

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF COMMERCIAL FISHERIES

ANNUAL MANAGEMENT REPORT

1975

YUKON AREA

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## PREFACE

This report presents the bulk of current and historical information concerning the management of commercial and subsistence fisheries in the Yukon area. 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 Yukon district was given area status in 1971. This report utilizes the old nomenclature, i.e., Yukon district.

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 section:

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 Report. This section presents detailed comprehensive report of the current year and makes comparisons with previous years.

In order to facilitate use of this report, tabular data has been separated into current year tables and appendix tables where annual comparisons are made. 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 have been computed, 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.

Catch data for 1975 is preliminary. Final 1975 catch data, with only minor revisions anticipated, will be presented in the Appendix Tables of the 1976 annual management report.

## AREA INTRODUCTION

### Fishery Resources

All five species of Pacific salmon are indigenous to the Yukon River drainage (Figure 1) with chum salmon being the most abundant. It is estimated that king salmon, coho salmon, pink salmon and red salmon follow in order of abundance.

Chum salmon are found throughout the Yukon River drainage. Summer and fall chum are the two distinct major runs of chum salmon entering the Yukon River. The summer chums are chiefly characterized by: earlier run timing (early June - mid-July), rapid maturation in freshwater, smaller size (6-7 pounds), and larger population. Summer chums spawn primarily in run off streams in the lower 500 miles of the drainage. The fall chums are mainly distinguished by: later run timing (mid-July - early September); robust body shape and bright silvery appearance; larger size (7-8 pounds) and smaller population. Fall chum spawn in the upper portion of the drainage (upstream of the mouth of the Tanana River) including various streams in the Yukon territory which are spring fed; usually remaining ice-free during the winter.

King salmon of the Yukon River are the largest species averaging 20-25 pounds (range 2-90+ lbs.). Spawning populations of kings have been documented in the Andreafsky River system located approximately 100 miles from the mouth of the Yukon River and as far upstream as the headwaters of the drainage in the Yukon Territory of Canada, nearly 2,000 miles from the mouth. Kings enter the mouth of the Yukon River after breakup during early June. Coho salmon enter the Yukon River during late July through mid-September, average about seven pounds in weight and spawn discontinuously throughout the drainage. The major coho spawning concentrations documented to date occur in the tributaries of the upper Tanana River drainage. Pink salmon enter the lower river during mid-June - early July, average approximately 3 pounds in weight and essentially spawn in the lower portion of the drainage (downstream of the village of Grayling). Red salmon are extremely rare in the Yukon River and only a few individuals are caught each year.

Other species common to the freshwater and coastal marine habitats are: sheefish, several species of whitefish, Arctic char, lake 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. Pollution, logging, dam construction and mining activities have been to date minimal or nonexistent. It remains to be seen what impact 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. Other employment is often sporadic or nonexistent in this area. Commercial salmon fishing in the Yukon district dates back to 1918. Only king salmon were harvested on a sustained basis prior to statehood (1959). The Department has liberalized certain regulations and encouraged processors to explore and develop the chum salmon fishery.

Decline in subsistence utilization of salmon has made it possible to increase commercial utilization in some districts during recent years. There has been an increased demand from Japanese markets for fresh frozen and cured salmon, especially chums. These trends are expected to continue, and 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 10,000-15,000 Eskimo and Indian people in the district, the majority of whom reside in excess of 45 small villages scattered along the coast and major river systems. Nearly all of these native people are dependent to varying degrees on fish and game resources for their livelihood.

Subsistence fishermen fish gill nets largely in the main rivers and to a lesser extent in the coastal marine waters capturing mainly salmon, whitefish and sheefish. Fishwheels take considerable numbers of salmon in the upper Yukon River. Beach seines are occasionally used near the spawning grounds to catch schooling or spawning salmon or 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 and tomcod are frequently taken through the ice by handlines.

There is very little wastage of the fish taken for subsistence purposes. The major portion is sun dried 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 400,000 to 500,000 salmon. The majority of salmon taken are chums. Subsistence harvest information prior to 1960 is incomplete or entirely lacking for many years. There are records indicating that in excess of one million salmon were taken in some years during the early 1900's.

About 1930 the airplane began replacing the sled dog as mail and supply carrier, starting the gradual decline of the subsistence salmon fishery. This decline has been accelerated in the past 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 three positions-- one area management biologist, one assistant area management biologist and one research biologist. In addition approximately 10 summer employees are hired each season to assist the permanent staff in conducting various management and research studies.

