THE SOUTHEASTERN DISTRICT MAINLAND SALMON FISHERY OF AREA M, THROUGH JULY 25, THE TIME PERIOD OF THE SEDM MANAGEMENT PLAN

REPORT TO THE ALASKA BOARD OF FISHERIES, 2004

By

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ABSTRACT

The Southeastern District Mainland (SEDM) fishery of Area M is located on the south side of the Alaska Peninsula and occurs in Stepovak, Beaver, and Balboa Bays. Under a management plan (5 AAC 09.360) originally established by the Alaska Board of Fisheries in 1985, the commercial fishery is currently allocated 6.0% of the total Chignik Management Area bound sockeye salmon commercial harvest through July 25. After July 25, the SEDM area is managed based on the strength of local salmon stocks (5 AAC 09.366). Over the past 20 years, about 90% of the sockeye salmon harvest has been by set gillnet fishers and the remaining 10% by purse seine fishers. The 1996-2003 average harvest in the SEDM through July 25 was 119,114 sockeye salmon of which an average of 81,984 sockeye salmon were considered Chignik bound by regulation. From 1985-2003, the SEDM fishery harvested an average of 5.8% of the total Chignik bound sockeye salmon harvest through July 25.

The respective SEDM sockeye salmon harvests through July 25 in 2001, 2002, and 2003 were 106,607, 153,469, and 222,651 fish. The sockeye salmon considered to be Chignik bound by regulation harvested in the SEDM during 2001 (51,141 fish), 2002 (63,026 fish), and 2003 (70,044 fish) accounted for 5.5, 6.0, and 6.7% of the total Chignik bound harvest through July 25. In 2003, 48 set gillnet and 11 purse seine permit holders participated in the SEDM fishery through July 25.

In 2001, 2002, and 2003, the respective Orzinski Lake sockeye salmon escapements were 31,200, 42,849, and 70,690 fish. The 1990-2003 average sockeye escapement into Orzinski Lake is 31,711 salmon.

The 2001 Northwest Stepovak Section sockeye salmon harvest through July 25 was 42,681 fish with none considered Chignik bound. The total 2002 Northwest Stepovak Section sockeye salmon harvest through July 25 was 85,086 fish of which 8,319 fish were considered Chignik bound. The 2003 sockeye salmon harvest in the Northwest Stepovak Section through July 25 totaled 142,620 fish with 6,019 fish considered Chignik bound.

INTRODUCTION

The Southeastern District Mainland (SEDM) fishery of Area M is located on the south side of the Alaska Peninsula (Figure 1). Included in this fishery are the Beaver Bay, Balboa Bay, Southwest Stepovak, Northwest Stepovak, East Stepovak, and Stepovak Flats Sections (Figure 2). Under the current Alaska Board of Fisheries (BOF) management plan adopted during the January 1998 meeting, beginning July 1, sockeye salmon harvested in the Northwest Stepovak Section are considered 100% local fish (ADF&G 2001). However, only Orzinski Bay is managed entirely on local stocks. Sockeye salmon harvested in the Northwest Stepovak Section before July 1 are considered by regulation to be 20% local and 80% Chignik bound (this 80% is attributed to the Chignik sockeye salmon allocation 5AAC 09.360(a)(1) and (b)-(h)). The remainder of the SEDM is managed, through July 25, on a 6% allocation with fishing periods based on the strength of the Chignik River sockeye salmon runs within the Chignik Management Area (CMA; Appendix A.1). After July 25, the entire SEDM area is managed on the strength of local stocks under Post-June Salmon Management Plan (5 AAC 09.366). This report describes the SEDM fishery through July 25 while the post July 25 fisheries in this area are described in the South Alaska Peninsula Post June Fishery BOF report (Burkey 2004).

Since 1978, set gillnets have been the only legal gear through July 10 in the SEDM (Table 1). During 1994-2003, set gillnet fishers harvested about 92.3% of the total SEDM sockeye harvest through July 25, and purse seine fishers have harvested the remaining 7.7% (Table 2; Figure 3).

Fishing effort in the SEDM through July 25 primarily targets sockeye salmon considered to be Chignik bound by regulation. The peaks of the local pink and chum salmon escapements occur during late July through mid August. The fishery is usually closed during mid to late August to either achieve desired pink and chum escapement goals and/or because of quality concerns and limited markets, and is reopened in September to harvest coho salmon. Sockeye salmon are known to migrate through the area during the entire season (Burkey 2003).

Additional tables, located in Appendices B and C of this report, have been prepared illustrating historical effort, harvests, and regulations for the SEDM fishery.

RECENT HISTORY

Prior to 1974, the SEDM fishery was regulated by set weekly fishing periods, which were generally five days per week (Appendix C.1). From 1974 through 1977, the fishery was open on a day per day basis with Chignik Lagoon. In 1978, the BOF restricted fishing periods to three days per week for set gillnet gear only through July 10. During 1978 harvest rates through July 25 were low despite strong Chignik runs, resulting in a SEDM catch of only 31,197 sockeye salmon, of which 22,064 sockeye were considered Chignik bound (Tables 2 and 3). From 1973-1978, an average of 20 set gillnet and 17 purse seine fishers participated in this fishery through July 25 (Figures 4 and 5).

Beginning with the 1979 season, the BOF increased fishing time from three days to five days per week but specified that not more than 60,000 Chignik sockeye salmon could be harvested through July 10 (Appendix C.1). The BOF stipulated that the fishery could be closed if it became apparent that the Chignik escapement requirements were not assured. The BOF also stated that if the CMA catch exceeded 1,000,000 sockeye salmon before July 10, the SEDM fishery could continue beyond the 60,000 sockeye salmon ceiling. This management plan remained in effect until 1985.

From 1979-1982, the annual SEDM harvest averaged 118,429 sockeye salmon, with 76,476 of them considered to be Chignik bound (6.4% of the total Chignik bound sockeye harvest) through July 25 (Table 3; Figure 6). These harvests were achieved in spite of numerous fishery closures imposed by the department because of poor Chignik sockeye salmon escapements. Set gillnet fishing activity, through July 25, increased from 23 permits in 1978 to 37 permits in 1982 (Figure 4).

In 1983, an estimated 227,392 Chignik bound sockeye salmon were harvested in the SEDM fishery through July 25 (Table 3). Most of the sockeye salmon (76%) were harvested after July 10 (Shaul et al 1983).

In 1984, set gillnet effort increased to 54 permits through July 25, of which five were operated by fishermen who were also purse seine permit holders (Figure 4). Because of an exceptionally strong early Chignik run, the large number of fish available in the SEDM, and high gear levels, only six fishing days were required to harvest an estimated 60,000 Chignik bound sockeye salmon. The SEDM fishery was closed for only three days and was reopened on June 14 when the Chignik sockeye salmon harvest reached 1,000,000 fish. In 1984, the late Chignik sockeye salmon run was weaker than predicted, and the second run escapement goal was reached only after considerable curtailment of the SEDM, Chignik, and Cape Igvak (Kodiak Management Area) fisheries during mid July. The total 1984 SEDM harvest of Chignik bound sockeye salmon through July 25 was 423,068 fish (Table 4).

For the 1985 season, the BOF developed a management plan based on the Cape Igvak Salmon Management Plan instead of using a set fishing schedule. The BOF plan directed the department to manage the fishery so that the number of sockeye salmon taken in the SEDM fishery (exclusive of the Northwest Stepovak Section) was as near as possible to 6.2% of the total Chignik bound sockeye salmon harvest through July 25. The department re-evaluated the data used to calculate the allocation and determined that 6.0% was the appropriate figure. The BOF changed the allocation, based on the re-evaluated data, to 6.0% beginning with the 1988 season. However, before the SEDM fishery could open the following criteria had to be met:

1) A forecasted harvestable surplus beyond the escapement goals for the first and second runs of Chignik River system sockeye was expected to be more than 600,000 fish.

2) The department determined that the runs were as strong as expected.

In years when a harvestable surplus for the first and second runs of Chignik River system sockeye salmon was expected to be less than 600,000 fish, no commercial salmon fishery targeting Chignik

bound sockeye salmon would be allowed in the SEDM fishery until a harvest of 300,000 sockeye salmon was achieved in the Chignik Area. After July 8, fishing in the SEDM might occur provided at least 300,000 sockeye salmon had been harvested in the Chignik Area, escapement objectives were being met, and the Chignik Area harvest was anticipated to total at least 600,000 sockeye salmon. In addition, the number of sockeye salmon taken in the SEDM fishery needed to be as near as possible to 6.0% of the total Chignik bound sockeye salmon harvest through July 25.

From 1985 through 1991, the harvest of Chignik bound sockeye salmon in the SEDM, through July 25, averaged 88,776 salmon, 5.5% of the total Chignik bound sockeye salmon harvest, and ranged from 4,485 fish in 1989 to 152,714 fish in 1991 (Table 3).

The BOF revised the SEDM management plan prior to the 1992 season. The revised plan was in effect from 1992 through 1995, and included two significant changes as follows:

1) The area in the Northwest Stepovak Section to be managed on a local stock basis was reduced to include only the waters of Orzinski Bay; the Stepovak Flats Section would continue to be managed on the basis of the Stepovak River chum salmon stock (Figure 2).

2) The allowable harvest of sockeye salmon in the SEDM fishery (exclusive of Orzinski Bay) through July 25 was increased from 6.0% to 7.0% of the total Chignik bound sockeye salmon catch (Appendix C.1).

From 1992-1995, the harvest of Chignik bound sockeye in the SEDM, through July 25, averaged 113,258 salmon and 6.7% of the total Chignik bound sockeye salmon harvest (Table 5: Figure 6).

In January 1996, the BOF made the following changes to the SEDM salmon management plan:

1) The area to be managed for local Orzinski Lake sockeye salmon increased from only Orzinski Bay to the entire Northwest Stepovak Section (Figure 2). Prior to July 1, the entire Northwest Stepovak Section will be managed on an allocation based on the strength of the Chignik sockeye salmon runs as described in 5 AAC 09.360(a)(1) and (b)-(h). Beginning July 1, the Northwest Stepovak Section would be managed entirely on local stocks. The Stepovak Flats Section would continue to be managed on the basis of the Stepovak River chum salmon stocks.

2) The percentage of sockeye salmon allocated to the SEDM fishery was decreased from 7.0% to 6.0% of the total Chignik bound sockeye salmon harvest through July 25. This BOF action was taken in an attempt to maintain traditional harvest levels of Chignik bound sockeye salmon in the SEDM fishery and to compensate for the increased area managed for local Orzinski Lake sockeye salmon.

3) The BOF established a closed waters area encompassing Kupreanof Point, as described in 5 AAC 09.350(38), from July 6 through August 31 (Figure 7).

To illustrate the changes in the SEDM management plan, harvest numbers in this report will be averaged for the years that reflect time periods under specific regulations. The average from 1985-1991 is intended to represent the time period when Northwest Stepovak Section sockeye harvests for the entire season were considered local stocks (Table 3). The 1992-1995 average represents the years only Orzinski Bay harvests were considered local stocks. The 1996-2003 average represents the years under the current management plan. Tables depicting factors unaffected by the BOF management plan changes (e.g. harvests and effort by gear type) summarize the data with 10- and 20-year averages.

CURRENT MANAGEMENT PLAN

In January 1998, the BOF stipulated that only Orzinski Bay would be managed entirely on its local sockeye salmon run from July 1 through 25 (Figure 2). The balance of the Northwest Stepovak Section, although having fishing periods partially dependent on Chignik run strength and harvest, the sockeye salmon harvest is considered "local" and independent of Chignik based allocation guidelines. Also, fishing time in the Northwest Stepovak Section from July 1-25 would not be more than four days per seven-day period with no more than two consecutive fishing days during a seven-day period (Figure 8).

The total Chignik sockeye salmon harvest is defined as 100% of those sockeye caught within the CMA, 90% of those sockeye salmon caught in the Cape Igvak Section of the KMA through July 25, and 80% of those sockeye salmon caught in the SEDM fishery through July 25, excluding sockeye salmon caught within the Northwest Stepovak Section from July 1-25.

Management attempts to be near the 6.0% sockeye salmon allocation on July 11 (when purse seine gear is allowed in the SEDM), and again on July 25, to achieve a historically equitable harvest allocation between set gillnet and purse seine fishers.

There are two distinct sockeye salmon runs into the Chignik River system, the Black Lake run and the Chignik Lake run (Pappas and Daigneault 2002). Based on previous tagging studies, the two runs overlap in run timing from about June 26 through July 8. During the overlap period, the strength of the second run (Chignik Lake) cannot be evaluated. In order to prevent over-harvest of the second run, the Cape Igvak and SEDM fisheries (except the Northwest Stepovak Section beginning July 1) are usually closed during this period. However, fishing may be allowed to continue in Chignik to harvest excess early run sockeye salmon, even though second run fish are present.

EFFORT LEVELS

From 1975-2000, a substantial increase in set gillnet effort occurred in the SEDM fishery. The number of set gillnet permits fished through July 25 increased from 7 permits in 1975 to a high of

64 in 1993, 1996, and 2000. From 2001-2003, effort decreased with 48 permits fished in 2003 (Appendix B.6; Figure 5). The number of set gillnet permits fished in the SEDM, through July 25, averaged 47 from 1985-1991, 59 from 1992-1995, and 56 during 1996-2003 (Table 5). Historically, many fishers participated in both set gillnet and purse seine fishing, and received a limited entry permit for each gear type. During the 1970s and 1980s, many of the dual permit holders sold or transferred their set gillnet permits and retained their purse seine permits. This action increased effort in the SEDM fishery, since many permits that were previously used part-time were now fished full-time. Recently an increasing number of dual permit holders are not using their purse seine permit because of low salmon prices and high purse seine operating costs while fishing their set gillnet permit. This has lowered the overall purse seine effort (Figure 4).

The number of SEDM set gillnet landings, through July 25, has also increased from 189 in 1978 to a high of 1,657 in 1984, with 1,035 landings made in 2003 (Figure 9). Set gillnet landings in the SEDM, through July 25, averaged 440 from 1985-1991, 702 from 1992-1995, and 885 during 1996-2003 (Table 5). The increased number of deliveries since 1996 is partially caused by the need to meet the industry's improved quality standards.

The number of purse seine permits fished through July 25 fluctuated dramatically since 1985, and ranged from 0 in 1994 to a high of 69 in 1990, with 11 permits fished in 2003 (Table 5). The number of purse seine permits fished in the SEDM, through July 25, averaged 28 from 1985-1991, 22 from 1992-1995, and 19 from 1996-2003 (Table 5; Figure 10).

The number of SEDM purse seine landings, through July 25, has also fluctuated dramatically from a high of 145 in 1983 to 0 in 1994, with 20 landings made in 2003 (Figure 9). Purse seine landings in the SEDM, through July 25, averaged 56 from 1985-91, 32 from 1992-95, and 27 from 1996-2003 (Table 5).

LOCAL STOCKS FISHERIES

Northwest Stepovak Section

Currently, commercial salmon fishing in the Northwest Stepovak Section is managed based on the strength of the Orzinski Lake sockeye stock from July 1-25 while considering the strength of Chignik sockeye salmon runs. During this period, a maximum of two consecutive fishing days and four days within a seven-day period may be allowed (5 AAC 09.360). After July 25, the section is managed based on the strength of local stocks (sockeye, pink, chum, and coho salmon).

