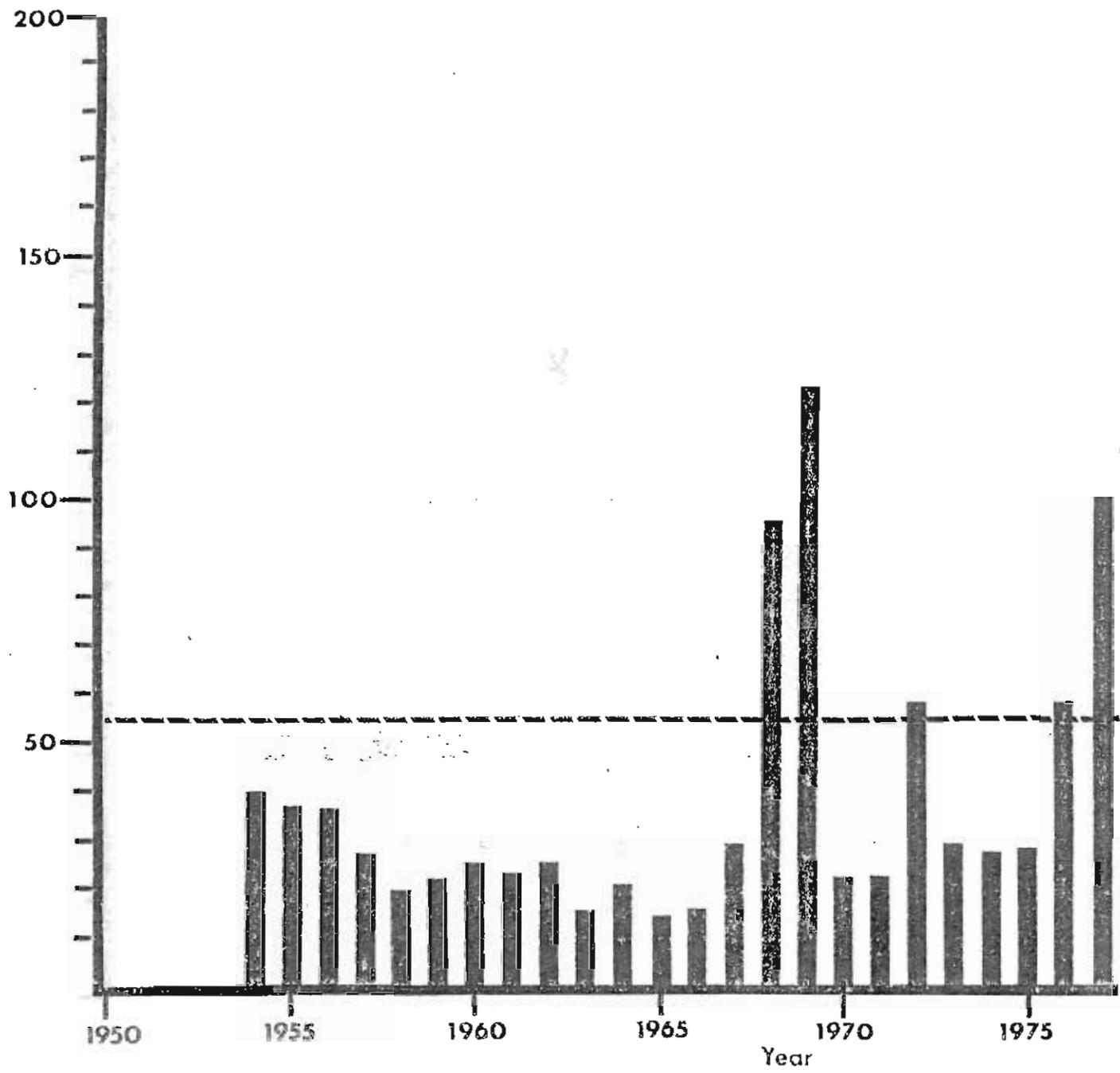
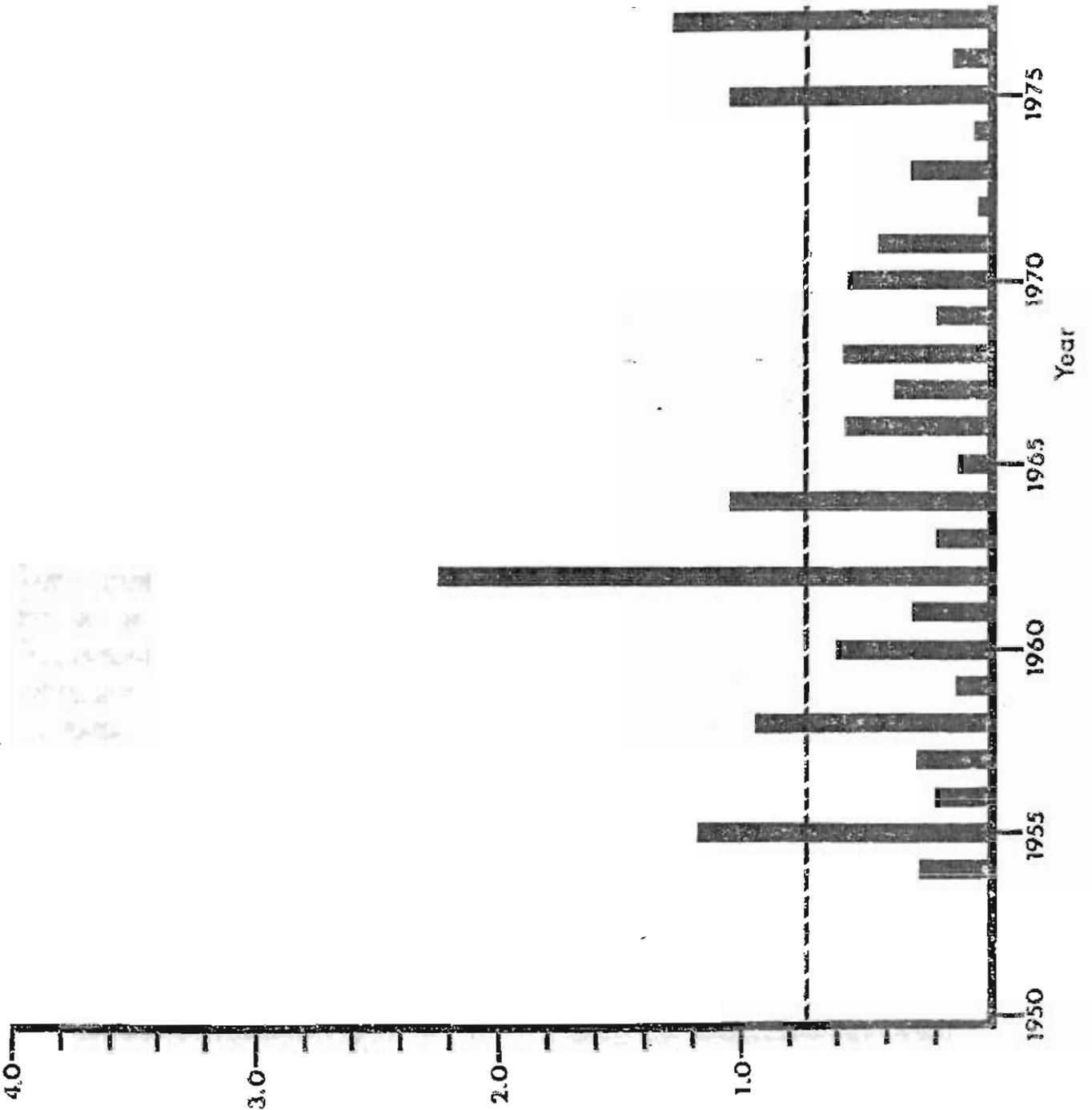