Operating expenses for the Yukon area management and research program from July 1, 1974 through June 30, 1975 were approximately \$137,200. Of this total, state and federal funds provided \$84,800 and \$52,400 respectively.

The main objective of the Department's program is to manage the commercial salmon fisheries on a sustained yield basis. In addition, the staff works to obtain needed information to determine the potential for commercial fisheries on underutilized species such as 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 the district is the scheduled weekly fishing period and/or quotas. Commercial fishing is normally allowed for a total of from three to five days a week during the open season which depends on the district and species involved. Season catch quotas are utilized for the king salmon fisheries of the upper four subdistricts and the fall chum fishery throughout the district. 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. A list of emergency orders and regulations dealing with changes in fishing

time and other changes in regulations issued for the Yukon area in 1975 is presented in Attachment 1.

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. Since all the fisheries were either initiated or expanded through regulation changes only since 1960, fishery management is hampered by the relative lack of comparative catch and return information. 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 current levels of commercial utilization in order to establish definite trends in subsistence utilization and to obtain more information on the relationship between the salmon catch and return.

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

A unique problem in the area is the language/communication barrier. Many of the older native people cannot read or speak English. Therefore, the staff often must use translators when conducting the many public meetings that are annually held 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 education and information, a weekly fishery program is broadcasted during the fishing season over radio stations KNOM and KICY in Nome, KYUK in Bethel and various radio stations in the Fairbanks area.

### Special Studies

Attachment 2 lists special studies undertaken during 1975 and includes a summary of objectives, procedures and results for each.



YUKON RIVER BASIN  
(330,000 square miles)

FIGURE 1

Attachment 1 . List of Yukon area emergency orders and regulations issued, 1975.

<u>Number</u>	<u>Effective Date</u>	<u>Action Taken</u>	<u>Comments</u>
E.O. #1(Yukon)	May 19	Subsistence fishing closure upper Tanana River (Salcha River to Gerstle River).	Closure necessary to protect spawning chum salmon stocks which were accessible in the vicinity of the pipeline crossing.
E.R. #1(AYK)	June	Extend license and registration deadline to June 14 for gill-nets and fishwheels.	Extension of deadline date requested due to late break-up and flooding.
E.R. #2(AYK)	June	Regulations permitting the sale of subsistence salmon roe in AYK region.	Regulations promulgated in accordance with AS 16.06.827 which legalized the sale of subsistence roe in the AYK region.
E.O. #1(AYK)	June 10	Earlier effective date for regulations adopted by Board of Fish and Game in April.	Action necessary due to late effective date (June 28) of recently adopted regulations.
E.O. #2(Yukon)	June 23	Initiate 2-day/week subsistence fishing closure in Section 4-A of subdistrict 4 excluding Koyukuk River drainage.	Required for adequate enforcement of regulations in face of expanding commercial fishing and sale of subsistence caught salmon roe.
E.O. #3(Yukon)	June 25	Reduce fishing time from 3 to 2 days/week in subdistricts 1 and 2.	Action required to provide for increased king salmon escapements because of indicated poor strength of the run.
E.O. #4(Yukon)	July 3	Exclude Tozitna and Innoko River drainages from 2-day week subsistence closure in subdistricts 5 and 4, respectively.	Correction of typographical error E.O. #2.

## Attachment 1 . (continued)

<u>Number</u>	<u>Effective Date</u>	<u>Action Taken</u>	<u>Comments</u>
E.O. #5(Yukon)	July 1	Closure of fishing season in subdistrict 2.	Closure initiated because maximum sustained harvest taken consistent with spawning and subsistence fishing requirements.
E.O. #6(Yukon)	July 2	Closure of fishing season in subdistrict 3.	3,000 king salmon season catch quota taken.
E.O. #7(Yukon)	July 5	Increase weekly fishing time from 2 to 3 days/week in subdistricts 1 and 2.	Increased fishing time to harvest very large summer chum salmon is warranted.
E.R. #1(Yukon)	July 19	Amend date when fall chum salmon quota becomes effective in subdistricts 1, 2 and 3.	Date changed from <u>after</u> July 15 to July 19 because of large, late run of summer chums.
E.O. #8(Yukon)	July 22	Prohibit sale of subsistence caught chum salmon roe in subdistrict 3.	Roe quota, based on traditional harvest levels of chum salmon, was exceeded. Closure necessary to prevent excessive subsistence harvest.
E.O. #9(Yukon)	July 28	Reopen commercial fishing season in Tucker Slough to Bonasila River area subdistrict 3.	King salmon run has passed through and chum salmon are available to warrant reopening of season.
E.O. #10(Yukon)	August 1	Prohibit sale of subsistence caught chum salmon roe in subdistrict 4.	Roe quota, based on traditional harvest levels, was exceeded. Closure necessary to prevent excessive subsistence harvest.
E.O. #11(Yukon)	August 12	Closure of fishing season in subdistricts 1, 2 and 3.	200,000 combined fall chum salmon quota apparently taken.