Prior to July 1, 80% of the sockeye salmon harvested in the Northwest Stepovak Section are attributed to the Chignik bound sockeye salmon harvest (Figure 8). Beginning July 1, all sockeye salmon caught within the Northwest Stepovak Section are considered to be of Orzinski Lake stock. Through July 25, 80% of those sockeye salmon caught in the remainder of the SEDM fishery are considered to be from the Chignik River runs. After July 25 the entire SEDM is managed for local stocks.

Orzinski Lake sockeye salmon escapements were assessed using a weir from 1935-1941, and most recently from 1990-2003. Based on historical aerial surveys and weir counts, Orzinski Lake sockeye salmon escapement objectives were developed by time periods and implemented beginning with the 1991 season (Table 6). The escapement point goal for Orzinski Lake is 20,000 sockeye salmon (Nelson and Lloyd 2001). From 1990-2003, the escapement has averaged 31,711 sockeye salmon and ranged from a high of 70,690 in 2003 to a low of 15,000 in 1990 and 1999 (Watchers 2003). Since 1990, July 9 has been the average date when 50% of the total yearly sockeye escapement has been achieved (Figure 11). In 2003, the Orzinski Lake weir was operated from June 8 through August 1 and 62,207 sockeye (of which 10,545 were jack salmon) were counted through the weir (Table 7). Daily sockeye salmon escapements were still being tallied when the weir was removed for the season and a post weir estimate of 8,483 fish resulted in a total sockeye salmon escapement of 70,690 fish (Table 7).

Stepovak Flats Section

Commercial salmon fishing in the Stepovak Flats Section is managed on the basis of the run strength of pink and chum salmon returning to Stepovak Flats streams. Eighty percent of the sockeye salmon harvest in this section is assigned as Chignik bound fish, and included in the 6.0% allocation criteria stated in the current SEDM salmon management plan. To protect schooling chum salmon which are needed to achieve escapement requirements, the entire section is closed to salmon fishing by regulation beginning July 29. Prior to July 26, the Stepovak Flats Section is usually open concurrently with the rest of the SEDM (excluding the Northwest Stepovak Section).

2001 SEASON SUMMARY

In 2001 both the early and late Chignik River sockeye salmon runs were slightly stronger than expected (Connolly and Dinnocenzo 2002). Approximately two days of fishing during June and four in July were permitted in SEDM prior to July 25.

The SEDM harvest through July 25 was 106,607 sockeye salmon with 51,141 sockeye salmon considered to be Chignik bound by regulation (Table 5). This constituted 5.5% of the total Chignik bound sockeye salmon harvest through July 25 (6.0% allocation; Figure 6). The calculation to determine percentage of the allocation harvested includes a foregone harvest of 27,896 sockeye salmon which escaped pass the Chignik weir because of a price dispute between SEDM fishermen and processors.

Escapement into Orzinski Lake during 2001 was estimated at 31,200 sockeye salmon (Appendix B.10). This was well above the upper end of the escapement goal range of 15,000 to 20,000 adult sockeye salmon. Fishing was permitted in the Northwest Stepovak Section beginning July 1 with a total of 14 days of fishing time during July 1-25. An additional eight days of fishing was permitted in Orzinski Bay during July 1-25. The total harvest for the Northwest Stepovak

Section through July 25 (including Orzinski Bay) was 42,681 sockeye salmon with all of the harvest occurring during July 1-25 (Table 5).

The 2001 SEDM salmon harvest through July 25 was 177 chinook, 106,607 sockeye, 1,314 coho, 42,220 pink, and 50,211 chum salmon (Appendix B.4). Purse seine fishers harvested 64 chinook, 4,394 sockeye, 168 coho, 14,430 pink, and 6,249 chum salmon (Appendix B.5). Set gillnet fishers harvested 113 chinook, 102,213 sockeye, 1,146 coho, 27,790 pink, and 43,962 chum salmon (Appendix B.6). Purse seine fishers accounted for 4.1 %, and set gillnet fishers 95.9% of the annual SEDM sockeye salmon harvest (Table 2).

2002 SEASON SUMMARY

The 2002 forecast for the total harvest of Chignik bound sockeye salmon was 630,000 salmon for the first (Black Lake) run and 840,000 salmon for the second (Chignik Lake) run (Pappas and Daigneault 2002). The forecast indicated that a fishery could occur in the SEDM targeting Chignik bound sockeye salmon since a harvest of at least 600,000 sockeye was expected in the CMA. The strength of the early Chignik run was about as expected and commercial fishing was allowed in the CMA beginning on June 9 (Pappas 2002). The SEDM opened to commercial salmon fishing on June 21 and a total of four days of fishing time was allowed during June.

The 2002 late Chignik run was below forecast. The SEDM fishery was allowed four days of fishing during July, prior to July 25, targeting sockeye salmon considered to be bound for the Chignik Lakes system as allowed under the management plan. The SEDM total sockeye salmon harvest prior to July 25 was 153,469 fish (Table 5). The 2002 estimated Chignik component of the SEDM harvest was 63,026 sockeye salmon, 6.0% of the total CMA bound sockeye salmon harvest through July 25 (Table 3; Figure 6).

In 2002, the total estimated Orzinski Lake sockeye salmon escapement was 42,849 fish (Appendix B.10). This was well above the upper end of the escapement goal range of 15,000 to 20,000 adult sockeye salmon (Nelson and Lloyd 2001). Fishing was permitted in the Northwest Stepovak Section beginning July 1 with a total of 14 days of fishing time during July 1-25. An additional eight days of fishing was permitted in Orzinski Bay during July 1-25. The total harvest for the Northwest Stepovak Section through July 25 (including Orzinski Bay) was 85,086 sockeye salmon with 8,319 fish considered Chignik bound (Table 5).

The 2002 SEDM harvest through July 25 was 545 chinook, 153,469 sockeye, 5,390 coho, 143,365 pink, and 18,752 chum salmon (Appendix B.4). Purse seine permit holders harvested 69 chinook, 7,813 sockeye, 4,263 coho, 60,850 pink, and 4,092 chum salmon (Appendix B.5). Set gillnet permit holders harvested 476 chinook, 145,656 sockeye, 1,127 coho, 82,515 pink, and 14,660 chum salmon (Appendix B.6). Purse seine fishers accounted for 5.1% and set gillnet fishers 94.9% of the annual SEDM sockeye salmon harvest (Table 4).

2003 SEASON SUMMARY

In 2003 both the early and late Chignik River sockeye salmon runs were weaker than expected (Pappas and Clark 2003), however both were still considered strong enough to allow a fishery in the SEDM. Consequently, two days of fishing during June and two days in July were permitted in the SEDM prior to July 25.

The SEDM harvest prior to July 25 included 222,651 sockeye salmon with 70,044 of them considered to be Chignik bound by regulation (Table 5). This constituted 6.7% of the total Chignik bound sockeye salmon harvest through July 25 (6.0% allocation; Table 3; Figure 6).

In 2003, the total estimated Orzinski Lake sockeye salmon escapement was 70,690 (Table 7). This was well above the upper end of the escapement goal range of 15,000 to 20,000 adult sockeye salmon. Fishing was permitted in the Northwest Stepovak Section beginning July 2 with a total of 14 days of fishing time during July 1-25. An additional seven days of fishing was permitted in Orzinski Bay during July 1-25. The total harvest for the Northwest Stepovak Section through July 25 (including Orzinski Bay) was 142,620 sockeye salmon with 135,096 harvested July 1-25 (Table 5). Forty-eight hours of fishing in June resulted in a harvest of 7,524 sockeye with 6,019 (80%) attributed to the Chignik bound sockeye salmon allocation (Table 5).

The 2003 SEDM harvest through July 25 was 309 chinook, 222,651 sockeye, 2,234 coho, 129,458 pink, and 12,272 chum salmon (Appendix B.4). Purse seine permit holders harvested 41 chinook, 11,582 sockeye, 660 coho, 52,928 pink, and 1,702 chum salmon (Appendix B.5). Set gillnet permit holders harvested 268 chinook, 211,069 sockeye, 1,574 coho, 76,530 pink, and 10,570 chum salmon (Appendix B.6). Purse seine gear accounted for 5.2% and set gillnet gear 94.8% of the SEDM sockeye salmon harvest through July 25 (Table 2; Figure 3).

SEASON OUTLOOK 2004

The outlook for the 2004 sockeye salmon harvest in the SEDM is based on the CMA preliminary sockeye salmon forecast (Appendix A), and uses the current 6.0% allocation for the SEDM fishery.

The 2004 preliminary CMA forecast estimates an early run (Black Lake) harvest of 910,000 sockeye, a late run (Chignik Lake) harvest of 855,000 sockeye, for a total estimated Chignik harvest of 1,770,000 sockeye salmon (Plotnik and Eggers *in press*).

The 2004 SEDM sockeye salmon harvest considered to be Chignik bound by regulation is estimated using a proportion of the total forecasted Chignik River System sockeye salmon harvest. Assuming that 100% of the total estimated early run (Black Lake) and 75% of the estimated late run (Chignik Lake) sockeye salmon harvest for 2004 will occur through July 25, the SEDM (less the Northwest Stepovak harvest beginning July 1) 6% allocation converts into a potential Chignik bound harvest of approximately 93,075 sockeye salmon through July 25. This is 105% of the 1994-2003 average Chignik bound sockeye salmon harvest of 88,600 fish (Table 4).

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Table 1. Southeastern District Mainland commercial sockeye salmon harvest by gear type, through July 10, 1970-2003.

	Set Gillnet[a]		Purse Seine		
Year	Number	Percent	Number	Percent	Total Catch
1970	76,251	95.8	3,357	4.2	79,608
1971	48,523	97.5	1,240	2.5	49,763
1972	14,874	96.8	490	3.2	15,364
1973	35,130	98.0	703	2.0	35,833
1974	47,924	79.2	12,610	20.8	60,534
1975	0	0.0	0	0.0	0
1976	50,385	93.9	3,276	6.1	53,661
1977	21,981	73.0	8,132	27.0	30,113
1978	25,449	100.0	0	0.0	25,449
1979	38,200	100.0	0	0.0	38,200
1980	51,365	100.0	0	0.0	51,365
1981	133,371	100.0	0	0.0	133,371
1982	60,386	100.0	0	0.0	60,386
1983	121,625	100.0	0	0.0	121,625
1984	532,151	100.0	0	0.0	532,151
1985	61,160	100.0	0	0.0	61,160
1986	140,329	100.0	0	0.0	140,329
1987	216,609	100.0	0	0.0	216,609
1988	17,924	100.0	0	0.0	17,924
1989	11,728	100.0	0	0.0	11,728
1990	20,177	100.0	0	0.0	20,177
1991	251,386	100.0	0	0.0	251,386
1992	134,978	100.0	0	0.0	134,978
1993	135,950	100.0	0	0.0	135,950
1994	177,938	100.0	0	0.0	177,938
1995	72,484	100.0	0	0.0	72,484
1996	194,535	100.0	0	0.0	194,535
1997	84,206	100.0	0	0.0	84,206
1998	9,777	100.0	0	0.0	9,777
1999	169,832	100.0	0	0.0	169,832
2000	129,462	100.0	0	0.0	129,462
2001	56,077	100.0	0	0.0	56,077
2002	88,589	100.0	0	0.0	88,589
2003	126,261	100.0	0	0.0	126,261
Averages					
1970-1977	36,884	79.3	3,726	8.2	40,610
1994-2003	110,916	100.0	0	0.0	110,916

[a] Only set gillnet gear is allowed prior to July 11 since the 1978 season.

Table 2. Southeastern District Mainland commercial sockeye salmon harvest by gear type, through July 25, 1970-2003.

	Set Gillnet[a]		Purse Seine		Total
Year	Number	Percent	Number	Percent	Catch
1970	80,692	95.4	3,904	4.6	84,596
1971	60,767	95.9	2,587	4.1	63,354
1972	19,491	92.4	1,614	7.6	21,105
1973	46,141	97.9	976	2.1	47,117
1974	66,101	74.9	22,129	25.1	88,230
1975	1,807	57.3	1,349	42.7	3,156
1976	52,414	90.2	5,712	9.8	58,126
1977	30,658	70.5	12,827	29.5	43,485
1978	28,930	92.7	2,267	7.3	31,197
1979	77,604	87.5	11,136	12.5	88,740
1980	89,743	93.0	6,729	7.0	96,472
1981	181,698	90.1	20,013	9.9	201,711
1982	79,442	91.5	7,351	8.5	86,793
1983	213,051	71.0	87,107	29.0	300,158
1984	567,043	95.3	28,000	4.7	595,043
1985	78,347	96.8	2,610	3.2	80,957
1986	196,545	95.2	9,987	4.8	206,532
1987	244,413	99.8	482	0.2	244,895
1988	77,204	95.1	3,956	4.9	81,160
1989	46,977	52.7	42,247	47.3	89,224
1990	85,368	52.0	78,660	48.0	164,028
1991	275,768	95.2	13,959	4.8	289,727
1992	214,638	99.6	806	0.4	215,444
1993	186,656	88.5	24,271	11.5	210,927
1994	221,657	100.0	0	0.0	221,657
1995	139,515	87.5	19,866	12.5	159,381
1996	276,212	97.2	7,864	2.8	284,076
1997	293,750	96.4	11,115	3.6	304,865
1998	74,069	63.2	43,062	36.8	117,131
1999	205,706	94.8	11,320	5.2	217,026
2000	199,605	98.6	2,830	1.4	202,435
2001	102,213	95.9	4,394	4.1	106,607
2002	145,656	94.9	7,813	5.1	153,469
2003	211,069	94.8	11,582	5.2	222,651
Average 1984-2003	192,121	89.7	16,241	10.3	208,362
Average 1994-2003	186,945	92.3	11,985	7.7	198,930

[a] Only set gillnet gear is allowed prior to July 11 since 1978 season.

