

1998
YUKON AREA
SUBSISTENCE, PERSONAL USE, AND COMMERCIAL
SALMON FISHERIES OUTLOOK AND
MANAGEMENT STRATEGIES



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By

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1.0 INTRODUCTION

This document informs fishermen, processors, and other interested individuals about the outlook for the 1998 Yukon Area salmon runs and management strategy for the subsistence, personal use, and commercial salmon fisheries. Chinook, sockeye, coho, pink, and chum salmon occur in the Yukon River. The Yukon River chum salmon return is made up of an earlier and more abundant summer chum salmon run and a later fall chum salmon run. No directed commercial fisheries occur on sockeye, coho or pink salmon within the Yukon River drainage.

The Yukon Area includes all waters of Alaska within the Yukon River drainage and coastal waters from Point Romanof, northeast of Kotlik, to the Naskonat Peninsula. For management purposes the Yukon Area is divided into seven districts and ten subdistricts (Figure 1). Commercial fishing is allowed along the entire 1,224 miles of the Yukon River in Alaska and along the lower 225 miles of the Tanana River. The Coastal District includes the majority of coastal marine waters within the Yukon Area and is open only to subsistence fishing. The Lower Yukon Area, Districts 1, 2, and 3, includes coastal waters of the delta and that portion of the Yukon River drainage downstream of Old Paradise Village (river mile 301). The Upper Yukon Area, Districts 4, 5, and 6, is the Alaskan portion of the Yukon River drainage upstream of Old Paradise Village. Commercial, Aboriginal, domestic, and sport salmon fisheries also occur in Canada, with fishery management activities conducted by the Canadian Department of Fisheries and Oceans (DFO).

2.0 OUTLOOK FOR 1998

2.1 CHINOOK SALMON

Typically, the majority of chinook salmon returning to the Yukon River are 6-year-old fish; however, 5- and 7-year-old fish make a significant contribution to the run. Spawning ground escapements in 1992, the brood year for producing 6-year-old fish returning in 1998, were judged to be average to above average in magnitude. However, the return of this brood year as 5-year-old fish in 1997 appeared to be below average. The 7-year-old return is expected to be strong based upon the high contribution of age-6 fish in the 1997 run. The return of 5-year-old fish in 1998 is expected to be average to above average in abundance based on the spawning escapements observed in 1993. Overall, the 1998 chinook salmon run is anticipated to be near average in strength. The commercial harvest in Alaska is expected to be 88,000 to 108,000 chinook salmon (82,000 to 100,000 fish in the Lower Yukon Area and 6,000 to 8,000 fish in the Upper Yukon Area).

2.2 SUMMER CHUM SALMON

The return of 5-year-old fish in 1998 is expected to be below average based on spawning escapements observed in 1993 and the contribution of 4-year-old fish in the 1997 run. An above average return of 4-year-old summer chum salmon is expected. Summer chum salmon spawning escapement to the Anvik River in 1994 was 1,125,000, more than double the minimum escapement goal of 500,000 fish. Escapements to other spawning areas in 1994 appeared to be above average based upon weir counts for the East Fork Andreafsky and Gisasa Rivers and tower counts on the

Nulato, Chena and Salcha Rivers and Kaltag and Clear Creeks. Overall, the 1998 outlook is for an average to above average summer chum salmon run. The commercial harvest is expected to be 500,000 to 800,000 fish, but given the uncertainties associated with run distribution and market conditions, it may be less.

2.3 FALL CHUM SALMON

Fall chum salmon return primarily as 4- or 5-year-old fish, although 3- and 6-year-old fish also contribute to the run. A Ricker spawner-recruit model was used to predict the returns of fall chum salmon from the 1992 to 1995 parent-years that will contribute to the 1998 run. This process resulted in a 1998 preseason projection of 880,000 fish with the following approximate age composition:

Age-3 fish	16,000 (1995 Brood Year)
Age-4 fish	649,000 (1994 Brood Year)
Age-5 fish	201,000 (1993 Brood Year)
Age-6 fish	14,000 (1992 Brood Year)

It is anticipated the major contributor to the 1998 run will be age-4 fish returning from the 1994 brood year. In that year fall chum salmon run strength was assessed inseason to be much weaker than it in fact was. Initially, this resulted in closures or restrictions to various fall season fisheries throughout the drainage on a run size much larger than originally believed. The resulting low exploitation on fall chum salmon resulted in excellent escapements throughout the drainage, with all escapement goals in 1994 being met.

Should the 1998 fall chum salmon run materialize as projected, run size will be sufficient to not only meet escapement and subsistence requirements, but to also provide for commercial opportunity. A run of 880,000 fall chum salmon is approximately 95,000 fish greater than the average run size for the 24-year period 1974 through 1997.

2.4 COHO SALMON

Although comprehensive escapement information on Yukon River drainage coho salmon is lacking, it is known that coho salmon have later and overlapping run timing with fall chum salmon and primarily return at age 4. Assuming average survival, an average to above average return of coho salmon is anticipated in 1998. This is based upon results of limited escapement surveys conducted in 1994, when escapements were considered average to above average in the areas examined. Of note, more than 60,000 coho salmon were counted in the Delta Clearwater River in 1994, the highest on record and in excess of the minimum escapement goal of 9,000 fish.

Currently, there are no Alaska Board of Fisheries established coho salmon guideline harvest ranges within the Yukon Area, and coho salmon are considered an incidental harvest during the fall season fishery which is directed at chum salmon. Under this management strategy, any commercial harvest of coho salmon in 1998 will be largely dependent upon the abundance of fall chum salmon and the accompanying management strategies to harvest fall chum salmon.

3.0 MANAGEMENT STRATEGY FOR 1998

The overall goal of the department's program is to manage the various salmon runs for sustained yield under the policies and regulations established by the Alaska Board of Fisheries. Management of the Yukon Area commercial salmon fishery is complex due to the inability to determine stock specific run size and timing, the increasing efficiency of the commercial fleet, and allocation issues. Current escapement goals in the Yukon River drainage are based, in part, on historic escapements to key index spawning areas. In most cases, the average historic escapement level for a base period for each index area is considered a minimum escapement goal to be achieved.

Subsistence fishing occurs throughout most of the Yukon Area and has the highest priority among uses of the resource. In order to enforce commercial fishing regulations, it is necessary to place some restrictions on the subsistence fishery. For example, subsistence salmon fishing is closed in most areas for 24 hours prior to the commercial salmon season. This regulation discourages the illegal activity of subsistence caught salmon or salmon roe being sold commercially. However, substantially more fishing time is allowed throughout the fishing season for subsistence than for commercial purposes.

Primary tools used in management of the commercial salmon fishery are guideline harvest ranges established by the board (Table 1) and emergency order authority. Emergency orders are used to open and close the commercial fishing seasons, establish fishing periods, and implement gear restrictions. The department attempts to manage the commercial fisheries so that each district's harvest is proportionally similar to their respective guideline harvest range.

3.1 NEW REGULATIONS FOR 1998

The Alaska Board of Fisheries met in Fairbanks from December 2 through December 9, 1997 and addressed Arctic-Yukon-Kuskokwim (AYK) subsistence, personal use, sport, and commercial finfish proposals. To keep Yukon Area salmon fishermen, processors, and other interested individuals informed of current fishing regulations, the department is providing a partial summary of actions taken by the Alaska Board of Fisheries. Appendix B contains the summary of board actions on selected Yukon Area proposals during the December 1997 meeting.

3.2 SUBSISTENCE FISHERY

The department encourages fishermen to keep track of their subsistence salmon harvest on their subsistence catch calendar or subsistence fishing permit. Non-permitted fishermen who do not receive a subsistence salmon calendar by mail can contact the department in Emmonak or Fairbanks to have a calendar mailed to them. To encourage fishermen to return catch calendars by mail, return postage for the 1998 calendar has been prepaid by the department. Additionally, a \$200 lottery will be conducted following the season for all households that have returned their properly filled out calendars.

3.2.1 Districts 1, 2, and 3

In Districts 1, 2, and 3, subsistence salmon fishermen may take salmon seven days per week until 24 hours prior to opening of the commercial salmon fishing season. During the Districts 1, 2, and 3 commercial season, subsistence fishing is allowed only between commercial periods. During the chinook and summer chum commercial salmon fishing season, subsistence salmon fishing will be closed 18 hours before, during, and 12 hours following a commercial salmon fishing period. A new regulation reduces the number of hours subsistence fishing is closed prior to fall season commercial fishing periods. During the fall season, subsistence salmon fishing will be closed 12 hours before, during, and 12 hours following each District 1, 2 or 3 commercial salmon fishing period.

Fishermen are also reminded that regulations require fishermen to immediately remove the dorsal fin from chinook salmon taken for subsistence purposes in Districts 1, 2, and 3. The sale of salmon that have had the dorsal fin removed is illegal.

3.2.2 Subdistrict 4-A

In Subdistrict 4-A, subsistence salmon fishermen may take salmon seven days per week until 24 hours prior to opening of the commercial salmon fishing season. Regulations also separate subsistence fishing periods with set gillnet, fish wheel, and beach seine gear from commercial fishing periods in Subdistrict 4-A. A regulation change for the 1998 season is that during the commercial salmon fishing season, subsistence salmon fishing with set gillnet, fish wheel, and beach seine gear will be closed 12 hours before, during, and 12 hours following a Subdistrict 4-A commercial salmon fishing period. Previously, subsistence salmon fishing was closed 18 hours before a commercial salmon fishing period. In March 1997, the Alaska Board of Fisheries adopted a subsistence regulation for Subdistrict 4-A which allows chinook salmon to be taken with drift gillnet gear only for two 48-hour periods per week during the commercial salmon fishing season. The drift gillnet periods will be from 6:00 p.m. Sunday until 6:00 p.m. Tuesday and from 6:00 p.m. Wednesday until 6:00 p.m. Friday.

3.2.3 Subdistricts 4-B and 4-C

Regulations allow subsistence salmon fishing seven days per week until 24 hours prior to the opening of Subdistricts 4-B and 4-C commercial salmon fishing season. Once Subdistricts 4-B and 4-C commercial salmon season opens, managers will attempt to coincide allowable commercial salmon fishing periods with the subsistence salmon fishing schedule. During the commercial salmon season, subsistence salmon fishing time in Subdistricts 4-B and 4-C will be two 48-hour periods per week, unless altered by emergency order. Additionally, for any commercial salmon fishing closures of greater than five days in duration during the commercial salmon season, subsistence salmon fishermen may take salmon five days a week from 6:00 p.m. Sunday until 6:00 p.m. Friday.

3.2.4 District 5

In Subdistrict 5-D, unless altered by emergency order, subsistence salmon fishermen may take salmon seven days per week throughout the season. In the remainder of District 5, subsistence

salmon fishermen may take salmon seven days per week until 24 hours prior to opening of the commercial salmon season. Once the commercial salmon fishing season opens in Subdistricts 5-A, 5-B, and 5-C, subsistence salmon fishing periods will coincide with the commercial salmon fishing schedule. Additionally, subsistence only salmon fishing periods will also be scheduled.

During the Subdistricts 5-A, 5-B and 5-C commercial salmon season when commercial salmon fishing closures of greater than five days in duration occur, subsistence salmon fishermen may take salmon five days per week from 6:00 p.m. Tuesday until 6:00 p.m. Sunday. In 1998, Subdistricts 5-A, 5-B and 5-C, subsistence salmon fishermen may take salmon seven days a week following the closure of the commercial salmon season.

In portions of District 5, regulation requires subsistence fishermen to obtain subsistence fishing permits. Permit areas include the "Yukon River bridge area." The Yukon River bridge area includes the Yukon River drainage from Hess Creek to the Dall River. Additionally, regulation also requires subsistence fishing permits for the Yukon River drainage from Twenty-two Mile Slough, located upstream of Fort Yukon, to the Canadian border. Subsistence fishermen may obtain a permit by contacting the department's office in Fairbanks. Permits may be issued in person or by mail. Regulations require all permit holders to report harvest information on their permits and to return their permits to the department at the end of the fishing season.

3.2.5 District 6

Regulations require salmon fishermen in District 6, the Tanana River drainage, to obtain subsistence salmon permits. Subsistence salmon fishermen can obtain a permit by contacting the department's office in Fairbanks. No subsistence fishing is allowed in that portion of the Tanana and Yukon River drainages that are included in the Fairbanks Nonsubsistence Area. Subsistence permit holders in that portion of Subdistrict 6-B, from a point three miles upstream of the mouth of Totchaket Slough to the upper boundary of Subdistrict 6-B, are required to report to the department each week the number of salmon taken. Permit holders can report their weekly catch by calling a recording at (907) 459-7388. All Tanana River subsistence permit holders are required to report their harvest information on their permit. At the end of the fishing season, expired permits should be returned to the department's office in Fairbanks.

Within the majority of Subdistricts 6-A and 6-B, unless altered by emergency order, the subsistence salmon fishing schedule is two 42-hour periods per week from 6:00 p.m. Monday until 12 noon Wednesday and from 6:00 p.m. Friday until 12 noon Sunday. One exception is within the Old Minto Area where subsistence salmon fishing is allowed five days a week from 6:00 p.m. Friday until 6:00 p.m. Wednesday. The Old Minto Area includes that portion of the Tanana River drainage from the downstream end of Crescent Island up to a line three miles upstream from the mouth of Totchaket Slough. These subsistence salmon fishing schedules may be altered by emergency order.

3.3 PERSONAL USE FISHERY

In 1995, the Joint Board of Fish and Game adopted regulations that created the Fairbanks Nonsubsistence Area. No subsistence fishing is allowed within non-subsistence areas (Figure 2). Subdistrict 6-C falls entirely within the Fairbanks Nonsubsistence Area and thus is managed

under personal use regulations. There is a fishery harvest limit in Subdistrict 6-C of 750 chinook, 5,000 summer chum, and 5,200 fall chum and coho salmon combined. If this harvest limit is reached inseason, the Subdistrict 6-C personal use fishery will be closed.

Personal use salmon fishing permits are required in Subdistrict 6-C and can be obtained from the department's office in Fairbanks during regular office hours. Personal use permit holders must report their harvests to the department each week. Personal use permit applicants must possess a valid State of Alaska resident sport fishing license.

3.4 COMMERCIAL FISHING REPORTING REQUIREMENTS

All processors and buyers of salmon are required to register with the department before purchasing salmon in the Yukon Area. Processors and buyers in Districts 1, 2, and 3 must register with the department's office in Emmonak. Processors and buyers in Districts 4, 5, and 6 must register with the department's office in Fairbanks. Timely reporting of salmon purchases is essential for the management of these fisheries. Registered salmon buyers are required to provide a verbal report of their salmon purchases within 18 hours following the closure of a commercial fishing period. Buyers may verbally report harvest information in the Upper Yukon Area after office hours by calling a 24-hour recording at (907) 459-7388. Buyers are also required to mail or deliver fish tickets to the department within 24 hours following closure of a commercial fishing period in the Lower Yukon Area. In the Upper Yukon Area, buyers are required to mail or deliver fish tickets to the department within 36 hours following closure of a commercial fishing period. If there is incomplete reporting, the department may delay commercial fishing until the needed harvest reports are received. In addition, it is very important for buyers to accurately report on each fish ticket the statistical area where salmon were harvested.

Regulations also require commercial fishermen in Subdistrict 6-C to report, on the fish ticket, the number of salmon harvested but not sold during commercial fishing periods. Buyers are requested to ensure this information is reported on fish tickets.