## Attachment 1 . (Continued)

<u>Number</u>	<u>Effective Date</u>	<u>Action Taken</u>	<u>Comments</u>
E.O. #12(Yukon)	August 13	Reopening of fishing season in subdistricts 1, 2 and 3.	Season reopen to allow remainder of 200,000 chum salmon quota to be taken. Earlier closure (E.O. 11) was premature as quota was not taken as anticipated.
E.O. #13(Yukon)	August 16	Closure of fishing seasons in subdistricts 1, 2 and 3.	200,000 catch quota of fall chums taken.
E.O. #14(Yukon)	August 20	Closure of fishing season in subdistrict 4.	10,000 fall chum and coho salmon catch quota taken.
E.O. #15(Yukon)	Sept. 8	Closure of fishing season in subdistrict 5.	25,000 fall and coho salmon catch quota taken.
E.O. #16(Yukon)	Sept. 9	Closure of fishing season in subdistrict 6.	15,000 fall chum and coho salmon catch quota taken.
E.O. #17(Yukon)	Sept. 18	Prohibit sale of subsistence caught chum salmon roe in subdistrict 5.	Roe quota, based on traditional harvest levels, was exceeded. Closure necessary to prevent excessive subsistence harvest.
E.O. #18(Yukon)	Sept. 25	Prohibit sale of subsistence caught chum salmon roe in subdistrict 6.	Roe quota, based on traditional harvest levels, was exceeded. Closure necessary to prevent excessive subsistence harvest.

Attachment 2 . Summary of special projects conducted in the Yukon Area by the Division of Commercial Fisheries, 1975.

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1. 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 399 king and 3,201 chum salmon was taken in the index set gill nets from June 10 through July 14. Peaks in the king salmon migration occurred during June 22-23 and June 29 - July 1. Peaks in the summer chum migration occurred during June 23 - July 3. Based on comparative catch data, the 1975 king salmon run was below average in magnitude. The 1975 chum salmon run was well above average in magnitude.

2. Subsistence Salmon Fishery Surveys

- a. Location: Yukon, Koyukuk, Tanana Rivers and Yukon Territory Villages.
- 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 549 fishing families were surveyed and their catches totaled 17,563 king salmon and 276,636 other salmon. A total 1,000 river miles traveled by boat and 500 air miles by single engine aircraft in the conducting of the survey. Yukon Territory subsistence catch data was furnished by Environment Canada - Fisheries Service (Whitehorse office).

3. Yukon River Anadromous Fish Investigation

- 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 and evaluate management procedures needed to maintain them at their level of maximum yield.
- c. Results: The king salmon escapement for the Anvik River in 1975 was estimated to be 720. Anvik aerial survey counts were very low when compared to weir and float counts and were believed to have been made too early to give a peak king count.

Three-hundred and thirteen king salmon were enumerated at the Whitehorse fishway in 1975. This count was only 42% of the average yearly count of 652 for the sixteen year period beginning in 1958 and ending in 1974.

Attachment 2 . (Continued) Summary of special projects conducted in the Yukon Area by the Division of Commercial Fisheries, 1975.

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In 1975, the age composition of 1,654 Yukon system king salmon sampled from the catch and escapement was 23.2% were age 4<sub>2</sub>, 37.7% were age 5<sub>2</sub>, 28.2% were age 6<sub>2</sub> and 10.5% were age 7<sub>2</sub>. Less than 1% of kings examined were age 3<sub>2</sub>. Female kings were significantly more numerous than male kings in age class 6<sub>2</sub> and 7<sub>2</sub>. Female kings comprised 40.7% and males 59.3% of kings sampled, combined age classes.

A comparison was made of size composition for fishwheel king salmon catches in 1975 to size composition for all other king salmon measured in 1975. This comparison showed that fishwheels were highly selective for the smaller fish or that larger kings avoided fishwheel gear.

The 1975 expanded Anvik tower count of summer chums was 601,880, almost 300% of the 1974 count. The 1974 Anvik count was the previous recorded historical high escapement for any stream in the Yukon system.