Figure 6 . Lower Cook Inlet sockeye salmon catch, 1954 - 1978



1950  
 1955  
 1960  
 1965  
 1970  
 1975

Figure 7. Lower Cost Inlet - Ink - 1954 - 1975

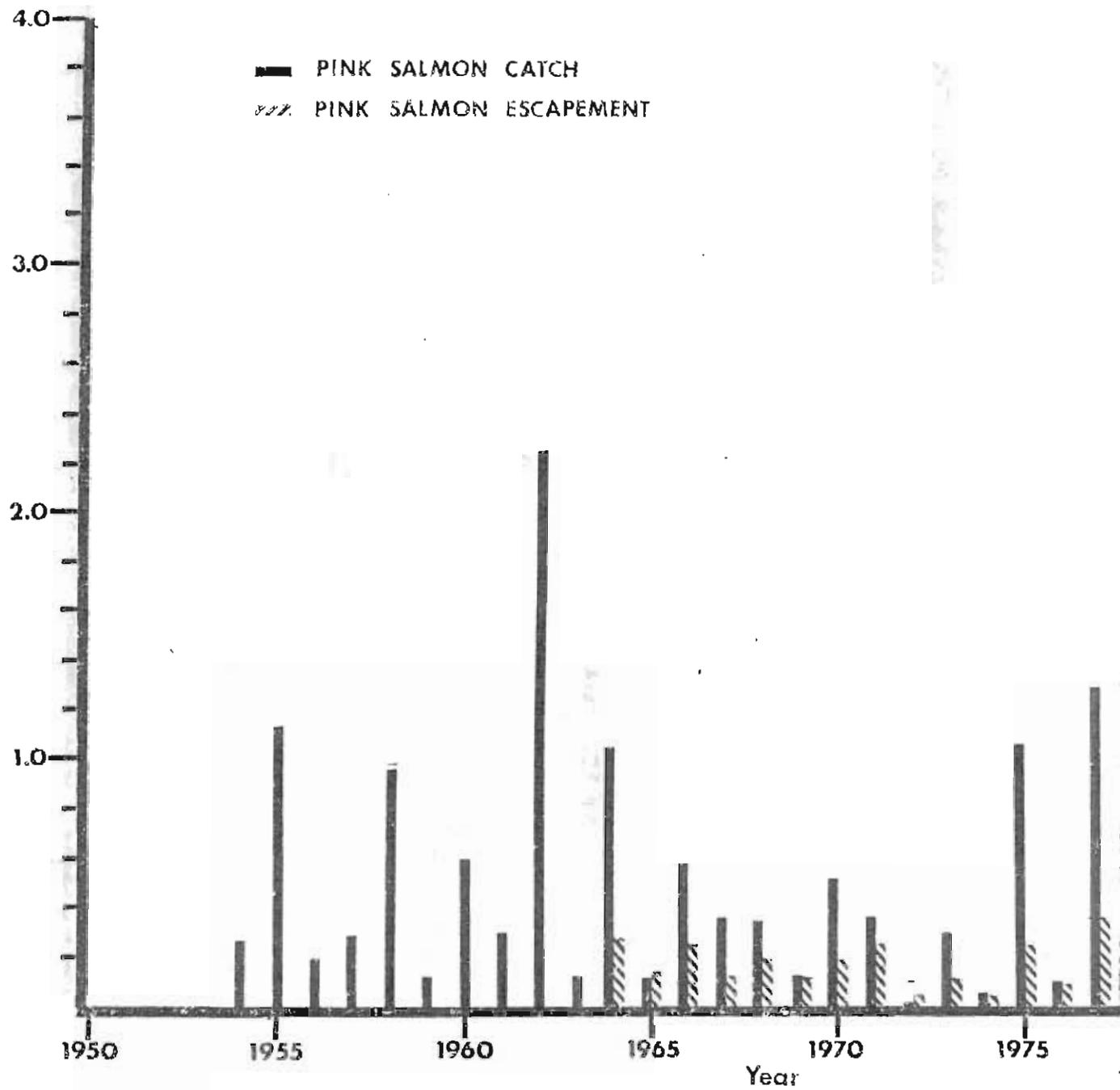


Figure 8. Southern and Outer Districts' pink salmon catch/escapement, 1954 -

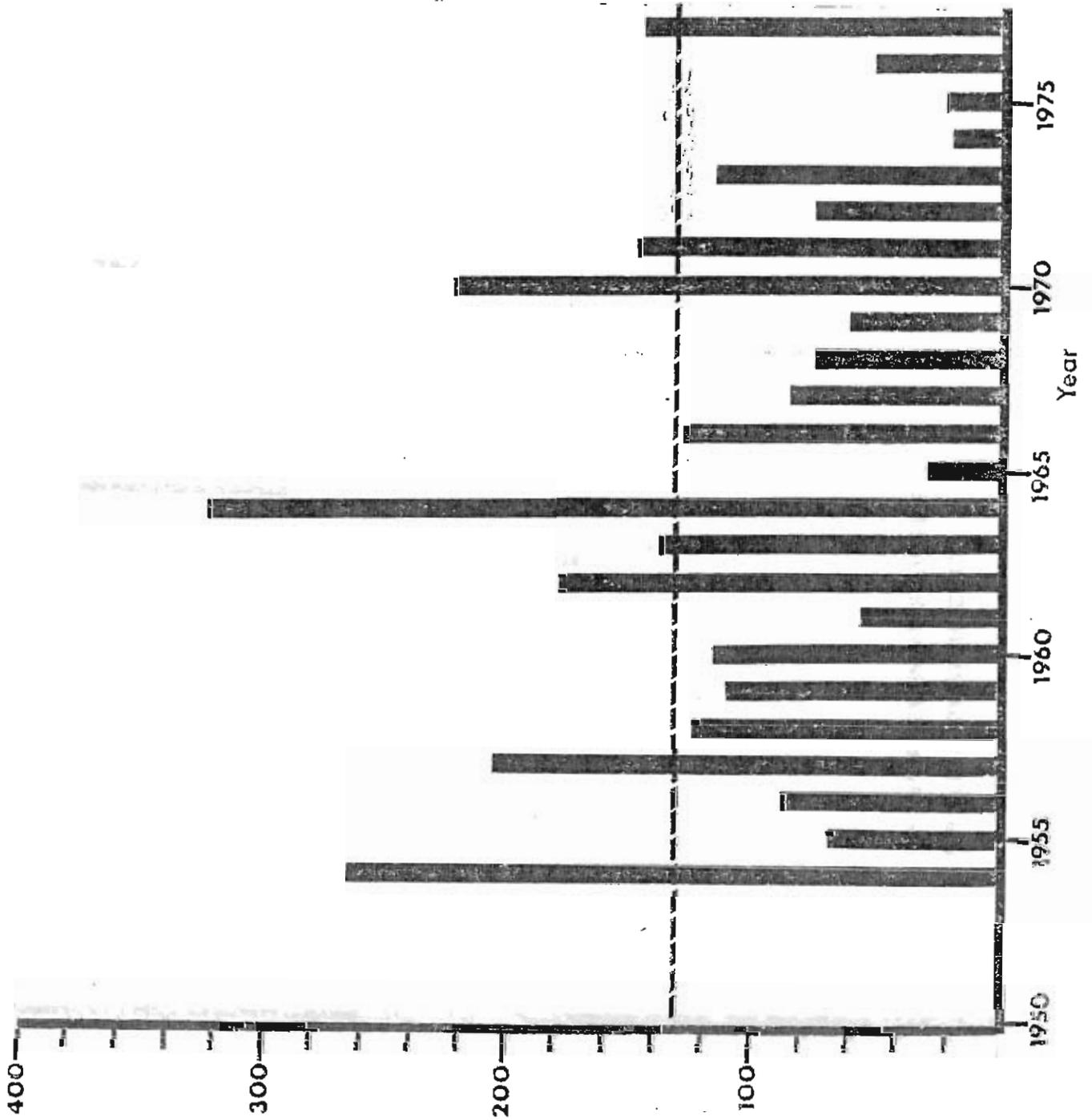


Figure 1. Total number of... 1954

Table 1. Lower Cook Inlet salmon catch by species, district and gear, 1976.

	KING	SOCKEYE	COHO	PINK	CHUM	TOTAL
<b>SOUTHERN DISTRICT</b>						
Set Net	176	33,993	1,321	13,431	1,353	50,274
Seine	266	1,287	584	55,386	164	88,706
<b>TOTAL</b>	<b>442</b>	<b>35,280</b>	<b>1,905</b>	<b>99,817</b>	<b>1,517</b>	<b>138,961</b>
<b>OUTER DISTRICT</b>						
	7	18,886	0	93	412	19,398
<b>KAMISHAK DISTRICT</b>						
	1	3,988	1,111	1,112	48,848	55,060
<b>EASTERN DISTRICT</b>						
	0	5	200	35,423	45	35,673
<b>TOTAL</b>	<b>450</b>	<b>58,159</b>	<b>3,216</b>	<b>136,445</b>	<b>50,822</b>	<b>249,092</b>
24 Year Average	217	38,821	4,990	547,899	119,053	710,180

1/ Catches from Seward Silver Salmon Derby.

Table 2. Lower Cook Inlet salmon catch by species, district and gear, 1977.

	KING	SOCKEYE	COHO	PINK	CHUM	TOTAL
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SOUTHERN DISTRICT						
Set Net	175	54,404	869	38,064	2,765	96,277
Seine	7	259	370	118,632	3,958	123,226
TOTAL	182	54,663	1,239	156,696	6,723	219,503
OUTER DISTRICT						
	34	33,733	1,520	1,127,800	70,167	1,233,262
KAMISHAK DISTRICT						
	1	7,425	105	6,308	65,659	79,498
EASTERN DISTRICT						
	0	5,776	360 1/	1,349	3,229	10,714
TOTAL	217	101,597	3,232	1,292,153	145,778	1,542,977
24 Year Average	217	38,021	4,990	547,899	119,053	710,180

1/ Catches from Seward Silver Salmon Derby.

Table 3. Lower Cook Inlet escapement goals, average observed and 1976 and 1977 escapements of pink salmon.

SOUTHERN DISTRICT	ESC. GOAL	AVE. ESC. 1/	1976 ESC.	1977 ESC.
