4K91-5

SOUTHEASTERN DISTRICT MAINLAND (ALASKA PENINSULA AREA) MANAGEMENT PLAN

By

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Regional Information Report[1] No. 4K91-5

Alaska Department of Fish and Game
Division of Commercial Fisheries
211 Mission Road
Kodiak, Alaska

April 1991

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MANAGEMENT PLAN

East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections

The Southeastern District Mainland (Balboa-Stepovak) fishery (Figure 1) will be managed according to the Southeastern District Management Plan (Appendix A) as adopted by the Alaska Board of Fisheries.

The East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections will be managed on the basis of the interception of Chignik River sockeye salmon. The Northwest Stepovak and Stepovak Flats Sections will be managed on a local stock basis, the Northwest Stepovak Section on the basis of the Orzinski Lake sockeye salmon stock and the Stepovak Flats Section on the basis of the Stepovak River chum salmon stock.

When possible, fishing time in the Southeastern District Mainland fishery will coincide with other nearby fisheries to avoid concentrating fishing gear. At least 36 hours notice will be given prior to the first commercial fishing period in the fishery. At least 24 hours notice will be given prior to the opening of any other fishing period, unless it is an extension of a fishing period in progress.

For salmon fishing, set gill net gear is the only legal gear type allowed in the Southeastern District Mainland fishery through July 10. After July 10, set gill net, purse seine, and hand purse seine gear types are allowed.

The forecasted midpoint harvest for the Chignik sockeye salmon runs for 1991 are 2,363,000 salmon for the early run and 890,000 salmon for the second run (Appendix B). If the runs come in as expected and the goals of the management plan are achieved, about 180,000 estimated Chignik destined sockeye salmon will be harvested prior to July 26. This compares to the recent five year average of 83,459 and 10 year average of 130,382 (Table 1).

The total Chignik sockeye salmon catch is 100% of those sockeye salmon caught within the Chignik Management Area, plus 80% of those sockeye salmon caught in the Cape Igvak Section of the Kodiak Management Area, plus 80% of those sockeye salmon caught in the Southeastern District Mainland fishery excluding 100% of those sockeye salmon caught in the Suzy Creek to Dent Point area.

Because the harvestable surplus is expected to exceed 600,000 sockeye salmon, the Southeastern District Mainland fishery may open after the first commercial fishing period in the Chignik Area. Based on the 2,363,000 sockeye salmon early run harvest forecast, it is possible that the first opening for the Southeastern District Mainland fishery could be in early to mid June.

If the first run fails to develop as expected, the Southeastern District Mainland fishery will be curtailed in order to allow a minimum harvest in the Chignik Area of at least 300,000 sockeye through July 8, if that many salmon are surplus to escapement requirements.

During the period from about June 26 through July 9, the strength of the second run of Chignik River sockeye salmon cannot be evaluated at Chignik. To prevent

