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PRINCE WILLIAM SOUND MANAGEMENT AREA

SALMON REPORT

TO THE ALASKA BOARD OF FISHERIES

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PRINCE WILLIAM SOUND SALMON FISHERIES

Management Area Description

The Prince William Sound (PWS) management area encompasses all coastal waters and inland drainage's entering the northcentral Gulf of Alaska between Cape Suckling and Cape Fairfield (Figure 1). This area includes the Bering River, Copper River and all of Prince William Sound with a total adjacent land area of approximately 38,000 square miles.

The salmon management area is divided into eleven districts that correspond to the local geography and distribution of the five species of salmon harvested by the commercial fishery. The management objective for all districts is the achievement of escapement goals for the major species while allowing for the orderly harvest of all fish surplus to spawning requirements. In addition, the department follows regulatory plans to manage fisheries and assist private non-profit (PNP) hatcheries in achieving cost recovery and brood stock objectives.

Six hatcheries contribute to the area's fisheries. Five are operated by the regional aquaculture association, Prince William Sound Aquaculture Corporation (PWSAC). The Gulkana Hatchery in Paxson augments the production of sockeye salmon to the Copper River. The Cannery Creek Hatchery located on the north shore of the Sound, and the A.F. Koernig Hatchery in the southwestern Sound produce pink salmon, the Noerenberg Hatchery in the northwestern Sound produces pink, chum, coho and chinook salmon and the Main Bay Hatchery in the western Sound produces sockeye salmon. Valdez Fisheries Development Association (VFDA) operates the Solomon Gulch Hatchery in Port Valdez and produces pink and coho salmon.

Gear for the salmon fishery includes purse seine, drift and set gillnet. Drift gillnet permits are the most numerous and are allowed in the Bering River, Copper River, Coghill, Unakwik and Eshamy Districts. Set gillnet gear is allowed only in the Eshamy District. Purse seine gear is allowed in the Eastern, Northern, Unakwik, Coghill, Northwestern, Southwestern, Montague and Southeastern Districts.

As an avenue for the commercial fishing industry to formally provide management recommendations to the department, representatives from area processing, gear groups, and aquaculture associations sit on an advisory body known as the PWS Salmon Harvest Task Force (SHTF).

Five herring fisheries occur during the year. Four of the herring fisheries occur in the spring; gillnet sac roe, purse seine sac roe, spawn-on-kelp not in pounds, and spawn-on-kelp in pounds. A herring food and bait fishery occurs in the fall. All of the herring fisheries are managed for a guideline harvest level established by the Prince William Sound Herring Management Plan, 5 AAC 27.365. The management objective for herring is to target fisheries on a high quality segment of the biomass.

Overview of Area Wide Fisheries

The 1996 Prince William Sound Area commercial salmon harvest of 31.64 million fish is the fifth highest on record (Table 1). The harvest was comprised of 26.04 million pink, 3.0 million sockeye, 2.10 million chum, 459,253 coho, and 56,457 chinook salmon (Table 2). The majority of the catch, 22.16 million, was common property harvest and 9.48 million were sold for hatchery cost recovery (exclusive of roe/meal sales).

The estimated value of the combined commercial salmon harvest is $40.5 million, including hatchery sales (Table 3). During the 1996 season, 509 drift gillnet permit holders fished. The drift gillnet catch is valued at $27.99 million, setting the average earnings at $54,988. The set gillnet catch is valued at $712,016, setting the average earnings of the 27 participating permits at $26,371. The seine fishery was worth $5.26 million for an average ex-vessel value of $58,431 for the 90 permit holders that participated this year. Revenue generated for hatchery operations (exclusive of roe/meal sales) was approximately $6.57 million.

1996 SEASON SUMMARY BY DISTRICT

Copper River District

Preseason Outlook and Harvest Strategy

The 1996 harvest forecast for the Copper River District was 53,000 chinook, 1.2 million sockeye, and 346,000 coho salmon. The Gulkana Hatchery located north of Paxson Lake was expected to contribute approximately 200,000 sockeye salmon to the commercial catch.

The 1996 sockeye salmon harvest of 2,360,000 was the largest on record and nearly twice the projected harvest (Table 4). The harvest of 55,650 chinook salmon was slightly above the projected harvest. It was the second largest chinook harvest on record, being surpassed only by the record harvest of 1995 (Table 5). The inriver goal past Miles Lake sonar of 560,000 salmon was exceeded with an estimated 908,000 salmon passing the sonar site. The sockeye aerial escapement index for the Copper River Delta systems was 65,000, 28 percent below the index goal of 90,000 (Table 6).

The traditional fishing schedule for the Copper River District is two 24-hour periods per week. Periods begin at 7:00 a.m. on Mondays and 7:00 p.m. on Thursdays. The lengths of fishing periods are adjusted by emergency order as needed. After August 7, coho management begins with one 48-hour period per week which is also adjusted as needed based on run strength. Fishing periods during the coho fishery begin at 12:00 noon.

Early in the season, management of the Copper River District is based on the actual harvest as compared to the anticipated harvest. This is the most reliable method of evaluating early run strength prior to the installation of the inriver sonar at Miles Lake. In late May, sonar counts and commercial harvest

information become the primary factors governing management of the fishery. The inriver goal for the upper Copper River is 560,000 salmon. By mid-June, aerial estimates of sockeye escapement in the Copper River Delta systems become an additional consideration when scheduling commercial fishing periods. Due to the many spawning systems in the lower Copper River Delta, an actual weekly escapement index of selected sockeye systems is compared to an anticipated weekly escapement index. The escapement index goal for the Copper River Delta is 90,000 sockeye salmon.

Season Summary

The 1996 commercial fishing season began on May 16 with a 24-hour fishing period. The harvest was 109,941 sockeye and 12,825 chinook salmon. The sockeye harvest was more than four times the projected harvest of 24,100 while the chinook harvest was over three times the projected harvest of 3,689. Water flow conditions for the Copper River were near average however, a majority of the river above the 27-Mile bridge remained ice covered. The area's weather conditions up to this point had seen above normal air and sea surface temperatures and calm winds. Escapement information was not yet available from the Miles Lake sonar site on May 18. However, the high catch rate from the first period, warm ocean conditions, and few blush fish showing up in the harvest indicated a sockeye and chinook return above the preseason forecast. The second fishing period was scheduled for 24-hours on Monday, May 20 and would help to further determine the strength of the salmon return. Weather conditions had remained calm and clear. The harvest for the second 24-hour period was a record breaking, single period harvest for sockeye of 188,164 and 11,516 chinook salmon. The sockeye harvest was four times the projected harvest of 42,400 and the chinook harvest was double it's projected harvest of 5,900.

ADF&G personnel operating the Miles Lake sonar were on site May 13, however, river and lake ice prevented deployment until May 18. Ice in Miles Lake hampered sonar operations through the rest of May. The sonar site at Miles Lake is comprised of two Bendix side scan sonar counters. Transducers are deployed on a tripod early in the season when water levels are low and are moved to the permanent concrete pads and rails as water levels rise. The first day of operation on May 18 saw 101 salmon being counted versus an anticipated count of 1,664 salmon. Species apportionment at the site, between chinook and sockeye, is not one of the objectives of the Miles Lake project. The inriver ratio of sockeyes to chinook salmon approaches 100 to 1 and the two species' migration patterns are dissimilar. Chinook have a tendency to migrate further offshore, out of the ensonified zone, versus sockeye's near shore migration habits. The migration time for salmon to travel from the commercial fishing district to the sonar site ranges from seven to nine days depending on the water level of the Copper River.

The announcement for the next scheduled commercial fishery was at 12:00 noon Wednesday, May 22. The cumulative harvest for the first two commercial fishing periods was over four times the projected for sockeye and 2.5 times for chinook. The sonar's escapement estimate through May 21 was only 646 salmon, versus an anticipated 9,800 salmon. Considering the large initial harvest, if run entry and upriver migration timing were both on track, then escapement past Miles Lake sonar should have begun to reflect a strong return also. However, inriver passage at Miles Lake sonar was less than 10% of the anticipated by May 22. A possible explanation for the low escapement was that sockeye salmon appeared to have built up in the outside waters due to favorable sea conditions that led to an abundant food supply. Sockeye were averaging nearly one pound larger than normal. With excellent marine conditions, fish remained offshore feeding. Numerous feeding fish were detected in the catch, at far higher rates than have been seen

historically. With inriver passage past the sonar counters far below the projected level, the third period was delayed.

By the morning of May 25, the inriver passage rate had increased. The cumulative escapement estimate through May 24 stood at 4,765 versus the anticipated escapement of 19,993, slightly less than 25% of the desired level. The last commercial fishing period had ended at 7:00 a.m. on Tuesday, May 21. The department was contemplating opening the next fishing period on the morning of May 27. A closure of six days would have then transpired between fisheries. The passage rate past the sonar had increased slightly by May 25. However, due to the travel time between the fishery and the sonar site an increase resulting from the commercial closure would not be reflected at the sonar until May 27 or 28. With escapement counts expected to increase by Monday or Tuesday, a commercial fishery was announced for Monday, May 27. The fishery was limited to 12-hours but if escapement had increased dramatically by the morning of May 27 the fishery would be extended an additional 12-hours.

Escapement increased slightly on May 26 with a total of 2,192 past the sonar. The projected daily count was 8,320 salmon. The early morning count on Monday was again slightly higher but not high enough to justify extending the fishery an additional 12-hours and the fishery closed as scheduled at 7:00 p.m. The harvest during Monday's 12-hour period was again a new single period record for sockeye of 270,695. The chinook harvest was 8,794. This magnitude of harvest stressed the processing capacity available for Copper River sockeye. The daily passage rate on May 28 was 13,179 doubling the cumulative passage to 26,289 salmon , 57 percent of the objective by that date. By 6:00 a.m. on May 29, the morning counts had put the anticipated daily passage estimate at 16,664 which would put the cumulative inriver passage only 19 percent below the projected for this date. With inriver passage building quickly (due to the extended closure) and expected to last for several days, the next commercial fishing period was scheduled to begin at 12:00 noon on Thursday rather than waiting until the traditional starting time of 7:00 p.m. A primary consideration at this point was how to harvest the volume of fish available without exceeding the daily processing capacity. Two 12-hour periods were employed with the second period beginning at 7:00 a.m. on Saturday, June 1. The sockeye harvests for the two 12-hour periods were 151,296 and 78,362 respectively. The chinook harvests were 3,173 and 3,044. The inriver passage past Miles Lake sonar was 50,000; the anticipated passage was 59,000. With escapement past the commercial fishery approaching the anticipated level, a 24-hour period was scheduled for Monday, June 3. The cumulative harvest through June 4 was 906,000 sockeye and 43,000 chinook salmon. The projected harvest through June 5 was 484,500 sockeye and 39,000 chinook.

The cumulative escapement estimate past the Miles Lake sonar through June 4 was 170,000; the anticipated escapement was 109,000 salmon. An aerial survey of the lower Copper River delta, flown on June 4, observed 3,200 sockeye; the anticipated count was 2,600. The next commercial fishing period was for 24-hours beginning at 7:00 p.m. Thursday, June 6. Daily passage rates at Miles Lake sonar remained above the projected for most of the season and the 560,000 objective was reached on June 27. However, maintaining the projected daily passage rate remains the objective for the rest of the season for both the upper Copper River and lower delta systems. With the aerial indexes for the lower delta systems less than the objective, commercial fishing periods were increased only slightly to two 36-hour periods per week through August 8. Effort decreased when other areas in Prince William Sound opened in June. The last day of operation at the Mile Lake sonar camp was August 6 with a cumulative count of 906,084 salmon.

Coho Salmon Fishery

The coho salmon harvest of 193,000 was 44% below the projected harvest of 344,000. The coho season officially began on August 12 with a single 48-hour period for the week. A single 48-hour period per week has been the recommendation from the SHTF for the past three years. Effort during the August 12 period was low with only six permits fishing. The low turn out was due to a fisherman's strike over the $0.40 per pound being offered by processors. The permit holders were requesting $0.65 per pound for their coho. The six permits which did fish were permit holders with their own markets. With such a low turn out, the next fishing period was scheduled for 24-hours on August 15. As with Monday's period, few permits fished. The week of August 19, the schedule deviated from one 48-hour period to two 24-hour periods per week. This change was based on a request from the drift gillnet fleet and was part of a compromise between the processors and the fleet over quality concerns. During the strike less than 10 permits fished each period. With minimal fishing effort for two weeks, escapement was expected to be far above the anticipated. An aerial survey on August 23 observed 17,000 coho in the Copper River delta systems; the anticipated was 6,150 coho. Considering the low harvest, escapement counts were actually less than expected. However, with the aerial estimate more than double the anticipated, the Copper River District was opened for two 30-hour periods. Periods began at 12:00 noon Monday, August 26 and at 12:00 noon Thursday, August 29. The harvest from Monday's period was 57,270 coho and the harvest from Thursday's period was 24,410 for a combined harvest of 81,680. The projected harvest for that week was 77,000 coho.

The first week of September is the peak harvest period with a projected harvest of 77,600 coho. The actual harvest for the week ending September 7 was 35,651 coho, slightly less than half the projected harvest. Effort was also decreasing and by September 2 only 171 boats fished, down from 274 boats on August 26. On September 9, 94 permits fished, and only 36 fished on September 12. The aerial survey on September 6 observed 36,200 in the delta systems versus the anticipated count of 30,000. The Copper River District went on a schedule of two 30-hour periods per week through October 4 when it closed for the 1996 season.

Aerial surveys were hampered by weather following the September 6 survey. Heavy rainfall and strong northerly winds throughout the month of September restricted surveying until October 9. The peak aerial index estimate historically occurs during the third week of September. The October 9 survey observed 34,700 coho; the projected was 20,000. The peak count for all systems combined is 45,200 coho salmon; the aerial index goal is 49,250. With no observations made during the historical peak, and the observed total only 9 percent below the objective, it is felt that the escapement goal for coho salmon in the Copper River delta was achieved for 1996.

Bering River District

Preseason Outlook and Harvest Strategy

The 1996 harvest forecast for the Bering River District was 20,000 to 30,000 sockeye salmon and 142,000 coho salmon. Commercial fishing periods in the Bering River District generally coincide with the Copper River District. The Bering River District escapement index goal is 32,000 for sockeye salmon and 23,000 for coho salmon (Table 7).

The sockeye salmon harvest of 37,712 was 24 percent above the preseason projection (Tables 8&9). The coho harvest of 93,763 was approximately 44 percent below the preseason forecast. The observed escapement indices for the Bering River system were 25,710 for sockeye, and 26,800 for coho.

Season Summary

The Bering River District opened on June 6, a week earlier then planned. The first aerial survey on June 4 observed 1,200 sockeye in the Bering River and 1,700 in Bering Lake. The anticipated count for the week ending June 8 is 1,500 sockeye. With an extremely large return to the Copper River systems, it was anticipated that the Bering River systems would follow the same pattern. The 24-hour period on June 6 saw a harvest of 5,677 sockeye. The June 13 and 17 aerial survey results were both above the anticipated index. The June 17 observed index of 11,600 was almost double the projected count of 6,200. The harvest through June 19 was 26,800 sockeye, well above preseason expectations. Fishing periods in the Bering River District followed the same schedule as the Copper River District for the rest of the season. The final escapement estimate for the Bering River District systems was slightly less than expected. Escapement into Bering Lake was within the projected range as was escapement into Kushtaka and Clear Creeks. Visibility in the Shepherd Creek systems was marginal for 1996 and it is felt that sockeye escapement was below average to that system.

The coho salmon returning to the Bering and Controller Bay systems generally return a week later than those returning to Copper River tributaries. Coho salmon are the primary salmon species harvested in the Bering River District. The ten year average harvest is 118,000 coho and 18,000 sockeye salmon.

The strike over coho salmon prices also affected the Bering River District fisheries. No fishing took place in the Bering River District until the August 26 fishing period. Aerial surveys during the month of August were limited due to poor visibility and marginal flying conditions. The August 18 aerial survey observed nearly 2,000 coho salmon versus an anticipated count of 1,500. With no commercial fishing activity since August 8, the count of 2,000 coho was less than expected. Permit holders resumed fishing the week of August 26 and 57,200 coho were harvested in two 30-hour periods. The projected harvest for the week was 35,000 and the projected cumulative harvest through August 31 was 52,600. Based on a moderate harvest for a week that followed two weeks of no fishing, and the last aerial survey only observing slightly higher than projected escapements, it was felt that the coho return would be of average size. For the past two years the coho harvest in the Bering River District has exceeded 250,000 each season. The week of September 1 is traditionally the peak harvest period. The harvest was 26,169 versus an anticipated harvest of 43,700. An aerial survey on September 2 observed 19,000 coho versus the anticipated count of 11,250. With escapement needs nearly met and effort dwindling to less than 50 boats, it was felt that the escapement goal would be met despite the less than average return. The Bering River District went on a schedule of two 30-hours per week and closed for the season on October 6. The aerial index goal of 22,100 was surpassed with an observed index of 26,800. Escapement was distributed uniformly throughout all systems.

Coghill District (Prior To July 21)

Preseason Outlook and Harvest Strategy

The management strategy prior to July 21 (gillnet only fishery) is concerned primarily with the return of sockeye salmon to Coghill Lake and the return of chum salmon to the Wally Noerenberg Hatchery (WNH). Coghill sockeye are managed for an escapement goal of 25,000 while hatchery chum are managed to satisfy the allocation between the common property fishery and PWSAC's corporate escapement (Figure 3).

The 1996 Coghill Lake sockeye forecast was 243,000, which included 218,000 sockeye of wild stock origin and 25,000 sockeye from PWSAC's remote releases near the mouth of the Coghill River. The Noerenberg Hatchery expected a return of 1.70 million early chum salmon to the Esther Subdistrict and PWSAC was slated to harvest 40 percent of the returning hatchery chum production

Season Summary

The total of both the common property harvest and the corporate escapement for chum salmon was 1,869,100, slightly more then the preseason forecast (Table 10). The common property harvest of early chum salmon was 613,000. The hatchery harvested 1,052,100 chum salmon for cost recovery and the brood stock goal of 217,000 chum salmon was achieved. Of the hatchery's harvest of slightly over 1 million chum, some 270,000 were processed primarily for roe salvage and/or meal production. The total commercial harvest of sockeye salmon in the district was 180,175. The escapement into Coghill Lake was 38,693 sockeye salmon, exceeding the goal by 13,693.

Management of the Esther Subdistrict for the past three years has relied upon restricting the drift fleet to the Terminal Harvest Area (THA) as needed to promote the escapement of Coghill Lake wild stocks. This action allowed for a harvest of Noerenberg Hatchery chum salmon while limiting the harvest of Coghill sockeye salmon migrating through the area. However, with the strong sockeye forecast for Coghill Lake, the management strategy for the Esther Subdistrict would begin with two 24-hour periods per week in all waters of the subdistrict. Additional fishing time and areas would be granted as warranted.

The management strategy agreed upon by the SHTF called for opening the Esther Subdistrict for a common property harvest when PWSAC had reached a cumulative harvest of 20,000 chum salmon. PWSAC began their corporate chum harvest on June 7. Initial catches were strong and PWSAC was anticipating that by June 10 they would have harvested nearly 40,000 chum. The waters of the Esther Subdistrict and the waters of the Coghill District up to the markers at Shoestring Cove opened for an 8-hour period on Monday, June 10. Because of the strong sockeye salmon return to the Copper River, tender capacity was limited to 100,000 chums. To prevent a harvest that exceeded tender capacity, the first period was limited to 8-hours. However, during the first three hours of the fishing period, catch rates were low enough the period was extended an additional four hours. The harvest for the 12-hour period was 52,185 chum salmon.

PWSAC's corporate harvest through June 10 was approximately 60,200 chum. An estimated 100,000 chum salmon were present in Lake and Quillian Bay on the morning of June 11. With PWSAC ahead in corporate escapement and a large volume of chum salmon in the hatchery Special Harvest Area (SHA) a

24-hour commercial fishing period was announced for June 12. The area open was expanded to include the THA and SHA to a line near the net pens in front of the hatchery. Tender capacity shortages and a continuing strong return to the Copper River limited commercial effort in the chum fishery. The harvest for the 24-hour period was 74,000 chum and 146 sockeye. Through June 13, PWSAC had collected 144,000 chum salmon while the common property harvest was only 126,000. It was apparent that the chum return was stronger than projected and PWSAC would remain above the corporate escapement goal of 40%. The commercial fishery was placed on a schedule of 24-hours every other day through June 23.

Since 1990, there has not been a directed fishery on Coghill Lake wild sockeye. The escapement goal for Coghill Lake is 25,000 sockeye and has been met in only three of the last seven years. The harvest forecast of almost 250,000 sockeye would allow for a directed fishery on that stock. The management strategy agreed to by the SHTF for a directed fishery on Coghill stock sockeye included opening the waters of College Fjord south of Latitude 61 during the last week of June. This area would expand to Coghill Point if the return was near the forecast and escapement past the weir was within the expected range.