3.5 CHINOOK AND SUMMER CHUM SALMON COMMERCIAL SEASON

The 1998 chinook salmon run will be managed to achieve aerial survey escapement goals for selected streams in the Alaskan portion of the drainage and to endeavor to provide for a minimum 28,000 chinook salmon spawning escapement level in the Canadian mainstem and a harvest (all Canadian user-groups combined) within the previously agreed to guideline harvest range of 16,800 to 19,800 fish for Canada. The chinook salmon spawning escapement in Canada has averaged 29,600 fish from 1990 through 1997. Inseason run assessment will be based on test fisheries, main river sonar passage estimates, subsistence catch reports, age composition, and commercial harvest information. Because of the below average contribution of 5-year-old chinook salmon in the 1997 run, the age composition of the 1998 chinook run will be monitored closely to determine the strength of the return of 6-year-olds.

The department will assess the summer chum salmon run inseason using the main river sonar project near Pilot Station, test fisheries, subsistence catch reports, age and sex composition data, and commercial harvest information. A comparison of the Anvik River sonar escapement estimate

and the Pilot Station sonar passage estimate will be used, in conjunction with other escapement monitoring projects, to provide information concerning the size and sex ratio of escapements to non-Anvik River tributaries. Other escapement monitoring projects include the Kaltag River tower operated by the Alaska Cooperative Extension Service 4-H Fisheries and Bering Sea Fishermen's Association (BSFA); the Nulato River tower funded by BSFA and the department; the Andreafsky, Gisasa, and South Fork Koyukuk River weirs operated by the United States Fish and Wildlife Service (USFWS); and Clear Creek tower operated by Tanana Chiefs Conference (TCC) and BSFA.

The department will initially manage the early portion of the summer chum salmon run conservatively, based upon the assumption that the run will be below average in size and that this run size will meet escapement and subsistence needs, as well as provide for a commercial harvest near the lower end of the guideline harvest ranges. Declining salmon markets may have a major impact on the fisheries this season. Therefore, the department will work closely with buyers and fishermen to manage the chinook and summer chum salmon fisheries by timing harvests for fish quality and market demands to the extent feasible within biological constraints.

3.5.1 Districts 1, 2, and 3

It is anticipated the chinook salmon directed commercial fishery will open by emergency order on a staggered basis, beginning with District 1, when increasing subsistence and/or test net catches of chinook salmon have occurred over a seven- to ten-day period. This management strategy provides for passage of a portion of the early run segment through the lower river districts before commercial fishing starts. It is possible a six-hour commercial fishing period may be established as early as June 5 in either District 1 or District 2, in an effort to spread out the chinook harvest and to target male chinook salmon early in the run. If this strategy is utilized, the subsequent fishing period may be delayed depending on the harvest during the initial period and run timing.

Directed chinook salmon commercial fishing periods with unrestricted mesh size gillnets are anticipated to be no more than 12 hours in duration. In general, fishing periods are expected to begin at 6:00 p.m. Monday and Thursday in District 1 and at 6:00 p.m. Wednesday and Sunday in District 2. Since Districts 1 and 2 have a combined guideline harvest range, the overall harvest level will determine when the directed chinook salmon fishery and the commercial salmon summer season will end. It may not be possible to allow an equal amount of fishing time for each district.

The use of unrestricted mesh size gillnets usually ceases when the combined harvest of Districts 1 and 2 approaches 70,000 to 85,000 chinook salmon. Typically, fishing periods with unrestricted mesh size gillnets target larger chinook salmon, which results in a higher harvest of females that are important for spawning success. Allowing a harvest above 85,000 chinook salmon will be dependent on run abundance and the harvest of chinook salmon during periods with gillnets restricted to 6-inch maximum mesh size. The chinook harvest during periods restricted to 6-inch maximum mesh size is typically composed of smaller fish and a higher proportion of males.

Six-inch maximum mesh size directed summer chum salmon fishing periods are anticipated to be 4 to 12 hours in duration. Short, summer chum salmon directed fishing periods may be scheduled based on market considerations and run assessment. In addition, short periods targeting summer

chum salmon will be easier to establish between unrestricted mesh size periods and will lower the harvest of chinook salmon during such periods. Because of market considerations, an effort will be made to schedule summer chum salmon directed periods as early in June as possible. The combined commercial harvest for Districts 1 and 2 may be up to the midpoint of the guideline harvest range of 500,000 summer chum salmon, with the actual harvest being dependent on inseason run assessment and market conditions.

An attempt will be made to establish commercial fishing periods in District 3 early in the run based on market considerations. The District 3 commercial harvest is expected to range between 1,800 and 2,000 chinook. A new regulation for the 1998 season allows a permit holder registered in District 3 to transfer to District 1 or 2 following a 72-hour waiting period. Only one district transfer is allowed in the Lower Yukon Area prior to July 15.

The USFWS will be operating a weir on the East Fork of the Andreafsky River in 1998. Historical escapement timing information obtained from sonar and tower projects operated on this river will be used to assess the 1998 summer chum salmon spawning escapement inseason. The department will use the assessment of spawning escapement in the East Fork Andreafsky River to regulate the size of the area closed to commercial fishing near the mouth of the Andreafsky River.

Regulations require identification of any vessel used by commercial salmon fishermen in Districts 1, 2, and 3. A vessel must display either the ADF&G vessel license number or the fisherman's 5-digit Commercial Fisheries Entry Commission (CFEC) permit serial number and the letter that follows. Symbols must be at least 12 inches high and 1 inch wide and be displayed on both sides of the hull or cabin.

New gillnet depth regulations for commercial fishing in Districts 1, 2, and 3 that went into effect in 1996 will remain in effect this season. Gillnets with greater than 6-inch mesh size may not be more than 45 meshes in depth. Gillnets with mesh size of 6 inches or less may not be more than 50 meshes in depth.

3.5.2 District 4

In years with average returns and run timing, the first District 4 commercial fishing period will occur between June 18 and June 25. Commercial fishing periods in Subdistrict 4-A are anticipated to begin at 6:00 p.m. Sunday and 6:00 p.m. Wednesday and be no longer than 18 hours in duration. However, the frequency and duration of Subdistrict 4-A fishing periods will be based on summer chum salmon run abundance. Management will be based, in part, on summer chum salmon spawning escapements and sex ratios monitored on the Anvik, Kaltag, Nulato, and Gisasa Rivers and on Clear Creek.

It is anticipated Subdistricts 4-B and 4-C will initially be placed on a schedule of two 48-hour periods per week beginning at 6:00 p.m. Sunday and 6:00 p.m. Wednesday. Subdistricts 4-B and 4-C may open earlier than Subdistrict 4-A to allow harvest of earlier running chinook salmon. If subsistence salmon fishing opportunities are not sufficient to meet subsistence needs due to the commercial fishing schedule, additional subsistence only fishing time will be allowed.

Based on preseason projections, the chinook salmon harvest is expected to be within the District 4 guideline harvest range, and the summer chum salmon harvest is expected to be up to the midpoint of the District 4 guideline harvest range. The District 4 early season will close when the targeted chinook or summer chum salmon harvest is reached.

3.5.3 Anvik River Management Area

The Anvik River may be opened to summer chum salmon commercial fishing if a surplus greater than the escapement goal minimum of 500,000 fish is available. If possible, the department intends to schedule the Anvik River commercial fishing periods to coincide with those of Subdistrict 4-A. Additional fishing periods may be allowed in the Anvik River based upon size of the surplus available for commercial harvest. The intent is to allow a harvest of Anvik River summer chum salmon that is in excess of the spawning escapement goal and to decrease harvest pressure on non-Anvik River summer chum salmon stocks. Fish harvested in the Anvik River fishery will not count against the Subdistrict 4-A summer chum salmon guideline harvest range. Permit holders are reminded that all chinook salmon caught during Anvik River commercial fishing periods must be released alive.

3.5.4 District 5

The District 5 commercial salmon fishing season will open by emergency order once the chinook salmon run is distributed throughout the area. Assessment of run abundance and timing from downstream districts, along with subsistence catch reports, will be used to determine the season opening.

It is anticipated Subdistricts 5-A, 5-B, and 5-C fishing periods during the early season will initially be 24 or 36 hours in duration. For Subdistrict 5-D, 24- or 36-hour commercial fishing periods are anticipated. This will allow the department to better monitor and maintain the harvest within guideline harvest ranges. In years with average returns and run timing, the first commercial fishing period has occurred between June 25 and July 5 in Subdistricts 5-A, 5-B, and 5-C, and between July 1 and July 10 in Subdistrict 5-D.

Subdistricts 5-A, 5-B, and 5-C have a guideline harvest range of 2,400 to 2,800 chinook salmon, and Subdistrict 5-D has a guideline harvest range of 300 to 500 chinook salmon. Based on the preseason projection, the department will manage the chinook salmon harvest to remain within guideline harvest ranges.

Few summer chum salmon are present or harvested in Subdistricts 5-B, 5-C, and 5-D. The commercial harvest of summer chum salmon in District 5 will largely be a function of management actions taken for chinook salmon.

3.5.5 District 6

Inseason salmon run strength and timing indicators in the Tanana River drainage include test fish wheel catches near the village of Nenana, aerial surveys, and performance of the commercial and subsistence fisheries. In addition, chinook and summer chum salmon escapement information

collected by Sport Fish Division through tagging or tower counting projects on the Chena and Salcha Rivers may be used for inseason run assessment. Due to the limited management tools available, the department will be conservative in management of District 6. The department can exceed the upper end of the guideline harvest ranges only in years it can determine that additional commercial fishing will not jeopardize achieving escapement goals and will meet subsistence needs.

It is anticipated opening of the District 6 commercial fishing season will be in early to mid-July. During the early season in District 6, there may be up to two 42-hour commercial fishing periods per week, from 6:00 p.m. Friday until 12 noon Sunday and from 6:00 p.m. Monday until 12 noon Wednesday. The directed chinook salmon commercial fishery is expected to close once the midpoint of the chinook salmon guideline harvest range of 600 to 800 chinook salmon is reached. Additional commercial fishing directed at chinook salmon may be allowed if escapement monitoring projects indicate chinook salmon escapement goals and subsistence needs are being met. Directed summer chum salmon commercial fishing periods will occur later in July and into August. Based on preseason projections, it is anticipated the summer chum salmon harvest will be up to the mid-point (25,500 fish) of the guideline harvest range.

3.6 FALL CHUM AND COHO SALMON COMMERCIAL SEASON

The Board of Fisheries reviewed *The Yukon River Drainage Fall Chum Salmon Management Plan* during a meeting held in Fairbanks, Alaska, on December 2 through 9, 1997. The board received public and advisory committee comments concerning the management plan, including proposed amendments from the Yukon River Drainage Fisheries Association (YRDFA). The board adopted a management plan which included recommendations proposed by YRDFA and which will be in effect through the 2000 season.

The fall chum salmon management plan recommends that directed fall chum salmon commercial fisheries be allowed only when run size projections are greater than 675,000 fall chum salmon. Additionally, only the harvestable surplus above 625,000 fall chum salmon may be targeted in the Alaska commercial fisheries. The 1998 preseason projection of approximately 880,000 fall chum salmon suggests an Alaskan fall chum salmon commercial harvest of up to 255,000 fall chum salmon could occur given normal distribution of healthy stocks throughout the drainage.

If fall chum salmon return as projected, an Alaskan commercial harvest approaching the third quartile of each district's guideline harvest range could be expected. The combined total of the third quartile of all districts or subdistricts is approximately 258,000 fall chum salmon. As the 1998 run materializes inseason, the department, using inseason management tools, may adjust the run size projection and corresponding commercial harvest upward or downward.

In 1998, the department will endeavor to deliver a minimum of 103,600 fall chum salmon to the Canadian border on the mainstem Yukon River. The 103,600 fall chum salmon border passage goal minimum includes a minimum of 80,000 fall chum salmon for spawning escapement and a minimum of 23,600 fall chum salmon for the low end of the Canadian guideline harvest range. It is believed that Canadian bound salmon represent a higher proportion of fish during the early portion of the run.

It should be noted that in recent years declining salmon flesh and salmon roe markets have had a major impact on the fall commercial salmon fishing season and schedule. It is anticipated poor salmon market conditions will continue in 1998. In all districts, the department will work closely with buyers and fishermen to time harvests for fish quality and market demands to the extent feasible within biological constraints.

3.6.1 Districts 1, 2, and 3

The guideline harvest range for Districts 1, 2, and 3 is 60,000 to 220,000 fall chum salmon. The department will monitor the run inseason by using the lower Yukon River set gillnet test fishery, the Mountain Village drift gillnet test fishery, Pilot Station sonar passage estimates, and subsistence and commercial catch statistics. This information, in combination with the preseason projection, will be the basis for initial management decisions for Districts 1, 2, and 3 commercial fisheries. If 1998 fall chum salmon return as projected, a Districts 1, 2, and 3 commercial fall chum salmon harvest of up to 180,000 fall chum salmon could be expected. The first lower Yukon River fall season commercial fishing period could occur as early as the week of July 20.

As a reminder to fishermen, regulations require District 1 commercial fishermen to register for the coastal "Set Net Only Area" prior to the opening of the fall commercial fishing season. Registration "sign-in" sheets will be available at Lower Yukon Area village post offices and at the department's field office in Emmonak. A new regulation now allows fisherman to transfer into and out of the Set Net Only Area. After initial registration for the Set Net Only Area, a permit holder may not commercially fish for salmon in the remainder of District 1, or in another district until 72 hours after re-registration with a Department of Fish and Game employee. The re-registration and 72-hour waiting period begin at the time that notification is received and noted by the department. After the first fall season commercial fishing period, a permit holder not registered for the Set Net Only Area, may transfer to the Set Net Only Area after re-registration with a Department of Fish and Game employee. The re-registration and 72-hour waiting period begin at the time that notification is received and noted by the department.

3.6.2 District 4

District 4 fall season commercial fishing activities are allowed only in Subdistricts 4-B and 4-C. Current regulations do not provide for a commercial fall season in Subdistrict 4-A. The Subdistricts 4-B and 4-C guideline harvest range is 5,000 to 40,000 fall chum salmon. Based on the preseason projection, a commercial harvest of up to 31,000 fall chum salmon may be taken in Subdistricts 4-B and 4-C. In years with average run timing and a commercially harvestable surplus, the first commercial fishing period normally occurs in early to mid-August.

3.6.3 District 5

The upper portion of District 5, referred to as Subdistrict 5-D, is managed separately from Subdistricts 5-A, 5-B, and 5-C. Subdistricts 5-A, 5-B, and 5-C have a guideline harvest range of 4,000 to 36,000 fall chum salmon. Based on the preseason projection, a commercial harvest of up to 28,000 fall chum salmon may be taken in Subdistricts 5-A, 5-B, and 5-C. In years with average

run timing and a commercially harvestable surplus, the first fall commercial fishing period normally occurs in mid-August. It is believed the majority of fall chum and coho salmon harvested in Subdistrict 5-A are bound for the Tanana River, particularly as the season progresses in time. In the event commercial fishing activities continue into September in Subdistricts 5-A, 5-B, and 5-C, the status of Tanana River drainage salmon stocks will be taken into consideration in management of the Subdistrict 5-A commercial fishery.

For Subdistrict 5-D, the Board of Fisheries established a separate guideline harvest range of 1,000 to 4,000 fall chum salmon. Based on the preseason projection, a commercial harvest of up to 3,000 fall chum salmon may be taken in Subdistrict 5-D. In years with average run timing, the first fall commercial fishing period in Subdistrict 5-D normally occurs in late August or early September.