Table 3. Harvest of sockeye salmon considered to be Chignik bound by regulation in the Chignik, Cape Igvak, and Southeastern District Mainland areas, 1964-2003.[a]

	Chignik Area		Cape Igvak		Southeastern District Mainland Area		
Year	Catch	Percent	Catch	Percent	Catch	Percent	Total
1964[b]	556,890	90.6	14,980	2.4	43,021	7.0	614,891
1965	599,553	89.9	11,021	1.7	56,020	8.4	666,594
1966	219,794	88.0	18,003	7.2	12,011	4.8	249,808
1967	462,000	91.5	23,014	4.6	20,021	4.0	505,035
1968	977,382	82.5	135,951	11.5	70,959	6.0	1,184,292
1969	394,135	79.0	97,982	19.6	7,013	1.4	499,130
1970[c]	1,325,734	72.5	434,394	23.8	68,181	3.7	1,828,309
1971	1,016,136	80.3	197,614	15.6	51,272	4.1	1,265,022
1972	378,218	88.0	33,865	7.9	17,752	4.1	429,835
1964-72 catch and percentage figures are total for the entire season. Catch figures and percentages after 1972 are only through July 25.							
1973[d]	769,258	89.0	57,348	6.6	37,983	4.4	864,589
1974	530,278	73.6	122,071	16.9	68,029	9.4	720,378
1975	115,984	81.8	23,635	16.7	2,205	1.6	141,824
1976	792,024	83.0	117,926	12.4	44,730	4.7	954,680
1977	1,547,285	90.4	128,852	7.5	35,502	2.1	1,711,639
1978[e,f]	1,454,389	85.4	227,014	13.3	22,064	1.3	1,703,467
1979[g]	794,504	91.8	13,950	1.6	56,878	6.6	865,332
1980	670,001	91.3	32	0.0	63,724	8.7	733,757
1981	1,606,300	79.9	282,727	14.1	122,533	6.1	2,011,560
1982	1,250,768	84.5	167,401	11.3	62,767	4.2	1,480,936
1983	1,450,832	72.7	318,048	15.9	227,392	11.4	1,996,272
1984	2,474,405	73.9	449,372	13.4	423,068	12.6	3,346,845
1985[h]	696,169	79.9	123,627	14.2	51,421	5.9	871,217
1986	1,456,729	82.6	188,017	10.7	118,006	6.7	1,762,752
1987	1,659,615	78.0	321,506	15.1	146,886	6.9	2,128,007
1988	675,487	95.7	11,218	1.6	19,320	2.7	706,025
1989	496,044	99.1	0	0.0	4,485	0.9	500,529
1990	1,205,575	83.6	107,706	7.5	128,599	8.9	1,441,880
1991[i]	1,958,954	80.4	324,329	13.3	152,714	6.3	2,435,997
1992[j]	1,054,309	81.1	152,358	11.7	93,845	7.2	1,300,512
1993	1,495,098	77.7	300,055	15.6	128,536	6.7	1,923,689
1994[k]	1,632,435	80.6	250,230	12.4	142,350	7.0	2,025,015
1995	1,024,785	79.9	169,530	13.2	88,302	6.9	1,282,617
1996[l]	1,710,249	79.7	308,327	14.4	127,201	5.9	2,145,777
1997	443,892	100.0	0	0.0	0	0.0	443,892
1998[m,n]	786,466	91.2	8,813	1.0	66,893	7.8	862,172
1999	2,326,811	78.7	456,147	15.4	173,621	5.9	2,956,579
2000	1,509,652	80.1	272,808	14.5	103,419	5.5	1,885,879
2001[o]	1,145,840	79.6	215,214	14.9	79,037	5.5	1,440,091
2002[p]	851,030	81.1	135,818	12.9	63,026	6.0	1,049,874
2003	859,124	81.8	121,923	11.6	70,044	6.7	1,051,091
Averages							
1979-1982	1,080,393	86.9	116,028	6.7	76,476	6.4	1,272,896
1985-1991	1,164,082	85.6	153,772	8.9	88,776	5.5	1,406,630
1992-2003	1,236,641	82.6	199,269	11.5	94,690	5.9	1,530,599

-Footnotes On Next Page-

[a] The Cape Igvak and Southeastern District Mainland (SEDM) figures represent 80% of the total sockeye salmon catches for those areas based on the premise that 80% of the sockeye salmon caught in the Cape Igvak Section and the SEDM (excluding sockeye salmon caught in Northwest Stepovak Section from 1964-1991 and 1996-2003 and in Orzinski Bay only from 1992-1995) are bound for the Chignik Management Area (CMA).

[b] The data from 1964-1972 are based on total yearly catches. Prior to 1974, Cape Igvak and Southeastern District Mainland fisheries were set by regulation to weekly fishing periods, usually five days per week. Time modifications were implemented when poor escapements occurred at Chignik.

[c] Catches (1970-1992) were updated using historical electronic fish ticket databases.

[d] During 1974-1977 all three fisheries were managed on a day by day basis.

[e] From 1978-1991, the Cape Igvak Fishery Management Plan allocated 15 percent of the total sockeye salmon catch destined for Chignik.

[f] During 1978, seining prior to July 11 was not allowed in the SEDM. Set gillnet fishers were allowed to fish three days per week through July 10, after which the fishery was managed on the basis of local stocks.

[g] During 1979-1984 and prior to July 11, fishing was allowed five days per week in the Southeastern District Mainland Area with a maximum harvest of an estimated 60,000 sockeye salmon destined for Chignik. If the Chignik Area sockeye catch was 1,000,000 or more before July 11, the 60,000 maximum harvest was to be dropped.

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

[i] Includes overescapement of 278,305 sockeye counted past the weir during the Chignik Area seiners' boycott (Jun 23-Jul 4, 1991).

[j] Review of Orzinski Lake historical and current escapement records led the BOF to redefine the SEDM Management Plan. Beginning in 1992, the SEDM fishery (excluding Orzinski Bay) was placed on an allocation of 7.0 percent of the total estimated Chignik sockeye salmon catch through July 25.

-Continued-

[k] Includes overescapement of 208,921 sockeye salmon counted past the weir during the Chignik Area seiners' strike (June 22-June 25, 1994).

[l] During the January 1996 BOF meeting, the area to be managed for local Orzinski Lake sockeye salmon was increased from only Orzinski Bay to the entire Northwest Stepovak Section. Prior to July 1, the entire Northwest Stepovak Section will be managed on an allocation based on the strength of the Chignik sockeye salmon runs. Beginning July 1, the Northwest Stepovak Section will be managed entirely on local stocks. The BOF also decreased the percentage of sockeye salmon allocated to the SEDM fishery from 7% to 6% to attempt to maintain traditional harvest levels of Chignik bound sockeye salmon in the SEDM fishery.

[m] During the January 1998 BOF meeting, the area managed entirely for local Orzinski Lake sockeye salmon was reduced from the entire Northwest Stepovak Section to only Orzinski Bay. All sockeye salmon caught in the Northwest Stepovak Section beginning July 1 would still be considered 100% local fish and not counted toward the 6% allocation. The remainder of SEDM sockeye salmon harvest allocated as 80% Chignik bound fish assures minimum harvest of 600,000 sockeye salmon in Chignik through July 25.

[n] Includes 7,714 sockeye salmon caught by the Chignik Seiners Association (CSA), and an overescapement of 52,131 sockeye salmon counted past the weir during the CSA boycott (June 16-29, 1998).

[o] CMA harvest includes a foregone harvest of 398,887 sockeye salmon which escaped past the weir as a result of a fishermen's strike in the CMA. SEDM harvest includes a foregone harvest of 27,896 sockeye salmon which escaped past the weir as a result of a fishermen's strike in the SEDM.

[p] Beginning in 2002, the percent of sockeye salmon harvested in the Cape Igvak Section considered to be Chignik bound was increased from 80% to 90%.

Table 4. Harvest of sockeye salmon considered to be Chignik bound by regulation in the Southeastern District Mainland, in number of fish and percent by gear type, through July 25, 1970-2003.

Year		Set Net Number	Set Net Percent	Purse Seine Number	Purse Seine Percent	Total Catch
1970	a	63,688	94.2	3,894	5.8	67,582
1971	a	48,575	95.9	2,066	4.1	50,641
1972	a	15,593	92.4	1,291	7.6	16,884
1973	a	37,240	98.0	743	2.0	37,983
1974	a	56,263	82.7	11,766	17.3	68,029
1975	a	1,126	51.1	1,079	48.9	2,205
1976	a	41,764	93.4	2,966	6.6	44,730
1977	a	26,473	74.6	9,029	25.4	35,502
1978	a	20,286	91.9	1,778	8.1	22,064
1979	a	52,065	91.5	4,813	8.5	56,878
1980	a	58,210	91.3	5,514	8.7	63,724
1981	a	107,474	87.7	15,059	12.3	122,533
1982	a	57,646	91.8	5,121	8.2	62,767
1983	a	157,831	69.4	69,561	30.6	227,392
1984	a	404,738	95.7	18,330	4.3	423,068
1985	a	49,523	96.3	1,898	3.7	51,421
1986	a	110,572	93.7	7,434	6.3	118,006
1987	a	146,636	99.8	250	0.2	146,886
1988	a	16,465	85.2	2,855	14.8	19,320
1989	a	4,371	97.5	114	2.5	4,485
1990	a	65,671	51.1	62,928	48.9	128,599
1991	a	152,454	99.8	260	0.2	152,714
1992	b	93,564	99.7	281	0.3	93,845
1993	b	109,119	84.9	19,417	15.1	128,536
1994	b	142,350	100.0	0	0.0	142,350
1995	b	73,864	83.6	14,438	16.4	88,302
1996	c	123,625	97.2	3,576	2.8	127,201
1997	c	0	0.0	0	0.0	0
1998	d	32,455	48.5	34,438	51.5	66,893
1999	d	164,565	94.8	9,056	5.2	173,621
2000	d	101,433	98.1	1,986	1.9	103,419
2001	d	47,626	93.1	3,515	6.9	51,141
2002	d	57,929	91.9	5,097	8.1	63,026
2003	d	62,221	88.8	7,823	11.2	70,044
Averages						
1984-2003		97,959	85.0	9,685	10.0	107,644
1994-2003		80,607	79.6	7,993	10.4	88,600

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Table 4. (page 2 of 2)

[a] From 1970-91, the Chignik contribution is 80% of the sockeye salmon harvested in Beaver Bay, Balboa Bay, Southwest Stepovak, Stepovak Flats, and East Stepovak Sections.

[b] From 1992-95, the Chignik contribution is 80% of the sockeye salmon harvested in the Southeastern District Mainland fishery except Orzinski Bay where 100% of the sockeye salmon are considered local.

[c] During their January 1996 meeting, the BOF increased the area to be managed for local Orzinski Lake sockeye salmon from only Orzinski Bay to the entire Northwest Stepovak Section. Prior to July 1, the entire Northwest Stepovak Section will be managed on an allocation based on the strength of the Chignik sockeye salmon runs. Beginning July 1, the Northwest Stepovak Section would be managed entirely on local stocks. The BOF also decreased the percentage of sockeye salmon allocated to the SEDM fishery from 7% to 6% to attempt to maintain traditional harvest levels of Chignik bound sockeye in the SEDM fishery.

[d] During their January 1998 meeting, the BOF reduced the area managed entirely for local Orzinski Lake sockeye salmon from the entire Northwest Stepovak Section to only Orzinski Bay. All sockeye salmon caught in the Northwest Stepovak Section beginning July 1 would still be considered 100% local fish and not counted toward the 6% allocation. The remainder of SEDM sockeye salmon harvest was allocated as 80% Chignik bound fish. Assures minimum harvest of 600,000 sockeye salmon in Chignik through July 25.

Table 5. Southeastern District Mainland commercial fishing effort and assignment of sockeye salmon harvests June 1-July 25, 1985-2003.

	Effort				Northwest Stepovak			SEDM minus Northwest Stepovak		SEDM		
	Gillnet		Seine									Total
Year	Permits	Landings	Permits	Landings	Total	"Local"	"Non-local"	"Local"	"Non-local"	"Local"	"Non-local"	Catch
1985 [a]	49	367	23	51	16,681	16,681	0	12,855	51,421	29,536	51,421	80,957
1986 [a]	42	616	18	29	59,025	59,025	0	29,501	118,006	88,526	118,006	206,532
1987 [a]	53	528	6	9	61,287	61,287	0	36,722	146,886	98,009	146,886	244,895
1988 [a]	41	300	16	45	57,010	57,010	0	4,830	19,320	61,840	19,320	81,160
1989 [a]	42	248	25	54	83,618	83,618	0	1,121	4,485	84,739	4,485	89,224
1990 [a]	46	277	69	131	3,279	3,279	0	32,609	128,599	35,888	128,599	166,322
1991 [a]	59	747	39	71	98,834	98,834	0	38,179	152,714	137,013	152,714	289,727
1992 [b]	59	650	6	14	113,428	101,198	12,232	20,403	81,613	121,599	93,845	215,444
1993 [b]	64	763	53	82	73,747	54,955	18,792	27,436	109,744	82,391	128,536	210,927
1994 [b]	56	678	0	0	89,522	52,880	36,642	26,427	105,708	79,307	142,350	221,657
1995 [b]	58	718	27	30	62,598	51,723	10,875	19,357	77,426	71,079	88,301	160,362
1996 [c]	64	1,164	25	46	137,925	127,645	10,280	29,230	116,921	156,875	127,201	284,076
1997 [c]	57	1,173	12	23	304,865	304,865	0	0	0	304,865	0	304,865
1998 [c]	45	340	20	23	33,515	33,515	0	16,723	66,893	50,238	66,893	117,131
1999 [c]	63	649	27	30	32,884	6,577	26,307	36,828	147,313	43,405	173,621	217,026
2000 [c]	64	1,163	26	31	89,857	76,500	13,357	22,516	90,062	99,016	103,419	202,435
2001 [c]	51	551	16	20	42,681	42,681	0	12,785	51,141	55,466	51,141	106,607
2002 [c]	53	1,001	12	25	85,086	76,767	8,319	13,677	54,706	90,443	63,026	153,469
2003 [c]	48	1,035	11	20	142,620	136,601	6,019	16,006	64,025	152,607	70,044	222,651
Average:												
1985-1991	47	440	28	56	54,248	54,248	0	22,260	88,776	76,507	88,776	165,545
1992-1995	59	702	22	32	84,824	65,189	19,635	23,406	93,623	88,594	113,258	202,098
1996-2003	56	885	19	27	108,679	100,644	8,035	18,471	73,883	119,114	81,918	201,033

[a] From 1970 through 1991, the Chignik contribution is 80% of the sockeye salmon harvested in the Beaver Bay, Balboa Bay, Southwest Stepovak, Stepovak Flats, and East Stepovak Sections.

[b] From 1992 through 1995, the Chignik contribution is 80% of the sockeye salmon harvested in the Southeastern District Mainland (SEDM) fishery, except Orzinski Bay where 100% of the sockeye salmon are considered local production.

[c] From 1996 through 2003, the Chignik contribution is 80% of the sockeye salmon harvested in the SEDM fishery, except beginning July 1, in the Northwest Stepovak Section where 100% of the sockeye salmon are considered local production.

Table 6. Sockeye salmon inseason escapement objectives for Orzinski Lake.

Date	Numbers of Fish
June 15	0
July 1	2,000
July 9	5,000
July 16	10,000
July 23	15,000
August 7	20,000
Season Total	20,000

Table 7. Sockeye salmon daily and cumulative escapement counts through Orzinski Lake weir, 2003.

