

Kuskokwim Area Commercial and Subsistence Salmon Fisheries  
1989 Management Plan

By

Alaska Department of Fish and Game  
Division of Commercial Fisheries  
Arctic-Yukon-Kuskokwim Region

and

Kuskokwim River Salmon Working Group

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<sup>1</sup> The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished divisional reports.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 needs for up-to-date information, reports in this series may contain preliminary data.

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## INTRODUCTION

This management plan will inform fishermen, processors, and other interested persons about the status of the 1989 Kuskokwim Area salmon runs and the Department strategies to regulate the salmon fisheries. The map in Figure 1 shows the Kuskokwim Area.

The Division of Commercial Fisheries of the Alaska Department of Fish and Game is responsible for the management of commercial and subsistence fisheries in the Kuskokwim Area. The objective of the Department's research and management program is to manage the salmon runs for optimum sustained yield under the policies set forth by the Alaska Board of Fisheries, including assignment of subsistence as the highest priority among consumptive uses of the resource. Most commercial fishermen take salmon for both commercial and subsistence purposes. In order to enforce commercial fishing regulations it is necessary to place some restrictions on the subsistence fishery.

In 1983, provisional spawning escapement objectives were established for the area's major spawning systems (Table 1). These objectives are the average escapement counts obtained in these systems since 1959. Escapements at objective levels should maintain the salmon stocks at past levels of abundance. Continuing assessment of salmon returns may require future adjustment of the objectives to maximize salmon production.

Commercial fishing time during the season varies in response to return magnitude as shown by commercial catch data, test fishing and spawning escapement monitoring. The Alaska Board of Fisheries, the Department of Fish and Game, the Kuskokwim Area Advisory Committees, subsistence and commercial fishermen, and the processors agreed to work together to share information regarding decisions on the openings and closures of the Kuskokwim River fishery. Department staff and a Working Group consisting of fishermen and processor representatives will evaluate historic and in-season data on the magnitude of salmon returns when discussing commercial fishing periods.

Kuskokwim area salmon processors will sponsor a test fishery again this year. This test fishery will be run by fishermen, with technical help from the Department, at a site of their choice. The Department will be continuing to develop a dual beam sonar project in the Kuskokwim River. The goal of this project is to provide an accurate estimate of the number of salmon swimming up the Kuskokwim River; however, it will be several years before the sonar provides reliable counts. The Working Group will continue an in-season subsistence catch reporting system. This should provide more complete information on the timing and magnitude of salmon migrations. An outline of the subsistence monitoring program is presented on page 25 of this management plan. The U.S. Fish & Wildlife Service (USFWS) will conduct a king salmon tagging

experiment using both test fisheries. This project is a feasibility study to determine techniques and methods that will be necessary to conduct an expanded study on the Kuskokwim River in 1990. The results of this year's tagging effort are expected to be inconclusive due to the small number of tags.

As in the past, subsistence fishermen will receive catch calendars which the Department will collect in October and November. Changing the calendar collection date from September to October or November should improve the accuracy of coho catch reporting.

Budget cuts and personnel shortages forced the Department to choose between having a catch monitor in Districts 4 and 5 or running the Kanektok Sonar project. The Kanektok Sonar project will not be run this year. This unfortunate interruption of the project will slow the improvement of fishery management information for District 4. The Department will be assessing the Kanektok River to determine the feasibility of other methods of enumerating salmon escapement.

## REGULATION CHANGES

### Kuskokwim River

The Kuskokwim River Salmon Management Plan requires the Department to manage the Kuskokwim River (Districts 1 and 2) commercial salmon fishery in the following way:

1. There may not be a directed king salmon fishery.
2. For the years 1988 & 1989, the fishery must be open no later than June 20.
3. Only those waters of District 1 downstream of ADF&G regulatory markers located at Bethel may be open during the first fishing period.
4. There shall be at least 3 eight hour commercial fishing periods in June.
5. The incidental king salmon catch guideline harvest level is 15,000 to 30,000 fish.
6. The Department shall provide at least 24 hours notice for District 1 commercial fishing periods.

In addition the JOINT STATEMENT ON THE MANAGEMENT OF THE KUSKOKWIM RIVER SALMON FISHERY says:

The Board of Fisheries, the Department of Fish and Game, the local Fish and Game advisory committees, and local subsistence and commercial fishermen agree to work together towards the goal of increasing the sustained yield of Kuskokwim River salmon stocks to provide for subsistence needs and an economically viable commercial fishery. To achieve that goal, the parties agree to the following:

1. Kuskokwim River salmon users will form a working group;

2. The local Department staff will meet with the Working Group to discuss preseason and in-season management of the fishery and evaluate items such as, but not limited to:
  - a. test fishery data;
  - b. CPUE data from historic and in-season commercial fisheries; and
  - c. in-season subsistence catch data;
  - d. it is understood that the purpose of these meetings shall be to arrive at a consensus regarding the openings and closures of the Kuskokwim River fishery; if a consensus cannot be reached, emergency order authority will continue to be at the area management biologist's discretion.
3. The Department will announce the opening of the first commercial fishing period by June 10;
4. The fishing periods may be separated by six days to assist king salmon passage;
5. The Department and the Working Group will work towards the development of a comprehensive management plan for all Kuskokwim River salmon stocks, and report to the Board of their progress; and
6. Calls for Working Group/Staff meetings will be at the discretion of the chair of the Working Group.