The weir below Coghill Lake was installed on June 6. Escapement past the weir through June 24 was 218 sockeye versus the anticipated cumulative count of 2,609. Sockeye are harvested in the Esther Subdistrict during the directed fishery on enhanced chum salmon. In the recent past, area restrictions have been implemented within the subdistrict to reduce the harvest of Coghill Lake sockeye. This has prevented using current harvest information to evaluate run strength. No area restrictions were necessary during the sockeye return. The cumulative sockeye harvest in the Esther Subdistrict through June 22 was 4,190. Based on the forecast, the waters of the Coghill District north to Latitude 61 were opened for a 24-hour period on June 24.

The period on June 27 included the same waters, however the time was increased to 32-hours in the general waters of the Coghill District with an additional 12-hours of fishing allowed in the THA and SHA to harvest the buildup of surplus chum salmon. There was little interest in buying chum shown by area processors. With a grounds price of $0.10 a pound for chums, there was also little interest from the commercial fleet to harvest them. Through June 26, PWSAC's corporate harvest stood at 56% of the run. The area south of Latitude 61 opened twice a week through July 5 and the length of the fishing periods varied slightly. On July 8, all waters of the Coghill District, excluding Coghill Lagoon, were opened. The sockeye harvest during the 36-hour period was 60,374, up substantially from the previous period's harvest of 11,936. Escapement past the Coghill weir through July 9 was 8,119 versus an anticipated 12,683. Generally, sockeye movement through College Fjord occurs during July's large tide series. The monthly high tide series were beginning to build with the highest tides due the following week. Since July 3, daily weir passage rates had exceeded the projected rates. A skiff survey on July 6 estimated 10,000 sockeye in Coghill River with an additional buildup of sockeye beginning in the saltwater lagoon. The escapement goal of 25,000 into Coghill Lake was assured of being met and the areas open were expanded to include all waters of the Coghill District, excluding Coghill Lagoon. With a continued build-up of sockeye in the saltwater lagoon at the mouth of Coghill River, a 48-hour period was announced for July 11 that included 8-hours in Coghill Lagoon up to the mouth of Coghill River. The final escapement estimate past the weir was 38,693 sockeye salmon and the cumulative commercial sockeye harvest was 180,170 (Tables 11&12). Several periods followed ranging in length from 48-hours to 120-hours. Through the remainder of July, Coghill Lagoon continued to be opened up to the mouth of Coghill River whenever waters in the Coghill District opened.

Beginning in 1993, PWSAC released hatchery reared sockeye smolt at the mouth of Coghill River. If not harvested in a fishery, the returning adults (30,000 to 40,000 sockeye annually) have the characteristic of milling in the saltwater lagoon or spawning in the lower portion of the river. They do not appear to contribute significantly to the escapement. Based on coded-wire tag recoveries in Prince William Sound, Coghill Lake produced nearly 250,000 sockeye salmon of which 110,000 were hatchery produced remote release fish. Coghill Lake sockeye were harvested in Coghill, Eshamy, Eastern and Southwestern districts. The commercial harvest of Coghill wild stock sockeye was 95,000 and escapement was 39,000 providing a total Coghill wild stock return of slightly less than 135,000, or 39 percent below the preseason forecast.

Unakwik District

Season Summary

The 1996 Unakwik District harvest was 6,063 sockeye with minor amounts of chum and pink salmon. The sockeye harvest was below the 10-year average harvest of 8,800 (Tables 13 & 14).

The Unakwik District opened June 20 on a schedule of two 24-hour periods per week to target sockeye salmon. No changes were made to the fishing schedule until July 24 when the district closed until further notice. Sockeye harvest peaked during the first week of July. The peak aerial survey estimate for Miners Lake was 3,500 sockeye. No sockeye were observed at Cowpen Lake. The district remained closed for the duration of the 1996 season following the July 24 period.

Eshamy District

Preseason Outlook and Harvest Strategy

Beginning mid-June and lasting through mid-July, the management strategy is based primarily upon the Coghill-stock sockeye salmon return to Main Bay Hatchery (Figure 4). In late July, management focuses on the Eshamy-stock sockeye salmon return to the Main Bay Hatchery and the Eshamy-stock sockeye salmon return to Eshamy Lake. The Eshamy Lake sockeye return is managed for an escapement goal of 35,000 sockeye. The Eshamy District also supports wild pink salmon stocks. The district's commercial harvest includes salmon from these local stocks as well as from stocks (both wild and hatchery) outside the district.

The 1996 forecast of Main Bay Hatchery sockeye salmon was 325,000 composed of 250,000 Coghill-stock, 75,000 Eshamy stock, and less than 300 Eyak stock. A small return to Marsha Bay on Knight Island was expected to provide 35,000 sockeye for Main Bay's corporate escapement. The Eshamy Lake sockeye salmon forecast was 100,000 fish composed of 36 percent remote released sockeye from Main Bay hatchery and 64 percent wild stock sockeye.

The common property harvest of sockeye salmon from all stocks was 311,332 sockeye, slightly below the preseason forecast of 325,000 (Table 15). PWSAC's Main Bay Hatchery sales harvest of 49,500 sockeye was far below their anticipated harvest of 114,000. PWSAC's corporate escapement goal for both Main Bay Hatchery and Wally Noerenberg Hatchery is 40% plus $370,000 in revenue to cover operating costs at

Gulkana Hatchery. PWSAC elected to collectively manage the chum and sockeye returns for cost recovery. With corporate escapement at WNH at nearly 60%, PWSAC harvested fewer sockeye at Main Bay Hatchery. The hatchery brood stock goal for Eshamy stock sockeye was not achieved. The health and condition of roughly half the brood stock during the egg take were less than satisfactory and those fish were not utilized. Because of the construction and maintenance of the hatchery brood pond, sockeye were forced to remain in saltwater until the actual egg take. The Coghill stock is being discontinued at Main Bay Hatchery and all Coghill stock returns were harvested for sales. At Marsha Bay on Knight Island, PWSAC harvested 13,560 adult sockeye that resulted from pre-smolt released into a barrier lake in the fall of 1993.

The 1996 Eshamy District Management Plan was approved by the SHTF this spring and was also described in the 1996 PWS Salmon Management Outlook paper. The management recommendations were as follows: The entire Eshamy District should be opened whenever possible, and June and July's common property fisheries in the Crafton Island Subdistrict would be based on the strength of the Coghill wild-stock sockeye return. Based on the 1996 forecast for Coghill Lake wild stock sockeye, the Crafton Island Subdistrict was expected to open to drift and set gillnet gear in late June or early July. Also, in considering the Department's 1996 Eshamy stock forecast, a common property fishery in the Crafton Island Subdistrict could occur in late July or early August if the Eshamy Lake wild-stock escapement was at or above the projected escapement. The preferred fishing schedule was a minimum of two 24-hour periods per week.

Season Summary

The entire Eshamy District excluding Eshamy Lagoon and the Alternating Gear Zone (AGZ) in the Main Bay Subdistrict opened on July 1 for 24-hours. Based on the projected available harvest of almost 200,000 Coghill Lake wild stock sockeye, commercial fishing was not restricted to the Main Bay Subdistrict during the Coghill run. The harvest of 68,250 sockeye and 13,700 chum salmon included an estimated 20,200 wild stock sockeye. The next period on July 4 was for 24-hours. Through July 3, PWSAC had harvested 48,300 sockeye. On July 4 with PWSAC ahead in their corporate harvesting and an estimated 15,000 sockeye in the AGZ, PWSAC recommended opening the AGZ to common property fishing. To resolve which gear group would be allowed in the AGZ, a coin toss determined that the drift gillnet fleet would be the first to fish in the AGZ. Subsequent periods would alternate between the drift and set gillnet fleet.

The Eshamy District, excluding Eshamy Lagoon, opened for two periods per week through July 20. After July 21 the Coghill stock sockeye return was complete and management priorities switched to the Eshamy stock sockeye return to Main Bay Hatchery. Escapement past the Eshamy weir through July 20 was only 460 sockeye versus the anticipated 4,130. With less than 10 percent of the desired escapement into Eshamy Lake and catches in the Eshamy District dropping, the Crafton Island Subdistrict closed for the season following the 24-hour period on July 18. The Main Bay Subdistrict opened for two periods per week through August 6 after which it became apparent the hatchery run was weak. All remaining sockeye would be needed for brood stock at the Main Bay Hatchery. The Eshamy District did not reopen and closed for the 1996 season on August 31.

Escapement of sockeye salmon at Eshamy Lake fell short of the goal of 35,000 - 45,000 fish with only 5,271 sockeye counted past the weir (Table 17). Actual sockeye escapement was below the anticipated escapement for the entire season. During the last four seasons, milling sockeye have congregated at the mouth of Eshamy River from late July through mid-September. These concentrations of fish have been comprised predominantly of sockeye from Main Bay Hatchery's remote release project. These fish were

salt-water acclimated smolt which were held and released near the mouth of Eshamy River. The concentration of milling fish in Eshamy Lagoon this season was not as large as in previous years. The pace of the escapement was slow, with periodic bursts of sockeye moving upstream after rainfalls. The largest build up in salt water occurred just before the weir was pulled on August 27 when an estimated 3,000 sockeye were milling near the mouth of Eshamy River. With only a small concentration of sockeye near the mouth of the river, and the Main Bay Hatchery return below expectations, it was obvious that escapement goals would not be met for 1996. Factoring in the fish remaining in Eshamy Lagoon after the weir was removed, a rough estimate for the actual escapement would approach 15,000 sockeye. Having no dedicated funds for continuing the Eshamy weir project late into the season, the weir was pulled on August 27. Historically, by this date the Eshamy return is 98% complete. As has been seen for the previous three years, some sockeye continued milling in Eshamy Lagoon into late October. It remains unclear if the remote released sockeye that mill in the lagoon for long periods ever contribute successfully to the spawning population of Eshamy Lake.

General Purse Seine Districts

Preseason Outlook and Harvest Strategy

The general purse seine districts include the Eastern, Northern, Coghill, Northwestern, Southwestern, Montague and Southeastern Districts. The Prince William Sound Management and Salmon Enhancement Allocation Plan (5 AAC 24.370) closes the Southwestern District prior to July 18. The plan also closes the Coghill District to purse seine gear prior to July 21. Beginning July 21, both purse seine and drift gillnet gear are allowed in the Coghill District. From August 25 through September 4, the use of seine gear is restricted to the Noerenberg Hatchery Terminal Harvest Area (THA). Beginning September 5, seine gear may only be operated in the THA if the harvestable surplus is predominately pink salmon. Fishing periods in all districts are established by emergency order.

The general purse seine districts are managed to achieve wild pink and chum salmon escapement goals by district, and allow for the orderly harvest of surplus wild and hatchery stocks. Escapement of pink and chum salmon is tracked through the season by weekly aerial surveys of 209 index streams. Management to achieve hatchery corporate escapement goals is accomplished by opening and closing subdistricts near the hatcheries. Subdistrict openings are also utilized to target the fleet on hatchery stocks when wild salmon escapement is weak.

VFDA's Solomon Gulch Hatchery has a stock of pink salmon that peaks in early July and a run of coho salmon that begins in August. In 1995, VFDA elected to discontinue it's production of chum salmon that returned in August each year. This year's chum return to Solomon Gulch was the last large scale return from their previous releases. All VFDA returns are to the Solomon Gulch Hatchery in Port Valdez.

PWSAC has pink salmon stocks that peak in mid-August. PWSAC's pink salmon return to the Cannery Creek, Noerenberg and A.F. Koernig Hatcheries. A moderate run of coho salmon is incidental to the late pink salmon fishery at the Noerenberg Hatchery. The outlook for the general purse seine fishery in 1996 was for a total return of 27.3 million pink salmon composed of 21.3 million hatchery (43% PWSAC, 37%

VFDA) and 6.0 million wild stock pink salmon. The forecasted common property fishery harvest was 17.0 million pinks with an additional 10.5 million slated for corporate and wild stock escapement. The wild stock chum salmon forecast was 577.9 thousand salmon with an escapement goal of 225 thousand.

The PWS Salmon Harvest Task Force held meetings prior to the fishing season. Seine representatives on the task force reviewed changes to the fishery being considered for the 1996 season and made recommendations on management strategies to incorporate these anticipated changes. Strong statewide return forecasts, poor market conditions, catch limits, and low prices cast a great deal of doubt over the potential for a successful seine season. There was significant concern preseason that above average returns of pink salmon could exceed processor's interest in purchasing PWS pink salmon. Seine effort was expected to be greatly reduced from past seasons due to the anticipated low prices. The SHTF felt that the remaining seiners would likely concentrate their fishing effort and target hatchery returns where high volume harvests could occur. With a strong wild stock pink salmon forecast and a reduced seine fleet, the department agreed to open a majority of the Eastern District during seine periods targeting the pink return to Solomon Gulch Hatchery. This would help to relieve congestion in the Valdez Narrows Subdistrict where a majority of the VFDA return has traditionally been harvested. Another significant change in the seine fishery for 1996 was PWSAC's plan to not collect corporate escapement at AFK Hatchery. Instead, they planned to increase their corporate harvesting at Noerenberg and Cannery Creek Hatcheries and allow the seine fleet to harvest 100% of the AFK Hatchery pink salmon return. The SHTF seine representative requested that the fleet be given the earliest opportunity to harvest the AFK return and the department agreed to open the hatchery's THA to seining beginning July 18. Early harvest information would be used to evaluate the strength and timing of the AFK pink salmon return.

VFDA's 1996 Annual Management Plan for Solomon Gulch Hatchery called for their pink salmon return to be managed to provide 10 million pounds of pinks for corporate escapement. Fish surplus to the corporation's needs would be made available for common property harvesting. In 1995, Peter Pan Seafoods entered into a three year contract with VFDA to purchase their cost recovery salmon. Despite the contract, preseason negotiations between VFDA and Peter Pan Seafood were necessary to assure that VFDA would have a market for their cost recovery harvest. Peter Pan's Valdez plant was not planning to operate at full capacity in 1996 which would impact the department's management strategies for efficiently harvesting the Solomon Gulch pink return. Peter Pan's reduced capacity would mean that VFDA's daily sales would be limited by processing capacity. This would draw out the time needed by VFDA to obtain their 10 million pound goal.

The corporate escapement rate for the PWSAC pink salmon return was to again be 40 percent. Site specific corporate escapement could fall above or below 40 percent as both the Noerenberg and Cannery Creek returns would be managed collectively. To distinguish wild from hatchery pink salmon, inseason coded wire tag estimates of the commercial harvest would be used.

Season Summary

Aerial surveys to assess early chum and pink salmon in the Eastern and Northern Districts began in mid-June. In July, surveys started in all other seine districts. Although extensive time and area opportunities were provided for the seine fleet to harvest in wild stock areas this season, little effort was directed at returns occurring outside the migration corridors used by hatchery fish. As a result, escapement goals were exceeded in five of the 9 districts within PWS (Table 18). The Southeastern District's pink salmon

escapement was 38% above the season's goal; the Eastern District was 23 % above; the Northern/ Unakwik Districts were 2% above; and the Montague District was 33% above. The Northwestern and Coghill Districts were 36% and 27% below their respective goals. While short of it's goal, pink salmon escapement in the Coghill District was the highest seen since 1987. The Southwestern District and the Eshamy Districts were 63% and 56% below their respective escapement goals for the season (Table 19).

The excellent chum salmon returns seen statewide in 1996 were also reflected in the strong hatchery and wild stock returns in PWS. Wild stock chum salmon escapement was well above the goals for the major chum producing districts in the Sound. Escapement was 110% above the goal in the Southeastern District; 14% above in the Northwestern District; 68% above in the Northern District; 41% below in the Coghill District; and 59% below in the Montague District (Table 20).

VFDA began their corporate escapement harvesting on June 17 at the Solomon Gulch Hatchery using nine seiners in their cost recovery fleet. The 1996 pink salmon revenue goal for VFDA was $2.74 million. Based upon their sales contract with Peter Pan Seafood, VFDA required 10 million pounds of pink salmon to meet their revenue goal. Initial harvests were tracking close to the anticipated run entry curve and the average size of pink salmon being harvested was 3.8 pounds. By June 30, VFDA had attained 30 percent of their 10 million pound goal. The percentage of female pinks in the sales harvest at the end of June was roughly 20%, also indicating that the return was on track. The first seine fishery was announced for July 2 and included a majority of the Eastern District including the western half of Port Valdez. A harvest of 672,515 pink salmon was taken by 48 boats (Table 21). Comparable seine effort in 1995 for the first period was 107 boats. Most seiners had been placed on daily catch limits by their processors. Limits ranged from 20,000 to 70,000 pounds depending upon the individual processor. Sufficient numbers of pink salmon remained in, or continued to enter, the hatchery's THA after the first seine period allowing VFDA to quickly resume sales harvesting. The reduced fleet size and a steady run entry pattern allowed fishing periods to occur on a day-on day-off schedule through July 14. Waters east of Granite Point in the Northern District were opened for the second seine period on July 4 and for subsequent seine periods. Early timed wild stocks of pink and chum salmon appeared to be meeting weekly escapement goals. The seine fleet increased to 67 boats on July 12 when effort targeting the VFDA return peaked. In 1995, the peak effort targeting early pinks was 140 seiners on July 8.

VFDA's pink salmon return was of sufficient magnitude and the seine fleet was small enough that many seiners were able to harvest their daily limits before seine periods were over. The operator of one floating processor operating in PWS requested longer seine periods to better coordinate their processing requirements with their seiner's harvests. Because catch limits were in place and there were few conservation concerns at the time, daily seine periods were lengthened to 19-hours beginning July 14. The duration of seine periods were subsequently adjusted as needed to address escapement concerns or to coincide with hours of daylight.

Due to processor limits, VFDA's cost recovery harvesting was not keeping pace with the run entry into the hatchery THA and a surplus was developing in the eastern half of Port Valdez. The eastern boundary that limited seining inside Port Valdez was moved closer to the hatchery beginning with the July 6 opening. Processors, concerned with maintaining a high quality harvest, began directing their fleets to either fish outside of Port Valdez or to avoid taking water marked pink salmon inside the port. Peter Pan Seafoods, whose contract with VFDA obligated them to buy VFDA's sales harvest fish from the THA, voiced similar

concerns over the quality of the sales harvest. As part of their negotiated contract, Peter Pan Seafoods was to keep all proceeds derived from the sale of salmon roe recovered from VFDA's sales harvest in exchange for a base price of $0.27/lb. for pink salmon. Peter Pan maintained the right to reject fish from the sales harvest based on quality. Beginning July 11, Peter Pan Seafood began rejecting water marked pink salmon from VFDA's sales harvest. Between July 9 and July 16, Peter Pan Seafoods ground and disposed of approximately 1 million pounds of pink salmon after salvaging the roe. Other PWS processors continued to find the quality of these same sales fish to be acceptable for canning and continued to put up product. VFDA derived no income from fish that were rejected and roe stripped by Peter Pan Seafoods. The rejected fish however were still being counted against VFDA's 10 million pound sales harvest goal. VFDA suspended their sales harvesting on July 16, approximately 900,000 pounds shy of their goal after the percentage being rejected exceeded 50% of the daily harvest. Following their egg-take and roe salvage operations, VFDA ended the season shy of their 10 million pound goal by approximately 180,000 lb. VFDA's pink and chum returns came in close to the preseason forecasts of 8 million pink salmon and 300,000 chum salmon. There was little directed seine effort on the chum return to Solomon Gulch Hatchery and most of the chum harvest was incidental to the harvest of late run pink salmon. It appears VFDA had a slightly higher return of coho salmon than forecasted. On September 3, Port Valdez was opened to seiners following the completion of the Valdez Silver Salmon Derby. Fourteen seiners harvested 50,227 coho salmon in a clean-up fishery on September 3 and an additional 11,026 coho were harvested over the next three days. This appears close to the forecasted harvest of 77,000 coho. Including the commercial and sport fish harvests, and roe salvage sales at the hatchery, the total harvest of VFDA coho exceeded 100,000 for the season. VFDA met their egg-take goals for pink and coho salmon. Post season, VFDA processed 195,619 pinks, 87,328 chum and 31,551 coho salmon for roe salvage at the hatchery.

Following VFDA's suspension of their sales harvesting in mid-July, a 67-hour seine period began on July 17 in the Eastern and Northern Districts. Pink salmon catches had already begun to decline with the VFDA return diminishing and seine effort dropped to 40 boats by the end of the period. Attention began to shift toward late timed pink salmon returning to the PWSAC hatcheries. During the lull between VFDA's and PWSAC's pink salmon returns, seine effort continued to decline despite ample time and area openings in the Eastern, Northern and Southwestern Districts. By July 23, seine effort had dropped to 28 boats. On the same day, the Southeastern District began opening concurrently with seine openings elsewhere. The Southeastern District was opened for a total of 691 hours in 1996 but there was no reported harvest from the district the entire season. Likewise, the Montague District was opened a total of 672 hours in 1996 but had no reported harvest. Low prices for pink salmon and no major markets available for seine caught chums prevented most boats from targeting the abundant wild stocks in the Eastern, Northern and Southeastern Districts the entire season.

