

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES

ANNUAL MANAGEMENT REPORT

1974

ARCTIC-YUKON-KUSKOKWIM REGION

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PREFACE

This report presents all available information concerning the management of commercial and subsistence fisheries in the Arctic-Yukon-Kuskokwim Area. Although data from many special research projects are included in this report, complete documentation of these projects and results will be presented in separate reports.

The A-Y-K area was given regional status in 1971 with the result that all districts are now areas. This report utilizes the old nomenclature, i.e., A-Y-K area, Kuskokwim district, etc.

Data presented in this report supercedes information found in previous management reports. An attempt has been made to correct errors in previous reports and previously unrecorded data have been incorporated into this report which are so indicated by appropriate footnotes.

The report is organized into the following major sections:

1. Area Introduction. This is a general and brief description of the area, inhabitants, fishery resources, fisheries and management practices.
2. Area Summary. This section summarizes current year data for the area and makes comparisons with previous years.
3. District Reports. There are several unique and separate fishing districts in the area and separate comprehensive reports are presented for each.

In order to facilitate use of this report, the tabular data has been separated into current year tables and appendix tables where annual comparisons are made. The text for each major section is followed by current year tables and then by appendix tables.

The following is an explanation of how effort and catch per unit effort data, presented throughout this report, have been derived. Boat (or fisherman) hours is computed by arbitrarily assuming that if a fishing boat delivers in any 24 hour fishing period, it fished the entire period. If the period was more than 24 hours long, then the vessel is assumed to have fished the complete period for as many hours as was open to commercial fishing.

Catch per fisherman (or boat) hour is obtained by dividing the total fisherman hours into the catch for the corresponding period of time.

Total fishermen (or boats) is the total number of fishermen making deliveries, irrespectively of how many deliveries made or days fished during a particular "season." There are a number of fishermen who deliver only once or twice during the entire season.

"Total days fished" is the total number of hours open for commercial fishing during the season divided by 24.

AREA INTRODUCTION

Boundaries

The Arctic-Yukon-Kuskokwim Area, as shown in Figure 1, is that portion of the State north of the Alaska Range and the Bristol Bay drainage. It includes all of the drainages of the Bering Sea and the Arctic Ocean from Cape Newenham to Demarcation Point at the Canadian border. In addition it includes the following Bering Sea Islands: Nunivak, St. Lawrence and St. Matthew. This is the largest management area in the State comprising over 400,000 square miles which is equal to the combined areas of California, Oregon, Washington and Idaho.

Fishery Resources

All five species of Pacific salmon are indigenous to the area with chum salmon being the most abundant. It is estimated that pink salmon, king salmon, coho salmon and red salmon follow in order of abundance.

Chum and pink salmon are found throughout the area although these species become relatively scarce north of the Kotzebue Sound drainage. Chum and pink salmon have been found as far north as Barrow and in the Beaufort Sea adjacent to the mouth of the Sagavanirktok River. The largest spawning runs of king salmon occur from Cape Newenham to Norton Sound. King salmon are uncommon north of the Shaktoolik River in Norton Sound but have been found as far north as the Wulik River located about 100 miles northwest of Kotzebue. The greatest coho salmon runs occur in the Kuskokwim district. Red salmon are common in the Kuskokwim district and a small population exists in Salmon Lake on the Seward Peninsula. Occurrence of this species is very rare in the other districts.

Other species common to the freshwater and coastal marine habitats are: Sheefish, several species of whitefish, Arctic char, lake trout, rainbow trout, grayling, burbot, suckers, sculpins, blackfish, sticklebacks, lampreys, smelt, herring and several species of cods, flatfishes, crabs, shrimps and mollusks.

Water Quality

Water quality and spawning habitats in the area have been largely preserved in their original condition because pollution, logging and dam construction activities have been minimal or nonexistent. It remains to be seen what impact the recent oil development activity will have on water quality and fishery resources in the area.

Commercial Fishing

The relatively recent development and expansion of the commercial salmon fishery has enabled many area residents to obtain a cash income when other employment is often sporadic or nonexistent. Although commercial salmon fishing

in the area dates back to 1913, the only district having a sustained fishery prior to statehood (1959) was the Yukon district. In 1959 and 1960 Department biologists conducted reconnaissance surveys which indicated that harvestable surpluses of salmon were available in several districts that were not being commercially fished. The Department then liberalized certain regulations and encouraged processors to explore and develop new fishing grounds. As a result sustained commercial salmon fisheries have been developed in the Kuskokwim, Norton Sound and Kotzebue districts. Even as late as 1968, a completely new salmon commercial fishery was initiated in Goodnews Bay, which is located just south of the Kuskokwim River mouth.

Nearly all of the area's commercial fishermen are resident Eskimos and Indians as are the vast majority of processing plant workers. Depending on the district being fished, commercial fishermen operate set and drift gill nets to capture salmon although a few fishwheels are still used in the upper Yukon River. Most fishermen operate small inexpensive skiffs powered with outboard motors. In the Yukon and Kuskokwim districts commercial fishing is prohibited outside the river mouths with the exception of two small marine fisheries in Kuskokwim Bay. In the Norton Sound and Kotzebue districts, all commercial salmon fishing is done in the coastal marine waters.

The decline in subsistence utilization of salmon has made it possible to increase commercial utilization in some districts during recent years. Also, there has been an increased demand from Japanese markets for fresh frozen and cured A-Y-K salmon, especially chums. These trends are expected to continue, which should result in a moderate increase in production and economic value of the commercial fishery over the next few years.

Subsistence Utilization

There are approximately 30,000-40,000 Eskimo and Indian people in the area, the majority of which reside in excess of 110 small villages scattered along the coast and the major river systems. Nearly all of these native people are dependent to varying degrees on the fish and game resources for their livelihood.

Subsistence fishermen operate gill nets in the main rivers and to a lesser extent in the coastal marine waters to capture mainly salmon, whitefish and sheefish. Fishwheels take considerable number of salmon in the Yukon and Kuskokwim Rivers. Beach seines are occasionally used near the spawning grounds to catch schooling or spawning salmon as well as several other species of fish. Traps and fish weirs of various designs are also used, mainly in the fall and winter months, to capture whitefish, sheefish, blackfish and burbot. Sheefish, pike, char, tomcod and king crab are frequently taken through the ice by hand-lines.

Compared to commercially caught fish there is very little wastage of any portion of the fish taken for subsistence purposes. The major portion of the fish is sundried or smoked for later consumption while the head and viscera are usually fed to sled dogs.

The Department has conducted annual surveys of the important subsistence salmon fisheries since the early 1960's. During this period the recorded annual subsistence harvests have ranged between 580,000 to 850,000 salmon. The majority of salmon taken are chums. Subsistence harvest information prior to 1960 is incomplete or entirely lacking for many years, but there are some records indicating that in excess of two million salmon were taken in some years during the early 1900's.

About 1930 the airplane began replacing the sled dog as mail carrier, and this started the gradual decline of the subsistence salmon fishery. This decline has been accelerated in the past few years as increased welfare payments and employment opportunities, including commercial fishing activities, have become available to the native people. Another very important factor tending to affect subsistence fishing effort during recent years is the increasing use of snow vehicles which may be replacing sled dogs at a faster rate than did the airplane. Since considerable numbers of salmon and other fish are fed to sled dogs, fewer fish will be required for subsistence purposes as the canine population declines. The decline in subsistence fishing is not related necessarily to fish abundance, but mainly reflects decreases in effort and dependence due to a changing way of life.

Management

The Division of Commercial Fisheries of the Alaska Department of Fish and Game is responsible for the management of commercial and subsistence fisheries in this vast area. The permanent staff assigned to this area includes five positions--regional supervisor, three area management biologists, one assistant area management biologist, and one research biologist. In addition from 25 to 30 summer employees are hired each season to assist the permanent staff in conducting various management and research studies.

Operating expenses for the A-Y-K area management and research program from July 1, 1973 through June 30, 1974 were approximately \$283,500. Of this total, state and federal funds provided \$204,100, and \$79,400, respectively.

The main objective of the Department's program is to manage the commercial salmon fisheries on a sustained yield basis in addition to obtaining needed information to determine the potential for commercial fisheries on underutilized species such as herring, char and whitefish. Present commercial salmon fishing regulations are still relatively restrictive in order to insure that sufficient salmon are provided for subsistence fishery and spawning ground requirements.

The basic regulation that governs the commercial salmon harvest in all districts is the scheduled weekly fishing period. Commercial fishing is normally allowed for a total of from one to four days a week during the open season which depends on the district and species involved. The fishing effort usually occurs

during the entire run and not just during any particular segment of the run. Occasionally more or less fishing time is allowed, depending upon fishing conditions and the strength of the runs or spawning escapements as determined by special studies conducted by the Department.

Due to the vast size of the area and the silty characteristics of many streams, accurate estimates of the size of salmon runs and the spawning escapements are difficult to obtain. Fishery management is also hampered by the relative lack of comparative catch and return information since all the fisheries were either initiated or expanded through regulation changes only since 1961 or 1962. The management problem is further compounded by having to provide sufficient escapement after commercial fishing for the important subsistence fishery as well as for spawning purposes.

For these reasons the present commercial fishery is still considered to be somewhat experimental in nature. It has been a policy of the Alaska Department of Fish and Game to maintain recent levels of commercial utilization for a few years in order to establish definite trends in subsistence utilization and to obtain more information on the relationship between the salmon catch and return.

If there is no apparent change in run size, it is the Department's policy to increase commercial utilization once trends in declining subsistence utilization can be established. It should be pointed out that increases in commercial fishing efficiency are expected in some districts and may balance any immediate decline in subsistence utilization with the result that present regulations will be maintained or even made more restrictive.

A unique problem in the area is the so-called language barrier. Many of the older native people cannot read or speak English. Therefore, the staff must use translators when conducting the many public meetings that are annually conducted throughout the area. In addition many special regulation notices are distributed in both the English and Eskimo languages. While it may normally take only half an hour or so to conduct a public meeting or hearing in English, it usually takes two to three times that long when Eskimo translators are used. To assist in the education and information program, a weekly fishery program is broadcasted during the fishing season over radio stations KNOM and KICY in Nome, KOTZ in Kotzebue, and KYUK in Bethel.

Special Studies

Table 1 lists special studies undertaken during 1974 and includes a summary of objectives, procedures and results for each.

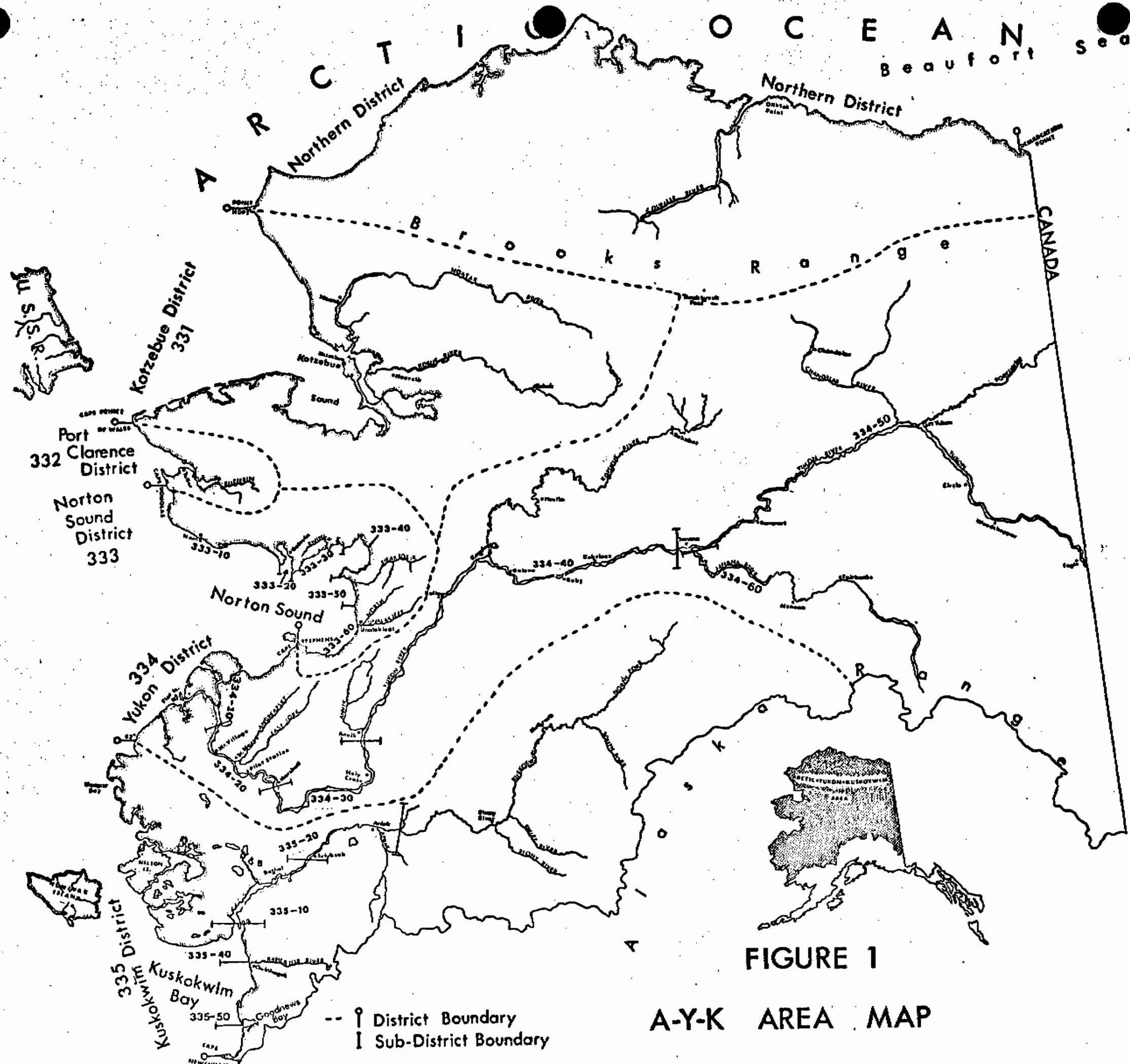


FIGURE 1

A-Y-K AREA MAP

-- District Boundary
 | Sub-District Boundary

Table 1. Summary of special projects conducted in the Arctic-Yukon-Kuskokwim Region by the Division of Commercial Fisheries, 1974.

1. Kuskokwim River Test Fishing

- a. Location: Kwegooyuk on the east bank of the mouth of the Kuskokwim River located 56 river miles downstream from Bethel.
- b. Objectives: Determine run timing and relative abundance of king, red and chum salmon.
- c. Results: A total of 1,228 king, 385 red, 1,998 chum and 13 pink salmon was taken in set gill nets fished from May 24 through July 20. An additional 8 kings, 130 reds, 735 cohos, and 23 chums were captured during the period August 1 to August 12. The King salmon run was below average magnitude and peaked about June 20. Based on comparative catch data, the chum salmon run was the largest since 1970 and peaked on June 27 and July 6.

2. Yukon River Test Fishing

- a. Location: Flat Island in the south mouth of the Yukon River.
- b. Objectives: Determine run timing and relative abundance of king and summer chum salmon in the south mouth channel of the Yukon River.
- c. Results: A total of 587 king and 5,924 chum salmon was taken in the index set gill nets from May 31 through July 14. Peak migrations for king salmon occurred during June 5-10. Peaks in the summer chum salmon migration occurred during June 6-13 and June 16-22, June 25-26 and June 30-July 7. Based on comparative catch comparisons, the 1974 king salmon run was average in magnitude. The 1974 chum salmon run was well above average in magnitude.

3. Subsistence Salmon Fishery Surveys

- a. Location: Kuskokwim River, Yukon River, Norton Sound, Port Clarence and Kotzebue Sound.
- b. Objectives: Determine subsistence utilization of salmon and fishing effort needed for formulating future management procedures and goals, also, collect tag recoveries from high seas and Department tagging programs.
- c. Results: A total of 1,399 fishing families were surveyed and their catches totaled 47,196 king salmon and 654,668 other salmon. A total of 2,500 river miles was traveled by boat and 1,500 air miles by single engine aircraft in the conduct of the survey.

4. Kogruluk River Counting Tower

- a. Location: Mouth of the Kogruluk River, tributary to the Holitna River (Kuskokwim River system).
- b. Objectives: Determine daily and seasonal timing and magnitude of all species of salmon entering this stream; sample for age, sex and size information.
- c. Results: A total of 3,724 king, 4,881 chum, 5 pink, 290 red, and 873 coho salmon was counted passing the tower site. The number of King salmon enumerated was the highest since 1970, while the numbers of chums fell to record low levels for the second consecutive year. King, chum and red salmon escapements peaked in mid July. The coho salmon escapement apparently peaked in early September. Visual size estimates

Table 1. (continued) Summary of special projects conducted in the Arctic-Yukon-Kuskokwim Region by the Division of Commercial Fisheries, 1974.

of king salmon passing the tower indicate that 45.8 percent of the escapement was composed of small male, age 3₂ and 4₂, fish.

5. Yukon River Anadromous Fish Investigations

- a. Location: Yukon River drainage.
- b. Objectives: Develop estimates or indices of the magnitude and quality of king and chum salmon escapements, determine size and effect of commercial and subsistence harvest on various stocks of king and chum salmon, plus relate collected data to long-term trends in the salmon stocks evaluating management procedures needed to maintain them at their level of maximum yield.
- c. Results: An expanded total of 208,815 chum salmon and 506 king salmon was enumerated as they migrated past the Anvik River tower between June 24 and July 19. High water forced termination of the counts on July 19. During aerial and boat surveys 1,857 king salmon and 3,510 chum salmon were enumerated in the Salcha River. Six percent of the chum salmon and 22 percent of the king salmon spawned in the area which would be affected by a break in the trans-Alaska hot-oil pipeline. Beaver dams prevented king salmon fry, adult chum salmon, and other species from utilizing 4 out of 5 major Salcha River tributaries. A total of 273 king salmon was enumerated through the Whitehorse fishway. This was the second lowest escapement on record. The sample of kings taken for age and sex information was composed of 60 percent males. A total of 403 fall chum salmon were tagged in the Delta River. The average stream life for fall chums was 18 days and the Peterson population estimate was 5,718 fish. There was a significant reduction in average fecundity from 2,634 eggs in 1973 to 1,886 eggs per female in 1974. Aerial photographs of the Delta River spawning area, taken during the peak of spawning, indicated that the Peterson tag recovery population estimate was 61 percent greater than the actual population size. This error was probably the result of migration of tagged chums out of the spawning area. Major fall chum spawning areas were located in the Sheenjek and Chandalar Rivers. Aerial surveys in the Yukon drainage enumerated a total of 5,266 king salmon, 7,008 coho salmon, 356,140 summer chum salmon and 148,765 fall chum salmon. Test fishing gill nets were operated at Flat Island to obtain information on run timing, magnitude and composition. The age and sex composition of the 1974 salmon runs were sampled at several locations on the Yukon River and its tributaries. A subsistence catch survey was conducted along the Yukon River and it was determined that a minimum of 20,565 king salmon and 291,102 salmon of other species was taken in 1974.