The normal commercial fishing period in District 1, the lower Kuskokwim River (Figure 2) and District 2, the middle Kuskokwim River (Figure 3) will be from 1:00 p.m. until 7:00 p.m. If the periods are longer than six hours, the extra time will be equally divided before 1:00 p.m. and after 7:00 p.m. The Department may no longer set the time of the fishing periods since this change was made a regulation at the request of the Lower Kuskokwim Advisory Committee.

The subsistence fishing closure in District 1, the lower Kuskokwim River is 16 hours before, during, and 6 hours after every commercial fishing period. Subsistence fishermen, please note the upstream boundary of District 1, the lower Kuskokwim (Figure 2) is now at Bogus Creek.

Kuskokuak Slough is an exception to the subsistence fishing closure rules in District 1. In Kuskokuak Slough subsistence nets must not be in the water 16 hours before and during commercial openings. Subsistence fishing may begin as soon as the commercial period is over. Kuskokuak Slough is closed to commercial fishing.

The Kuskokwim River from Bogus Creek upstream to High Bluffs below Kalskag (Figures 2 & 3) is CLOSED to commercial fishing. Subsistence nets must be out of the water in this area 16 hours before, during, and 6 hours after each commercial fishing period in District 1. This is the same subsistence closure as in District 1, the lower Kuskokwim.

In District 2, the middle Kuskokwim River, all subsistence nets will have to be out of the water 24 hours before, during and 6 hours after each commercial salmon fishing period in the district. Subsistence fishermen should also be aware that the boundaries of District 2, the middle Kuskokwim River, changed (Figure 3). District 2, the middle Kuskokwim River, is now the Kuskokwim River from High Bluffs below Kalskag upstream to Chuathbaluk.

Subsistence fishermen upstream of Chuathbaluk complained that they did not hear the commercial period announcements because of the poor radio reception in that area. At the request of the Central Kuskokwim Advisory Committee, the Kuskokwim River upstream of Chuathbaluk is closed to commercial fishing. This will allow the subsistence fishermen upstream of Chuathbaluk to subsistence fish 7 days a week with no closures.

#### Kuskokwim Bay Districts

The Board of Fisheries adopted a management plan for District 4 (Figure 4), Quinhagak, which the Department will follow in 1989. The "DISTRICT 4 SALMON MANAGEMENT PLAN" requires the Department to manage the Quinhagak District in the following way:

1. The commercial salmon fishery must open before June 16;
2. When the commercial king salmon catch is less than 50% of the combined commercial catch of king and red salmon, the commercial salmon fishery will be managed based on the strength of the red salmon run;
3. Commercial salmon fishing periods are established by emergency order but the department will allow at least one fishing period a week (there may be more than one fishing period a week), unless a severe conservation problem develops;
4. If a commercial closure is required the Department will decide by the 10th day after the closure whether to close the sport fishery on the species of concern.

Before the 1988 season commercial fishermen from District 4 told the Department that they prefer to fish from 6:00 p.m. until 6:00 a.m. until after July 4. During the 1988 season fishermen informed the Department that they preferred to fish from 9:00 a.m. to 9:00 p.m. in June. The fishing periods were changed to that time at the request of the fishermen. During the 1989 season, daylight hours from 9:00 a.m. until 9:00 p.m. will be used for the entire season in District 4. Periods will normally be 12 hours long unless a reduction in fishing time is needed to reduce effort.

In District 5, Goodnews Bay (Figure 5) the normal commercial fishing period will be from 9:00 a.m. until 9:00 p.m.

There were several proposals from the Central Bering Sea Advisory Committee and the fishermen in Districts 4 and 5 to require registration to prevent large numbers of fishermen from moving

between districts. After much discussion the Board decided not to require district registration. The discussion between the Board, fishermen and Department concluded that whenever possible the Department should make the commercial openings in each district, including the Kuskokwim River districts, occur at the same time to prevent fishermen from running from district to district. This system reduced transfers between districts in 1988. The 9:00 a.m. to 9:00 p.m. fishing periods in District 4 and District 5 will overlap with the fishing period required by regulation in District 1, the lower Kuskokwim. Since run strength varies from district to district, it will not always be possible to have coincidental commercial openings. Twelve hour openings might not be possible in Districts 4 and 5 if salmon runs are weak or effort is high.

In District 4 subsistence nets must be out of the water by 6:00 p.m. the day before a commercial fishing period. Subsistence fishing will begin again at 3:00 a.m. the day after the commercial fishing period.

District 5 subsistence nets must be out of the water by 9:00 a.m. the day before a commercial fishing period. Subsistence fishing will begin again at 3:00 a.m. the day after the commercial fishing period.