3.6.4 District 6

Tanana River inseason run strength indicators include test fish catches from a fish wheel located on the south bank of the Yukon River near the village of Tanana and from Tanana River test fish wheels located near the mouth of the Kantishna River and near the village of Nenana. The performance of subsistence, personal use, and commercial fisheries are also taken into consideration.

Additionally, for the fourth consecutive year, the department will conduct an upper Tanana River drainage fall chum salmon tagging and recapture study. The project provides an inseason Tanana River drainage population estimate for fall chum salmon upstream of the confluence with the Kantishna River. The Tanana River tagging project shows promise as an inseason run strength and timing indicator. However, as with any project in the early years of operation, the data collected will have limited use in salmon management decisions. Utility of the Tanana River tagging project will continue to grow with each successful year of operation.

The department will initially manage the fall season in District 6 on the basis of fall chum salmon guideline harvest ranges and the run strength and timing of the overall Yukon River fall chum salmon return. However, dependent on inseason Tanana River fall chum salmon run strength and timing indicators, the department does have the authority to manage District 6 for a different level within the guideline harvest range or to exceed the guideline harvest range. Due to the limited inseason run assessment tools currently available, the department will be conservative in management of District 6 fisheries.

District 6 has a guideline harvest range of 2,750 to 20,500 fall chum salmon. Based on the preseason projection, a commercial harvest of up to 16,000 fall chum salmon may be taken in District 6. In years with average run timing and a commercially harvestable surplus, the first fall season commercial salmon fishing period normally occurs in early to mid-September.

3.6.5 Toklat River Fall Chum Salmon Rebuilding Plan

The Board of Fisheries also reviewed and modified *The Toklat River Fall Chum Salmon Rebuilding Management Plan* during the December 1997 meeting. The modified plan will be in effect through the 2000 fishing season. Parent year escapements for 4-year-olds returning in 1998 and 1999 were

above the minimum biological escapement goal. In recognition of the good parent year escapement, the board removed many of the restrictive elements of the Toklat River rebuilding management plan for the 1998 season. Regulatory language was also added that if the biological escapement goal is met in 1998, these same restrictive elements of the rebuilding plan removed for the 1998 season, will also be removed for the 1999 season.

Regulations and permit stipulations continue to require a Kantishna River subsistence salmon fishing permit to participate in this fishery. Permits are available at the department's office in Fairbanks.

3.6.6 Coho Salmon

Yukon River coho salmon have a slightly later, but overlapping, run timing with that of the fall chum salmon run, which complicates the fall season management program. Fall chum salmon are the primary species of management concern during the fall season. No commercial guideline harvest ranges have been established for coho salmon. However, the Yukon River Drainage Fisheries Association's Proposal 173 was tabled by the Alaska Board of Fisheries during its December 1997 meeting. Proposal 173 requested the development of a Yukon River coho salmon management plan, which would allow a directed coho salmon commercial fisheries under special situations. It is anticipated that the board will review this proposal during its meeting in Homer in November 1998. Currently, commercial harvest of coho salmon is a function of the timing, frequency, and duration of periods established for the more numerous fall chum salmon. Any commercial harvest of coho salmon in 1998 will be largely dependent upon the abundance of fall chum salmon and accompanying management strategies to harvest fall chum salmon.

4.0 U.S./CANADA YUKON RIVER SALMON PANEL AND NEGOTIATIONS

Negotiations were initiated in 1985 between the U.S. and Canada regarding a Yukon River salmon treaty. The purpose of these negotiations is to develop between the U.S. and Canada the coordinated conservation and management of salmon stocks that spawn in the Yukon River drainage in Canada.

In the early to mid-1990s, it was realized that, while reaching a comprehensive long term agreement remained a formidable challenge because of some key unresolved issues, there would be benefits that could be realized by more formally implementing the areas of agreement to date. In February 1995 an interim Yukon River Salmon Agreement went into effect. A U.S./Canada Yukon River Panel (Panel) was formed to implement the interim Yukon River Salmon Agreement. The Panel administers a Yukon River Salmon Restoration and Enhancement Fund (Fund). Both sides have to be in agreement for any action to occur. The focus of the Panel is on salmon stocks that spawn in the Canadian portion of the Yukon River drainage. The Panel makes recommendations to management agencies in Alaska and Canada.

The Panel agreed to the first six years of a rebuilding plan for Canadian mainstem chinook salmon stocks in April 1996. Recognizing the desirability of rebuilding stocks, the parties agreed to an interim, minimum spawning escapement objective for Canadian mainstem Yukon River

chinook salmon of 28,000 fish for six years beginning in 1996. The U.S. contribution to this effort is to endeavor to deliver between 44,800 to 47,800 chinook salmon to the Canadian mainstem Yukon River. The Canadian contribution to this effort is to endeavor to manage the harvest of chinook salmon in the mainstem Yukon River drainage in Canada by all user groups, combined within a guideline harvest range of 16,800 to 19,800 chinook salmon. The long-term goal of the rebuilding program is to achieve escapements of 33,000 to 43,000 chinook in the mainstem Yukon River in Canada.

For Canadian Yukon River mainstem fall chum salmon, a 12-year rebuilding plan was agreed upon during the negotiation process to begin with the 1990 season. The objective of this plan is to rebuild the stock by achieving a spawning escapement of 80,000 or more fall chum salmon for all brood years in the cycle by the year 2001. The U.S. contribution to this effort is to endeavor to deliver to the Canadian border on the mainstem Yukon River an agreed to number of fall chum salmon. The Canadian contribution to this effort is to endeavor to manage the harvest of fall chum salmon in the mainstem Yukon River drainage in Canada by all user groups combined within a guideline harvest range of 23,600 to 32,600 fall chum salmon.

A key component of the interim agreement is a Yukon River Salmon Restoration and Enhancement Fund administered by the Panel to address the restoration and enhancement of Canadian origin salmon stocks. At its April 1996, March 1997 and March 1998 meetings, the Panel allocated monies from this special fund to restore and increase salmon production on the river. Overall, approximately \$1.3 million in U.S. dollars has been granted to applicants to the fund. Applicants have included regional organizations, Native groups, private consultants and others, primarily in Canada.

The interim agreement was initially put in place through 1997 with an option to extend if both sides concurred. A number of issues remained to be resolved, and negotiations resumed October 1997, followed by another session in March 1998. The goal of the negotiations is to reach a long-term agreement on the remaining issues and to incorporate the relevant elements of the interim agreement. The interim agreement was extended through March 1998.

At the time of this writing, the interim agreement has not been extended beyond March 1998. The department will continue to manage the salmon fisheries on the Yukon River in 1998 consistent with the rebuilding plans for chinook and fall chum salmon that are contained in the interim agreement. Specifically, this means that the U.S. will endeavor to deliver between 44,800 to 47,800 chinook and between 103,600 to 112,600 fall chum salmon to the mainstem Yukon River in Canada in 1998, from which 28,000 or more chinook and 80,000 or more fall chum salmon are intended for spawning escapement.

5 AAC 99.015 JOINT BOARD NONSUBSISTENCE AREAS. (4) The Fairbanks Nonsubsistence Area is comprised of the following: within Unit 20(A) as defined by 5 AAC 92.450(20)(A) east of the Wood River drainage and south of the Rex Trail but including the upper Wood River drainage south of its confluence with Chicken Creek, within Unit 20(B) as defined by 5 AAC 92.450(20)(B) the North Star Borough and that portion of the Washington Creek drainage east of the Elliot Highway, within Unit 20(D) as defined by 5 AAC 92.450(20)(D) west of the Tanana River between its confluence's with the Johnson and Delta Rivers, west of the west bank of the Johnson River, and north and west of the Volkmar drainage, including the Goodpaster River drainage, and within Unit 25(C) as defined by 5 AAC 92.450(25)(C) the Preacher and Beaver Creek drainages.

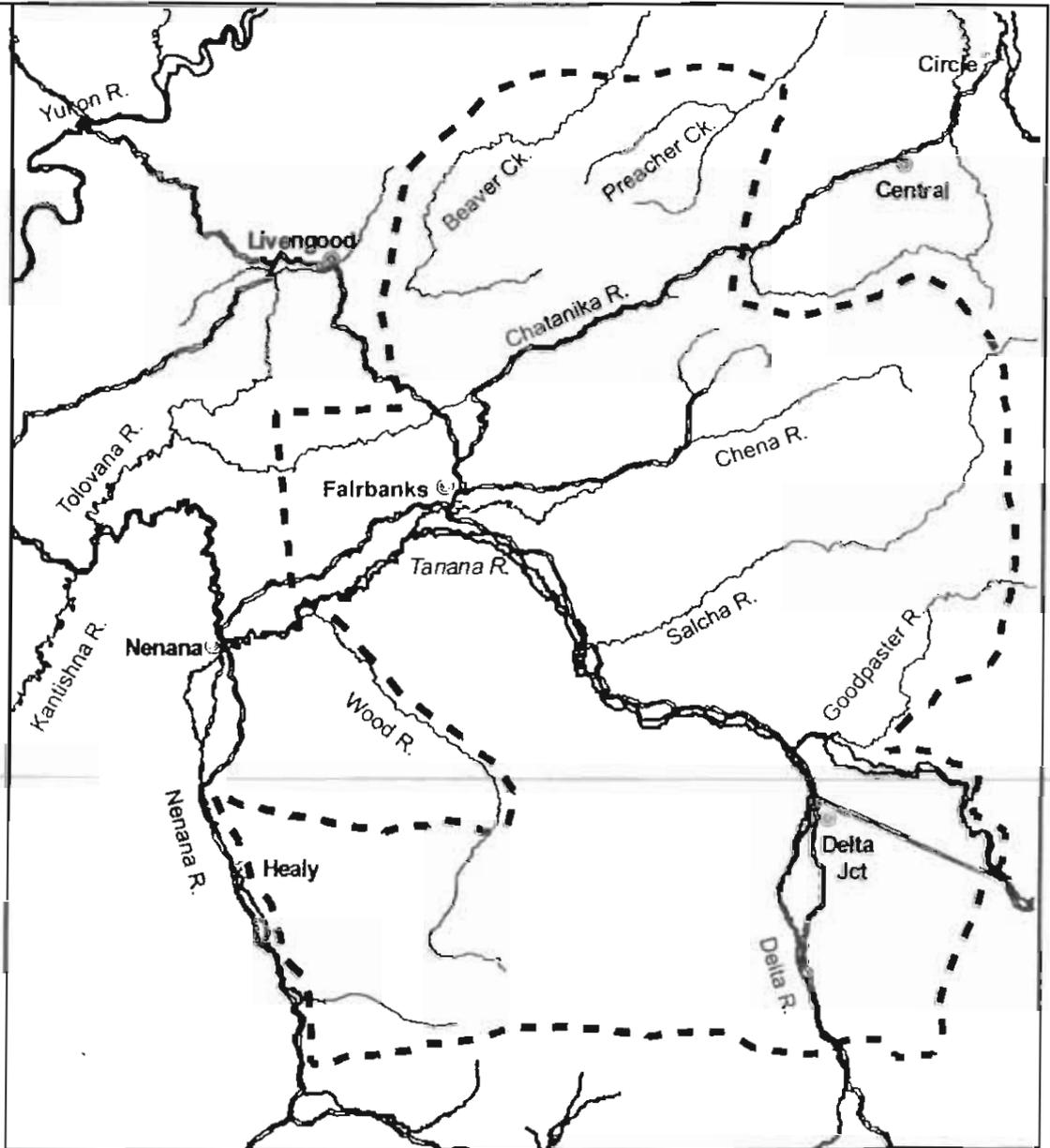
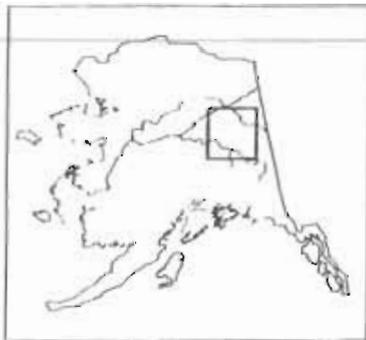


Figure 2. The Fairbanks Nonsubsistence Area, 1998.

Table 1. Guideline harvest ranges and mid-points for commercial harvest of Yukon River chinook, summer chum and fall chum salmon in Alaska, 1998.

Chinook Salmon						
District or Subdistrict	Guideline Harvest Range ^a					
	Lower		Mid-Point		Upper	
	Numbers	Percent	Numbers	Percent	Numbers	Percent
1 and 2	60,000	89.1	90,000	91.6	120,000	92.9
3	1,800	2.7	2,000	2.0	2,200	1.7
4	2,250	3.3	2,550	2.6	2,850	2.2
5A, B, C	2,400	3.6	2,600	2.6	2,800	2.2
5D	300	0.4	400	0.4	500	0.4
6	600	0.9	700	0.7	800	0.6
Total	67,350	100.0	98,250	100.0	129,150	100.0

Summer Chum Salmon						
District or Subdistrict	Guideline Harvest Range ^b					
	Lower		Mid-Point		Upper	
	Numbers	Percent	Numbers	Percent	Numbers	Percent
1 and 2	251,000	62.8	503,000	62.9	755,000	62.9
3	6,000	1.5	12,500	1.6	19,000	1.6
4A ^c	113,000	28.3	225,500	28.2	338,000	28.2
4B, C	16,000	4.0	31,500	3.9	47,000	3.9
5	1,000	0.3	2,000	0.3	3,000	0.3
6	13,000	3.3	25,500	3.2	38,000	3.2
Total	400,000	100.0	800,000	100.0	1,200,000	100.0

Anvik River Management Area roe cap of 100,000 pounds ^d

Fall Chum Salmon						
District or Subdistrict	Guideline Harvest Range ^e					
	Lower		Mid-Point		Upper	
	Numbers	Percent	Numbers	Percent	Numbers	Percent
1, 2, and 3	60,000	82.5	140,000	71.2	220,000	68.5
4B, C	5,000	6.9	22,500	11.4	40,000	12.5
5A, B, C	4,000	5.5	20,000	10.2	36,000	11.2
5D	1,000	1.4	2,500	1.3	4,000	1.2
6	2,750	3.8	11,625	5.9	20,500	6.4
Total	72,750	100.0	196,625	100.0	320,500	100.0

^a The chinook salmon guideline harvest ranges have been in effect since 1981.

^b Summer chum salmon guideline harvest ranges were established in February 1990 based on the average harvest shares from 1975-1989.

^c Or the equivalent roe percentage of 151,500 to 183,000 pounds or some combination of fish and pounds of roe.

^d The current Anvik River Management Area roe cap was established in March 1996.

^e The current fall chum salmon guideline harvest ranges were established in 1990.

Table 2. The Yukon River drainage fall chum salmon management plan, 1998.