Commercial seine harvests in the Southwestern District are closely monitored to assess the timing and magnitude of the late pink salmon returns to PWSAC hatcheries and wild stock streams. Subsequent management actions are planned based upon coded-wire tag data and harvest information from the district. In recent years, the Department has conducted test fisheries prior to commercial openings in the Southwestern District to keep abreast of the late pink return. The management strategy is to monitor the hatchery and wild stock components of the catch and to try and target the seine fleet on predominantly enhanced returns of pink salmon when they arrive. The department's goal is to minimize the harvest of wild stocks in mixed stock fisheries within the Southwestern District. Low prices and a reduced seine fleet made the option of conducting a test fishery impractical this season. Instead, commercial openings were used as an assessment tool to monitor the late pink salmon returns. This strategy began with two 36-hour seine

periods in the THA in front of AFK Hatchery between July 19 and 22. There was only one seiner that reported a small harvest during the second of the two periods. Most boats still fishing had remained in the Eastern or Northern District targeting the last of the VFDA pink return.

On July 25, the southern half of the Southwestern District was opened for a 19-hour period. As with most seine periods targeting late run pink salmon in 1996, this opening was concurrent with openings in the Eastern, Northern, Southeastern and Montague Districts. Effort for the first seine period targeting late pinks was nine boats in the Southwestern District, 20 boats in the Eastern District and 6 boats in the Northern District. The combined harvest for the July 25 opening was 137,522 pink salmon of which 28,040 were from the Southwestern District. The low effort and relatively small harvest for the opening gave clear indication that the late return of pink salmon had not begun in earnest. A schedule of day-on day-off seine openings was maintained throughout the remainder of the season with adjustments to time and areas made as needed to provide for corporate and wild stock escapement needs. Seine effort steadily increased in all districts and peaked during fishing periods on August 8 and 14 when 77 seiners were fishing throughout PWS. In 1995, effort peaked at 177 seiners on August 9.

PWSAC began their corporate harvesting of pink salmon on July 27 at Cannery Creek Hatchery. Cost recovery harvesting of chum salmon was ongoing at Noerenberg Hatchery when pink salmon first appeared in the harvest on July 16. Pink salmon began to predominate the sales harvest by July 26. PWSAC entered into a joint venture arrangement with Northern Victor Seafood to process a significant percentage of their sales harvest fish in 1996. The Northern Victor was one of two floating processors operating in PWS this season. Low prices for pink salmon and the likelihood for weak demand from traditional markets for cost recovery pinks provided the impetus for PWSAC to employ a floating processor this season. Higher than anticipated survival rates in combination with weak demand for PWSAC's pinks had the potential to overwhelm traditional markets and create buildups in terminal areas. Should PWSAC find itself unable to keep pace with the volume of pinks returning to their hatcheries, the Northern Victor had the added ability of processing large volumes of pink salmon carcasses into fish meal.

The day-on day-off schedule of seine openings around the Sound was well received by a majority of the seine fleet and area processors. Closures or adjustments to areas opened to the fleet were the primary tools used by the department to provide for PWSAC's corporate escapement needs. PWSAC asked the department preseason to be as aggressive as possible in harvesting enhanced fish to prevent buildups in terminal areas during a year with poor market conditions. Strong wild stock escapements in the eastern and northern sections of the Sound allowed the department to open these areas to the seine fleet. However, wild stock escapements in the western half of PWS, especially in the Coghill District, have been chronically weak in recent years. In an effort to improve pink escapements into the Coghill District, while at the same time provide for PWSAC's 40% corporate escapement goal, common property seine openings in early August were restricted to portions of the Esther Subdistrict along the south shore of Esther Island.

The Coghill District was opened to seiners concurrently with openings in other seine districts on August 4. Only one seiner had landed fish in July after the 21st. For the August 4 period, only those waters in the Esther Subdistrict east of Esther Light and within 1.5 miles from Esther Island were opened for a 17-hour period. A total of 119,000 pinks were harvested by 5 seiners. By August 4, PWSAC had collected approximately 247,000 pinks at Noerenberg Hatchery and 369,000 at Cannery Creek Hatchery and their corporate escapement percentage stood at approximately 26%, shy of the 40% goal. Coded-wire tag data from the Southwestern District and hatchery THA harvests were indicating that the Noerenberg and

Cannery Creek returns were clearly outperforming the pink return to AFK Hatchery. For the next period on August 6, the area open in the southern half of the Southwestern District was reduced to the Port San Juan Subdistrict and the Point Elrington Subdistrict. The composition of enhanced fish in the Southwestern District catch ranged between 62% and 91% from July 29 to August 6. The Departments strategy was to harvest enhanced returns closer to their respective hatcheries in order to minimize the harvest of wild stocks destined for streams in western PWS. The seine fleet was put on notice that additional reductions in area would be forthcoming in the Southwestern District if escapements within that district did not improve.

Areas open to seining in the Northern District targeting the PWSAC return to Cannery Creek Hatchery were adjusted as needed to provide PWSAC with sufficient fish to meet their corporate sales needs. Generally, waters inside Unakwik Inlet were opened or closed depending upon the volume of pinks entering the Cannery Creek THA each day. Areas opened in the Esther Subdistrict were similarly adjusted on a period by period basis to satisfy PWSAC's corporate escapement needs.

By August 6, coded wire tag data indicated that PWSAC produced pink salmon had contributed 3.13 million pink salmon to the late run harvest of 4.02 million. PWSAC had collected approximately 900,000 pinks and was approximately 1.2 million pinks behind in harvesting towards their 40% goal. Tag data indicated that enhanced fish were comprising approximately 88% of the harvest in the Northern District. The peak seine harvests of the season occurred on August 6 and 8 when 1.39 and 1.35 million pinks were landed. Seining effort peaked during the periods on August 8 and 14 with 77 seiners making deliveries.

With PWSAC behind in harvesting towards their 40% goal, the schedule of every other day seine openings in the Northern and Coghill Districts was interrupted following the August 8 period. PWSAC began soliciting seiners to assist the corporation in it's cost recovery harvesting. A two day closure in these districts was announced on August 9 to allow PWSAC the opportunity to increase their corporate escapement percentage. PWSAC would employ the assistance of additional seiners fishing in expanded THA's near the Noerenberg and Cannery Creek Hatcheries. Following the two day closure areas of the Northern District were reopened to the fleet. However, the Esther Subdistrict remained closed at PWSAC's request in order to increase their corporate escapement. For those seiners unwilling to assist in PWSAC's cost recovery efforts, openings in the Eastern, Southwestern, Southeastern and Montague Districts continued while fishing was restricted in the Northern and Coghill Districts.

PWSAC's corporate escapement percentage was slowly increasing each day with the assistance of additional seiners and their respective markets. On August 13, PWSAC's escapement percentage had climbed to approximately 33.5%. Sex ratios reported from the commercial harvest inside Unakwik Inlet were approaching 60% indicating that the Cannery Creek return was past it's peak and harvests could be expected to decline soon.

Weekly aerial surveys of the Coghill District were indicating that wild stock escapements, while still less than anticipated, were showing dramatic improvement over past years. Since 1994, surveys of the Northern District in mid-August have also found large numbers of pink salmon holding up in Hidden Bay and along the east shoreline of Culross Island. Peak estimates in 1996 ranged from 150,000 to 300,000 pink salmon holding there. There are only a few intertidal spawning streams in this area and they are incapable of accommodating such large numbers of spawners. It is suspected that a majority of these fish were enhanced fish destined for Noerenberg Hatchery. It appears that they strayed into Hidden Bay and preferred to remain near the freshwater outlets of lakes similar to the water source at Noerenberg Hatchery.

With greatly improved escapements in the Coghill District, the entire Perry Island Subdistrict where these milling fish were located was opened to seiners for a 15-hour period on August 14. The Esther Subdistrict was to remain closed during the period to provide for PWSAC's corporate escapement which then stood at 36%. However, on the morning of August 14 PWSAC notified the Department that tenders servicing their cost recovery markets had experienced mechanical difficulties, and they would be unable to harvest pinks from the Noerenberg Hatchery SHA until late in the evening. The return to Noerenberg Hatchery was at it's peak and the daily run entry, if left unharvested, would have resulted in an unmanageable buildup in the confined hatchery THA. PWSAC requested that the department open the Esther Subdistrict, including the hatchery THA and SHA, to the seine fleet as soon as possible. A nine hour period in the entire Esther Subdistrict was immediately announced at noon on August 14. The opening had the intended effect of temporarily stanching the flow of pink salmon into Lake Bay. There was some criticism of the department for the lack of advanced warning given to the fleet when opening the Esther Subdistrict. Because of the immediacy of the situation and because much of the fleet remained on daily catch limits, the department opted to open the subdistrict as soon as possible. Despite the fact that some seiners were unable to participate in the Esther Subdistrict harvest, most seiners were still able to harvest their daily catch limits because of the surpluses available in the areas already opened to fishing. The department announced it would provide a minimum two hour advanced notice should this situation reoccur in the future.

Wild stock escapements in the Southwestern District continued to track well below the desired level for mid-August. The waters opened to seining were further reduced on August 17 so that only the AFK Hatchery THA and SHA remained open. The terminal area in front of the hatchery was the only area in the Southwestern District that was reopened for the duration of the season. In the Northern District, a regular schedule of seine periods continued throughout the remainder of August. Common property fishing time was reduced in the Coghill District to assist PWSAC's corporate harvesting and to minimize Coghill District wild stock interceptions. Seine effort began to decline following the August 14 seine period and had shrunk to 32 seiners by August 21. The percentage of female pinks being harvested in the commercial fishery indicated that the returns to Noerenberg and Cannery Creek Hatcheries were approximately 85% complete by August 21. Seine effort continued to decline and by August 26 only 10 seiners remained on the grounds. PWSAC's corporate escapement had risen to 38.5% by this date and they continued to improve their standing daily. By September 5, their corporate escapement was estimated to stand at 40.82% when they discontinued their sales harvesting of pink salmon. PWSAC processed 243,000 pinks, 25,904 chum and 4,899 coho for roe salvage after egg-take operations were complete. PWSAC also went to considerable effort and expense this season to process surplus chum salmon into fish meal rather than simply disposing of carcasses after salvaging roe. The last commercial seine harvest occurred on September 6. Additional seine periods were announced into mid-September but attracted no fishing effort and the season was closed.

1996 PRINCE WILLIAM SOUND AND COPPER RIVER SUBSISTENCE FISHERIES

Subsistence and personal use harvests continue to be minor by comparison to the commercial salmon harvest in the Prince William Sound management area. The largest subsistence and personal use fisheries occur on the upper Copper River, upstream of the regulatory markers above Haley Creek to Slana River. In

Prince William Sound and the Copper and Bering River Districts commercial fishermen may withhold a portion of their commercial catch for home use. Prior to the 1994 BOF meeting this "home use" was unreported. The BOF placed into regulation the requirement that all chinook salmon harvested but not sold (home use) in the Copper and Bering River Districts be reported on a fish ticket as not sold/personal use.

The only personal use fishery occurs on the upper Copper River in the Chitina Subdistrict. All remaining waters of the Prince William Sound Management area are closed to the personal use taking of finfish. Subsistence fishing permits are issued from the Cordova office for the Copper River Delta, Prince William Sound, Southwestern and Eastern areas.

Prince William Sound Area Subsistence And Home-Use Fisheries

Prince William Sound And Lower Copper River Fisheries

Subsistence permits issued at the Cordova office allow subsistence users to fish during commercial fishing periods in Prince William Sound and the Copper and Bering River Districts. In 1996, 10 permits were issued for Prince William Sound, however, as of November 15 only two permits have been returned and neither permit holder fished (Table 24). For the Copper and Bering River Districts, 176 permits were issued and 126 permits have been returned as of November 15. Of the permits returned, 79 permit holders fished successfully and 5 were unsuccessful. An additional 42 permit holders did not fish. The reported catch was 223 chinook, 791 sockeye and 32 coho (Table 25).

The recording on fish tickets of take home or "home use" chinook salmon from the Copper and Bering River District's commercial salmon fisheries began in 1994. During 1994, 12 chinook were recorded as home use in the Bering River District and 751 in the Copper River District. In 1995, a total of 11 chinook were reported taken from the Bering River District and 1,688 were reported taken from the Copper River District. In 1996, a total of 2,169 chinook were reported taken from the Copper River District.

Eastern And Southwestern Prince William Sound Fisheries

The Southwestern and Eastern subsistence permit program began in 1988. Residents of both Chenega Bay and Tatitlek are eligible for subsistence use permits in their respective areas. In 1991, a court ruling qualified all residents of Alaska for a subsistence permit in the Eastern or Southwestern areas. Permit holders are allowed to fish in these areas from May 15 until two days before the commercial fishery opens in the permitted area; during all commercial fishing periods in the permitted area; and from two days after the commercial fishing seasons closes until September 30 in Southwestern and October 31 in the Eastern area for seven days a week.

In the Southwestern area, 7 permits were issued, mainly to residents of Chenega Bay village (Table 26). Only 3 permit holders reported having fished for a total catch of 107 sockeye, 105 pink, 46 chum and 7 coho (Table 26). Two permits had not been returned by November 15. In the Eastern area, 6 permits were issued. Only two permits have been returned with one reporting a harvest of 38 coho salmon.

TABLES

Table 1. Prince William Sound Management Area commercial salmon harvest by gear type and district, 1996.

District	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total
Eastern [a]	78	36	4,418	87,658	6,076,471	340,398	6,508,981
Northern [a]	76	8	5,089	7,185	5,042,398	10,738	5,065,418
Coghill	64	1	2,640	5,319	1,484,422	463	1,492,845
Southwestern	60	19	11,866	10,820	5,046,919	13,200	5,082,824
Purse Seine	90	64	24,013	110,982	17,650,210	364,799	18,150,068
Bering River [b]	140	111	37,712	93,763	0	30	131,616
Copper River [b]	505	55,646	2,356,365	193,042	6,372	25,533	2,636,958
Unakwik	9	3	6,063	0	17	694	6,777
Coghill	254	575	177,530	20,926	59,447	612,969	871,447
Eshamy	157	19	179,064	1,056	19,043	23,552	222,734
Drift Gillnet	509	56,354	2,756,734	308,787	84,879	662,778	3,869,532
Eshamy	27	13	132,268	309	16,648	9,276	158,514
Set Gillnet	27	13	132,268	309	16,648	9,276	158,514
Solomon Gulch	1	15	18	0	2,365,031	10,998	2,376,062
Cannery Creek	1	0	0	0	1,805,159	0	1,805,159
Wally Noerenberg	4	2	1,260	39,169	4,114,858	1,050,514	5,205,803
Main Bay	2	2	75,523	6	6,039	5,193	86,763
Armin F. Koernig	2	0	10,150	0	118	0	10,268
Hatchery [c]	10	19	86,951	39,175	8,291,205	1,066,705	9,484,055
Donated Fish [d]	37	6	104	0	0	1	111
ADF&G Test Fish	0	0	0	0	0	0	0
Confiscated Fish	2	1	532	0	0	0	533
Total	10	7	636	0	0	1	644
Prince William Sound Total		56,457	3,000,602	459,253	26,042,942	2,103,559	31,662,813

[a] Totals include discarded pink and chum salmon.

[b] Does not include salmon taken for home use as reported on fish tickets.

[c] Hatchery sales for operating expenses. Includes meal production/ roe salvage sales, processor discards. Excludes post egg take roe sales at hatcheries.

[d] These fish were landed by Coghill District and Copper River District Drift Gillnet permit holders and and donated to the community.

Table 2. Commercial salmon harvest by species from all gear types, Prince William Sound Area, 1971 - 1996.

	Catch by Species					
Year [a]	Chinook	Sockeye	Coho	Pink	Chum	Total
1971	20,142	741,945	327,697	7,312,730	579,552	8,982,066
1972	23,003	976,115	124,670	57,090	46,088	1,226,966
1973	22,638	473,044	199,019	2,065,844	740,017	3,500,562
1974	20,602	741,340	76,041	458,619	89,210	1,385,812
1975	22,325	546,634	84,109	4,453,041	101,286	5,207,395
1976	32,751	1,008,912	160,494	3,022,426	370,657	4,595,240
1977	22,864	943,943	179,417	4,536,459	573,166	6,255,849
1978	30,435	505,509	312,930	2,917,499	489,771	4,256,144
1979	20,078	369,583	315,774	15,615,810	349,615	16,670,860
1980	8,643	208,724	337,123	14,161,023	482,214	15,197,727
1981	20,782	784,469	396,163	20,558,304	1,888,822	23,648,540
1982	47,871	2,362,328	623,877	20,403,423	1,336,878	24,774,377
1983	53,879	908,469	365,469	13,977,116	1,048,737	16,353,670
1984	39,774	1,303,515	609,484	22,119,309	1,229,185	25,301,267
1985	43,735	1,464,563	1,025,046	25,252,924	1,321,538	29,107,806
1986	42,128	1,288,712	426,240	11,410,302	1,700,906	14,868,288
1987	41,909	1,737,989	175,214	29,230,303	1,919,415	33,104,830
1988 [b]	31,797	767,674	477,816	11,820,121	1,843,317	14,940,725
1989 [b]	32,006	1,175,238	424,980	21,886,466	1,001,809	24,520,499
1990 [b]	22,163	911,607	524,274	44,165,077	967,384	46,590,505
1991 [c]	35,355	1,734,544	641,854	37,135,561	352,321	39,899,635
1992 [d]	41,306	1,771,612	619,460	8,637,116	334,376	11,403,870
1993 [e]	32,005	1,851,133	445,612	5,761,097	1,186,365	9,276,212
1994 [f]	48,558	1,514,329	1,058,154	36,886,301	1,058,213	40,565,555
1995 [f]	67,083	1,523,464	992,798	16,221,493	864,245	19,669,083
1996 [f]	56,457	3,000,602	459,253	26,042,942	2,103,559	31,662,813
Ten Year Average (1986-95)	39,431	1,427,630	578,640	22,315,384	1,122,835	25,483,920

[a] Includes catches by all gear types and hatchery sales from the Eastern, Northern, Coghill, Unakwik, Northwestern, Eshamy, Southwestern, Montague, Southeastern, Copper River and Bering River districts.

[b] Includes confiscated and educational special use permits. Also includes hatchery sales harvests and carcass sales.

[c] Includes confiscated and educational special use permits, hatchery sales harvests, and donated and discarded catches.

[d] Includes catches from confiscated and educational special use permits, hatchery sales harvest and test fisheries.

[e] Includes catches from confiscated permits, hatchery sales harvests, donated fish harvest and test fisheries.

[f] Includes catches from confiscated permits, hatchery sales harvests (including roe salvage & meal production). Does not include roe salvage at hatcheries.

Table 3. Total commercial salmon harvest and estimated value by gear type and district, Prince William Sound, 1996.

Species	Number	Pounds	Avg. Wt.	Price [a]	Estimated Value
PURSE SEINE					
Chinook	64	1,037	16.20	0.55	570.35
Sockeye	24,013	152,517	6.35	0.73	111,337.41
Coho	110,982	874,369	7.88	0.36	314,772.84
Pink	17,650,210	63,503,303	3.60	0.07	4,445,231.21
Chum	364,799	2,976,666	8.17	0.13	386,966.58
	18,150,068	67,507,892			$5,258,878.39
DRIFT GILLNET					
Chinook	56,354	1,395,036	24.75	1.62	2,259,958.32
Sockeye	2,756,734	17,585,668	6.38	1.31	23,037,225.08
Coho	308,787	2,788,645	9.03	0.52	1,450,095.40
Pink	84,879	300,707	3.54	0.04	12,028.28
Chum	662,778	5,856,389	8.84	0.21	1,229,841.69
	3,869,532	27,926,445			$27,989,148.77
SET GILLNET					
Chinook	13	217	16.69	0.68	147.56
Sockeye	132,268	820,673	6.20	0.85	697,572.05
Coho	309	2,550	8.25	0.24	612.00
Pink	16,648	59,328	3.56	0.04	2,373.12
Chum	9,276	80,801	8.71	0.14	11,312.14
	158,514	963,569			$712,016.87
HATCHERY SALES [b]					
Chinook	19	166	8.74	0.55	$91.33
Sockeye	86,951	499,099	5.74	0.89	$444,197.88
Coho	39,175	278,926	7.12	0.36	$100,413.36
Pink	8,291,205	29,433,778	3.55	0.14	$4,076,578.22
Chum	1,066,705	9,291,001	8.71	0.15	$1,430,814.08
	9,484,055	39,502,969.10			$6,052,094.87
OTHER GEAR [c]					
Chinook	7	61		0.55	$34
Sockeye	636	3,651		0.73	$2,665
Coho	0	0		0.36	$0
Pink	0	0		0.07	$0
Chum	1	9		0.13	$1
	644	3,721			$2,699.75

Gear Type	Value of Catch	No. of Permits	Average Earnings
Purse Seine	$5,258,878	90	$58,431.98
Drift Gillnet	$27,989,149	509	$54,988.50
Set Gillnet	$712,017	27	$26,371.00
Subtotal-Value of CPF Catch	$33,960,044		
Hatchery	$6,052,095		
Other Gear	$2,700		
GRAND TOTAL	$40,014,839		

[a] Mean prices are estimated at the end of the season based on the average of cash buyers and the advance prices paid by the canneries on the grounds. They do not reflect the spring adjustments paid by some companies.