	Daily			Cumulative		
Date	Adults	Jacks	Total	Adults	Jacks	Total
8-Jun	0	0	0	0	0	0
9-Jun	0	0	0	0	0	0
10-Jun	0	0	0	0	0	0
11-Jun	3	0	3	3	0	3
12-Jun	2	0	2	5	0	5
13-Jun	0	0	0	5	0	5
14-Jun	1	0	1	6	0	6
15-Jun	0	0	0	6	0	6
16-Jun	2	0	2	8	0	8
17-Jun	0	0	0	8	0	8
18-Jun	20	7	27	28	7	35
19-Jun	0	0	0	28	7	35
20-Jun	305	54	359	333	61	394
21-Jun	34	7	41	367	68	435
22-Jun	3	1	4	370	69	439
23-Jun	9	0	9	379	69	448
24-Jun	10	0	10	389	69	458
25-Jun	68	11	79	457	80	537
26-Jun	262	38	300	719	118	837
27-Jun	5	2	7	724	120	844
28-Jun	8	2	10	732	122	854
29-Jun	0	0	0	732	122	854
30-Jun	2	0	2	734	122	856
1-Jul	12,538	913	13,451	13,272	1,035	14,307
2-Jul	7,693	438	8,131	20,965	1,473	22,438
3-Jul	5,120	658	5,778	26,085	2,131	28,216
4-Jul	2,397	605	3,002	28,482	2,736	31,218
5-Jul	348	187	535	28,830	2,923	31,753
6-Jul	906	297	1,203	29,736	3,220	32,956
7-Jul	3,380	796	4,176	33,116	4,016	37,132
8-Jul	1,577	480	2,057	34,693	4,496	39,189
9-Jul	787	385	1,172	35,480	4,881	40,361
10-Jul	1,398	469	1,867	36,878	5,350	42,228
11-Jul	655	277	932	37,533	5,627	43,160
12-Jul	2,257	801	3,058	39,790	6,428	46,218
13-Jul	338	110	448	40,128	6,538	46,666
14-Jul	666	327	993	40,794	6,865	47,659
15-Jul	598	291	889	41,392	7,156	48,548
16-Jul	663	404	1,067	42,055	7,560	49,615
17-Jul	633	180	813	42,688	7,740	50,428
18-Jul	1,622	275	1,897	44,310	8,015	52,325
19-Jul	1,056	233	1,289	45,366	8,248	53,614
20-Jul	400	119	519	45,766	8,367	54,133

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Table 7. (page 2 of 2)

	Daily			Cumulative		
Date	Adults	Jacks	Total	Adults	Jacks	Total
21-Jul	2,054	608	2,662	47,820	8,975	56,795
22-Jul	208	136	344	48,028	9,111	57,139
23-Jul	571	354	925	48,599	9,465	58,064
24-Jul	223	72	295	48,822	9,537	58,359
25-Jul	594	259	853	49,416	9,796	59,212
26-Jul	403	72	475	49,819	9,868	59,687
27-Jul	407	86	493	50,226	9,954	60,180
28-Jul	195	44	239	50,421	9,998	60,419
29-Jul	509	218	727	50,930	10,216	61,146
30-Jul	366	217	583	51,296	10,433	61,729
31-Jul	245	57	302	51,541	10,490	62,031
1-Aug	121	55	176	51,662	10,545	62,207
Post Weir	7,045	1,438	8,483	58,707	11,983	70,690

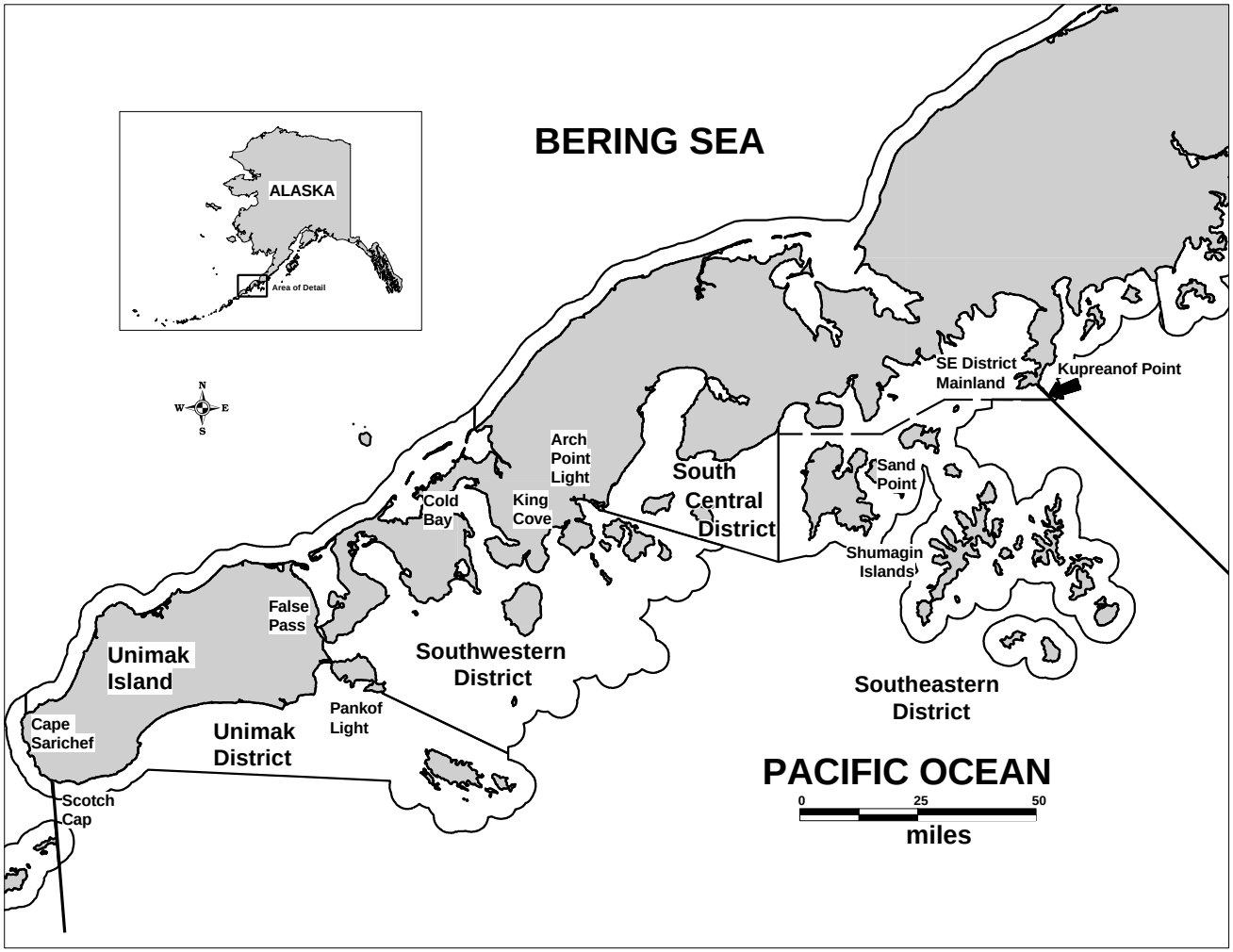

Figure 1. Map of the Alaska Peninsula Management Area from Kupreanof Point to Scotch Cap with the South Peninsula salmon fishing districts defined.

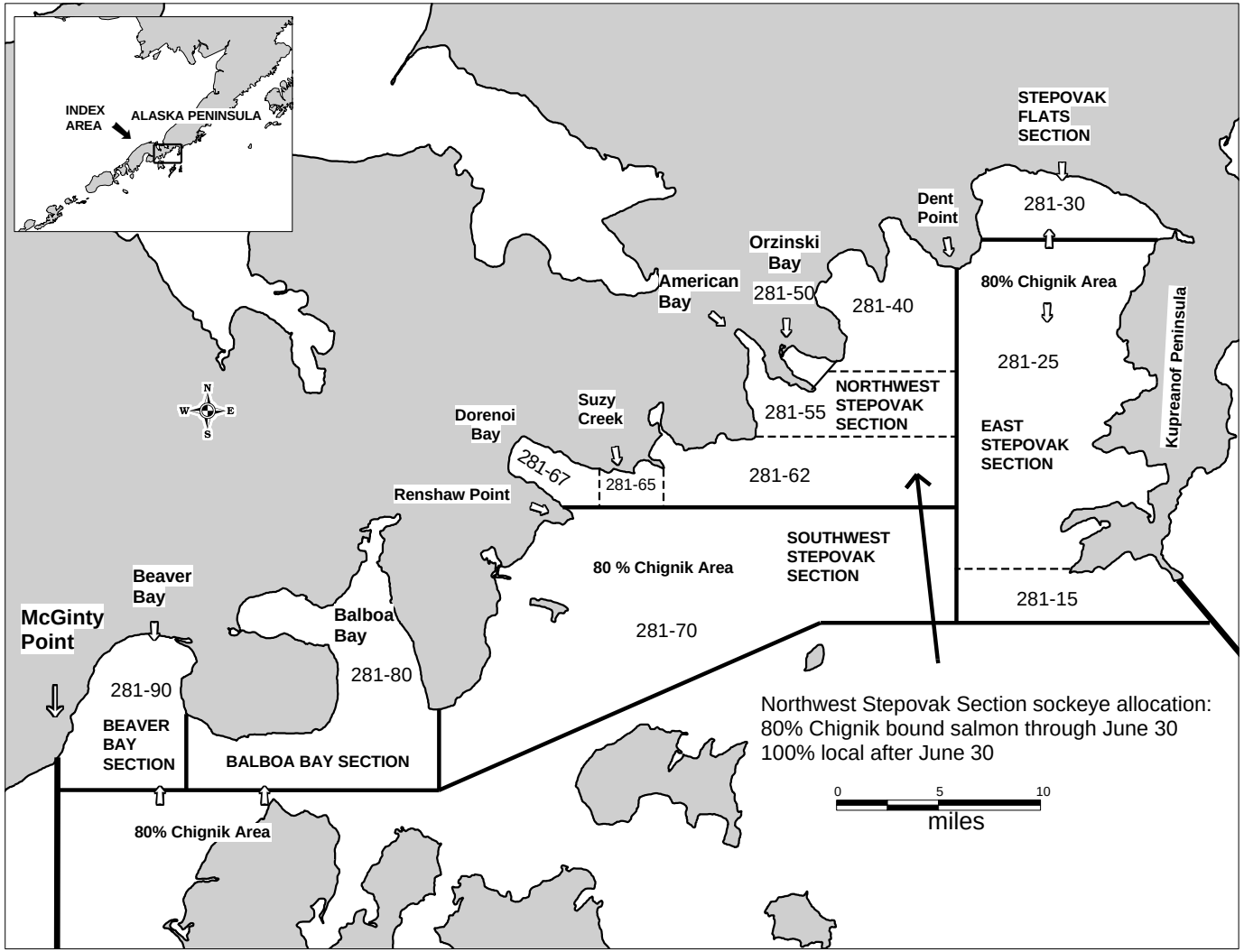

Figure 2. Map of the Southeastern District Mainland fishery from Kupreanof Point to McGinty Point with the salmon fishing sections defined.

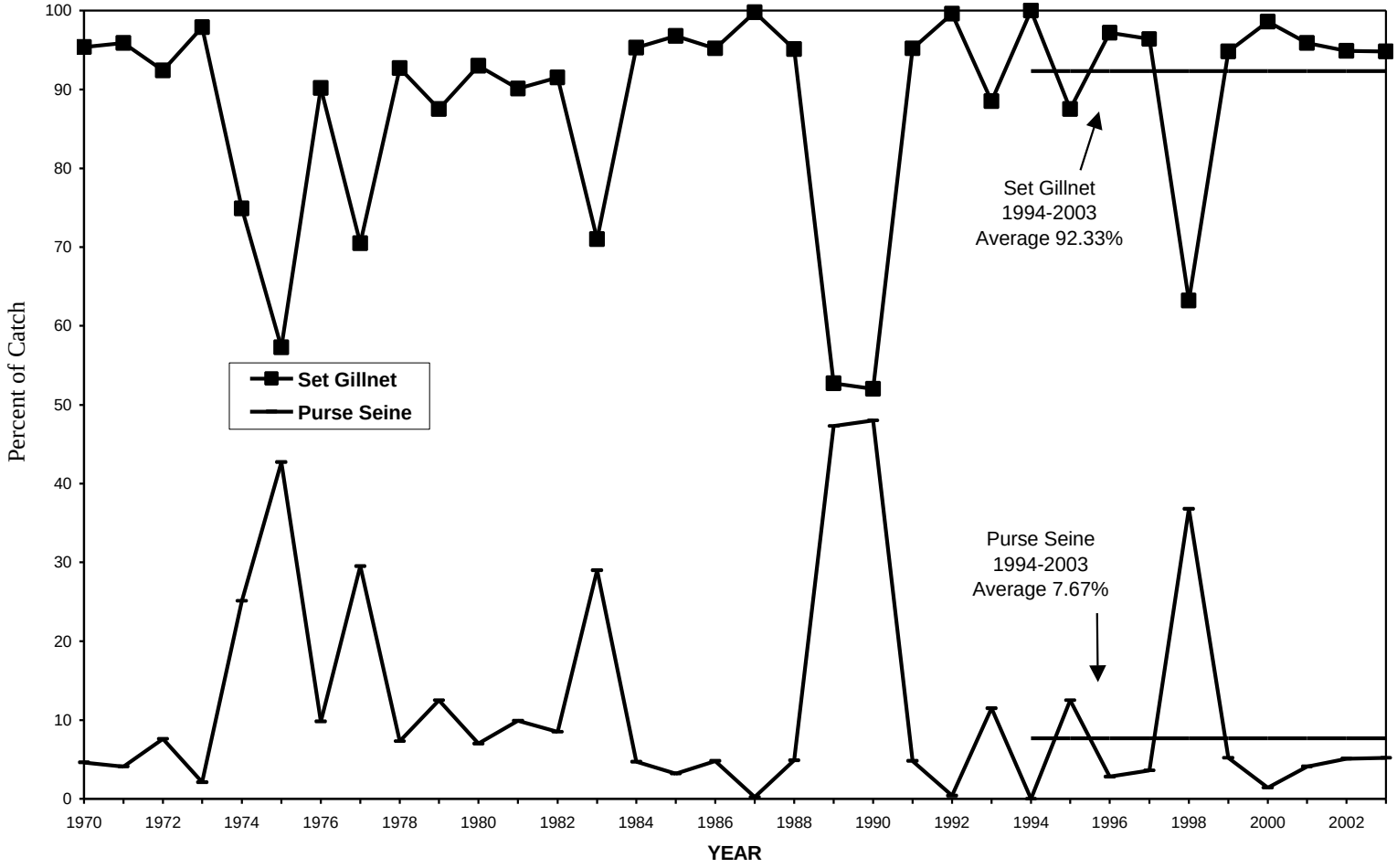

Figure 3. Sockeye salmon harvest in percent by gear type, through July 25, Southeastern District Mainland, 1970-2003.