The three primary producing fall chum salmon streams all had record escapements in 1975. Escapement enumeration of chum salmon by the Fishing Branch weir in the Yukon Territory was an all-time high of 353,000. The Sheenjek and Toklat Rivers had similar record levels of escapement during 1975 - 78,000 each. These three streams have accounted for 91% of all documented fall chum salmon escapement for the years 1974 and 1975.

For the Yukon River as a whole, 87.9% of 4,261 summer and fall chum salmon sampled from the catch and escapement during 1975 were composed of age class 4<sub>1</sub>'s. Age class 3<sub>1</sub> represented 6.9% of escapement and age class 5<sub>1</sub> represented 5.2% of escapement. Unfortunately, no good overall escapement data exists for the 1971 Yukon chum brood year which gave rise to the 1975 record return.

4. Commercial Salmon Catch Sampling

- a. Location: Various locations in the different subdistrict fisheries.
- b. Objectives: Obtain age, sex and size information for commercially caught fish.
- c. Results: Several hundred samples of king, chum and coho salmon were collected in 1975. In contrast to most other years, the 1975 Yukon River king salmon catch was composed of only 35 percent age 6<sub>2</sub> fish, normally the dominant age class. Chum salmon catch and escapement samples from both the summer and fall runs were composed of nearly 90 percent age 4<sub>1</sub> fish. Detailed age, sex and size composition data has been compiled and will be presented in a subsequent separate report.

## AREA SUMMARY, 1975

### Commercial Fishery

Table 2 presents commercial catches by subdistrict for the 1975 season. The total district catch included 62,912 kings, 2,301 cohos and 993,312 chums totaling 1,058,525 salmon.

Appendix Table 2 compares the district commercial catch during the 1960-1975 period. The 1975 harvest of chum salmon and all species combined was the greatest ever recorded. The 1975 harvests of king and coho salmon, in contrast, were the lowest recorded in recent years.

Table 1 is a list of 1975 buyer and processors, showing associated processing information for each.

During 1975 approximately \$1,794,900 was paid to fishermen for salmon deliveries. Wages earned by processing plant employees, tender boat operators, etc. added another estimated \$596,600 to the economy of the district.

### Subsistence Fishery

In 1975 a minimum catch of 17,563 kings and 276,636 other salmon, mostly chums, was documented in the district (not including Yukon Territory catches). Table 12 shows subsistence catches made during 1975 and Appendix Table 1 compares historical Yukon River drainage catches.

### Total Utilization

A minimum total of 1,333,970 salmon of all species was harvested in the Yukon River drainage by both Alaskan commercial and subsistence fishermen in 1975. This was the largest utilization recorded in recent years.

Table 1. Yukon district processors and associated data, 1975.

Commercial operator	Product	Average price paid to fishermen (estimated)	District
Yukon Delta Fish Marketing Co-op, Inc. Emmonak, Alaska	Frozen		Yukon
	Kings	.39 per lb.	Subdistrict 1
	Cohos	.23 per lb.	
	Chums	.21 per lb.	
	Salmon Roe		
John Amukon Scammon Bay, Alaska	Hard salt kings	8.00 per fish	Yukon Subdistrict 1
Bering Sea Fisheries, Inc. 4413 83rd Avenue S.E. Everett, Washington	Frozen salmon & canned (#1 talls)		Yukon
	Kings	.38 per lb.	Subdistrict 1
	Cohos	.26 per lb.	
	Chums	.21 per lb.	
	Salmon Roe		
Northern Commercial Co. 1110 Third Avenue Seattle, Washington	Mild cured kings		Yukon
	frozen salmon		Subdistrict 1
	Kings	.36 per lb.	
	Cohos	.22 per lb.	
	Chums	.20 per lb.	
	Salmon Roe		
Azachorak Corp. DBA The Village Cannery Mountain Village, Alaska	Hard salt, frozen & canned (# $\frac{1}{2}$ flats) salmon		Yukon
	Kings	.38 per lb.	Subdistricts 1, 2, & 3
	Cohos	.20 per lb.	
	Salmon Roe		
Akers & Co., Inc. Chulooawick, Alaska (via Emmonak, Alaska )	Mild cure		Yukon
	Kings	.36 per lb.	Subdistrict 1
	Chums	.20 per lb.	

Table 1 (continued) Yukon district processors and associated data, 1975.