6. Kwiniuk River Counting Tower

- a. Location: About five miles upstream from the mouth of the Kwiniuk River in Norton Sound, located about 110 miles east of Nome.
- b. Objectives: Determine daily and seasonal timing and magnitude of chum and pink salmon runs, also to determine accuracy of chum salmon forecasts using a method described by Mattson.

Table 1. (continued) Summary of special projects conducted in the Arctic-Yukon-Kuskokwim Region by the Division of Commercial Fisheries, 1974.

- c. Results: A total of 62 king, 40,825 pink and 35,899 chum salmon was counted past the tower. The king salmon escapement of 62 king salmon was the highest recorded since 1965 with the chum and pink escapements below their respective parent year escapements by 40% and 50% respectively. The chum salmon escapement of 35,899 was 15.9% below the "Mattson" forecast of 42,679.

7. Arctic Salmon Studies

- a. Location: Unalakleet River, Norton Sound and Noatak River, Kotzebue Sound.
- b. Objectives: Use of tagging studies to determine migrational pattern and timing of salmon in the Unalakleet River drainage; develop indices or estimates of the magnitude and quality of king, chum and pink salmon in the Unalakleet River system by use of tagging studies and a counting tower on the North River. Determine the size and effect of the commercial and subsistence harvest on various stocks of salmon and relate these to long-term trends in the salmon stocks. Develop management procedures based on data collected to maintain salmon harvest at a level of optimum sustained yield. A chum salmon test fishing and tagging project was conducted on the Noatak River and Kotzebue Sound approximately seven miles from the river mouth.
- c. Results: A total of 196 king, 143,789 pink and 826 chum was counted past the North River salmon counting tower during its third year of operation. The commercial catch sampling of chum salmon indicated 8.5 percent, 77.1 percent and 14.4 percent were age 3₁, 4₁, and 5₁ fish.

A flood and storm affecting the Bering Seacoast during November 11 and 12 resulted in a flood in Nome, destroying all of the salmon tagging and test fishing data collected in 1974 of the Unalakleet and Noatak Rivers.

8. Upper Yukon River Salmon Investigations

- a. Location: Upper Yukon River from Ruby to Fort Yukon, including Koyukuk and Tanana Rivers.
- b. Objectives: Obtain accurate commercial catch information in addition to collecting age, sex and size data and tag recoveries; distribute information regarding licensing and regulations.
- c. Results: A temporary Fish and Game Technician III stationed in Fairbanks made several trips during the season to important villages in the area. The commercial catch consisted of 4,835 kings, 2,888 cohos and 108,338 chums. Several king and chum salmon were sampled for age, sex and size data.

9. Commercial Salmon Catch Sampling

- a. Various Locations: In all districts
- b. Objectives: Obtain age, sex and size information for commercially caught fish.
- c. Results: Several thousand samples of all species were taken in 1974. This information has been tabulated and analyzed and will be presented in subsequent separate reports.

Table 1. (continued) Summary of special projects conducted in the Arctic-Yukon-Kuskokwim Region by the Division of Commercial Fisheries, 1974.

10. Kuskokwim River Whitefish Investigations

- a. Location: Kuskokwim River drainage
- b. Objectives: Determine whitefish taxonomy, movements, locations of spawning areas and age, sex and size compositions of various populations.
- c. Results: A report is being prepared in which all tagging and age, sex and size studies will be summarized; taxonomic studies indicate the need for a standardized method of collecting meristical count data to distinguish species and stocks of whitefish.

AREA SUMMARY, 1974

Commercial Fishery

Table 2 presents commercial catches by district for the 1974 season. The total area catch included 130,423 kings, 29,003 reds, 198,496 cohos, 208,582 pinks and 1,870,241 chums totaling 2,436,745 salmon.

Appendix Table 1 compares the area commercial catches during the 1960-1974 period. The 1974 harvest of all species except king salmon and all species combined was the greatest ever recorded.

Table 3 is a list of 1974 buyers and processors, showing associated processing information for each.

During 1974 approximately \$5,236,950 was paid to fishermen for salmon deliveries. Wages earned by processing plant employees, tenderboat operators, etc., added another estimated \$1,124,700 to the economy of this area.

Subsistence Fishery

In 1974 a minimum total of 47,196 kings and 654,668 other salmon, mostly chums, was taken by 1,399 fishing families. Table 2 shows subsistence catches by district for 1974 and Appendix Table 1 compares area catches made during the 1960-1974 period.

Total Utilization

A minimum total of 3,138,609 salmon of all species was harvested by both commercial and subsistence fishermen in 1974. This was the largest utilization recorded for the 1960-1974 period.

Table 2. Arctic-Yukon-Kuskokwim area total salmon catches by district, 1974

	Kings	Reds	Cohos	Pinks	Chums	All species
Kuskokwim:						
Commercial	30,570	29,003	179,579	60,015	196,127	495,294
Subsistence	29,590				321,258 ^{1/}	350,848
Subtotal:	<u>60,160</u>	<u>29,003</u>	<u>179,579</u>	<u>60,015</u>	<u>517,385</u>	<u>846,142</u>
Yukon:						
Commercial	96,902		16,825		877,368	991,095
Subsistence	17,186				282,466 ^{1/}	299,652
Subtotal:	<u>114,088</u>		<u>16,825</u>		<u>1,159,834</u>	<u>1,290,747</u>
Norton Sound:						
Commercial	2,951		2,092	148,519	162,267	315,829
Subsistence	420		1,064	16,426	3,958	21,868
Subtotal:	<u>3,371</u>		<u>3,156</u>	<u>164,945</u>	<u>166,225</u>	<u>337,697</u>
Port Clarence:						
Commercial						
Subsistence		28	62	14	2,663	2,767
Subtotal:		<u>28</u>	<u>62</u>	<u>14</u>	<u>2,663</u>	<u>2,767</u>
Kotzebue						
Commercial				48	634,479	634,527
Subsistence					26,729	26,729
Subtotal:				<u>48</u>	<u>661,208</u>	<u>661,256</u>
Grand total of A-Y-K Area:						
Commercial	130,423	29,003	198,496	208,582	1,870,241	2,436,745
Subsistence	47,196	28	1,126	16,440	637,074	701,864
Total:	<u>177,619</u>	<u>29,031</u>	<u>199,622</u>	<u>225,022</u>	<u>2,507,315</u>	<u>3,138,609</u>
Totals-1973	193,074	5,270	199,131	62,428	1,624,352	2,084,255
Totals-1972	216,431	5,514	52,179	62,149	950,547	1,286,820
Totals-1971	229,379	7,430	38,835	17,285	1,047,618	1,340,547
Totals-1970	235,510	13,242	96,575	119,955	1,208,241	1,673,523
Totals-1969	214,606	10,490	179,774	107,348	852,769	1,364,987

^{1/} Mostly chum salmon, but includes some red, coho and pink salmon.

Table 3. (continued) 1974 Arctic-Yukon-Kuskokwim area processors and associated data.

Commercial operator	Product	Average price paid to fishermen (estimated)	District
Yukon Delta Fish Marketing Co-op, Inc. Emmonak, Alaska	Frozen		Yukon Subdistrict 1
	Kings	.36 per lb.	
	Cohos	.21 per lb.	
	Chums	.20 per lb.	
	Salmon roe		
John Amukon Scammon Bay, Alaska	Hard salt kings	<u>1/</u>	Yukon Subdistrict 1
Bering Sea Fisheries, Inc. 4413 83rd Avenue S.E. Everett, Washington	Frozen salmon & canned (#1 tails)		Yukon Subdistrict 1
	Kings	.36 per lb.	
	Cohos	.25 per lb.	
	Chums	.20 per lb.	
	Salmon Roe		
Northern Commercial Co. 1110 Third Avenue Seattle, Washington	Mild cured kings frozen salmon		Yukon Subdistrict 1
	Kings	.36 per lb.	
	Cohos	.23 per lb.	
	Chums	.20 per lb.	
	Salmon Roe		
Mountain Village Fish Co. Mountain Village, Alaska	Hard salt kings canned (#½ flats)		Yukon Subdistricts 1,2,3
	Kings	.36 per lb.	
	Chums	.20 per lb.	
	Salmon roe		
Akers & Co., Inc. Chuloonawick, Alaska (via Emmonak, AK)	Mild cure		Yukon Subdistrict 1
	Kings	.36 per lb.	
	Cohos	.20 per lb.	
	Chums	.20 per lb.	
	Salmon roe		

Table 3. (continued) 1974 Arctic-Yukon-Kuskokwim area processors and associated data.

Commercial operator	Product	Average price paid to fishermen (estimated)	District
Salmon Products, Inc. SRA Box 1381 Anchorage, Alaska	Frozen salmon Chums	.20 per lb.	Yukon Subdistrict 2
Boreal Fisheries 19828 78th Avenue E. Spanaway, Washington	Fresh salmon Kings Cohos Chums	.35 per lb. .20 per lb. .20 per lb.	Yukon Subdistrict 2
King Island Fisheries William Willoya Box 484 Nome, Alaska	Fresh salmon Kings Chums	.36 per lb. .20 per lb.	Yukon Subdistrict 2
Harry Turner Holy Cross, Alaska	Smoked salmon strips Kings	<u>1/</u>	Yukon Subdistrict 3
Lena Alyosius Holy Cross, Alaska	Smoked salmon strips Kings	<u>1/</u>	Yukon Subdistrict 3
Johnsons Store Holy Cross, Alaska	Smoked salmon Kings	<u>1/</u>	Yukon Subdistrict 3
Evan Edwards Holy Cross, Alaska	Smoked Salmon Kings Chums	<u>1/</u> <u>1/</u>	Yukon Subdistrict 3
The King Fisheries Box 4-2847 Anchorage, Alaska	Fresh salmon Kings Chums	<u>1/</u> <u>1/</u>	Yukon Subdistrict 3
Joe Demientieff Holy Cross, Alaska	Smoked salmon Kings	<u>1/</u>	Yukon Subdistrict 3

Table 3. (continued) 1974 Arctic-Yukon-Kuskokwim area processors and associated data.

Commercial operator	Product	Average price paid to fishermen (estimated)	District
Clark Fishing Enterprises Box 517 Aniak, Alaska	Fresh salmon Kings	<u>1/</u>	Yukon Subdistrict 3
Par Co. Fisheries 1155 East 8th Avenue Bldg. 7, Apt. 1197 Anchorage, Alaska	Fresh salmon Chums	<u>1/</u>	Yukon Subdistrict 3
Kallands Fisheries Box 51 Nenana, Alaska	Fresh salmon Kings Chums	.50 per lb. .20 per lb.	Yukon Subdistrict 5
Andy Ludecker 4½ Mile Chena Pump Road Fairbanks, Alaska	Fresh salmon Kings Chums	<u>1/</u> <u>1/</u>	Yukon Subdistrict 6
C & G Enterprises Galena, Alaska	Fresh salmon Kings Chums Salmon roe	.50 per lb. .25 per lb. <u>1/</u>	Yukon Subdistrict 4
Torgny Boquist Circle, Alaska	Fresh salmon Kings Chums	<u>1/</u> <u>1/</u>	Yukon Subdistrict 5
Biederman General Store Box 42 Eagle River, Alaska	Fresh salmon Kings Chums	<u>1/</u> <u>1/</u>	Yukon Subdistrict 5
John Distad 31 Yankovich Road	Fresh salmon Chums	.20 per lb.	Yukon Subdistrict 5
Shannigan Fisheries Grayling, Alaska	Salmon roe	<u>1/</u>	Yukon Subdistrict 4

Table 3 (Continued) 1974 Arctic-Yukon-Kuskokwim area processors and associated data.

Commercial operator	Product	Average price paid to fishermen (estimated)	District
Fairbanks Sheet Metal Box 1104 Fairbanks, Alaska	Fresh salmon Kings	.50 per lb.	Yukon Subdistrict 5
Fred E. Chase 521 Lakeview Fairbanks, Alaska	Fresh salmon Kings Chums Salmon roe	.50 per lb. .25 per lb. 1.25 per lb.	Yukon Subdistrict 6
Terry Johnson 2228 Bridgewater Fairbanks, Alaska	Fresh salmon Kings Chums Salmon roe	.50 per lb. .25 per lb. 1.25 per lb.	Yukon Subdistrict 6
Chase Enterprises Anvik, Alaska	Fresh salmon Chums	<u>1/</u>	Yukon Subdistrict 4
Brian Thompson Box 488 Fairbanks, Alaska	Fresh salmon Kings	.50 per lb.	Yukon Subdistrict 5
Sidney Huntington Box 27 Galena, Alaska	Fresh salmon Chums Salmon roe	.20 per lb. 1.00 per lb.	Yukon Subdistrict 4
Bob Bean Box 19 Tanana, Alaska	Fresh salmon Kings	.50 per lb.	Yukon Subdistrict 5
Innoko River Services Box 246 Wasilla, Alaska	Fresh salmon Kings Chums	.50 per lb. .20 per lb.	Yukon Subdistrict 4

Table 3.(continued) 1974 Arctic-Yukon-Kuskokwim area processors and associated data.

Commercial operator	Product	Average price paid to fishermen (estimated)	District
✓ True Alaska Seafoods Box 335 Nenana, Alaska	Fresh salmon		Yukon Subdistricts 3,4,5,6
	Kings	.50 per lb.	
	Chums	.30 per lb.	
	Salmon roe	1.25 per lb.	
Gurtler Enterprises Ruby, Alaska	Fresh salmon		Yukon Subdistrict 4
	Kings	.50 per lb.	
	Chums	.25 per lb.	
	Salmon roe	1.00 per lb.	
Waller Enterprises Box 72 Eagle, Alaska	Fresh salmon		Yukon Subdistrict 5
	Kings	$\frac{1}{1}$	
	Chums	$\frac{1}{1}$	
Peter Merry Guide Service 1206 Coppet Fairbanks, Alaska	Fresh salmon		Yukon Subdistrict 5
	Kings	.50 per lb.	
Paul Beard Box 72 Tanana, Alaska	Fresh salmon		Yukon Subdistrict 5
	Kings	.50 per lb.	
	Chums	.30 per lb.	
Nenana Reefer Box 26 Nenana, Alaska	Fresh salmon		Yukon Subdistricts 4,5,6
	Kings	.50 per lb.	
	Chums	.25 per lb.	
	Cohos	.25 per lb.	
	Salmon roe	1.25 per lb.	

Table 3 (Continued) 1974 Arctic-Yukon-Kuskokwim area processors and associated data.

Commercial operator	Product	Average price paid to fishermen (estimated)	District
Kotzebue Sound Fishery Co-op Box 343 Kotzebue, Ak.	Fresh Salmon	.36 per lb.	Kotzebue
	Fresh Sheefish	.30 per lb.	
	Fresh Char	.16 per lb.	
Hansons Trading Co. Box 47 Kotzebue, Ak.	Fresh sheefish	.35 per lb.	Kotzebue
	Fresh char	.30 per lb.	
	Fresh whitefish	.20 per lb.	
Whitney Fidalgo Seafoods Inc. 4401 W.International Airport Rd., Anch.	Frozen Salmon		Norton Sound and Kotzebue
	Kings	.40 per lb.	
	Cohos	.16 per lb.	
	Pinks	.13 per lb.	
	Chums	.32 per lb.	
Norton Sound Trading Company 3411 Amber Bay Loop. Anchorage, Ak. 99502	Fresh Salmon		Norton Sound
	Chums	.24 per lb.	
	Pinks	.12 per lb.	
U.S.Mercantile Box 856 Nome, Ak	Salmon: Fresh	N/A	Norton Sound
	Smoked, Dried	N/A	
Norton Sound Fishermen's Coop Box 10, Unalakleet, Ak.	Fresh&Frozen Salmon		Norton Sound
	Kings	.40 per lb.	
	Cohos	.16 per lb.	
	Pinks	.13 per lb.	
	Chums	.32 per lb.	
Northern Commercial Co. Nome, Alaska	Fresh&Frozen Salmon		Norton Sound
	Pinks	-	
	Chums	-	

Appendix Table 1. Arctic-Yukon-Kuskokwim total salmon catch, 1960-1974.

Year	Commercial catch					Total	Subsistence catch		
	King	Red	Coho	Pink	Chum		King	Other salmon ^{1/}	Total
1960	73,560	5,649	5,498			84,707	19,457	337,067	356,524
1961	148,741	2,308	21,752	34,443	109,657	316,901	52,617	593,115	645,732
1962	122,907	10,415	45,094	37,666	412,168	628,250	33,506	622,858	656,364
1963	142,185	38	37,994	56,031	209,234	445,482	67,271	593,584	660,855
1964	116,835	13,548	31,536	14,511	234,415	410,845	54,235	757,734	811,969
1965	144,512	1,886	14,571	220	104,388	265,577	45,376	800,371	845,747
1966	120,692	1,137	47,994	13,177	186,016	369,016	63,576	473,926	537,502
1967	161,496	654	71,646	29,052	128,329	391,177	81,832	600,306	682,138
1968	150,728	5,884	174,490	146,997	162,661	640,760	50,591	545,541	596,132
1969	157,392	10,362	132,290	88,248	384,367	772,659	57,214	535,114	592,328
1970	147,204	12,654	78,913	92,330	673,988	1,005,089	88,306	580,128	668,434
1971	158,037	6,054	25,336	4,908	675,425	869,760	71,342	399,445	470,787
1972	152,720	4,312	46,567	47,134	655,625	906,358	63,711	316,751	380,462
1973	128,650	5,224	198,331	47,234	1,196,671	1,576,110	64,424	443,721	508,145
1974	130,423	29,003	198,496	208,582	1,870,241	2,436,745	47,196	654,668	701,864

Handwritten notes:
 1975: 93,379 King, 18,036 Red, 118,400 Coho, 30,000 Pink, 1,170,000 Chum, 2,245,919 Total
 1976: 60,000 King, 60,000 Red, 580,000 Coho, 300,000 Pink, 1,000,000 Chum, 2,100,000 Total
 1977: 130,000 King, 12,000 Red, 100,000 Coho, 100,000 Pink, 1,000,000 Chum, 1,600,000 Total
 1978: 500,000 King, 500,000 Red, 500,000 Coho, 500,000 Pink, 500,000 Chum, 2,500,000 Total
 1979: 500,000 King, 500,000 Red, 500,000 Coho, 500,000 Pink, 500,000 Chum, 2,500,000 Total
 1980: 500,000 King, 500,000 Red, 500,000 Coho, 500,000 Pink, 500,000 Chum, 2,500,000 Total

Year	King	Red	Total catch			Chum ^{2/}	Total
			Coho	Pink			
1960	93,017	5,649	5,498		337,067	441,231	
1961	201,358	2,308	21,752	34,443	702,772	962,633	
1962	156,413	10,415	45,094	37,666	1,035,026	1,284,614	
1963	209,456	38	37,994	56,031	802,818	1,106,337	
1964	171,070	13,548	31,536	14,511	992,149	1,222,814	
1965	189,888	1,886	14,571	220	904,759	1,111,324	
1966	184,268	1,137	47,994	13,177	659,942	906,518	
1967	243,328	654	71,646	29,052	728,635	1,073,315	
1968	201,319	5,884	174,490	146,997	708,202	1,236,892	
1969	214,606	10,362	132,290	88,248	919,481	1,364,987	
1970	235,510	13,242	96,575	119,955	1,208,241	1,673,523	
1971	229,379	7,430	38,835	17,285	1,047,618	1,340,547	
1972	216,431	5,514	52,179	62,149	950,547	1,286,820	
1973	193,074	5,270	199,131	62,428	1,624,352	2,084,255	
1974	177,619	29,003	198,496	208,582	2,524,909	3,133,609	

^{1/} Majority are chum salmon but some red, coho and pinks.

