

YAKUTAT SET GILLNET FISHERY

1993 MANAGEMENT PLAN



Regional Information Report No.¹ 1J93-11

Alaska Department of Fish and Game
Division of Commercial Fisheries
Southeast Region
Juneau, Alaska

May 1993

¹ The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished divisional reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate timely reporting of recently collected information, reports in this series undergo only limited internal review and may contain preliminary data; this information may be subsequently finalized and published in the formal literature. Consequently, these reports should not be cited without prior approval of the author or the Division of Commercial Fisheries.

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
Anticipated Salmon Returns	1
Fishery Management	1
1993 SUMMER MANAGEMENT PLAN	2
Alsek River	2
East River	3
Situk-Ahrnklin and Lost River	4
Yakutat Bay	6
Monti Bay and Manby Shore Ocean Fisheries	6
Manby Shore Inland Fishery	7
Humpback Creek Fishery	7
Akwe River	7
Italio River	8
Yakataga District	8
1993 FALL MANAGEMENT PLAN	8
Yakutat District	9
Yakataga District	9
YAKUTAT AREA-1993 SALMON RUN PROJECTIONS	9
Sockeye	9
Alsek River	9
East River	10
Akwe River	10
Italio River	10
Lost River	10
Situk River	10

TABLE OF CONTENTS (Cont.)

	<u>Page</u>
Coho	10
Tsiu/Kaliakh River	10
Areawide	10
FISHERY CONTACTS	11

INTRODUCTION

The Yakutat Area encompasses the waters of Alaska between Cape Suckling and Cape Fairweather. The area is divided into two fishing districts: the Yakataga District between Cape Suckling and Icy Cape, and the Yakutat District between Icy Cape and Cape Fairweather. All five salmon species are harvested in the Yakutat Area, with sockeye, coho, chinook, and pink salmon comprising the majority of the catch in that order of importance.

Set gillnet gear is the only net gear permitted in the Yakutat Area. About 170 commercial setnet entry permits are renewed annually. Setnet permit holders in the Yakutat Area do not have registered sites and may fish in any open fishing area. They may also move between fishing areas during the season, as long as not more than one river is fished concurrently.

There are 25 unique fisheries in the area. Most target sockeye salmon from mid-June through July; coho salmon dominate the catch in August and September. The only targeted pink salmon fishery occurs in the southeast portion of Yakutat Bay and it harvests fish returning to Humpback Creek. Set gillnet fisheries in the Yakataga District harvest primarily coho salmon.

Anticipated Salmon Returns

Overall salmon catches in the Yakutat Area are currently below historic peak levels. Annual catches as high as 800,000 fish have been recorded, while the 1983-1992 average annual catch was 442,000. Historic high catches may have over-exploited the stocks and may not be sustainable. In 1992, about 632,000 salmon (77% of the total Yakutat area commercial salmon catch) were harvested by setnet gear. The remainder of the salmon catch, approximately 190,000 fish, was harvested in the commercial troll fishery.

No formal forecast program exists for the Yakutat salmon runs. Preseason expectations are based on known or estimated, parent-year spawning escapements and commercial catches, local observations of rearing conditions and, in some cases, the strength of certain year classes. The 1993 Yakutat area salmon runs are expected to be average to below average for sockeye salmon, average to slightly above average for coho salmon, and below average for pink salmon. (See page 13 for selected run projections)

Fishery Management

Set gillnet fisheries in the Yakutat area are managed by adjusting fishing times and areas in each fishery in response to inseason assessments of run strength. These actions are taken to provide adequate spawning escapements and to allow harvests of salmon that are surplus to escapement goals. Inseason assessment methods include both fishery performance and spawning escapement information. In the glacial systems, fishery performance data is utilized for management because poor visibility prevents the accurate observation of spawning escapements.