Humpy Creek	25,000 - 50,000	34,100	27,200	86,000
Tutka Lagoon	6,000 - 10,000	10,700	11,500	14,000
Seldovia Creek	25,000 - 35,000	37,800	25,600	35,700
Port Graham River	20,000 - 40,000	12,000	6,500	20,600
China Foot Bay	5,000	9,000	2,000	3,900
Barabara Creek	18,000 - 24,000	5,000	200	5,700
<b>Total</b>	<b>99,000 - 164,000</b>	<b>108,600</b>	<b>73,000</b>	<b>165,900</b>
<b>OUTER DISTRICT</b>				
Rocky River	50,000	18,400	2,700	36,700
Windy Left River	30,000 - 50,000	13,500	200	47,300
Windy Right River	10,000	4,900	200	11,100
Port Dick Creek	20,000 - 100,000	37,800	12,700	129,500
Island Creek	12,000 - 18,000	3,700	0	600
South Nuka Creek	10,000	13,000	+	12,000
Port Chatham Streams	10,000 - 15,000	10,000	-	14,200
<b>Total</b>	<b>142,000 - 253,000</b>	<b>101,300</b>	<b>15,800</b>	<b>231,200</b>
<b>KAMISHAK DISTRICT</b>				
Big Kamishak River	20,000	31,000	8,000	-
Little Kamishak River	20,000	22,000	6,000	-
Amakdedori Creek	5,000	16,000	-	-
Bruin Bay River	25,000 - 50,000	74,000	13,500	60,000
Sunday Creek	10,000	11,000	300	9,000
Brown's Peak Creek	10,000	10,000	1,200	13,000
<b>Total</b>	<b>90,000 - 115,000</b>	<b>164,000</b>	<b>29,000</b>	<b>82,000</b>
<b>EASTERN DISTRICT 2/</b>				
Bear Creek	5,000	6,400	10,000	-
Salmon Creek	10,000	8,000	16,900	-
Mayor Creek	2,000	1,600	4,300	-
Clear Creek	2,000	1,500	2,000	-
Thumb Cove	1,000	1,100	2,000	-
Humpy Cove	2,000	600	1,400	-
Tonsina Creek 3/	5,000	2,800	5,700	-
<b>Total</b>	<b>27,000</b>	<b>22,000</b>	<b>42,300</b>	<b>-</b>
<b>LOWER COOK INLET TOTAL</b>	<b>358,000 - 559,000</b>	<b>395,900</b>	<b>160,100</b>	<b>475,100</b>

1/ Average escapement figures are based on weir counts, ground and aerial surveys conducted between 1951 and 1977. For many streams only several years data exist.

2/ Average escapements for pinks are for even years only.