^{2/} Subsistence catch of "other salmon" included under total chum salmon catch.

YUKON DISTRICT

DISTRICT AND SUBDISTRICT BOUNDARIES

This district includes all waters of the Yukon River and its tributary streams in Alaska and all coastal waters from Cape Stephens, including Stuart Island, southward to 62° North Latitude (Figure 1). The Yukon River is the largest river in Alaska, draining approximately 35 percent of the state, and is the fifth largest in North America. It originates in British Columbia, Canada, within 30 miles of the Gulf of Alaska and flows over 2,300 miles to its mouth on the Bering Sea draining an area of approximately 330,000 square miles. With the possible exception of a few fish taken at the mouth or adjacent coastal villages, only salmon of Yukon River origin are harvested in this district.

The present subdistrict boundaries were established in 1961, 1962 and 1974. The commercial fishing area is divided into six subdistricts for management and regulatory purposes (Figure 2): subdistrict 334-10 (mouth to Anuk River including Black River); subdistrict 334-20 (Anuk River to Owl Slough near Marshall); subdistrict 334-30 (Owl Slough to the mouth of the Bonasila River); subdistrict 334-40 (Bonasila River to the mouth of Illinois Creek at Kallands); subdistrict 334-50 (Illinois Creek to the U.S.-Canadian Border, excluding the Tanana River drainage); and subdistrict 334-60 (the Tanana River drainage). The lower three subdistricts are further subdivided into statistical area for management and research purposes (Figures 3 and 4).

COMMERCIAL FISHERY

Introduction

The first recorded commercial salmon harvest in the drainage dates back to 1903 when 70,000 pounds of king and chum salmon were taken in Yukon Territory, Canada. A small commercial fishery for these species still exists in Yukon Territory, primarily at Dawson.

The first recorded commercial salmon harvest in Alaska was in 1918 when Carlisle Packing Company operated a floating cannery at Andrafsky (now St. Marys). Relatively large catches of king, coho and chum salmon were made during the first four years of this fishery (Appendix Table 21). Since restrictions were placed only on commercial fishing inside the river's mouth, a majority of the catch was made in "outside" waters. Because of the existence of a large upriver subsistence fishery, the early commercial fishery met opposition and was closed completely during 1925-1931. Commercial fishing for king salmon was

resumed at a much lower level in 1932, and this species has been taken commercially each year since then. Since 1921, commercial catches of chum and/or coho salmon have been made only during 1952-54, 1956 and since 1961.

Since the 1950's commercial salmon fishing has been permitted only upstream from the mouth of the Yukon and Black Rivers. During the 1954-1960 period, a 65,000 king salmon quota was in effect for the river. Of this total, not more than 50,000 could be taken below the mouth of the Anuk River, 10,000 in the area between the mouths of the Anuk and Anvik Rivers and 5,000 upstream from the Anvik River. During these years, fishing was allowed for five and one-half days a week until the specific quotas were obtained.

King salmon catch quotas were eliminated for subdistricts 334-10 and 334-20 in 1961 and these fisheries have been regulated by scheduled weekly fishing periods since then. The king salmon in these two subdistricts opens June 1 and is closed by emergency order late June or early July depending on the timing and magnitude of the runs. Fishing time during this season was allowed for four days a week during 1961-1967, but was reduced to 3 1/2 days a week beginning in 1968 and to 3 days a week in 1974. This was done to provide for adequate king salmon escapements in the face of increasing fishing effort and efficiency.

In subdistrict 334-30 commercial fishing is allowed four days a week until the 3,000 king salmon quota is taken.

Several important regulations changes, as a result of action taken by the Board of Fish and Game during its December 1973 meeting, became effective for the lower Yukon area in 1974:

- 1) Subdistrict 334-30 was reduced in size and redefined as that portion of the drainage from Owl Slough upstream to the mouth of the Bonasila River (instead of the Koyukuk River).
- 2) In subdistricts 334-10 and 334-20 of the Yukon district the weekly fishing period was reduced from 3 1/2 to 3 days a week during the king salmon season (June 1 through July 10) and from 4 to 3 days during the fall season (after July 10).
- 3) In subdistricts 334-10 and 334-20 of the Yukon district a changeover date of after July 3 was established when only gill nets of 6-inch or smaller mesh size may be used.
- 4) In subdistricts 334-10, 334-20 and 334-30, a commercial salmon catch quota of 200,000 chums after July 15 for the combined areas was established (previously there was no chum quota in effect in subdistricts 334-10 and 334-20. The 3,000 chum salmon quota in effect for subdistrict 334-30 was repealed.
- 5) In subdistrict 334-30 salmon may not be taken for subsistence during the weekly closures of the commercial salmon fishing season.
- 6) In subdistricts 334-10 and 334-20 commercial fishermen may not take salmon for subsistence purposes with gill nets larger than 6-inch mesh after July 3.

Since 1961 the commercial fishing season in the lower Yukon subdistricts

has been reopened following the closure of the king salmon season. This second season is referred to as the "fall season" and primarily fall chum and coho salmon are taken. The mid-season closure during July and often including late June was initially for the purpose of insuring an adequate supply of summer chum salmon for upriver subsistence fishermen. Also, this closure provides protection for the late stages of the king salmon run. However, subsistence fishing for summer chums has declined in recent years and the Department has liberalized regulations to provide for an earlier opening in July to harvest the surplus.

Excluding the 1920's, the sale of other species of salmon captured during the king salmon season in the area of the present lower two subdistricts has been allowed only since 1967. The incidental catch of summer chum salmon was limited during this season as fishermen used gill nets of stretched mesh measure of eight inches or greater. However, beginning in 1970, each fisherman could substitute up to 50 fathoms of gill net of any mesh size in subdistricts 334-10 and 334-20. All mesh size restrictions were lifted during the king salmon season (from June 1 through early July) beginning with the 1973 season in order to allow greater opportunity to use small mesh nets which are selective toward the more abundant chums. However, the greater majority of fishermen continue to fish with mainly the larger mesh king salmon nets.

Prior to 1974 the commercial fishery in the upper Yukon area (above the mouth of the Koyukuk River) was allowed seven days a week fishing time until quotas of 2,000 king and 2,000 chum and coho salmon combined were taken. These quotas were established for the purpose of allowing a very limited commercial utilization which traditionally had occurred for many years. However, in recent years the upriver commercial fishery has expanded. Fishing effort nearly doubled from 1972 to 1973 and processors have developed outside markets. In recognition of the recently developed upriver commercial fishery and the desire of the fishermen in the upper Yukon area to more actively participate, the Board of Fish and Game adopted several regulation changes to provide for a moderate increase in upriver catches, reduce gear conflicts and at the same time to provide for adequate escapements:

- 1) Subdistrict 334-40 was reduced in size and redefined as that portion of the Yukon River drainage from the mouth of the Bonasila River to the mouth of Illinois Creek at Kallands.
- 2) Two new subdistricts were added: subdistrict 334-50 and subdistrict 334-60.
- 3) Salmon catch quotas were established in the upper Yukon area as follows:
 - a) Subdistrict 334-40: 1,000 king salmon and after August 15, 10,000 chum and coho salmon combined for the area.
 - b) Subdistrict 334-50: 3,000 king salmon and after August 15, 25,000 chum and coho salmon combined for the area.
 - c) Subdistrict 334-60: 1,000 king salmon and after August 15, 15,000 chum and coho salmon combined for the area.
- 4) In subdistricts 334-40, 334-50 and 334-60 the weekly commercial fishing period was reduced from 7 to 5 days a week.

- 5) The use of drift gill nets was prohibited in the upper three subdistricts.
- 6) A minimum distance requirement of 200 feet between units of gear was established.
- 7) The Tanana River upstream of the mouth of the Chena River was closed to commercial fishing.
- 8) Gear and vessels registered to fish in subdistricts 334-40, 334-50 and 334-60 may not transfer to another subdistrict.
- 9) Gear and vessels registered to fish in subdistricts 334-10, 334-20 and 334-30 may not transfer to subdistricts 334-40, 334-50 and 334-60.

The Yukon River fall chum salmon fishery in terms of fishing effort and processing capabilities has expanded rapidly in recent years (since 1968). The Department has established a 250,000 optimum fall chum salmon harvest goal until future returns from current levels of harvest can be evaluated. For the 1974 season the Board established quotas of 200,000 chum salmon for the lower three subdistricts (combined) and 50,000 combined chum and coho salmon for the upper three subdistricts. In addition, fishing time in subdistricts 334-10 and 334-20 during the fall season was reduced from 4 to 3 days a week.

Set gill nets, drift gill nets and fishwheels are legal forms of commercial fishing gear and a fisherman can operate or assist only one type of gear at any one time. Set gill nets in use by any individual fisherman cannot exceed 150 fathoms in aggregate length and drift gill nets cannot exceed 50 fathoms. An individual may have in operation not more than one fishwheel at any one time. Set gill nets are most commonly used, especially near the river mouth, but the use of drift gill nets is increasing each season. Drift gill nets are legal forms of gear in the lower three subdistricts only. Most fishermen operate small outboard powered skiffs of 16 to 20 feet in length and do not use gill net rollers, power reels, etc., of any type. Subsistence fishing is prohibited during the closed fishing periods of the commercial fishing seasons in the lower three subdistricts. Finally, salmon may not be taken for 24 hours before the opening and following the closing of the commercial salmon fishing season in each subdistrict.

Appendix Table 23 presents commercial catches for each subdistrict since 1960.

1974 District Summary

In 1974 there were 96,902 kings; 16,825 cohos; and 877,368 chums, totaling 991,095 salmon taken commercially. This was the largest harvest ever recorded for chum salmon and also for all species combined. The total 1974 salmon catch exceeded the previous record total catch of 630,029 in 1973 by 361,066 fish (Appendix Table 21). Tables 17, 18, 19 present 1974 commercial salmon catches by fishing season and statistical areas, respectively.

A total of 900 commercial, 771 fishing vessel, 684 set gill net and 298 drift gill net licenses was issued for the district in 1974. Commercial, vessel and set gill net registration was very similar to 1973 totals, however the number of drift gill licenses issued in 1974 declined 11% compared to the previous year (Appendix Table 22). License registration declined in the lower Yukon (subdistricts 334-10, 334-20 and 334-30 combined) however, this was balanced by a substantial increase in the upper Yukon area (subdistricts 334-40, 334-50 and

334-60) where the commercial fishery is undergoing expansion. In the upper Yukon area a total of 153 commercial, 110 fishing vessel and 67 set net licenses were issued in 1974 which represent an increase of 51%, 45% and 60%, respectively over the previous year's total. Also, a total of 85 fishermen indicated they planned to operate fishwheels in the upper Yukon area during 1974, an increase of 49% over that recorded in 1973. Fishwheels are legal types of gear, however there is no license fee required.

The above license totals do not include commercial and vessel licenses issued for fish tendering purposes throughout the district. Table 20 shows the residency of all persons issued fishing licenses for 1974. The vast majority of all commercial fishermen are Eskimo and Indian residents of the Yukon River drainage.

The majority of the king salmon catch was processed primarily as a fresh/frozen product and to a lesser extent by canning and mild curing-hard salting. Production of canned king salmon was at a comparatively low level as only two canneries operated in the lower river. However, a record total of 21,074 cases of canned chum salmon was packed in the lower Yukon during 1974. The majority of the chum and coho salmon were frozen by three floaters. Production of salmon roe totaled 208,842 pounds in 1974 including 74,342 pounds of salmon roe were purchased from subsistence fishermen, primarily in the upper Yukon area. Commercial salmon production data is presented in Appendix Table 28. Table 3 includes all buyers and processors that operated in the Yukon district during 1974.

Yukon district commercial fishermen received about \$1,921,300 for their catches in 1974, a 58 percent increase compared to 1973. In addition, a minimum of \$500,000 in wages was estimated to have been earned by processing plant employees and tenderboat operators. The latter figure was obtained from information supplied by a majority of the buyers and processors. The first wholesale value of the 1974 pack was estimated at a record \$6,035,900, a 35 percent increase compared to the 1973 value of \$4,453,900 (Appendix Table 29). Substantial increase in the 1974 wholesale value reflects on higher prices and the large chum salmon catch.

Appendix tables 30 and 31 show mean fish prices and mean salmon weights respectively for 1960-1974.

King Salmon: Under the new regulations established by the Department in 1961, the annual king salmon harvest for the entire district has averaged 101,724 for the period 1961-1973 compared to 63,023 for the previous period 1952-1960, and increase of 61 percent (Appendix Table 21). The 1974 district catch of 96,902 king salmon was approximately 4,822 less fish compared to the previous 13-year average. The greatest catch ever made in the district was 129,706 king salmon in 1967.

The 1974 catch data presented in this report does not include king and chum salmon taken commercially by Canadian fishermen in Yukon Territory (Appendix Table 21).

Table 18 shows the king salmon catches (and incidental chum salmon catches) made in each subdistrict and statistical area during the 1973 king salmon season. Tables 21 through 26 present daily catch data for each subdistrict.

Appendix Table 24 presents catch per boat hour data (king salmon season)

for the lower Yukon subdistricts. The data presented for 1974 is probably not comparable to other years because of two factors: (1) Many fishermen operated 5 1/2-inch mesh nets during June in order to harvest the exceptionally large summer chum salmon run (in the past nearly all nets fished during the king salmon season were 8 to 8 1/2-inch mesh size); and (2) During the period June 20-22 the three major processors in the Emmonak area quit buying fish, due to being swamped with fish from the previous period and as a result, fishing effort declined two-thirds. Therefore, it is difficult to ascertain the abundance of the Yukon River king salmon run based on comparative catch per boat data. Also, incomplete aerial survey information precludes assessment of the run magnitude. King salmon escapements were excellent in the Tanana River system, however, elsewhere in the drainage it was not possible to ascertain escapement levels due to logistical problems and unfavorable stream conditions. Subsistence catches were average, however favorable fishing conditions (low water and absence of driftwood) may have contributed to size of the catch more than the actual abundance of fish. Overall, it appears that Yukon River king salmon run was average in magnitude and certainly larger than the run in 1973.

"Breakup" of the lower river ice in 1974 was early--the river was clear of ice in late May and the first king salmon was taken on May 27 (Emmonak). Elsewhere in the lower river, kings were first reported taken on May 28 at Pilot Station, May 31 at Marshall, and June 2 at Paimute. The timing of the king run in the lower river was early and essentially completed by late June. Peak commercial catches at the mouth occurred on June 10-12 and June 17-19. Upriver, the first kings were reported as follows: Galena (June 11), Nulato (June 12), Rampart (June 18), Stevens Village (June 23), Beaver (June 22), Eagle (June 24), Whitehorse (July 22); in the Tanana River drainage: Nenana (June 21), Chena River (July 18) and Salcha River (July 17). The arrival of king salmon at various locations upriver was approximately ten days earlier than in 1973.

Appendix Table 25 presents a breakdown of the subdistrict 334-10 king salmon catches by statistical area for the years 1965-1974. In 1974, the king salmon catches were more evenly distributed in all areas in contrast to 1973 when nearly all the kings entered the south mouth area.

An estimated 350-500 kings were "dumped" due to processing or tendering problems during the king salmon season in the lower Yukon area.

After the king salmon run had peaked on June 17-19 in subdistrict 334-10 catches steadily declined. The subdistrict 334-10 and 334-20 commercial fishery was closed by emergency order effective 6:00 a.m. June 29. Monitoring of test and subsistence fishing catches in the lower river after the closure indicated that the king salmon run was essentially over as no large numbers of fish entered the river. Usually, there is a "late run" of kings that enters during early July.

In subdistrict 334-30 the 3,000 king salmon quota was exceeded and the fishery was closed by emergency order effective 6 p.m. June 19. Normally the subdistrict 334-30 king salmon fishery closes in late June-early July. In 1974 large numbers of kings were taken early and the increased number of buyers (five) resulted in the quota being taken early.

King salmon quotas in two of the three upriver subdistricts were not taken. In subdistrict 334-40 a total of 679 kings were reported taken for commercial purposes. In this subdistrict, the 1,000 kings salmon quota was not taken because most fishermen retained their kings for personal use rather than allowing the fish to enter commercial channels. This action kept the fishing season opened and enabled the fishermen to continue fishing for the more abundant chums.

In subdistrict 334-50 (3,000 king salmon quota) a total of 2,661 kings were taken.

The 1,000 king salmon quota in subdistrict 334-60 (Tanana River) was exceeded and the commercial fishing season was closed on July 20. After the majority of the king salmon run had passed through the fishery, the commercial fishing season was re-opened to allow harvest of the summer chum salmon run. A total of 1,495 kings were taken commercially in this subdistrict. Delinquent reporting by fishermen and processors of their catches was largely responsible for the quota having been substantially exceeded.

Chum and Coho Salmon: Tables 21 through 26 also present commercial catch data by fishing period for these species. The 1974 chum harvest of 877,368 was the largest in history (69 percent greater than the previous record catch of 517,934 in 1973). The 1974 Yukon district coho salmon catch totaled 16,825 fish which exceeded the 13-year average by 12 percent (Appendix Table 21).

The record chum catch was a result of an exceptionally large run of summer chums and increased fishing effort attributed to high prices paid to the fishermen; and the recent development and expansion of the upriver fishery in the Interior. In recent years, the Yukon River commercial chum salmon fishery has expanded due to increased processing and tender facilities which have become available. Also, the increased harvest in recent years reflects the gradual relaxation of fishery restrictions due to the decline in the dependence upon subsistence fishing for chum salmon.

There are two distinct major runs of chum salmon entering the Yukon River: the summer and fall chums. The summer chums are chiefly characterized by: an earlier run timing (early June-mid July), mature more rapidly in freshwater, smaller size (6-7 pounds) and larger population. The fall chums are mainly distinguished by: later run timing (mid July-mid September), a more uniform robust body shape and bright, silvery appearance, larger size (7-8 pounds) and smaller population.

In 1974 the total Yukon River commercial chum salmon catch was composed of 604,210 summer chums and 273,158 fall chums. The majority of the summer chums were taken with both 8 1/2 and 5 1/2-6 inch mesh gill nets during the king salmon season (June 3-29) in the lower two subdistricts. Comparative summer chum salmon catch data for subdistrict 334-10 and 334-20 are presented in Appendix Table 26.

The first reported summer chum salmon was taken on June 1 by Department test fishing nets at Flat Island. Peak commercial catches in subdistrict 334-10 during the king salmon season occurred during the period June 17-19 although the summer chums were very abundant throughout June and early July based on test fishing catch data.