During 1993, the major fishing areas can be expected to open on the following dates:

Yakutat District

Area	Opening Date
Yakutat Bay (south of 59°40' N.lat.)	14 June
Dangerous River	14 June
Eastern Situk-Ahrnklin Lagoon (approximately 2 miles)	14 June
Alsek River	14 June
Manby Shore Ocean	21 June
Lost River	21 June
Situk-Ahrnklin Lagoon	21 June
East River	28 June
Akwe River	28 June
Remainder of the Yakutat District	28 June
Italio River	by Emergency Order

Yakataga District

Season	Opening Date
Sockeye Season	16 June (except Tsiu River closed)
Coho Season	by Emergency Order

1993 SUMMER MANAGEMENT PLAN

This management plan concentrates on the major fisheries in the Yakutat area. Information on areas that are fished only occasionally is available from the Yakutat Area Management Biologist listed at the end of the plan.

Alsek River

The Alsek River, located 45 miles southeast of Yakutat, is a major transboundary river that drains a large area east of the coastal mountain range. It extends approximately 130 miles from its mouth, upriver into

the Yukon Territory of Canada. The U.S./Canada border is approximately 40 miles upstream from the river mouth. The river supports large populations of chinook, sockeye, and coho salmon, and small populations of pink and chum salmon. Alaskan set gillnet fisheries target on sockeye and coho salmon. Canadian subsistence and sport fisheries target on sockeye and chinook salmon.

Commercial salmon landings from the Alaskan portion of the Alsek River have averaged approximately 14,700 sockeye, 4,300 coho, and 190 chinook salmon annually (1988-1992). The Canadian subsistence and sport harvest has averaged approximately 535 chinook, 2,000 sockeye, and 100 coho salmon during the same period. Subsistence and sport fisheries in the Alaskan portion of the river are relatively minor, harvesting about 180 salmon annually.

Historically, a set gillnet fishery which targeted on chinook salmon was conducted during May in the Alaskan portion of the river. However, due to depressed runs, the directed fishery has been closed since 1962 and chinook salmon are harvested only incidentally during the sockeye salmon fishery in early June. The 1993 run of chinook salmon is not expected to produce fish surplus to the Klukshu River escapement goal of 4,700.

The initial Alsek River opening will be 24 hours beginning 12:01 p.m., Monday, June 14 and extending through 12:00 noon Tuesday June 15. This represents a one week delay from the date scheduled in the published regulations. The Alsek sockeye run is expected to be below average in 1993. The primary brood year (1988) early run Klukshu River weir escapement was only 585 sockeye; the late run was only 8,756. Subsequent fishing time will be based on a comparison of current year fishery performance (catch and effort) in relation to historical performances. However, because of the poor Klukshu River escapement in 1988, weekly fishing periods are expected to be limited in 1993.

To reduce the incidental harvest of chinook salmon, gillnet mesh-size will be restricted to a maximum of six inches through July 1. Set gillnet fishers are encouraged to reduce the incidental harvest of chinook salmon as much as possible. Reducing the impact on chinook should help afford more fishing time in the future on early season sockeye returns.

The Alsek River surf fishing area is expected to be open during the same periods as the inriver fishery. The surf fishing area includes the shoreline, 0.75 of a mile in each direction, from the river mouth to the outermost bar where the surf breaks.

East River

The East River is a short, clear river originating from the upwellings and local drainage of the eastern portion of Dry Bay. The river produces good runs of sockeye, coho and chum salmon. Commercial fishing occurs two miles upstream from the mouth, and in the adjacent ocean waters within two miles of the mouth, in each direction out to 500 yards from the shore at low tide. The surf and ocean area is open during the same periods as the inriver fishery. East River salmon catches have averaged about 111,600 sockeye, 10,400 chum, and 12,000 coho salmon (1988-1992). In recent years, the East River has been one of the most productive sockeye salmon fisheries in the Yakutat area.

The East River sockeye salmon season opens by regulation on the fourth Monday of June (June 28). The duration of weekly fishing periods and open areas will be based on escapement observations, effort levels,

and fishery performance. A minimum aerial index escapement goal of 30,000 sockeye has been established for the East River. As in recent years, upriver closures may be necessary during high water periods to reduce the harvest of poor quality fish that "back out" of the closed area.