## COMMERCIAL FISHERIES MANAGEMENT

### Districts 1 and 2, The Kuskokwim River

Commercial fishing is only allowed in Districts 1 and 2. The boundaries of both districts were changed in 1988 and fishermen should refer to Figures 2 and 3 before fishing. District 1, the lower Kuskokwim, includes the Kuskokwim River beginning at a line between Apokak Slough and Popokamiut upstream to a line located between Fish and Game regulatory markers located upstream of the mouth of Bogus Creek (Figure 2). **PROCESSORS AND FISHERMEN:** please note that the new addition to District 1 from Mishevik Slough to Bogus Creek is statistical area 335-13. Please report 335-13 on fish tickets for fish taken in this area.

District 2 includes the Kuskokwim River from ADF&G regulatory markers located at High Bluffs upstream to ADF&G regulatory markers located at Chuathbaluk (Figure 3). The Kuskokwim River between Bogus Creek and High Bluffs (between District 1 and 2) is closed to commercial fishing as is the Kuskokwim River upstream of Chuathbaluk.

Gill nets may not exceed 50 fathoms in length, 45 meshes in depth, and may not be greater than 6 inch mesh in both districts.

No directed harvest of king salmon occurs in either district. The incidental guideline harvest level for king salmon in District 1,

the lower Kuskokwim is 15,000 to 30,000 fish. In District 2 the incidental harvest guideline for king salmon is 0 to 2,000 fish. These incidental harvest guidelines apply during the red and chum salmon fisheries.

The Board of Fisheries has not established harvest guidelines for chum salmon in District 1. District 2 has a guideline harvest range of 4,000 to 8,000 chum salmon. The commercial chum salmon harvest for the Kuskokwim River (Districts 1 and 2) normally ranges from 200,000 to 400,000 salmon (Table 2). Catches within this range normally provide for traditional subsistence requirements and adequate spawning escapements.

The Department will announce the first commercial opening in District 1 by 10 June in consultation with the Kuskokwim River Salmon Working Group. Only District 1 downstream of Bethel will be open during the first fishing period. The remainder of District 1 will open when the incidental king salmon catch is considered minimal. All openings are by emergency order based on run strength. A joint evaluation of test fishery data, historic and current CPUE data, subsistence catch data, etc by the Working Group and the Department will provide the basis for determining run strength. District 2 will open when the Subsistence Test Fishery, operated by the Working Group, shows that chum salmon are available throughout the district and the incidental chinook salmon catch will be minimal.

The Working Group is concerned about the impact of the Shumigan and Unimak salmon fisheries on the run strength of the Kuskokwim River chum and coho salmon. Because of the concern that has been expressed about the potential interception of Kuskokwim bound salmon stocks the Department's Cold Bay Office will FAX the latest catch updates from the Shumigan and Unimak salmon fisheries to the Bethel office. This data to the Working Group will be provided throughout the 1989 season.

The Kuskokwim River Salmon Working Group has resulted in significant changes in the conduct of the fishery. In addition to providing a forum in which to determine management actions the Working Group involved itself in many other areas. The Working Group has been working with both the Department of Public Safety and fishermen to improve compliance with the regulations. The Working Group has also made significant contributions in improving the communication of information to and from fishermen. Fishermen safety issues have also been addressed through the actions of the Working Group. The first year of cooperative management with the Working Group was very successful and the 1989 season should see further improvements.

The commercial harvest will not greatly exceed 300,000 chum salmon except under the following conditions:

1. Test fishing indices exceed historic average CPUE for years with adequate escapement of chum salmon.
2. Commercial catch per unit effort (especially in early and mid-July) is above average.
3. Subsistence fishermen report that adequate subsistence catches are being made.
4. Chum salmon escapement projects show adequate escapements are occurring.

Management options for ensuring adequate escapements during poor returns include in order of priority:

1. Commercial harvest fishing time restrictions, including early closure.
2. Personal use fishing time restrictions, including early closure.
3. Subsistence harvest fishing time restrictions.

There are fewer red salmon than chum salmon in Districts 1 and 2. Historically, Kuskokwim River fishermen have not accurately identified red and chum salmon in their commercial or subsistence catches. For this reason, the red and chum salmon harvest in the main Kuskokwim River has not been accurately documented. Since 1981, fishermen, processors and the Department have worked together to accurately identify each species in the commercial harvest. Red salmon have comprised 10 to 24 percent of the combined chum-red salmon catch since 1981. Before 1981 the reported red salmon catch was 2 percent or less of the combined chum-red salmon harvest. Recent years catch data and interviews with life-long residents of the drainage suggest that the recent increased catches are partly a result of increased red salmon returns. The previous 5 year average harvest of red salmon has been 91,200 (Table 2). Since 1981, the red salmon catch has ranged from 33,100 to 136,100. The catch should fall within this range in 1989.

A 10 to 20 day closure usually begins in mid-July following the peak of the chum salmon run. The Kuskokwim River reopens, usually by 1 August, when coho salmon predominate in test fishing and subsistence catches. The normal fishing schedule is two 6-hour periods a week. Fishing time is increased or decreased depending on run strength.