During June 17-19 a record period catch of 96,706 summer chums was taken in subdistrict 334-10. Some fishermen made deliveries during this period of over 1,000 chums. Peak king catches also occurred during this period and as a result an estimated 20,000 chums were dumped when processors became "swamped". An additional 5-10,000 chums were also wasted during the remainder of the king salmon season in the lower Yukon.

In the upper Yukon area a total of 50,770 summer chum salmon were taken. The majority of the summer chums were taken in subdistrict 334-40.

Subdistricts 334-10 and 334-20 fishing seasons were reopened effective 6 p.m. July 4 to fishing with six-inch maximum mesh size gill nets. In past years, the fall season did not reopen until July 10-11 in order to protect the late run of kings. Reopening the fall season in early July to fishing exclusively with small mesh gill nets allowed a greater harvest of the more abundant summer chums that are present and at the same time minimized the incidental catch of kings. Only 1,191 kings were taken during the first week of the fall season, July 4-10, in subdistricts 334-10 and 334-20.

The first fall chum salmon were taken in the lower Yukon (subdistrict 334-10) during the period July 11-13, when it was estimated that five percent of the chum catch was composed of the fall run. The next fishing period, July 15-17, was estimated to be composed of 50% summer chums. Thereafter, the chum salmon catch was composed of almost exclusively fall chums.

A total of 215,590 fall chum salmon were harvested in the lower Yukon in 1974 compared to 264,899 fall chums taken in 1973. The reduced fall chum catch in 1974 was the result of the 200,000 chum salmon quota in effect for subdistricts 334-10, 334-20 and 334-30 after July 15. The 1974 Yukon River fall chum salmon run was apparently larger than the past few years, based on comparative catch per unit effort data (Appendix Table 28). The peak fall chum catches in subdistrict 334-10 occurred during the last period of the season on August 12-14 when 42,752 fish were taken, a record fall chum catch for a 36-hour fishing period. Large numbers of fall chums were still running for 3-4 days after the season closed on August 14 based on reports from subsistence fishermen.

The coho salmon catch in the lower Yukon totaled 13,937 fish of which 10,921 were taken in subdistrict 334-10 during the August 12-14 fishing period, also a record single period catch. There are indications that the coho run was of relatively large magnitude based on the available commercial catch data and good escapements observed in the Tanana River drainage. Cohos are of minor importance in the commercial fishery and are taken incidentally to the more abundant fall chum salmon.

The subdistrict 334-30 commercial fishery was reopened effective 8 a.m. July 24 and 552 fall chums were taken by a few fishermen.

The lower Yukon area commercial salmon fishery was closed, after the 200,000 chum salmon quota was taken, effective 6:00 a.m. August 14 in subdistrict 334-10, 6:00 a.m. August 16 in subdistrict 334-20 and 6:00 p.m. August 16 in subdistrict 334-30. Due to the unanticipated large numbers of chums that entered the river during the August 12-14 fishing period, the 200,000 quota was substantially exceeded. A total of 230,128 chums were taken during the quota period (after July 15) in the lower three subdistricts.

In the upper Yukon area a total of 57,568 fall chum and 2,888 coho salmon were taken. The combined fall chum and coho salmon quotas were attained in subdistricts 334-50 and 334-60 and commercial fishing was closed by emergency order in those areas on September 14 and 28, respectively. Catch by subdistricts after August 15 are as follows: subdistrict 334-40 (9,213 chums), subdistrict 334-50 (23,551 chums and 1,500 cohos) and subdistrict 334-60 (24,804 chums and 1,388 cohos). The quota over-run which occurred in subdistrict 6 resulted from unexpectedly large catches which occurred immediately prior to the scheduled closure date and from fish tickets received late. Tables 24, 25, & 26 present catch by weekly fishing period by subdistrict in the upper Yukon area.

Enforcement

Observed commercial fishery violations have increased over previous years. The most common violation in the lower Yukon area was fishing during the closed period. The main problem area was the Sheldons Point-Chris Point area where on several occasions, nets were observed fishing during the closures. Also, several nets were observed in the closed water area west of the Chris Point marker. Upriver in subdistrict 334-20, nets were observed in the water during the closed period near Marshall and Pilot Station on one occasion. Three of these fishermen from Marshall were cited and fined by Fish and Wildlife Protection officers.

The Division of Commercial Fisheries staff spent considerable effort checking compliance with the six-inch maximum mesh regulation for gill nets in subdistricts 334-10 and 334-20 when the season reopened in early July. A total of approximately 110 set gill nets and drift nets were checked. Compliance was excellent as no nets with larger than six-inch mesh were found.

Other violations observed in the lower Yukon area included fishing in closed water areas outside of posted markers. Also, fishing unmarked gear was a common violation.

In the upper Yukon area a new set of regulations were adopted by the Board of Fish and Game for the 1974 fishing season. Even in simplified form these laws are not easily comprehended by many people for whom they were intended. For this reason, a rather slow approach to stringent enforcement of commercial fishing regulations was taken in this area. During the course of the season, Commercial Fisheries personnel and Fish and Wildlife Protection officers issued only two citations for fishing violations and four written warnings. An extremely high degree of compliance was gotten by issuance of stern verbal warnings. The most common violations observed during the course of the season was unmarked fishing gear, failure of processors to submit timely and accurate catch information and fishing during a closed period. In general, compliance with this new and seemingly complex set of regulations was excellent. The 1975 season will bring full scale enforcement of the more critical regulations.

SUBSISTENCE FISHERY

Comprehensive annual surveys of the Yukon River subsistence salmon fishery were initiated by the Department in 1961, but the data obtained cannot be easily compared with that of earlier seasons. The methods and coverage of these earlier surveys were not documented and their accuracy cannot be determined.

Methods used to survey the Yukon subsistence fishery and treatment of this data are similar to that previously described for the Kuskokwim district. Since 1961, the Department has annually surveyed all fishermen along the main river in Alaska, including the Tanana River, as far upstream as the village of Nenana and the village of Venetie on the Chandalar River. Catch data from the Canadian portion of the drainage has been supplied by personnel of Environment Canada - Fisheries Service since 1962. In recent years, the Department has conducted surveys of Koyukuk River villages.

An estimated 20,565 king and 291,102 other species of salmon, mostly chums, were taken in the Yukon River drainage (including the Yukon Territory catches). In addition, 170 kings and 5,262 other species (not included in the Yukon River drainage totals) were reported taken by 14 fishing families at Stebbins, a coastal village located several miles north of the Yukon River mouth. Table 27 presents 1974 catch data for each Yukon River community and Appendix Table 32 shows comparative Yukon River catch data for 1961-1974. Appendix Table 21 shows Yukon River drainage historical subsistence catch data for 1918-1974.

Comparing catches from villages surveyed each year since 1961 ("Equivalent catches"), the 1974 Yukon River king salmon harvest was larger than the previous 13-year average of 17,276 fish (Appendix Table 32).

For the ninth consecutive season, a relatively small catch of the "other salmon" (mostly chums) species was taken in 1974. However, the 1974 catch was the largest since 1967 and was attributed to the large chum salmon run. Equivalent catches averaged 400,874 during 1961-1965, compared to an average of only 216,370 during 1966-1974, a decrease of 46 percent.

Permits are required for subsistence fishing in the upper Tanana River drainage upstream from the mouth of the Wood River and also in the upper Yukon River drainage from the mouth of Hess Creek to the mouth of Dall River. In the upper Tanana River drainage, subsistence fishermen are limited to a catch of 5 kings and 75 chums and coho salmon apiece. Subsistence fishing was prohibited until July 15 in order to provide for king salmon escapements. A total of 70 permits was issued for salmon fishing and reported catches totaled 38 king, 281 coho, and 2,699 chum salmon. In addition 21 permits were issued for the taking of salmon carcasses in the vicinity of Big Delta. A total of 1,974 chum salmon carcasses was reported. Also, six permits were issued for taking whitefish and miscellaneous species and fishermen reported taking 1,745 whitefish and 100 other fish.

The upper Yukon River drainage between the mouths of Hess Creek and Dall River was restricted to subsistence fishing by permit only as a result of action by the Board of Fish and Game during its December, 1973 meeting. This area was recently made accessible to vehicular traffic by the opening of a section of the trans-Alaska pipeline haul road to the public. No limits were placed on the numbers of salmon which may be taken by subsistence fishermen in this area. Catch reports indicated that a total of 591 kings, 1,857 chums and 1,271 cohos was taken in 1974.

From all indications, the annual Yukon River subsistence salmon harvests for some years in the early 1900's and even as late as 1940 exceeded one million fish (Appendix Table 21). Recent declines in subsistence catches are not necessarily due to fish abundance, but mainly reflect decreases in fishing effort and dependence due to a changing way of life.

To illustrate changes in effort, there were 393 fishwheels operated on the Yukon River in 1918. Fishwheels are very effective and each wheel is capable of taking from 2,000 to 5,000 chum salmon annually if fished properly. The number of fishwheels recorded during the 1970 survey was an all-time low of 56, a decrease of 200 percent since 1961. In 1961 each fishing family kept an average of 7.7 sled dogs, while in 1974 this figure was down to 4.1 sled dogs. Finally the number of snowmachines owned by fishing families was documented beginning with the 1967 season when the average number of snowmachines per family was 0.41. In 1974 the average number of snowmachines per family increased to 1.1 (Appendix Table 32).

ESCAPEMENT

The Yukon River Drainage (330,000 square miles) is too extensive for complete aerial survey coverage during any given season. In addition, poor survey conditions have prevented surveys from being flown during some years or have resulted in minimum counts. Table 28 presents aerial survey data for all streams surveyed in 1974.

Appendix Table 33 presents comparative king salmon escapement data for selected tributaries during the 1959-1974 period. King salmon escapements into the major spawning areas, except the Tanana River system, were difficult to evaluate due to adverse weather and stream conditions and logistical problems. In the Anvik River, a total of 442 kings were enumerated as of July 18, when the tower counting operations ceased because of high muddy water. King salmon escapements into the various tributary streams of the Tanana River were judge excellent. In the Chena River 1,035 kings were counted, the largest escapement ever documented, and in the Salcha River a total of 1,857 kings were enumerated.

In the Yukon Territory, surveys were conducted too late to adequately assess king salmon escapement levels. There are indications, however, based on reports from commercial fishermen at Dawson, that catches were significantly larger than in 1973 indicating that escapements were probably "fair." The Whitehorse Dam fishway count of 273 kings was the second lowest ever recorded. However, due to possible problems associated with the passage of adults through the fishway and mortality of smolts through the turbines, the Whitehorse Dam fishway is probably not a reliable index of king salmon escapements in the Yukon Territory. Alternate index areas should be established elsewhere to better monitor escapements.

Limited studies indicated that the quality, in terms of sex ratio, of upper Yukon River drainage king salmon escapements were in favor of males. In the Salcha River the sex ratio was 3:1 in favor of males and at Whitehorse the ratio was 1.5:1 in favor of males.

Appendix Tables 34 & 35 presents comparative summer and fall chum salmon escapements for selected streams. Summer chum escapements were judged excellent throughout the drainage based on selected surveys. A minimum of 208,000 chums were documented in the Anvik River (tower count) and probably the total escapement was close to 400,000 fish for the entire river. In the Andreafsky River (East and West Forks) incomplete aerial surveys indicated excellent escapements; probably 100-200,000 chums may have spawned in this system.

During the past three years the Department has initiated intensive surveys of fall chum and coho salmon spawners in the upper Yukon River drainage. Several major previously undocumented spawning areas have been identified. In 1974, large concentrations of spawning fall chums were documented for the Toklat, Sheenjek and Chandalar Rivers. Comparable surveys of portions of the upper Tanana River drainage indicate that fall chum escapements were one-half the magnitude observed in 1972 and 1973. In the Yukon Territory, a total of 32,500 fall chums was enumerated in the Fishing Branch River, a tributary of the Porcupine River, in 1974 by Environment Canada - Fisheries Service personnel.

Tanana River drainage coho escapements appeared excellent.

OUTLOOK FOR 1975

It is difficult to predict the relative magnitudes of the 1975 Yukon River king salmon run. There are indications, based on commercial catch and escapement data, that the 1969 brood year run was below average in magnitude. The 1969 commercial catch (90,223) fish and catch per unit effort data were among the lowest ever recorded, indicating that the run was below average. Furthermore, during the first 2 1/2 weeks of June, 1969, the majority of the kings entered the south mouth where most of the gear is concentrated. During this period the run was probably overharvested, resulting in poor escapements. Escapements in 1969 were below average, although in the Alaskan portion of the drainage it was difficult to evaluate escapements due to poor survey conditions. The majority of the king salmon expected to return in 1975 will probably be composed of 6-year-old fish originating from the 1969 brood year. Accordingly, it may be assumed that the return of 6-year-olds (normally the dominant age class) in 1975 will be below average in abundance unless the offspring of the 1969 brood year experienced exceptionally good survival conditions.

However, there is the possibility that king salmon smolts from the 1969 brood year may have been adversely affected by the unusually cold temperatures that occurred during the winter and spring of 1970-1971. Also, 1970 brood year smolts may have been adversely affected by the severely cold temperatures during the winter and spring of 1971-1972, which could limit the return of five-year-olds in 1975 and also six-year-olds in 1976.

The expansion of the Japanese mothership fisheries in the high seas during recent years may possibly result in lesser numbers of king salmon returning in 1975. Most of the high seas harvest of kings are composed of immature four-year-old fish, which normally return as six-year-olds two years later. Scale analysis studies conducted by the National Marine Fisheries Service indicate that the majority of the king salmon intercepted by the Japanese mothership fishery in the Bering Sea originated from western Alaska rivers (including the Yukon River). It is interesting to note that in 1973 the Japanese fishing fleet harvested an estimated 105,000 kings in the North Pacific of which approximately 30,000 were taken in the Bering Sea. The 1973 high seas catch was one of the lowest catches in recent years although fishing effort appears to have been down also. The small 1973 catch of kings may indicate that the numbers of four-year-old fish were not abundant and therefore indicating that the return of six-year-olds to western Alaska rivers will be less than average.

In summary, it appears that the 1975 king salmon run may be less than average and that fishing time restrictions may be required during the 1974 season in order to obtain adequate spawning escapements. Also, until future returns can be studied, the commercial harvest goal for Yukon River king salmon should not exceed 90,000 fish unless an exceptionally large run is indicated. The commercial harvest goal has been revised downward from the previously established goal of 105,000 kings in view of the recent below-average size runs and the necessity to provide for adequate escapements.

There is very little information on which to estimate the relative magnitude of the 1975 runs of Yukon River summer chum, fall chum and coho salmon. Normally, the Yukon River summer and fall chum runs are composed primarily of four-year-old fish. The return of four-year-olds in 1975 will be dependent on the strength of the 1971 brood year run and the survival of the resulting progeny (eggs, alevins and fry). Based on the available commercial and test fishing catch and escapement data, the 1971 chum runs were considered above average in magnitude. However, the eggs and alevins from the 1971 brood year may have experienced high mortality due to the severe cold temperatures during the winter and spring of 1971-1972. Also, chum salmon fry entering the Bering Sea during the spring of 1972 may have encountered below average temperatures and additional mortalities may have occurred.

However, it should be mentioned that similar information concerning the possible adverse effects of the severe winter and spring temperatures of 1970-1971 indicated that the return of chum salmon to the Yukon River drainage system in 1974 would be poor, also. Just the opposite occurred as an exceptionally large run of summer chums returned in 1974; the fall chum salmon run was judged to be above average, also. It is speculated that due to the long distance of the spawning areas from the Bering Sea and/or the timing of the downstream migration, that the chum salmon fry did not encounter the severe cold temperature and consequently abnormal mortalities were not experienced. In addition, mortalities of eggs and alevins in the stream gravel was probably offset by the large number of eggs deposited by the heavy density of spawners in 1970.

The 1975 Yukon River summer chum salmon run is expected to be composed of primarily five and four-year-old fish. The return of five-year-old fish from the 1970 brood year is expected to contribute substantially to the 1975 run. Usually, when there are large numbers and a high proportion of four-year-old chums from the previous year, there is a "carryover" of five-year-old fish the following year. The contribution of four-year-olds, normally the dominant age class, to the 1975 return will depend on the survival of the 1971 brood year progeny. If mortalities were not as severe as anticipated due to unfavorable environmental conditions during the winter-spring of 1971-1972, then the return of four-year-olds in 1975 may be average or above average in abundance. Overall, it is expected that the magnitude of the 1975 summer chum run will be average and possibly above average in abundance depending on the return of four-year-olds.