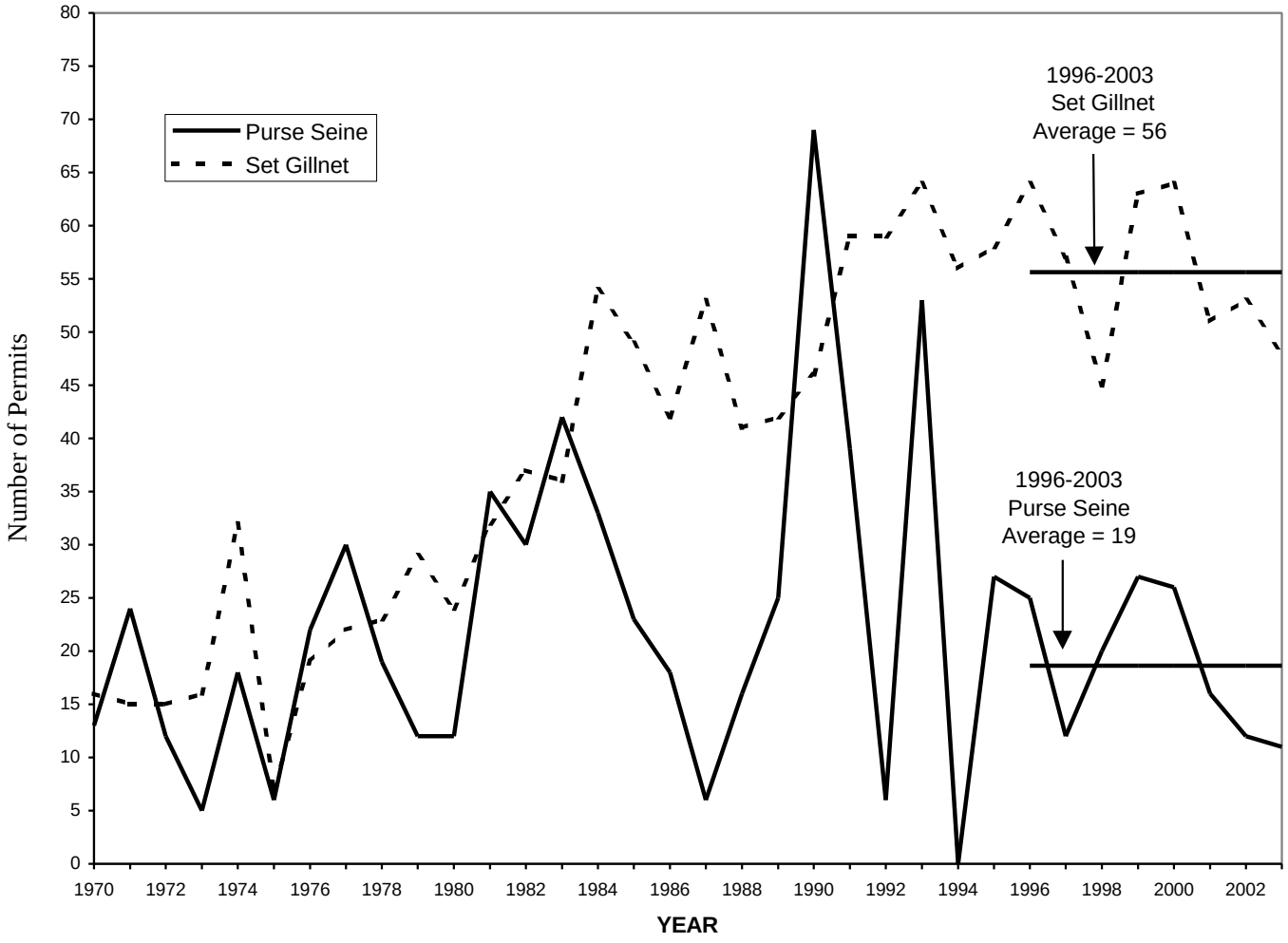

Figure 4. Southeastern District Mainland CFEC permits fished by gear type through July 25, 1970-2003.

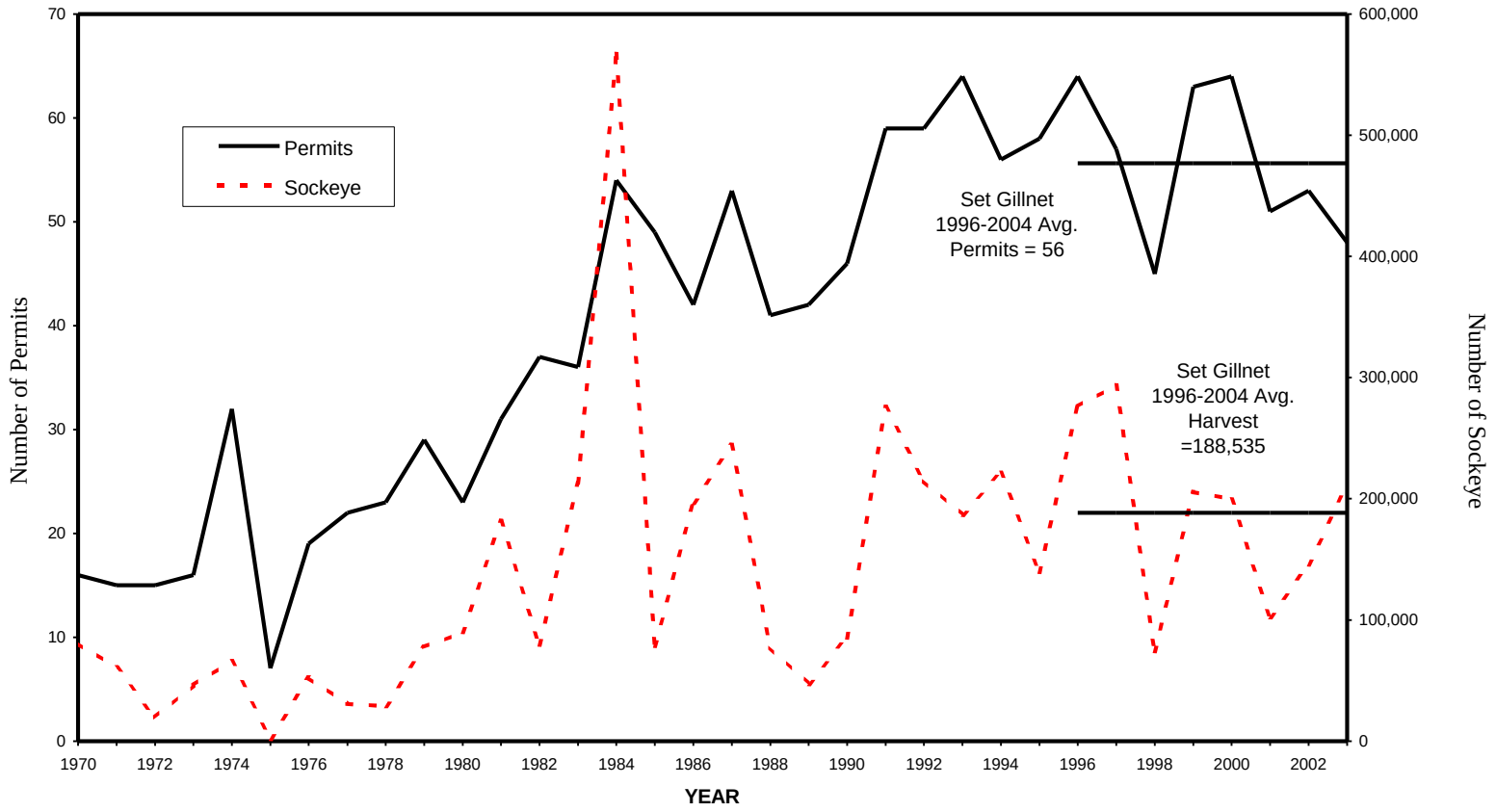

Figure 5. Set gillnet effort and sockeye salmon harvests in the Southeastern District Mainland fishery, through July 25, 1970-2003.

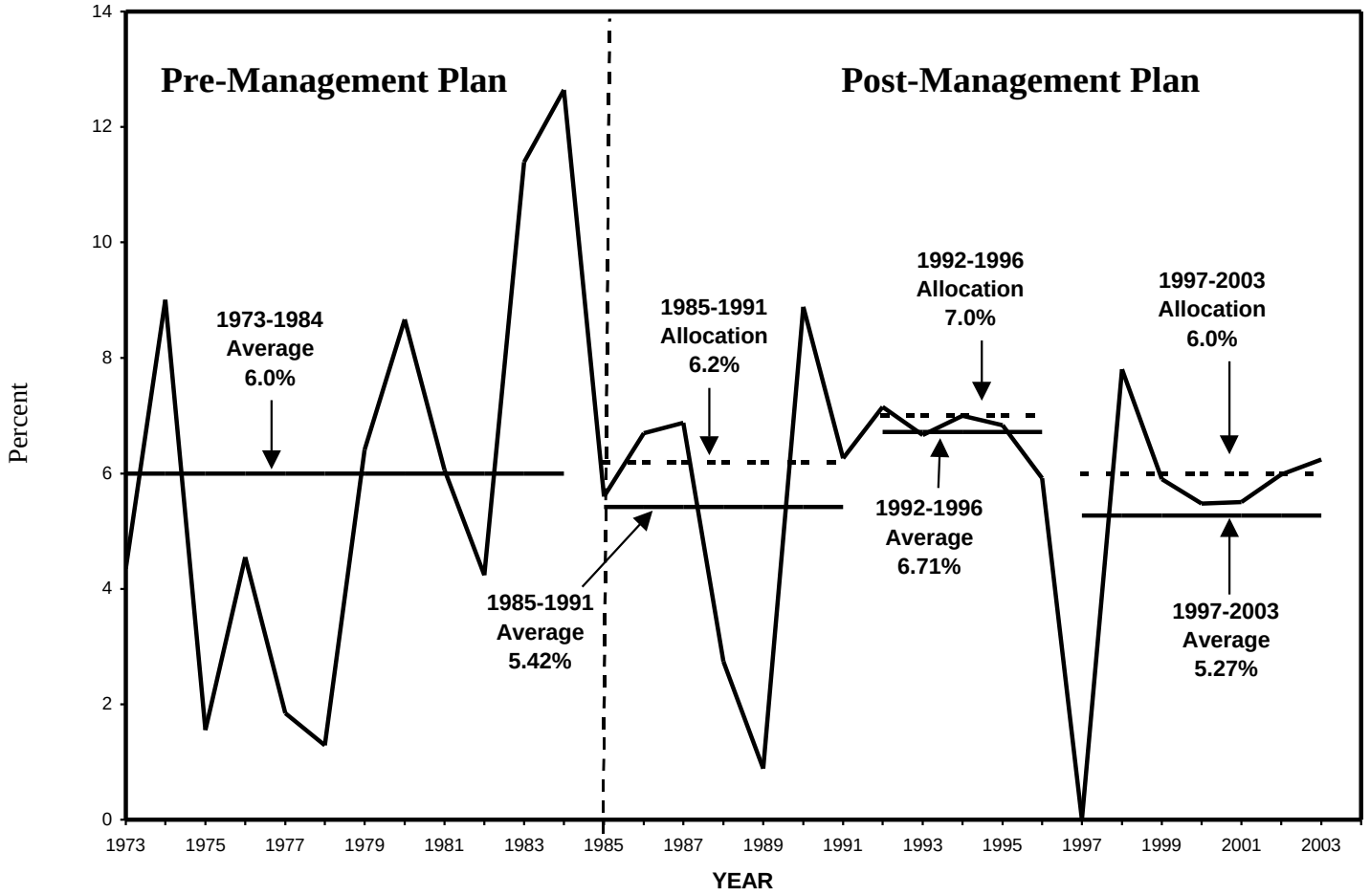

Figure 6. Percentage harvest of sockeye salmon considered to be Chignik bound by regulation in the Southeastern District Mainland fishery, through July 25, 1973-2003.

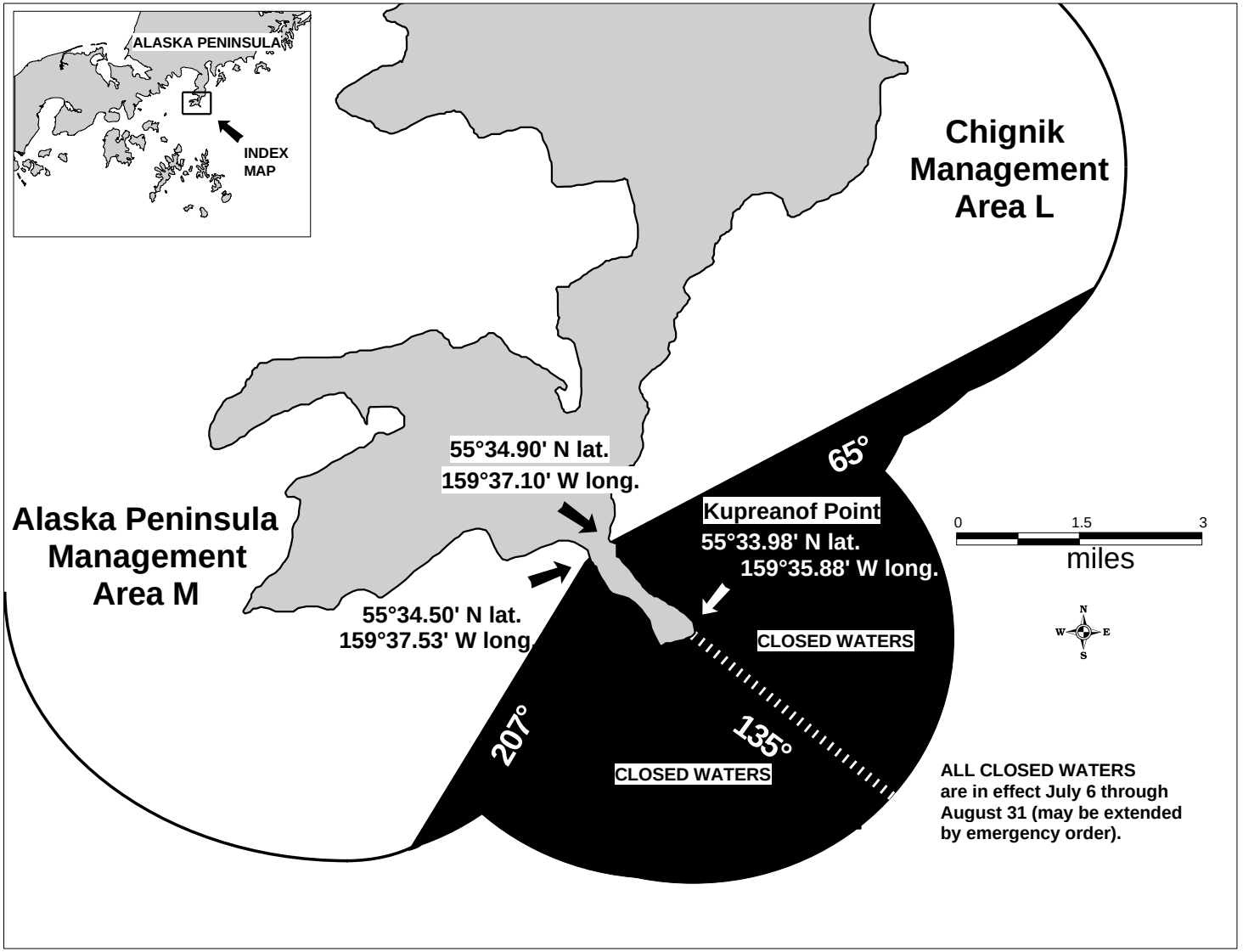

Figure 7. Map of Kupreanof Point vicinity with closed waters defined.

THE REGULATORY REQUIREMENTS OF THIS PLAN ARE DESCRIBED IN 5 AAC 09.360.
A DIAGRAM OF THE CHRONOLOGICAL REQUIREMENTS OF THIS PLAN IS SHOWN BELOW.

