

1988 MANAGEMENT PLAN
YAKUTAT SET GILL NET FISHERY

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May 1988

Regional Information Report¹ No. 1J88-11

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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, and pink salmon comprising the majority of the catch in that order of importance. Set gill net gear is the only net gear permitted in the Yakutat Area, with approximately 140-160 commercial set net entry permits renewed annually. Set net permit holders in the Yakutat Area do not have registered sites and may fish in any open fishing area. They may also move between fisheries in the area during the season, as long as not more than one river is fished concurrently.

The overall salmon production in the Yakutat Area is currently below historical levels but shows signs of recovery. Catches as high as 800,000 fish annually have occurred while the recent ten year average catch is 370,000 fish. Set net gear accounted for approximately 414,000 salmon during the 1987 season which represented approximately 87% of the Yakutat total catch, with troll gear accounting for the remainder.

Each of approximately 11 different fisheries (plus a few more smaller systems that are fished on some years) are managed in-season using catch per unit of effort and escapement information. The poor visibility in many glacial streams prevents in-season observation of salmon spawning escapements. In those glacial systems, parent year escapement estimates and in-season catches are relied upon for management. The goal of in-season management is to regulate fishing time and area in each fishery to provide adequate escapements and allow a harvest of fish surplus to spawning escapement requirements.

During 1988, the various fisheries can be expected to open on the following dates:

- Alsek River - June 13
- East River - June 27
- Yakutat Bay (south of 59°40' N. lat.) - June 13
- Situk-Ahrnklin Lagoon - June 20
- Manby Shore - June 20
- Sudden and Manby Streams - June 27
- Lost River - June 20
- Italio River - Emergency Order Opening
- Remainder of the Yakutat District - June 27
- Yakataga District (except Tsiu River) - June 13
- Tsiu River - Emergency Order Opening

Since no formal forecast program exists for the Yakutat fisheries, expectations are derived from parent year commercial catch, spawning escapements, and local observations of rearing conditions. Expectations for the 1988 Yakutat Area fishing season are for average to above average sockeye salmon returns, average to above average coho salmon returns, and average pink salmon returns.

INDIVIDUAL FISHERIES

Most of the individual set gill net fisheries begin the season with targeted sockeye salmon fishing in mid-June. The sockeye salmon season generally extends into August, and by late August coho salmon dominate the catch. The only targeted pink salmon fishery occurs in the southeast portion of Yakutat Bay harvesting salmon returning to Humpy Creek. Set gill net fisheries in the Yakataga District harvest primarily coho salmon. However, in 1988, portions of the area will open in late June for exploratory sockeye fishing. Chinook salmon are harvested incidentally during the sockeye fisheries in some areas.

Alsek River

The Alsek River fishing area is located 45 miles southeast of Yakutat. It is a major transboundary river draining a large area east of the coastal range. It extends approximately 130 miles from its mouth up-river into the Yukon Territory of Canada. The U.S./Canada border is approximately 40 miles upstream from the river mouth. The Alsek River supports major populations of chinook, sockeye, and coho salmon, and small populations of pink and chum salmon. All of the chinook salmon, a majority of sockeye salmon, and approximately 50% of the coho salmon are thought to spawn in the Canadian portions of the drainage. A counting weir has been operated by the Canadians since 1976 on the Klukshu River, approximately 125 miles upstream of the Alsek River mouth. It is estimated that approximately 60% of the chinook and sockeye salmon of the Alsek River drainage are Klukshu River stocks.

Major fisheries on the Alsek River currently include the Alaskan commercial set gill net fishery in the lower 14 miles of the river and adjacent ocean waters, and Canadian sport and subsistence fisheries. Sport and subsistence fisheries in the Alaskan portion of the river are relatively minor, taking less than 200 salmon annually.