[b] Value of hatchery sales is a rough estimate based upon average sales harvest prices and total pounds harvested. Hatchery Sales Total includes all fish processed for meal production and roe recovery. Joint ventures between hatchery operators and processors or value added processing by hatcheries may not be accurately reflected in the value estimates

[c] Includes confiscated fish & donated fish. Does not include donated brood stock carcasses.

Table 4. Copper River District commercial drift gillnet salmon harvest by period, 1996.

					Chinook		Sockeye		Coho		Pink		Chum	
Period	Date	Hours	Permits	Landings	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds
01	05/16-05/17	24	458	738	12,825	308,448	109,941	682,894	0	0	0	0	2,686	24,398
02	05/20-05/21	24	480	886	11,516	272,627	188,164	1,181,543	0	0	1	3	7,394	67,418
03	05/27-05/27	12	490	722	8,794	215,373	270,695	1,727,378	0	0	0	0	1,375	12,122
04	05/30-05/30	12	489	630	3,173	77,319	151,296	966,535	0	0	0	0	890	8,136
05	06/01-06/01	12	486	628	3,044	76,510	78,362	494,694	1	7	0	0	581	5,113
06	06/03-06/04	24	476	749	3,722	96,768	107,544	671,749	0	0	0	0	207	1,848
07	06/06-06/07	24	464	814	3,389	84,681	152,080	954,320	6	37	0	0	2,126	17,686
08	06/10-06/11	36	381	715	3,042	82,226	129,372	822,163	8	43	0	0	3,528	28,952
09	06/13-06/15	48	431	1,049	3,049	84,645	172,419	1,110,868	10	79	1	3	1,188	10,335
10	06/17-06/19	48	426	936	1,529	42,453	122,481	785,258	9	67	8	26	783	6,492
11	06/20-06/22	36	380	672	797	21,459	83,235	529,597	12	75	50	230	186	1,524
12	06/24-06/25	36	317	584	324	9,567	97,555	621,628	26	190	30	100	325	2,612
13	06/27-06/29	36	308	563	134	3,445	104,507	667,073	52	369	244	994	924	7,466
14	07/01-07/02	36	322	752	134	3,327	134,726	862,439	894	5,989	518	2,110	1,209	9,221
15	07/04-07/06	36	304	538	64	1,746	92,766	589,935	2,124	15,593	974	3,682	1,126	8,738
16	07/08-07/09	36	220	437	39	919	89,306	573,552	1,169	8,796	281	1,135	612	4,824
17	07/11-07/13	36	189	303	15	411	55,033	352,180	1,623	11,693	198	762	96	726
18	07/15-07/16	36	261	448	14	295	48,002	308,788	1,328	9,848	505	2,106	126	978
19	07/18-07/20	36	256	397	12	209	60,680	390,483	2,797	20,331	399	1,561	95	744
20	07/22-07/23	36	260	418	10	180	47,825	308,442	2,797	20,394	267	1,012	44	371
21	07/25-07/27	36	209	291	5	99	21,230	137,603	3,469	25,252	413	1,571	15	123
22	07/29-07/30	36	124	170	5	118	13,495	86,929	4,580	32,499	730	2,699	4	27
23	08/01-08/03	36	74	106	4	95	9,035	58,360	4,198	30,695	327	1,105	6	50
24	08/05-08/06	36	144	197	1	30	10,065	64,263	11,882	92,117	1,121	3,828	3	22
25	08/08-08/10	36	157	227	1	42	5,877	37,404	21,788	172,313	304	1,010	4	32
26	08/12-08/14	48	6	6	0	0	23	151	655	6,222	0	0	0	0
27	08/15-08/16	24	2	2	0	0	30	195	259	2,470	0	0	0	0
28	08/19-08/20	24	7	7	0	0	23	153	1,476	14,514	0	0	0	0
29	08/22-08/23	24	9	10	0	0	11	71	2,314	19,918	0	0	0	0
30	08/26-08/27	30	274	506	4	33	244	1,661	57,270	521,723	0	0	0	0
31	08/29-08/30	30	165	243	0	0	117	753	24,410	234,510	1	4	0	0
32	09/02-09/03	30	171	292	0	0	130	942	25,109	249,948	0	0	0	0
33	09/05-09/06	30	137	196	0	0	74	501	10,542	105,844	0	0	0	0
34	09/09-09/10	30	94	132	0	0	21	139	8,183	79,212	0	0	0	0
35	09/12-09/13	30	36	46	0	0	1	7	2,354	23,928	0	0	0	0
36	09/16-09/17	30	11	11	0	0	0	0	535	5,237	0	0	0	0
37	09/19-09/20	30	13	17	0	0	0	0	988	9,991	0	0	0	0
38	09/23-09/24	30	1	1	0	0	0	0	174	1,712	0	0	0	0
Total			505	15,439	55,646	1,383,025	2,356,365	14,990,651	193,042	1,721,616	6,372	23,941	25,533	219,958
Average Weight						24.85		6.36		8.92		3.76		8.61

Table 5. Commercial salmon catch by species in the Copper River District, 1973 - 1996.

	Catch by Species					
Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1973	19,948	332,816	132,272	8,964	10,173	504,173
1974	18,980	607,766	46,625	9,839	664	683,874
1975	19,644	335,687	53,502	236	807	409,876
1976	31,483	865,254	111,900	3,392	178	1,012,207
1977	22,089	619,140	131,356	23,185	335	796,105
1978	29,062	249,872	220,338	3,512	2,233	505,017
1979	17,678	80,528	194,885	1,295	107	294,493
1980	8,454	18,908	225,299	3,966	198	256,825
1981	20,178	477,662	310,154	23,952	1,799	833,745
1982	47,362	1,177,632	454,763	7,154	1,177	1,688,088
1983	50,022	633,010	234,243	7,345	2,217	926,837
1984	38,955	899,776	382,432	32,194	6,935	1,360,292
1985	42,333	931,132	587,990	19,061	5,966	1,586,482
1986	40,670	780,808	295,980	3,016	17,614	1,138,088
1987	41,001	1,180,782	111,599	31,635	14,796	1,379,813
1988	30,741	576,950	315,568	2,775	11,022	937,056
1989	30,863	1,025,923	194,454	25,877	5,845	1,282,962
1990	21,702	844,778	246,797	1,596	7,545	1,122,418
1991	34,787	1,206,811	385,086	1,246	20,220	1,648,150
1992	39,810	970,938	291,627	1,664	5,807	1,309,846
1993	29,727	1,398,234	281,469	9,579	13,002	1,732,011
1994	47,061	1,152,220	677,633	12,079	19,055	1,908,048
1995	65,675	1,271,822	542,658	19,809	56,100	1,956,064
1996	55,646	2,356,365	193,042	6,372	25,533	2,636,958
Ten Year Average (1986-95)	38,204	1,040,927	334,287	10,928	17,101	1,441,446

Table 6. Copper River and Bering River area sockeye salmon escapement estimates, 1988 - 1996.

Stream/Lake [a,b]	1988	1989	1990	1991	1992	1993	1994	1995	1996
Eyak Lake	6,775	4,110	8,270	20,640	21,470	16,400	18,040	17,720	16,110
Hatchery Creek	1,225	1,150	2,800	5,100	2,200	1,100	2,800	3,700	1,900
Power Creek	350	0	205	1,870	1,420	700	500	650	1,200
Ibek Creek	0	120	160	120	40	glacial	800	glacial	100
McKinley Lake	9,700	6,300	1,400	2,000	10,300	7,700	12,700	13,100	8,600
Salmon Creek	100	630	2,000	3,330	25	3,000	420	200	2,600
26/27 Mile Creek	2,105	3,020	3,360	3,900	1,420	1,625	4,900	2,000	1,440
39 Mile Creek	3,620	7,420	5,000	5,340	4,500	4,000	7,000	5,400	6,200
Goat Mountain	220	3,150	420	20	620	NC	600	650	1,000
Pleasant Creek	460	990	3,190	1,495	1,567	2,270	1,400	1,600	1,400
Martin River	0	0	350	2,045	1,400	1,500	4,700	1,500	2,700
Ragged Pt. R./Lake	2,060	4,420	8,950	5,900	2,600	1,325	0	6,200	1,540
Martin Lake	6,440	7,850	11,250	10,700	14,000	6,700	13,100	9,450	9,000
Pothole Lake	2,785	1,550	2,190	5,200	1,300	700	950	1,200	1,160
L. Martin Lake	2,200	3,030	5,700	11,700	1,780	1,900	1,760	2,500	300
Tokun Lake/River	12,160	4,950	4,200	5,960	8,230	3,400	2,850	7,150	7,150
Martin River Slough	3,115	3,010	13,900	5,180	3,955	5,400	5,850	3,350	3,070
Copper Delta Total	53,315	51,700	73,345	90,500	76,827	57,720	78,370	76,370	65,470
Upper Copper R. [c]	488,398	607,869	581,859	579,412	601,952	833,387	715,577	599,265	906,867
Copper R. Dist. Tot.	541,713	659,569	655,204	669,912	678,779	891,107	793,947	675,635	972,337
Bering River/Lake	11,450	14,330	16,325	26,480	54,180	23,120	23,000	28,650	22,420
Shepherd Creek	950	340	1,260	3,400	1,200	3,100	1,400	2,600	2,000
Stillwater Cr.	100	250	700	1,200	150	500	800	900	1,100
Kushtaka Lake	480	1,530	256	880	100	205	150	400	990
Katalla River	350	6,850	1,200	260	265	800	1,200	900	800
Bering R. Area Tot.	13,330	23,300	19,741	32,220	55,895	27,725	26,550	33,450	27,310
Copper/Bering Total	555,043	682,869	674,945	702,132	734,674	918,832	820,497	709,085	999,647

[a] The escapement figures in this table are based on peak aerial survey estimates and sonar counts from a majority of known salmon spawning areas in the Copper and Bering River Delta.These indices are not intended to provide a true estimate of total escapement for the coastal stocks, but a comparable index based upon the best data currently available. An effort has been made to standardize the estimates across years.

[b] The areas in this table represent combined survey sites corresponding to the "system" designations for the current year survey results presented elsewhere in this report.

[c] Upriver escapement estimate from Miles Lake sonar counts.

Table 7. Copper River Delta and Bering River coho salmon escapement estimates, 1988 - 1996.

Stream/Lake [a,b]	1988	1989	1990	1991	1992	1993	1994	1995	1996
Eyak Lake	3,250	1,925	5,775	7,170	5,710	NC [d]	9,900	4,050	5,100
Hatchery Creek	100	400	1,940	0	1,100	NC [d]	700	170	0
Power Creek	350	0	650	0	1,000	NC [d]	700	300	0
Ibek Creek	2,400	4,330	3,950	13,540	9,600	NC [d]	3,060	3,000	6,300
Scott & Elsner River	1,060	510	1,105	700	550	1,580	1,600	540	1,000
18/20 Mile	1,075	1,000	630	4,200	915	1,750	3,300	2,550	3,800
McKinley Lake	170	800	375	100	800	700	2,100	400	NC
Salmon Creek	1,925	1,990	1,970	1,770	0	1,400	0	1,250	1,500
26/27 Mile	105	810	860	300	475	1,500	1,300	1,300	1,480
39 Mile	1,390	2,150	2,230	2,100	1,900	1,600	4,150	3,800	5,250
Goat Mountain	1,500	2,500	1,340	1,900	480	650	1,000	2,800	1,000
Pleasant Cr. [c]	110	961	1	6	8	NS	45	100	40
Martin River	3,400	470	400	1,600	1,900	4,540	10,600	5,000	15,400
Ragged Pt. River/Lk	1,080	3,600	820	450	310	300	0	100	0
Martin Lake	145	590	320	1,500	65	150	0	10	0
Pothole Lake	350	1,300	2,670	6,000	300	730	0	300	140
Little Martin Lake	4,500	7,200	7,400	11,360	10,800	6,400	200	1,500	700
Tokun River/Lake	600	2,870	2,250	2,800	510	950	1,780	1,900	1,300
Martin River Slough	4,110	7,960	7,700	8,860	8,140	11,200	5,120	5,950	4,100
Copper Delta Total	27,620	41,366	42,386	64,356	44,563	33,450	45,555	35,020	47,110
Katalla R.	560	1,220	2,960	4,000	2,760	4,400	4,500	4,500	6,800
Bering Lake	2,350	1,000	2,040	12,300	3,540	5,900	5,800	10,600	6,000
Dick Creek	105	570	1,500	1,220	1,250	200	100	100	0
Shepherd Cr.	70	70	100	NS	NS	600	900	800	NC [d]
Nichawak R.	3,670	2,550	2,900	2,560	1,970	4,100	2,000	2,700	2,000
Gandil R.		1,410	910	1,460	600	1,250	950	1,350	1,000
Controller Bay	4,660	9,000	14,390	9,760	6,180	13,600	14,300	7,400	11,000
Bering Area Total	11,415	15,820	24,800	31,300	16,300	30,050	28,550	27,450	26,800
Copper/Bering Total	39,035	57,186	67,186	95,656	60,863	63,500	74,105	62,470	73,910

[a] The escapement figures in this table are based on peak aerial survey estimates counts from a majority of the known salmon spawning areas in the Copper and Bering River Delta. These indices are not intended to provide a true estimate of total escapement for the coastal stocks, but a comparable index based upon the best data currently available. An effort has been made to standardize the estimates across years, however counts were obtained only as environmental conditions allow and may not necessarily correspond to periods of peak abundance. Missing counts are generally a result of bad weather, high water, turbulence or other factors that prevent surveys for that given year.

[b] The areas in this table represent combined survey sites corresponding to the "system" designations for the current year survey results presented elsewhere in this report.

[c] Not an indexed stream.

[d] Due to glacial water conditions these systems are listed as "NC" no count.

Table 8. Commercial salmon harvest by period in the Bering River District drift gillnet fishery, 1996.

					Chinook		Sockeye		Coho		Pink		Chum	
Period	Date [a]	Hours	Permits [b]	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
1	6/06	24	16	24	24	637	5,677	34,956	0	0	0	0	4	47
2	6/10	24	31	52	25	642	9,643	66,100	0	0	0	0	26	211
3	6/13	48	16	42	12	292	4,846	29,891	0	0	0	0	0	0
4	6/17	48	15	39	13	372	6,671	41,290	0	0	0	0	0	0
5	6/20	36	18	39	31	956	4,073	25,822	0	0	0	0	0	0
6	6/24	36	7	15	5	146	5,007	29,849	0	0	0	0	0	0
7	6/27	36	5	8	0	0	757	4,681	0	0	0	0	0	0
8	7/01	36	3	5	0	0	535	3,369	0	0	0	0	0	0
9	7/04	36	2											
10	7/08	36	0	0	0	0	0	0	0	0	0	0	0	0
11	7/11	36	0	0	0	0	0	0	0	0	0	0	0	0
12	7/15	36	0	0	0	0	0	0	0	0	0	0	0	0
13	7/18	36	0	0	0	0	0	0	0	0	0	0	0	0
14	7/22	36	0	0	0	0	0	0	0	0	0	0	0	0
15	7/25	36	0	0	0	0	0	0	0	0	0	0	0	0
16	7/29	36	0	0	0	0	0	0	0	0	0	0	0	0
17	8/01	36	0	0	0	0	0	0	0	0	0	0	0	0
18	8/05	36	1											
19	8/08	36	3	4	0	0	83	472	727	5,442	0	0	0	0
20	8/12	48	0	0	0	0	0	0	0	0	0	0	0	0
21	8/15	24	0	0	0	0	0	0	0	0	0	0	0	0
22	8/19	24	0	0	0	0	0	0	0	0	0	0	0	0
23	8/22	24	0	0	0	0	0	0	0	0	0	0	0	0
24	8/26	30	78	199	1	18	13	91	32,707	301,613	0	0	0	0
25	8/29	30	98	241	0	0	11	72	24,457	232,330	0	0	0	0
26	9/02	30	90	198	0	0	15	97	14,597	139,379	0	0	0	0
27	9/05	30	66	147	0	0	10	65	11,572	110,662	0	0	0	0
28	9/09	30	43	76	0	0	3	21	7,207	69,808	0	0	0	0
29	9/12	30	21	34	0	0	1	7	1,950	18,769	0	0	0	0
30	9/16	30	4	4	0	0	0	0	178	1,682	0	0	0	0
31	9/19	30	4	4	0	0	0	0	350	3,360	0	0	0	0
32	9/23	30	0	0	0	0	0	0	0	0	0	0	0	0
33	9/26	30	0	0	0	0	0	0	0	0	0	0	0	0
34	9/30	30	0	0	0	0	0	0	0	0	0	0	0	0
35	10/3	30	0	0	0	0	0	0	0	0	0	0	0	0
Total		1,164	140	1,135	111	3,063	37,712	239,116	93,763	883,191	0	0	30	258
Average Weight (lbs)						27.59		6.34		9.42				8.60

a Starting date of period.

b Some daily entries omitted if less than three permits fishing in a statistical area.

Table 9. Commercial salmon catch by species in the Bering River District, 1973 - 1996.

Year	Catch by Species					Total
	Chinook	Sockeye	Coho	Pink	Chum	
1973	285	15,426	65,348	2	5	81,066
1974	32	4,208	28,615	7	2	32,864
1975	162	21,637	24,162	0	0	45,961
1976	228	30,908	42,423	43	1	73,603
1977	127	14,445	47,218	192	221	62,203
1978	331	33,554	91,097	266	2,391	127,639
1979	385	139,015	114,046	6,895	23,094	283,435
1980 [a]	0	0	108,872	0	0	108,872
1981	200	55,585	82,626	9,882	8,307	156,600
1982	254	129,667	144,752	47	333	275,053
1983	610	179,273	117,669	851	4,615	303,018
1984	330	91,784	214,632	309	20,408	327,463
1985	215	26,561	419,276	214	9,642	455,908
1986	128	19,038	115,809	15	243	135,233
1987	34	16,926	15,864	54	7	32,885
1988	19	7,152	86,539	23	181	93,914
1989	30	9,225	26,952	7	2	36,216
1990	14	8,332	42,952	2	1	51,301
1991	28	19,181	110,951	4	195	130,359
1992	21	19,721	125,616	4	1	145,363
1993	130	33,951	115,833	82	22	150,018
1994	121	27,926	259,003	34	63	287,147
1995	44	21,585	282,045	26	229	303,929
1996	111	37,712	93,763	0	30	131,616
Ten Year Average (1986-95)	57	18,304	118,156	25	94	136,637

[a] In 1980 no fishing was allowed prior to August 11.

Table 10. Commercial salmon harvest by period in the Coghill District commercial drift gillnet and purse seine fisheries, P.W.S., 1996. Periods listed for each gear are those with active fishing participation.