Run Size Estimate ^a	Recommended Management Action Fall Chum Salmon Directed Fisheries				Targeted Drainagewide Escapement
	Commercial	Personal Use	Sport	Subsistence	
350,000 or Less	Closure	Closure	Closure	Closure ^b	350,000
350,001 to 450,000	Closure	Closure	Closure	Restrictions ^c	350,000
450,001 to 550,000	Closure	Closure	Closure	Restrictions ^c	375,000
550,001 to 600,000	Closure	Closure ^d	Closure ^d	Restrictions ^c	400,000
600,001 to 675,000	Closure	Normal Fishing Schedules	Retention Allowed	Normal Fishing Schedules	400,000 or More
Greater Than 675,000	Commercial Fishing Considered ^e	Normal Fishing Schedules	Retention Allowed	Normal Fishing Schedules	400,000 or More

- ^a The department will use the best available data including preseason projections, mainstem river sonar passage estimates, test fisheries indices, subsistence and commercial fishing reports, and passage estimates from escapement monitoring projects to assess the run size.
- ^b The department may, by emergency order, allow subsistence chum salmon directed fisheries in areas that indicator(s) suggest that the escapement goal(s) in that area will be achieved.
- ^c The department may, by emergency order, allow a less restrictive or a normal subsistence fishing schedule in areas that indicator(s) suggest that the escapement goal(s) in that area will be achieved.
- ^d The department may, by emergency order, allow personal use and sport fishing in areas that have normal subsistence fishing schedules and indicator(s) that suggest the escapement goal(s) in that area will be achieved.
- ^e When the projected run size is more than 675,000 chum salmon, the department may allow for a drainage-wide commercial fishery with the targeted harvest of the surplus above 625,000 chum salmon distributed by district or subdistrict proportional to the guideline established in harvest range 5 AAC 05.365. The department shall distribute the harvest at levels below the low end of the guideline harvest range by district or subdistrict proportional to the mid-point of the guideline harvest range.

Appendix A

Historical Commercial Harvest and Escapement Information

Appendix A.1 Commercial chinook salmon sales and estimated harvest by area and district, Yukon River drainage, 1961-1997.

Year	Lower Yukon Area ^a				Upper Yukon Area ^a									Subtotal	Total Estimated Harvest ^a		
	District 1	District 2	District 3	Subtotal	District 4			District 5			District 6						
					Number	Roe	Estimated Harvest ^b	Number	Roe	Estimated Harvest ^b	Number	Roe	Estimated Harvest ^b				
1961	84,466	29,026	4,368	117,860	-	-	-	-	-	-	-	-	-	1,804	-	1,804	119,664
1962	67,099	22,224	4,687	94,010	-	-	-	-	-	-	-	-	-	724	-	724	94,734
1963	85,004	24,221	7,020	116,245	-	-	-	-	-	-	-	-	-	803	-	803	117,048
1964	67,555	20,246	4,705	92,506	-	-	-	-	-	-	-	-	-	1,081	-	1,081	93,587
1965	89,268	23,763	3,204	116,235	-	-	-	-	-	-	-	-	-	1,863	-	1,863	118,098
1966	70,788	16,927	3,612	91,327	-	-	-	-	-	-	-	-	-	1,988	-	1,988	93,315
1967	104,350	20,239	3,618	128,207	-	-	-	-	-	-	-	-	-	1,449	-	1,449	129,656
1968	79,465	21,392	4,543	105,400	-	-	-	-	-	-	-	-	-	1,126	-	1,126	106,526
1969	71,888	14,756	3,595	90,039	-	-	-	-	-	-	-	-	-	988	-	988	91,027
1970	56,648	17,141	3,705	77,494	-	-	-	-	-	-	-	-	-	1,651	-	1,651	79,145
1971	86,042	19,226	3,490	108,758	-	-	-	-	-	-	-	-	-	1,749	-	1,749	110,507
1972	70,053	17,855	3,841	91,748	-	-	-	-	-	-	-	-	-	1,092	-	1,092	92,840
1973	56,981	13,859	3,204	74,044	-	-	-	-	-	-	-	-	-	1,309	-	1,309	75,353
1974	71,840	17,948	3,480	93,268	685	-	685	2,683	-	2,683	1,473	-	1,473	4,821	-	4,821	98,089
1975	44,585	11,315	4,177	60,077	389	-	389	2,872	-	2,872	500	-	500	3,761	-	3,761	63,838
1976	62,410	16,556	4,148	83,114	409	-	409	3,151	-	3,151	1,102	-	1,102	4,662	-	4,662	87,776
1977	69,915	16,722	3,965	90,602	985	-	985	4,162	-	4,162	1,008	-	1,008	6,155	-	6,155	96,757
1978	59,006	32,624	2,916	94,546	608	-	608	3,079	-	3,079	635	-	635	4,322	-	4,322	99,168
1979	75,007	41,498	5,018	121,523	1,989	-	1,989	3,389	-	3,389	772	-	772	6,150	-	6,150	127,673
1980	90,382	50,004	5,240	145,626	1,521	-	1,521	4,891	-	4,891	1,947	-	1,947	8,359	-	8,359	153,985
1981	99,506	45,781	4,023	149,310	1,347	-	1,347	8,374	-	8,374	987	-	987	8,708	-	8,708	158,018
1982	74,450	39,132	2,609	116,191	1,087	-	1,087	5,385	-	5,385	981	-	981	7,453	-	7,453	123,644
1983	85,457	43,229	4,106	142,792	601	-	601	3,606	-	3,606	911	-	911	5,118	-	5,118	147,910
1984	74,671	36,697	3,039	114,407	961	-	961	3,669	-	3,669	867	-	867	5,497	-	5,497	119,904
1985	90,011	48,365	2,588	140,964	664	-	664	3,418	-	3,418	1,142	-	1,142	5,224	-	5,224	146,188
1986	53,035	41,849	901	95,785	502	-	502	2,732	-	2,732	950	-	950	4,185	-	4,185	99,970
1987	76,643	47,458	2,039	126,140	1,524	-	1,524	3,758	-	3,758	3,338	-	3,338	8,620	-	8,620	134,760
1988	56,120	35,120	1,767	93,007	3,159	-	3,159	3,436	-	3,436	762	-	762	7,357	-	7,357	100,364
1989	61,570 ^c	33,166	1,645	96,381	2,790	-	2,790	3,280	-	3,280	1,741	-	1,741	7,817	-	7,817	104,198
1990	51,199 ^d	33,061	2,341	86,601	3,536	8	3,538	3,353	47	3,365	1,757	1,678	2,156	8,646	1,731	9,059	95,660
1991	56,332	39,260	2,344	97,936	2,446	2,222	3,582	3,810	82	3,828	898	1,545	1,072	6,942	3,829	8,480	106,416
1992	74,212	38,139	1,819	114,170	1,651	2,273	2,394	3,852	7	3,855	572	884	753	6,075	3,164	7,002	121,172
1993	49,286	37,293	1,501	88,080	1,349	701	1,577	3,008	0	3,008	1,113	1,313	1,445	5,470	2,014	6,030	94,110
1994	62,241	41,692	1,114	105,047	2,218	564	2,443	3,739	50	3,744	2,135	1,820	2,606	8,090	2,394	8,793	113,840
1995	76,106	41,458	0	117,564	262	626	499	3,242	0	3,242	1,660	4,731	2,747	5,184	5,357	6,488	124,052
1996	56,642	30,209	0	86,851	45	202	137	2,497	518	2,757	278	750	447	2,820	1,470	3,341	90,192
1997	66,384	39,303	0	105,747	1,450	14	1,457	3,678	0	3,678	1,966	3,211	2,728	7,094	3,225	7,863	113,610
Five Year Average																	
1987-1991	60,373	37,613	2,027	100,013	2,691	-	2,919	3,528	-	3,534	1,657	-	1,814	7,876	-	8,267	108,280
Five Year Average																	
1992-1996	63,697	37,758	687	102,342	1,105	873	1,410	3,268	107	3,321	1,152	1,900	1,600	5,524	2,880	6,331	108,673

^a Harvest reported in numbers of fish sold in the round and pounds of roe sold. Since 1990, efforts were made to separate chinook roe from summer chum roe. Does not include department test fish sales.

^b All fish sold in the round. Includes department test fish sales prior to 1988.

^c The estimated harvest is the fish sold in the round plus the estimated number of females to produce the roe sold.

^d In 1974, District 4 was subdivided to include Districts 5 and 6.

^e Includes the illegal sales of 653 chinook salmon in District 5, and 2,136 chinook salmon in District 6.

^f Includes the illegal sales of 3,211 chinook salmon.

^g Includes the illegal sales of 1,101 chinook salmon.

^h Includes the illegal sales of 2,711 chinook salmon in District 1, and 284 chinook salmon in District 2.

ⁱ Includes the illegal sales of 1,218 chinook salmon in District 1, and 207 chinook salmon in District 2.

Appendix A.2. Commercial summer chum salmon sales and estimated harvest by area and district, Yukon River drainage in Alaska, 1967-1997.

Lower Yukon Area								
Year	District 1 b	District 2 b	District 3 a			Subtotal		
			Number	Roe	Estimated Harvest ^c	Number	Roe	Estimated Harvest ^c
1967	9,453	1,425	57			10,935	-	10,935
1968	12,995	1,407	68			14,470	-	14,470
1969	56,886	5,080	-			61,966	-	61,966
1970	117,357	19,649	-			137,006	-	137,006
1971	93,928	6,112	50			100,090	-	100,090
1972	114,234	20,907	527			135,668	-	135,668
1973	221,644	63,402	463			285,509	-	285,509
1974 ^d	466,004	74,152	1,721			541,877	-	541,877
1975	418,323	99,139	-			517,462	-	517,462
1976	273,204	99,190	9,802			382,196	-	382,196
1977	250,652	105,679	3,412			359,743	-	359,743
1978	393,785	227,548	27,003			648,336	-	648,336
1979	369,934	172,838	40,015			582,787	-	582,787
1980	391,252	308,704	44,782			744,738	-	744,738
1981	507,158	351,878	54,471			913,507	-	913,507
1982	249,516	182,344	4,086			435,946	-	435,946
1983	451,164	248,092	14,600			713,856	-	713,856
1984	292,676	236,931	1,087			530,694	-	530,694
1985	247,486	188,099	1,792			437,377	-	437,377
1986	381,127	288,427	442			669,996	-	669,996
1987	222,898	174,876	3,501			401,275	-	401,275
1988	645,322	424,461	13,965			1,083,748	-	1,083,748
1989	544,373 ^f	343,032	7,578			894,983	-	894,983
1990	146,725	131,755	643			279,123	-	279,123
1991	140,470 ^h	175,149	8,912			324,531	-	324,531
1992 ⁱ	177,329	147,129	65			324,523	-	324,523
1993	73,659	19,332	483			93,454	-	93,454
1994	42,332	12,869	35			55,236	-	55,236
1995	142,266	83,817	0			226,083	-	226,083
1996	92,506	30,727	0	935	1,534	123,233	935	124,767
1997	59,915	18,242	0	0	0	78,157	0	78,157
Five Year Average								
1987-1991	339,958	249,855	6,920	-	-	596,732	-	596,732
Five year Average								
1992-1996	105,618	58,775	113	-	-	164,506	-	164,813

-Continued-

Year	Upper Yukon Area ^a												Total			Total
	District 4			District 5			District 6			Subtotal			Total			Total
	Number	Roe	Estimated Harvest ^c	Number	Roe	Estimated Harvest ^c	Number	Roe	Estimated Harvest ^c	Number	Roe	Estimated Harvest ^c	Number	Roe	Estimated Harvest ^c	Estimated Harvest
1967	-	-	-	-	-	-	-	-	-	0	0	0	10,935	0	10,935	10,935
1968	-	-	-	-	-	-	-	-	-	0	0	0	14,470	0	14,470	14,470
1969	-	-	-	-	-	-	-	-	-	0	0	0	61,966	0	61,966	61,966
1970	-	-	-	-	-	-	-	-	-	0	0	0	137,006	0	137,006	137,006
1971	-	-	-	-	-	-	-	-	-	0	0	0	100,090	0	100,090	100,090
1972	-	-	-	-	-	-	-	-	-	0	0	0	135,668	0	135,668	135,668
1973	-	-	-	-	-	-	-	-	-	0	0	0	285,509	0	285,509	285,509
1974 ^d	27,866	-	27,866	6,831	-	6,831	13,318	-	13,318	48,015	0	48,015	589,892	0	589,892	589,892
1975	165,054	-	165,054	12,997	-	12,997	14,782	-	14,782	192,833	0	192,833	710,295	0	710,295	710,295
1976	211,307	-	211,307	774	-	774	6,617	-	6,617	218,698	0	218,698	600,894	0	600,894	600,894
1977	169,541	-	169,541	1,274	-	1,274	4,317	-	4,317	175,132	0	175,132	534,875	0	534,875	534,875
1978	364,184	16,920	381,104	4,892	605	5,497	34,814	8,236	43,050	403,890	25,761	429,651	1,052,226	25,761	1,077,987	1,077,987
1979	169,430	35,317	204,747	8,608	1,009	9,617	18,491	3,891	22,382	195,529	40,217	236,746	779,316	40,217	819,533	819,533
1980	147,560	135,824	283,384	456	-	456	35,855	3,282	39,137	183,871	139,106	322,977	928,609	139,106	1,067,715	1,067,715
1981	59,718	187,032	330,445	1,236	49	1,285	32,477	1,987	34,464	93,431	189,068	366,194	1,006,938	189,068	1,279,701	1,279,701
1982	3,647	151,261	257,719	213	21	234	21,597	1,517	23,114	25,457	152,819	281,067	461,403	152,819	717,013	717,013
1983	6,672	148,125	255,388	42	1,856	1,898	24,309	18	24,327	31,023	149,999	281,613	744,879	149,999	995,469	995,469
1984	1,009	166,842	278,070	645	47	692	56,249	335	56,584	57,903	167,224	335,346	588,597	167,224	866,040	866,040
1985	12,007	247,085	427,483	700	-	700	66,913	1,540	68,453	79,620	248,625	496,636	516,997	248,625	934,013	934,013
1986	300	269,545	465,535	690	-	690	50,483	2,145	52,629	51,473	271,691	518,654	721,469	271,691	1,188,850	1,188,850
1987	29,991	121,474	209,800	362	44	406	10,610	450	11,060	40,963	121,968	221,268	442,238	121,968	622,541	622,541
1988	24,051	254,526	490,074	722	363	1,085	40,129	1,646	41,775	64,902	256,535	532,934	1,148,650	256,535	1,616,682	1,616,682
1989	18,554	283,305	510,244	154	373	527	42,115	4,871	46,986	80,823	288,549	557,757	955,806	288,549	1,452,740	1,452,740
1990	12,364	105,723	222,550	11	594	671	11,127 ^e	3,059	14,833	23,502	109,376	238,054	302,625	109,376	517,177	517,177
1991	6,381	137,232	309,644	4	28	35	18,197	4,716	23,892	24,582	141,976	333,571	349,113	141,976	658,102	658,102
1992 ^f	2,659	110,809	211,398	102	295	430	5,029	1,892	7,228	7,790	112,996	219,054	332,313	112,996	543,577	543,577
1993	27	22,447	42,957	0	0	0	3,041	515	3,705	3,088	22,962	46,662	96,522	22,962	140,116	140,116
1994	3,611	89,717	171,607	229	212	464	21,208	7,828	31,434	25,048	97,757	203,505	80,284	97,757	258,741	258,741
1995	8,873	281,074	554,587	107	188	316	24,711	9,475	37,428	33,691	290,737	592,331	259,774	290,737	818,414	818,414
1996	0	295,190	510,240	0	302	336	22,360	18,332	46,890	22,360	313,824	557,466	145,593	314,759	682,233	682,233
1997	2,052	74,231	124,671	137	0	137	14,886	9,036	25,287	17,085	83,267	150,095	95,242	83,267	228,252	228,252
Five Year Average																
1987-1991	18,268	180,452	348,462	251	280	545	24,436	2,948	27,709	42,954	183,681	376,716	639,686	183,681	973,448	973,448
Five Year Average																
1992-1996	3,034	159,847	298,157	88	199	309	15,270	7,608	25,337	18,391	167,655	323,804	182,897	167,842	488,616	488,616

^a Harvest reported in numbers of fish sold in the round and pounds of roe. Roe sales may include some pink and chinook salmon roe. Does not include department test fish sales.