Alaskan Alsek River salmon landings have averaged approximately 15,000 sockeye, 4,600 coho, and 250 chinook salmon annually during the last five years. The comparable annual Canadian subsistence and sport harvest has averaged approximately 400 chinook, 3,000 sockeye, and 100 coho salmon. Historically, a chinook salmon directed set gill net fishery was conducted during May in the Alaskan waters of the river. However, due to depressed

returns, the directed fishery has been closed since 1962. Chinook salmon are harvested incidentally during the sockeye salmon fishery in early June.

The 1988 Alsek River sockeye salmon return is expected to be above recent year levels. Although the early portion of the return is expected to produce a harvestable surplus, the major strength of the sockeye run is expected from the later run segments, which enter the river beginning in mid-June. Gillnetters are cautioned that it is difficult to forecast sockeye salmon return strength to the Alsek River as was evident in 1987 when the return developed considerably below pre-season expectations. The department will need to monitor the 1988 fishery closely to evaluate run strength based on the current year information. The return of chinook salmon is not expected to produce any fish surplus to spawning needs.

As in 1987, the initial Alsek River opening for the 1988 season will be delayed for one week until the second Monday of June (June 13). This compares to a two-week delay that had been implemented from 1983 through 1986. Corresponding to this delayed opening, the Canadians have indicated a conservative management approach for their subsistence fishing season, until mid-August, to limit the harvest of early run sockeye salmon. These conservation efforts should lead to healthier early run sockeye returns in future years. The initial weekly fishing period will be 24 hours with the opening beginning at noon. The period will be closely monitored and could be extended if the return of early run sockeye salmon is of sufficient strength and the harvest of chinook salmon can be minimized. The duration of future fishing periods will be based upon inseason evaluation of sockeye salmon catches and effort levels.

As during recent years, a historical catch and escapement model will be used as a management tool to estimate total run size. This model has proved successful and will be an important component of the inseason management process. However, the model does not provide reliable estimates for the early portion of the return. Fisherman are encouraged to discuss the model with the department staff.

This early season opening is intended to harvest sockeye salmon. To minimize the incidental take of chinook salmon, gill nets will be restricted to a maximum mesh size of six inches through July 3. Set gillnetters are encouraged to minimize the incidental harvest of chinook salmon as much as possible to assist rebuilding of the depressed Alsek River chinook salmon stock.

The Alsek River sockeye salmon return is generally complete by early to mid-August. Following the sockeye salmon season, the fishery will be managed for harvesting coho salmon. Coho salmon management will be based on the comparison of the current year fishery performance with historical performance to determine fishing time.

The Alsek River surf fishing area can be expected to be open during the same time periods as the inriver fishery. The surf fishing areas includes the shoreline, 3/4 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 and clear river originating from upwellings and local drainages of the eastern portion of Dry Bay. The Doame River joins the East River approximately 4 miles upstream from the East River mouth. Relatively few sockeye salmon enter the Doame River drainage, which supports predominantly coho salmon. A large lagoon is located at the junction of the two rivers, where sockeye, chum, and coho salmon ripen prior to moving upstream to spawn. Commercial fishing occurs in two areas: 1) below the lagoon to the mouth, a distance of 3 1/2 miles, and 2) in the ocean waters adjacent to the river mouth within 2 miles each direction of the mouth, out to 500 yards from the shore at low tide. Within the ocean waters, there are two groups of fishermen: those who fish directly in the breaking waves and those who remain outside these breakers. East River salmon catches have averaged approximately 100,000 sockeye, 13,000 chums, and 6,000 coho salmon during the last five seasons.

The results of recent scale aging analysis has clarified that Doame River sockeye stocks contribute the major portion of the early season salmon catch at the East River fishery. The Doame River sockeye salmon population is small and currently is not large enough to support a directed commercial harvest. In recent years, early season gillnetting periods on the East River have been the same as the adjacent Alsek River fishery. To conserve Doame River sockeye salmon, the initial opening of the 1988 East River fishery is being delayed until June 27.