					Chinook		Sockeye		Coho		Pink		Chum	
Period	Date	Hours	Permits	Landings	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds
GEAR: DRIFT GILLNET														
01[a]	06/10-06/10	12	107	192	88	1,187	162	946	1	7	0	0	52,185	476,725
02[b]	06/12-06/13	24	93	254	185	2,625	146	891	0	0	0	0	74,040	667,802
03[c]	06/15-06/16	24	51	154	110	1,493	186	1,167	0	0	0	0	54,083	475,513
04	06/17-06/18	24	42	120	27	471	395	2,620	0	0	1	4	43,362	389,295
05	06/19-06/20	24	59	140	23	432	1,161	7,554	0	0	0	0	53,100	472,702
06	06/21-06/22	24	58	132	24	386	1,685	11,238	0	0	12	39	50,709	449,899
07[d]	06/23-06/25	48	101	424	26	483	6,765	46,156	0	0	137	475	123,847	1,093,374
08[e]	06/27-06/29	44	105	320	27	509	9,514	61,068	4	31	419	1,533	98,137	866,886
09[f]	07/01-07/02	24	42	78	3	75	6,878	46,511	8	60	123	433	14,178	117,915
10	07/04-07/06	36	63	113	1	23	11,936	77,091	8	70	997	3,449	8,582	72,302
11[g]	07/08-07/09	36	164	390	9	142	60,374	406,342	38	312	1,087	3,293	9,301	81,282
12[h]	07/11-07/13	48	143	302	20	302	32,095	209,609	217	1,726	1,089	3,673	10,465	89,676
13[i]	07/14-07/16	48	82	177	4	70	13,397	91,123	267	2,328	4,568	14,429	6,654	58,265
14[i,j]	07/17-07/19	48	60	132	6	88	12,082	84,387	337	2,653	4,295	14,106	5,744	49,140
15[j]	07/20-07/22	48	26	53	4	53	5,048	33,016	216	1,954	2,415	7,529	1,693	13,986
16[j,k]	07/23-07/27	96	42	135	15	178	12,823	85,430	697	5,563	11,856	39,609	4,598	35,235
17[l]	07/29-08/03	120	21	47	3	105	2,471	16,212	115	1,009	1,923	5,909	2,162	16,279
19[m]	08/06-08/06	17	5	5	0	0	166	1,088	112	738	3,500	13,915	49	373
20[n]	08/08-08/08	16	6	7	0	0	141	919	127	1,056	5,331	21,069	37	298
23[o]	08/29-08/30	30	19	38	0	0	31	185	3,842	32,331	6,526	23,500	34	229
24[p]	09/02-09/04	48	29	69	0	0	28	197	6,517	54,534	7,618	28,832	7	47
25	09/05-09/07	54	33	79	0	0	19	129	4,219	34,783	6,564	24,188	2	12
26[q]	09/09-09/11	60	30	65	0	0	25	163	2,906	24,945	926	2,951	0	0
27	09/12-09/14	60	16	23	0	0	1	6	1,164	10,151	60	229	0	0
28[r]	09/16-09/18	60	7	7	0	0	1	7	131	1,052	0	0	0	0
Total			254	3,456	575	8,622	177,530	1,184,055	20,926	175,303	59,447	209,165	612,969	5,427,235
Average Weight						14.99		6.67		8.38		3.52		8.85
GEAR: PURSE SEINE														
11[s,t]	07/23-07/27	96	1	1	0	0	137	903	0	0	659	2,637	41	329
17[u]	08/04-08/04	17	5	10	0	0	401	2,354	169	1,154	118,912	432,109	84	657
18[u]	08/06-08/06	17	19	29	0	0	855	5,313	610	4,882	302,618	1,055,992	138	992
19[v]	08/08-08/08	16	18	31	1	12	640	3,760	845	6,446	353,265	1,192,641	89	618
20[w]	08/14-08/14	9	48	66	0	0	528	3,151	1,680	12,874	641,480	2,219,698	98	766
21[x]	08/22-08/22	6	20	23	0	0	79	511	1,892	15,698	62,335	222,949	13	117
27[y]	09/02-09/04	48	4	4	0	0	0	0	123	1,104	5,153	18,036	0	0
Total			64	164	1	12	2,640	15,992	5,319	42,158	1,484,422	5,144,062	463	3,479
Average Weight						12.00		6.06		7.93		3.47		7.51
Combined Total			318	3,620	576	8,634	180,170	1,200,047	26,245	217,461	1,543,869	5,353,227	613,432	5,430,714
Average Weight				11.38		14.99		6.66		8.29		3.47		8.85

[a] Open waters included the Esther Subdistrict, excluding the waters of Lake Bay north of a line at 60° 47' 36" N. Latitude. In addition, waters of the General District between the Esther Subdistrict boundary in lower Esther Passage to markers located near Shoestring Cove at approximately N. latitude were open.

[b] Open waters included the Esther Subdistrict, excluding waters of Lake Bay inside a line near the net pens. In addition, waters of the General District between the Esther Subdistrict boundary in lower Esther Passage and markers located near Shoestring Cove at 60° 50'45" N. latitude were open.

-continued-

Table 10. (continued)

[c] Open waters included the Esther Subdistrict, excluding waters of Lake Bay inside a line marked with buoys. In addition, waters of the General District between the Esther Subdistrict boundary in lower Esther Passage and markers located near Shoestring Cove at 60° 50' 45" N. latitude were open to a schedule of 24-hours open and 24-hours closed until further notice beginning at 8:00 a.m. June 15.

[d] Waters of the Coghill District south of a line at 61° 0'00" N. latitude, excluding the waters of the hatchery Special Harvest Area (SHA) were opened to fishing the second 24 hours of the period.

[e] Open waters included the Coghill District south of a line at 61° 0'00" N. latitude for a 32-hour period. The THA and SHA to a line near the net pens were opened an additional 12-hours.

[f] The Coghill District was open south of a line at 61° 0'00" N. latitude including waters of the Noerenberg THA and SHA to a line near the net pens.

[g] The Coghill District was open including the Noerenberg THA and SHA to a line near the barrier seine. Coghill Lagoon remained closed inside of the anadromous stream markers.

[h] The waters of Coghill Lagoon to the mouth of Coghill River were open for 8-hours. In addition, all waters of the Coghill District excluding Coghill Lagoon were open for an additional 40-hours.

[i] The Coghill District, including the Coghill Lagoon, opened for three 48-hour periods.

[j] The Coghill District opened, including Coghill Lagoon to buoys in the mouth of Coghill River and excluding the Noerenberg THA and SHA.

[k] The initial 48 hour period was extended an aditional 48 houors.

[l] The Coghill District north of a line at 61° 00' 00" N. latitude to the buoys at the mouth of the Coghill River was open.

[m] Open waters included the Esther Subdistrict east of Esther Light and within one and one-half miles of Esther Island. The Noerenberg THA and SHA were closed.

[n] Open waters included the Esther Subdistrict east of Hodgkin Point and within one and one-half miles of Esther Island. The Noerenberg THA and SHA were closed.

[o] Esther Subdistrict excluding the Noerenberg THA and SHA was open.

[p] Esther Subdistrict excluding the Noerenberg SHA was open.

[q] Esther Subdistrict excluding the Noerenberg SHA was open for two 60-hour periods per week until season's end.

[r] Coghill District closed 8:00 p.m. October 5.

[s] The Coghill District opened, including Coghill Lagoon to buoys in the mouth of Coghill River and excluding the Noerenberg THA and SHA.

[t] The initial 48 hour period was extended an aditional 48 houors.

[u] Open waters included the Esther Subdistrict east of Esther Light and within one and one-half miles of Esther Island. The Noerenberg THA and SHA were closed.

[v] Open waters included the Esther Subdistrict east of Hodgkin Point and within one and one-half miles of Esther Island. The Noerenberg THA and SHA were closed.

[w] Open waters included only the Esther Subdistrict.

[x] Open waters included only the Esther Subdistrict excluding the Noerenberg THA and SHA.

[y] Open waters for seining included only the Noerenberg THA excluding the SHA.

Table 11. Commercial salmon catch by species in the Coghill District, Prince William Sound, 1977 - 1996.

	CATCH BY SPECIES					
Year	Chinook	Sockeye	Coho	Pink	Chum	Total
DRIFT GILLNET						
1977	124	154,342	49	332,859	127,476	614,850
1978	469	193,899	64	49,527	110,679	354,638
1979	543	75,753	1,837	259,372	56,916	394,421
1980	107	56,957	1,053	355,684	68,071	481,872
1981	152	101,058	1,008	526,739	131,399	760,356
1982	127	929,965	213	181,925	252,077	1,364,307
1983	340	38,273	1,013	233,263	234,022	506,911
1984	396	94,956	563	897,496	264,878	1,258,289
1985	380	339,296	1,131	454,531	246,824	1,042,162
1986	617	381,565	789	68,887	218,971	670,829
1987	352	377,454	13,396	712,897	318,842	1,422,941
1988	501	82,294	41,307	1,314,061	346,388	1,784,551
1989	364	106,114	80,737	628,522	194,584	1,010,321
1990	126	11,988	128,605	1,907,510	301,209	2,349,438
1991	92	3,888	78,363	231,501	34,223	348,067
1992	242	57,919	86,782	167,384	182,433	494,760
1993	576	66,532	37,898	141,279	635,208	881,493
1994	390	12,928	50,879	58,334	554,181	676,712
1995	468	57,797	29,343	161,493	379,659	628,760
1996	575	177,530	20,926	59,447	612,969	871,447
Ten Year Average (1986-95)	373	115,848	54,810	539,187	316,570	1,026,787
PURSE SEINE						
1977	40	16,436	50	230,215	37,102	283,843
1978	206	9,623	34	13,059	14,007	36,929
1979	692	3,047	55	38,560	5,709	48,063
1980	0	2,159	0	134,876	4,702	141,737
1981	1	1,997	0	34,083	23,378	59,459
1982	23	17,466	29	1,006,579	135,553	1,159,650
1983	0	175	16	41,048	8,958	50,197
1984	0	21	0	10,911	1,126	12,058
1985	85	10,757	112	69,242	19,330	99,526
1986	186	18,514	98	145,706	27,078	191,582
1987	58	38,899	1,956	865,671	59,252	965,836
1988	63	1,623	15,787	1,600,481	11,755	1,629,709
1989	61	2,030	39,484	3,296,965	124,639	3,463,179
1990	2	286	11,819	785,278	10,951	808,336
1991	11	1,562	621	1,980,074	11,519	1,993,787
1992	6	765	27,382	196,503	1,603	226,259
1993	46	6,250	1,760	352,468	3,645	364,169
1994	50	21,060	30,517	3,538,760	3,575	3,593,962
1995	33	20,670	5,337	917,200	2,597	945,837
1996	1	2,640	5,319	1,484,422	463	1,492,845
Ten Year Average (1986-95)	52	11,166	13,476	1,367,911	25,661	1,418,266
COMBINED GEARS						
1977	164	170,778	99	563,074	164,578	898,693
1978	675	203,522	98	62,586	124,686	391,567
1979	1,235	78,800	1,892	297,932	62,625	442,484
1980	107	59,116	1,053	490,560	72,773	623,609
1981	153	103,055	1,008	560,822	154,777	819,815
1982	150	947,431	242	1,188,504	387,630	2,523,957
1983	340	38,448	1,029	274,311	242,980	557,108
1984	396	94,977	563	908,407	266,004	1,270,347
1985	465	350,053	1,243	523,773	266,154	1,141,688
1986	803	400,079	887	214,593	246,049	862,411
1987	410	416,353	15,352	1,578,568	378,094	2,388,777
1988	564	83,917	57,094	2,914,542	358,143	3,414,260
1989	425	108,144	120,221	3,925,487	319,223	4,473,500
1990	128	12,274	140,424	2,692,788	312,160	3,157,774
1991	103	5,450	78,984	2,211,575	45,742	2,341,854
1992	248	58,684	114,164	363,887	184,036	721,019
1993	622	72,782	39,658	493,747	638,853	1,245,662
1994	440	33,988	81,396	3,597,094	557,756	4,270,674
1995	501	78,467	34,680	1,078,693	382,256	1,574,597
1996	576	180,170	26,245	1,543,869	613,432	2,364,292
Ten Year Average (1986 - 95)	424	127,014	68,286	1,907,097	342,231	2,445,053

Table 12. Salmon escapement by species in the Coghill District, Prince William Sound, 1970 -1996.

Year	Sockeye a	Pink b	Chum b
1970	35,200	95,170	11,880
1971	15,000	62,160	6,600
1972	51,000	30,960	28,160
1973	55,000	493,780	72,610
1974	22,333	56,940	29,280
1975	34,855	452,430	3,640
1976	9,056	57,090	25,670
1977	31,562	130,510	43,940
1978	42,284	85,450	18,160
1979	48,281	70,980	6,330
1980	142,253	214,930	23,340
1981	156,112	106,450	2,050
1982	180,314	368,380	22,130
1983	38,783	310,330	61,410
1984	63,622	429,450	19,690
1985	163,311	296,970	22,140
1986	71,095	101,600	13,140
1987	187,263	147,060	24,510
1988	72,052	37,070	39,240
1989	37,751	45,510	22,680
1990	8,949	49,110	26,020
1991	9,752	98,580	6,070
1992	29,642	23,611	10,003
1993	9,232	41,837	8,430
1994	7,264	65,648	14,176
1995	30,382	46,029	11,596
1996	38,693	117,260	26,327
10 Year Average (1986-95)	46,338	65,606	17,587

a Escapement count of sockeye salmon past the Coghill River weir.

b Pink and chum escapements estimated by aerial surveys. Historical data revised in 1990.

Table 13. Commercial salmon harvest by period in the Unakwik District drift gillnet and purse seine fisheries, P.W.S., 1996. Periods listed are those with active gear participation.

					Chinook		Sockeye		Coho		Pink		Chum	
Period	Date	Hours	Permits	Landings	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds
GEAR: DRIFT GILLNET														
01	06/20-06/21	24	1	1	0	0	164	1,218	0	0	0	0	65	555
02	06/24-06/25	24	4	4	3	35	682	4,712	0	0	4	18	279	2,482
03	06/27-06/28	24	2	2	0	0	289	1,909	0	0	0	0	58	584
04	07/01-07/02	24	2	2	0	0	669	4,677	0	0	0	0	130	1,115
05	07/04-07/05	24	2	2	0	0	1,791	13,696	0	0	0	0	0	0
06	07/08-07/09	24	6	8	0	0	1,840	12,629	0	0	13	58	117	912
07	07/11-07/12	24	2	2	0	0	468	3,230	0	0	0	0	0	0
08	07/15-07/16	24	1	2	0	0	160	1,055	0	0	0	0	45	390
GEAR: PURSE SEINE - NO REPORTED HARVEST IN 1996														
Total			9	23	3	35	6,063	43,126	0	0	17	76	694	6,038
Average Weight						11.67		7.11				4.47		8.70

Table 14. Commercial salmon catch by species in the Unakwik District, Prince William Sound, 1980 - 1996.

Year	CATCH BY SPECIES Chinook	Sockeye	Coho	Pink	Chum	Total
DRIFT GILLNET						
1980	0	1,547	6	4,815	727	7,095
1981	0	2,445	0	4,152	1,330	7,927
1982	1	48,947	0	335	598	49,881
1983	3	13,215	0	1,515	1,426	16,159
1984	2	18,522	0	27,742	7,125	53,391
1985	26	27,532	22	9,191	3,942	40,713
1986	5	25,759	1	1,973	2,463	30,201
1987	2	5,894	1	4,871	1,356	12,124
1988	15	8,589	0	281	1,504	10,389
1989	31	21,412	27	41,820	404	63,694
1990	3	247	127	9,986	23	10,386
1991	13	4,482	11	12,299	118	16,923
1992	3	2,224	13	3,972	94	6,306
1993	5	14,691	4	3,338	978	19,016
1994	0	548	0	300	0	848
1995	8	2,116	0	1	36	2,161
1996	3	6,063	0	17	694	6,777
Ten Year Average (1986-95)	9	8,596	18	7,884	698	17,205
PURSE SEINE						
1980	0	6	0	9,113	355	9,474
1981	0	108	0	71,624	17,650	89,382
1982	0	2	4	89,137	517	89,660
1983	0	6	0	3,344	716	4,066
1984 [a]						
1985	0	138	0	28,210	4,123	32,471
1986	0	76	0	4,718	4,675	9,469
1987	0	146	0	187,752	6,549	194,447
1988	0	667	7	57,844	23,860	82,378
1989 [a]						
1990 [a]						
1991	0	819	3	121,068	79	121,969
1992	0	42	2	13,264	119	13,427
1993	0	79	0	3,233	67	3,379
1994	0	226	102	388,901	73	389,302
1995 [a]						
1996 [a]						
Ten Year Average (1986-95)	0	294	16	110,969	5,060	116,339
COMBINED GEARS						
1980	0	1,553	6	13,928	1,082	16,569
1981	0	2,553	0	75,776	18,980	97,309
1982	1	48,949	4	89,472	1,115	139,541
1983	3	13,221	0	4,859	2,142	20,225
1984	2	18,522	0	27,742	7,125	53,391
1985	26	27,670	22	37,401	8,065	73,184
1986	5	25,835	1	6,691	7,138	39,670
1987	2	6,040	1	192,623	7,905	206,571
1988	15	9,256	7	58,125	25,364	92,767
1989	31	21,412	27	41,820	404	63,694
1990	3	247	127	9,986	23	10,386
1991	13	5,301	14	133,367	197	138,892
1992	3	2,266	15	17,236	213	19,733
1993	5	14,770	4	6,571	1,045	22,395
1994	0	774	102	389,201	73	390,150
1995	8	2116	0	1	36	2161
1996	3	6,063	0	17	694	6,777
Ten Year Average (1986-95)	9	8,802	30	85,562	4,240	98,642

[a] No catch recorded.

Table 15. Commercial salmon harvest by period in the Eshamy District commercial drift gillnet and set gillnet fisheries, Prince William Sound, 1996.

Period	Date [a]	Hours	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
					Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds
DRIFT GILLNET														
1	07/01 [b]	24	74	192	5	78	49,162	309,061	10	82	2,052	7,497	10,355	90,839
2	07/04 [c]	24	99	188	3	62	36,244	230,137	1	6	2,526	9,911	5,438	46,251
3	07/08 [d]	36	35	107	0	0	18,890	120,210	16	118	1,439	5,335	2,485	20,886
4	07/11	48	74	142	4	71	24,610	151,508	121	916	1,504	4,909	1,642	14,547
5	07/15	48	62	137	4	37	17,188	108,009	360	2,845	2,794	9,758	2,635	21,892
6	07/18 [f]	48	41	93	3	43	12,191	77,442	326	2,779	1,727	5,813	807	6,963
7	07/22 [g]	48	27	47	0	0	5,352	34,565	18	148	577	1,901	51	432
8	07/25	48	19	43	0	0	5,207	33,445	64	511	852	2,709	74	590
9	07/29	48	22	52	0	0	6,635	41,398	74	595	3,210	11,560	57	441
10	08/01	24	19	24	0	0	2,573	16,113	30	243	1,172	4,220	6	46
11	08/05 [h]	24	17	20	0	0	1,012	6,832	36	292	1,190	3,912	2	13
Total		420	157	1,045	19	291	179,064	1,128,720	1,056	8,535	19,043	67,525	23,552	202,900
Average Weight					15.32		6.30		8.08		3.55		8.61	
SET GILLNET														
1	07/01 [b]	24	23	82	1	25	19,094	119,890	7	57	589	2,145	3,380	30,079
2	07/04 [c]	24	24	63	0	0	11,641	72,665	1	7	1,396	6,019	1,900	16,811
3	07/08 [d]	36	23	108	5	69	30,300	187,221	10	92	2,251	7,790	1,994	17,128
4	07/11	48	24	70	3	48	13,003	79,024	6	53	729	2,601	587	5,008
5	07/15	48	23	78	2	42	14,139	86,471	85	744	1,035	3,678	509	4,252
6	07/18 [f]	48	24	88	0	0	16,780	104,297	103	856	2,557	8,722	675	5,860
7	07/22 [g]	48	16	53	0	0	7,604	48,070	11	94	1,080	3,975	86	696
8	07/25	48	18	57	1	13	7,747	48,801	36	263	1,478	5,000	62	481
9	07/29	48	18	67	1	20	6,903	42,736	16	131	1,689	6,124	62	324
10	08/01	24	17	32	0	0	3,195	19,653	23	176	1,635	6,086	15	114
11	08/05 [h]	24	15	25	0	0	1,862	11,845	11	77	2,209	7,188	6	48
Total		420	27	723	13	217	132,268	820,673	309	2,550	16,648	59,328	9,276	80,801
Average Weight					16.69		6.20		8.25		3.56		8.71	
Combined Total			184	1,768	32	508	311,332	1,949,393	1,365	11,085	35,691	126,853	32,828	283,701
Average Weight					15.88		6.26		8.12		3.55		8.64	

a Starting date of period.

b Open waters included all waters in the Eshamy District except the Alternating Gear Zone in the Main Bay Subdistrict and the waters of Eshamy Lagoon.

c The AGZ was open to drift gillnet gear.

d The Crafton Island Subdistrict was open for 24-hours and the Main Bay Subdistrict was open for 48-hours. In the AGZ, the first 24-hours was open to drift gillnet gear and the second 24-hours was open to set gillnets. During the second 48-hour period, the first 24-hours in the AGZ was open to set gillnet gear and the second 24-hours was open to drift gillnets.

e The Crafton Island Subdistrict was open for 24-hours and the Main Bay Subdistrict was open for 48-hours. The AGZ was closed to fishing.

f The Main Bay Subdistrict, excluding the AGZ, was open to fishing.

g The Eshamy District was closed for the season effective 8:00 a.m. Monday, September 2.

Table 16. Commercial salmon catch by species in the Eshamy District, Prince William Sound, 1980 -1996.