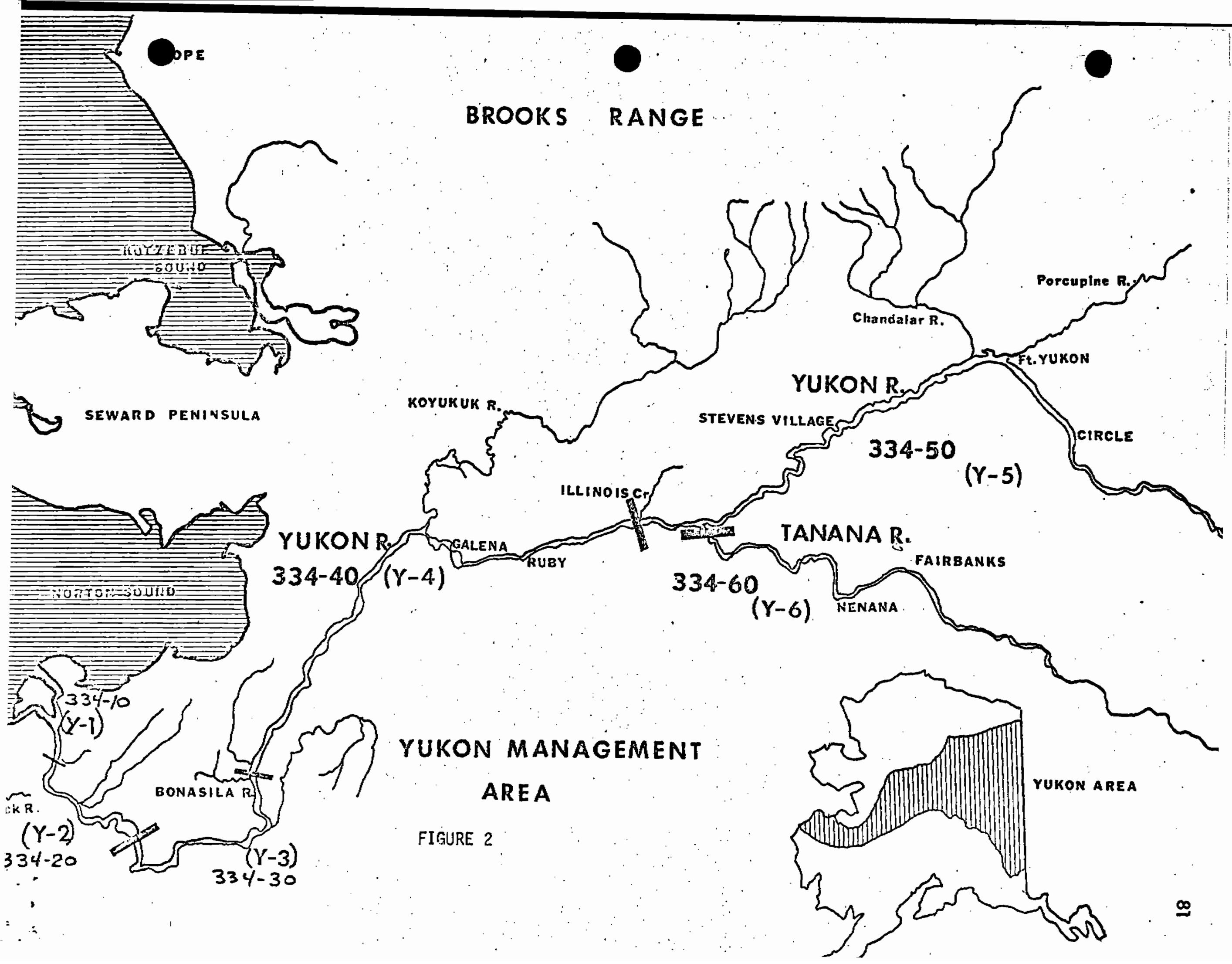
The adverse temperature conditions during the winter-spring of 1971-1972 probably had a less serious effect on the fall chum salmon run than on the summer chum run. The fall chums spawn in ground water, spring-fed areas which are less susceptible to freezing than the run-off streams which are utilized for spawning by summer chums. There is evidence that survival of the 1971 brood year progeny was favorable since the returns of three-year-old fish was at a very high level in 1974. The proportion of three-year-old fall chums from the lower Yukon River commercial fishery samples

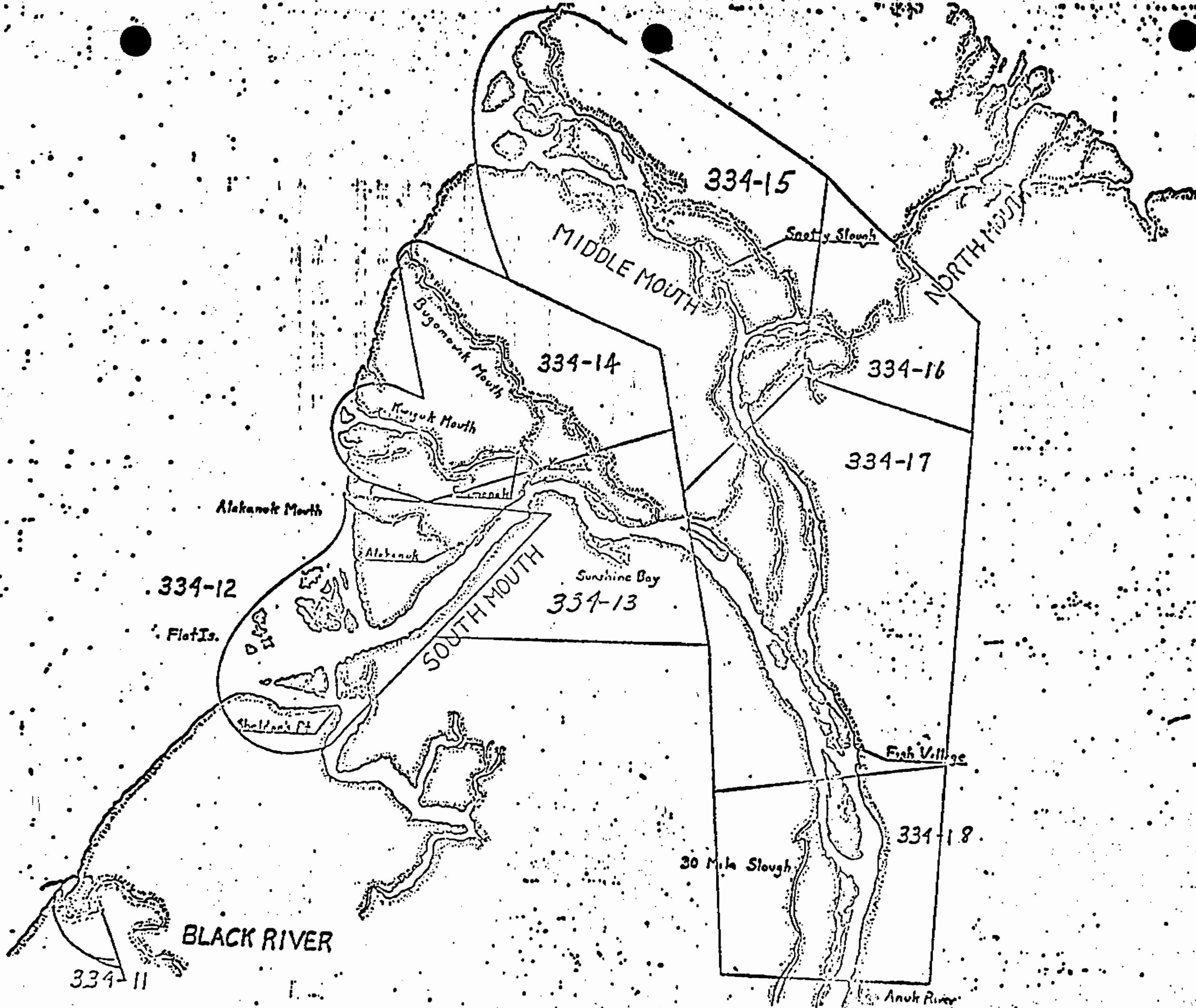
was 44 percent. Also, several escapement samples (Delta River, Toklat River and Sheenjek River) were composed of significant number of three-year-old fish. If there is a large "carryover" of four-year-olds, normally the dominant age class, then the 1975 Yukon River fall salmon run may be above average in magnitude.

In summary, the 1975 Yukon River chum salmon run (both summer and fall chums) is expected to be of average magnitude. A substantially larger run may develop if the progeny from the 1971 brood year run, particularly the summer chum salmon run, did not experience a high mortality rate due to the severely cold winter and spring of 1971-1972.

The management staff has established harvest goals of 500,000 summer and 250,000 fall chum salmon for the Yukon River commercial fisheries. An additional catch of summer chums in excess of the 500,000 harvest can be made only if the run is larger than average as was the case in 1974. The fall chum salmon run is presently being harvested at the maximum rate and an increased catch is not warranted until future runs can be evaluated. If the chum salmon runs in 1975 are below average in magnitude, then fishing time restrictions may be necessary in order to insure that adequate escapements are obtained.

The indicated coho salmon catch is expected to total 15,000-20,000 fish, depending on the amount of fishing effort exerted on the fall chum run.





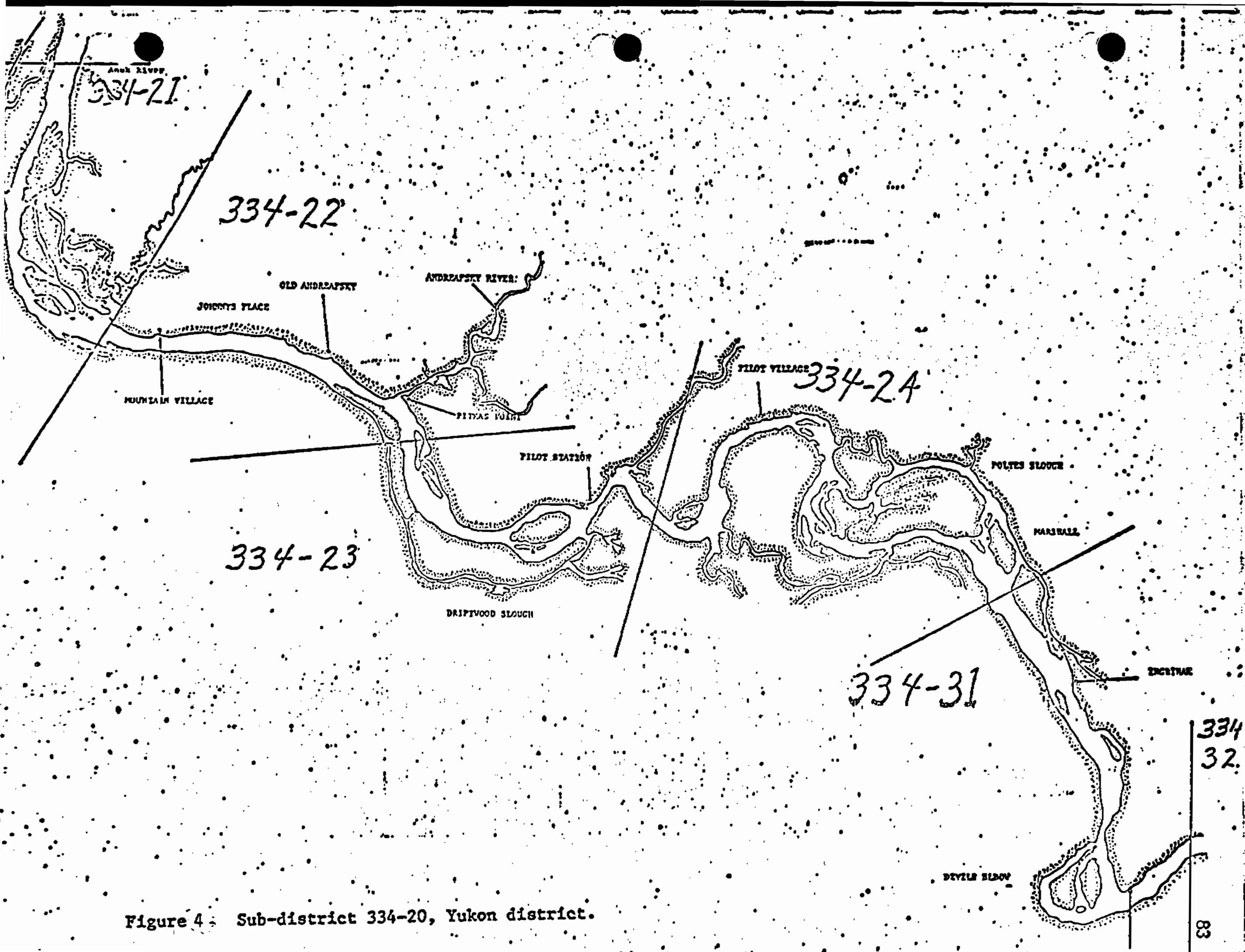


Figure 4 - Sub-district 334-20, Yukon district.

Table 17. Commercial salmon catches by species and subdistrict, Yukon district, 1974.

Subdistrict	Kings	Summer Chums	Fall Chums	Total Chums	Cohos	Total All Species
334-10						
King Salmon Season (6/3-29)	69,457	298,889	-	298,889	-	368,346
Fall or Second Season	1,610	180,655	161,498	342,163	13,761	357,534
(Before Quota Period 7/4-15)	(1,383)	(161,340)	(4,787)	(166,127)	-	-
(After Quota Period 7/16-8/14)	(227)	(19,325)	(156,711)	(176,036)	(13,761)	-
Total 334-10	71,067	479,554	161,498	641,052	13,761	725,880
334-20						
King Salmon Season (6/3-28)	17,464	50,869	-	50,869	-	68,333
Fall or Second Season	123	21,412	53,540	74,952	176	75,251
(Before Quota Period 7/4-15)	(114)	(21,412)	-	(21,412)	-	-
(After Quota Period 7/16-8/16)	(9)	-	(53,540)	(53,540)	(176)	-
Total 334-20	17,587	72,281	53,540	125,821	176	143,584
334-30						
King Salmon Season (6/4-19)	3,413	1,605	-	1,605	-	5,018
Fall or Second Season (7/24-8/16)	-	-	552	552	-	522
Total 334-30	3,413	1,605	552	2,157	-	5,570
334-40						
Before Quota Period	679	29,701	-	29,701	-	30,380
After Quota Period	-	-	9,213	9,213	-	9,213
Total 334-40	679	29,701	9,213	38,914	-	39,593
334-50						
Before Quota Period	2,661	4,462	-	4,462	-	7,123
After Quota Period	-	-	23,551	23,551	1,500	25,051
Total 334-50	2,661	4,462	23,551	28,013	1,500	32,174
334-60						
Before Quota Period	1,495	16,607	-	16,607	-	18,102
After Quota Period	-	-	24,804	24,804	1,388	26,192
Total 334-60	1,495	16,607	24,804	41,411	1,388	44,294
GRAND TOTAL 334	96,902	(604,210)	(273,158)	877,368	16,825	991,095

Table 18. Commercial salmon catches by statistical area during king salmon season, Yukon district, 1974.

Statistical Area	King	Chum
334-11	2,973	24,303
12	28,372	176,384
13	6,863	59,966
14	3,964	8,840
15	12,801	5,047
16	1,930	672
17	6,674	13,872
18	5,880	9,805
Subtotal 334-10	<u>69,457</u>	<u>298,889</u>
334-21	6,243	15,795
22	4,962	24,255
23	2,602	6,389
24	3,657	4,430
Subtotal 334-20	<u>17,464</u>	<u>50,869</u>
334-31	1,196	1,495
32	2,217	110
Subtotal 334-30	<u>3,413</u>	<u>1,605</u>
334-40	679	29,701
Subtotal 334-40	<u>679</u>	<u>29,701</u>
334-50	2,661	4,462
Subtotal 334-50	<u>2,661</u>	<u>4,462</u>
334-60	1,495	16,607
Subtotal 334-60	<u>1,495</u>	<u>16,607</u>
Total 334	95,169	402,133

Table 19. Commercial salmon catches by statistical area during fall season, Yukon district, 1974.

Statistical Area	King	Coho	Chum
334-11	120	-	13,969
12	710	4,193	150,347
13	199	6,784	67,262
14	18	1,181	12,038
15	202	1,018	44,935
16	154	139	4,342
17	137	303	22,360
18	70	143	26,910
Subtotal 334-10	<u>1,610</u>	<u>13,761</u>	<u>342,163</u>
334-21	27	-	22,478
22	70	176	26,853
23	10	-	4,798
24	16	-	20,823
Subtotal 334-20	<u>123</u>	<u>176</u>	<u>74,952</u>
334-31	-	-	-
32	-	-	552
Subtotal 334-30	-	-	<u>552</u>
334-40	-	-	9,213
Subtotal 334-40	-	-	<u>9,213</u>
334-50	-	1,500	23,551
Subtotal 334-50	-	<u>1,500</u>	<u>23,551</u>
334-60	-	1,388	24,804
Subtotal 334-60	-	<u>1,388</u>	<u>24,804</u>
Total 334	1,733	16,825	475,235

Table 20 . Yukon district licenses issued by residence, 1974.

Subdistrict	Residence	Commercial	Fishing Vessel	Set Net	Drift Net	Fishwheel ^{1/}
334-10	Sheldons Point	31	30	30	1	
	Alakanuk	89	86	87	16	
	Emmonak	104	99	100	19	
	Kotlik	82	80	81	15	
	Mt. Village	32	25	21	24	
	St. Marys	18	17	16	14	
	Pilot Station	7	7	4	7	
	Marshall	8	8	7	6	
	Russian Mission	4	3	3	2	
	Hooper Bay	1	1	1		
	Scammon Bay	30	30	30	1	
	Stebbins	10	10	10	1	
	Unalakleet	31	21	21	1	
	Shaktoolik	1	1	1		
	Bethel	3	3	1	2	
	Kalskag	2	2	2		
	Anchorage	4	2	3		
	Kodiak	2	2	2		
Everett	1	3	3			
	<u>Subtotal</u>	<u>460</u>	<u>430</u>	<u>423</u>	<u>109</u>	
334-20	Mt. Village	95	70	64	62	
	Pitkas Point	19	15	14	12	
	St. Marys	45	37	25	32	
	Pilot Station	50	45	36	41	
	Marshall	22	21	18	20	
	Holy Cross	1	1	1	1	
	<u>Subtotal</u>	<u>232</u>	<u>189</u>	<u>158</u>	<u>168</u>	
334-30	Mt. Village	2	2	1	2	
	Marshall	18	16	11	15	
	Russian Mission	10	9	9	2	
	Holy Cross	24	14	14	2	
	Bethel	1	1	1		
	<u>Subtotal</u>	<u>55</u>	<u>42</u>	<u>36</u>	<u>21</u>	
334-40	Anvik	2	2			2
	Grayling	4	4			4
	Nulato	1	1			1
	Koyukuk	1	1			1
	Galena	14	10	7		6
	Ruby	17	12	6		10
		<u>Subtotal</u>	<u>39</u>	<u>30</u>	<u>13</u>	
334-50	Tanana	24	18	10		16
	Rampart	9	7	9		2
	Stevens Village	5	3	4		2
	Fort Yukon	1	1			1
	Circle City	2	2	1		2
	Eagle	4	3	3		
	<u>Subtotal</u>	<u>45</u>	<u>34</u>	<u>27</u>		<u>23</u>
334-60	Nenana	36	19	5		18
	Fairbanks	33	27	22		20
		<u>Subtotal</u>	<u>69</u>	<u>46</u>	<u>27</u>	
TOTAL		900	771	684	298	85

^{1/} No license required for fishwheels.

Table 21. Commercial salmon catches from subdistrict 334-10, Yukon district, drift and set gill nets combined, 1974.

Date of landing	Hours fished	No. of boats	Total catch (catch/boat hour)			Cumulative catch		
			King	Coho	Chum	King	Coho	Chum
1 6/3	6		209		75	209		75
6/4	24		1,668		1,193	1,877		1,268
6/5	6		1,621		1,332	3,498		2,600
	<u>36</u>	211	3,498 (.46)		2,600 (.34)			
2 6/6	6		736		1,763	4,234		4,363
6/7	24		2,675		9,327	6,909		13,690
6/8	6		4,052		13,553	10,961		27,243
	<u>36</u>	299	7,463 (.69)		24,643 (2.29)			
3 6/10	6		3,409		6,689	14,370		33,932
6/11	24		8,046		22,544	22,416		56,476
6/12	6		3,247		15,185	25,663		71,661
	<u>36</u>	360	14,702 (1.13)		44,418 (3.43)			
4 6/13	6		1,588		4,834	27,251		76,495
6/14	24		5,193		15,370	32,444		91,865
6/15	6		4,333		10,880	36,777		102,745
	<u>36</u>	342	11,114 (.69)		31,084 (2.52)			
5 6/17	6		2,984		13,411	39,761		116,156
6/18	24		11,234		53,089	50,995		169,245
6/19	6		4,627		30,206	55,622		199,451
	<u>36</u>	355	18,845 (1.47)		96,706 (7.56)			
6 6/20	6		128		788	55,750		200,239
6/21	24		1,385		2,259	57,135		202,498
6/22	6		1,326		334	58,461		202,832
	<u>36</u>	120	2,839 (.66)		3,381 (.78)			
7 6/24	6		528		2,787	58,989		205,619
6/25	24		4,491		26,396	63,480		232,015
6/26	6		2,176		25,397	65,656		257,412
	<u>36</u>	351	7,195 (.57)		54,580 (4.31)			
8 6/27	6		343		2,362	65,999		259,774
6/28	24		2,308		24,873	68,307		284,647
6/29	6		1,150		14,242	69,457		298,889
	<u>36</u>	358	3,801 (.29)		41,477 (3.22)			
Subtotal <u>1/</u>	288	396	69,457 (.80)		298,889 (3.46)			
9 7/4	6		91		3,387	91		3,387
7/5	24		441		21,296	532		24,683
7/6	6		255		23,089	787		47,772
	<u>36</u>	214	787 (.10)		47,772 (6.20)			
10 7/8	6		30		6,250	817		54,022
7/9	24		222		34,989	1,039		89,011
7/10	6		105	1	18,649	1,144	1	107,660
	<u>36</u>	287	357 (.04)	1 (+)	59,888 (5.81)			
11 7/11	6		49		12,904	1,193		120,564
7/12	24		113		25,441	1,306		146,005
7/13	6		61		15,980	1,367		161,985
	<u>36</u>	288	223 (.02)		54,325 (5.22)			
12 7/15	6		10		4,141	1,377		166,126
7/16	24		104	3	23,988	1,481	4	190,114
7/17	6		33		14,663	1,514		204,777
	<u>36</u>	275	147 (.01)	3 (+)	42,792 (4.32)			
13 7/18	6		8	3	1,497	1,522	7	206,274
7/19	24		15	2	3,777	1,537	9	210,051
7/20	6		19	1	6,840	1,556	10	216,891
	<u>36</u>	214	42 (.01)	6 (+)	12,114 (1.57)			
14 7/22	6		3	1	719	1,559	11	217,610
7/23	24		9	19	10,054	1,568	30	227,664
7/24	6		3	8	1,863	1,571	38	229,527
	<u>36</u>	175	15 (+)	28 (+)	12,630 (2.00)			

Table 21. (Continued) Commercial salmon catches from subdistrict 334-10, Yukon district, drift and set gill nets combined, 1974.