The commercial coho salmon harvest in the Kuskokwim River has averaged 443,000 salmon in the last 5-years (Table 2). In recent years the coho salmon catch has increased because of larger runs and more effort. Existing Board regulations establish a harvest guideline of 2,000 to 4,000 coho salmon for District 2. This harvest guideline was about 2 percent of the historic District 1 catch. In years with large coho salmon runs, the Department has

allowed the District 2 catch of coho salmon to exceed the harvest guideline until it equaled about 2 percent of the District 1 catch. The Board of Fisheries did not act upon a proposal to increase the District 2 harvest guideline in 1987. However, they did review the Department's management strategy and recommended no change.

During the last 5-year period, coho salmon have been numerically and economically the dominant species in the Kuskokwim River commercial harvest. Since 1981 the coho salmon run size has been increasing, particularly in even numbered years. The 1989 catch should be similar to the previous 5 odd year's catch which has ranged from 196,300 to 399,500 (Table 2).

#### District 4, Quinagak

Commercial fishing in District 4 occurs in the marine waters of Kuskokwim Bay near Quinagak (Figure 4). All subsistence fishing must stop 24 hours before, during and 6 hours after each commercial fishing period in District 4 and in the Kanektok and Arolik Rivers. Gill nets may not exceed 50 fathoms in length, 45 meshes in depth, and may not be greater than 6 inch mesh.

The commercial king salmon season in District 4 will open before June 16, depending on the entry pattern of king salmon into the Kanektok River and as required by the District 4 Salmon Management Plan (see page 4). Commercial fishing is normally scheduled for two 12-hour periods per week from mid-June to early July when the target species is king salmon. These periods are from 9:00 a.m. to 9:00 p.m. as requested by the fishermen in 1988.

The commercial king salmon harvest in District 4 ranges from 10,000 to 46,000 fish. Comparing inseason catch data collected by the Department with data collected in previous years is the primary means of assessing run strength. Harvest levels can be increased or decreased in response to the Department's assessment of in-season run strength by adjusting fishing time via emergency order.

King salmon abundance has been decreasing since the peak commercial harvest of 46,385 king salmon in 1983. However, the king runs have continued to be above average until 1988. The 1989 return should be similar to recent years and the harvest should be between 14,000 and 33,500 (Table 3).

In early July, red salmon are the target species in District 4. The District 4 Salmon Management Plan requires the Department to manage for red salmon once they exceed 50 percent of the combined king and red salmon catch. The recent 5 year average catch of red salmon has been 12,700 in District 4 (Table 3). The catch should be average in 1989.

Chum salmon are taken incidentally to the other species in District 4. The previous 5 year average catch is 26,400; the 1989 catch should be similar (Table 3).

Commercial coho salmon harvests in District 4 have averaged 61,000 fish per year during the 1983-87 period (Table 3). Normally the fishing schedule is three (Monday, Wednesday, Friday) 12-hour fishing periods per week. This schedule has in the past allowed a level of commercial catches that still provide adequate spawning escapements and subsistence harvests. The three period per week schedule is frequent enough to compensate for any "lost" (because of weather) fishing time. District 4 closes by regulation on September 8.

#### District 5, Goodnews Bay

Commercial salmon fishing in District 5 occurs in the marine waters of Goodnews Bay (Figure 5). The Goodnews River is closed to commercial fishing. All subsistence nets must be out of the water for 24 hours before, during and 6 hours after every commercial opening in the District and in the Goodnews River. Fishermen must use six inch or less stretched mesh nets which may not exceed 50 fathoms in length or 45 meshes in depth. These gear restrictions help managers to reduce the selective harvest of the larger and more productive chinook salmon, while allowing the take of the more abundant red salmon.

Commercial fishing is normally scheduled for two 12-hour periods per week from mid-June to early July. These periods are from 9:00 a.m. until 9:00 p.m. The time of the open periods has changed from previous years. This change was made in 1987 at the request of local fishermen. The 9:00 a.m. to 9:00 p.m. fishing period will coincide with fishing periods in other districts and reduce the number of fishermen traveling between districts. The daylight fishing hours also enhance fishermen safety.

A counting tower on the middle fork of the Goodnews River estimates salmon escapements. King, red and chum salmon are migrating during the time the tower is in operation. Coho and pink salmon are also counted, but the project ending date precludes adequate assessment of the escapement of these species. The primary objective of the project is to provide daily escapement information to inform management of the commercial salmon fishery in Goodnews Bay and to allow accurate interpolation of the aerial survey escapement data collected in the Goodnews River drainage. The total population estimates made possible by the tower count suggest that the red salmon escapement objectives may be too high. Based on exploitation rates in other fisheries the provisional escapement objectives for red salmon at the Goodnews Tower project have been lowered. The former objective of 35,000 to 45,000 red salmon has been lowered to 20,000 to 30,000.