^b All sales are fish in the round in District 1 and 2. Includes department test fish sales prior to 1988.

^c The estimated harvest is the fish sold in the round plus the estimated number of females caught to produce the roe sold. In addition, the estimated harvest for Districts 3 and 4 includes the estimated number of unsold males harvested.

^d In 1974, District 4 was subdivided to include Districts 5 and 6.

^e Includes the illegal sales of 150 summer chum salmon in District 1.

^f Does not include 1,233 female summer chum salmon sold in Subdistrict 6 C with roe extracted and roe sold separately. These fish are included in estimated harvest to produce roe sold.

^g Includes the illegal sales of 1,023 summer chum salmon.

^h Includes the illegal sales of 31 summer chum salmon in District 1, and 91 summer chum salmon in District 2.

Appendix A.3 Commercial fall chum salmon sales and estimated harvest by area and district, Yukon River drainage, 1961-1997.

Year	Lower Yukon Area ^b				Upper Yukon Area ^a									Subtotal			Total Estimated Harvest
	District 1	District 2	District 3	Subtotal	District 4			District 5			District 6			Numbers	Roe	Estimated Harvest ^c	
					Numbers	Roe	Estimated Harvest ^c	Numbers	Roe	Estimated Harvest ^c	Numbers	Roe	Estimated Harvest ^c				
1961	42,461	-	-	42,461	-	-	-	-	-	-	-	-	-	0	0	0	42,461
1962	53,116	-	-	53,116	-	-	-	-	-	-	-	-	-	0	0	0	53,116
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
1964	8,347	-	-	8,347	-	-	-	-	-	-	-	-	-	0	0	0	8,347
1965	22,936	-	-	22,936	-	-	-	-	-	-	-	-	-	381	0	381	23,317
1966	69,836	-	1,209	71,045	-	-	-	-	-	-	-	-	-	0	0	0	71,045
1967	36,451	-	1,823	38,274	-	-	-	-	-	-	-	-	-	0	0	0	38,274
1968	49,857	-	3,068	52,925	-	-	-	-	-	-	-	-	-	0	0	0	52,925
1969	128,866	-	1,722	130,588	-	-	-	-	-	-	-	-	-	722	0	722	131,310
1970	200,306	4,858	3,285	208,449	-	-	-	-	-	-	-	-	-	1,146	0	1,146	209,595
1971	188,533	-	-	188,533	-	-	-	-	-	-	-	-	-	1,061	0	1,061	189,594
1972	136,711	12,899	1,313	150,922	-	-	-	-	-	-	-	-	-	1,254	0	1,254	152,176
1973	173,783	45,304	-	219,087	-	-	-	-	-	-	-	-	-	13,003	0	13,003	232,090
1974	176,036	53,540	552	230,128	9,213	-	9,213	23,551	-	23,551	26,884	-	26,884	59,648	0	59,648	289,776
1975	158,183	51,666	5,590	215,439	13,666	-	13,666	27,212	-	27,212	18,692	-	18,692	59,570	0	59,570	275,009
1976	105,851	21,212	4,250	131,313	1,742	-	1,742	5,387	-	5,387	17,948	-	17,948	25,077	0	25,077	156,390
1977	131,758	51,994	15,851	199,603	13,980	-	13,980	25,730	-	25,730	18,673	-	18,673	58,383	0	58,383	257,986
1978	127,947	51,646	11,527	191,120	10,988	1,721	12,709	21,016	5,220	26,236	13,259	3,687	16,946	45,263	10,628	55,891	247,011
1979	109,406	94,042	25,955	229,403	48,899	3,199	52,098	47,459	8,097	55,556	34,185	7,170	41,355	130,543	18,466	149,009	378,412
1980	106,829	83,891	13,519	204,229	27,978	4,347	32,325	41,771	605	42,376	19,452	60	19,520	89,201	5,020	94,221	298,450
1981	167,834	154,883	19,043	341,760	12,082	1,311	13,393	86,620	6,955	93,575	25,989	3,019	29,008	124,691	11,285	135,976	477,736
1982	97,484	96,581	5,815	199,880	3,894	167	4,061	13,583	42	13,625	8,820	596	7,416	24,307	805	25,112	224,992
1983	124,371	85,645	10,018	220,034	4,482	1,963	6,445	43,993	0	43,993	34,089	3,101	37,190	82,564	5,064	87,628	307,662
1984	78,751	70,803	6,429	155,983	7,625	2,215	9,840	24,060	57	24,117	20,564	56	20,620	52,249	2,328	54,577	210,560
1985	129,948	40,490	5,164	175,602	24,452	2,525	26,977	25,338	0	25,338	42,352	0	42,352	92,142	2,525	94,667	270,269
1986	59,352	51,307	2,793	113,452	2,045	0	2,045	22,053	395	22,448	1,892	182	2,074	25,990	577	26,567	140,019
1987	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	44,890	31,845	2,080	78,825	15,662	1,421	17,083	16,989	0	16,989	21,844	1,808	23,652	54,495	3,227	57,722	136,547
1989	74,235	97,558	15,332	187,125	11,776	3,407	15,183	18,215	3,989	22,204	49,090	7,353	56,443	79,081	14,749	93,830	280,955
1990	25,269	37,077	3,715	66,061	4,989	2,351	8,166	7,778	1,058	8,976	43,182	7,535	50,975	55,949	10,944	66,117	134,178
1991	59,724	102,628	9,213	171,565	3,737	1,616	6,091	27,355	3,625	32,114	28,195	14,154	44,448	59,287	19,395	82,653	254,216
1992	0	0	0	0	0	0	0	0	0	0	15,721	2,806	19,022	15,721	2,806	19,022	19,022
1993	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	3,630	0	3,630	1	3,276	4,369	3,631	3,276	7,999	7,999
1995	79,345	90,831	0	170,176	2,924	4,126	8,731	9,778	18,815	30,033	67,855	9,560	74,117	80,557	32,501	112,881	283,057
1996	33,629	29,851	0	63,280	2,918	0	2,918	11,878	8,498	21,858	10,266	6,173	17,574	25,062	14,671	42,350	105,630
1997	27,483	24,326	0	51,809	2,458	0	2,458	2,448	1,194	3,920	0	0	0	4,904	1,194	6,378	58,187
Five Year Average																	
1987-1991	40,824	53,822	6,070	100,715	7,233	1,759	9,305	14,067	1,734	16,057	28,462	6,170	35,103	49,762	9,663	60,464	161,180
Five Year Average																	
1992-1996	22,595	24,096	0	46,691	1,168	825	2,330	5,057	5,463	11,104	18,769	4,363	23,016	24,994	10,651	36,450	83,142

^a Sales reported in numbers of fish sold in the round and pounds of unprocessed roe, which may include small amounts of coho salmon roe. Since 1990, efforts were made to separate coho roe from fall chum roe. Does not include department test fish sales.

^b All fish sold in the round. Includes department test fish sales prior to 1988.

^c The estimated harvest is the fish sold in the round plus the estimated number of females to produce the roe sold.

^d In 1974, District 4 was subdivided to include Districts 5 and 6.

^e Does not include B84 female fall chum salmon sold in Subdistrict 6-C with roe extracted and roe sold separately. ^f Females are accounted for in the estimated harvest to produce roe sold.

Appendix A 4 Commercial coho salmon sales and estimated harvest by area and district, Yukon River drainage in Alaska, 1961-1997.

Year	Lower Yukon Area ^b				Upper Yukon Area ^a									Total Estimated Harvest				
	District 1	District 2	District 3	Subtotal	District 4			District 5			District 6				Subtotal			
					Number	Roe	Estimated Harvest ^c	Number	Roe	Estimated Harvest ^c	Number	Roe	Estimated Harvest ^c		Number	Roe	Estimated Harvest ^c	
1961	2,855	-	-	2,855	-	-	-	-	-	-	-	-	-	-	-	-	-	2,855
1962	22,928	-	-	22,928	-	-	-	-	-	-	-	-	-	-	-	-	-	22,928
1963	5,572	-	-	5,572	-	-	-	-	-	-	-	-	-	-	-	-	-	5,572
1964	2,446	-	-	2,446	-	-	-	-	-	-	-	-	-	-	-	-	-	2,446
1965	350	-	-	350	-	-	-	-	-	-	-	-	-	-	-	-	-	350
1966	19,254	-	-	19,254	-	-	-	-	-	-	-	-	-	-	-	-	-	19,254
1967	9,925	-	1,122	11,047	-	-	-	-	-	-	-	-	-	-	-	-	-	11,047
1968	13,153	-	150	13,303	-	-	-	-	-	-	-	-	-	-	-	-	-	13,303
1969	13,989	-	1,009	14,998	-	-	-	-	-	-	-	-	-	-	-	-	95	15,093
1970	12,632	-	-	12,632	-	-	-	-	-	-	-	-	-	-	-	-	556	13,188
1971	12,165	-	-	12,165	-	-	-	-	-	-	-	-	-	-	-	-	38	12,203
1972	21,705	506	-	22,211	-	-	-	-	-	-	-	-	-	-	-	-	22	22,233
1973	34,860	1,781	-	36,641	-	-	-	-	-	-	-	-	-	-	-	-	0	36,641
1974 ^d	13,713	178	-	13,889	0	-	0	1,409	-	1,409	1,479	-	1,479	2,888	-	2,888	-	16,777
1975	2,288	200	-	2,488	0	-	0	5	-	5	53	-	53	58	-	58	-	2,546
1976	4,064	17	-	4,081	0	-	0	0	-	0	1,103	-	1,103	1,103	-	1,103	-	5,184
1977	31,720	5,319	538	37,577	0	-	0	2	-	2	1,284	-	1,284	1,286	-	1,286	-	38,863
1978	16,460	5,835	758	23,053	32	-	32	1	-	1	3,068	-	3,068	3,099	-	3,099	-	28,152
1979	11,369	2,850	-	14,219	155	-	155	0	-	0	2,791	-	2,791	2,946	-	2,946	-	17,165
1980	4,829	2,660	-	7,489	30	-	30	0	-	0	1,226	-	1,226	1,258	-	1,258	-	8,745
1981	13,129	7,848	419	21,396	0	-	0	0	-	0	2,284	-	2,284	2,284	-	2,284	-	23,680
1982	15,115	14,179	87	29,381	15	-	15	0	-	0	7,780	-	7,780	7,795	-	7,795	-	37,176
1983	4,595	2,557	-	7,152	0	-	0	0	-	0	6,168	-	6,168	6,168	-	6,168	-	13,320
1984	29,472	43,064	621	73,157	1,095	-	1,095	0	-	0	7,688	-	7,688	8,783	-	8,783	-	81,940
1985	27,678	17,125	171	44,974	938	-	938	0	-	0	11,762	-	11,762	12,700	-	12,700	-	57,672
1986	24,824	21,197	793	46,814	0	-	0	0	-	0	441	-	441	441	-	441	-	47,255
1987	0	0	0	0	0	-	0	0	-	0	0	-	0	0	-	0	-	0
1988	36,028	34,758	1,419	72,205	2	-	2	8	-	8	13,972	-	13,972	13,982	-	13,982	-	86,187
1989	22,987	38,402	3,988	65,377	3	-	3	84	-	84	16,084	-	16,084	16,171	-	16,171	-	81,548
1990	12,160	16,405	918	29,483	0	-	0	0	-	0	11,549 ^e	4,042	14,804	11,549	4,042	14,804	-	44,287
1991	54,095	40,898	1,905	96,898	14	0	14	0	0	0	6,288	4,299	9,774	6,282	4,299	9,786	-	106,886
1992	0	0	0	0	0	0	0	0	0	0	6,556	1,680	7,979	6,556	1,680	7,979	-	7,979
1993	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0
1994	0	0	0	0	0	0	0	0	0	0	120	5,568	4,451	120	5,568	4,451	-	4,451
1995	21,625	18,489	0	40,113	0	0	0	0	0	0	5,826	2,229	8,900	5,826	2,229	8,900	-	47,013
1996	27,705	20,974	0	48,679	161	0	161	0	0	0	3,803	4,829	7,142	3,964	4,829	7,303	-	55,982
1997	21,450	13,056	0	34,506	814	0	814	0	0	0	0	0	0	814	0	814	-	35,320
Five Year Average																		
1987-1991	25,054	26,093	1,846	52,793	4	0	4	18	0	18	9,575	-	10,927	9,597	-	10,949	-	63,742
Five Year Average																		
1992-1996	9,868	7,692	0	17,758	32	-	32	0	0	0	3,261	2,865	5,294	3,293	2,865	5,327	-	23,085

^a Sales reported in numbers of fish sold in the round and pounds of roe. Since 1990, efforts were made to separate coho and fall chum salmon roe. Does not include department test fish sales.

^b All sales are fish in the round. Includes department test fish sales prior to 1988.

^c The estimated harvest is the fish sold in the round plus the estimated number of females caught to produce the roe sold.

^d In 1974, District 4 was subdivided to include Districts 5 and 6.

^e Does not include 438 female coho salmon sold in District 6-C with roe extracted and roe sold separately. These fish are included in estimated harvest to produce roe sold.