Table 4. Lower Cook Inlet escapement goals, average observed and 1976 and 1977 escapements for chum salmon. 1/

OUTER DISTRICT	ESCAPEMENT GOAL (RANGE)	AVE. OBS. ESCAPE.	1976 ESC.	1977 ESC.
Dogfish Lagoon	5,000 - 10,000	5,500	3,000	6,400
Port Chatham (streams)	*	1,500	-	5,000
Windy Right River	*	1,500	-	500
Windy Left River	*	1,300	200	600
Rocky River	20,000	7,000	12,000	10,500
Head End Creek	4,000	5,600	1,500	5,000
Island Creek	10,000 - 15,000	5,300	1,000	11,100
Middle Creek	*	2,000	-	200
Petrof River	2,000 - 5,000	3,000	2,000	3,500
<b>Total</b>	<b>41,000 - 54,000</b>	<b>32,700</b>	<b>19,700</b>	<b>42,800</b>
<b>KAMISHAK DISTRICT</b>				
Silver Beach (streams)	*	4,000	6,100	6,000
Main Left (streams)	5,000 - 10,000	6,000	18,000	-
Big Kamishak River	20,000	11,000	24,000	-
Little Kamishak River	20,000	5,000	21,000	-
McNeil River	10,000 - 20,000	22,200	10,000	10,000
Cottonwood Creek	10,000	5,300	5,000	10,000
Iniskin River	10,000	8,400	13,500	4,400
Bruin River	5,000	5,200	4,000	18,000
Rocky Cove (Sunday Creek)	*	1,000	500	500
Ursus Cove (streams)	5,000 - 10,000	4,700	6,000	9,300
<b>Total</b>	<b>85,000 - 110,000</b>	<b>72,800</b>	<b>108,100</b>	<b>68,200</b>
<b>SOUTHERN DISTRICT</b>				
Tutka Creek	*	1,100	-	-
Seldovia River	*	1,200	300	600
Port Graham River	4,000 - 5,000	1,700	400	5,200
<b>Total</b>	<b>4,000 - 5,000</b>	<b>4,000</b>	<b>700</b>	<b>5,800</b>
<b>LOWER COOK INLET TOTAL</b>	<b>130,000 - 169,000</b>	<b>109,500</b>	<b>128,500</b>	<b>116,800</b>

1/ Average escapement figures are based on weir counts and ground and aerial surveys conducted between 1951 and 1977. For many streams, only several years of data exist.

\*No established goal.

Table 5. Lower Cook Inlet escapement goals, average observed and 1976 and 1977 escapements for sockeye salmon. 1

	ESCAPEMENT GOAL	AVERAGE ESCAPE.	1976 ESC.	1977 ESC.
<b>SOUTHERN DISTRICT</b>				
English Bay	10,000 - 20,000	7,200	6,000	12,500
Clearwater Slough	*	-	600	-
Total	10,000 - 20,000	7,200	6,600	12,500
<b>OUTER DISTRICT</b>				
Desire Lake	10,000	7,800	11,000	10,700
Delight Lake	10,000	6,400	6,000	5,200
Anderson Beach	2,000	500	-	-
Total	22,000	14,700	17,000	15,900
<b>EASTERN DISTRICT</b>				
Aralik Lake	2,500 - 5,000	7,000	9,000	5,400
Bear Lake	*	*	*	-
Total	2,500 - 5,000	7,000	8,000	5,000
<b>KAMISHAK DISTRICT</b>				
Mikfik Lake	5,000	5,700	10,000	9,800
Chenik Lake	10,000 - 20,000	1,400	900	200
Kamishak River	*	2,500	-	-
Douglas River	*	1,500	200	2,600
Douglas Beach	*	500	100	400
Total	15,000 - 25,000	11,600	11,200	13,000
<b>LOWER INLET TOTAL</b>	<b>49,500 - 72,000</b>	<b>40,500</b>	<b>42,800</b>	<b>46,400</b>

\*Data not available.

Table 5. 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	36.0	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
Total	477.1	150.3	529.8	168.3	188.6	68.1	250.0	529.5	51.4	2,421.0
Average	34.1	10.7	37.8	12.0	13.5	4.9	18.4	37.8	3.7	172.9
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	150-222 even yr. and 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 pink salmon adult harvests of 3,400 in 1975; 10,814 in 1976; 6,528 in 1977.

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 30-50,000 for Windy Left and 70-100,000 in Port Dick in years where large numbers of upstream spawners return.

Table 7. 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
-----													
14 Year													
Total	17.0	72.0	83.5	78.3	74.0	66.2	25.0	133.0	56.5	28.4	48.1	83.6	745.6
Avg.	1.7	5.5	7.0	5.6	5.3	11.0	5.0	22.2	5.2	4.7	5.3	8.4	53.3
Escap.													
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 8. Pink salmon alevin density by brood year for index streams in the Southern and Outer districts of Cook Inlet, 1964-1975. 7/

Year	Humpy	Tutka	Seldovia	Port Graham	Windy Left	Windy Right	Rocky	Port Dick	Island Creek	China Foot 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	39.0	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 10/	236.1	67.3	1,933.6	298.8
1969	161.4 5/	348.0	493.2	247.9	325.0	779.0	0.0 2/	195.0	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
Total	3,513.0	3,186.3	3,284.2	1,976.9	986.1	2,134.6	326.0	1,577.6	250.9	7,709.9	1,023.8
Avg.	319.4	289.7	298.6	179.7	89.6	194.1	29.6	143.4	22.8	700.9	165.8

- 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 fry salmon.  
9/ Averages do not include China Foot.  
10/ Incomplete sampling due to high water.

Table 9. Pink salmon catch 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
Humpy Creek	13.2	67.9	57.4	13.8	40.4	0.6	11.4	44.3	339.4	26.9
Tutka Bay	14.4	106.8	37.7	44.6	31.6	32.4	10.3	20.0	89.2	21.9
Seldovia Bay	4.9	15.1	1.6	19.2	11.7	28.7	27.3	19.4	429.6	47.6
Port Graham Bay	5.3	1.0	2.7	12.4	5.1	2.0	1.0	13.9	18.3	44.8
Dogfish Bay	1.6	0	0	0.1	2.3	0	10.4	0.3	0	5.0
Port Chatham	1.2	0	0.8	0	0	0	26.3	12.0	16.0	1.4
Windy Bay	3.1	2.2	0	5.4	0	0	57.3	60.5	18.1	173.2
Rocky Bay	2.3	0	1.4	0.1	0	0	0.1	0.2	0	11.6
Port Dick Bay	28.2	92.9	19.0	15.3	259.9	51.5	94.6	96.6	90.3	880.3
Nuka Bay	33.3	2.0	0.3	0	0.1	0	119.7	8.1	35.4	56.3
Resurrection Bay	8.4	0	0	0	1.2	0	0	0	0	0
Bruin Bay	0	0	12.3	0.9	2.1	0	11.7	0	0	6.2
Rocky-Ursus Coves	3.7	2.7	44.2	0	13.0	52.8	16.4	7.9	0	0
Iniskin and Cottonwood Bays	1.5	3.3	21.8	0	0.1	26.0	0	4.7	0	0.1
Miscellaneous	3.6	9.5	4.4	3.8	8.0	8.4	6.4	11.5	27.1	16.9
<b>Total</b>	<b>154.7</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>

1/ Data source IBM computer runs, 1959-77.