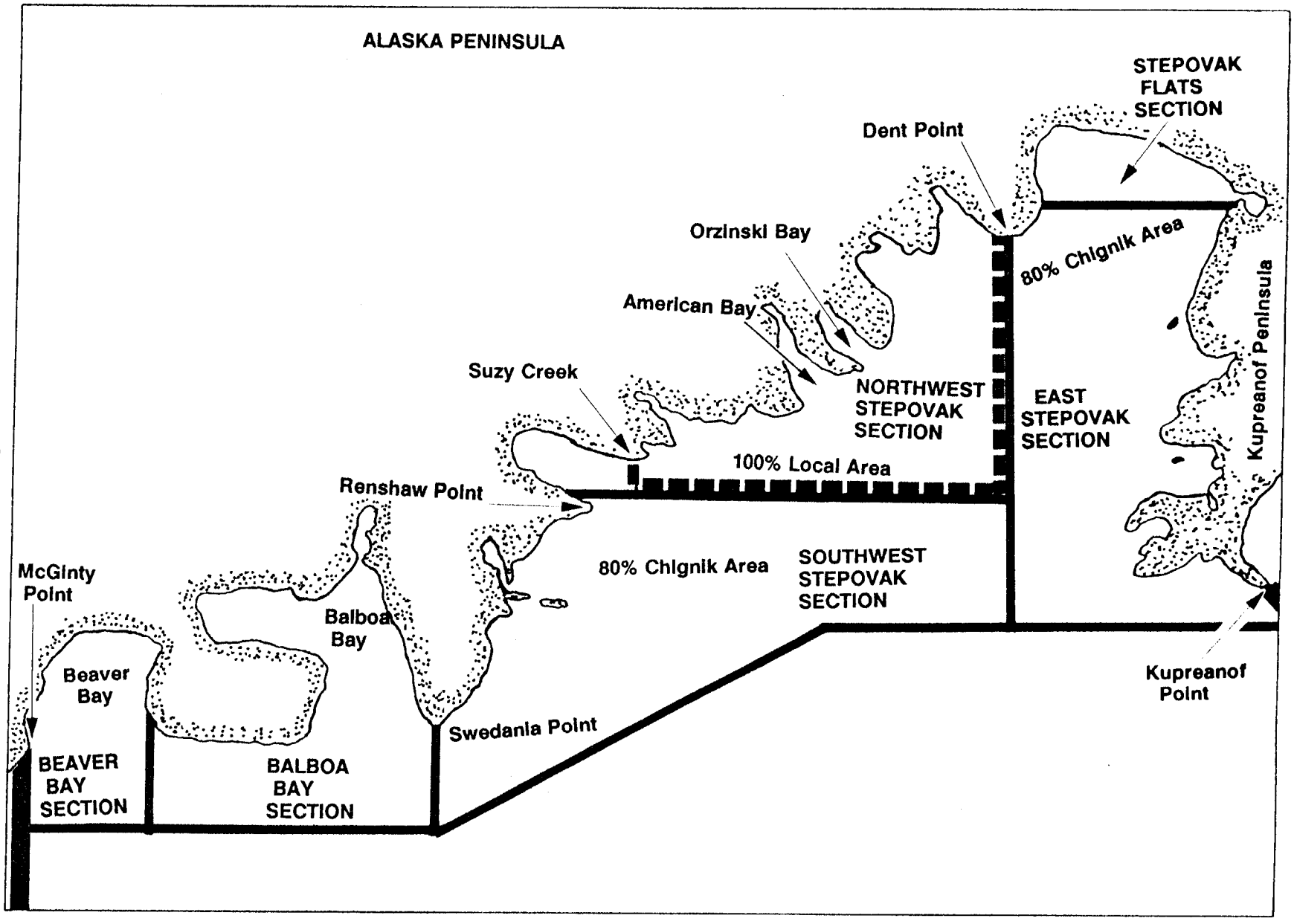

Figure 1. Map of the Southeastern District Mainland fishery from Kupreanof Point to McGinty Point with the salmon sections shown.

Table 1. Southeastern District Mainland fishery catch of Chignik destined sockeye salmon through July 25, 1980-90.[1]

Year	Number of Salmon			
	Total Catch	Northwest Stepovak	Total Catch Minus Northwest Stepovak	Chignik Bound Catch[1]
1981	201,711	49,374	152,337	121,870
1982	86,793	8,334	78,459	62,767
1983	300,158	15,918	284,240	227,392
1984	595,043	66,209	528,834	423,067
1985	80,957	16,681	64,276	51,421
1986	206,532	59,025	147,507	118,006
1987	244,895	61,287	183,608	146,886
1988	81,160	57,010	24,150	19,320
1989	89,224	83,618	5,606	4,484
1990	164,028	3,279	160,749	128,599
Average:				
5 Year	157,168	52,844	104,324	83,459
10 Year	205,050	42,074	162,977	130,382

[1] The estimate of sockeye salmon destined for the Chignik River has been determined to be 80% of the sockeye salmon harvested along the mainland from the eastern most tip of McGinty Point to Suzy Creek and from the Stepovak Flats and the East Stepovak Sections.

overharvest of the second run, commercial salmon fishing in the Southeastern District will, in the Department's discretion, be disallowed or severely restricted during this time period.