The East River sockeye salmon stock begins to enter the river in late June. Beginning on June 27, the weekly fishing periods will be based on East River sockeye escapement observations, effort levels, and fishery performance. As in recent years, up-river closures may be necessary during highwater periods to minimize the harvest of the fish schooled in the lagoon that move down river during these periods.

By late August, the East River sockeye salmon run is usually over and fall chum and coho salmon become the predominate catch for the remainder of the season. The fall season generally extends into late September. Chum salmon are the predominate species caught in the fall fishery, although coho salmon are an important management consideration. In-season management during the fall fishing period will be based on fishery performance information.

The East River surf fishing area can be expected to be open during the same time periods as the in-river fishery. The surf fishing area is defined by regulation to be adjoining ocean waters within 500 yards of the shore at low tide and two miles east and west of the mouth of the East River.

Situk-Ahrnklin and Lost Rivers

The Situk-Ahrnklin lagoon is the site of the oldest and, historically, the most productive fishery in the Yakutat Area. Located approximately seven miles by road from Yakutat, it normally supports the largest concentration of fishing effort in Yakutat. Fishing occurs primarily in the lagoon, although some fishing occurs at the river mouth and in the adjoining surf fishing area. Sockeye during the summer and coho salmon during the fall comprise the major portion of the harvest. Situk River catches have averaged approximately 32,000 coho, 23,000 sockeye, 8,000 pink, and 500 chinook salmon during the most recent five year period.

The Lost River is located a short distance from the Situk River. Fish from both rivers are harvested in the Lost River fishery. For that reason, the Lost River is included in the same weekly fishing periods as established for the Situk River fishery during the summer sockeye salmon season. During the fall coho salmon season, the Lost River is managed independent of the Situk River fishery.

The Situk River sockeye salmon run is currently depressed from historical levels. During the first 20 years of the fishery (1904-1924) over 300,000 sockeye salmon were harvested annually. During the next 20 year period (1925-1945) over 100,000 sockeye were harvested annually. In the last 40 years the Situk River sockeye harvest has averaged about 50,000 fish. The harvest in recent years has been considerably below 50,000 fish, except in 1987 when 63,000 sockeye salmon were taken.

The 1988 sockeye salmon escapement goal range for the Situk Lakes portion of the drainage is 40,000 to 55,000 fish. This is lower than the escapement goal of 80,000 to 100,000 used for recent years. The change was based on an evaluation of recently available spawner-recruit information.

The strength of the 1988 Situk River sockeye salmon return is uncertain. The parent year (1983) sockeye salmon spawning escapement was approximately 68,000 fish, which is above the current escapement goal. Although, no formal forecast of return strength is available, some harvestable surplus of sockeye salmon is expected. Management will have to be based on inseason evaluations of sockeye salmon run strength.

The season opening date for the Situk and Lost Rivers will be, as specified by regulation, the third Monday in June (June 20). The duration of the opening will be dependent on sockeye run strength. Indications of run strength will include Situk River weir counts, lower river float counts, and subsistence fishing success. This information will be compared to historical information. If a poor sockeye salmon run develops, conservation actions can be expected in all fisheries harvesting these returns.

As in recent years, a migration run timing model will be employed to estimate the total Situk River sockeye salmon return. However, the model does not provide reliable run size estimates until early July.

An average return of chinook salmon is expected to the Situk River in 1988. Since chinook salmon are taken incidentally in the set gill net fishery, the Situk River commercial catch of chinook salmon is largely dependent on the fishing time allowed for sockeye salmon. Chinook salmon escapements have benefitted by the limited early season sockeye fishing time allowed in recent years. As early season set gillnetting is expected, chinook salmon will become more of a management concern in 1988 than during recent years. The opportunities to conserve chinook salmon will depend on the strength of the early portion of the sockeye salmon return and the need to harvest the available fish. Depending on the strength of both the chinook and sockeye salmon runs, conservation actions may be necessary to reduce the incidental take of chinook salmon. Gillnetters are encouraged to avoid harvesting chinook salmon while targetting on sockeye salmon.