Table 10. Pink salmon catch 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
Humpy Creek	71.6	100.8	82.4	40.7	43.9	114.1	2.1	35.4	73.1
Tutka Bay	87.6	279.5	100.9	53.5	26.9	43.9	5.2	5.5	18.0
Seidovia Bay	42.6	142.8	37.4	44.1	23.6	28.6	0.2	3.5	3.0
Port Graham Bay	7.1	18.1	38.4	5.1	23.0	12.5	1.1	4.5	3.9
Dogfish Bay	1.0	1.4	0.1	7.1	0	9.8	0.3	0	0
Port Chatham	15.7	102.2	67.1	6.7	10.0	1.9	0	0	0
Windy Bay	29.2	85.5	68.6	20.1	3.4	0.8	0	0	0
Rocky Bay	17.0	225.9	53.2	0	10.8	39.8	0	0	0
Port Dick Bay	257.4	1,118.3	526.3	296.8	55.0	193.8	0	0.6	0
Nuka Bay	26.6	129.8	23.8	0	90.2	48.4	0.3	0.7	0.1
Resurrection Bay	5.8	0.1	0.3	0	37.4	40.2	18.2	0	35.4
Bruin Bay	2.6	0	0	0	126.2	10.2	0	0	0
Rocky-Ursus Coves	6.6	3.2	13.5	2.9	18.0	7.5	0	0	0
Iniskin and Cottonwood Bays	2.1	3.2	4.3	0	9.9	3.5	0	0	0.1
Miscellaneous	37.9	29.5	39.1	102.2	107.1	19.3	1.3	0.4	2.8
<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>

1/ Data resource IBM computer runs, 1960-77.

Table 11. Chum salmon catch 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
Kanishak 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 and 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
<b>Total</b>	<b>110.8</b>	<b>116.1</b>	<b>55.6</b>	<b>179.3</b>	<b>138.5</b>	<b>323.3</b>	<b>28.1</b>	<b>129.1</b>	<b>85.4</b>	<b>75.1</b>	<b>61.2</b>

Catch Location	1970	1971	1972	1973	1974	1975	1976	1977
Tutka	1.6	0.5	1.3	0.8	1.4	2.0	0.9	0.8
Port Graham	4.8	2.0	3.2	2.6	1.0	2.2	0.5	5.0
Dogfish	50.9	114.5	41.1	0.4	0	0	0	9.4
Port Chatham	0.1	2.1	0	0.2	0	0.6	0	0.1
Rocky-Windy	39.4	1.4	0	0.9	0	0.3	0	17.7
Port Dick	21.8	0.7	0	33.4	8.1	6.8	0	25.6
Nuka	5.9	0.1	2.3	40.8	3.9	3.6	0.4	17.4
Resurrection	0.4	0.4	0.7	0	0	0	0	0
Douglas River	0	0	0	0	0	0.1	7.1	4.0
Kanishak River	0	0	2.4	0	0	0	10.5	0
McNeil River	1.9	0	2.3	0	2.0	0	16.9	38.5
Bruin	12.8	1.6	1.8	0	0.7	0	0	0
Ursus-Rocky Coves	8.9	10.3	0.2	5.7	0	2.0	2.8	7.8
Cottonwood and Iniskin	71.9	14.5	19.7	29.9	0	2.8	11.5	15.3
Miscellaneous	3.6	0.2	0.5	0.8	2.1	1.2	0.2	4.2
<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>145.0</b>

1/ Data source IBM computer runs, 1959-1977.

Table 12. Sockeye salmon catch 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	0.3	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	5.1	6.3	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
Total	21.6	24.7	22.0	25.3	15.1	20.7	14.0	15.3	29.0	95.2	122.6	22.3

Catch Location	1971	1972	1973	1974	1975	1976	1977
Resurrection							
Bay	2.2	0.1	0	0	0	0	0
Aialik Bay	0	0.3	3.1	0.2	0.6	0	5.0
Nuka Bay	1.0	25.1	1.5	0.2	0	10.9	32.5
Humpy Creek	1.3	3.7	2.1	3.0	3.5	5.4	3.0
Tutka Bay	10.0	14.0	0.1	10.8	12.6	14.2	21.0
Seldovia Bay	1.5	2.3	2.2	2.3	2.1	2.1	3.0
Port Graham Bay	5.6	10.5	11.7	10.9	9.2	13.6	26.6
Kamishak Bay	0	0	0	0	0	4.0	7.4
Miscellaneous	0	1.0	5.0	0	1.0	0	0
Total	22.2	57.9	29.2	27.4	20.1	58.2	100.1

1/ Data source IBM computer runs, 1959-77.

Table 13. Salmon catch by species for set gillnets in the Southern District of Lower Cook Inlet, 1958-1977. 1/

Year	Kings	Reds	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	47,769
1974	175	26,966	3,010	11,097	2,713	43,961
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
20 Year Total	1,247	360,255	18,879	293,586	33,705	707,672
20 Year Average	62	18,013	944	14,679	1,685	35,384
% of Total	0.17	50.91	2.67	41.49	4.76	100.00

1/ Data source: final IBM computer runs 1958-1977.

Table 14. Lower Cook Inlet salmon catch by species, 1954-1977. 1/

Year	King	Red	Coho	Pink	Chum	Total
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	101,597	3,232	1,292,153	145,778	1,542,977
24 Year Total	5,219	912,494	119,760	13,149,580	2,857,260	17,044,313
24 year Average	217	38,021	4,990	547,899	119,053	710,180
% of Total	0.03	5.36	0.70	77.15	16.76	100.00

1/ Data source: final IBM computer runs, 1954-1977 and processor catch reports.

Table 15. Southern district salmon catch by species, 1954-1977. 17

Year	King	Sockeye	Coho	Pink	Chum	Total
1954	1,532	22,913	12,235	180,977	150,709	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	2,055	564,050	9,073	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	86,457
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	54,663	1,239	156,696	6,723	217,503
24 year Total	4,812	513,792	73,185	4,768,730	456,873	5,817,392
24 Year Average	201	21,408	3,049	198,697	19,036	242,475
% of Total	0.08	8.83	1.26	81.98	7.85	100.00

1/ Data source: Final IBM computer runs, 1954-1977, and processor catch reports.

Table 16. Outer district salmon catch by species, 1954-1977. 1/

Year	King	Sockeye	Coho	Pink	Chum	Total
1954	13	4,927	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	126,667	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
24 Year Total	146	157,560	7,439	7,628,208	1,717,166	9,510,519
24 Year Average	6	6,565	310	317,842	71,549	396,272
% of Total	+	1.66	0.08	80.21	18.05	100.00

1/ Data source: Final IBM computer runs, 1954-1977, and processor catch reports.