Date of landing	Hours fished	No. of boats	Total catch (catch/boat hour)			Cumulative catch		
			King	Coho	Chum	King	Coho	Chum
7/25	6		2	23	6,146	1,573	61	235,673
15 7/26	24		8	57	19,765	1,581	118	255,438
7/27	6		2	74	8,430	1,583	192	263,868
	<u>36</u>	194	<u>12 (+)</u>	<u>154 (.02)</u>	<u>34,341 (4.92)</u>			
16 7/29	6		2	18	1,903	1,585	210	265,771
7/30	24		4	193	11,430	1,589	403	277,201
7/31	6		2	101	14,518	1,591	504	291,719
	<u>36</u>	180	<u>8 (+)</u>	<u>312 (.05)</u>	<u>27,851 (4.29)</u>			
17 8/1	6				244			291,963
8/2	24		7	85	3,129	1,598	589	295,092
8/3	6		2	80	1,480	1,600	669	296,572
	<u>36</u>	129	<u>9 (+)</u>	<u>165 (.04)</u>	<u>4,853 (1.05)</u>			
18 8/5	6			15	16		684	296,588
8/6	24		2	519	756	1,602	1,203	297,344
8/7	6		2	456	469	1,604	1,659	297,813
	<u>36</u>	55	<u>4 (+)</u>	<u>990 (.51)</u>	<u>1,241 (.63)</u>			
19 8/8	6			58	83		1,717	297,896
8/9	24		3	602	742	1,607	2,319	298,638
8/10	6		2	527	881	1,609	2,846	299,519
	<u>36</u>	77	<u>5 (+)</u>	<u>1,187 (.42)</u>	<u>1,706 (.61)</u>			
20 8/12	6			1,428	7,164		4,274	306,683
8/13	24			5,323	19,710		9,597	326,393
8/14	6		1	4,164	15,770	1,610	13,761	342,163
	<u>36</u>	119	<u>1 (+)</u>	<u>10,921 (2.54)</u>	<u>42,752 (9.97)</u>			
Subtotal ^{2/}	432	322	1,610 (.02)	13,761 (.17)	342,163 (4.26)			
Grand Total	720	485	71,067	13,761	641,052			

1/ King salmon season (6/3-6/29).

2/ Fall season (7/4-8/14).

Table 22. Commercial salmon catches from subdistrict 334-20, Yukon district, drift and set gill nets combined, 1974.

Date of landing	Hours fished	No. of boats	Total catch (catch/boat hour)			Cumulative catch		
			King	Coho	Chum	King	Coho	Chum
6/2	6							
6/3	24		4			4		
6/4	6		188			192		
	<u>36</u>	22	<u>192</u> (.24)					
6/5	6							
6/6	24		512		13	704		13
6/7	6	75	272		97	976		110
	<u>36</u>		<u>784</u> (.30)		<u>110</u> (.05)			
6/9	6							
6/10	24		1,754		1,593	2,730		1,703
6/11	6		1,850		2,006	4,580		3,709
	<u>36</u>	129	<u>3,604</u> (.77)		<u>3,599</u> (.75)			
6/12	6		126		1,029	4,706		4,738
6/13	24		1,189		6,451	5,895		11,189
6/14	6		771		3,273	6,666		14,462
	<u>36</u>	136	<u>2,086</u> (.42)		<u>10,753</u> (2.19)			
6/16	6		36		10	6,702		14,472
6/17	24		1,062		1,969	7,764		16,441
6/18	6		1,262		2,341	9,026		18,782
	<u>36</u>	133	<u>2,360</u> (.49)		<u>4,320</u> (.90)			
6/19	6		32		74	9,058		18,856
6/20	24		1,894		10,304	10,952		29,160
6/21	6		1,692		12,372	12,644		41,532
	<u>36</u>	144	<u>3,618</u> (.68)		<u>22,750</u> (4.39)			
6/23	6							
6/24	24		349		2,146	12,993		43,678
6/25	6		2,412		1,319	15,405		44,997
	<u>36</u>	69	<u>2,761</u> (1.11)		<u>3,465</u> (1.39)			
6/26	6							
6/27	24		1,310		3,634	16,715		48,631
6/28	6		749		2,238	17,464		50,869
	<u>36</u>	127	<u>2,059</u> (.45)		<u>5,872</u> (1.28)			
Subtotal ^{1/}	288	154	17,464 (.60)		50,869 (1.58)			
7/4	6				170			170
7/5	6		27		1,383	27		1,553
	<u>12</u>	12	<u>27</u> (.19)		<u>1,553</u> (10.78)			
7/7	6							
7/8	24		19		2,093	46		3,646
7/9	6		1		852	47		4,498
	<u>36</u>	22	<u>20</u> (.03)		<u>2,945</u> (3.71)			
7/10	6							
7/11	24		11		3,850	58		8,348
7/12	6		18		4,860	76		13,208
	<u>36</u>	61	<u>29</u> (.01)		<u>8,710</u> (3.96)			
7/14	6				22			13,230
7/15	24		21		3,783	97		17,013
7/16	6		17		2,936	114		19,949
	<u>36</u>	88	<u>38</u> (.01)		<u>6,741</u> (2.12)			
7/17	6							
7/18	24		1		553	115		20,502
7/19	6		2		2,228	117		22,730
	<u>36</u>	52	<u>3</u> (+)		<u>2,782</u> (1.48)			

Table 22 (Continued) Commercial salmon catches from subdistrict 334-20, Yukon district, drift and set gill nets combined, 1974.

Date of landing	Hours fished	No. of boats	Total catch (catch/boat hour)			Cumulative catch		
			King	Coho	Chum	King	Coho	Chum
7/21	6				452			23,182
7/22	24		1		7,034	118		30,216
7/23	6		3		4,323	121		34,539
	<u>36</u>	96	<u>4 (+)</u>		<u>11,809 (3.41)</u>			
7/24	6							
7/25	24		1		4,234	122		38,773
7/26	6				1,895			40,668
	<u>36</u>	85	<u>1 (+)</u>		<u>6,129 (2.00)</u>			
7/28	6							
7/29	24				3,055			43,723
7/30	6				10,813			54,536
	<u>36</u>	97			<u>13,868 (3.97)</u>			
7/31	6				278			54,814
8/1	24		1		6,741	123		61,555
8/2	6				5,058			66,613
	<u>36</u>	105	<u>1 (+)</u>		<u>12,077 (3.22)</u>			
8/4	6				145			66,758
8/5	24				279			67,037
8/6	6				38			67,075
	<u>36</u>	27			<u>462 (.46)</u>			
8/7	6				36			67,111
8/8	24				197			67,308
8/9	6							
	<u>36</u>	10			<u>233 (.65)</u>			
8/11	6							
8/12	24			148	386		148	67,694
8/13	6							
	<u>36</u>	11		<u>148 (.37)</u>	<u>386 (.97)</u>			
8/14	6			28	2,258		176	69,952
8/15	24				2,231			72,183
8/16	6				2,769			74,952
	<u>36</u>	36		<u>28 (.02)</u>	<u>7,258 (5.60)</u>			
Subtotal ^{2/}	444	121	123 (+)	176 (+)	74,952 (2.94)			
Grand Total	750	190	17,587	176	125,821			

1/ King salmon season (6/2-6/28).

2/ Fall season 7/3-8/16).

Table 23. Commercial salmon catches from subdistrict 334-30, Yukon district, drift and set gill nets combined, 1974.

Date of Landing	Hours Fished	No. of Boats	Total catch (catch/boat hour)		Cumulative catch	
			King	Chum	King	Chum
6/3	6					
6/4	24		15		15	
6/5	24		64		79	
6/6	24		252		331	
6/7	18		381	11	712	11
	<u>96</u>	22	<u>712</u>	<u>11</u>		
6/10	6		28	4	740	15
6/11	24		144	112	884	127
6/12	24		348	402	1,232	529
6/13	24		961	169	2,193	698
6/14	18		387	601	2,580	1,299
	<u>96</u>	39	<u>1,868</u>	<u>1,288</u>		
6/17	6					
6/18	24		433	77	3,013	1,376
6/19	18		400	229	3,413	1,605
	<u>48</u>	29	<u>833</u>	<u>306</u>		
Subtotal ^{1/}	240	42	3,413	1,605		
8/5	6					
8/6	24					
8/7	24			165		165
8/8	24			182		347
8/9	18			205		552
	<u>96</u>	6		<u>552</u>		
Subtotal ^{2/}	96	6		552		
Grand Total	336	42	3,413	2,157		

^{1/} King salmon season (6/3-6/19).

^{2/} Fall season (7/24-8/16).

Table 24 . Commercial salmon catches from subdistrict 334-40, Yukon district, set gill nets and fishwheel gear combined, 1974.

Period Ending	Boats	King	Coho	Chum	Total
6/22		31	-	25	56
6/29		192	-	1,633	1,825
7/6		400	-	4,999	5,399
7/13		53	-	10,910	10,963
7/20		-	-	4,118	4,118
7/27		3	-	1,718	1,721
8/3		-	-	752	752
8/10		-	-	2,617	2,617
8/17		-	-	5,450	5,450
8/24		-	-	1,267	1,267
8/31		-	-	4,383	4,383
9/7		-	-	-	-
9/14		-	-	1,042	1,042
Total	26	679	-	38,914	39,593

Table 25. Commercial salmon catches from subdistrict 334-50, Yukon district, set gill nets and fishwheel gear combined, 1974.

Period Ending	Boats	King	Coho	Chum	Total
6/22		72	-	-	72
6/29		405	-	-	405
7/6		470	-	-	470
7/13		681	-	260	941
7/20		538	-	628	1,166
7/27		442	-	1,412	1,854
8/3		52	-	992	1,044
8/10		1	-	1,411	1,412
8/17		-	-	3,799	3,799
8/24		-	-	3,886	3,886
8/31		-	-	4,380	4,380
9/7		-	-	5,042	5,042
9/14		-	91	4,541	4,632
9/21		-	500	500	1,000
9/28		-	909	1,162	2,071
Total	37	2,661	1,500	28,013	32,174

Table 26: Commercial salmon catches from subdistrict 334-60, Yukon district, set gill nets and fishwheel gear combined, 1974.

Period Ending	Boats	King	Coho	Chum	Total
6/29		5	-	-	5
7/6		336	-	8	344
7/13		670	-	460	1,130
7/20		447	-	4,446	4,893
7/27		24	-	839	863
8/3		9	-	6,512	6,521
8/10		1	-	3,632	3,633
8/17		3	-	1,770	1,773
8/24		-	4	1,421	1,425
8/31		-	10	3,253	3,263
9/7		-	130	5,749	5,879
9/14		-	1,244	13,321	14,565
Total	23	1,495	1,388	41,411	44,294

Table 27. Yukon River subsistence salmon catch data, 1974 (includes Canadian catches).

Village	Date of Survey	Fishing Families	Dogs ^{1/}	Snow-Machines ^{1/}	Kings	Other Salmon ^{2/}	Total Salmon	5 1/2" Nets	8 1/2" Nets	Fishwheels
Sheldons Point	8/3	15	30	16	265	5,857	6,122	18	10	
Alakanuk	8/5	59	91	81	575	12,279	12,854	67	21	
Emmonak	8/6	31	58	38	202	6,987	7,189	30	11	
Lamont Slough	8/6	1	3	1	3	900	903	1	1	
Aproka Pass	8/6	1	2	2	2	560	562	1	0	
Kotlik	8/9	22	29	31	394	6,098	6,492	22	11	
Mt. Village	8/14	45	71	53	450	11,408	11,858	46	16	
Pitkas Point	8/15	9	35	11	234	2,433	2,667	9	2	
St. Marys	8/13	25	47	31	589	10,491	11,080	31	13	
Pilot Station	8/15	28	61	21	467	8,410	8,877	31	12	
Marshall	8/16	26	106	31	1,068	6,763	7,831	24	15	
Russian Mission	8/17	16	47	16	1,170	4,461	5,631	13	15	
Holy Cross	8/18	13	29	8	1,944	3,986	5,930	18	11	
Anvik	8/18	12	87	18	111	29,261	29,372	9	1	6
Grayling	8/19	18	79	20	519	25,978	26,497	16	3	7
Kaltag	8/20	16	99	16	586	14,174	14,760	18	8	2
Nulato	8/20	21	174	20	1,037	33,319	34,356	24	21	8
Koyukuk	8/20	9	106	11	555	13,770	14,325	6	7	5
Galena	8/21	6	26	3	385	4,531	4,916	4	3	1
Ruby	8/21	12	186	17	2,319	15,388	17,707	5	5	9
Tanana	8/24	16	158	16	789	12,447	13,236	2	1	14
Rampart	8/25	9	57	7	370	1,249	1,619	14	2	1
Minto	8/25	6	58	4	154	2,720	2,874	2	2	1
Stevens Village	8/25	4	14	3	241	2,214	2,455	2	1	2
Beaver	8/25	2	10	2	23	1,055	1,078	0	1	7
Fort Yukon	8/26	6	70	7	883	122	1,005	1	0	3
Circle	8/26	2	20	2	406	1,266	1,672	1	3	4
Eagle	8/26	2	5	1	22	22	44	5	0	0
Mayo ^{3/}					233		233			
Pelly Crossing ^{3/}					433	14	447			
Ross River ^{3/}					30		30			
Carmacks ^{3/}					2,563	1,590	4,153			
Teslin ^{3/}					20		20			
Burwash ^{3/}						32	32			
MAIN RIVER TOTALS		432	1,758	487	19,042	239,785	258,827	420	196	67
Huslia	8/24	14	153	18	60	5,776	5,836	0	16	
Hughes	8/24	5	63	6	7	8,786	8,793	0	9	
Alatna	8/24	2	23	2	0	3,510	3,510	0	3	
Allakaket	8/24	8	49	6	69	3,517	3,586	2	23	
KOYUKUK RIVER TOTALS		29	288	32	136	21,589	21,725	2	51	
Nenana	8/27	9	63	8	1,073	19,755	20,828	0	2	16
Manley		1	-	-	176	20	196	0	0	1
Fairbanks and vicinity ^{4/}		53	-	-	38	2,953	2,991	5	36	7
TANANA RIVER TOTALS		63	63	8	1,287	22,728	24,015	5	38	24
Old Crow^{3/}					100	7,000	7,100			
PORCUPINE RIVER TOTALS					100	7,000	7,100			
GRAND TOTAL--YUKON RIVER^{5/}		524	2,109	527	20,565	291,102	311,667	427	285	91

^{1/} Data from fishing families only.

^{2/} Mostly chums, but includes small numbers of pink and coho salmon.

^{3/} From Environment Canada - Fisheries Service, Whitehorse; only catch data available.

^{4/} Includes reports turned in by permittees (subsistence fishing permits required for Tanana River above Wood River).

^{5/} Does not include catches of 170 kings and 5,262 other salmon made by 14 fishing families from Stebbins, a small coastal village located outside the Yukon River drainage boundary.

Table 28. Aerial survey escapement counts, ^{1/} Yukon district, 1974.

Stream (drainage)	Date	Survey Rating	Kings	Cohos	Summer Chums	Fall Chums
<u>Andreafsky River</u>						
West Fork	7/14	fair	285	-	33,578	-
East Fork	7/14	poor	50	-	3,215	-
Subtotal			<u>335</u>		<u>36,793</u>	
<u>Anvik River</u>						
(Anvik River Tower Count)	7/19	-	471 506	-	206,277 208,815	-
<u>Innoko River drainage</u>						
Dishna River	7/15	poor	7	-	2,886	-
Rodo River	7/14	good	10	-	16,137	-
Kaltaq River	7/14	fair	13	-	1,584	-
Hulato River	7/13	fair-good	78	-	51,160	-
<u>Koyukuk River drainage</u>						
Gisasa River	7/14	fair-good	161	-	22,022	-
Kateel River	7/14	fair	14	-	1,661	-
South fork Koyukuk	8/9	fair	14	-	59	-
Middle fork Koyukuk	8/9	fair	11	-	-	-
Slate Creek ^{2/}	8/13	-	13	-	-	-
Subtotal			<u>213</u>		<u>23,742</u>	
<u>Tozitna River</u>	8/6	fair	-	-	1,823	-
<u>Tanana River drainage</u>						
Baker Creek ^{3/}	8/15		42	-	-	-
<u>Tolovana River drainage</u>						
Chatanika River	8/1	fair	69	-	487	-
<u>Kantishna River drainage</u>						
Toklat River	10/11	fair	-	-	-	34,310
Bear Paw River	7/28-8/1	fair	96	-	15	-
Glacier Creek	7/28-8/1	fair	12	-	-	-
Moose Creek	10/20	fair	-	-	-	2,996
McKinley River	10/20	fair/poor	-	-	-	405
Subtotal			<u>108</u>		<u>15</u>	<u>37,711</u>

Table 28. (Continued) Aerial survey escapement counts, Yukon district, 1974

Stream (drainage)	Date	Survey Rating	Kings	Cohos	Summer Chums	Fall Chums
<u>Tanana River drainage (continued)</u>						
Nenana River	10/10	-	-	13	-	23
Seventeen mile slough	10/10	fair	1	20	-	1,570
slough (5 miles below Clear AFB)	10/11	fair	-	828	-	-
slough (1 mile below Anderson)	10/11	fair	-	900	-	-
subtotal			T	1,761		1,593
Chena River ^{4/}	7/30-8/8	-	1,039	-	4,349	-
Salcha River ^{5/}	7/29	good	1,857	-	8,040	-
<u>Upper Tanana River</u>						
Big Tanana slough ^{6/}	10/21	poor	-	87	-	-
Benchmark 735 slough	10/31	poor	-	-	-	1,450
Richardson Clearwater ^{7/}	10/29	fair-poor	-	235	-	125
Delta River	10/31	fair	-	15	-	4,010
Near Richardson Hwy bridge ^{6/}	11/13	good	-	22	-	4,567
Blue Creek	11/13	good	-	64	-	1
Goodpaster River	7/29	fair	97	-	113	-
Bluff Cabin slough	10/31	good	-	-	-	4,840
Clearwater Creek slough	10/31	fair	-	-	-	496
Clearwater Creek and Lake	10/24	fair	-	560	-	10
Delta Clearwater Creek ^{6/}	10/14	-	-	3,950	-	-
Delta Clearwater Slough	10/31	fair	-	-	-	1,235
Subtotal			97	4,933	113	16,734
<u>Big Salt River</u>	8/6	good	-	-	196	-
<u>Chandalar River</u>	9/18	fair	-	-	-	17,455
<u>Porcupine River drainage</u>						
Sheenjok River	9/18	fair	-	14	-	40,507
Black River						
Salmon Fork	9/19	poor	-	-	-	444
Kevenjik Creek	10/13	fair	-	-	-	1,625
Salmon Trout River	9/19	good	-	-	-	6
Subtotal			-	14	-	42,582

Table 29. (Continued) Aerial survey escapement counts, Yukon district, 1974.