The tower count, commercial catch, and aerial surveys are the only in-season indicators of run strength. Red salmon are the target species in June and July. During June in recent years fishing time restrictions have been necessary to protect the less abundant king salmon. Fortunately, king salmon escapement objectives were achieved or approached while still allowing the total utilization of the red and chum salmon. Normally 1 or 2 twelve hour fishing periods a week occur during June and early July when the king salmon are running. Depending on effort levels and red salmon escapement, fishing time is normally increased to two or three 12 hour periods a week following the king salmon run in July. The revision of the red salmon escapement objectives may allow an increase in fishing time. In other fisheries where less abundant stocks are mixed with more abundant stocks, increasing the length of the fishing period has been successful at increasing the harvest of the abundant salmon while still offering some protection to the less abundant fish. Depending on red salmon run strength some fishing periods in the Goodnews Bay district may be longer than 12 hours in 1989.

The red salmon catch has averaged 17,400 in recent years (Table 4). An average return of red salmon in 1989 should result in a catch of more than 20,000 fish. The incidental king salmon catch should range from 3,000 to 6,000 fish (Table 4). The incidental chum salmon catch averages 10,000 fish (Table 4).

The management strategy in District 5 for coho salmon (three 12-hour periods per week) is similar to that used in District 4. The coho salmon return should be average in 1989. The coho salmon catch in Goodnews Bay should approach 20,000 to 30,000 fish (Table 4). District 5 closes by regulation on September 8.

#### SUMMARY OF 1988 COMMERCIAL SALMON REGULATIONS, KUSKOKWIM AREA

This summary of regulations is for informational use only. This list of regulations is not complete or official. Copies of complete regulations are available at the Bethel Fish and Game office.

##### 1. Commercial Fishing Districts:

- A. District 1, the lower Kuskokwim River, consists of that portion of the Kuskokwim River upstream of a line from Apokak Slough (60' 08' N. lat. 162' 28' W. long.) to the southernmost tip of Eek Island to Popokamiut (60' 04' N. lat. 162' 28' W. long.) to a line between ADF&G regulatory markers located just upstream of the mouth of Bogus Creek.

- B. District 2 is that portion of the Kuskokwim River from ADF&G regulatory markers located at High Bluffs upstream to ADF&G regulatory markers at the downstream edge of Chuathbaluk.
- C. District 4, Quinhagak consists of the Kuskokwim Bay between ADF&G regulatory markers placed at the westernmost edge of the mouth of Oyak Creek and at the southernmost edge of the mouth of the Arolik River.
- D. District 5, Goodnews Bay consists of that portion of Goodnews Bay inside a line between Department of Fish and Game regulatory markers placed near the bay entrance and a line between Department of Fish and Game regulatory markers placed near the mouth of the Ukfigag River and on the opposite shore near the mouth of the Tunulik River.
- E. All other waters are closed to commercial salmon fishing.

2. Commercial Gill Net Specifications and Operation:

- A. Only set and drift gill nets are legal gear.
- B. Fishermen shall fish or help in fishing only one type of gear at any time, they cannot have set nets out while they are fishing with drift nets.
- C. The length of a set or drift gill net may not exceed 50 fathoms.
- D. Salmon may be taken only with gill nets of 6 inch or smaller mesh.
- E. Gill nets with 6 inch or smaller mesh may not be more than 45 meshes deep.
- F. No gill net may obstruct more than one-half the width of any waterway. In the intertidal zone this restriction applies at all stages of the tide.
- G. All gill nets in operation must have a red keg, buoy or cluster of floats plainly and legibly marked with the fisherman's five digit CFEC permit serial number.
- H. In District 5 no part of the set gill net may be set or operated within 300 feet of any part of another set gill net.
- I. Gill net web must contain at least 30 filaments and all filaments must be of equal diameter or the web must contain at least six filaments, each of which must be at least 0.20 millimeter in diameter.

3. Commercial Fishing Seasons and Periods:

- A. All districts open by emergency order.
- B. KUSKOKWIM RIVER SALMON MANAGEMENT PLAN.
  - 1. The objective of the Kuskokwim River Salmon Management Plan is to provide guidelines for the management of the Kuskokwim River commercial salmon fishery that will result in sustained yields of the salmon stocks large enough to provide for subsistence needs and an economically viable commercial fishery.

2. It is the intent of the Board of Fisheries that the Kuskokwim River king salmon stock be managed in a conservative manner consistent with sustained yield principles and the subsistence priority and, consistent with intent, that the available surpluses of other salmon stocks be taken. To accomplish these objectives the department shall manage the Kuskokwim River commercial salmon fishery as follows:

- (a) there shall be no directed commercial king salmon fishery;
- (b) for the years 1988 and 1989, the fishery shall open no later than June 20;
- (c) only those waters of District 1 downstream of ADF&G regulatory markers located at Bethel shall be open during the first period;
- (d) there shall be at least three eight-hour fishing periods in June;
- (e) although no directed fishery on king salmon is allowed, the incidental catch guideline harvest level for king salmon during fisheries directed on other species is 15,000 to 35,000 fish;
- (f) to the extent possible, the department shall provide at least 24 hours advance opening of District 1 fishing periods;
- (g) District 1 fishing periods are from 1:00 p.m. until 7:00 p.m.; when longer fishing periods are allowed, the extra time is to be equally divided before 1:00 p.m. and after 7:00 p.m.