Steelhead trout occasionally build up in the Situk River awaiting higher water levels to return to the ocean. When the out-migration occurs in late June there is a potential to harvest a significant portion of the spawning population. If a major out-migration is expected during a scheduled open gillnetting period, as indicated by a major rainstorm, the opening may be delayed for a day or two to reduce the potential for a high incidental catch of steelhead trout.

The fall fishery will begin in mid-August and may continue through September. The fishery is managed on the basis of coho salmon run strength indicated by the catch and escapement observations. Coho returns are expected to be average or above for the 1988 season.

Yakutat Bay

There are four different gillnetting areas in Yakutat Bay: the Monti Bay fishery in the southern portion, the Manby Shore ocean fishery and the Manby Shore instream fishery along the northern shore, and the Humpy Creek fishery in the southeastern portion of Yakutat Bay.

Both the Monti Bay and Manby Shore ocean sockeye salmon fisheries harvest primarily mixed stocks of fish destined for spawning streams south of Yakutat Bay. In 1987, tag recovery data showed that approximately 50% of all sockeye caught in Monti Bay were bound for the Situk River. During some individual weeks, the Monti Bay catch was virtually all of Situk River origin. Because of the high catch rate of Situk River sockeye salmon, management of the Monti Bay and Manby Shore ocean fisheries will continue to be based on the need to conserve or harvest sockeye salmon returning to the Situk River. The most recent five year average salmon landings in the Monti Bay fishery, the major ocean fishery in Yakutat Bay, are approximately 17,000 sockeye, 4,000 pink, 3,000 coho, and 250 chinook salmon.

The Monti Bay fishery (waters of Yakutat Bay south of 59°40' north latitude) will open on the second Monday of June (June 13), the normal regulatory season opening date. The initial open period will be a normal 2.5 day period from 6:00 a.m. Monday through 6:00 p.m. Wednesday. The scheduled regulatory

opening date for the Manby Shore ocean fishery (waters of Yakutat Bay north of 59°40' north latitude) is Monday June 20. The fishing period will correspond to the Situk River fishery which is scheduled to open on the same date. Additional sockeye salmon directed fishing in Monti Bay and along Manby Shore will depend on Situk River sockeye salmon run strength assessment.

Management of the Manby Shore instream fisheries, waters upstream of the mean high tide line, will be based on the availability of local stocks. During the summer season, these fisheries harvest sockeye salmon primarily from Manby Stream and Sudden Stream. The fall fishing season targets on coho salmon, primarily in Manby Stream, Sudden Stream, Esker Creek and Spoon River. The initial open period can be expected on June 27.

The Humpy Creek fishery targets on pink salmon returning to Humpy Creek in the southeastern portion of Yakutat Bay. Annual harvests have ranged from none to 100,000 pink salmon. A pink salmon harvest is expected at Humpy Creek for the 1988 season, since the parent year (1986) spawning escapement was average and environmental conditions were good. In-season management of this fishery will be based on observed pink salmon spawning escapement in Humpy Creek and showings of pink salmon in Yakutat Bay. The expected opening date for this fishery is late July or early August.

Akwe and Italio Rivers

The Akwe River, located approximately 35 miles south of Yakutat, is a partly glacial system. The lower seven miles of the river are very wide and shallow flowing parallel to the beach before entering the ocean. It is in this lower portion of river that commercial fishing takes place upstream to a point 3.5 miles from the mouth. The recent five year average Akwe River harvest is approximately 8,000 sockeye, 7,000 coho, and 100 chinook salmon.