After July 8, fishing time in the Southeastern District Mainland fishery will be dependent upon the strength of the second run as evaluated at Chignik and on the catch of Chignik bound sockeye during the first run at Cape Igvak, Chignik, and the Southeastern District Mainland fisheries. When the second run appears strong enough for a fishery at Chignik, the Southeastern District Mainland will open if at least 300,000 sockeye salmon were harvested in the Chignik Area. The Department will manage the fishery so that the number of sockeye salmon harvested in the Chignik Area from both runs combined will be at least 600,000 salmon and the harvest in the Southeastern District Mainland will approach as near as possible 6.0% of the total Chignik bound sockeye salmon catch (Appendix C), if that many sockeye salmon are surplus to escapement requirements.

The fishery shall be managed according to the plan as stated in the 1990-1991 Bristol Bay and Westward Alaska commercial salmon fishing regulation book (Appendix A). No attempt will be made to allow equal fishing time with Chignik, as had been done from 1974 through 1977, but rather the end goal will be to meet the 6.0% allocation level after the conditions of the management plan have been satisfied. To meet the goal of 6.0% by July 25, the percentage may fluctuate above or below 6.0% prior to July 25. Because of the restrictions placed upon the Southeastern District Mainland fishery to protect the Chignik runs, it may not be possible to achieve a 6.0% allocation level even though escapement goals are met and the minimum catch level of 600,000 salmon at Chignik is exceeded.

Local Stocks

The Northwest Stepovak and Stepovak Flats Sections will be managed on a local stock basis. The Northwest Stepovak Section will be managed on the basis of the Orzinski Lake sockeye salmon stock from July 1 through July 25, after July 25 on local sockeye and pink salmon runs. The Stepovak Flats Section will be managed on the basis of the Stepovak River chum salmon stock.

Northwest Stepovak Section

The sockeye escapement goal for Orzinski (Orzenoi) Lake is 10,000 to 20,000 salmon as estimated from the production potential of the lake (personnel communication, Arnie Shaul, Alaska Department of Fish and Game, Kodiak, Alaska). In 1991, the total estimated sockeye escapement was 15,000 salmon. ADF&G intends to operate a weir on the Orzinski system in 1991, similar to the 1990 weir.

A weir was used to count escapements into the lake from 1935 to 1941, and in 1990. The earliest recorded sockeye escapement occurred on June 11, 1940 (11 salmon), while the usual pattern of first entry into the lake is about June 17. July 17 is the average date of 50% cumulative sockeye escapement, while on the average 99% of the escapement occurs by August 7. Based on aerial surveys and weir counts, sockeye salmon escapement requirements for Orzinski Lake by time periods has been developed (Table 2).

Table 2. Sockeye salmon escapement requirements for Orzinski Lake.

Time Period	Cumulative Escapement Goal
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

Through June 30, 1991, the Northwest Stepovak Section (except Orzinski Bay) will be open on a day per day basis with the rest of the Southeastern District Mainland fishery. Sockeye salmon caught within the Northwest Stepovak Section through June 30 will be allocated 100% to the Orzinski Lake run. From July 1 through July 25, fishing time in the Northwest Stepovak Section will be based on the strength of the sockeye salmon run destined to Orzinski Lake. After July 25, fishing time will be based on local sockeye, pink, and chum salmon stocks. If the sockeye salmon escapement into Orzinski Lake, school near the mouth of the Orzinski Lake River and escapement goals are not met, Orzinski Bay will be closed north of a line from Elephant Point (55°41'55" N.lat., 160°03'12"W.long.) to Waterfall Point (55°43'13" N.lat., 160°01'05" W.long.).

Stepovak Flats Section

The Stepovak Flats Section will be managed on the basis of the chum salmon run into Stepovak River (local stock basis). Through July 11, this section will open to commercial salmon fishing on a day per day basis with the remainder of the Southeastern District Mainland fishery. Sockeye harvested in this section will be assigned as 80% Chignik bound and are included as part of the 6.0% allocation of the Southeastern District Mainland fishery. After July 10, the Stepovak Flats Section will be managed on the basis of the chum salmon run into Stepovak River. Fishermen are reminded that most of this section is closed to commercial salmon fishing from July 29 through September 30 (5 AAC 09.350(23)).