C. JOINT STATEMENT ON THE MANAGEMENT OF THE KUSKOKWIM RIVER SALMON FISHERY

The Board of Fisheries, the Department of Fish and Game, the local Fish and Game advisory committees, and local subsistence and commercial fishermen agree to work together towards the goal of increasing the sustained yield of Kuskokwim River salmon stocks to provide for subsistence needs and an economically viable commercial fishery. To achieve that goal, the parties agree to the following:

- 1. Kuskokwim River salmon users will form a working group;

2. the local Department staff will meet with the Working Group to discuss preseason and in-season management of the fishery and evaluate items such as, but not limited to;
    - a. test fishery data;
    - b. CPUE data from historic and in-season commercial fisheries; and
    - c. in-season subsistence catch data;
    - d. it is understood that the purpose of these meetings shall be to arrive at a consensus regarding the openings and closures of the Kuskokwim River fishery; if a consensus cannot be reached, emergency order authority will continue to be at the area management biologist's discretion.
  3. the Department will announce the opening of the first commercial fishing period by June 10;
  4. the fishing periods may be separated by six days to assist king salmon passage;
  5. the Department and the Working Group will work towards the development of a comprehensive management plan for all of the Kuskokwim River salmon stocks, and report to the Board of their progress; and
  6. calls for Working Group/Staff meetings will be at the discretion of the chair of the Working Group.
- D. Harvest guidelines in District 2 are:
1. 0-2,000 king salmon;
  2. 4,000-8,000 chum salmon,
  3. 2,000-4,000 coho salmon.
- E. Districts 1 and 2 will close on September 1.
- F. District 4
1. Will open before 16 June.
  2. There shall be at least one fishing period a week unless a severe conservation problem exists.
  3. If the commercial salmon fishery is closed the department shall decide by the tenth day whether the sport fishery on the species of concern will close.
- G. District 4 and 5 will close on 8 September.
4. Closed Waters
- A. All waters of the Kuskokwim River drainage not included in Districts 1 and 2.
  - B. All waters of Kuskokuak Slough.
  - C. The Goodnews, Kanektok and Arolik Rivers.

- D. All waters of the Kuskokwim Area not included in Districts 4, and 5.

YOU MAY OBTAIN THE CURRENT COMMERCIAL SALMON OPENINGS 24 HOURS A DAY BY CALLING 543-2598.

#### SUBSISTENCE SALMON FISHING REGULATIONS

- A. SALMON MAY ONLY BE TAKEN FOR SUBSISTENCE BY RESIDENTS OF THE KUSKOKWIM AREA, except those persons living on the U.S. military installations located on Cape Newenham, Sparevohn, and Tatalina.
- B. IT IS UNLAWFUL TO BUY OR SELL SUBSISTENCE-TAKEN FISH OR THEIR PARTS, OR THEIR EGGS.
- C. In District 1 and in those waters of the Kuskokwim River between Districts 1 and 2, excluding the Kuskokuak Slough, salmon may be taken anytime except salmon may not be taken 16 hours before, during, and for six hours after each open commercial salmon fishing period for District 1.
- D. Kuskokuak Slough salmon may be taken at anytime except salmon may not be taken 16 hours before and during each open commercial salmon fishing period for District 1.
- E. In District 2 and tributaries flowing into the Kuskokwim River salmon may be taken at any time except from June 1 through September 8 salmon may not be taken 24 hours before, during and 6 hours after each open commercial fishing period in the district.
- F. In District 4 and 5 salmon may be taken at any time except from June 1 through September 8 salmon may not be taken 24 hours before, during and 6 hours after each open commercial fishing period in the district.
- G. Only gill net, beach seine or fishwheel are legal gear for taking salmon, salmon may also be taken by spear in the Holitna River drainage.
- H. All unattended fishing gear must have the fishermen's initial, last name, and address written on it legibly.
- I. The length of set gill nets or drift gill nets in use by any individual for taking salmon may not exceed 50 fathoms.
- J. In tributaries of the Kuskokwim River, set gill nets must connect to the bank, fish perpendicular to the bank and in a straight line.
- K. In that portion of the Kuskokwim River drainage from the southern end of the Eek Island, upstream to the mouth of the Kolmakof River, no part of a set gill net located within the tributary of the Kuskokwim River may set or operated within 150 feet of any part of another gill net.
- L. A gill net may obstruct not more than one-half of the width of any fish stream. A stationary fishing device may obstruct not more than one-half the width of any salmon stream.
- M. The maximum depth of gill nets is as follows;

- (1) gill nets with 6 inch or smaller mesh may not be more than 45 meshes in depth.
- (2) gill nets with greater than 6 inch may not be more than 35 meshes in depth.
- N. The Goodnews River is closed east of a line between ADF&G regulatory markers placed near the mouth 24 hours before, during and 6 hours after each commercial salmon fishing period.
- O. The Kanektok River is closed upstream of ADF&G regulatory markers placed near the mouth 24 hours, before, during and 6 hours after each open commercial salmon fishing period.