The sockeye salmon season is expected to continue until late August. The 1989 parent-year escapement was estimated at 30,500 fish. An average return from 30,500 spawners would yield a surplus of about 89,000 fish.

Situk-Ahrnklin and Lost River

The Situk-Ahrnklin Inlet is the site of the oldest and, historically, the most productive fishery in the Yakutat area. Located about nine miles by road from Yakutat, the Situk-Ahrnklin fishery normally supports the largest concentration of fishing effort in Yakutat of up to 96 permits. Fishing occurs primarily in the inlet, although some fishing occurs at the river mouth and in the adjoining surf fishing area. Sockeye salmon make up the major portion of the harvest during the summer, while coho salmon dominate the catch during the fall. Situk-Ahrnklin catches have averaged about 93,600 sockeye, 73,900 coho, 19,700 pink, and 500 chinook salmon (1988-1992). The sockeye escapement goal for the Situk River drainage is 40,000 to 55,000 fish through the weir.

Based on spawner-recruit information, the 1993 Situk-Ahrnklin sockeye salmon run is expected to be less than the 1992 return. The 1988 brood year Situk River sockeye escapement was 46,700 fish. The 1993 Situk River sockeye catch is expected to be around 90,000 fish split between the Situk, Lost, Yakutat Bay and Manby Shore Ocean fisheries.

The June 14 opening date for the eastern part of the Situk-Ahrnklin Inlet is set in anticipation of a surplus of Ahrnklin River sockeye. Run timing of Ahrnklin sockeye is generally earlier than Situk sockeye. Evidence of the earlier timing and strength of the Ahrnklin River sockeye was seen when approximately 10,000 sockeye were harvested during the second week of June openings in 1990 and 1991. Age composition analysis indicates that most of the harvested sockeye were freshwater age-0; distinguishing them from Situk stocks. The parent-year (1989) escapement to the Ahrnklin was average and surplus production is anticipated. During the second week of June, fishing will be confined to the eastern end of the Situk-Ahrnklin Inlet with a 24-hour opening. After the first opening, fishing periods will be based on run strength as indicated by fishery performance and by escapements through the Situk River weir. A run-timing model will be used to estimate the total Situk River sockeye run beginning after several weeks of harvest and escapement data is available. A similar model will be used to project Situk chinook salmon abundance.

Since chinook salmon are taken incidentally in the set gillnet fishery, the Situk commercial catch of chinook is largely dependent on the fishing time allowed for sockeye. If the chinook salmon return is weak and the sockeye return is average or above average, conservation actions may be necessary to reduce the incidental harvest of chinook salmon.

At the 1991 Board of Fisheries meeting, the Board adopted the following Situk-Ahrnklin Inlet and Lost River Chinook Management Plan for the Situk-Ahrnklin Inlet and Lost River:

1. If the projected escapement of chinook salmon to the Situk River weir is less than 350 large chinook (three ocean age and older) the department will close the Situk River subsistence, commercial, and recreational fisheries, and close the commercial troll fishery in state waters between loran lines 7960-Y-30390 and 7960-Y-30200.
2. If the projected escapement of chinook salmon to Situk River weir is between 350 and 450 large fish (three ocean age and older), the department shall:
 - A. Implement restrictions in the commercial fisheries by emergency order that shall include the following:
 - i. Establish a "non-sale" chinook salmon season in the Situk-Ahrnklin Inlet and Lost River set gillnet fisheries;
 - ii. Close the commercial troll fishery in state waters between loran lines 7960-Y-30390 and 7960-Y-30200;
 - iii. Restrict the weekly fishing periods in the Situk-Ahrnklin Inlet and Lost River set gillnet fisheries.
 - B. Close the sport fishery for chinook salmon in the Situk River.
3. If the projected escapement of chinook salmon to Situk River weir is between 450 and 750 large fish (three ocean age and older), the department shall:
 - A. Implement restrictions in the commercial fisheries by emergency order that shall include one or more of the following:
 - i. Establish a "non-sale" chinook salmon season in the Situk-Ahrnklin Inlet and Lost River set gillnet fisheries;
 - ii. Close the commercial troll fishery in state waters between loran lines 7960-Y-30390 and 7960-Y-30200;
 - iii. Restrict the weekly fishing periods in the Situk-Ahrnklin Inlet and Lost River set gillnet fisheries.
 - B. Restrict the sport harvest of chinook salmon in the Situk River by one or more of the following options:
 - i. Portions of the river may be closed to chinook salmon sport fishing;
 - ii. Only unbaited, artificial lures may be used:

- iii. Only catch and release sport fishing for chinook salmon over 16 inches may be allowed.
4. When the projected escapement of chinook salmon to the Situk River weir is greater than 750 large fish (three ocean age and older), the department shall:
 - A. Manage the commercial set gillnet fisheries in the Situk-Ahrnklin Inlet and Lost River based on sockeye salmon run strength.
 - B. Provide a sport fishery for chinook salmon during which the bag limit is one chinook salmon over 16 inches in length and the seasonal limit from June 1 through August 31 is two chinook salmon over 16 inches in length. If a chinook salmon seasonal limit is imposed, each angler shall immediately record the catch on the Situk River chinook salmon catch record.

Steelhead trout in post-spawning condition occasionally accumulate in the Situk River prior to the time that they emigrate to the ocean. When the emigration is late, there is a potential for the Situk setnet fishery to harvest a larger than normal number of adults. The rate of emigration of spawned-out steelhead often increases following periods of heavy rainfall. If a major emigration is expected to occur during a scheduled gillnet fishing period, the opening may be delayed for a few days to reduce the incidental harvest of steelhead.

Because the Lost River is located only a short distance from the Situk River, fish from both rivers are harvested in the Lost River fishery. The Lost River is usually opened for the same weekly fishing periods as established for the Situk River fishery during the summer sockeye season. However, if extensive fishing periods become necessary on the Situk River, it may not be possible to maintain the same weekly periods for the Lost River because of the smaller stock size. The management strategy for the Lost River will depend primarily on the abundance of the Lost River sockeye return.

Yakutat Bay

There are three distinct set gillnet fisheries in Yakutat Bay. The Monti Bay fishery occurs in the ocean waters of Yakutat Bay south of 59°40' N. latitude and opens by regulation on the second Monday of June. The Manby Shore Ocean fishery encompasses the ocean waters of Yakutat Bay north of 59°40' N. latitude and opens the third Monday of June by regulation. The Manby Shore Inland fishery opens by regulation on the fourth Monday of June and includes the streams along the northern shore of Yakutat Bay.

Monti Bay and Manby Shore Ocean Fisheries

Both the Monti Bay and Manby Shore Ocean fisheries harvest mixed stocks of sockeye salmon. Tag recovery data collected in 1987 indicated that a major portion of the Monti Bay sockeye harvest was of Situk origin. Due to the high Situk River sockeye contribution to the Monti Bay fishery and the Manby Shore Ocean fishery, both fisheries will be managed to conserve or harvest Situk River sockeye from the third week in June through the third week of July. The Monti Bay fishery will open by regulation on

Monday June 14. The weekly fishing period will be limited to a maximum of 4.5 days due to the mixed stock nature of the ocean fisheries, and the potentially adverse impact on weaker Yakutat area stocks.

The Manby Shore Ocean fishery will open by regulation on Monday, June 21. Weekly fishing periods will depend on Situk River sockeye salmon run strength assessment. Adequate harvest is expected in the terminal area fisheries, and the Monti Bay and Manby Shore Ocean fisheries are expected to be limited in duration.

Manby Shore Inland Fishery

Management of the Manby Shore Inland fisheries, waters upstream of the mean high tide line, will be based on the abundance of local stocks. During the summer, these fisheries harvest salmon primarily from Manby and Sudden Streams. A 2.5 day weekly fishing period can be expected during the initial opening period scheduled for June 28. Additional open periods will depend on fishery performance information.