Appendix A 5 Chinook salmon escapement counts for selected spawning areas in the Alaskan portion of the Yukon River drainage, 1961-1997 *

Year	Andreafsky River			Anvik River		Nulato River			Gisasa River		Chena River			Salcha River	
	East Fork		West Fork	River	Index Area	North Fork	South Fork	Mainstem	Aerial	Weir	River	Index Area	River	Index Area	
	Aerial	Tower or Weir	Aerial	Aerial	Aerial	Aerial	Aerial	Population Estimate			Aerial	Aerial	Population Estimate	Aerial	Aerial
1961	1,003			1,226			376	167		266				2,878	
1962	675		762									81		937	
1963												137			
1964	667		705											450	
1965			344	650										408	
1966	361		303	638										800	
1967			276	336											
1968	380		363	310										739	
1969	274		231	296										461	
1970	665		574	368										1,882	
1971	1,904		1,682									6		158	
1972	798		582	1,198								193		1,193	
1973	825		788	613								21		391	
1974			285	471		55	23		161		1,016	959		1,857	
1975	993		301	730		123	81		385		316	262		1,056	
1976	818		643	1,053		471	177		332		531	496		1,641	
1977	2,008		1,499	1,371		286	201		255		563			1,202	
1978	2,487		1,062	1,324		498	422		45		1,726			3,490	
1979	1,180		1,134	1,484		1,093	414		484		1,159			4,788	
1980	958		1,500	1,330	1,192	954	369		951		2,541			6,757	
1981	2,146		231	807	577		791				690			1,237	
1982	1,274		851						421		2,073			2,534	
1983				653	376	526	480		572		2,553	2,336		1,961	
1984	1,573		1,993	641	574						501	494		1,031	
1985	1,617		2,248	1,051	720	1,600	1,180		735		2,553	2,262		2,035	
1986	1,954	1,530	3,158	1,118	918	1,452	1,522		1,346		2,031	1,935		3,368	
1987	1,608	2,011	3,281	1,174	879	1,146	493		731		6,404	1,209	4,771	1,898	
1988	1,020	1,339	1,448	1,805	1,449	1,061	714		797		3,346	1,760	4,562	2,761	
1989	1,399		1,089	442	212						2,666	1,280	3,294	2,333	
1990	2,503		1,545	2,347	1,595	568	430		684		5,603	1,436	1,402	10,728	
1991	1,938		2,544	875	625	767	1,253		1,690		3,025	1,277	1,277	5,608	
1992	1,030		2,002	1,536	931	348	231		910		5,230	825	799	7,862	
1993	5,855		2,765	1,720	1,526	1,844	1,181		1,573		12,241	2,943	2,660	10,007	
1994	300	7,801	213		913	843	952	1,795	2,779	2,888	11,877	1,570	1,570	18,399	
1995	1,635	5,841	1,108	1,996	1,147	968	681	1,412	410	4,023	9,680	3,575	3,039	13,643	
1996		2,955	624	839	709		100	756		1,952	6,833	2,233	2,112	7,958	
1997	1,140	3,186	1,510	3,979	2,690			4,766	1,414	3,764	13,390	3,495	3,303	18,396	
EO	>1,500		>1,400	>1,300	>500	>800	>500		>600				>1,700	>2,500	

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- ^a Aerial survey counts are peak counts only. Survey rating was fair or good unless otherwise noted.
- ^b From 1961-1970, river count data are from aerial surveys of various segments of the mainstem Anvik River. From 1972-1979, counting tower operated; mainstem aerial survey counts below the tower were added to tower counts. From 1980-present, aerial survey counts for the river are best available minimal estimates for the entire Anvik River drainage. Index area counts are from the mainstem Anvik River between the Yellow River and McDonald Creek.
- ^c Includes mainstem counts below the confluence of the North and South Forks, unless otherwise noted.
- ^d Chena River index area for assessing the escapement objective is from Moose Creek Dam to Middle Fork River.
- ^e Salcha River index area for assessing the escapement objective is from the TAPS crossing to Caribou Creek.
- ^f Incomplete and/or poor survey conditions resulting in minimal or inaccurate counts.
- ^g Boat survey.
- ^h Data unavailable for index area. Calculated from historic (1972-91) average ratio of index area counts to total river counts (0.90:1.0).
- ⁱ Tower counts.
- ^j Mark-recapture population estimate.
- ^k Mainstem counts below the confluence of the North and South Forks Nulato River included in the South Fork counts.
- ^l Weir counts.
- ^m Incomplete count because of late installation and/or early removal of project.
- ⁿ Data are preliminary.
- ^o Interim escapement goals. Established March, 1992.
- ^p Interim escapement goal for the entire Anvik River drainage is 1,300 salmon. Interim escapement objective for mainstem Anvik River between the Yellow River and McDonald Creek is 500 salmon.

Appendix A.6. Chinook salmon escapement counts for selected spawning areas in the Canadian portion of the Yukon River drainage, 1991-1997.

Year	Tincup Creek ^a	Tatchun Creek ^b	Little Salmon River ^c	Big Salmon River ^d	Nisutlin River ^{e,f}	Ross River ^f	Wolf River ^g	Whitehorse Fishway		Canadian Mainstem				
								Count	Percent Hatchery Contribution	Border Passage Estimate	Harvest	Spawning Escapement Estimate		
1961								1,068	0					
1962								1,500	0					
1963								483	0					
1964								595	0					
1965								903	0					
1966		7 ^k						563	0					
1967								533	0					
1968			173 ^k	857 ^k	407 ^k	104 ^k		414	0					
1969			120	286	105			334	0					
1970		100		670	615		71 ^k	625	0					
1971		130		275	650		750	856	0					
1972		80		126	415		13	391	0					
1973		99		27 ^k	75 ^k			224	0					
1974		192		70 ^k	48 ^k			273	0					
1975		175		153 ^k	249		40 ^k	313	0					
1976		52		86 ^k	102			121	0					
1977		150		408	316 ^k			277	0					
1978		200		330	524			725	0					
1979		150		489 ^k	632		183 ^k	1,184	0					
1980		222		286 ^k	1,436		377	1,383	0					
1981		133		670	2,411	1,626	949	395	1,555	0				
1982		73		403	758	578	155	104	473	0	36,598	16,808	19,790	
1983	100	264		101 ^k	540	701	43 ^{k,h}	95	905	0	47,741	18,752	28,989	
1984	150	153		434	1,044	832	151 ^k	124	1,042	0	43,911	16,295	27,616	
1985	210	190		255	801	409	23 ^k	110	508	0	29,881	19,151	10,730	
1986	228	155		54 ^k	745	459 ^k	72 ^h	109	557	0	36,479	20,064	16,415	
1987	100	159		468	891	183	180 ^k	35	327	0	30,623	17,563	13,260	
1988	204	152		368	765	267	242	66	405	16	44,445	21,327	23,118	
1989	88	100		862	1,662	695	433 ^p	146	549	19	42,620	17,419	25,201	
1990	83	643		665	1,806	652	457 ^h	188	1,407	24	56,679	18,980	37,699	
1991				326	1,040		250	201 ^r	1,266 ^h	51 ^h	41,187	20,444	20,743	
1992	73	106		494	617	241	423	110 ^r	758 ^h	84 ^h	43,185	17,803	25,382	
1993		183		184	572	339	400	168 ^r	688 ^h	73 ^h	45,027	16,469	28,558	
1994	101 ^k	477		726	1,764	389	506	393 ^r	1,577 ^h	54 ^h	46,680	20,790	25,890	
1995	121	397		781	1,314	274	253 ^k	229 ^r	2,103	57	52,353	20,091	32,262	
1996	150	423		1,150	2,565	719	102 ^h	705 ^r	2,958	35 ^s	47,955	19,546	28,409	
1997 ^k	193	266 ^k		1,025	1,345	277		322 ^r	2,084	24	53,400	15,717	37,683	
E.O.														33,000-43,000

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- * Data obtained by aerial survey unless otherwise noted. Only peak counts are listed. Survey rating is fair to good, unless otherwise noted.
 - † All foot surveys except 1978 (boat survey) and 1986 (aerial survey).
 - ‡ For 1968, 1970, and 1971 counts are from mainstem Big Salmon River. For all other years counts are from the mainstem Big Salmon River between Big Salmon Lake and the vicinity of Souch Creek.
 - § One Hundred Mile Creek to Sidney Creek.
 - ¶ Big Timber Creek to Lewis Lake.
 - || Wolf Lake to Red River.
 - Ⓜ Counts and estimated percentages may be slightly exaggerated. In some or all of these years a number of adipose-clipped fish ascended the fishway, and were counted, more than once. These fish would have been released into the fishway as fry between 1989 and 1994, inclusive.
 - Ⓝ Estimated total spawning escapement excluding Porcupine River (estimated border escapement minus the Canadian catch).
 - Ⓚ Incomplete and/or poor survey conditions resulting in minimal or inaccurate counts.
 - Ⓜ Estimate derived by dividing the annual 5-area (Whitehorse Fishway, Big Salmon, Nisutlin, Wolf, Tatchun) count by the average proportion of the annual 5-area index count to the estimated spawning escapement from the DFO tagging study for years 1983, and 1985-1989.
 - Ⓝ Information on area surveyed is unavailable.
 - Ⓜ Counts are for Big Timber Creek to Sheldon Lake.
 - Ⓜ Interim escapement objective. Stabilization escapement objective for years 1990-1995 is 18,000 salmon. Rebuilding step escapement objective for years 1996-2001 is 28,000 salmon.
 - ¶ Counts are for Wolf Lake to Fish Lake outlet.
 - * Data are preliminary.

Appendix A 7 Summer chum salmon escapement counts for selected spawning areas in the Alaskan portion of the Yukon River drainage, 1973-1997. ^a

Year	Andreasfjky River		Arvik River		Rodo River	Katag Creek	Nulato River			Gisasa River		Hogatza River		Tozina River	Chena River		Sakcha River		
	East Fork	West Fork	Tower & Aerial ^b	Sonar	Aerial	Tower	South Fork	North Fork	Mainstem	Aerial	Weir	Clear & Caribou Cr.	Clear Creek	Aerial	Aerial	Tower	Aerial	Tower	
	Sonar, Tower, or Weir Counts	Aerial					Aerial	Aerial				Aerial	Aerial						Aerial
1973	10,149 ^d		51,835	249,015												79 ^d		290	
1974	3,215 ^d		33,578	411,133		16,137		29,016	29,334		22,022			1,823	4,349			3,510	
1975	223,485		235,954	900,967		25,335		51,215	87,280		56,904		22,365	3,512	1,670			7,573	
1976	105,347		118,420	511,475		38,258		9,230	30,771		21,342		28,744	725 ^d	685			5,484	
1977	112,722		63,120	358,771		16,118		11,385	58,275		2,204 ^d		10,734	761 ^d	610			677 ^d	
1978	127,090		57,321	307,270		17,845		12,821	41,659		9,280 ^d		5,102	2,262	1,609			5,605	
1979	66,471		43,391		280,537			1,506	35,598		10,962		14,221		1,025 ^d			3,060	
1980	36,823 ^d		114,759		492,676			3,702 ^d	11,244 ^d		10,388		19,786		338			4,140	
1981	81,555	147,312 ^f			1,486,182			14,348							3,500			8,500	
1982	7,501 ^d	181,352 ^f	7,267 ^d		444,581						334 ^d		4,984 ^s		874	1,509		3,756	
1983		110,608 ^f			362,912			1,263 ^d	19,749		2,356 ^d		28,141		1,604	1,097		716 ^s	
1984	95,200 ^d	70,125 ^f	238,565		891,028								124 ^d		1,861			9,810	
1985	66,146		52,750		1,080,243	24,576		10,494	19,344		13,232		22,566		1,030	1,005		3,178	
1986	83,931	167,614 ^g	98,373		1,189,602			16,848	47,417		12,114				1,778	1,509		8,028	
1987	6,687 ^d	45,221 ^g	35,535		455,676			4,094	7,163		2,123		5,669 ^d		333			3,657	
1988	43,056	68,937 ^g	45,432		1,125,449	13,872		15,132	26,951		9,264		6,890		2,983	432		2,889 ^d	
1989	21,460 ^d				838,908											714 ^d		1,574 ^d	
1990	11,519 ^d		20,428 ^d		403,627	1,941 ^d		3,136 ^{dh}	1,419 ^d		450 ^d		2,177 ^d		36	245 ^d		450 ^d	
1991	31,886		46,857		647,772	3,977		13,150	12,491		7,003		8,947		93	115 ^d		154 ^d	
1992	11,308 ^d		37,808 ^d		775,626	4,465		5,322	12,358		9,300		2,986		794	848 ^d		3,222	
1993	10,935 ^d		9,111 ^d		517,409	7,867		5,486	7,698		1,581				970	168	5,400	212	5,809
1994		200,981 ⁱ			1,124,689		47,295			148,762 ^k	8,827	51,116 ^h	8,247 ^m		1,137	9,988	4,916	39,450	
1995		172,148 ^j			1,339,418	12,849	77,193	10,875	29,949	236,890	8,458	136,886		116,735	4,985	185 ^d	3,519 ^k	934 ^d	30,784
1996		108,450 ⁱ			933,240	4,380	51,269	8,490 ^{dh}		129,694		157,569	27,090 ^m	100,912	2,310	2,051	12,810 ^k	9,722	74,827 ^k
1997 ^e		51,139 ⁱ			609,118	2,775 ^d	48,018			157,975	686 ^d	31,802	1,821 ^d	76,454	428 ^d	594 ^d	9,439 ^k	3,968 ^d	35,741 ^k
E.O. ⁿ	>109,000		>116,000		>500,000				>53,000 ^e				>17,000 ^p					>3,500	

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- ^a Aerial survey counts are peak counts only, survey rating is fair or good unless otherwise noted.
- ^b From 1972-1979 counting tower operated, escapement estimate listed is the tower counts plus expanded aerial survey counts below the tower (see Buklis 1982).
- ^c Includes mainstem counts below the confluence of the North and South Forks, unless otherwise noted.
- ^d Incomplete survey and/or poor survey timing or conditions resulted in minimal or inaccurate count.
- ^e Sonar count
- ^f Tower count
- ^h Mainstem counts below the confluence of the North and South Forks of the Nulato River included in the South Fork counts
- ⁱ Weir count
- ^j Incomplete count due to late installation and/or early removal of project or high water events.
- ^m BLM-helicopter survey.
- ⁿ Interim escapement objective
- ^o Interim escapement objective for North Fork Nulato River only
- ^p Consists of Clear and Caribou Creeks interim escapement objectives of 9,000 and 8,000, respectively
- ^q Data are preliminary

Appendix A.8. Fall chum salmon escapement counts for selected spawning areas in Alaskan and Canadian portions of the Yukon River drainage, 1971-1997.

Year	Alaska				Canada						Canadian Mainstem		
	Toklat River ^b	Delta River ^c	Chandalar River ^d	Sheenjek River ^d	Fishing Branch River ^{f,g}	Mainstem Yukon River Index ^{g,h}	Koidern River ^g	Kluane River ^{g,j}	Teslin River ^{g,k}	Border Passage Estimate	Harvest	Spawning Escapement Estimate	
	1971					312,800							
1972		5,384			35,125 ⁿ			198 ^{p,r}					
1973		10,469			15,989 ^s	383		2,500					
1974	41,798	5,915		89,966 ^l	32,525 ^s			400					
1975	92,265	3,734 ^v		173,371 ^l	353,282 ^s	7,671		362 ^r					
1976	52,891	6,312 ^v		26,354 ^l	36,584			20					
1977	34,887	16,876 ^v		45,544 ^t	88,400			3,555					
1978	37,001	11,136		32,449 ^t	40,800			0 ^r					
1979	158,336	8,355		91,372 ^l	119,898			4,640 ^r					
1980 ^{ah}	26,346	5,137		28,933 ^l	55,268			3,150		39,130	16,218	22,912	
1981	15,623	23,508		74,560	57,386 ^w			25,806		66,347	19,281	47,066	
1982	3,624	4,235		31,421	15,901	1,020 ^x		5,378		47,049	15,091	31,958	
1983	21,869	7,705		49,392	27,200	7,560		8,578 ^r		118,365	27,490	90,875	
1984	16,758	12,411		27,130	15,150	2,800 ^y	1,300	7,200	200	81,900	25,267	56,633 ^r	
1985	22,750	17,276 ^v		152,768	56,016 ^s	10,760	1,195	7,538	356	99,775	37,765	62,010	
1986	17,976	6,703 ^v	59,313	84,207 ^{aa}	31,723 ^s	825	14	16,686	213	101,826	13,886	87,940	
1987	22,117	21,180	52,416	153,267 ^{aa}	48,956 ^s	6,115	50	12,000		125,121	44,345	80,776	
1988	13,436	18,024	33,619	45,206 ^{aa}	23,597 ^s	1,550	0	6,950	140	69,280	32,494	36,786	
1989	30,421	21,342 ^v	69,161	99,116 ^{aa}	43,834 ^s	5,320	40	3,050	210 ^p	55,861	20,111	35,750	
1990	34,739	8,992 ^v	78,631	77,750 ^{aa}	35,000 ^{ab}	3,651	1	4,683	739	82,947	31,212	51,735	
1991	13,347	32,905 ^v		86,496 ^{ac}	37,733 ^s	2,426	53	11,675	468	112,303	33,842	78,461	
1992	14,070	8,893 ^v		78,808 ^{ac}	22,517 ^s	4,438	4	3,339	450	67,962	18,880	49,082	
1993	27,838	19,857		42,922 ^{ac}	28,707 ^s	2,620	0	4,610	555	42,165	12,422	29,743	
1994	76,057	23,777 ^v		153,000 ^{ac,ad}	65,247 ^s	1,429 ^p	20 ^p	10,734	209 ^p	133,712	35,354	98,358	
1995	54,513 ^{ah}	20,587	280,999	235,000 ^{ac,ad}	51,971 ^{s,aj}	4,701	0	16,456	633	198,203	40,111	158,092	
1996	18,264	19,758	208,170	247,965 ^{ac,ad}	77,278 ^s	4,977		14,431	315	143,758	21,329	122,429	
1997 ^{ad}	14,511	8,000	199,874	80,423	26,959	2,189		3,350	207	94,725	9,286	85,439	
E.O. ^{af}	>33,000	>11,000		>64,000	50,000- 120,000							>80,000	