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#### PERSONAL USE FISHERY

- A. Salmon may only be taken for personal use by a holder of a valid resident Alaska sport fishing license or by an Alaskan resident exempt from licensing.
- B. In the Kuskokwim Area salmon may only be taken by people who hold a Kuskokwim Area Personal Use Salmon Fishing Permit. You may obtain a Kuskokwim Area Personal Use Salmon Fishing Permit from the Commercial Fisheries Division, Room 215, Bethel Native Cooperation Building, Bethel, Alaska; mailing address PO Box 90, Bethel, Alaska 99559; telephone 543-2433.
- C. Salmon may only be taken from July 1 through September 30.
- D. Salmon taken for personal use may not be used for bait or fed to dogs. It is unlawful to buy, sell, trade or barter fish or their parts taken for personal use.
- E. Each personal use fishermen shall plainly and legibly inscribe their first initial, last name, and home address on a keg or buoy attached to a gill net.
- F. Both lobes of the caudal or tail fin of personal use fish must be removed immediately upon landing.
- G. In District 1 and in those waters of the Kuskokwim River between Districts 1 and 2, excluding the Kuskokuak Slough, salmon may not be taken 16 hours before, during, and for six hours after each open commercial salmon fishing period for District 1.
- H. Salmon may not be taken in Kuskokuak Slough 16 hours before and during commercial salmon fishing periods in District 1.
- I. In District 2 and tributaries flowing into the Kuskokwim River salmon may not be taken 24 hours before, during and 6 hours after each open commercial fishing period in the district.
- J. In District 4 and 5 salmon may not be taken 24 hours before, during and 6 hours after each open commercial fishing period in the district.
- K. Only gill net, beach seine or fishwheel are legal gear for taking salmon, salmon may also be taken by spear in the Holitna River drainage.

- L. The length of set gill nets or drift gill nets in use by any individual for taking salmon may not exceed 50 fathoms.
- M. In tributaries of the Kuskokwim River, set gill nets must connect to the bank, fish perpendicular to the bank and in a straight line.
- N. In that portion of the Kuskokwim River drainage from the southern end of the Eek Island, upstream to the mouth of the Kolmakof River, no part of a set gill net located within the tributary of the Kuskokwim River may set or operated within 150 feet of any part of another gill net.
- O. A gill net may obstruct not more than one-half of the width of any fish stream. A stationary fishing device may obstruct not more than one-half the width of any salmon stream.
- P. The maximum depth of gill nets is as follows;
  - (1) gill nets with 6 inch or smaller mesh may not be more than 45 meshes in depth.
  - (2) gill nets with greater than 6 inch may not be more than 35 meshes in depth.
- Q. The Goodnews River is closed east of a line between ADF&G regulatory markers placed near the mouth 24 hours before, during and 6 hours after each commercial salmon fishing period.
- R. The Kanektok River is closed upstream of ADF&G regulatory markers placed near the mouth 24 hours, before, during and 6 hours after each open commercial salmon fishing period.

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ble 1. Kuskokwim Area escapement index objectives for chinook, sockeye, coho and chum salmon.

		Escapement Objectives <sup>a</sup>			
		Chinook	Sockeye	Coho	Chum
<u>KUSKOKWIM RIVER:</u>					
1.	Kwethluk River	1.0	-	-	7.0
	a. 3-step Mt. to Canyon Cr.	0.2	-	-	-
	b. Canyon Creek				
2.	Kisaralik River				
	a. Airstrip to Kisaralik L.	1.0	-	-	8.0
	b. Kasigluk R. (upper to lower)	1.0	-	-	8.0
3.	Tuluksak R. (Fog R. to Bear Cr.)	0.4	-	-	5.0
4.	Aniak River				
	a. Buckstock R. to Aniak L.	1.5	-	-	10.0
	b. Salmon River	1.6	-	-	3.0
	c. Aniak Sonar Project <sup>b</sup>	-	-	-	250.0
5.	Holitna River				
	a. Nogamut to Kashegelgok <sup>c</sup>	2.0	1.0	-	49.0
	b. KogrukluK Weir <sup>c</sup>	10.0	2.0	25.0	30.0
6.	Salmon River (Pitka Fork)	1.3	-	-	-
<u>KUSKOKWIM BAY:</u>					
1.	Kanektok River to Kagati Lake	5.8	32.0	25.0	30.5
2.	Goodnews River System				
	a. Main Fork and lakes	1.6	15.0	15.0	17.0
	b. Middle Fork and lakes	0.0	5.0	2.0	4.0
	c. Middle Fork Tower Project <sup>d</sup>	3.5	25.0	-	15.0

a Escapement objectives in thousands of fish are preliminary and are subject to change as additional data becomes available. Unless otherwise indicated, escapement objectives are based on aerial index counts which do not represent total escapement, but do reflect annual spawner abundance trends when made using standard survey methods under acceptable survey conditions.

b Sonar total escapement estimates.

c Total KogrukluK River escapement estimates.

d Tower total escapement estimates.