Humpback Creek Fishery

The "Humpy Creek," fishery located in the southeastern portion of Yakutat Bay, targets pink salmon. A below average run is expected at Humpy Creek for the 1993 season, given the below average 1991 parent-year spawning escapement of 8,000. Inseason management of this fishery will be based on observed pink salmon escapement to Humpy Creek and the availability of pink salmon in the Yakutat Bay fishery.

Akwe River

The Akwe River is a glacial river system located about 35 miles south of Yakutat. The lower seven miles of the river are wide and shallow and flow parallel to the beach before entering the ocean. The commercial fishery occurs in this lower portion of the river. The 1988-1992 average Akwe River harvest was approximately 6,500 sockeye, 8,000 coho, and 160 chinook salmon.

The Akwe River parent-year (1988 and 1989) sockeye salmon catches were above average and it is likely that the sockeye return for 1993 will be above average. Decreased sockeye salmon production in the last two years has resulted in a reduction of fishing effort. In spite of the reduced effort, fishery performance has not improved and reductions in the normal 2.5 day weekly fishing period have been necessary. Data from 1991 indicate that this is a highly efficient fishery, with a removal rate of approximately 50%, even though the effort in 1991 was about half that of previous years. The sockeye fishery is scheduled to open by regulation on June 28 and the season should extend through early August. Inseason management will be based on fishery performance and effort levels.

The Akwe River will be open upstream of the markers located about 0.5 miles above the confluence with the Italo River to the upper markers located 2.5 miles downstream from the westernmost end of the "Sand Dunes", a fishing area of about four miles.

Italo River

The Italo River, located adjacent to the Akwe River, supports small runs of sockeye and coho salmon. The course of the Italo River changed and flowed into the lower Akwe River during the winter of 1986-1987, and both rivers now share a common mouth. Both Italo and Akwe salmon stocks are present in this area and for some distance upstream in each river. Determination of Akwe or Italo run strengths from fishing success in the junction area is not possible. Therefore, the junction and a portion of each river above the junction is closed to set gillnet fishing.

Harvest in the Italo River, including the Middle and Old Italo channels, has averaged approximately 1,500 coho salmon annually (1988-1992). The sockeye salmon fishery has not been open since 1987. The reason for the recent sockeye run failures is unknown since parent-year escapements were good. Historically, the Italo produced sockeye catches of over 20,000 fish. The Italo River fishery opens by emergency order when good escapements are observed. The parent-year escapements for this year's sockeye return were below average and no harvestable surplus is expected.

Yakataga District

The Yakataga District, except the Tsiu River, will initially open on Wednesday, June 16 for a 2.5 day period, from 6:00 a.m. Wednesday to 6:00 p.m. Friday. The duration of subsequent fishing periods will depend on effort levels and fishing success. The late-week fishing period is expected to be maintained until fall fishing begins on August 2.

1993 FALL MANAGEMENT PLAN

Fall fishing is directed primarily at harvesting coho salmon, although fall chum salmon contribute to the catches on the East River. The fall fishing season generally begins on the first Monday of August. At that time, the regulatory weekly fishing period changes in most areas to a 12:01 p.m. opening and 12:00 noon closing time.

During the fall, set gillnet fishing occurs in both the Yakutat and Yakataga Districts. In the Yakutat District, the fall coho salmon fishery occurs primarily in the same areas as the summer sockeye salmon fishery. In the Yakataga District, there are areas where only coho salmon fishing takes place.

No formal forecasts of coho salmon runs are available. However, due to average to below average parent-year runs in most systems in 1989, coho runs are expected to be average to slightly below average.

Yakutat District

Fall fishing will begin on August 2 in the Yakutat District, except in the East River where management will continue to be based on sockeye salmon run strength through most of August.