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- ^a Latest table revision November 3, 1997.
- ^b Expanded total abundance estimates for upper Toklat River index area using stream life curve (SLC) developed with 1987-1993 data. Index area includes Geiger Creek, Sushana River, and mainstem floodplain sloughs from approximately 0.25 mile upstream of roadhouse to approximately 1.25 miles downstream.
- ^c Estimates are a total spawner abundance, generally from using spawner abundance curves and streamlife data.
- ^d Side-scan sonar estimate 1986-1990, split beam sonar estimate 1995-1996.
- ^e Located within the Canadian portion of the Porcupine River drainage. Total escapement estimated using weir to aerial survey expansion factor of 2.72, unless otherwise indicated.
- ^g Aerial survey count unless otherwise indicated.
- ^h Tatchun Creek to Fort Selkirk.
- ⁱ Duke River to end of spawning sloughs below Swede Johnston Creek.
- ^k Boswell Creek area (5 km below to 5 km above confluence).
- ^m Excludes Fishing Branch River escapement (estimated border passage minus Canadian removal).
Weir installed on September 22. Estimate consists of a weir count of 17,190 after September 22, and a tagging passage estimate of 17,935 prior to weir installation.
- ⁿ Incomplete and/or poor survey conditions resulting in minimal or inaccurate counts.
- ^r Foot survey.
- ^s Weir count.
- ^t Total escapement estimate using sonar to aerial survey expansion factor of 2.22.
- ^v Population estimate from replicate foot surveys and stream life data.
- ^w Initial aerial survey count was doubled before applying the weir/aerial expansion factor of 2.72 since only half of the spawning area was surveyed.
- ^x Boat survey.
- ^y Total index area not surveyed. Survey included the mainstem Yukon River between Yukon Crossing to 30 km below Fort Selkirk.
- ^z Escapement estimate based on mark-recapture program unavailable. Estimate based on assumed average exploitation rate.
- ^{aa} Expanded estimates for period approximating second week August through middle fourth week September, using Chandalar River run timing data.
- ^{ab} Weir was not operated. Although only 7,541 chum salmon were counted on a single survey flown October 26, a population estimate of approximately 27,000 fish was made through date of survey, based upon historic average aerial-to-weir expansion of 28%. Actual population of spawners was reported by DFO as between 30,000-40,000 fish considering aerial survey timing.
- ^{ac} Total abundance estimate are for the period approximating second week August through middle fourth week of September. Comparative escapement estimates prior to 1986 are considered more conservative; approximating the period of end of August through middle week of September.
- ^{ad} Data are preliminary.
- ^{af} Interim escapement objective.
- ^{ag} Based on escapement estimates for years 1974-1990.
- ^{ah} Minimal estimate because of late timing of ground surveys with respect to peak of spawning.
- ^{ai} Incomplete count due to late installation and/or early removal of project or high water events.

Appendix A.9. Coho salmon escapement counts for selected spawning areas in the Alaskan portion of the Yukon River drainage, 1972-1997. ^a

Year	Andreafsky River			Kantishna River		Nenana River				Delta Clearwater River ^{t,g}	Clearwater Lake and Outlet	Richardson Clearwater River
	East Fork	West Fork	Anvik River	Geiger Creek ^b	Barton Creek	Lost Slough	Nenana Mainstem ^c	Wood Creek ^d	Seventeen Slough			
1972										630	417	454 ^k
1973										3,322	551 ^f	375 ^f
1974						1,388			27	3,954 ⁱ	560	652 ^f
1975						943			956	5,100	1,575 ^{t, h}	4 ^k
1976			467 ^k	25 ^j		118			281	1,920	1,500 ^{t, h}	80 ^k
1977			81 ^k	60		524 ^k		310 ^b	1,167	4,793	730 ^{t, h}	327
1978						350		300 ^b	466	4,798	570 ^{t, h}	
1979						227			1,987	8,970	1,015 ^{t, h}	372
1980				3 ⁱ		499 ^k		1,603 ^b	592	3,946	1,545 ^{t, h}	611
1981	1,657 ^k					274		849 ^{n,r}	1,005	8,563 ^p	459 ^k	550
1982				81				1,436 ^{n,r}		8,365 ^p		
1983				42		766		1,042 ⁿ	103	8,019 ^p	253	88
1984				20 ^j		2,677		8,826 ⁿ		11,061	1,368	428
1985				42 ⁱ		1,584		4,470 ⁿ	2,081	5,358	750	
1986				5	496	794		1,664 ⁿ	218 ^{d,h}	10,857	3,577	146 ^b
1987				1,175		2,511		2,387 ⁿ	3,802	22,300	4,225 ^{t, h}	
1988	1,913	830	1,203	159	437 ^k	348		2,046 ⁿ		21,600	825 ^{t, h}	
1989				155	12 ^k			412 ⁿ	824 ^k	11,000	1,600 ^{t, h}	483
1990				211		688	1,308		15 ^k	8,325	2,375 ^{t, h}	
1991				427	467 ^k	564	447		52	23,900	3,150 ^{t, h}	
1992				77	55 ^k	372			490	3,963	229 ^{t, h}	500 ^f
1993				138	141	484	419	666 ^{n,s}	581	10,875	3,525 ^{t, h}	
1994				410	2,000 ^{n,s}	944	1,648	1,317 ^{n,s}	2,909	62,675 ^w	3,425 ^{t, h}	5,800 ^f
1995	10,901 ⁿ			142	192 ^{n,s}	4,169	2,218	500 ⁿ	2,972 ^k	20,100	3,625 ^{t, h}	
1996	8,037 ⁿ			233	0 ⁿ	2,040	2,171	2,416 ⁱ	3,668 ^{d,h}	14,075 ^x	1,125 ^{t, y}	
1997	9,462 ⁿ			274		1,524 ^{aa}	1,446	1,464 ^{lab}	1,996 ^{d,h}	11,525	2,775 ^{t, h}	
E O										>9,000 ^u		

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- ^a Aerial surveys unless otherwise noted. Only peak counts presented. Survey rating is fair to good, unless otherwise noted.
- ^b Foot survey.
- ^c Mainstem Nenana River between confluences of Lost Slough and Teklanika River.
- ^d Surveyed by F.R.E.D.
- ^f Surveyed by Sport Fish division.
- ^g Boat survey counts in the lower 17.5 river miles, unless otherwise indicated.
- ^h Boat survey.
- ^k Poor survey.
- ⁿ Weir count.
- ^p Expanded estimate based on partial survey counts and historic distribution of spawners from 1977-1980.
- ^r Coho weir was operated at the mouth of Clear Creek (Shores Landing).
- ^s Incomplete count because of late installation and/or early removal of project.
- ^t Data are preliminary.
- ^u Interim escapement objective established March, 1993, based on boat survey counts of coho salmon in the lower 17.5 river miles during the period October 21-27.
- ^w An additional 17,565 coho salmon were counted by helicopter in the Delta Clearwater outside of the normal mainstem index area.
- ^x An additional 3,300 coho salmon were counted by helicopter in the Delta Clearwater outside of the normal mainstem index area.
- ^y An additional 350 coho salmon were counted in Clearwater Lake Inlet.
- ^{aa} Survey of western floodplain sloughs only.
- ^{ab} Beginning at confluence of Clear Creek, the survey includes counts of Glacier and Wood Creeks up to their headwaters.

Appendix B

Yukon Area Fishery Regulation Changes

YUKON AREA FISHERY REGULATION CHANGES

To keep Yukon Area salmon fishermen, processors, and other interested individuals informed of current fishing regulations, the department is providing this partial summary of regulatory changes and actions recently taken by the Alaska Board of Fisheries. This summary of actions is limited to selected proposals addressed by the board during the December 2 through December 9, 1997 meeting in Fairbanks. For more information concerning these or other regulations, contact the Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division office in Anchorage at 907-267-2171 or in Fairbanks at 907-459-7274. *The following summary is for informational purposes only and is not intended to detail, reflect, or fully interpret reasons for the board's actions.*

YUKON AREA SALMON

PROPOSAL NO. 150

ACTION: No Action Taken

DESCRIPTION: 5 AAC 04.XXX, 5 AAC 04.100, and 5 AAC 05.100. Requests establishment of a new pink salmon directed commercial fishery within waters offshore of Stebbins and St. Michael. Area of the proposed fishery currently is within the Norton Sound-Port Clarence Area. This proposal raises the issue of intercepting salmon bound for the Yukon River.

DISCUSSION: Stakeholders present at the December Board of Fisheries meeting requested the board take no action on the proposal at this time. However, the board agreed to accept a future Agenda Change Request (ACR) on this issue following a comprehensive test fishery in 1998 to provide more data about possible chum salmon bycatch.

PROPOSAL NO. 156

ACTION: Adopted as Amended

DESCRIPTION: 5 AAC 01.210. FISHING SEASONS AND PERIODS. Reduce the hours that subsistence salmon fishing is closed prior to a fall season commercial fishing period. Proposal 156 recommends that during the fall season, Districts 1, 2, and 3 subsistence salmon fishing be closed 12 hours before, during, and 12 hours following a fall season commercial salmon fishing period.

AMENDMENTS: Substitute language in Record Copy (RC) 94 was adopted. RC 94 contained a friendly amendment from the GASH Fish and Game Advisory Committee to include Subdistrict 4-A in this proposal. The Department was in support of this friendly amendment.

DISCUSSION: The Department was in support of this Lower Yukon Fish and Game Advisory Committee proposal. Passage of this proposal means there will be 12 hour closures before, during, and 12 hours after commercial fishing periods in Districts 1, 2, 3 during the fall season and in Subdistrict 4-A.

PROPOSAL NO. 157

ACTION: Adopted

DESCRIPTION: 5 AAC 01.220 and 5 AAC 01.245. Remove the subsistence salmon fishing restriction which prevents a subsistence salmon fisherman who is registered for the commercial set net only area of District 1 from using drift gillnets for the taking of subsistence fish in Districts 1, 2, and 3.

DISCUSSION: The Department was in support of this Lower Yukon Fish and Game Advisory Committee proposal. The regulation restricting subsistence salmon fishermen registered for the commercial setnet only area of District 1 was removed by the passage of this proposal.

PROPOSAL NO. 158

ACTION: Adopted as Amended

DESCRIPTION: 5 AAC 01.220. During the commercial salmon fishing season, this proposal would remove salmon directed fishing gear as legal non-salmon fishing gear within the Yukon River and the lower portion of the Tanana River. Regulation 5 AAC 01.220 (f) allows set gillnets (no mesh size restrictions), drift gillnets (no mesh size restrictions), and fish wheels to be used in the harvest of non-salmon species. Set gillnets with a mesh size greater than 5 inches, drift gillnets and fish wheels are the primary type of gear used to harvest subsistence salmon throughout the Yukon River drainage during the commercial salmon season.

AMENDMENTS: A motion to delete set gillnet gear from this proposal carried after a discussion on reasonable opportunity.

DISCUSSION: Board members noted some stakeholder opposition to including set gillnet fishing gear in this proposal.

PROPOSAL NO. 159

ACTION: Rejected

DESCRIPTION: 5 AAC 01.220. **LAWFUL GEAR AND GEAR SPECIFICATIONS.** Allow the use of subsistence drift gillnet gear to take king salmon in Yukon River Subdistricts 4-B and 4-C, from the tip of Cone Point to the old village site at Kokrines.

DISCUSSION: The board heard concerns about limited fishing sites and travel distances, as well as fear that drifting would change the traditional fishing schedule and could increase the harvest of large kings needed for genetic diversity. ADFG staff has the ability to increase subsistence only fishing time during the commercial fishing season under current gear specifications by emergency order.

PROPOSAL NO. 160

ACTION: No Action Taken

DESCRIPTION: 5 AAC 01.220. LAWFUL GEAR AND GEAR SPECIFICATIONS. Allow the use of subsistence drift gillnet gear to take king salmon in Yukon River Subdistricts 4-B and 4-C, from the tip of Cone Point to the mouth of the Yuki River.

DISCUSSION: No action was taken on Proposal 160 based on the action taken on Proposal 159.

PROPOSAL NO. 161

ACTION: Adopted

DESCRIPTION: 5 AAC 01.230. Remove the required placement of regulatory markers at the upstream mouth of Twenty-two Mile Slough within Subdistrict 5-D.

DISCUSSION: The board noted local advisory committee support for using natural markers to delineate fishing subdistricts where possible.

PROPOSAL NO. 162

ACTION: Adopted

DESCRIPTION: 5 AAC 01.230. This proposal would allow the Department of Fish and Game to issue separate subsistence salmon and non-salmon household permits in order to reduce confusion on reporting harvests and to more closely follow the fishing patterns of individuals seeking specific species.

DISCUSSION: The board committee recommended support.

PROPOSAL NO. 163

ACTION: Adopted

DESCRIPTION: 5 AAC 01.240. Eliminate the requirement for subsistence salmon fishermen to remove the salmon dorsal fin during commercial fishing periods in Subdistricts 5-A, 5-B, and 5-C and in the lower portion of Subdistrict 5-D, downstream from Long Point.

DISCUSSION: The board noted that this regulation has not been enforced in recent years and there is no evidence it is necessary.

PROPOSAL NO. 164

ACTION: Adopted

DESCRIPTION: 5 AAC 01.210. Clarify and modify the Yukon River subsistence fishing season regulation to reflect current management practices. This proposal addresses three separate subsistence fishing season issues under 5 AAC 01.210.

1) 5 AAC 01.210. (b) requires a 24-hour closure of subsistence salmon fishing to follow the closure of the commercial salmon season in Districts 4, 5 and 6. Current regulations allow concurrent commercial and subsistence salmon fishing periods. During the commercial salmon season, subsistence is typically closed following a

commercial/subsistence salmon fishing period until the next commercial/subsistence or subsistence only fishing period. Regulation 5 AAC 01.210. (b) is unnecessary. Currently, buyers have up to 18 hours following a commercial fishing period to report the number and pounds of salmon or salmon roe purchased. Typically, the department waits until after the collection of verbal harvest reports to determine if another commercial salmon period should occur. This process of waiting for the verbal processor reports before determining the next course of action provides the necessary separation between the commercial/subsistence salmon fishing period and the next subsistence salmon fishing period.