Table 2. Lower Kuskokwim River, District 1, and the middle Kuskokwim River, District 2, combined commercial salmon harvest, 1960-1988.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1960	5,969	0	2,498	0	0	8,467
1961	18,913	0	5,044	0	0	23,962
1962	15,341	0	12,432	0	0	27,773
1963	12,016	0	15,660	0	0	27,676
1964	17,149	0	28,613	0	0	45,762
1965	21,989	0	12,191	0	0	34,180
1966	25,545	0	22,985	0	0	48,530
1967	29,986	0	56,313	0	148	86,447
1968	34,278	0	127,306	0	187	161,771
1969	43,997	322	83,765	0	7,165	135,249
1970	39,290	117	38,601	44	1,664	79,716
1971	40,274	2,606	5,253	0	68,914	117,047
1972	39,454	102	22,579	8	78,619	140,762
1973	32,838	369	130,876	33	148,746	312,862
1974	18,664	136	147,269	84	171,887	338,040
1975	21,720	23	81,945	10	181,840	285,538
1976	30,735	2,971	88,501	133	177,864	300,204
1977	35,830	9,379	241,364	203	248,721	535,497
1978	45,641	733	213,393	5,832	248,656	514,255
1979	38,966	1,054	219,060	78	261,874	521,032
1980	35,881	360	222,012	803	483,211	742,267
1981	47,663	48,375	211,251	292	418,677	726,258
1982	48,234	33,154	447,117	1,748	278,306	808,559
1983	33,174	68,855	196,287	211	267,698	566,225
1984	31,742	48,575	623,447	2,942	423,718	1,130,424
1985	37,889	106,647	335,606	75	199,478	679,695
1986	19,414	95,433	659,988	3,422	309,213	1,087,470
1987	36,179	136,602	399,467	43	574,336	1,146,627
1988	55,716	92,025	524,296	10,825	1,381,674	2,064,536
Five Year Average (1983-1987)	31,680	91,222	442,959	1,339	354,889	922,088

Table 3. Quinhagak District commercial salmon harvest, 1967-1988.

<u>Year</u>	<u>Chinook</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>Total</u>
1967	0	652	1,926	0	8,087	10,665
1968	8,879	5,884	21,511	75,818	19,497	131,589
1969	16,802	3,784	15,077	953	38,206	74,822
1970	18,269	5,393	16,850	15,195	46,556	102,263
1971	4,185	3,118	2,982	13	30,208	40,506
1972	15,880	3,286	376	1,878	17,247	38,667
1973	14,993	2,783	16,515	277	19,680	54,248
1974	8,704	19,510	10,979	43,642	15,298	98,133
1975	3,928	8,584	10,742	486	35,233	58,973
1976	14,110	6,090	13,777	31,412	43,659	109,048
1977	19,090	5,519	9,028	202	43,707	77,546
1978	12,335	7,589	20,114	47,033	24,798	111,869
1979	11,144	18,828	47,525	295	25,995	103,787
1980	10,387	13,221	62,610	21,671	65,984	173,873
1981	24,524	17,292	47,557	160	53,334	142,867
1982	22,106	25,685	73,652	11,838	33,346	166,627
1983	46,385	10,263	32,442	168	23,090	112,348
1984	33,652	17,258	135,342	16,249	50,424	252,925
1985	30,401	7,876	29,992	28	20,418	88,715
1986	22,835	21,484	57,544	8,700	29,700	140,263
1987	26,022	6,489	50,070	66	8,557	91,204
1988 <sup>a</sup>	13,872	21,534	68,591	21,258	29,183	154,438
Five Year Average (1983-1987)	31,859	12,674	61,070	5,042	26,438	137,091

a Preliminary harvest figures.

Table 4. Goodnews Bay District commercial salmon harvest, 1968-1988.

<u>YEAR</u>	<u>CHINOOK</u>	<u>SOCKEYE</u>	<u>COHO</u>	<u>PINK</u>	<u>CHUM</u>	<u>TOTAL</u>
1968			5,458			5,458
1969	3,978	6,256	11,631	298	5,006	27,169
1970	7,163	7,144	6,794	12,183	12,346	45,630
1971	477	330	1,771	0	301	2,879
1972	264	924	925	66	1,331	3,510
1973	3,543	2,072	5,017	324	15,781	26,737
1974	3,302	9,357	21,340	16,373	8,942	59,314
1975	2,156	9,098	17,889	419	5,904	35,466
1976	4,417	5,575	9,852	8,453	10,354	38,651
1977	3,336	3,723	13,335	29	6,531	26,954
1978	5,218	5,412	13,764	9,103	8,590	42,087
1979	3,204	19,581	42,098	201	9,298	74,382
1980	2,331	28,632	43,256	7,832	11,748	93,799
1981	7,190	40,273	19,749	11	13,642	80,865
1982	9,476	38,877	46,683	4,673	13,829	113,538
1983	14,117	11,716	19,660	0	6,766	52,259
1984	8,612	15,474	71,176	4,711	14,340	114,313
1985	5,793	6,698	16,498	8	4,784	33,781
1986	2,723	25,112	19,378	4,447	10,355	62,015
1987	3,357	27,758	29,057	54	20,381	80,607
1988	4,964	36,368	30,832	5509	33,059	110,732
Five year Average (1983-1987)	6,920	17,352	31,154	1,844	11,325	68,595