	CATCH BY SPECIES					
Year [a]	Chinook	Sockeye	Coho	Pink	Chum	Total
DRIFT GILLNET						
1980	0	684	25	3,235	130	4,074
1983	1	924	8	162,541	3,427	166,901
1984	7	23,490	282	247,326	15,451	286,556
1985	1	667	0	24,899	1,021	26,588
1986	0	4	1	938	65	1,008
1987	2	642	3	3,225	7,060	10,932
1988	94	50,868	794	348,873	206,060	606,689
1989 [b]						
1990	110	12,967	574	165,362	264,772	443,785
1991	107	296,234	468	44,516	202,183	543,508
1992	158	373,596	1,017	153,018	50,974	578,763
1993	8	80,807	673	45,974	27,045	154,507
1994	2	61,848	623	254,535	9,497	326,505
1995	21	29851	1468	60712	13284	105336
1996	19	179,064	1,056	19,043	23,552	222,734
Ten Year Average (1986-95)	56	100,757	625	119,684	86,771	307,893
SET GILLNET						
1980	0	2,000	38	2,471	134	4,643
1983	1	1,328	10	167,942	4,463	173,744
1984	5	23,226	98	278,176	3,000	304,505
1985	1	3,439	74	33,284	1,295	38,093
1986	9	1,043	86	42,123	5,764	49,025
1987	31	5,387	336	86,677	45,099	137,530
1988	100	18,321	283	180,456	93,577	292,737
1989 [b]						
1990	56	10,204	532	369,589	94,494	474,875
1991	76	184,028	504	20,075	49,394	254,077
1992	101	144,568	1,242	390,097	4,695	540,703
1993	55	101,717	832	84,568	20,369	207,541
1994	9	97,664	628	311,134	6,908	416,343
1995	19	30814	695	28118	6621	66267
1996	13	132,268	309	16,648	9,276	158,514
Ten Year Average (1986-95)	51	65,972	571	168,093	36,325	271,011
COMBINED GEAR						
1980	0	2,684	63	5,706	264	8,717
1983	2	2,252	18	330,483	7,890	340,645
1984	12	46,716	380	525,502	18,451	591,061
1985	2	4,106	74	58,183	2,316	64,681
1986	9	1,047	87	43,061	5,829	50,033
1987	33	6,029	339	89,902	52,159	148,462
1988	194	69,189	1,077	529,329	299,637	899,426
1989 [b]						
1990	166	23,171	1,106	534,951	359,266	918,660
1991	183	480,262	972	64,591	251,577	797,585
1992	259	518,164	2,259	543,115	55,669	1,119,466
1993	63	182,524	1,505	130,542	47,414	362,048
1994	11	159,512	1,251	565,669	16,405	742,848
1995	40	60665	2163	88830	19905	171603
1996	32	311,332	1,365	35,691	32,828	381,248
Ten Year Average (1986-95)	106	166,729	1,195	287,777	123,096	578,903

[a] Fishing was closed during the following years: 1981 and 1982.

[b] Fishing was closed due to oil contamination on the beaches.

Table 17. Salmon escapement by species at the Eshamy weir, Prince William Sound, 1967 - 1996.

	Escapement by Species					
Year	Chinook	Sockeye [a]	Coho	Pink	Chum	Total
1967	0	10,821	192	10,433	1	21,447
1968	1	68,048	450	919	1	69,419
1969	0	61,196	96	3,095	2	64,389
1970	0	11,460	25	387	0	11,872
1971	0	954 [b]	97	3,179	0	4,230
1972 [c]		28,683				28,683
1973	0	10,202	205	1,698	0	12,105
1974 [c]		633				633
1975 [c]		1,724				1,724
1976 [c]		19,367				19,367
1977	0	11,746	230	32,080	0	44,056
1978	0	12,580	20	552	0	13,152
1979	0	12,169	5	3,654	1	15,829
1980	5	44,263	128	963	2	45,361
1981	1	23,048	249	5,956	13	29,267
1982	0	6,782	79	1,056	79	7,996
1983	0	10,348	40	7,047	4	17,439
1984	2	36,121	881	3,970	0	40,974
1985	0	26,178	96	6,271	0	32,545
1986	2	6,949	55	1,004	31	8,041
1987 [d]						
1988	2	31,747	48	1,205	1	33,003
1989	1	57,232	0	6,283	210	63,726
1990	0	14,477	43	2,209	5	16,734
1991	2	46,229	907	31,241	17	78,396
1992	1	36,237	52	3,004	5	39,299
1993	1	42,893	92	3,435	9	46,430
1994	1	64,660	1,184	12,061	87	77,993
1995	7	21701	1076	18601	407	41792
1996	2	5,271	108	7,959	9	13,349
10 Year Average (1986-1995)	2	35,792	384	8,783	86	45,046

[a] Sockeye number includes jacks.

[b] Enumeration low due to holes in weir. Actual escapement is estimated to be more than 3,000.

[c] Incidental passage of salmon other than sockeye were not recorded for each year.

[d] The Eshamy weir was not in operation during 1987.

Table 18. Aerial escapement indices for pink and chum salmon by district, Prince William Sound, 1996.

PINK SALMON (EVEN CYCLE)

District	Escapement Goal	Even Cycle Escapement Range	1966-94 Mean Index	Observed Escapement Index[a]	Deviation From Goal
Eastern	474,000	427,000 - 521,000	463,357	584,326	23.3%
Northern/Unakwik	213,000	192,000 - 235,000	196,092	218,022	2.4%
Coghill	143,000	129,000 - 158,000	123,925	104,781	-26.7%
Northwestern	135,000	122,000 - 149,000	128,274	86,709	-35.8%
Eshamy	8,200	7,000 - 9,000	8,697	3,000	-63.4%
Southwestern	144,000	130,000 - 159,000	139,666	63,337	-56.0%
Montague	70,000	63,000 - 77,000	70,659	92,966	32.8%
Southeastern	239,000	215,000 - 263,000	231,113	330,285	38.2%
Total	1,426,200		1,361,783	1,483,426	4.0%

CHUM SALMON

District	Escapement Goal	Escapement Range	1965-95 Mean Index	Observed Escapement Index[a]	Deviation From Goal
Eastern	98,100	87,200 - 109,000	89,698	137,908	40.6%
Northern/Unakwik	33,075	29,400 - 36,750	40,635	55,568	68.0%
Coghill	33,325	29,600 - 37,050	20,575	19,669	-41.0%
Northwestern	21,350	19,000 - 23,700	13,788	24,405	14.3%
Eshamy	0	0 - 0	39	0	
Southwestern	3,825	3,400 - 4,250	1,868	2,231	-41.7%
Montague	12,825	11,400 - 14,250	2,494	5,216	-59.3%
Southeastern	22,500	20,000 - 25,000	15,356	47,334	110.4%
Total	225,000		184,453	292,331	29.9%

[a]Based on weekly aerial survey counts of 209 index spawning streams in Prince William Sound. This does not represent the total spawning escapement but rather a comparable annual index.

Table 19. Pink salmon harvests and escapement indices, including hatchery sales harvests and brood stock, PWS, 1965 - 1996. Historical data revised in 1989.

	PINK SALMON ESCAPEMENTS[a]									Hatchery		Common Property	
Year	Eastern	Northern/ Unakwik	Coghill	Northwest	Eshamy	Southwest	Montague	Southeastern	Total	Sales	Brood	Catch[b]	Total Run[c]
1965	257,853	59,820	91,584	159,011	9,340	65,380	77,042	255,926	975,956			2,460,471	3,436,427
66	544,980	288,710	135,440	79,960	11,720	115,570	42,220	204,570	1,423,170			2,699,418	4,122,588
67	255,240	144,200	65,240	82,980	5,020	42,950	10,020	236,610	842,260			2,626,340	3,468,600
68	364,930	151,120	108,020	117,430	10,770	172,770	52,350	179,120	1,156,510			2,452,168	3,608,678
69	160,600	94,770	39,020	23,830	0	57,890	1,550	26,910	404,570			4,828,579	5,233,149
1970	387,090	125,360	95,170	82,660	7,610	66,790	73,880	140,660	979,220			2,809,996	3,789,216
71	352,800	126,210	62,160	14,320	1,710	79,140	296,730	179,480	1,112,550			7,310,964	8,423,514
72	344,470	83,900	30,960	39,020	1,100	29,530	33,140	79,060	641,180			54,783	695,963
73	309,040	69,660	493,780	2,910	0	52,320	119,520	177,780	1,225,010			2,056,878	3,281,888
74	256,880	206,750	56,940	163,930	6,240	160,980	11,750	94,650	958,120			448,773	1,406,893
1975	412,560	38,260	452,430	4,990	0	77,270	85,380	194,670	1,265,560			4,452,805	5,718,365
76	472,080	139,600	57,090	68,150	5,840	52,120	13,790	117,590	926,260			3,018,995	3,945,255
77	390,930	69,980	130,510	80,890	16,450	178,670	152,960	277,780	1,298,170	7,745	16,112	4,514,431	5,844,258
78	279,120	163,010	85,450	132,300	5,430	258,980	56,690	164,030	1,145,010	114,188	40,432	2,780,073	4,079,703
79	642,220	200,730	70,980	124,020	0	231,300	219,400	728,630	2,217,280	223,748	54,207	15,393,223	17,888,458
1980	535,960	189,140	214,930	159,260	13,100	133,470	118,400	307,680	1,671,940	346,728	145,061	13,434,024	15,597,753
81	599,340	243,170	106,450	51,210	3,990	93,630	255,420	359,870	1,713,080	707,037	268,501	19,286,542	21,975,160
82	573,070	332,560	368,380	174,290	15,080	195,950	132,380	482,860	2,274,570	1,354,732	239,945	18,858,647	22,727,894
83	481,950	168,410	310,330	196,630	12,610	161,290	230,200	601,680	2,163,100	686,963	258,062	13,309,461	16,347,586
84	1,209,740	593,310	429,450	452,370	16,860	345,760	191,810	792,560	4,031,860	415,393	341,259	21,683,076	26,471,588
1985	750,530	214,210	296,970	199,190	1,410	181,270	332,240	645,510	2,621,330	1,209,960	640,340	23,959,698	28,431,328
86	356,380	141,420	101,600	81,490	3,840	74,980	44,680	155,830	960,220	905,464	466,471	10,498,052	12,830,207
87	514,570	132,960	147,060	75,390	3,450	112,920	149,260	330,630	1,466,240	2,691,190	1,158,908	26,125,769	31,442,107
88	362,370	143,850	37,070	73,780	490	126,440	67,990	152,540	964,530	1,632,701	824,302	9,650,406	13,071,939
89	359,730	106,530	45,510	68,540	19,470	176,230	181,760	315,000	1,272,770	5,737,911	856,927	13,854,209	23,796,279
1990	443,660	131,580	49,110	115,870	17,870	150,100	113,572	304,090	1,325,852	6,691,160	749,910	35,430,821	46,239,241
91	474,380	165,930	98,580	101,320	18,800	197,095	247,890	533,170	1,837,165	5,201,860	1,324,255	31,178,750	40,295,731
92	204,383	72,915	23,611	42,308	2,709	66,953	47,156	95,070	555,105	2,626,248	802,117	5,578,099	9,984,715
93	315,209	95,614	41,837	46,011	9,348	98,573	144,784	315,093	1,066,469	2,212,403	893,462	3,548,694	7,721,028
94	615,240	178,151	65,648	141,290	11,799	144,594	60,084	196,378	1,413,184	10,521,439	1,467,755	26,364,862	39,767,240
1995	396,696	84,447	46,029	50,582	10,182	82,490	183,448	336,310	1,190,184	5,090,152	1,154,635	10,975,079	18,410,050
96	584,236	218,022	104,781	86,709	3,000	63,337	92,966	330,285	1,483,336	8,291,205	1,264,701	17,745,365	28,784,607
EVEN CYCLE AVG. (1966-94)													
AVG.	463,357	196,092	123,925	128,274	8,697	139,666	70,659	231,113	1,361,782	2,734,228	564,139	10,384,146	13,889,258
ODD CYCLE AVG. (1965-93)													
Avg.	417,103	125,931	156,154	80,114	6,986	118,026	167,975	344,691	1,416,981	2,376,897	662,541	11,617,618	15,107,121

[a] Coghill and Northwestern escapement figures correspond to current district boundaries.

[b] Includes the common property harvest of both wild and hatchery stocks. Does not include hatchery sales harvests.

[c] Represents the sum of the commercial catch, hatchery sales, brood (including roe recoveries), plus the escapement index. Does not account for wild stock escapement into non-index streams.

Table 20. Chum salmon harvests and escapement indices, including hatchery sales harvests and brood stock, Prince William Sound, 1965 - 1996.

	CHUM SALMON ESCAPEMENTS[a]									Hatchery		Common Property	
Year	Eastern	Northern	Coghill	Northwestern	Eshamy	Southwestern	Montague	Southeastern	Total	Sales	Brood	Catch[b]	Total Run[c]
1965	69,180	20,980	20,768	18,907	0	1,829	17,500	46,480	195,644			201,043	396,687
66	75,690	24,870	10,540	5,770	0	2,180	14,100	9,410	142,560			426,628	569,188
67	74,570	23,270	7,450	1,670	0	6,200	4,980	9,070	127,210			274,234	401,444
68	48,960	10,620	8,780	800	0	580	220	4,610	74,570			342,939	417,509
69	58,690	17,340	8,410	780	0	0	0	6,320	91,540			320,977	412,517
1970	34,430	4,020	11,880	2,720	0	550	0	7,950	61,550			230,661	292,211
71	49,730	11,870	6,600	5,600	100	1,430	27,990	6,450	109,770			574,265	684,035
72	112,950	70,760	28,160	22,980	0	4,010	3,340	26,990	269,190			45,370	314,560
73	213,170	140,030	72,610	13,250	0	1,020	3,110	48,080	491,270			729,839	1,221,109
74	72,010	55,510	29,280	6,580	0	240	80	3,200	166,900			88,544	255,444
1975	30,040	8,910	3,640	430	0	1,280	140	2,850	47,290			100,479	147,769
76	16,260	29,430	25,670	8,300	0	90	0	770	80,520			370,478	450,998
77	47,880	48,600	43,940	10,090	0	700	0	8,280	159,490			575,839	735,329
78	90,250	27,480	18,160	12,940	0	790	0	6,550	156,170			485,147	641,317
79	42,630	17,320	6,330	8,770	0	90	0	5,140	80,280			324,040	404,320
1980	26,720	27,880	23,340	3,060	0	2,040	70	6,710	89,820	6		412,948	502,774
81	71,560	28,670	2,050	15,130	0	710	0	16,010	134,130	118		1,745,869	1,880,117
82	146,120	68,580	22,130	21,880	0	1,530	0	25,260	285,500	0	86,200	1,335,368	1,707,068
83	143,800	85,720	61,410	31,660	340	3,170	0	21,410	347,510	0	44,000	1,030,546	1,422,056
84	129,190	59,080	19,690	7,920	0	20	0	8,650	224,550	4,886	3,000	1,196,785	1,429,221
1985	111,310	33,410	22,140	13,290	0	620	0	4,470	185,240	3,840	0	1,302,090	1,491,170
86	126,690	50,740	13,140	17,420	0	1,890	0	8,830	218,710	20,683	12,523	1,662,366	1,914,282
87	183,620	38,700	24,510	26,460	0	1,690	0	44,020	319,000	2,549	15,574	1,902,063	2,239,186
88	258,560	75,420	39,240	40,780	0	2,350	500	66,930	483,780	42,694	108,271	1,792,616	2,427,361
89	112,080	46,470	22,680	27,430	320	11,690	0	22,640	243,310	129,551	74,513	862,551	1,309,925
1990	115,100	112,480	26,020	37,020	0	80	1,050	7,275	299,025	24,554	107,284	935,284	1,366,147
91	86,360	19,080	6,070	8,960	0	2,800	925	9,203	133,398	13,471	114,814	318,435	580,118
92	48,804	12,903	10,003	11,072	300	2,940	783	3,881	90,686	57,392	183,940	271,176	603,194
93	54,102	24,975	8,430	18,966	0	1,300	30	19,172	126,975	475,148	140,330	706,196	1,448,649
94	40,476	23,942	14,176	12,992	100	2,225	0	4,057	97,968	380,365	114,654	677,848	1,270,835
1995	75,655	28,899	11,596	4,883	0	2,250	1,000	23,200	147,483	231,539	172,542	527,006	1,078,570
96	137,908	55,568	19,669	24,405	0	2,231	5,216	47,334	292,331	1,066,705	253,751	1,011,291	2,624,078
1965-95 AVG	89,698	40,635	20,575	13,788	39	1,868	2,494	15,356	184,452	77,017	77,316	708,087	964,551

[a]Coghill and Northwestern escapement figures correspond to current district boundaries.

[b]Includes the common property harvest of both wild and hatchery stocks. Does not include hatchery sales harvests.

[c]Represents the sum of the common property catch, hatchery sales and brood, plus the escapement index. Does not account for wild stock escapement into non-index streams.

Table 21. Prince William Sound commercial purse seine salmon harvest by day, 1996.

Catch Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
			Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds
07/02 a	48	88	2	18	430	2,780	14	88	672,515	2,551,951	5,759	46,954
07/04 b	52	91	3	51	1,171	7,483	21	186	613,747	2,370,133	6,822	56,838
07/06 c	58	110	0	0	325	2,200	3	29	859,973	3,314,992	8,262	70,731
07/08 c	57	94	2	36	216	1,506	21	155	675,181	2,592,831	19,024	154,513
07/10 c	64	104	2	20	306	2,150	1	8	659,370	2,520,819	16,470	136,996
07/12 c	67	111	0	0	416	2,761	10	79	673,092	2,474,743	29,438	245,628
07/14 c	64	100	2	30	279	1,904	152	1,168	620,629	2,318,864	46,100	391,449
07/17 c	57	82	3	39	128	791	317	2,542	391,978	1,471,346	48,659	413,165
07/18 c	57	70	2	33	162	1,033	403	2,879	296,522	1,069,667	34,574	290,203
07/19 c	40	45	1	13	269	1,788	288	2,270	176,216	639,162	22,014	181,383
07/21 d	32	39	3	48	552	3,592	219	1,812	134,161	484,975	11,700	92,732
07/23 e	28	35	5	82	416	2,708	2,141	17,457	100,201	358,244	14,904	117,862
07/25 f	35	40	4	74	1,728	10,826	2,146	15,722	137,522	476,734	33,677	256,353
07/27 f	41	44	1	10	1,528	9,526	1,007	7,334	161,487	577,647	15,027	122,647
07/29 g	47	62	18	321	2,539	16,050	1,363	10,650	357,733	1,328,102	10,910	84,442
07/31 h	56	71	2	76	1,684	10,624	1,172	9,504	410,330	1,472,513	10,373	81,834
08/02 i	70	88	3	36	2,717	16,949	1,785	13,615	638,914	2,257,557	4,859	38,121
08/04 j	72	110	0	0	2,011	12,716	1,537	11,738	872,711	3,073,228	1,746	13,418
08/06 k	71	148	0	0	1,643	10,430	2,284	17,497	1,389,754	4,798,576	1,362	10,714
08/08 l	77	157	2	20	1,190	7,386	2,323	19,158	1,345,396	4,542,510	805	6,553
08/10 m	33	51	0	0	308	2,006	957	7,787	391,176	1,338,382	9,131	66,448
08/11 m	74	105	5	59	788	5,017	1,382	11,109	849,554	3,022,340	398	3,123
08/12 m	31	42	0	0	255	1,675	1,090	8,215	385,269	1,344,783	484	4,287
08/13 m	36	41	0	0	121	798	3,129	24,857	292,376	1,046,583	5,797	43,617
08/14 n	77	121	3	65	1,106	6,777	4,665	36,873	1,137,280	3,976,006	1,674	13,199
08/15 m	21	30	0	0	47	281	1,143	9,155	228,614	808,520	812	6,433
08/16 o	66	78	0	0	299	1,939	1,334	10,705	472,543	1,652,951	349	2,746
08/17 p	60	72	0	0	653	4,150	2,989	24,766	560,665	1,951,283	861	6,890
08/18 q	53	65	0	0	208	1,348	994	8,181	416,234	1,542,850	292	2,331
08/19 r	10	14	0	0	13	85	204	1,658	113,565	408,282	173	1,381
08/20 s	48	69	0	0	229	1,384	1,097	9,118	504,837	1,810,703	119	944
08/21 s	32	41	1	6	86	610	310	2,629	229,745	846,311	49	390
08/22 t	29	42	0	0	114	746	1,974	16,410	230,988	852,070	15	135
08/23 s	13	14	0	0	17	117	135	1,124	118,517	436,492	6	55
08/24 u	10	11	0	0	12	80	68	599	113,414	381,201	7	57
08/25 u	11	12	0	0	18	118	321	2,859	82,721	318,013	4	29
08/26 u	10	11	0	0	7	43	33	258	60,400	234,392	4	19
08/27 u	8	9	0	0	0	0	29	295	55,647	184,050	0	0
08/28 u	8	12	0	0	7	44	5	43	75,080	248,972	0	0
08/29 u	7	11	0	0	3	20	3	28	81,582	265,765	0	0
08/30 u	3	3	0	0	0	0	0	0	19,097	62,518	0	0
08/31 u	4	4	0	0	3	16	1	8	18,449	58,072	2	12
09/02 v	9	9	0	0	0	0	10,659	88,745	5,153	18,036	495	3,172
09/03 v	14	15	0	0	1	8	50,227	386,189	21	79	387	3,179
09/04 v	4	4	0	0	8	52	5,378	43,837	16	55	330	2,531
09/05 w	3	3	0	0	0	0	1,265	10,870	0	0	0	0
09/06 w	3	3	0	0	0	0	4,383	34,160	0	0	370	3,152
Total	90	2,581	64	1,037	24,013	152,517	110,982	874,369	17,630,375	63,503,303	364,244	2,976,666
Average Weight				16.20		6.35		7.88		3.60		8.17

a Waters of the Eastern District and Valdez Narrows Subdistrict west of 146° 30.5' W. longitude, and west of a line from Entrance Point to a yellow regulatory marker on Tongue Point were open.

b Waters of the Eastern District and Valdez Narrows Subdistrict west of 146° 30.5' W. longitude, and west of a line from Entrance Point to a yellow regulatory marker on Tongue Point were open. The Northern District east of Granite Point was open.

c Waters of the Eastern District and Valdez Narrows Subdistrict west of 146° 22' 33" W. longitude, and west of a line from Entrance Point to a yellow regulatory marker on Tongue Point were open. The Northern District east of Granite Point was open.

d Open waters included the Eastern District except Valdez Narrows Subdistrict, east of 146° 30' 30" W. longitude, and waters inside of the yellow Salmon Harvest Task Force (SHTF) markers in Jack, Olsen, and Sheep Bays and waters west of Beartrap Bay in Port Gravina were closed. The Northern District was open east of 147° 40' 00" W. longitude near Pellew Point. Waters inside of the yellow SHTF markers at the entrances to Jonah and Siwash bays remained closed.