Stream (drainage)	Date	Survey Rating	Kings	Cohos	Summer Chums	Fall Chums
Yukon Territory Streams ^{8/}						
Tachun Creek ^{9/}		-	192	-	-	-
Nisutlin River ^{10/}		fair-good	150	-	-	-
Big Salmon River ^{11/}		poor	70	-	-	-
Miner River	8/9	fair-good	89	-	-	-
Klondike River ^{11/}		fair-good	44	-	-	-
Kluane River ^{11/}		fair-good	-	-	-	300-500
McQueston River ^{9/}		-	40	-	-	-
Mayo River ^{11/}		fair-good	2	-	-	-
Yukon River ^{11/}		fair-good	30	-	-	190
Whitehorse Fishway ^{12/}	7/26-8/26	-	273	-	-	-
Fishing Branch River ^{13/}		-	-	200-300	-	32,500
Subtotal			890	300	-	33,190
Total for Yukon drainage:			5,266	7,008	356,140	149,265

- ^{1/} Only peak counts listed, salmon carcasses included.
- ^{2/} Communication from Bob Hallock, JFWAT.
- ^{3/} Foot survey.
- ^{4/} Boat surveys by Don Ross, USF&W.
- ^{5/} Combination aerial and boat survey.
- ^{6/} Helicopter survey conducted by Sport Fish Division, ADF&G.
- ^{7/} Coho survey conducted on 10/24, fall chums on 10/31.
- ^{8/} Survey data supplied by Environment-Canada Fisheries Service. Klondike, Big Salmon, Mayo and Nisutlin Rivers surveyed too late for accurate chinook counts!
- ^{9/} Foot Survey
- ^{10/} Count includes redds.
- ^{11/} Combination aerial and ground surveys.
- ^{12/} Fishway count.
- ^{13/} Weir count (preliminary data).

	Subsistence Catch			Total			Alaska			Total Utilization					
	Yukon Territory			Other 2/			King Salmon 2/			Yukon Territory			Other 2/		
	King	Salmon 2/	Total	King	Salmon 2/	Total	King	Salmon 2/	Total	King	Salmon 2/	Total	King	Salmon 2/	Total
400,000	8,000	8,000	1,400,000	12,239	1,500,065	1,512,304	12,239	1,500,065	1,512,304	12,239	1,500,065	1,512,304	12,239	1,500,065	1,512,304
269,000	5,957	7,957	269,000	194,822	633,950	732,790	194,822	633,950	732,790	194,822	633,950	732,790	194,822	633,950	732,790
820,000	6,965	8,429	820,000	78,467	1,015,555	1,094,122	78,467	1,015,555	1,094,122	78,467	1,015,555	1,094,122	78,467	1,015,555	1,094,122
345,000	10,376	5,800	330,000	67,646	112,008	101,244	67,646	112,008	101,244	67,646	112,008	101,244	67,646	112,008	101,244
452,500	10,500	16,176	435,000	11,825	330,000	351,825	11,825	330,000	351,825	11,825	330,000	351,825	11,825	330,000	351,825
130,000	8,108	25,500	1,130,000	17,500	1,130,000	1,130,000	17,500	1,130,000	1,130,000	17,500	1,130,000	1,130,000	17,500	1,130,000	1,130,000
274,000	3,000	8,600	274,000	274,000	274,000	274,000	274,000	274,000	274,000	274,000	274,000	274,000	274,000	274,000	274,000
575,000	2,700	13,600	555,000	20,500	555,000	575,500	20,500	555,000	575,500	20,500	555,000	575,500	20,500	555,000	575,500
520,000	2,800	11,300	520,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000	670,000
537,000	1,000	3,000	537,000	633,000	633,000	633,000	633,000	633,000	633,000	633,000	633,000	633,000	633,000	633,000	633,000
633,000	1,000	3,000	633,000	591,693	591,693	591,693	591,693	591,693	591,693	591,693	591,693	591,693	591,693	591,693	591,693
591,693	1,000	3,000	1,032,000	1,115,160	1,115,160	1,115,160	1,115,160	1,115,160	1,115,160	1,115,160	1,115,160	1,115,160	1,115,160	1,115,160	1,115,160
622,050	1,000	3,000	622,050	474,000	474,000	474,000	474,000	474,000	474,000	474,000	474,000	474,000	474,000	474,000	474,000
474,000	1,000	3,000	474,000	27,809	603,000	631,779	27,809	603,000	631,779	27,809	603,000	631,779	27,809	603,000	631,779
557,000	1,000	3,000	557,000	23,365	414,000	437,365	23,365	414,000	437,365	23,365	414,000	437,365	23,365	414,000	437,365
582,750	1,000	3,000	582,750	567,400	567,400	567,400	567,400	567,400	567,400	567,400	567,400	567,400	567,400	567,400	567,400
351,528	1,000	3,000	351,528	43,713	560,000	603,713	43,713	560,000	603,713	43,713	560,000	603,713	43,713	560,000	603,713
357,000	1,000	3,000	357,000	12,154	346,000	358,154	12,154	346,000	358,154	12,154	346,000	358,154	12,154	346,000	358,154
345,700	1,000	3,000	345,700	32,771	340,450	373,221	32,771	340,450	373,221	32,771	340,450	373,221	32,771	340,450	373,221
455,703	1,000	3,000	455,703	32,453	1,029,000	1,061,453	32,453	1,029,000	1,061,453	32,453	1,029,000	1,061,453	32,453	1,029,000	1,061,453
197,000	1,000	3,000	197,000	47,677	430,000	477,677	47,677	430,000	477,677	47,677	430,000	477,677	47,677	430,000	477,677
200,000	1,000	3,000	200,000	27,650	200,000	227,650	27,650	200,000	227,650	27,650	200,000	227,650	27,650	200,000	227,650
380,000	380,000	380,000	380,000	38,637	10,868	49,505	38,637	10,868	49,505	38,637	10,868	49,505	38,637	10,868	49,505
349,390	8,000	2,000	337,500	75,625	337,500	413,125	75,625	337,500	413,125	75,625	337,500	413,125	75,625	337,500	413,125
628,577	6,965	8,429	615,171	15,394	630,565	645,959	15,394	630,565	645,959	15,394	630,565	645,959	15,394	630,565	645,959
360,251	10,376	5,800	357,641	141,152	498,793	645,945	141,152	498,793	645,945	141,152	498,793	645,945	141,152	498,793	645,945
420,937	10,500	16,176	410,437	105,406	515,843	621,251	105,406	515,843	621,251	105,406	515,843	621,251	105,406	515,843	621,251
197,620	8,108	25,500	197,620	481,449	481,449	481,449	481,449	481,449	481,449	481,449	481,449	481,449	481,449	481,449	481,449
165,469	3,000	9,800	165,469	19,608	459,561	479,170	19,608	459,561	479,170	19,608	459,561	479,170	19,608	459,561	479,170
324,755	2,700	8,600	324,755	14,272	221,786	236,058	14,272	221,786	236,058	14,272	221,786	236,058	14,272	221,786	236,058
191,425	3,000	13,600	191,425	19,448	258,377	277,825	19,448	258,377	277,825	19,448	258,377	277,825	19,448	258,377	277,825
193,100	2,900	11,100	193,100	15,008	192,124	207,132	15,008	192,124	207,132	15,008	192,124	207,132	15,008	192,124	207,132
324,772	1,000	5,500	324,772	6,500	15,000	21,500	6,500	15,000	21,500	6,500	15,000	21,500	6,500	15,000	21,500
330,838	2,100	1,200	330,838	16,310	226,288	242,598	16,310	226,288	242,598	16,310	226,288	242,598	16,310	226,288	242,598
123,924	2,800	14,000	123,924	25,251	141,102	166,353	25,251	141,102	166,353	25,251	141,102	166,353	25,251	141,102	166,353
151,033	1,657	8,000	151,033	19,588	141,102	160,690	19,588	141,102	160,690	19,588	141,102	160,690	19,588	141,102	160,690
199,740	2,116	6,938	199,740	9,657	186,179	195,836	9,657	186,179	195,836	9,657	186,179	195,836	9,657	186,179	195,836
299,652	3,379	8,636	299,652	20,565	291,102	311,667	20,565	291,102	311,667	20,565	291,102	311,667	20,565	291,102	311,667

2/ Catch data for years 1903-1927 obtained by dividing total poundage of mixed salmon by an arbitrary weight of 15 pounds. Species breakdown is unknown. Figures are considered conservative (data collected by Royal Canadian Mounted Police).

Appendix Table 22 Yukon district commercial, vessel and gill net licenses issued and numbers of fishwheels operated by subdistrict, 1960-1974.

COMMERCIAL									
Year	Lower Yukon Area 1/				Upper Yukon Area			Totals	
	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60		
1960	193	95		289			18	307	
1961	232	130	26	394			18	412	
1962	321	148	46	515			21	536	
1963	295	131	30	446			6	452	
1964	319	119	31	469			20	489	
1965	327	143	34	504			38	542	
1966	393	143	21	557			21	578	
1967								607	
1968				563				22	585
1969	406	131	32	569				30	599
1970	393	164	33	590				38	628
1971	459	162	37	658				57	715
1972	473	193	43	709				56	765
1973	515	206	50	771				101	872
1974	460	232	55	747	39	45	69	153	900

DRIFT GILL NETS								
Year	Lower Yukon Area 1/				Upper Yukon Area			Totals
	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60	
1960	2	44		46				46
1961	17	86		103				103
1962	55	98	24	177				177
1963	24	85	5	114				114
1964	65	89	5	159				159
1965	62	98	4	164				164
1966	97	88	4	189				189
1967	135	109	5	249				249
1968	111	104	8	223				223
1969	142	100	10	252				252
1970	110	127	16	253				253
1971	140	134	19	293				293
1972	155	142	17	314				314
1973	165	151	18	334				334
1974	109	168	21	298				298

FISHING VESSEL									
Year	Lower Yukon Area 1/				Upper Yukon Area			Totals	
	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60		
1960	126	33		219			10	229	
1961	210	112	18	340			10	350	
1962	220	127	31	478			12	490	
1963	272	113	22	407			6	413	
1964	314	101	24	439			13	452	
1965	322	111	26	459			28	487	
1966	355	113	18	486			21	517	
1967	321	126	22	529			20	549	
1968	340	124	26	490			22	512	
1969	361	93	24	478			25	503	
1970	349	143	27	519			30	549	
1971	416	145	29	590			44	634	
1972	426	153	35	614			47	661	
1973	452	167	38	653			77	740	
1974	430	189	42	661	30	34	46	110	771

FISHWHEELS 2/										
Year	Lower Yukon Area 1/				Upper Yukon Area			Totals		
	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60			
1960										
1961										
1962								13		
1963								3		
1964								7		
1965								29		
1966								17		
1967										
1968								18		
1969								15		
1970								17		
1971								26		
1972								26		
1973								57		
1974					4 2/	4	24	23	38	85

SET GILL NETS									
Year	Lower Yukon Area 1/				Upper Yukon Area			Totals	
	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60		
1960	183	59		242			2	244	
1961	217	101	19	337			1	338	
1962	303	117	14	434			4	438	
1963	259	101	21	381			4	385	
1964	277	100	28	405			12	417	
1965	292	93	23	413			13	426	
1966	345	101	17	463			12	475	
1967	333	72	21	426			5	431	
1968	314	62	26	402			18	420	
1969	345	62	15	423			16	439	
1970	345	105	24	474			27	501	
1971	359	115	30	544			27	571	
1972	439	130	36	605			30	635	
1973	450	159	30	639			41	680	
1974	423	158	36	617	13	27	27	67	684

1/ Distribution of licenses by subdistrict represents that at the beginning of the fishing season (June 1); some fishermen transfer to other subdistricts during the season.
 2/ Fishwheels are legal types of gear but license fees are not required. Number of fishwheels operated each year obtained from commercial and fishing vessel license application forms where fishermen indicated type of gear to be operated.
 3/ Fishwheels were operated in the vicinity of Kaltag and Nulato. Beginning in 1974, these villages are in subdistrict 334-40.

Appendix Table 23. Commercial salmon catches by species and subdistrict, Yukon district, 1960-

KING SALMON

Year	Lower Yukon Area				Upper Yukon Area				Totals
	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60	Subtotals	
1960	50,713	15,994	-	66,707	-	-	-	884	67,591
1961	84,453	29,028	4,965	118,456	-	-	-	1,804	120,260
1962	67,099	22,224	4,687	94,010	-	-	-	724	94,734
1963	85,004	24,211	6,976	116,191	-	-	-	803	116,994
1964	67,555	20,246	4,705	92,506	-	-	-	1,081	93,587
1965	89,268	23,763	3,204	116,235	-	-	-	1,863	118,098
1966	70,723	16,927	3,612	91,327	-	-	-	1,988	93,315
1967	104,350	20,239	3,618	128,257	-	-	-	1,449	129,706
1968	79,465	21,392	4,543	105,400	-	-	-	1,126	106,526
1969	70,862	14,799	3,577	89,238	-	-	-	985	90,223
1970	57,651	17,210	3,712	78,603	-	-	-	1,666	80,269
1971	86,042	19,226	3,490	108,758	-	-	-	1,749	110,507
1972	70,052	17,855	3,841	91,748	-	-	-	1,092	92,840
1973	56,931	13,659	3,204	74,044	-	-	-	1,309	75,353
1974	71,067	17,597	3,413	92,067	679	2,661	1,495	4,835	96,902

CHUM SALMON

Year	Lower Yukon Area				Upper Yukon Area				Totals
	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60	Subtotals	
1960	-	-	-	-	-	-	-	-	-
1961	42,577 ^{1/}	-	-	42,577	-	-	-	-	42,577
1962	53,160 ^{1/}	-	-	53,160	-	-	-	-	53,160
1963	-	-	-	-	-	-	-	-	-
1964	8,347	-	-	8,347	-	-	-	-	8,347
1965	22,936	-	-	22,936	-	-	-	381	23,317
1966	69,836	-	1,209	71,045	-	-	-	-	71,045
1967	46,148	1,425	1,880	49,453	-	-	-	-	49,453
1968	62,852 ^{1/}	1,407	3,136	67,395	-	-	-	-	67,395
1969	184,411	5,024	1,722	191,157	-	-	-	703	191,860
1970	320,138	22,394	3,285	346,357	-	-	-	907	347,264
1971	282,461	6,112	50	288,623	-	-	-	1,061	289,684
1972	250,945	33,805	1,840	286,590	-	-	-	1,254	287,844
1973	395,427	109,041	463	504,931	-	-	-	13,003	517,934
1974	641,052	125,821	2,157	769,030	38,914	28,013	41,411	108,338	877,368

COHO SALMON

Year	Lower Yukon Area				Upper Yukon Area				Totals
	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60	Subtotals	
1960	-	-	-	-	-	-	-	-	-
1961	2,555	-	-	2,555	-	-	-	-	2,555
1962	22,926	-	-	22,926	-	-	-	-	22,926
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	14,041	-	845	14,886	-	-	-	95	14,981
1970	12,245	-	-	12,245	-	-	-	-	12,245
1971	12,165	-	-	12,165	-	-	-	38	12,203
1972	21,705	506	-	22,211	-	-	-	22	22,233
1973	34,860	1,781	-	36,641	-	-	-	-	36,641
1974	13,761	176	-	13,937	-	1,500	1,388	2,888	16,825

TOTAL SALMON

Year	Lower Yukon Area				Upper Yukon Area				Totals
	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60	Subtotals	
1960	50,713	15,994	-	66,707	-	-	-	884	67,591
1961	129,895	29,028	4,965	163,888	-	-	-	1,804	165,692
1962	143,185	22,224	4,687	170,096	-	-	-	724	170,820
1963	90,576	24,211	6,976	121,763	-	-	-	803	122,566
1964	78,348	20,246	4,705	103,299	-	-	-	1,081	104,380
1965	112,554	23,763	3,204	139,521	-	-	-	2,244	141,765
1966	159,878	16,927	4,821	181,626	-	-	-	1,933	183,614
1967	160,423	21,714	6,620	188,757	-	-	-	1,449	190,206
1968	155,470	22,799	7,829	186,098	-	-	-	1,126	187,224
1969	269,314	19,823	6,144	295,281	-	-	-	1,783	297,064
1970	390,064	39,604	6,997	436,665	-	-	-	2,573	439,238
1971	380,668	25,338	3,540	409,546	-	-	-	2,848	412,394
1972	342,702	52,166	5,681	400,549	-	-	-	2,368	402,917
1973	487,272 ^{1/}	124,778 ^{1/}	3,667	615,717	-	-	-	14,312	630,029
1974	725,880	143,584	5,570	875,034	39,593	32,174	44,294	116,061	991,095

^{1/} Includes small numbers of pink or red salmon.