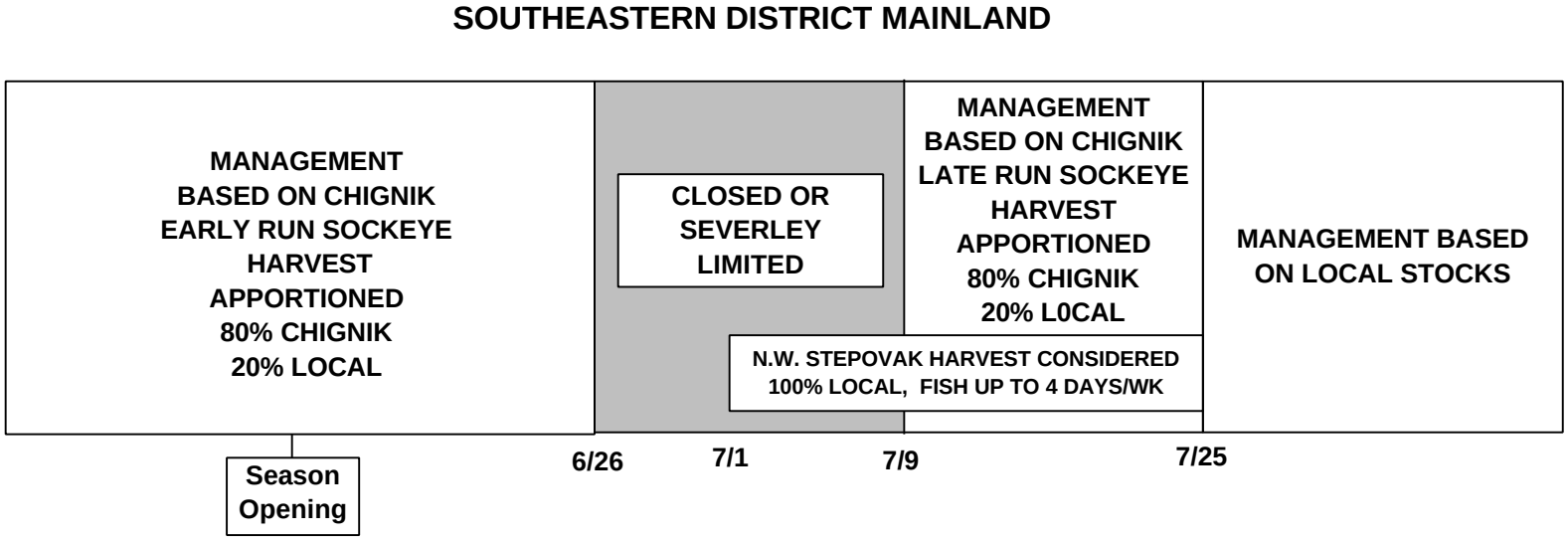

Figure 8. Overview of the Southeastern District Mainland salmon management plan.

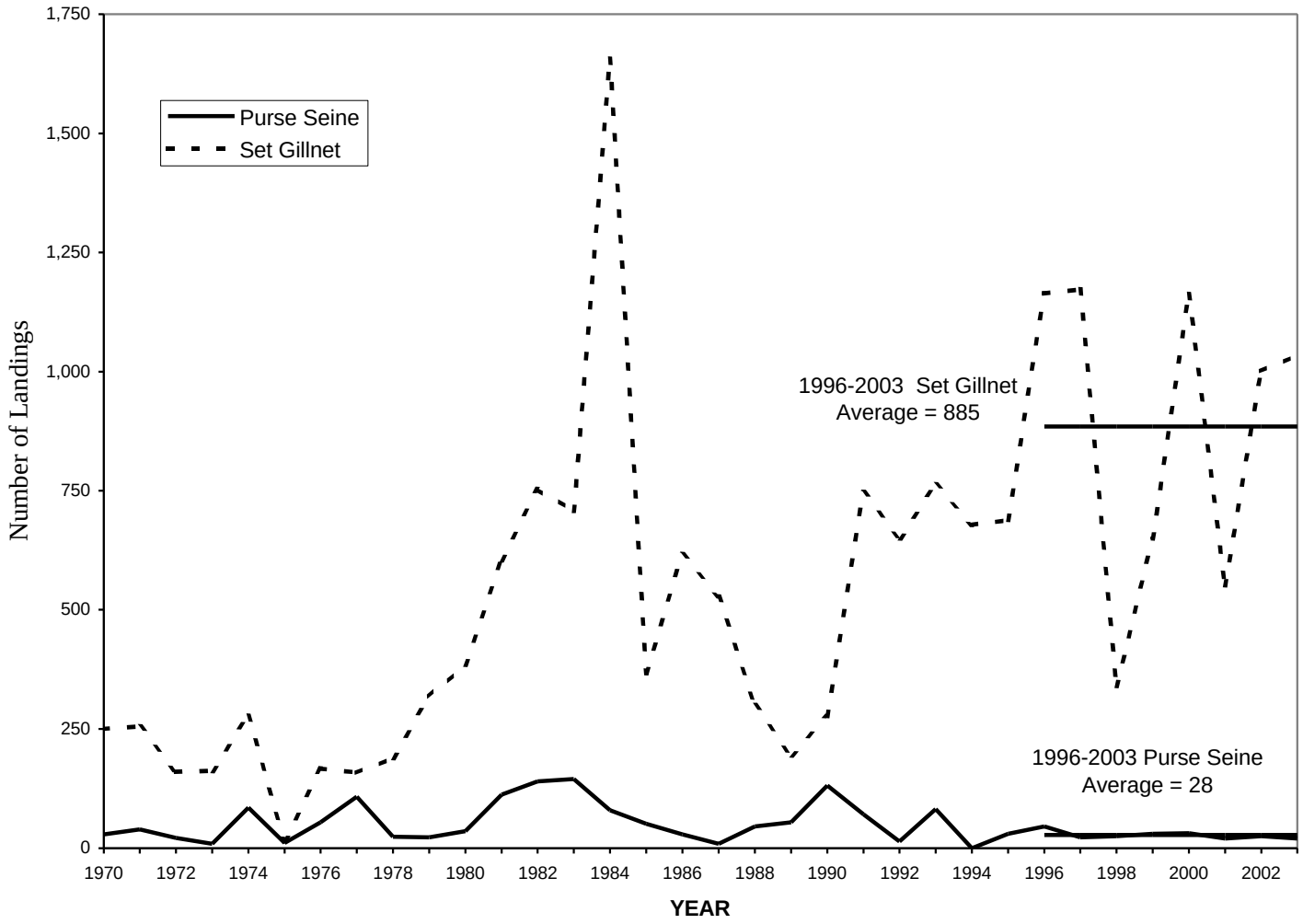

Figure 9. Southeastern District Mainland landings by gear type through July 25, 1970-2003.

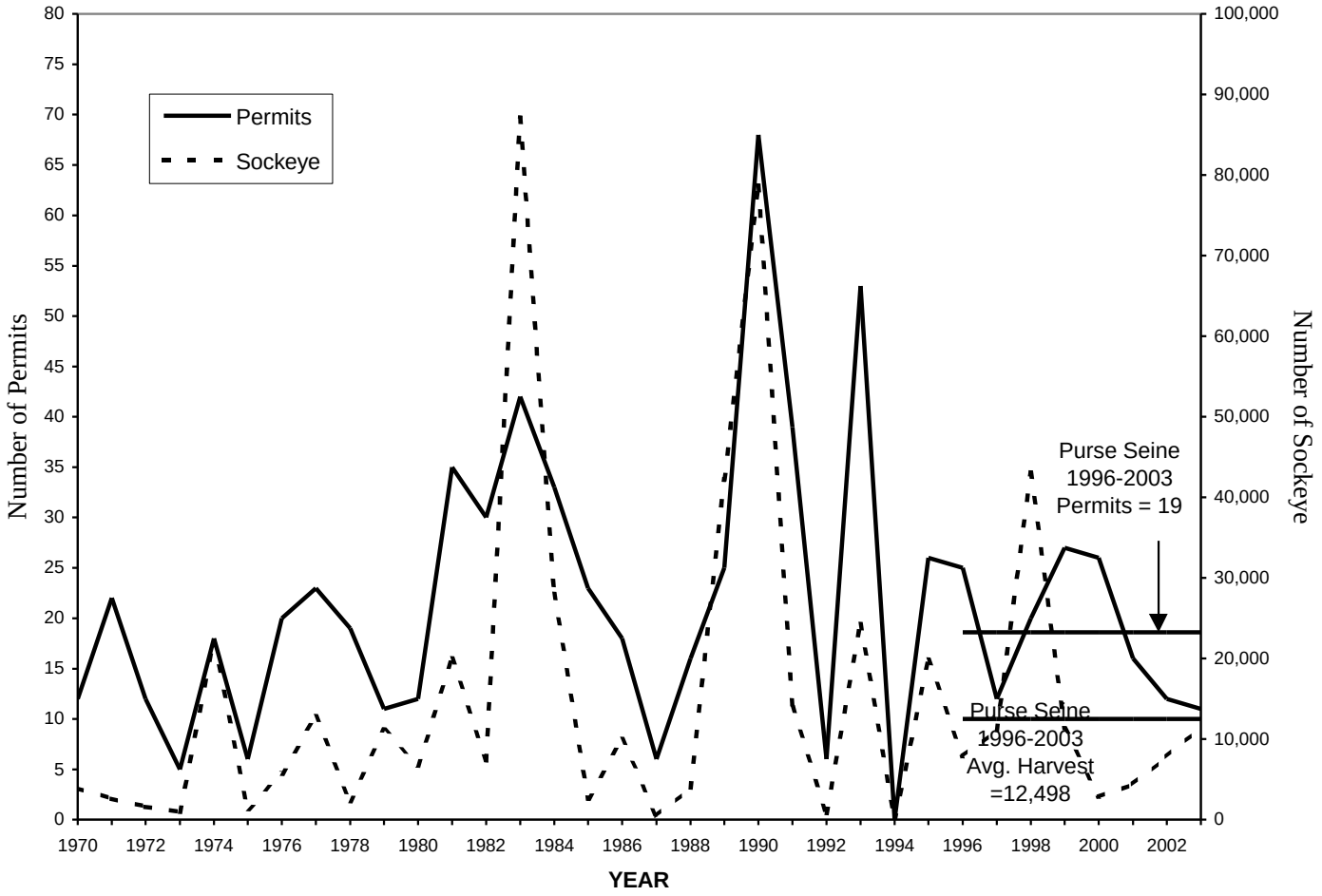

Figure 10. Purse seine effort and sockeye salmon harvests in the Southeastern District Mainland fishery, through July 25, 1970-2003.

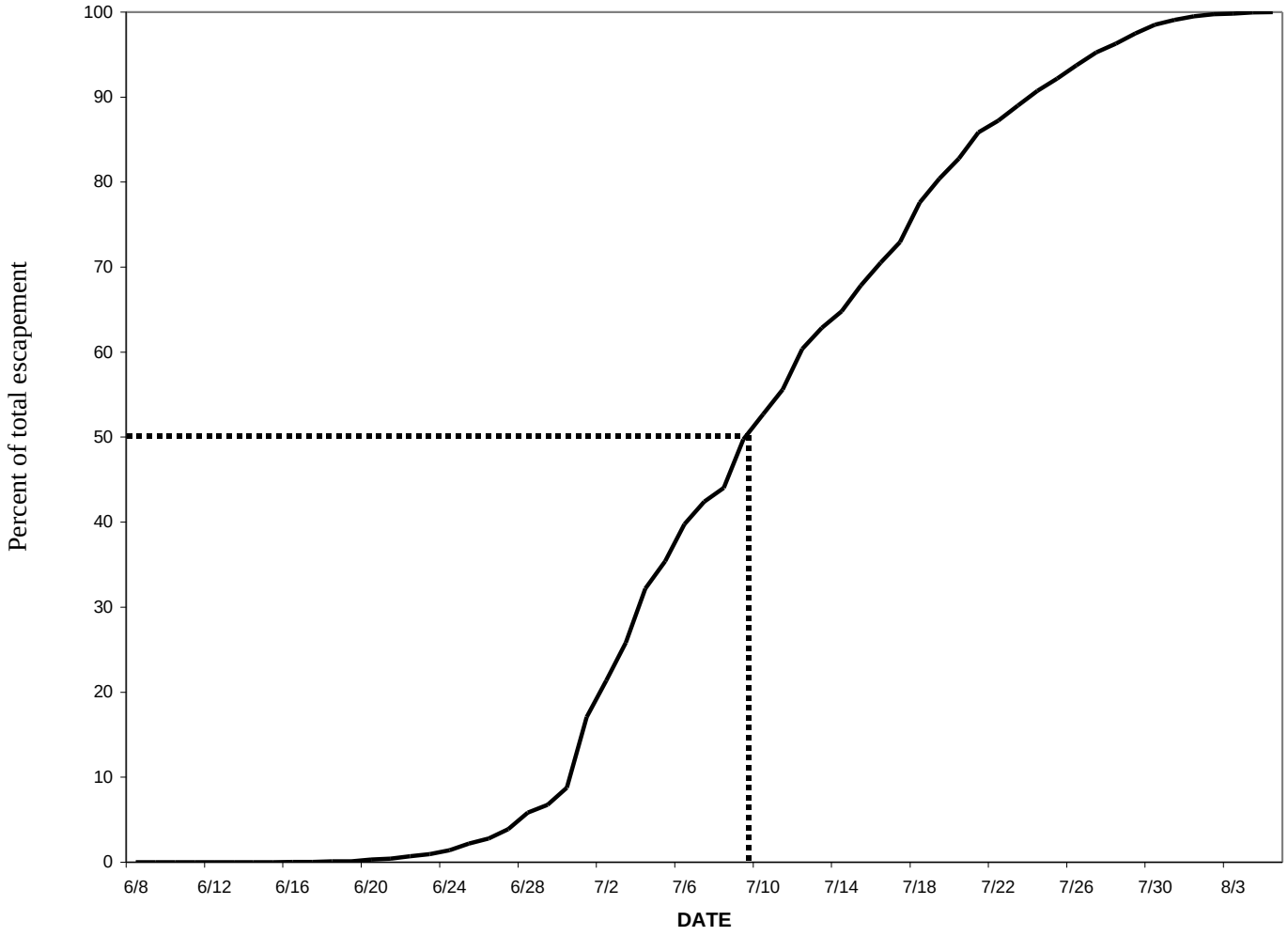

Figure 11. Orzinski Lake weir average cumulative sockeye salmon escapement timing 1990-2003.

APPENDIX

Appendix A.1. Chignik Management Area preliminary forecast of the 2004 sockeye salmon run.

FORECAST AREA: **Chignik Management Area**

SPECIES: **Sockeye salmon**

Preliminary Forecast of the 2004 Run:		Forecast Estimate (thousands)	Forecast Range (thousands)
Total Production:			
Early Run (Black Lake)	Total Run Estimate	1,260	480 – 2,210
	Escapement Goal	350	350 – 400
	Harvest Estimate	910	
Late Run (Chignik Lake)	Total Run Estimate	1,080	498 – 1,890
	Escapement Goal	225	225 – 275
	Harvest Estimate	855	
Total Chignik System	Total Run Estimate	2,340	692 – 2,910
	Escapement Goal	575	575 – 675
	Harvest Estimate	1,770	

These figures include harvests of Chignik-bound sockeye salmon from the Southeastern District Mainland and the Cape Igvak fisheries; approximately 1,440 thousand sockeye salmon are projected to be harvested in the Chignik Management Area.

Forecast Methods

The forecasts for the 2004 early and late Chignik sockeye salmon runs were based on simple linear regressions using sibling relationships, escapements and subsequent year-class returns, or median estimators of age class returns from brood years since 1977. In constructing and evaluating each of the regression models, standard regression diagnostic procedures were used. Regression models were only used in cases where the slope of the regression was significantly different from zero ($P < 0.25$). The early-run age 1.3 and 2.3 returns were estimated based on the abundance of their sibling returns (1.2 and 2.2) in 2003. The late-run age 1.3 and 2.3 returns were estimated using regression relationships based on the abundance of spawners in their parent years. Following non-significant regression results, the median brood year return by total age was used to estimate all other age class components (0.2, 1.1, 0.3, 1.2, 2.1, 2.2, 1.4, 3.2, 2.4, and 3.2) of the run. When regression relationships were used, the variance of the estimate was calculated from the error structure of the regression. When the median returns by age class were used, the 10^{th} and 90^{th} percentiles of the data were used to describe the range of the data. The variances associated with individual estimates were summed to estimate 80 percent prediction intervals, which were then added to the percentile estimates to calculate the forecast ranges.