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Table 21. (Continued)

e Open waters included the Eastern District except Valdez Narrows Subdistrict, east of 146° 30' 30" W. longitude, and waters inside of the yellow SHTF markers in Jack, Olsen, and Sheep Bays and waters west of Beartrap Bay in Port Gravina were closed.
The Northern District was open east of 147° 40' 00" W. longitude near Pellew Point. Waters inside of the yellow SHTF markers at the entrances to Jonah and Siwash bays remained closed.
Open waters included the Coghill District and Coghill Lagoon to the markers at the mouth of the Coghill River, excluding the Noerenberg Hatchery Terminal and Special Harvest Areas (THA & SHA).
Open waters within the Southwestern District included the AFK Hatchery THA and the SHA.

f Open waters included the Eastern District except Valdez Narrows Subdistrict, east of 146° 30' 30" W. longitude, and waters inside of the yellow SHTF markers in Jack, Olsen, and Sheep Bays and waters west of Beartrap Bay in Port Gravina were closed.
The Northern District was open east of 147° 40' 00" W. longitude near Pellew Point. Waters of Unakwik Inlet north of 60° 54' 42" N. latitude were closed.
Open waters included the Coghill District and Coghill Lagoon to the markers at the mouth of the Coghill River, excluding the Noerenberg Hatchery THA and SHA.
Open waters of the Southwestern District included those waters south of a line at the latitude of Dual Head, near the entrance of Whale Bay,. at 60° 15' 00" and the waters east of Knight Island, south of the Bay of Isles, at 60° 23' 00" N. latitude.

g Open waters included the Eastern District except the Valdez Narrows Subdistrict, and waters inside of the yellow SHTF markers in Jack, Olsen, and Sheep Bays and waters west of Beartrap Bay in Port Gravina were closed.
The Northern District was open east of 147° 40' 00" W. longitude near Pellew Point. Waters of Unakwik Inlet north of 60° 54' 42" N. latitude were closed.
Open waters of the Southwestern District included those waters south of a line at the latitude of Dual Head, near the entrance of Whale Bay,. at 60° 15' 00" and the waters east of Knight Island, south of the Bay of Isles, at 60° 23' 00" N. latitude.

h The Northern District was open east of 147° 40' 00" W. longitude near Pellew Point. Waters of Unakwik Inlet north of 60° 54' 42" N. latitude were closed.
Open waters included most of the Northern District excluding the Perry Island Subdistrict and the waters of Unakwik Inlet north of 60° 54' 42" N. latitude.
Open waters of the Southwestern District included those waters south of a line at the latitude of Dual Head, near the entrance of Whale Bay,. at 60° 15' 00" and the waters east of Knight Island, south of the Bay of Isles, at 60° 23' 00" N. latitude.

i Open waters included the Eastern District except Valdez Narrows Subdistrict, east of 146° 30' 30" W. longitude, and waters inside of the yellow SHTF markers in Jack, Olsen, and Sheep Bays and waters west of Beartrap Bay in Port Gravina were closed.
The Northern District was open east of 147° 40' 00" W. longitude near Pellew Point. Waters of Unakwik Inlet north of 60° 54' 42" N. latitude were closed.
Open waters of the Southwestern District included those waters south of a line at the latitude of Dual Head, near the entrance of Whale Bay,. at 60° 15' 00" and the waters east of Knight Island, south of the Bay of Isles, at 60° 23' 00" N. latitude.

j Open waters included only the Perry Island Subdistrict between Squaw Bay and Eaglek Island within One and one-half mile of the north shore mainland. Waters within Unakwik Inlet north of 60° 54' 42' were closed.
Open waters within the Coghill District included only the Esther Subdistrict east of Esther Light and the waters within one and one-half miles of Esther Island. The Noerenberg hatchery THA and Special Harvest Area SHA were also closed.
Open waters of the Southwestern District included those waters south of a line at the latitude of Dual Head, near the entrance of Whale Bay,. at 60° 15' 00" and the waters east of Knight Island, south of the Bay of Isles, at 60° 23' 00" N. latitude.

k Open waters included only the Perry Island Subdistrict between Squaw Bay and Eaglek Island within One and one-half mile of the north shore mainland. Waters within Unakwik Inlet north of 60° 54' 42' were closed.
Open waters within the Southwestern District included only the Point Elrington and Port San Juan Subdistricts and the AFK THA and SHA.

l Open waters included only the Perry Island Subdistrict between Squaw Bay and Eaglek Island within One and one-half mile of the north shore mainland. Waters within Unakwik Inlet north of 61° 00' 00' were closed.
Open waters within the Coghill District included only the Esther Subdistrict east of Hodgkin Point and the waters within one and one-half miles of Esther Island. The Noerenberg Hatchery THA and SHA were also closed.
Open waters within the Southwestern District included only the Point Elrington and Port San Juan Subdistricts and the AFK THA and SHA.

m Open waters included the Eastern District except the Valdez Narrows Subdistrict, and waters inside of the yellow SHTF markers in Jack, Olsen, Galena, Sawmill and Sheep Bays and waters west of Beartrap Bay in Port Gravina were closed.
Open waters within the Southwestern District included only the Port San Juan Subdistrict and the AFK THA and SHA.

n Open waters included the Eastern District except the Valdez Narrows Subdistrict, and waters inside of the yellow SHTF markers in Jack, Olsen, Galena, Sawmill and Sheep Bays and waters west of Beartrap Bay in Port Gravina were closed.
Only the waters of Unakwik Inlet north of 60° 56' 00" N. latitude were closed.
Open waters included only the Esther Subdistrict.
Open waters within the Southwestern District included only the Port San Juan Subdistrict and the AFK THA and SHA.

o Open waters included the Eastern District except the Valdez Narrows Subdistrict, and waters inside of the yellow SHTF markers in Jack, Olsen, Galena, Sawmill and Sheep Bays and waters west of Beartrap Bay in Port Gravina were closed.
Open waters within the Southwestern District included only the Port San Juan Subdistrict and the AFK THA and SHA.

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Table 21. (Continued)

p Open waters included the Eastern District except the Valdez Narrows Subdistrict, and waters inside of the yellow SHTF markers in Jack, Olsen, Galena, Sawmill and Sheep Bays and waters west of Beartrap Bay in Port Gravina were closed.
Those waters east of a marker on Point Perry, and east of Point Meares were open. Waters of Unakwik Inlet north of 60° 54' 42" N. latitude was closed.
Open waters within the Southwestern District included only the Port San Juan Subdistrict and the AFK THA and SHA.

q Open waters included the Eastern District except the Valdez Narrows Subdistrict, and waters inside of the yellow SHTF markers in Jack, Olsen, Galena, Sawmill and Sheep Bays and waters west of Beartrap Bay in Port Gravina were closed.
Only the waters of Unakwik Inlet north of 60° 54' 42" N. latitude were closed.
Open waters within the Southwestern District included the AFK Hatchery Terminal Harvest Area (THA) and the Special Harvest Area (SHA).

r Only the Valdez Narrows Subdistrict was closed.
Those waters east of a marker on Point Perry, and east of Point Meares were open. Waters of Unakwik Inlet north of 60° 56' 00" N. latitude was closed.
Open waters within the Southwestern District included the AFK Hatchery THA and the SHA.

s Only the Valdez Narrows Subdistrict was closed.
Open waters within the Southwestern District included the AFK Hatchery THA and the SHA.

t Those waters east of a marker on Point Perry, and east of Point Meares were open. Waters of Unakwik Inlet north of 60° 59' 00" N. latitude was closed.
Open waters within the Southwestern District included the AFK Hatchery THA and the SHA.

u Those waters east of a marker on Point Perry, and east of Point Meares were open. Waters of Unakwik Inlet north of 60° 59' 00" N. latitude was closed.
Open waters included only the Esther Subdistrict excluding the Noerenberg THA and SHA.
Open waters within the Southwestern District included the AFK Hatchery THA and the SHA.

v Open waters included the Eastern District and Valdez Narrow Subdistrict. Closed waters were marked by three large buoys in front of the Solomon Gulch Hatchery. Closed waters of the north shore were marked by the grain elevators on Ammunition Island in the Port of Valdez.
Those waters east of a marker on Point Perry, and east of Point Meares were open. Waters of Unakwik Inlet north of 60° 59' 00" N. latitude was closed.
Open waters within the Southwestern District included the AFK Hatchery THA and the SHA.

w Open waters included the Eastern District and Valdez Narrow Subdistrict. Closed waters were marked by three large buoys in front of the Solomon Gulch Hatchery. Closed waters of the north shore were marked by the grain elevators on Ammunition Island in the Port of Valdez.
Open waters included only the Noerenberg THA excluding the SHA.

Table 22. Commercial pink salmon harvest for all gear types, by district, Prince William Sound, 1969-1996. Includes purse seine, drift gillnet, and set gillnet catches from all Prince William Sound districts; Unakwik catches are included in the Northern District. Does not include hatchery cost recovery, confiscated and test fish harvests.

	DISTRICT								
Year	Eastern	Northern	Coghill	Northwestern	Eshamy	Southwestern	Montague	Southeastern	Total
1969	963,583	262,403	43,134	268,240		2,565,737		696,182	4,799,279
1970	358,326	308,797	100,338	371,528		1,518,700		90,438	2,748,127
1971 [a]	1,974,605	666,308	323,841	163,401		3,901,939		276,605	7,306,699
1972 [b]			9,408		54,781				64,189
1973	327,453	183,467	95,793	127,197		407,388	146,778	657,429	1,945,505
1974 [b]			163,328		285,441				448,769
1975	712,328	171,657	303,597	420,891		1,673,887	118,467	875,456	4,276,283
1976	1,380,943	384,267	217,696	207,190		589,458		82,366	2,861,920
1977	1,673,044	147,964	230,215	208,727		930,469	77,104	824,374	4,091,897
1978	1,516,076	933,013	13,059					216,696	2,678,844
1979	4,500,032	115,886	38,560	59,423		5,111,073	1,347,413	4,160,925	15,333,312
1980	3,140,134	1,271,177	134,876	306,109		7,507,776	950	1,271,389	13,632,411
1981	4,797,583	1,194,621	34,155	46,874		10,371,220	278,879	3,221,268	19,944,600
1982	2,959,601	2,331,903	1,000,524	520,972	3,997	10,801,771	6,444	747,116	18,372,328
1983	2,430,063	1,021,345	273,131	714,522		5,957,068	158,241	1,482,013	12,036,383
1984	4,525,029	2,194,904	996,483	1,412,822	544,082	10,197,349	11,587	1,245,042	21,127,298
1985	6,715,143	1,002,872	523,773	527,132	58,183	10,843,752	1,448,809	2,733,562	23,853,226
1986	2,488,540	944,871	214,593	285,184	43,061	6,374,535		147,268	10,498,052
1987	6,964,549	2,419,611	1,578,568	750,877	89,902	13,341,940	111,011	955,988	26,212,446
1988	481,324	286,743	2,932,072	7,738	529,329	5,411,424		1,776	9,650,406
1989	3,151,096	6,464,090	3,925,487	181,565	[c]	[c]	[c]	73,177	13,795,415
1990	7,970,364	5,482,585	2,692,788	891,444	534,951	17,811,479	10,658	12,325	35,406,594
1991	2,617,222	4,150,612	2,211,575		64,591	17,849,425			26,893,425
1992	489,228	1,142,061	363,887		543,115	3,039,775			5,578,066
1993		413,308	493,747		130,542	2,475,798			3,513,395
1994	11,554,320	7,171,038	3,597,094		565,669	3,408,093			26,296,214
1995	4,235,638	3,656,119	1,078,693		88,830	1,707,745	18,239	11,418	10,796,682
1996	6,059,063	5,039,988	1,543,869		35,691	5,046,919			17.725.530
10 year Average (1986-95)	4,439,142	3,213,104	1,908,850	423,362	258,999	7,142,021	34,977	200,325	16,864,070

[a] The Eshamy District was closed to fishing.

[b] The general purse seine district was closed to fishing.

[c] These districts were closed due to the Exxon Valdez oil spill.

Table 23. Estimated total hatchery and wild stock production of pink salmon, Prince William Sound, 1977 to 1996.

	Total Return by Hatchery[a]						
Year[b]	Solomon Gulch (VFDA)	Armin F Koernig (PWSAC)	Wally Noerenberg (PWSAC)	Main Bay (ADF&G - PWSAC)	Cannery Cr. (ADF&G - PWSAC)	Total Hatchery Production	Total Wild Stock Component[c]
1977		27,857				27,857	5,816,401
1978		154,620				154,620	3,925,083
1979		552,955				552,955	17,335,503
1980		1,493,489			90,348	1,583,837	14,013,916
1981		2,264,854			141,440	2,406,294	19,568,866
1982		5,134,363		35,000	764,214	5,933,577	16,794,317
1983	91,445	3,722,502		496,850	469,441	4,780,238	11,567,348
1984	131,075	2,800,000		1,200,000	1,139,000	5,270,075	21,201,513
1985	485,607	5,030,616		383,000	2,594,000	8,493,223	19,938,105
1986	1,217,250	4,964,000		232,000	853,000	7,266,250	5,563,957
1987	5,290,321	7,613,161	3,011,955	328,000	2,131,726	18,375,163	13,066,944
1988	1,034,204	6,076,493	3,866,618	100,000	227,688	11,305,003	1,766,936
1989	3,297,851	2,628,627	5,718,794	0	5,540,665	17,185,937	6,610,342
1990	8,923,567	6,809,090	13,553,591	[d]	2,534,297	31,820,545	14,418,696
1991	5,691,176	5,117,569	11,690,234	0	8,501,296	31,000,275	9,295,456
1992	1,859,078	2,391,140	1,995,346	0	1,516,369	7,761,933	2,222,782
1993	1,112,314	1,528,425	1,492,039	0	712,223	4,845,001	2,875,916
1994	12,567,633	1,735,011	6,222,788	0	9,400,689	29,926,121	9,841,119
1995	6,765,357	856,048	2,314,276	0	5,072,900	15,008,581	3,401,469
1996	7,184,280	1,710,382	5,223,765	0	6,917,979	21,036,406	7,748,201

[a] Prior to 1987, there was no definitive or statistically valid method of separating hatchery and wild stock composition in the commercial catch. The above estimates are based on presumed wild stock exploitation rates which in turn are determined by the wild stock escapement estimate. The wild stock escapement index is only a minimum estimate. The true wild stock escapement is not known. Consequently estimates prior to 1987 may exaggerate hatchery contributions somewhat. In 1987 returning adults from the Cannery Creek, Armin F. Koernig and Esther hatcheries were marked with half length coded wire tags. In a jointly funded program conducted by ADF&G and PWSAC, these marked fish were recovered and analyzed to estimate hatchery contributions to the fishery (Geiger,1990).

[b] Hatchery totals include cost recovery harvests, brood stock collection and escapement, and estimated common property fishery interception.

[c] Total wild stock return represents the estimated wild stock catch plus the aerial escapement index. 1996 wild stock component = 6,264,865 catch plus 1,483,336 escapement index.

[d] Not available.

Table 24. Salmon catch and effort in the Prince William Sound subsistence fishery, 1960 - 1996.

Year	Permits		Catch[a]						
	Issued	Returned	Chinook	Sockey	Coho	Pink	Chum	Unknown	Total
1960	50		1	139	505	1,292	75	150	2,162
1961	12		3	41	123	732	3		902
1962	9				119	214	142		475
1963	9				406	298	24		728
1964	15			11		900			911
1965	22	16				179	25		204
1966	3	3		3	19	20	50		92
1967	4	3			4	4			8
1968	4	3			20	156		22	198
1969	7	3			16				16
1970	1	1							0
1971	3	2				46			46
1972	0								0
1973	19	16			289				289
1974	3	1							0
1975	2	0							0
1976	0								0
1977	4	4							0
1978	3	2							0
1979	15	2							0
1980	26	15		7	6				13
1981	12	8		3	29		2		34
1982	35	27		84	4	31	24		143
1983	26	21		22	36	9	79		146
1984	8	8		10		11	2		23
1985	22	16	1	27	16	14	26		84
1986	25	14		5	15				20
1987	18	17	5	31	6		16		58
1988	7	7	2	51	7	10	9		79
1989	11	7	0	0	0	0	3	0	3
1990	8	8	0	0	7	4	0	0	11
1991	9	5	0	2	0	0	0	0	2
1992	10	6	0	20	0	0	0	0	20
1993	6	6	1	104	10	0	0	0	115
1994	5	4	0	0	0	0	0	0	0
1995	4	2	0	0	0	0	0	0	0
1996	10 [b]	2	0	0	0	0	0	0	0

[a] Includes catches from Prince William Sound, exclusive of the Copper River Flats.

[b] Summary of reports received as of November 15, 1996

Table 25. Salmon catch and effort in the Copper River District subsistence gillnet fishery, 1965-1996.

Year	Total Issued	Permits Issued			Catch			
		Fished[a]	Not Fished	Not returned	Chinook	Sockeye	Coho	Total
1965	31	15	5	11	12	459	85	556
1966	45	21	10	14	47	175		222
1967	61	37	19	5	83	153		236
1968	17	7	8	2	11	36		47
1969	49	20	13	16	16	63	85	164
1970	32	24	3	5	66	179		245
1971	29	17	9	3	10	32	4	46
1972	104	75	5	24	149	569	53	771
1973	94	89	N/A	5	153	326	180	659
1974	9	3	2	4	5	4	2	11
1975	2	2	N/A	0	0	5	0	5
1976	27	14	N/A	13	1	10	0	11
1977	23	22	N/A	1	10	71	0	81
1978	34	9	19	6	37	18	12	67
1979	49	21	20	8	45	26	17	88
1980	39	18	17	4	19	27	17	63
1981	72	30	21	21	48	145	104	297
1982	108	48	42	18	60	634	106	802 [b]
1983	87	31	42	14	79	107	57	254 [b]
1984	118	57	47	14	68	324	135	549 [b]
1985	94	67	27	0	88	261	83	433 [b]
1986	88	57	28	3	86	348	47	481 [b]
1987	95	39	50	6	49	359	14	510 [b]
1988	114	57	40	17	59	226	42	440 [b]
1989	75	32	32	11	56	339	51	454 [b]
1990	88	38	38	12	60	469	82	611 [b]
1991	129	72	43	14	136	830	38	1,009 [b]
1992	126	67	46	13	142	785	42	999 [b]
1993	111	50	43	18	120	428	29	601 [b]
1994	101	60	37	4	164	474	67	708 [b]
1995	126	72	40	14	154	692	31	880 [b]
1996	176	84	42	50 [c]	223	791	32	1046

[a] Includes all permit holders, successful or unsuccessful.

[b] Total also includes dolly varden.

[c] Report total through November 15,1996.

Table 26. Salmon catch and effort in the Eastern (Tatitlek) and Southwestern (Chenega) subsistence fishery, Prince William Sound, 1988 - 1996.