LITERATURE CITED

ADF&G (Alaska Department of Fish and Game). 1990. 1990-1991 Bristol Bay and Westward Alaska commercial fishing regulations salmon and miscellaneous, 1990 edition. Alaska Department of Fish and Game, Division of Commercial Fisheries, Juneau.

Shaul, A.R., J.N. McCullough, A.J. Quimby, M.E. Stopha, and R.S. Berceli. *In Press.* 1990 Alaska Peninsula and Aleutian Islands Management Areas Salmon and Herring Annual Management Report, Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report, Kodiak.

Appendix A

5 AAC 09.360. SOUTHEASTERN DISTRICT SALMON MANAGEMENT PLAN.

(a) This plan pertains to the management of the interception of Chignik River sockeye salmon caught in the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections. Before July 11, only set gillnet gear may be used in these sections. For the purpose of this plan, local runs include only those salmon in the waters inside of a line from Renshaw Point to the mouth of Osterback Creek.

(b) In years when a harvestable surplus for the first (Black Lake) and second (Chignik Lake) runs of Chignik River system sockeye salmon is expected to less than 600,000, no commercial salmon fishery is allowed in the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections, as described in 5 AAC 09.200 (f), until a harvest of 300,000 sockeye salmon in the Chignik Area, as described in 5 AAC 15.100, is achieved. After July 8, after at least 300,000 sockeye salmon have been harvested in the Chignik Area, and if escapement goals are being met, the department shall manage the fishery so that the number of sockeye salmon harvested in the Chignik Area will be at least 600,000 and the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections approaches as near as possible 6 percent of the total Chignik sockeye salmon catch.

(c) In years when a harvestable surplus beyond escapement goals for the first and second runs of Chignik River system sockeye salmon is expected to be more than 600,000 but the first run fails to develop as predicted and it is determined that a total sockeye salmon harvest in the Chignik Area of 600,000 or more may not be achieved, the commercial salmon fishery in the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections must be curtailed in order to allow at least a minimum harvest in the Chignik Area of 300,000 sockeye salmon by July 9 if that number of fish are determined to be surplus to the escapement goals of the Chignik River system. After July 8 and after at least 300,000 sockeye salmon have been harvested in the Chignik Area, and if escapement goals are being met, the department shall manage the fishery so that the number of sockeye salmon harvested in the Chignik Area is at least 600,000 and the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections approaches as near as possible 6 percent of the total Chignik sockeye salmon catch.

(d) In years when a harvestable surplus beyond the escapement goals for the first and second runs of Chignik River system sockeye salmon is expected to be more than 600,000 and the department determines that the runs are as strong as expected, the department shall manage the fishery so that the number of sockeye salmon taken in the East Stepovak, West Stepovak, Balboa Bay, and Beaver Bay Sections approaches as near as possible 6 percent of the total Chignik sockeye salmon catch.

(e) The estimate of sockeye salmon destined for the Chignik River has been determined to be 80 percent of the sockeye salmon harvested along the mainland from the eastern-most tip of McGinty Point to Suzy Creek and from the Stepovak Flats and the East Stepovak Sections. The remaining sockeye salmon taken in the mainland fishery have been determined to be destined for Orzinski Bay.

(f) The total Chignik sockeye salmon catch constitutes those sockeye salmon caught within the Chignik Area, plus 80 percent of the sockeye salmon caught in

the East Stepovak, Stepovak Flats, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections, as described in 5 AAC 09.200(f), plus 80 percent of the sockeye salmon caught in the Cape Igvak Section of the Kodiak Area. The percentage of Chignik sockeye salmon may be permitted to fluctuate above or below 6 percent at any time before July 25.

(g) This allocation method is in effect through July 25. The first fishing period of the commercial salmon fishing season in the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections may not occur before the first fishing period of the commercial salmon fishing season in the Chignik Area. After July 25, commercial salmon fishing in the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections may be allowed on local stocks.