Forecast Discussion

The 2004 sockeye salmon run to the Chignik River is expected to be 2.34 million fish, which is approximately 360 thousand fish greater than the estimated run of 2003 (1.98 million). The early run is expected to be approximately 270 thousand fish greater than the estimated early run in 2003 of 990 thousand fish. The late run is expected to be approximately 94 thousand fish greater than the estimated 2003 late run of 986 thousand. The 2004 sockeye salmon run to Chignik is expected to be approximately 310 thousand fish less than the recent 10-year average run (2.65 million).

The harvest estimate for the early run of 910 thousand is based on achievement of the Black Lake lower escapement goal of 350 thousand fish while the late run harvest estimate of 855 thousand is based on achievement of the Chignik Lake lower escapement goal of 225 thousand fish through September 15. Harvest estimates for both the early and late run include Chignik bound sockeye salmon harvested in the Cape Igvak Section of the Kodiak Management Area and the Southeastern District Mainland of the Alaska Peninsula Management Area.

Approximately 83 percent of the 2004 early run was estimated using sibling relationships. Using similar methods, the 2003 early run was over-estimated by approximately 40 percent. The majority of the 2004 late run (84 percent) was estimated using relationships between parent escapement and returns for the two major age classes (ages 1.3 and 2.3). Using similar methods, the 2003 late run was over-estimated by about 17 percent.

Available smolt data were analyzed and significant regression relationships were found between the total number of emigrating smolt and subsequent 3-ocean (usually about 80 percent of the run) returns. This estimate was then expanded to account for other ocean ages. In 2003, this method under-estimated the total run by about 9 percent. The smolt-based forecast of sockeye salmon returns in 2004 to Chignik is 3.10 million sockeye salmon, which is substantially (about 772 thousand) higher than that predicted from sibling relationships and median estimates.

The disparity between the smolt forecast and the sibling forecast suggest the actual return may fall in the upper half of the forecast range. Given this ancillary data, our confidence in this forecast is fair.

Kenneth A. Bouwens
Finfish Research Biologist
Kodiak

Appendix B.1. Southeastern District Mainland salmon harvest by species, all gear combined, June 1-July 10, 1970-2003.

			Number of Salmon					
Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	17	203	21	79,763	26	1,910	3,305	85,025
1971	15	196	77	49,763	4	1,991	4,874	56,709
1972	10	119	22	15,364	12	164	1,314	16,876
1973	15	93	9	35,833	2	399	1,009	37,252
1974	33	206	36	60,534	36	1,311	1,851	63,768
1975	0	0	0	0	0	0	0	0
1976	33	173	56	53,661	0	617	1,058	55,392
1977	34	123	17	30,113	0	5,782	2,717	38,629
1978	23	156	23	25,449	0	418	2,244	28,134
1979	25	194	64	38,267	107	3,994	1,343	43,775
1980	23	216	51	51,365	3	76	2,413	53,908
1981	30	418	1,177	133,501	177	1,438	7,445	143,738
1982	36	480	197	60,386	65	1,028	11,924	73,600
1983	34	377	298	121,625	514	102	2,899	125,438
1984	55	1,468	661	532,151	582	6,965	18,474	558,833
1985	44	261	146	61,160	1	855	3,601	65,763
1986	42	383	153	140,329	70	1,461	12,231	154,244
1987	53	385	89	216,609	4	105	5,382	222,189
1988	21	58	21	17,924	3	67	972	18,987
1989	39	101	44	11,728	5	301	458	12,536
1990	37	94	128	20,177	95	115	2,946	23,461
1991	58	631	386	251,386	388	744	5,040	257,944
1992	59	367	142	134,978	11	296	4,281	139,708
1993	59	540	491	135,950	294	393	1,218	138,346
1994	55	407	220	177,938	672	6,767	5,343	190,940
1995	55	356	254	72,484	64	282	4,846	77,930
1996	62	728	193	194,535	608	7,819	14,438	217,593
1997	51	392	50	84,206	174	1,440	1,042	86,912
1998	18	81	51	9,777	3	453	243	10,527
1999	61	533	145	169,832	3	53	3,731	173,764
2000	63	654	98	129,462	20	826	4,543	134,949
2001	44	193	64	56,077	281	5,655	15,238	77,315
2002	49	600	370	88,589	138	14,306	5,386	108,789
2003	48	613	193	126,261	627	12,266	3,321	142,668
Averages [a]								
1984-2003	49	442	195	131,578	202	3,058	5,637	140,670
1994-2003	51	456	164	110,916	259	4,987	5,813	122,139

[a] Only set gillnet gear is allowed prior to July 11 since the 1978 season. After 1977, any purse seine deliveries prior to July 11 are assumed to be in error and were assigned to gillnet gear.

Appendix B.2. Southeastern District Mainland salmon harvest by species, purse seine gear, June 1-July 10, 1970-2003.

Year[a]	Permits	Landings	Number of Salmon					
			Chinook	Sockeye	Coho	Pink	Chum	Total
1970	4	10	1	3,357	0	373	350	4,081
1971	7	12	7	1,240	0	1,539	692	3,478
1972	Confidentiality rules prohibit the relase of this information.							
1973								
1974	10	43	11	12,610	17	583	1,191	14,412
1975	0	0	0	0	0	0	0	0
1976	14	24	7	3,276	0	203	216	3,702
1977	12	29	10	8,132	0	4,262	805	13,209
1978-2003	0	0	0	0	0	0	0	0
Average 1970-77	8	20	6	4,769	3	1,160	542	6,480

[a] Only set gillnet gear is allowed prior to July 11 since the 1978 season. After 1977, any purse seine deliveries prior to July 11 are assumed to be in error and were assigned to gillnet gear.

Appendix B.3. Southeastern District Mainland salmon harvest by species, set gillnet gear, June 1-July 10, 1970-2003.

			Number of Salmon					
Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	14	191	20	76,251	26	1,536	2,949	80,782
1971	9	184	70	48,523	4	452	4,182	53,231
1972	10	115	22	14,874	12	164	1,295	16,367
1973	14	91	9	35,130	2	390	1,009	36,540
1974	26	163	25	47,924	19	728	660	49,356
1975	0	0	0	0	0	0	0	0
1976	19	149	49	50,385	0	414	842	51,690
1977	22	94	7	21,981	0	1,520	1,912	25,420
1978	23	156	23	25,449	0	418	2,244	28,134
1979	24	191	64	38,200	107	3,988	1,339	43,698
1980	23	216	51	51,365	3	76	2,413	53,908
1981	29	417	1,177	133,371	177	1,438	7,445	143,608
1982	36	480	197	60,386	65	1,028	11,924	73,600
1983	34	377	298	121,625	514	102	2,899	125,438
1984	55	1,468	661	532,151	582	6,965	18,474	558,833
1985	44	261	146	61,160	1	855	3,601	65,763
1986	42	383	153	140,329	70	1,461	12,231	154,244
1987	53	385	89	216,609	4	105	5,382	222,189
1988	21	58	21	17,924	3	67	972	18,987
1989	39	101	44	11,728	5	301	458	12,536
1990	37	94	128	20,177	95	115	2,946	23,461
1991	58	631	386	251,386	388	744	5,040	257,944
1992	59	367	142	134,978	11	296	4,281	139,708
1993	59	540	491	135,950	294	393	1,218	138,346
1994	55	407	220	177,938	672	6,767	5,343	190,940
1995	55	356	254	72,484	64	282	4,846	77,930
1996	62	728	193	194,535	608	7,819	14,438	217,593
1997	51	392	50	84,206	174	1,440	1,042	86,912
1998	18	81	51	9,777	3	453	243	10,527
1999	61	533	145	169,832	3	53	3,731	173,764
2000	63	654	98	129,462	20	826	4,543	134,949
2001	44	193	64	56,077	281	5,655	15,238	77,315
2002	49	600	370	88,589	138	14,306	5,386	108,789
2003	48	613	193	126,261	627	12,266	3,321	142,668
Averages [a]								
1984-2003	49	442	195	131,578	202	3,058	5,637	140,670
1994-2003	51	456	164	110,916	259	4,987	5,813	122,139

[a] Only set gillnet gear is allowed prior to July 11 since the 1978 season. After 1977, any purse seine deliveries prior to July 11 are assumed to be in error and were assigned to gillnet gear.

Appendix B.4. Southeastern District Mainland salmon harvest by species, all gear combined, June 1-July 25, 1970-2003.

			Number of Salmon					
Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	27	288	32	84,603	183	21,836	16,244	122,898
1971	33	294	94	63,366	92	18,741	18,206	100,499
1972	23	180	34	21,105	85	5,762	9,735	36,721
1973	18	171	17	47,579	231	4,503	5,236	57,566
1974	42	363	50	92,562	216	29,769	7,783	130,380
1975	13	25	0	3,156	63	3,020	770	7,009
1976	41	221	58	59,844	37	20,059	6,759	86,757
1977	51	266	33	48,589	940	43,301	11,454	104,317
1978	42	213	39	31,337	354	33,140	16,104	80,974
1979	42	344	119	90,658	5,857	45,582	7,561	149,777
1980	36	420	79	96,665	1,608	40,779	59,441	198,572
1981	69	718	1,320	202,540	3,058	17,347	172,340	396,605
1982	67	893	401	86,793	1,920	209,898	134,473	433,485
1983	78	852	1,387	302,387	3,222	11,295	101,873	420,164
1984	87	1,736	1,054	595,044	4,414	199,990	141,452	941,954
1985	72	418	177	80,957	909	74,592	87,116	243,751
1986	60	645	219	206,532	770	40,771	51,003	299,295
1987	59	537	130	244,895	197	2,363	21,332	268,917
1988	57	345	214	81,160	2,318	97,534	74,743	255,969
1989	67	248	145	89,224	1,226	210,017	6,570	307,182
1990	115	408	694	166,322	16,809	48,999	43,479	276,303
1991	98	818	614	289,727	1,386	24,788	12,113	328,628
1992	65	664	170	215,444	135	15,939	20,629	252,317
1993	117	845	1,093	210,927	4,207	78,278	9,266	303,771
1994	56	678	242	221,657	1,041	11,158	5,651	239,749
1995	84	718	321	159,381	2,286	52,772	21,809	236,569
1996	89	1,210	325	284,076	3,846	71,856	36,478	396,581
1997	69	1,194	146	304,629	1,380	16,613	6,368	329,136
1998	65	365	307	117,131	2,959	125,030	9,929	255,356
1999	90	679	184	217,026	898	42,905	8,390	269,403
2000	90	1,194	174	202,435	6,968	57,176	27,261	294,014
2001	67	571	177	106,607	1,314	42,220	50,211	200,529
2002	65	1,026	545	153,469	5,390	143,365	18,752	321,521
2003	59	1,055	309	222,651	2,234	129,458	12,272	366,924
Averages								
1984-2003	77	768	362	208,465	3,034	74,291	33,241	319,393
1994-2003	73	869	273	198,906	2,832	69,255	19,712	290,978

Appendix B.5. Southeastern District Mainland salmon harvest by species, purse seine gear, June 1-July 25, 1970-2003.

			Number of Salmon					
Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	13	29	10	3,911	27	13,679	3,730	21,357
1971	24	39	20	2,599	36	17,741	9,764	30,160
1972	12	21	6	1,614	4	3,761	4,279	9,664
1973	5	9	7	976	137	2,653	1,298	5,071
1974	18	85	18	22,129	72	21,622	4,108	47,949
1975	6	11	0	1,349	34	2,060	178	3,621
1976	22	54	7	5,724	37	14,912	4,605	25,285
1977	30	108	13	14,646	940	37,510	6,413	59,522
1978	19	24	11	2,267	321	31,355	10,371	44,325
1979	12	23	19	11,159	2,821	34,331	1,676	50,006
1980	12	36	4	6,896	1,011	34,807	30,547	73,265
1981	35	112	117	19,883	2,725	12,984	149,523	185,232
1982	30	140	128	7,351	973	190,694	101,744	300,890
1983	42	145	1,022	87,107	2,192	9,455	87,155	186,931
1984	33	79	346	28,001	2,933	154,448	109,445	295,173
1985	23	51	20	2,610	725	66,517	77,537	147,409
1986	18	29	42	9,987	321	31,231	30,653	72,234
1987	6	9	19	482	95	808	8,388	9,792
1988	16	45	130	3,956	1,587	80,939	63,211	149,823
1989	25	54	58	42,247	1,121	198,917	5,121	247,464
1990	69	131	503	80,954	15,980	47,534	34,415	179,386
1991	39	71	175	13,959	529	18,660	4,380	37,703
1992	6	14	4	806	20	4,810	14,832	20,472
1993	53	82	536	24,271	3,543	63,521	5,850	97,721
1994	0	0	0	0	0	0	0	0
1995	26	30	53	19,866	2,104	39,677	13,625	75,325
1996	25	46	73	7,864	977	19,071	4,619	32,604
1997	12	23	44	11,115	491	4,325	494	16,469
1998	20	25	210	43,062	1,520	91,150	6,516	142,458
1999	27	30	20	11,320	547	34,410	1,618	47,915
2000	26	31	14	2,830	1,356	14,476	2,689	21,365
2001	16	20	64	4,394	168	14,430	6,249	25,305
2002	12	25	69	7,813	4,263	60,850	4,092	77,087
2003	11	20	41	11,582	660	52,928	1,702	66,913
Averages								
1984-2003	23	41	121	16,356	1,947	49,935	19,772	88,131
1994-2003	18	25	59	11,985	1,209	33,132	4,160	50,544

Appendix B.6. Southeastern District Mainland salmon harvest by species, set gillnet gear, June 1-July 25, 1970-2003.

			Number of Salmon					
Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	18	258	22	80,692	156	6,112	12,447	99,429
1971	15	255	74	60,767	56	1,000	8,442	70,339
1972	15	160	28	19,491	81	2,001	5,456	27,057
1973	16	162	10	46,603	94	1,850	3,938	52,495
1974	32	278	32	70,433	144	8,147	3,675	82,431
1975	7	14	0	1,807	29	960	592	3,388
1976	19	167	51	54,120	0	5,147	2,154	61,472
1977	22	158	20	33,943	0	5,791	5,041	44,795
1978	23	189	28	29,070	33	1,785	5,733	36,649
1979	29	318	100	79,432	3,036	11,245	5,881	99,694
1980	24	384	75	89,769	597	5,972	28,894	125,307
1981	32	604	1,203	182,527	333	4,339	22,121	210,523
1982	37	753	273	79,442	947	19,204	32,729	132,595
1983	36	707	365	215,280	1,030	1,840	14,718	233,233
1984	54	1,657	708	567,043	1,481	45,542	32,007	646,781
1985	49	367	157	78,347	184	8,075	9,579	96,342
1986	42	616	177	196,545	449	9,540	20,350	227,061
1987	53	528	111	244,413	102	1,555	12,944	259,125
1988	41	300	84	77,204	731	16,595	11,532	106,146
1989	42	194	87	46,977	105	11,100	1,449	59,718
1990	46	277	191	85,368	829	1,465	9,064	96,917
1991	59	747	439	275,768	857	6,128	7,733	290,925
1992	59	650	166	214,638	115	11,129	5,797	231,845
1993	64	763	557	186,656	664	14,757	3,416	206,050
1994	56	678	242	221,657	1,041	11,158	5,651	239,749
1995	58	688	268	139,515	182	13,097	8,184	161,246
1996	64	1,164	252	276,212	2,869	52,785	31,859	363,977
1997	57	1,171	102	293,514	889	12,288	5,874	312,667
1998	45	340	97	74,069	1,439	33,880	3,413	112,898
1999	63	649	164	205,706	351	8,495	6,772	221,488
2000	64	1,163	160	199,605	5,612	42,700	24,572	272,649
2001	51	551	113	102,213	1,146	27,790	43,962	175,224
2002	53	1,001	476	145,656	1,127	82,515	14,660	244,434
2003	48	1,035	268	211,069	1,574	76,530	10,570	300,011
Averages								
1984-2003	53	727	241	192,109	1,087	24,356	13,469	231,263
1994-2003	56	844	214	186,922	1,623	36,124	15,552	240,434

Appendix B.7. Southeastern District Mainland salmon harvest by species, set gillnet gear, June 1-October 31, 2003.