Table 17. Kamishak Bay district salmon catch by species, 1954-1977. 1/

Year	King	Sockeye	Coho	Pink	Chum	Total
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	12,560	35,584	48,173
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	48,048	55,260
1977	1	7,425	105	6,308	65,659	79,498
24 Year Total	24	35,332	9,283	524,542	657,570	1,226,731
24 Year Average	1	1,472	387	21,856	27,399	51,115
% of Total	+	2.88	0.76	42.76	53.60	100.00

1/ Data source: Final IBM computer runs, 1954-1977, and processor catch reports.

Table 18. Eastern district salmon catch by species, 1954-1977. 1/

Year	King	Sockeye	Coho	Pink	Chum	Total
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	809
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	360	1,349	3,229	10,714
24 Year Total	237	205,810	29,853	228,100	25,651	489,651
24 Year Average	10	8,575	1,244	9,504	1,069	20,402
% of Total	0.05	42.03	6.10	46.58	5.24	100.00

1/ Data source: Final IBM computer runs, 1954-1977, and processor catch reports.

Table 19. Summary of subsistence fishermen in Lower Cook Inlet by area of residence.

Area Residence of Permittee	Homer		Anchorage Area		Halibut Cove		Anchor Point		Seldovia		Port Graham/ English Bay		Kenai/ Soldotna		Other		Total Permits Issued
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
1974	108	73.0	20	13.5	6	4.1	4	2.7	1	0.7	3	2.0	5	3.4	1	0.7	148
1975	118	75.2	13	8.3	6	3.8	7	4.5	5	3.2	2	1.3	4	2.5	2	1.3	157
1976	182	70.0	24	9.2	9	3.5	25	9.6	5	1.9	4	1.5	6	2.3	5	1.9	260
1977	155	77.3	8	4.0	8	4.0	17	8.6	7	3.6	0	0	2	1.0	3	1.5	198
4 year Total	561	-	65	-	29	-	53	-	18	-	9	-	17	-	11	-	763
4 Year Average	140	73.5	16	8.5	7	3.8	13	7.0	5	2.4	2	1.2	4	2.2	3	1.4	191

Table 20. Subsistence fishery catches for the Southern district of Cook Inlet, 1969-1977.

Year	Issued	Returned	Permits Not		King	Sockeye	Coho	Pink	Chum	Other	Total
			Fished	Returned							
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	148	118	66	86.3	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	64	3,116
9 Year											
Total	1,394	1,239	402	-	35	221	12,273	3,184	442	385	16,540
9 Year											
Average	155	138	45	89.0	4	25	1,364	354	49	43	1,838

Appendix Table 1. Emergency order commercial fishing periods in Lower Cook Inlet, 1976.

Number	Date	Description
2H-007-76	June 14	Opens the Kamishak district South of the latitude of Nordyke Island at 6:00 a.m. Thursday, June 17.
2H-008-76	June 22	Extended fishing in the Kamishak district through the normal weekly closures on June 23-24 and 26-28.
2H-009-76	June 28	Opens the East arm of Nuka Bay to seining from 12:00 noon Wednesday June 30 until 6:00 a.m. Saturday July 3 with an additional one mile radius closure around the mouth of Delight Lake Creek.
2H-010-76	July 1	Extends fishing in the East arm of Nuka Bay to seven days per week until further notice effective at 6:00 a.m. July 3.
2H-011-76	July 8	Closes the Nuka Bay area to fishing at 6:00 a.m. Wednesday July 14.
2H-012-76	July 12	Closes the Southern district to set gillnet fishing at 6:00 a.m. Wednesday July 14.
2H-013-76	July 18	Opens the Southern district from Barbara Point to Anisom Point to seining and opens the set gillnet area east of Barbara Point at 6:00 a.m. Tuesday July 20.
2H-014-76	July 20	Opens the South side of Kachemak Bay from Gull Island to Chugachik Island for 48 hours from 6:00 a.m. Thursday July 22 until 6:00 a.m. Saturday July 24.
2H-015-76	July 23	Opens the Kamishak district south of and including Rocky Cove for 96 hours from 6:00 a.m. Saturday July 24, until 6:00 a.m. Wednesday July 28.

Appendix Table 1. (Continued)

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2H-016-76	July 30	Opens the entire Southern district to set gill net fishing and opens the area from English Bay to Anisom Point to seining at 6:00 a.m. Monday August 2.
2H-017-76	August 2	Opens the Kamishak district south of the waterfalls North of Bruin Bay at 9:00 a.m. Tuesday, August 3 on seven day per week basis.
2H-018-76	August 2	Opens the remainder of the Southern district east of Anisom Point at 6:00 a.m. Wednesday August 4.
2H-019-76	August 2	Allows fishing in the Southern District through the normal Wednesday closure on August 4.
2H-020-76	August 3	Opens the Iniskin Bay area to fishing at 6:00 a.m. Thursday, August 5.
2H-021-76	August 7	Opens the Eastern district (Resurrection Bay) to fishing for 72 hours from 6:00 a.m. Monday August 9, until 6:00 a.m. Thursday, August 12.
2H-022-76	August 10	Closes the Eastern District at 12:00 noon Tuesday August 10.
2H-023-76	August 16	Opens Cottonwood & Iliamna Bays to seining at 12:00 noon Wednesday August 18.
2H-024-76	August 21	Opens Ursus Cove and lagoon at 6:00 a.m. Sunday, August 22.
2H-029-76	Sept. 17	Closes the Kamishak district to commercial salmon fishing and closes the Southern district to commercial and subsistence salmon fishing.

Appendix Table 2. Emergency order commercial fishing periods in Lower Cook Inlet, 1977.

Number	Date	Description
2H-004-77	June 9	Opens the Kamishak-Douglas subdistrict at 6:00 a.m. Thursday June 16.
2H-005-77	June 22	Allows fishing in the Kamishak-Douglas subdistrict seven days per week and opens McNeil River Lagoon at 6:00 a.m. Thursday June 23.
2H-006-77	June 24	Opens the East Nuka and Aialik subdistricts at 12:00 noon Sunday June 26 seven days per week. East Nuka opening is by flare.
2H-007-77	June 29	Opens Aialik Lagoon at 2:00 p.m. Wednesday June 29.
2H-008-77	July 5	Opens the Bruin Bay subdistrict to fishing at 6:00 a.m. Thursday July 7 seven days per week.
2H-009-77	July 5	Opens the Seldovia Bay subdistrict and the entire Outer district except for the Dogfish, Windy and Rocky Bay subdistricts and the Port Dick North section for 72 hours from 6:00 a.m. Thursday July 7 until 6:00 a.m. Sunday July 10.
2H-010-77	July 7	Puts fishing time back to the regular two 40 hour periods in the Kamishak-Douglas, Bruin Bay, East Nuka and Aialik subdistricts effective at 6:00 a.m. Monday July 11.
2H-011-77	July 9	Opens the entire Southern and Outer districts except the Humpy Creek and Northshore subdistricts and the Port Dick North section from 6:00 a.m. Monday July 11 until 6:00 a.m. Saturday July 16 on regular weekly periods.
2H-012-77	July 12	Extends fishing time in the Southern and Outer districts and the Aialik Bay subdistricts through the normal Wednesday closure and closes the Nuka Island subdistrict at 6:00 a.m. Wednesday July 13.
2H-013-77	July 14	Closes the Rocky Bay subdistricts at 2:00 p.m. Thursday July 14.