Year	Permits		Catch						
	Issued	Fished	Chinook	Sockeye	Coho	Pink	Chum	Unknown	Total
				EASTERN					
1988	17	9	2	210	249	143	297	0	901
1989	14	7	1	107	653	28	43	0	832
1990	13	8	0	5	241	10	4	0	260
1991	19	7	0	107	984	320	28	0	1,439
1992	15	5	2	441	369	30	49	0	891
1993	18	7	2	512	305	144	74	180	1,217
1994	14	4	0	50	143	50	70	0	313
1995 [a]	15								
1996	6	1	0	0	38	0	0	0	38
				SOUTHWESTERN					
1988	10	5	1	50	8	251	294	0	604
1989	8	7	0	322	0	554	180	0	1,056
1990	7	2	1	36	5	20	2	0	64
1991	12	4	3	345	42	195	53	0	638
1992	14	8	1	526	23	313	99	0	962
1993	22	17	2	835	50	232	124	0	1,243
1994	16	8	5	192	77	402	161	0	837
1995	10	5	2	152	67	67	41	0	329
1996	7	3	0	107	7	105	46	0	265

[a] No permits were returned.

FIGURES

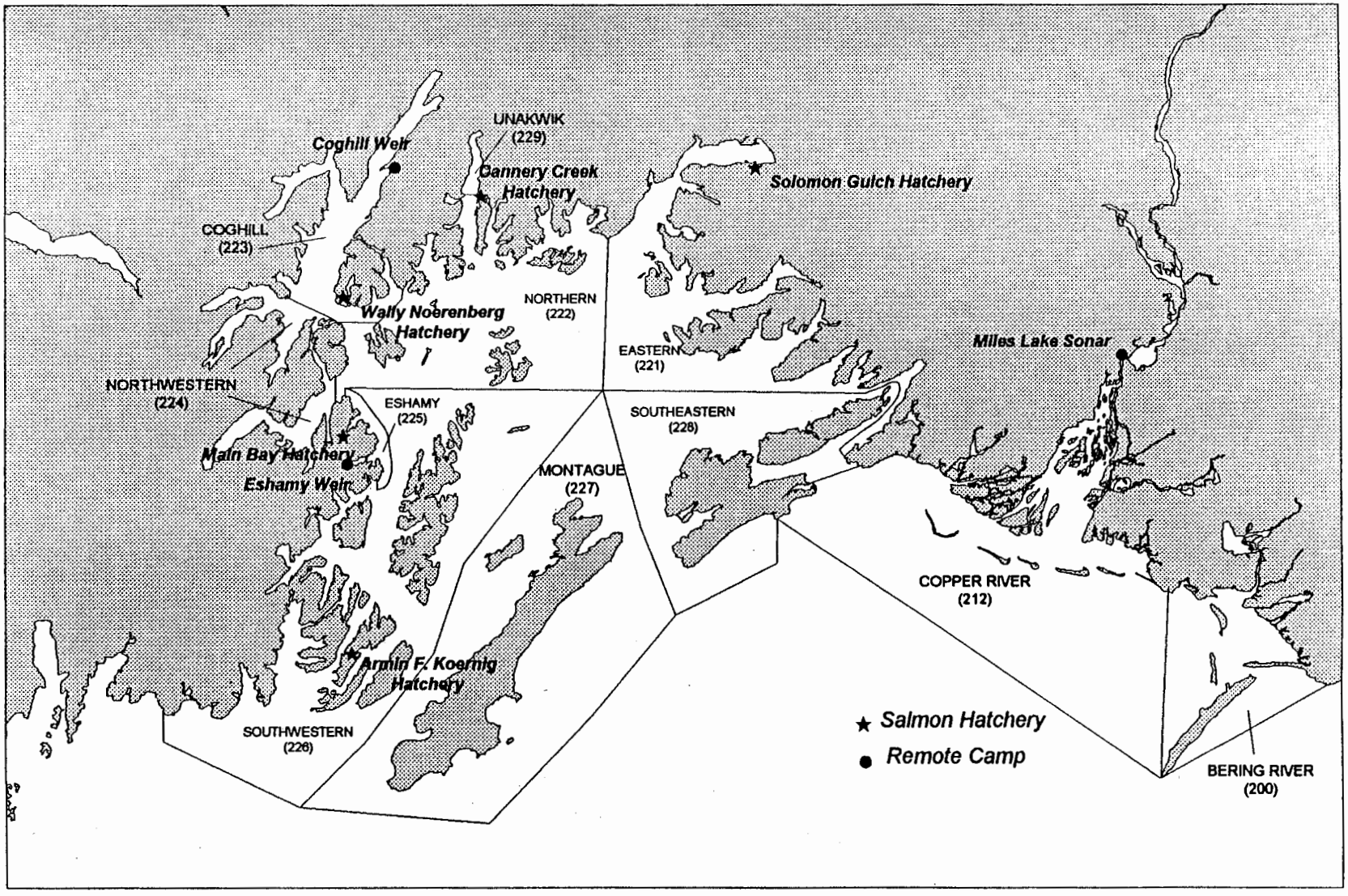

Figure 1. Prince William Sound Area showing commercial fishing districts, salmon hatcheries, weir locations, and Miles Lake sonar camp.

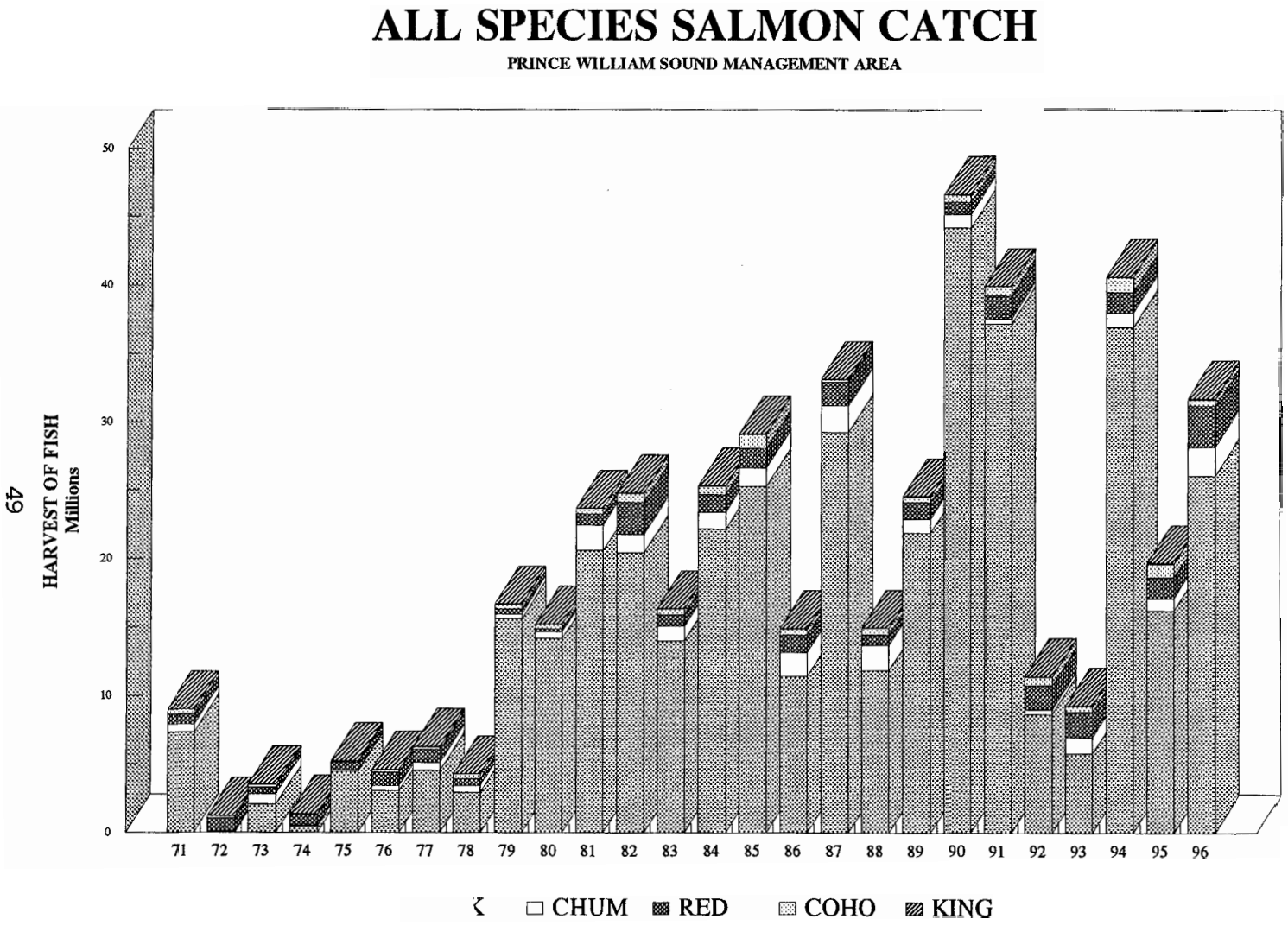

Figure 2. Commercial salmon harvest by species for all gear types combined, Prince William Sound, 1971 - 1996

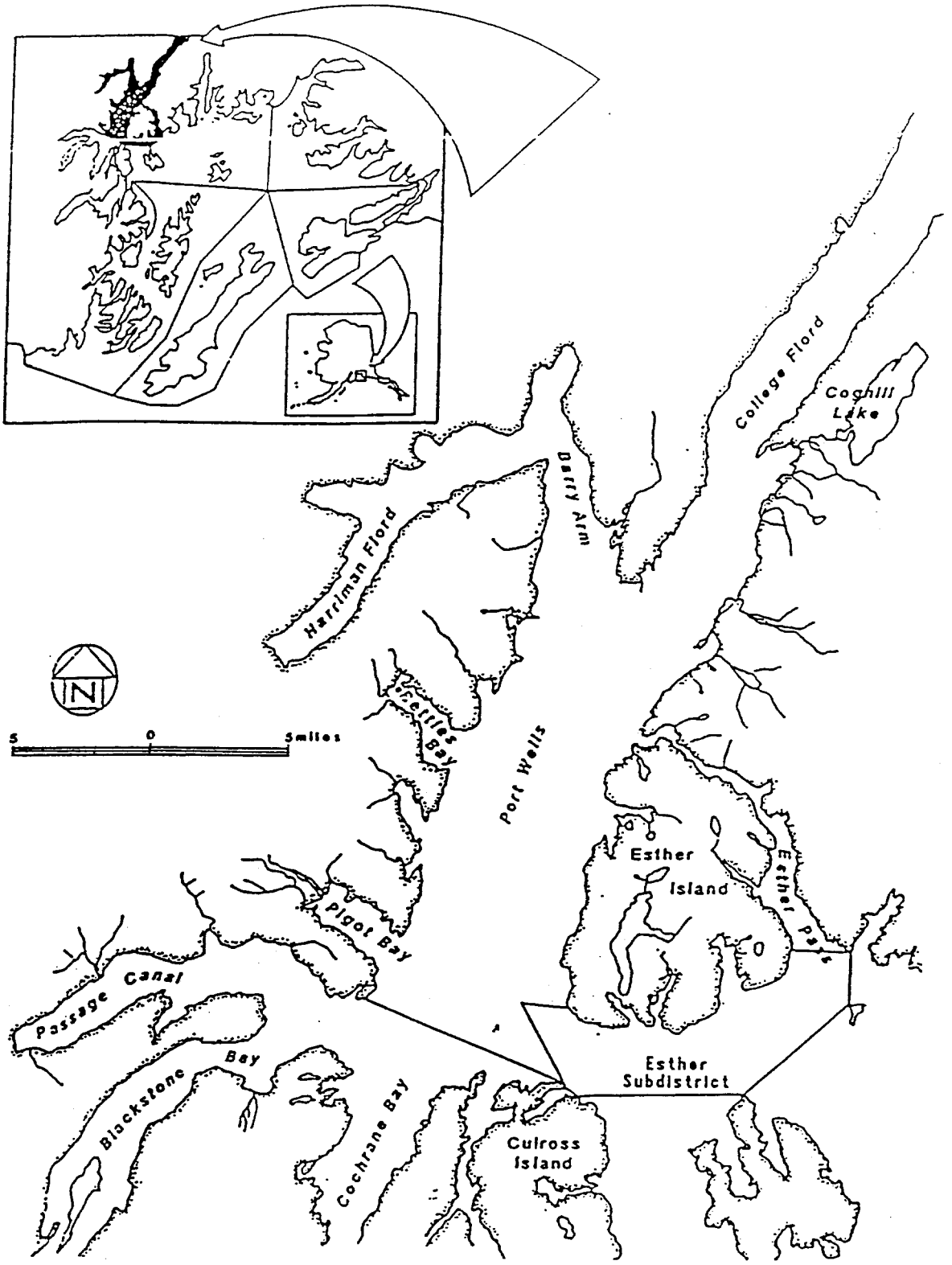

Figure 3. Map of the Coghill District showing the Esther Subdistrict.

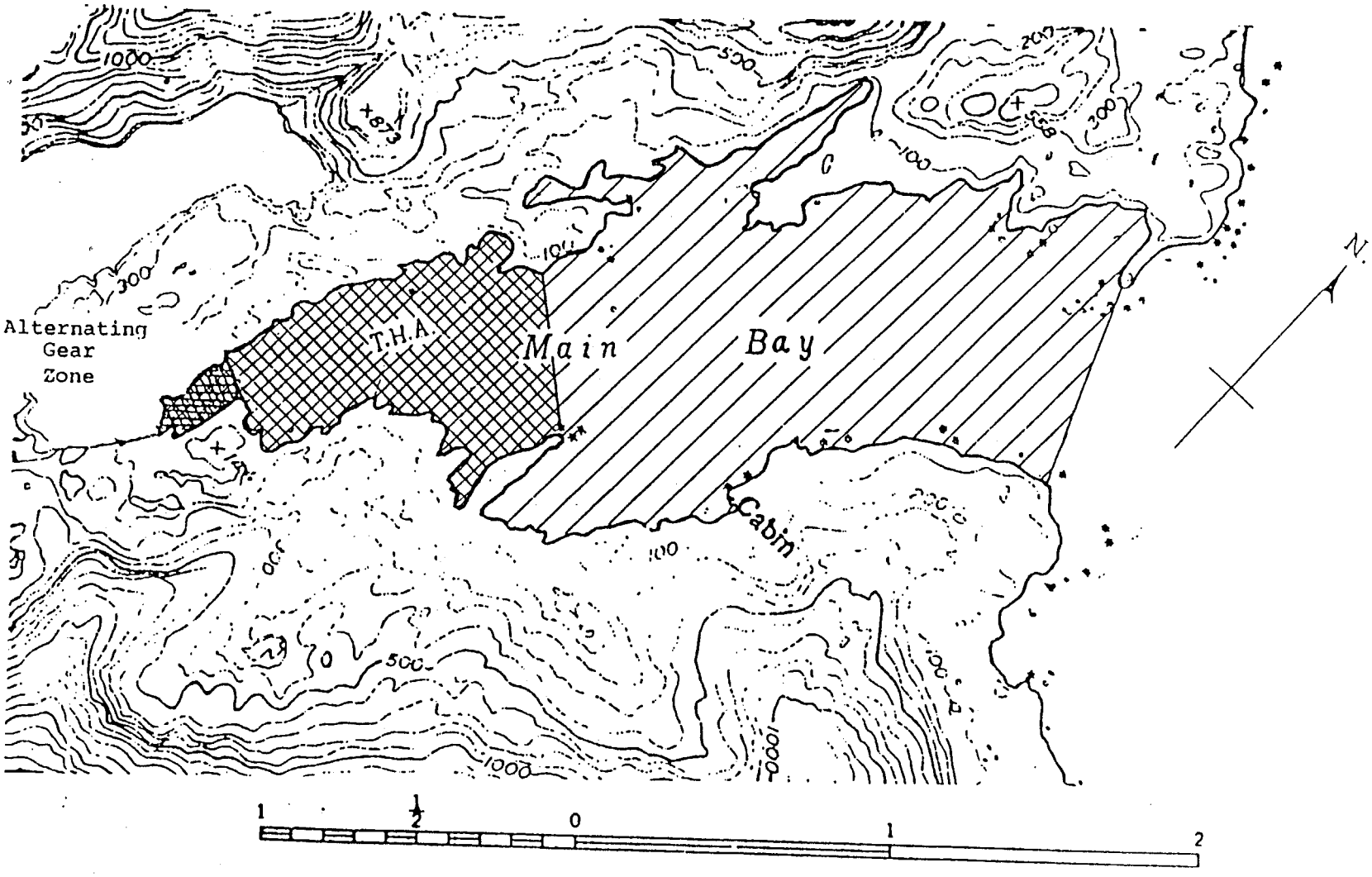

Figure 4. Map of the Main Bay Subdistrict, of the Eshamy District, showing the Terminal Harvest Area and the Alternating Gear Zone.

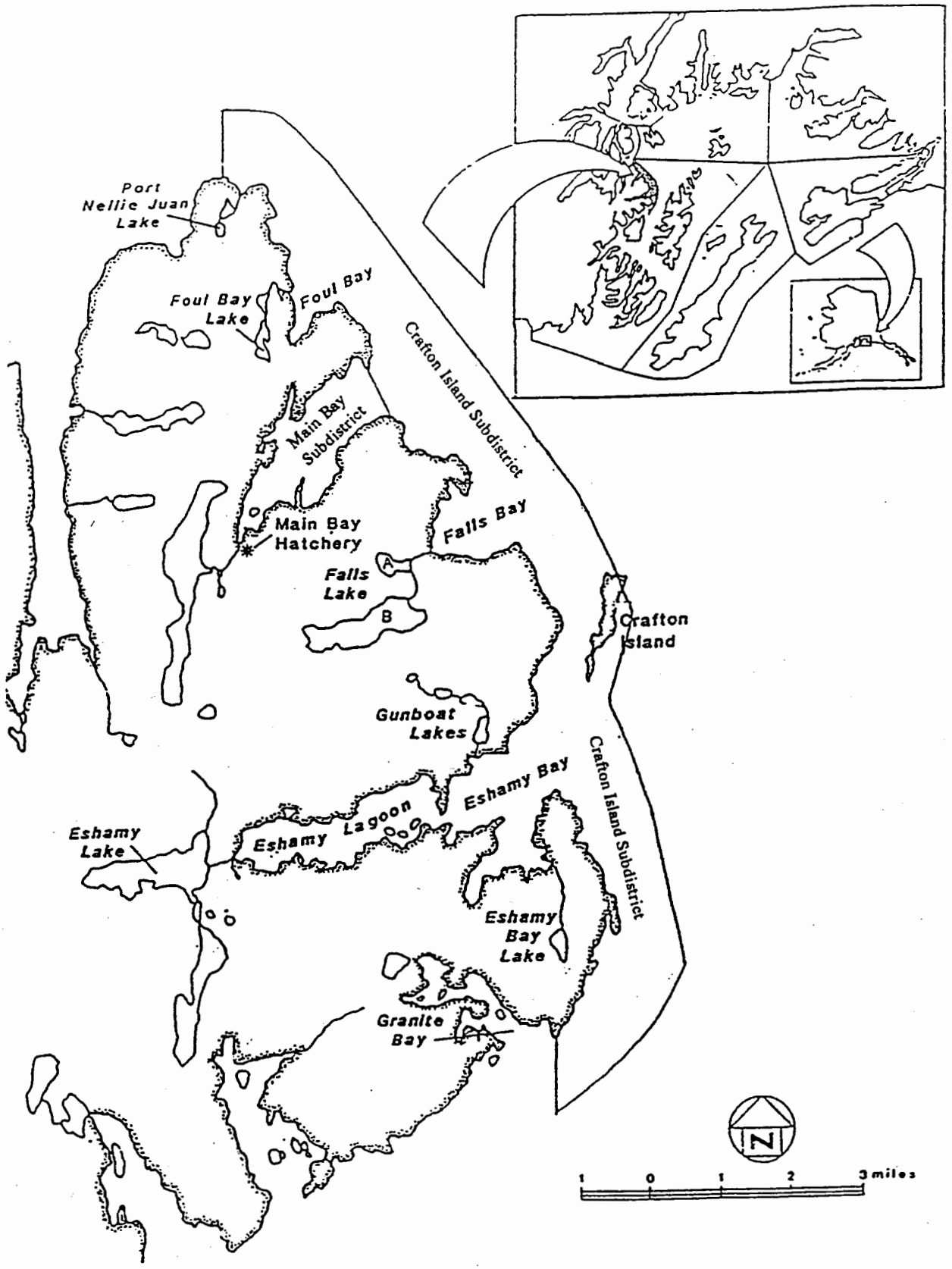

Figure 5. Map of the Eshamy District showing the Crafton Island and Main Bay Subdistricts.