The parent year (1983) catch and escapement information for the Akwe River indicates a good sockeye salmon return for the 1988 season. Increased sockeye salmon production in the Akwe River has resulted in additional fishing effort during the last five years. To obtain good escapements, with the additional fishing effort, reductions in the normal 2.5 day weekly fishing period, enlargement of the closed water area, and gear reductions have been necessary. The sockeye salmon fishery is scheduled to open on June 27 and should extend through early August. Thereafter to the end of September the fishery targets on coho salmon. An average coho salmon return is expected for the 1988 season.

Like the Akwe River, the Italio River is a small producer, supports a small number of gillnetters, and contributes primarily sockeye and coho salmon to the commercial fishery. The Italio River is adjacent to the Akwe River. The recent five year Italio River harvest has averaged approximately 1,500 sockeye and 4,600 coho salmon. Historically, it has produced sockeye salmon catches of over 20,000 fish.

The Italo River changed its course and flowed into the lower Akwe River during the winter of 1986-87. The two rivers now share a common mouth. Both the Italo and Akwe River salmon stocks will be mixed together in this common mouth area and for some distance upstream in each river. Determination of Akwe or Italo River salmon run strengths from fishing success in the junction area will not be possible. To minimize this problem, the common river mouth area will be closed. As in 1987 this will include a portion of each river above the junction.

The Akwe River will be open upstream of markers approximately one-half mile above the junction to the upper closed water markers 3 1/2 miles from the river mouth. The Italo River will be open in a very small area beginning 1/4 of a mile above the junction. Fishing opportunities in these areas should be adequate to allow full utilization of the sockeye and coho salmon stocks in both rivers. Inseason management will, as in recent years, be based on fishery performance and escapement information.

Kaliakh and Tsiu Rivers

The Kaliakh and Tsiu Rivers are located approximately 125 miles northwest of Yakutat in the Yakataga District. These two rivers support only a coho salmon fishery, which opens by Emergency Order when the escapement indicates a good return is developing. The Tsiu River is the most productive of the two rivers with an average harvest in recent years of about 30,000 coho salmon. The Kaliakh River harvest has averaged about 15,000 coho salmon in recent years. Parent year (1984) catch and escapement indicate that the 1988 coho salmon harvest should be average or better.

The coho salmon fishing will begin August 1 in the Yakataga District for three days, except the Tsiu River. The Tsiu River fishery is expected to be initially open on August 22 for a normal split weekly period from 9:00 a.m., Monday through 9:00 a.m., Tuesday and from 9:00 a.m., Wednesday through 9:00 a.m., Thursday.

As in 1987, the Yakataga Area, except the Tsiu River, will initially be open to gillnetting beginning the second Monday of June (June 13) to allow exploratory sockeye salmon directed fishing efforts. The initial open weekly fishing period can be expected to be of 2.5 days duration. The primary fishing area is expected to be the Kaliakh River.

Other Yakutat Area Salmon Fisheries

A few additional rivers support very small fisheries and are included under the season specified for the remainder of the Yakutat District and scheduled to open on June 27. Included in this category are the Dangerous and Yahtse Rivers. The harvest in these streams is primarily coho salmon, averaging about 10,000 fish annually. Because of the intense fishing pressure and inability to monitor escapements adequately due to the glacial water and

remoteness of the Yahtse River, a closed water area has been established in recent years to protect fish schooled at the mouths of tributary spawning streams. This closure will be in effect again for 1988.

Several small coho streams are located along the forelands west of the Yahtse River to Cape Yakataga. These systems can not support instream set gill net fisheries and will be closed during the 1988 season.

The 1988 Southeast-Yakutat Troll Fishery Management Plan, available at local Fish and Game offices, provides an overview of the 1988 trolling season.

The ocean area off the Situk and Lost River mouths will again be closed to trolling from August 7 through September 20. The remaining area in state waters from Sitkagi Bluffs to the Grand Plateau Glacier will be open to trolling during the same time as the weekly fishing periods on the Situk River set gillnet fishery from August 7 to September 20, except during regional troll closures when all trolling is closed.