Inseason management of all Yakutat District fall fisheries will be based primarily on fishery performance data since inseason coho escapement information is very limited. The initial fishing periods can be expected to extend from 12:01 p.m. Monday through 12:00 noon Thursday, the normal fall weekly gillnet period specified by regulation.

Fishing time and area adjustments will be made for each river as needed for conservation. A closed area can be expected in the Yahtse River to protect schools of milling coho salmon at tributary mouths. The actual closed water area will be based on inseason observations of coho schooling behavior which is related to river flow conditions. Several small coho streams are located along the forelands west of the Yahtse River to Cape Yakataga. Most of these streams have very small numbers of spawning coho and cannot support inriver set gillnet fisheries. This entire area will remain closed until harvestable surpluses are evident.

Yakataga District

The major fisheries in the Yakataga District occur for coho salmon on the Kaliakh and Tsiu Rivers, located about 125 miles northwest of Yakutat. These two adjacent rivers will open by emergency order. The Tsiu River is the more productive of the two rivers; in recent years, catches have been about 45,000 coho salmon, while the Kaliakh harvest has averaged about 12,000 coho salmon. Parent-year (1989) escapement counts and harvest were above average, and the 1993 coho salmon return is also expected to be above average.

The Tsiu River opening date and fishing periods will be determined by the observations of escapement seen above and below the regulatory markers. The Kaliakh River will be open for sockeye fishing although no effort is expected prior to the early August coho fishery. The Kaliakh River weekly fall fishing periods will normally open from 9:00 a.m. Monday through 9:00 a.m. Thursday, beginning on August 2.

YAKUTAT AREA-1993 SALMON RUN PROJECTIONS

Sockeye

Alsek River

The parent-year escapement was 7,700 through the Klukshu Weir. The catch may range from 8,000 to 10,000.

East River

The parent-year escapement was estimated at 30,500. A average return per spawner would yield catch of about 89,000 fish, with an escapement of 30,000.

Akwe River

No reliable escapement counts are available for 1988 and 1989. However, commercial harvests were good in both years. A catch of 4,000 to 8,000 may be possible.

Italio River

Escapement was below average in 1988 and in 1989. Recent returns have been poor for unknown reasons. It is unlikely there will be a sockeye harvest this season.

Lost River

The parent-year escapement was below average. Catches will depend on Situk-Ahrnklin management. A strong return is not expected.

Situk River

The parent-year escapement was 46,700. A return per spawner of 3:1 with an escapement goal of 55,000, would result in a catch of about 90,000 split between the Situk, Lost, Yakutat Bay, and Manby Shore Ocean fisheries.

Coho

Tsiu/Kaliakh River

With normal effort levels, a catch of over 45,000 may be possible in the Tsiu River this year. In the Kaliakh River, a harvest of 4,000-7,000 fish is expected.

Areawide

Parent-year escapements were average to slightly below average in most areas. The run is not expected to be as strong as it was in 1992. The area wide set gillnet catch may range between 150,000 and 180,000 fish.

FISHERY CONTACTS

Following are Alaska Department of Fish and Game, Commercial Fisheries Division contacts regarding this management plan:

Scott Marshall
Region I Supervisor

P.O. Box 240020
Douglas, Alaska 99824
(907) 465-4260

Doug Mecum
Region I Management Biologist

P.O. Box 240020
Douglas, Alaska 99824
(907) 465-4258

Keith Weiland
Area Management Biologist

P.O. Box 49
Yakutat, Alaska 99689
(907) 784-3255

ADA Publications Statement

The Alaska Department of Fish and Game conducts all programs and activities free from discrimination on the basis of sex, color, race, religion, national origin, age, marital status, pregnancy, parenthood, or disability. For information on alternative formats available for this and other department publications, please contact the department ADA Coordinator at (voice) 907-465-4120, (TDD) 1-800-478-3648 or (fax) 907-586-6595. Any person who believes s/he has been discriminated against should write to: ADF&G, P.O. Box 25526, Juneau, AK 99802-5526; or O.E.O., U.S. Department of the Interior, Washington, DC 20240.