			Chinook		Sockeye		Coho		Pink		Chum	
Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
9-Jun	27	33	20	268	6,718	41,742	0	0	17	106	120	789
10-Jun	30	72	23	321	14,751	92,784	1	7	17	55	299	2,005
17-Jun	34	49	13	164	8,125	52,299	1	6	127	389	169	1,121
21-Jul	6	14	0	0	1,883	13,113	0	0	1,181	4,598	129	910
22-Jul	21	42	4	35	6,110	40,359	67	488	11,417	40,046	1,416	10,350
23-Jul	10	15	1	6	3,501	24,775	36	249	4,228	15,483	531	3,794
24-Jul	6	8	0	0	1,071	7,677	0	0	760	2,974	64	453
25-Jul	13	27	3	40	3,010	20,706	97	677	4,256	18,264	888	6,186
26-Jul	4	8	0	0	545	3,724	0	0	835	2,608	88	685
27-Jul	25	43	3	33	4,437	28,046	452	3,224	13,196	49,007	1,120	7,857
28-Jul	27	38	12	167	3,644	25,128	351	2,480	11,693	40,958	1,058	7,475
29-Jul	Confidentiality rules prohibit the relase of this information.											
30-Jul	18	25	2	37	2,407	16,071	346	2,517	8,955	31,202	1,129	7,971
31-Jul	19	44	18	161	5,474	37,102	680	5,066	17,491	65,054	2,269	15,770
1-Aug	12	18	0	0	2,044	13,463	217	1,541	6,558	21,239	584	4,226
2-Aug	19	37	4	51	4,401	29,801	728	5,273	17,960	65,279	1,990	14,766
3-Aug	19	36	13	182	4,758	31,875	573	4,245	15,454	58,492	2,290	16,348
4-Aug	16	37	7	74	4,227	28,936	452	3,345	14,498	53,515	1,810	13,105
5-Aug	16	31	15	222	3,508	23,387	304	2,205	16,623	62,527	8,131	54,280
6-Aug	14	27	2	32	3,346	22,279	177	1,352	13,495	44,879	1,396	9,173
7-Aug	13	22	14	207	2,533	16,901	209	1,491	10,434	34,782	1,138	8,304
8-Aug	12	22	5	55	2,083	14,039	186	1,381	9,110	28,520	1,014	7,265
9-Aug	9	15	1	13	1,811	11,949	142	994	5,148	16,240	854	5,964
10-Aug	10	15	4	31	1,869	12,165	139	1,093	6,111	18,247	899	6,577
11-Aug	8	16	3	48	2,261	15,502	324	2,473	5,059	16,294	534	4,063
12-Aug	7	12	1	7	2,403	16,714	191	1,509	4,993	15,461	481	3,573
13-Aug	7	11	3	66	2,475	17,368	156	1,145	4,783	14,648	719	5,372
14-Aug	8	13	1	7	1,534	10,776	134	1,019	3,518	10,733	530	3,997
15-Aug	8	13	0	0	888	6,078	269	2,140	3,800	12,431	427	3,193
16-Aug	4	6	0	0	317	2,228	195	1,499	1,810	6,598	253	1,820
17-Aug	Confidentiality rules prohibit the relase of this information.											
1-Sep	15	16	4	86	3,133	21,336	2,542	20,531	0	0	60	418
2-Sep	17	24	0	0	5,966	40,822	3,351	27,060	0	0	65	441
3-Sep	17	19	0	0	4,813	32,294	2,469	20,307	0	0	16	139
4-Sep	14	15	1	13	3,602	22,670	1,183	10,401	0	0	26	210
5-Sep	13	24	0	0	5,207	32,853	2,264	18,121	0	0	9	54
6-Sep	0	0	0	0	0	0	0	0	0	0	0	0
7-Sep	0	0	0	0	0	0	0	0	0	0	0	0
8-Sep	12	13	2	51	1,028	6,637	771	6,284	0	0	25	173
9-Sep	15	17	0	0	1,762	11,423	1,271	10,607	0	0	36	231
10-Sep	15	17	0	0	2,608	16,775	2,135	17,987	0	0	12	81
11-Sep	15	20	0	0	3,976	25,487	2,326	20,219	0	0	14	96
12-Sep	10	12	0	0	1,901	12,908	1,327	10,108	0	0	0	0
15-Sep 16-Sep 17-Sep	Confidentiality rules prohibit the release of this information.											
18-Sep	5	9	0	0	4,114	22,812	1,567	11,897	0	0	25	139
19-Sep	Confidentiality rules prohibit the release of this information.											
22-Sep	5	5	0	0	2,739	16,519	789	6,313	0	0	18	107
23-Sep	Confidentiality rules prohibit the relase of this information.											
24-Sep	6	6	0	0	3,218	19,383	1,065	8,564	0	0	20	118
25-Sep 26-Sep 10-Oct	Confidentiality rules prohibit the relase of this information.											
Total	50	1,754	383	4,544	319,570	2,136,964	32,393	259,145	270,391	944,663	39,846	280,331
Average weight				11.9		6.7		8.0		3.5		7.0

Appendix B.8. Southeastern District Mainland salmon harvest by species, purse seine gear, June 1-October 31, 2003.

			Chinook		Sockeye		Coho		Pink		Chum	
Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
15-Jul	Confidentiality rules prohibit the relase of this information.											
16-Jul	10	12	41	567	10,171	71,151	660	4,607	31,281	132,570	1,702	11,404
21-Jul 22-Jul 25-Jul 27-Jul 28-Jul 30-Jul	Confidentiality rules prohibit the relase of this information.											
31-Jul	5	5	5	77	1,245	7,800	579	4,018	66,689	271,501	577	3,654
1-Aug 2-Aug 4-Aug 6-Aug 8-Aug	Confidentiality rules prohibit the relase of this information.											
Totals	19	41	73	887	16,096	109,314	2,680	18,907	249,759	951,020	3,960	26,415
Average weight				12.2		6.8		7.1		3.8		6.7

Appendix B.9. Southeastern District Mainland fishery, annual CFEC permits and number of landings by gear type June 1-July 25, 1970-2003.

	Purse Seine		Set Gillnet		Total	
Year	Permits	Landings	Permits	Landings	Permits	Landings
1970	13	29	18	258	31	287
1971	24	39	15	255	39	294
1972	12	21	15	160	27	181
1973	5	9	16	162	21	171
1974	18	85	32	278	50	363
1975	6	11	7	14	13	25
1976	22	54	19	167	41	221
1977	30	108	22	158	52	266
1978	19	24	23	189	42	213
1979	12	23	29	318	41	341
1980	12	36	24	384	36	420
1981	35	112	32	604	67	716
1982	30	140	37	753	67	893
1983	42	145	36	707	78	852
1984	33	79	54	1,657	87	1,736
1985	23	51	49	367	72	418
1986	18	29	42	616	60	645
1987	6	9	53	528	59	537
1988	16	45	41	300	57	345
1989	25	54	42	194	67	248
1990	69	131	46	277	115	408
1991	39	71	59	747	98	818
1992	6	14	59	650	65	664
1993	53	82	64	763	117	845
1994	0	0	56	678	56	678
1995	26	30	58	688	84	718
1996	25	46	64	1,164	89	1,210
1997	12	23	57	1,171	69	1,194
1998	20	25	45	340	65	365
1999	27	30	63	649	90	679
2000	26	31	64	1,163	90	1,194
2001	16	20	51	551	67	571
2002	12	25	53	1,001	65	1,026
2003	11	20	48	1,035	59	1,055
Averages						
1984-2003	23	41	53	727	77	768
1994-2003	18	25	56	844	73	869

Appendix B.10. Orzinski Lake sockeye salmon daily escapement by year, 1990-2003.

	Year													
Date	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
8-Jun	0	0	0	0	0	0	0	0	0	0	0	1	0	0
9-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	3
12-Jun	0	0	0	0	0	0	3	0	0	0	0	0	4	2
13-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14-Jun	0	0	0	0	0	0	1	0	0	0	0	0	0	1
15-Jun	0	0	0	0	0	0	8	0	0	0	1	18	0	0
16-Jun	0	0	0	0	0	3	0	12	0	2	4	18	0	2
17-Jun	0	0	0	0	0	0	0	17	0	0	44	22	0	0
18-Jun	0	0	0	1	8	3	0	0	11	3	44	53	2	27
19-Jun	0	1	0	0	4	11	0	8	0	2	22	22	1	0
20-Jun	0	1	0	0	0	28	2	0	14	5	40	66	225	359
21-Jun	0	2	0	0	18	28	3	20	8	10	30	5	286	41
22-Jun	0	1	0	0	0	111	0	17	0	10	3	892	49	4
23-Jun	0	14	0	366	34	63	20	128	14	5	2	202	95	9
24-Jun	0	0	0	5	11	17	0	8	43	9	229	0	1283	10
25-Jun	0	2	205	35	247	5	131	0	0	36	445	0	1797	79
26-Jun	0	16	1	474	31	9	593	8	105	34	5	0	790	300
27-Jun	0	348	295	474	146	32	581	16	820	86	69	1,190	0	7
28-Jun	0	3	1,255	184	10	595	218	877	235	21	1,150	225	2,765	10
29-Jun	0	1,839	9	216	7	65	178	70	22	43	801	0	84	0
30-Jun	1	638	56	0	0	32	628	86	177	1	10	4,175	1,823	2
1-Jul	3	1,067	241	2,909	269	24	2,985	33	586	276	6,488	691	2,711	13,451
2-Jul	40	367	685	1,380	26	30	1,020	59	2,381	4	963	722	329	8,131
3-Jul	0	1,080	0	1,394	53	1	3,249	1,738	264	65	191	1,612	1,469	5,778
4-Jul	0	9,852	2,152	686	17	1,214	3,165	3,050	58	194	161	46	618	3,002
5-Jul	286	2,828	5,285	0	7	110	282	10	79	252	402	0	2,136	535
6-Jul	240	1,845	475	0	108	4,789	425	5,208	62	34	475	409	1,265	1,203
7-Jul	59	948	201	95	217	128	205	2,504	191	112	592	461	82	4,176
8-Jul	10	380	489	0	331	32	256	246	0	23	660	1,384	419	2,057
9-Jul	0	1,275	274	438	6,203	5,282	617	378	1,135	1,289	384	2,463	703	1,172
10-Jul	123	1,359	227	0	2,482	1,436	637	305	1,092	89	95	221	1,339	1,867
11-Jul	208	1,511	162	503	3,225	1,692	1,167	57	7	1,110	118	252	0	932
12-Jul	860	2,811	476	5	330	2,942	194	99	2,402	846	20	434	3,614	3,058

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	Year													
Date	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
13-Jul	0	2,075	393	1,834	494	513	215	135	435	1,289	154	105	1,379	448
14-Jul	3	461	486	286	903	101	333	36	1,246	840	105	892	633	993
15-Jul	50	786	821	198	2,415	612	131	1,208	457	556	698	1,749	1,110	889
16-Jul	553	458	113	125	2,795	644	343	964	676	334	492	816	791	1,067
17-Jul	142	1,185	330	276	2,333	1,208	860	348	97	367	6	595	553	813
18-Jul	4,573	1,128	906	2,358	1,028	4	720	1,449	5	814	698	1,264	927	1,897
19-Jul	65	938	312	1,224	1,911	265	689	1,251	946	29	210	332	1,069	1,289
20-Jul	999		648	833	1,679	225	1,837	1,052	482	175	34	105	396	519
21-Jul	888		905	1,027	1,498	193	511	1,741	237	123	3	114	1,733	2,662
22-Jul	228		441	316	552	353	95	1,275	759	166	301	316	84	344
23-Jul	282		562	98	1,312	839	77	332	902	247	642	291	271	925
24-Jul	749		464	806	1,051	184	312	9	1,167	571	148	76	826	295
25-Jul	58		326	1,231	0	84	305	44	719	446	87	510	835	853
26-Jul	29		321	0	1,846		24	140	544	443	59	526	472	475
27-Jul	8		221	53	426		211		500	656	1,001	1,716	254	493
28-Jul	150		147	271	513		513		670	102	46	932	330	239
29-Jul	399		358	733					1,232	484	45	224	312	727
30-Jul	486		300	143					392	376	83	313	1,370	583
31-Jul	669			271					22		299	522	45	302
1-Aug	0			593							684	113		176
2-Aug	47			446							122			
3-Aug	334										87			
4-Aug	230													
5-Aug	526													
6-Aug	169													
Total weir escapement	13,467	35,219	20,542	22,287	34,540	23,907	23,744	24,938	21,194	12,579	19,452	27,095	37,279	62,207
Post weir estimate	1,533	4,781	4,458	2,430	3,460	6,093	6,256	10,062	3,806	2,421	2,048	4,105	5,570	8,483
Total estimated escapement	15,000	40,000	25,000	24,717	38,000	30,000	30,000	35,000	25,000	15,000	21,500	31,200	42,849	70,690

Appendix C.1. Southeastern District Mainland fishery regulatory history, 1970-2003.

Year	Management Plan
Pre-1974	Set weekly fishing periods, usually 5 days per week
1974-77	Day for day fishing with Chignik
1978	3 days per week, seine gear prohibited before July 10
1979-84	5 days per week, 60,000 catch ceiling (until Chignik catches 1 million) After 7/10 entire SEDM managed on local stocks.
1985-91	Assures minimum harvest in Chignik of 600,000 sockeye salmon, restricts fishing in SEDM during overlap period (6/26-7/9), allows 6% (6.2%-1985-87) allocation of total Chignik sockeye salmon harvest through 7/25, permits openings in Stepovak Flats and Northwest Stepovak Sections based on local runs
1992-95	Area managed on local sockeye salmon runs reduced to include only Orzinski Bay (Stepovak Flats Section not effected), increased allocation of Chignik sockeye harvest from 6% to 7%
1996-97	Area managed on local sockeye runs increased to include the Northwest Stepovak Section beginning July 1, reduced allocation of Chignik sockeye salmon harvest from 7% to 6%
1998-present	Beginning July 1, only Orzinski Bay was managed entirely on its local sockeye salmon run. However, all sockeye salmon caught in the Northwest Stepovak Section beginning July 1 were considered 100% local fish and were not counted toward the 6% allocation. The remainder of the SEDM sockeye salmon harvest was allocated as 80% Chignik bound fish. Assures minimum Chignik Management Area harvest of 300,000 sockeye salmon by July 8 and 600,000 by July 25. The maximum allowable fishing time in the Northwest Stepovak Section (excluding Orzinski Bay) during July 1-25 is four days within a seven day period with no more than two consecutive fishing days.