Appendix Table 24. Comparative commercial king salmon catch data, Yukon district, 1960-1974. ^{1/}

	Year	334-10	334-20	Sub-total (10+20)	334-30
Commercial Catch	1960	50,713	15,994	66,707	
	1961	84,406	29,028	113,434	4,965
	1962	67,072	22,224	89,296	4,687
	1963	85,004	24,211	109,215	6,976
	1964	67,555	20,246	87,801	4,705
	1965	89,268	23,763	113,031	3,204
	1966	70,783	16,927	87,710	3,612
	1967	104,335	20,289	124,624	3,618
	1968	79,465	21,392	100,857	4,543
	1969	70,588	14,799	85,387	3,577
	1970	57,502	17,210	74,712	3,712
	1971	84,397	19,226	103,623	3,490
	1972	68,059	17,317	85,376	3,841
	1973	52,790	12,479	65,269	3,204
	1974	69,457	17,464	86,921	3,413

	Year	334-10 ^a	334-20	Sub-total (10+20)	334-30
Boat Hours (Catch per boat hour)	1960	40,848 (1.24)	34,914 (0.46)	75,762 (0.88)	
	1961	79,224 (1.07)	29,118 (1.00)	108,342 (1.05)	2,808 (1.77)
	1962	84,792 (0.79)	38,118 (0.58)	122,910 (0.73)	2,520 (1.86)
	1963	72,288 (1.18)	27,672 (0.87)	99,960 (1.09)	5,616 (1.24)
	1964	56,736 (1.19)	22,398 (0.91)	79,134 (1.11)	4,596 (1.02)
	1965	78,096 (1.14)	31,008 (0.77)	109,104 (1.04)	2,286 (1.40)
	1966	69,894 (1.01)	22,380 (0.76)	92,274 (0.95)	1,782 (1.23) ^{2/}
	1967	102,456 (1.02)	37,488 (0.54)	139,944 (0.89)	4,050 (0.89)
	1968	92,450 (0.86)	32,280 (0.66)	124,730 (0.81)	3,745 (1.21)
	1969	84,864 (0.83)	27,828 (0.53)	112,692 (0.76)	3,577 (0.72)
	1970	61,260 (0.94)	20,460 (0.84)	81,720 (0.91)	3,566 (1.04)
	1971	73,272 (1.15)	19,956 (0.96)	93,228 (1.11)	4,790 (0.73)
	1972	79,236 (0.86)	19,872 (0.87)	99,108 (0.86)	5,916 (0.65)
	1973	75,036 (0.70)	23,496 (0.53)	98,532 (0.66)	7,282 (0.44)
	1974	86,256 (0.80)	29,808 (0.60)	116,064 (0.75)	7,032 (0.49)

^{1/} 334-10 and 334-20 data are only for the king salmon season (June & early July).

^{2/} Catch per vessel hour does not include 1,421 king salmon captured by an unknown number of fishermen.

Appendix Table 25. King salmon catches by statistical areas, subdistrict 334-10 of the Yukon district 1965-1974.^{1/}

Stat. Area	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
334-11 (Black River)	2,266	2,495	2,110	4,047	1,405	4,992	3,038	2,730	7,193	2,973
12 (South Mouth)	18,140	20,038	25,811	27,859	21,894	23,367	25,105	11,638	28,166	28,372
13 (Sunshine Bay)	8,137	5,460	6,203	7,997	9,635	5,258	7,135	3,435	4,302	6,863
14 (Kwiguk)	6,836	4,143	7,730	3,202	5,594	5,351	10,342	9,073	3,468	3,964
15 (Middle Mouth)	23,729	10,858	27,202	6,700	12,875	6,079	16,853	18,375	756	12,801
16 (North Mouth)	4,458	3,009	4,729	919	3,833	849	3,924	5,276	40	1,930
17 (Head of Passes)	16,114	12,898	18,583	17,378	9,930	4,890	12,037	13,059	6,683	6,674
18 (Fish Village)	9,588	11,882	11,967	11,363	5,422	6,716	5,963	4,473	2,182	5,880
334-10 Total	89,268	70,783	104,335	79,465	70,588	57,502	84,397	68,059	52,790	69,457

^{1/} Catch data only for king salmon season (June and early July).

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Appendix Table 26. Comparative commercial summer chum salmon catch data, subdistricts 334-10 and 334-20, Yukon district, 1967-1974.

Year	Subdistrict 334-10					Subdistrict 334-20				
	Duration	Days Fished	Boat Hours	Catch	(catch/boat hour)	Duration	Days Fished	Boat Hours	Catch	(catch/boat hour)
1967	6/8-6/27	11.0	77,208	9,494	(0.12)	-	-	-	-	-
1968	6/6-7/3	14.0	91,380	12,995	(0.13)	6/13-7/2	10.5	27,600	1,407	(0.05)
1969	6/2-6/28	12.5	84,864	8,840	(0.10)	6/15-7/1	8.0	16,620	5,024	(0.30)
1970	6/11-7/3	10.5	58,056	87,169	(1.50)	6/14-7/3	9.0	15,756	17,536	(1.11)
1971	6/14-7/3	10.5	73,032	36,077	(0.49)	6/20-7/5	8.5	17,832	6,112	(0.34)
1972	6/8-7/1	12.5	79,236	69,658	(0.88)	6/15-7/1	8.5	19,296	9,040	(0.47)
1973	6/7-7/11	14.5	100,284	191,840	(1.91)	6/10-7/14	14.5	36,000	56,481	(1.57)
1974	6/3-7/13	16.5	114,624	461,025	(4.02)	6/5-7/16	15.5	35,316	72,281	(2.05)

Appendix Table 27. Comparative commercial coho and chum salmon catch data for the fall season, subdistrict 334-10 Yukon district, 1961-1974.

Year	Duration	Days ^{1/} fished	Boat hours	Commercial catch (catch/boat hour)	
				Coho	Chum
1961	8/1-8/31	16	14,772	2,855 (0.2)	42,461 (2.9)
1962	8/1-9/3	21	46,950	22,926 (0.5)	53,116 (1.1)
1963	8/9-9/6	18	2,100	5,572 (2.7)	no purchases
1964	8/3-8/27	17	8,346	2,446 (0.3)	8,347 (1.0)
1965	8/2-8/4	<u>2/</u>	<u>2/</u>	350 (<u>2/</u>)	22,936 (<u>2/</u>)
1966	7/25-9/10	28	41,994	19,254 (0.5)	69,836 (1.7)
1967	7/24-8/27	21	19,272	9,925 (0.5)	36,451 (1.9)
1968	7/22-8/28	22	47,232	13,153 (0.3)	49,857 (1.1)
1969	7/11-8/23	25	47,352	14,041 (0.3)	148,017 (3.1)
	7/21-8/23 ^{3/}	20	39,408	14,041 (0.4)	128,866 (3.3)
1970	7/14-8/26	25	68,712	12,245 (0.2)	232,969 (3.4)
	7/20-8/26 ^{3/}	22	56,160	12,245 (0.2)	200,306 (3.6)
1971	7/12-9/4	32	108,336	12,165 (0.1)	246,384 (2.3)
	7/22-8/28 ^{3/}	22	85,344	11,582 (0.1)	178,744 (2.1)
1972	7/11-9/2	32	106,974	21,705 (0.2)	181,287 (1.7)
	7/20-8/26 ^{3/}	22	81,726	19,655 (0.2)	134,752 (1.6)
1973	7/12-9/1	30	140,304	34,860 (0.2)	212,235 (1.5)
	7/19-8/25 ^{3/}	22	107,136	34,860 (0.3)	173,783 (1.6)
1974	7/11-8/14	15	62,136	13,761 (0.2)	234,503 (3.8)
	7/18-8/14 ^{3/}	12	41,868	13,758 (0.2)	137,235 (3.3)

^{1/} One "day" is equivalent to 24 hours during open fishing period.

^{2/} Information not available.

^{3/} More comparable to duration of fishing for past seasons.

Appendix Table 28 Commercial salmon pack by species and type of processing, Yukon district, 1960-1974.^{1/}

Year	Cases (48#)			Fresh-frozen (round wt. in lbs.)			Cured King Salmon		Salmon Roe (lbs.)
	King	Coho	Chum	King	Coho	Chum	Tierces	1/2 Tierce	
1960	13,000			<u>2/</u>	<u>2/</u>	<u>2/</u>	250	180	
1961	19,474			<u>2/</u>	<u>2/</u>	<u>2/</u>	504	146	
1962	15,959	512	1,760	<u>2/</u>	<u>2/</u>	<u>2/</u>	464	280	
1963	16,400	1,190		<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	
1964	12,041			<u>2/</u>	17,100	66,770	537	499	
1965	18,149			275,000	2,500	160,500	670	67	
1966	14,026	836	2,812	414,000	61,355	301,240	398	60	
1967	21,503		126	475,900	66,400	366,496	627	96	1,755
1968	19,499		816	561,690	93,154	454,409	351	170	21,000
1969	9,560	1,104	4,499	423,597	26,973 ^{3/}	841,586 ^{3/}	647	95	29,000
1970	6,431	1,002	6,413	716,600	12,900	1,725,000	498 ^{4/}	191	26,300
1971	6,500	502	3,213	1,058,034	45,836	1,432,455	798 ^{5/}	229	55,177
1972	7,418	1,005	6,249	1,002,395	83,960	1,495,922	497	147	85,278
1973	5,227	1,008	9,902	1,339,317	181,928	2,920,532	61	205 ^{6/}	137,594
1974	6,660	603	21,074	1,062,666	58,816	3,879,300	438 ^{7/}	56	208,842

^{1/} Pack represents type of processing when fish were shipped out of district.

^{2/} Information not available.

^{3/} Includes approximately 11,600 and 110,500 lbs. (round weight) of coho and chum salmon respectively as salted fish for Japanese market. Also includes 15 tierces of mild cured chum salmon (12,000 lbs. round weight).

^{4/} Includes 51 tierces chum salmon.

^{5/} Includes 139 tierces chum salmon.

^{6/} Includes 72 half tierces chum salmon.

^{7/} Includes 57 tierces chum salmon.

Appendix Table 29 Dollar value estimates of Yukon district commercial fishery, 1960-1974.^{1/}

Year	Gross value of catch to fishermen	Wages earned ^{2/}	Total income to district	Wholesale value of pack ^{3/}	Tax revenues to state
1960	\$	\$	\$	\$	\$
1961	437,000			1,292,300	37,500
1962	361,900			1,275,250	50,400
1963	412,300			1,550,400	42,000
1964	354,400			1,203,800	35,000
1965	542,300			1,412,700	42,000
1966	454,500			1,308,100	37,000
1967	606,400	250,000	856,400	1,864,800	41,700
1968	535,000	264,000+	799,000+	1,655,156	47,000
1969	519,200	234,000+	753,000+	1,976,179	40,000
1970	623,100	185,800+	808,900+	2,113,100	45,000
1971	783,000	357,700+	1,140,700+	2,106,600	42,000
1972	784,000	445,400+	1,229,400	2,405,200	45,300
1973	1,217,000	585,800+	1,802,900+	4,453,900	53,900
1974	1,921,000	500,054+	2,421,054+	6,035,900	56,600

^{1/} Information not available for 1960 and wages earned during 1961-1966.

^{2/} Includes wages paid to tender boat operators, processing plant employees in district.

^{3/} Based on type of processing when fish were shipped out of the district.

Appendix Table 30 Estimated mean prices paid to fishermen, Yukon district, 1961-1974 ^{1/} (prices per fish)

<u>Year</u>	<u>King</u>	<u>Coho</u>	<u>Chum</u>	<u>Other</u>
1961	\$3.50	\$	\$	\$
1962	3.50			
1963	3.50			
1964	3.75	.50	.25	
1965	4.50		.35	
1966	4.50	.50	.35	
1967	4.50	.50	.35	
1968	4.64	.50	.50	
1969	4.60	.55	.50	
1970	5.00	.84	.61	
1971	5.34	.82	.64	
1972	5.90	.92	.75	
1973	7.45	1.27	1.18	
1974	9.00	1.75	1.40	

^{1/} Information not available for some species.

Appendix Table.3]. Mean weights and numbers of salmon per case, Yukon district, 1962-1974.^{1/}

<u>Year</u>	<u>Mean round weight in pounds^{2/}</u>			<u>Mean no. of fish/case^{3/}</u>		
	<u>King</u>	<u>Coho</u>	<u>Chum</u>	<u>King</u>	<u>Coho</u>	<u>Chum</u>
1962				3.2	13.3	10.5
1963						
1964	22.6		8.0	3.4		
1965	23.0		6.6	3.3		
1966	23.0		6.9	3.5		
1967	24.0	7.3	7.0	3.2		
1968	26.5		8.3	3.3		11.0
1969	23.9	6.7	6.5	3.4	10.0	12.0
1970	22.3	7.1	6.7	3.7	10.6	11.7
1971	22.6	6.9	6.4	3.3	10.3	12.4
1972	24.6	7.1	6.8	3.2	10.1	11.8
1973	24.5	7.1	7.4	3.1	10.5	10.8
1974	23.4	7.1	6.7	3.4	10.5	11.7

^{1/} Information is not available for some species.

^{2/} Based on age-length-weight samples or fish ticket entries.

^{3/} Standard 48 lb. case.

Appendix Table 32 Yukon River comparative subsistence catch and effort data, 1961-1974 (numbers per fishing family are in parenthesis).

Year	Total Catch		Equivalent Catch ^{1/}		Mean Equivalent Catch per Family ^{1/}	
	King Salmon	Other salmon ^{2/}	King salmon	Other salmon ^{2/}	King salmon	Other salmon ^{2/}
1961	23,719	407,814	23,719	405,632	38	650
1962	19,910	358,441	13,010	329,144	23	583
1963	32,656	421,625	26,141	372,578	44	624
1964	22,817	485,630	19,480	460,712	32	765
1965	19,723	458,379	16,950	436,306	31	806
1966	14,017	214,236	11,507	204,913	23	415
1967	19,661	288,595	16,306	256,926	35	545
1968 ^{3/}	14,832	189,607	11,883	170,522	25	358
1969	14,946	213,725	13,916	195,476	30	426
1970	15,926	223,237	13,474	199,163	34	498
1971	24,755	200,568	21,670	171,247	51	399
1972	19,541	140,102	17,079	119,335	43	298
1973	22,215	186,179	19,458	167,106	42	360
1974	20,543	291,080	16,584	256,636	38	586

Year	Fishing families surveyed ^{1/}	People in fishing families ^{1/}	Snowmachines ^{1/}	Sled dogs ^{1/}	Gear operated ^{1/}	
					Gill nets	Fishwheels
1961	624	3,626 (5.8)		4,806 (7.7)	577	169
1962	564	3,279 (5.8)		3,848 (6.8)	613	138
1963	597	3,460 (6.9)		4,155 (7.0)	716	156
1964	602	3,524 (6.0)		4,003 (6.6)	840	155
1965	541	3,453 (7.3)		3,974 (7.3)	647	127
1966	494	3,144 (6.4)		3,112 (6.3)	578	116
1967	471	2,756 (5.9)	192 (0.4)	2,752 (5.8)	530	87
1968	476	3,109 (6.5)	262 (0.6)	2,719 (5.7)	565	71
1969	459	2,974 (6.5)	349 (0.8)	2,442 (5.3)	594	63
1970	400	2,679 (6.7)	346 (0.9)	2,214 (5.5)	647	55
1971	429	2,795 (6.5)	414 (1.0)	1,894 (4.4)	683	56
1972	401	2,508 (6.3)	423 (1.1)	1,375 (3.4)	698	57
1973	463	2,894 (6.3)	485 (1.0)	2,030 (4.4)	840	77
1974	438	2,759 (6.3)	492 (1.1)	1,796 (4.1)	609	83

^{1/} Data from villages surveyed each year since 1961: Mouth to Fort Yukon and Tanana River (does not include Fairbanks area).

^{2/} Mostly chum salmon, some pinks and cohos.

^{3/} Total king and other salmon catches have been corrected.

Appendix Table 33. Comparative Yukon River drainage king salmon escapement counts 1959-1974.^{1/}

Year	Andreafsky River (East fork)	Andreafsky River (West fork)	Anvik River
1960	1,020	1,220	1,950
1961	1,003		1,226
1962	675 ^{2/}	762 ^{2/}	
1963			
1964	867	705	
1965		355 ^{2/}	650 ^{2/}
1966	361	303	638
1967		276 ^{2/}	336 ^{2/}
1968	380	383	297 ^{2/}
1969	231 ^{2/}	274 ^{2/}	296 ^{2/}
1970	665	574 ^{2/}	368 ^{2/}
1971	1,904	1,284	
1972	798	582 ^{2/}	1,172 ^{4/}
1973	825	788	613 ^{4/}
1974		285	506 ^{5/}

Year	Salcha River	Nisutlin River (Sidney-100 Mile Cr.)	Whitehorse Dam Fishway
1959			1,054
1960	1,660		660
1961	2,878		1,068
1962	937		1,500
1963			484
1964	450		587
1965	408		903
1966	800		563
1967			533
1968	735	407	407
1969	461 ^{2/}	105	334
1970	1,882	615	625
1971	159 ^{2/}	640 ^{3/}	856
1972	1,193	317	392
1973	249	36 ^{2/}	228
1974	1,857	48 ^{2/}	273

- ^{1/} With exception of Whitehorse fishway counts, the data was obtained from aerial surveys which were made only of the main stem of each river listed.
- ^{2/} Incomplete survey or poor survey conditions resulting in a very minimal count.
- ^{3/} Environment Canada - Fisheries Service survey.
- ^{4/} Combination tower counts and aerial survey estimates.
- ^{5/} Tower count.

Appendix Table 34. Comparative Yukon River drainage summer chum salmon aerial survey escapement estimates, 1958-1974.

Year	SUMMER CHUMS			
	Andreafsky River (East Fork)	Andreafsky River (West Fork)	Anvik River	Salcha River
1958			100-200,000	
1959			200,000	
1960	3,830		11,110	670
1961	8,110			1,152
1962	18,040	19,530	20,600	1,161
1963				
1964		12,810	12-14,000 <u>1/</u>	250 <u>1/</u>
1965		14,670 <u>1/</u>	100,000	2,375
1966	25,619	18,145	37,500	2,200
1967		14,495 <u>2/</u>	116,000	
1968	17,600 <u>2/</u>	74,600 <u>2/</u>	51,580 <u>1/</u>	3,790
1969	119,000	159,500		425 <u>1/</u>
1970	84,090	91,710 <u>1/</u>	232,780	7,879
1971	98,095	71,745		306 <u>1/</u>
1972	41,460	25,573	245,857 <u>3/</u>	947 <u>1/</u>
1973	10,149 <u>1/</u>	51,835	86,665 <u>3/</u>	290
1974	3,215 <u>1/</u>	33,258	208,815 <u>4/</u>	8,040 <u>5/</u>

1/ Poor or incomplete survey.

2/ Includes some pinks.

3/ Combined tower and aerial survey estimates.

4/ Tower counts.

5/ Combined aerial and boat surveys.

Appendix Table 35. Comparative Yukon River drainage aerial survey estimates, fall chum salmon, 1971-1974. 1/

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Tanana River drainage				
Bear Paw River		<u>2/</u>	1,530	2,996
Toklat River		1,000 ^{3/}	6,957	34,310
Benchmark 735 slough		5,255	127 ^{4/}	1,450
Delta River		3,650	7,971	4,010
Tanana River <u>7/</u>		8,350	5,635	4,567
Bluff Cabin slough		6,040	3,450	4,840
Delta Clearwater slough		<u>2/</u>	1,720 ^{3/}	1,235
Chandalar River		<u>2/</u>	<u>5/</u>	17,455
Porcupine River drainage				
Sheenjek River		<u>2/</u>	1,175 ^{3/}	40,507
Yukon Territory Streams				
Fishing Branch River	115,000+	35,326 ^{6/}	16,239 ^{6/}	32,500

- 1/ All surveys rated fair - good unless rated otherwise.
2/ Not surveyed.
3/ Poor survey.
4/ Surveyed too early.
5/ Surveyed too late.
6/ Weir count.
7/ Richardson Highway Bridge to Blue Creek.