Appendix Table 2. (Continued)

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2H-014-77	July 16	Reopens the Aialik, Tutka, Seldovia, Port Graham, Koyuktolik and Windy Bay subdistricts and the Port Dick subdistrict, except for the portion of the Port Dick North section from the west side of Middle Creek to the waterfalls south of Island Creek, at 6:00 a.m. Monday July 18.
2H-015-77	July 16	Closes the McNeil River area for 72 hours from 6:00 a.m. Monday July 18 until 6:00 a.m. Thursday July 21.
2H-016-77	July 18	Removes the markers at the HEA powerlines in Tutka Bay at 6:00 p.m. Monday July 18 and allows fishing up to the mouth of the lagoon.
2H-017-77	July 18	Allows set gill net fishing during the normal Wednesday closure from July 20-21.
2H-018-77	July 20	Closes the McNeil River area for an additional 96 hours from July 21-25.
2H-019-77	July 20	Opens the entire Southern and Outer districts at 6:00 a.m. Thursday July 21, except that the East Nuka and Northshore subdistricts will remain closed and the Humpy Creek subdistrict will be open for only 48 hours from 6:00 a.m. Thursday July 21 until 6:00 a.m. Saturday July 23.
2H-020-77	July 21	Opens the Bruin Bay and Kamishak-Douglas subdistricts during the normal weekend closure from July 23-25 and removes the Powder Island markers in Seldovia Bay at 6:00 a.m. Saturday July 23.
2H-021-77	July 23	Opens the East Nuka subdistrict at 6:00 a.m. Monday July 25.
2H-022-77	July 26	Closes the Barbara Creek, Windy, Rocky, Nuka Island and East Nuka subdistricts at 6:00 a.m. Thursday July 28, opens the Humpy Creek subdistrict for 48 hours from 6:00 a.m. Thursday July 28 until 6:00 a.m. Saturday, July 30, extends fishing time in the Kamishak district to seven days per week and keeps the McNeil River area closed until further notice.

Appendix Table 2. (Continued)

2H-023-77	July 28	Closes the Port Dick subdistrict and opens the East Nuka and Nuka Island subdistricts at 6:00 p.m. Thursday July 28 and allows fishing up to the stream mouth at South Nuka Island Creek and Desire Creek.
2H-024-77	July 30	Reopens the Port Dick and Windy Bay subdistricts at 6:00 a.m. Monday August 1.
2H-025-77	August 2	Opens the Humpy Creek subdistrict at 6:00 a.m. Thursday August 4 and allows a short flare opening in Dogfish Lagoon for 4 hours from 3:00 until 7:00 p.m. Thursday August 4.
2H-026-77	August 3	Opens the Ursus Cove and Rocky Cove subdistricts at 6:00 p.m. Thursday August 4 on a seven day per week basis.
2H-027-77	August 5	Closes the Port Dick subdistrict at 6:00 a.m. Saturday August 6.
2H-028-77	August 6	Opens the entire Kamishak district to fishing seven days per week at 6:00 a.m. Monday August 8, except for the portion of the Kamishak-Douglas subdistrict West of a line from McNeil Head to Nordyke Island.
2H-029-77	August 10	Opens the Northshore subdistrict to seining and subsistence fishing for two weeks from 6:00 a.m. Tuesday August 16 until 6:00 a.m. Wednesday August 31 and closes the area within two miles of shore from Anchor Point to Miller's Landing.
2H-030-77	August 12	Reopens the Port Dick subdistrict at 6:00 a.m. Monday August 15.
2H-031-77	August 16	Adjusts the eastern closure point for the subsistence fishing closed area along the north shore of Kachemak Bay from Miller's Landing to a marker 1.5 miles east of the Homer Spit.
2H-032-77	August 22	Allows fishing in Ursus Cove Lagoon and up to the mouth of Cottonwood Creek at 8:00 p.m. Monday August 22.
2H-033-77	Sept. 13	Closes all districts in Lower Cook Inlet to commercial and subsistence fishing 6:00 a.m. Saturday September 17.

Appendix Table 3. Fishing licenses and permits issued and fished in Lower Cook Inlet, 1960-1977.

Year	Gear License	Seines		Total	Seines Fished	Set Nets Fished
		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	28
Total	1,317	184	76	1,577	613	110
Average	88	61	25	88	51	28

\*Data source: CFEC microfiche printouts and final IBM computer runs.

Appendix Table 4. Ex-vessel value of Lower Cook Inlet commercial salmon harvest in thousands of dollars by species, 1960-1977.

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
18 Year total	30	2,230	147	7,154	2,537	12,098
18 Year Average	2	124	8	397	141	672

1/ Values obtained by using the formula: average price per lb. x average weight of fish x catch = Ex-vessel value.

2/ Preliminary data.

Appendix table 5. Average salmon price per pound by species in dollars, Lower Cook Inlet, 1960-1977. 1/

Year	King	Sockeye	Coho	Pink	Chum
1960	0.25 2/	0.27	0.18	0.15	0.16
1961	0.24 2/	0.24	0.15	0.11	0.08
1962	0.23 2/	0.27	0.16	0.15	0.07
1963	0.25 2/	0.27	0.15	0.13	0.08
1964	0.24 2/	0.27	0.15	0.10	0.07
1965	0.22 2/	0.24	0.11	0.08	0.08
1966	0.22 2/	0.24	0.14	0.11	0.08
1967	0.26	0.26	0.15	0.11	0.08
1968	0	0.25	0.17	0.18	0.09
1969	0	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

1/ 1960-1974 values obtained (except as noted) by using the formula: Avg. price/lb. x avg. weight/fish x catch = ex-vessel value. Ex-vessel 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:

$$\text{Avg. price/lb.} = \frac{\text{Avg. price/fish}}{\text{Avg. weight/fish}}$$

Avg. weight/fish from statistical leaflet. Avg. price/fish from annual management reports.

Appendix table 5. Salmon average weight per fish in pounds for Lower Cook Inlet, 1960-1977. 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	3.8	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	7.2
18 Year Total	404.8	111.3	124.2	66.5	109.0
18 Year Average	22.5	6.2	6.9	3.7	7.7

1/ 1960-1974 values obtained from commercial fish catch & production statistical leaflets. Remaining years from IBM computer runs.