2) As currently written the intent of regulation 5 AAC 01.210. (c) is confusing. Subsection (c) allows the five-day a week subsistence fishing schedule inbetween the chinook and summer chum salmon run and the fall chum and coho salmon run. The regulation could be interpreted that the conditions under subsection (c) would only take effect after the commercial salmon fishing season is closed. However, the intent and current management implementation of subsection (c) is that it takes effect only during the commercial salmon fishing season.

3) Regulation 5 AAC 01.210. (c) (2) incorrectly identifies the Innoko River drainage to be within District 4. Since the Innoko River drains into that portion of the Yukon River identified as District 3, the Innoko River drainage should be a part of District 3.

DISCUSSION: This department proposal provides for clearer regulations and reflects current management practices.

PROPOSAL NO. 165

ACTION: Adopted

DESCRIPTION: 5 AAC 05.365, 5 AAC 05.310, 5 AAC 05.370, and 5 AAC 01.210. Similar to the practice in Districts 4, 5, and 6, this proposal would remove regulatory language that closes the commercial salmon season between the summer and fall runs in Districts 1, 2, and 3. This would provide for more subsistence opportunities. Additionally, Proposal 165 would create a clearer regulation that reflects current management practices.

DISCUSSION: The board cited advisory committee support for passage of the proposal.

PROPOSAL NO. 167

ACTION: Adopted

DESCRIPTION: 5 AAC 05.368. ANVIK RIVER CHUM SALMON FISHERY MANGEMENT PLAN. Re-authorize the Anvik River chum salmon fishery management plan.

DISCUSSION: The board noted YR DFA's support for this pre-existing plan as a means for allowing fishing of surplus Anvik River summer chums and reducing the pressure on other Yukon River stocks. The plan was adopted without the sunset clause.

PROPOSAL NO. 168

ACTION: Adopted

DESCRIPTION: 5 AAC 01.210 and 5 AAC 05.367. Update existing regulatory language for the Tanana River commercial and subsistence fishing periods and season opening to provide for consistency between regulations and to more accurately reflect current management practices.

DISCUSSION: The board noted advisory committee support for this primarily housekeeping proposal.

PROPOSAL NO. 169

ACTION: Tabled to November 1998

DESCRIPTION: 5 AAC 05.367. Allows management of Subdistrict 5-A based on the timing and stock status of chinook, summer chum, fall chum, and coho salmon bound for the Tanana River. Including Subdistrict 5-A into the Tanana River management plan involves both biological and allocative issues. Possible options include:

- 1) Allow only a Subdistrict 5-A subsistence salmon fishery. Do not allow a Subdistrict 5-A commercial fishery. This option would provide for a more liberal and uninterrupted subsistence fishing schedule (5 or 7 days a week).
- 2) Restrict the Subdistrict 5-A commercial fishery to the historical harvest level, or to some other harvest level, when managing Subdistrict 5-A based on the Tanana River management plan. The historical 1983 to 1995 Subdistrict 5-A average commercial harvest was approximately 17 chinook, 22 summer chum, and 775 fall chum salmon.
- 3) Manage Subdistrict 5-A commercial fishery similar to that of Subdistrict 6-A. Subdistrict 5-A commercial salmon harvests would be applied against the Tanana River guideline harvest range.
- 4) Other options.

AMENDMENTS: The Tanana-Rampart-Manley and Minto-Nenana Advisory Committees recommended a possible option (RC 86).

DISCUSSION: The board discussed subsistence and commercial uses of this stock and concerns that the guideline harvest range not change for other subdistricts. The Tanana-Rampart-Manley and Minto-Nenana Advisory Committees requested tabling the proposal and bringing it back with a coho management plan after the February YRDFA meeting.

PROPOSAL NO. 170

ACTION: Rejected

DESCRIPTION: 5 AAC 05.XXX. Establish a salmon management plan for Yukon River Subdistrict 5-D.

DISCUSSION: Board members found no one at the meeting to speak in support of the proposal. Subsistence fishing is already allowed 7 days a week. This proposal was regarded as being too vague.

PROPOSAL NO. 171

ACTION: Adopted as Amended

DESCRIPTION: 5 AAC 01.248. Reauthorize and recommend the easing of or repeal of the Toklat River rebuilding plan's restrictions on commercial and subsistence fishing in 1998 and 1999.

AMENDMENTS: A motion carried to adopt board generated substitute language RC96. RC96 added wording that if the biological escapement goal is not met in 1998, the entire rebuilding plan would be effective for 1999.

DISCUSSION: Parent year escapements in the Toklat River index area for four-year-olds returning in 1998 and 1999 were above the minimum biological escapement goal. Therefore, easing the plan's restrictions was acceptable.

PROPOSAL NO. 172

ACTION: Adopted as Amended

DESCRIPTION: 5 AAC 01.249. Re-authorize the Yukon River fall chum salmon management plan with no sunset clause.

AMENDMENTS: A motion carried to substitute YR DFA recommended language (RC 30, page 4). Recommended language would provide a buffer for subsistence fisheries when managing the commercial fisheries.

DISCUSSION: There was agreement between lower river and upper river fishers, that if the lower river did not go commercial fishing, the upper river could not go commercial fishing. Although a provision to strongly consider terminal directed fisheries after the year 2000 was added. The department supported the conservative approach the YR DFA language recommended, but was neutral on allocative elements.

PROPOSAL NO. 173

ACTION: Tabled to November 1998

DESCRIPTION: 5 AAC 05.XXX. Currently, there is no management plan allowing directed coho salmon commercial fishing in the Yukon Area. The fall season is managed based on the timing and stock status of fall chum salmon. Currently, coho salmon sold commercially are considered incidental to the directed fall chum salmon commercial fishery. This proposal would establish a coho salmon management plan for the Yukon River drainage.

DISCUSSION: YR DFA recommended that more time was needed to develop river wide consensus on a coho salmon management plan.

PROPOSAL NO. 174

ACTION: Tabled to November 1998

DESCRIPTION: 5 AAC 05.XXX. Presented an option for allocation of coho salmon should they become a commercially targeted species.

DISCUSSION: See proposal 173

PROPOSAL NO. 175

ACTION: Tabled to November 1998

DESCRIPTION: 5 AAC 05.XXX. Presented an option for allocation of coho salmon should they become a commercially targeted species.

DISCUSSION: See proposal 173

PROPOSAL NO. 176

ACTION: Rejected

DESCRIPTION: 5 AAC 05.360. **GUIDELINE HARVEST RANGES.** Prohibit the sale of king salmon roe in the Yukon River.

DISCUSSION: Discussion of possible impacts to the stocks weighed against allowing use of the fish taken within guideline harvest ranges.

PROPOSAL NO. 177

ACTION: Adopted

DESCRIPTION: 5 AAC 05.360. **GUIDELINE HARVEST RANGES.** Prohibit the sale of king salmon roe in Yukon River Subdistrict 4-A.

DISCUSSION: Board cited support for the proposal from fishermen in area.

PROPOSAL NO. 178

ACTION: Adopted

DESCRIPTION: 5 AAC 05.360. **GUIDELINE HARVEST RANGES.** Convert the Yukon River king salmon guideline harvest ranges into a management plan format without making any substantive changes.

DISCUSSION: Proposal was viewed as a housekeeping measure to streamline and clarify existing regulations.

PROPOSAL NO. 179

ACTION: Rejected

DESCRIPTION: 5 AAC 05.331. **GILLNET SPECIFICATIONS AND OPERATIONS.** Increase the depth of commercial chum salmon gillnet gear from 50 to 70 meshes for gear with less than six inch mesh in Yukon River Districts 1, 2 and 3.

DISCUSSION: There is no justification for increasing the depth of commercial gillnets at this time. This is a relatively new regulation that has only been in effect for two years, and the affect of the regulation is not well known.

PROPOSAL NO. 180

ACTION: Rejected

DESCRIPTION: 5 AAC 05.331. GILLNET SPECIFICATIONS AND OPERATIONS. Increase the depth of commercial king salmon gillnet gear from 45 to 60 meshes for gear greater than six inch mesh in Yukon River Districts 1, 2 and 3.

DISCUSSION: The board was concerned there would be an increase in the efficiency of the commercial fishing fleet. The present regulation helps spread out the harvest of king salmon. Other concerns were that increasing the depth of gillnets would target larger predominantly female king salmon.

PROPOSAL NO. 181

ACTION: No Action Taken

DESCRIPTION: 5 AAC 05.370. REGISTRATION AND REREGISTRATION. Require commercial vessel registration and reregistration requirements so that a vessel must transfer between Districts 1 and 2 in the Yukon River commercial salmon fishery.

DISCUSSION: The committee addressing this proposal recommended a resolution (RC 90) be submitted to the Department of Public Safety, Division of Fish and Wildlife Protection to request increased enforcement of prohibition on the sale of subsistence caught fish.

PROPOSAL NO. 182

ACTION: No Action Taken

DESCRIPTION: 5 AAC 05.370. REGISTRATION AND REREGISTRATION Require a vessel to be registered for either District 1 or 2 at any one time in the Yukon River commercial salmon fishery.

DISCUSSION: No action was taken on Proposal 182 based on action taken on Proposal 181.

PROPOSAL NO. 183

ACTION: Adopted

DESCRIPTION: 5 AAC 05.370. REGISTRATION AND REREGISTRATION Clarify the district registration notification process as to when the 72-hour waiting period begins in the Yukon River.

DISCUSSION: The reregistration and 72-hour waiting period begins at the time that notification is received and noted by the department. This proposal is housekeeping in nature. It is a benefit to user groups.

PROPOSAL NO. 184

ACTION: Adopted

DESCRIPTION: 5 AAC 05.370. REGISTRATION AND REREGISTRATION. In the Yukon River commercial salmon fishery, allow District 3 vessels to reregister for Districts 1 or 2, after a 72-hour waiting period.

DISCUSSION: Passage of this proposal means fishermen from District 3 will be allowed to move to Districts 1 or 2 after a 72-hour waiting period. Only one reregistration is allowed before July 15. This will give District 3 fishermen the same ability to transfer as District 1 or 2 fishermen. No allocation criteria applies here.

PROPOSAL NO. 185

ACTION: Adopted

DESCRIPTION: 5 AAC 05.370. REGISTRATION AND REREGISTRATION. Establish reregistration criteria with a 72-hour waiting period in the set gillnet only fishing area in Yukon River District 1.

DISCUSSION: Adoption of this proposal allows commercial fishermen to transfer to and from the setnet only area of District 1 to other locations within District 1 and to Districts 2 and 3. This regulation had restricted CFEC permit holders registered for the set gillnet only area from fishing in other portions of District 1 and in Districts 2 and 3. This proposal is not allocative in nature.

PROPOSAL NO. 186

ACTION: Adopted

DESCRIPTION: 5 AAC 05.377. Remove the requirement for Districts 1, 2, 3 and 5, and Subdistricts 4-B, 4-C, 6-A and 6-B to report, on a fish ticket, the number of salmon taken but not sold during commercial salmon fishing periods. This proposal would make it clearer to subsistence fishermen where to report the fish they take home for subsistence use. Currently, Yukon Area subsistence salmon harvest numbers are collected from each community by the Department of Fish and Game by either subsistence surveys or subsistence permits.

AMENDMENTS: Substitute language on the last page of RC90 was adopted.

DISCUSSION: The reporting requirement caused confusion in the documentation of subsistence salmon taken during commercial/subsistence fishing periods. Subdistrict 6-C commercial fishermen will still be required to report salmon taken but not sold during commercial fishing periods.

PROPOSAL NO. 187

ACTION: Adopted

DESCRIPTION: 5 AAC 01.220, and 5 AAC 05.335. In the Yukon River, apply the same restrictions on the simultaneous use of personal use and commercial fishing gear as with the simultaneous use of commercial and subsistence gear. Restrictions include

fishermen may not operate more than one type of gear at a time, for commercial, personal use or subsistence purposes and restrictions on minimum distance between units of gear.

DISCUSSION: This was considered a housekeeping proposal submitted by the department. The board supported this proposal for clarifying existing regulation.

PROPOSAL NO. 188

ACTION: Adopted

DESCRIPTION: 5 AAC 77.157. In the Yukon Area, clearly list regulations that affect the subsistence fishery, which are applicable to the personal use fishery under the personal use regulations. The personal use regulations would apply within the Fairbanks Nonsubsistence Use Area.

DISCUSSION: Housekeeping proposal submitted by the department to clarify the regulation.

PROPOSAL NO. 189

ACTION: Adopted

DESCRIPTION: 5 AAC 05.510. In the Yukon Area, specify that smelt may only be taken for commercial purposes under authority of a permit.

DISCUSSION: Proposal submitted by the department primarily as a housekeeping measure.

PROPOSAL NO. 166

ACTION: Adopted as Amended

DESCRIPTION: 5 AAC 01.XXX and 5 AAC 70.010- 70.050. In the Yukon-Northern Area, develop a northern pike management plan for subsistence and sport fisheries in Minto Flats.

AMENDMENTS: Board adopted substitute language RC 93 which amended Proposal 166 to specify single hook to reduce mortality.

DISCUSSION: The board expressed concern about the over-wintering area and supported cooperation between the department and user groups. Reasonable opportunity was addressed.

AGENDA CHANGE REQUESTS & BOARD GENERATED PROPOSALS

BOARD PROPOSAL A.

ACTION: No action taken

DESCRIPTION: 5 AAC 05.200. FISHING DISTRICTS, SUBDISTRICTS, AND 5 AAC 05.350 CLOSED WATERS. Board Proposal A was developed in response to a letter from the City of Kotlik to the Board. It proposed moving the Yukon River

District 1 boundary from Apoon Pass to Coffee Point and repealing closed waters from waters east of a one-nautical mile radius of a U.S. Coastguard light at the mouth of Apoon Pass.

DISCUSSION: No action was taken on Board Proposal A because moving the commercial fishing boundary to Coffee Point might impact salmon returning to spawn in the Pastolik and Pastoliak Rivers.

ACR NO. 26

ACTION: Tabled until January 1999

DESCRIPTION: 5 AAC 01.220. LAWFUL GEAR AND GEAR SPECIFICATIONS. Allow rod and reel as legal gear for subsistence fishing in the AVCP Region.

DISCUSSION: The board considered this to be a major issue with statewide implications, requiring a more comprehensive process than that of an Agenda Change Request. It was tabled to allow time for study and public involvement. The board discussed a board work group and how to fund it, and whether to expand focus beyond the AVCP Region.

CAPE ROMANZOF HERRING

PROPOSAL NO. 151

ACTION: Rejected

DESCRIPTION: 5 AAC 27.287. SUPER-EXCLUSIVE USE AREAS. In the Norton Sound and Cape Romanzof commercial herring fisheries, allow super-exclusive and nonexclusive CFEC permit holders to participate in other commercial herring fisheries as deckhands.

DISCUSSION: The board considered opposition from advisory committees and the effects of weakening super-exclusive use provisions.

PROPOSAL NO. 190

ACTION: Rejected

DESCRIPTION: 5 AAC 27.950. WATERS CLOSED TO HERRING FISHING. Repeal all closed water areas of the Cape Romanzof District commercial herring fishery.

DISCUSSION: The board stated the proposal had good intentions but needs consent from the villages of Hooper Bay, Chevak and Scammon Bay. Chevak and Hooper Bay fishers opposed this proposal citing safety concerns. There was concern for enforcement problems if the area was opened because subsistence caught herring might be sold. The proposed area would overlap the subsistence herring fishing area of Scammon Bay. The department already has the authority to open outside waters by emergency order if necessary. The proposal may result in allocation issues between fishermen.