(h) During the period from approximately June 26 to July 9, the strength of the second run of the Chignik River system sockeye salmon cannot be evaluated. In order to prevent overharvest of the second run, the department may disallow or severely restrict commercial salmon fishing in the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Section during this period.

(i) The department shall announce commercial salmon fishing periods by emergency order. The department shall give at least one day's notice before the opening of a commercial salmon fishing period, unless it its an extension of a fishing period in progress.

Appendix B

FORECAST AREA: Chignik Management Area

PRELIMINARY FORECAST OF THE 1991 RETURN

Early Run (Black Lake stocks)	Point	80% Prediction Range
Escapement Goal:	400,000	
Harvest Estimate:	2,363,300	
Return Estimate:	2,763,300	2.34 to 3.18 million

Late Run (Chignik Lake stocks)	Point	80% Prediction Range
Escapement Goal:	250,000	
Harvest Estimate:	890,000	
Return Estimate:	1,140,000	0.91 to 1.37 million

Total Chignik Run	Point	80% Prediction Range
Escapement Goal:	650,000	
Harvest Estimate:	3.25 million	
Return Estimate:	3.90 million	3.12 to 4.68 million

FORECAST METHODS:

The estimated return to Black Lake provided above is the summation of the predicted returns of two and three ocean sockeye while the Chignik Lake returns are calculated using all contributing age classes.

The Black Lake forecast is based on the historical relationship between the prior year total return of age 1.2 fish, the average length of prior year age 1.2 male fish and the parent year escapement. These variables provide the framework for the multiple linear regression model used to predict the 1991 return. The Chignik Lake forecast has historically been quite variable in its accuracy and developing a model such as the one used for the first run has been unsuccessful. The forecast for 1991 was derived using an average return per spawner for each age class represented in the return.

DISCUSSION OF THE 1991 FORECAST:

Early Run

The estimated return of Black Lake sockeye salmon in 1991 is 2.76 million fish. This is approximately 1.2 million fish more than the 1980-89 average run of 1.57 million fish. The 1986 parent year escapement was 566,100 fish, 166,100 fish above the 400,000 fish escapement goal. The estimated return of 335,200 age 1.2 fish in 1990 was twice the 10 year average of 160,000. The 1990 1.2 return was also only 53,000 less than the 1983 1.2 return of 388 thousand which preceded the record run of 3.84 million in 1984.

Late Run

The estimated return of second run sockeye salmon in 1991 is 1.14 million fish, 40,000 more than the 1980-89 average of 1.10 million fish. The second run forecast has historically been quite variable when compared to actual returns. The 1985 parent year escapement of 369,200 fish was 119,200 above the 250,000 desired escapement goal. The average return per spawner for each contributing age class was used to forecast the return and it is anticipated that the actual return will fall within the prediction bounds.

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Appendix C

5 AAC 39.200 APPLICATION OF FISHERY MANAGEMENT PLANS.

(a) The Board of Fisheries has implemented by regulation fishery management plans that provide the Department of Fish and Game with guidelines to be followed when making management decisions regarding the state's subsistence, commercial, sport and personal use fisheries. The primary goal of these management plans is to protect the sustained yield of the state's fishery resources while at the same time providing an equitable distribution of the available harvest between various users. The regulations contained in this section are intended to aid in the achievement of that goal and therefore will apply to all fishery management plans contained in 5 AAC 03-5 AAC 39.

(b) In some fishery management plans, the distribution of harvestable fish between various users is determined by the harvest that occurs during a specific time period, at a specific location, or by a specific group or groups of users. At times fishermen, due to circumstances that are beyond the control of the department, such as weather or price disputes, will not harvest fish. When this happens in a fishery governed by a management plan, the goals of the plan may not be achieved. Therefore, when a fishery is open to the taking of fish and the group or groups of users whose catch determines the distribution of the harvest as set out in the applicable management plan are not taking the harvestable fish available to them, the department shall manage the fishery as if the available harvest is being taken. When determining the available harvest, the department shall consider the number of fish needed to meet spawning requirements, the number of fish present in the fishery and in spawning areas that are in excess to spawning requirements, and the estimated harvesting capacity of the group or groups of users that would normally participate in the fishery.