Appendix Table 7. Salmon case pack by species, Cook Inlet, 1960  
-1977. 1/

Year	40 1-lb. Cans per Case					Total
	King	Sockeye	Coho	Pink	Chum	
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	135,466	440,841
1965	1,221	109,683	11,999	5,911	27,187	135,991
1966	1,472	142,987	22,985	102,796	49,686	319,926
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	85,288	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
Total	51,897	1,642,409	296,615	1,401,757	1,194,296	4,586,974
Average	2,883	91,301	16,479	77,075	66,105	254,002

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

Appendix Table B. Commercial production of fresh, frozen and cured salmon by species, Cook Inlet, 1971-1977. 1/

Year	Production in Pounds					Total
	King	Sockeye	Coho	Pink	Chum	
1971	1,122,833	858,298	230,995	29,943	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	5,426,655	684,266	2,274,473	4,243,440	13,142,065
1977	842,240	3,263,220	754,610	500,070	5,439,190	15,881,330
Total	4,357,191	20,195,223	4,090,758	5,604,551	29,594,075	63,841,798
Average	622,456	2,885,032	584,394	800,650	4,227,725	9,120,257

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

Appendix Table 9. Lower Cook Inlet total salmon catch by district,  
1954-1977. 17

Year	Southern	Outer	Kamishak	Eastern	Total
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	181,684	213,746	248,307	116,827	760,764
1969	86,475	57,036	144,166	99,423	387,100
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	120,687	278,695	48,181	808	448,371
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	219,503	1,233,262	79,498	10,714	1,542,977
24 Year Total	5,817,392	9,510,519	1,226,751	489,651	17,044,313
24 Year Average	242,475	396,272	51,115	20,402	710,180
% of Total	34.13	55.80	7.20	2.87	100.00

17 Data source: Final IBM computer runs, 1954-1977 and processor catch reports.

Appendix Table 10. King salmon catch by district for Lower Cook Inlet, 1954-1977. 1/

Year	Southern	Outer	Kamishak	Eastern	Total
1954	1,532	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
24 Year Total	4,812	146	24	237	5,219
24 Year Average	201	6	1	10	217
% of Total	92.20	2.80	0.46	4.54	100.00

1/ Data source: Final IBM computer runs, 1954-1977 and processor catch reports.

Appendix Table 11. Sockeye salmon catch by district for Lower Cook Inlet, 1954-1977. 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	54,663	33,733	7,425	5,776	101,597
24 Year Total	513,792	157,560	35,332	205,810	712,494
24 year Average	21,408	6,565	1,472	8,575	38,021
% of Total	56.31	17.27	3.87	22.55	100.00

1/ Data source: Final IBM computer runs, 1954-1977 and processor catch reports.

Appendix Table 12. Coho salmon catch by district for Lower Cook Inlet, 1954-1977. 1/

Year	Southern	Outer	Kamishak	Eastern	Total
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	465	11	121	6	603
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	360	3,232
24 Year Total	73,185	7,439	9,283	29,853	119,760
24 Year Average	3,049	310	387	1,244	4,990
% of Total	61.12	6.21	7.75	24.92	100.00

1/ Data source: Final IBM computer runs, 1954-1977 and processor catch reports.

Appendix Table 13. Pink salmon catch by district for Lower Cook Inlet, 1954-1977. 1/

Year	Southern	Outer	Kamishak	Eastern	Total
1954	188,977	82,285	0	7,562	278,744
1955	565,216	557,997	5,121	55,994	1,184,328
1956	158,486	42,368	193	14,873	207,920
1957	138,511	149,197	5,905	0	285,613
1958	289,798	739,768	0	288	949,766
1959	58,244	69,854	5,325	125	124,748
1960	289,989	381,375	11,563	8,728	611,641
1961	191,867	185,491	6,819	0	384,177
1962	544,858	1,684,823	219	49	2,249,949
1963	99,828	21,471	82,314	11	203,614
1964	266,412	767,743	28,719	813	1,055,417
1965	98,268	21,886	3,452	0	115,598
1966	177,544	398,751	2,945	0	579,240
1967	92,793	262,258	17,348	3,897	375,438
1968	154,833	191,691	198,253	41,464	585,441
1969	78,253	51,533	88,157	1	207,944
1970	288,114	382,831	23,113	48,226	574,284
1971	58,866	318,718	32,894	1	392,879
1972	9,126	1,885	342	18,198	28,551
1973	97,574	197,259	12,568	2	307,403
1974	48,875	1,678	48	0	50,591
1975	893,789	168,291	9,432	0	1,061,512
1976	99,817	93	1,112	35,423	136,445
1977	156,696	1,127,888	6,388	1,349	1,292,153
24 Year Total	4,768,738	7,628,288	524,542	228,188	13,149,588
24 Year Average	198,697	317,842	21,856	9,504	547,399
% of total	36.27	58.81	3.99	1.73	100.00

1/ Data source: Final IBH computer runs, 1954-1977 and processor catch reports.

Appendix Table 14. Chum salmon catch by district for Lower Cook Inlet, 1954-1977. 1/

Year	Southern	Outer	Kamishak	Eastern	Total
1954	150,769	112,877	0	1,945	265,591
1955	24,938	40,887	278	3,147	69,250
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	13,976	59,996	23,574	13,381	110,927
1960	4,100	67,137	44,328	467	116,032
1961	2,916	40,212	12,463	0	55,591
1962	9,078	126,767	43,404	16	179,265
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	26,237	423	148,512
1972	4,936	43,490	26,374	743	75,543
1973	3,588	76,341	35,584	0	115,513
1974	2,275	11,931	4,554	0	19,760
1975	5,428	11,350	4,868	0	21,646
1976	1,517	412	48,848	45	50,622
1977	6,723	70,167	65,659	3,229	145,778
24 Year Total	456,873	1,717,166	657,570	25,651	2,857,260
24 Year Average	19,036	71,549	27,399	1,069	119,053
% of Total	15.99	60.10	23.01	0.90	100.00

1/ Data source: Final IBM computer runs, 1954-1977 and processor catch reports.

Appendix Table 15. Pink salmon catch in thousands of fish for fishing districts in Lower Cook Inlet, 1936- 1977. 1/

Year	Catch	Year	Catch	Year	Catch
1936	526	1956	208	1976	136
1937	457	1957	286	1977	1,292
1938	345	1958	950		
1939	292	1959	124		
1940	1,659	1960	612		
1941	692	1961	303		
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		
			Total		Average
42 Year			27,319		650
Odd-Year (21)			12,606		600
Even-Year (21)			14,713		701

1/ Data source: 1953-63 data very sketchy - U.S.F. & W.S. Statistical Digest #50 and INPFC Document #1134, Rich & Ball; ADF&G computer runs, 1960-1977.

Appendix Table 16. 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, 1964-1975.

Brood Year	Escapement	Return	Return/ Spawner	Forecast	Variation from Forecast in %	
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	+	102.6
Total	1,982.3	10,633	57.48	10,269		
Average	165.2	886	4.79	856	+	6.60