Commercial operator	Product	Average price paid to fishermen (estimated)	District
Schenk Seafood Sales, Inc. P.O. Box 984 Bellingham, Washington	Frozen		Yukon
	Kings	.39 per lb.	Subdistrict 1
	Cohos	.25 per lb.	
	Chums	.22 per lb.	
Salmon Products, Inc. SRA Box 1381 Anchorage, Alaska	Frozen salmon		Yukon
	Chums	.20 per lb.	Subdistrict 2
	Kings	.40 per lb.	
	Salmon Roe		
Boreal Fisheries 19828 78th Avenue E. Spanaway, Washington	Fresh salmon		Yukon
	Kings	.35 per lb.	Subdistrict 2
	Chums	.18 per lb.	
	Salmon Roe		
Harry Turner Box 97 Holy Cross, Alaska	Smoked salmon strips		Yukon
	Kings	<u>1/</u>	Subdistrict 3
Johnsons Store Holy Cross, Alaska	Smoked salmon		Yukon
	Kings	<u>1/</u>	Subdistrict 3
Patson Enterprises Box 445 Bethel, Alaska	Fresh salmon		Yukon
	Chums	.25 per lb.	Subdistricts 3 & 4
	Salmon Roe		
Clark Fishing Enterprises Box 517 Aniak, Alaska	Fresh salmon		Yukon
	Kings	.45 per lb.	Subdistrict 3
	Salmon Roe		

Table 1. (continued) Yukon district processors and associated data, 1975.

Commercial operator	Product	Average price paid to fishermen (estimated)	District
Huntington Ventures General Delivery Galena, Alaska	Fresh salmon Chums Salmon Roe	.14 per lb. <u>1/</u>	Yukon Subdistrict 4
Carl Huntington Koyukuk, Alaska	Fresh salmon Chums	.16 per lb.	Yukon Subdistrict 4
P. Merry Guide Service 1205 Coppet Fairbanks, Alaska	Fresh salmon Kings Chum Salmon Roe Whitefish	.85 per lb. .21 per lb. .60 per lb. .25 per lb.	Yukon Subdistrict 5
Interior Fisheries SRA Box 168 Anchorage, Alaska	Fresh salmon Kings Chums Salmon Roe	.75 per lb. .24 per lb. <u>1/</u>	Yukon Subdistrict 5 & 6
Yutan Fisheries Box 15 Tanana, Alaska	Fresh salmon Kings Chums	.75 per lb. .16 per lb.	Yukon Subdistrict 5
Terry Johnson Fish Co. 2107 Broadmoor Fairbanks, Alaska	Fresh salmon Kings Chums Salmon Roe	1.05 per lb. .35 per lb. 1.50 per lb.	Yukon Subdistrict 3 & 6
Nulato Fish Co. Clear, Alaska	Fresh salmon Chums	.20 per lb.	Yukon Subdistrict 4
YK Fisheries Box 28 Galena, Alaska	Fresh salmon Chums	.13 per lb.	Yukon Subdistrict 4

Table 1. (continued) Yukon district processors and associated data, 1975.

Commercial operator	Product	Average price paid to fishermen (estimated)	District
Brian Thompson Box 488 Fairbanks, Alaska	Fresh salmon Kings	.70 per lb.	Yukon Subdistrict 5
Ruby Trading Co. Ruby, Alaska	Fresh salmon Chums Salmon Roe	.15 per lb. 1.00 per lb.	Yukon Subdistrict 4
Wayne Taylor Box 292 Nenana, Alaska	Fresh salmon Kings Salmon Roe	1.00 per lb. <u>1/</u>	Yukon Subdistrict 5 & 6
Joseph Schurff 1260 Aurora Drive Fairbanks, Alaska	Fresh salmon Kings Chums	.90 per lb. .43 per lb.	Yukon Subdistrict 6
Clifford Beaver Box 666 Delta Junction, Alaska	Fresh salmon Kings Chums	.50 per lb. .40 per lb.	Yukon Subdistrict 6
Henry Deacon Grayling, Alaska	Salmon Roe	<u>1/</u>	Yukon Subdistrict 4
Nenana Reffer General Delivery Nenana, Alaska	Fresh salmon Chums Salmon Roe	<u>1/</u> <u>1/</u>	Yukon Subdistrict 6

## 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 Canal Point light near Cape Stephens southward to Cape Romanzof (Figure 2). The Yukon River is the largest river in Alaska, draining approximately 35 percent of the state, and is the fifth largest in North America. The river 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 drainage, 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 and redefined in 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 subdistricts are further subdivided into statistical areas for management purposes. Figures 3 and 4 present the lower three subdistrict statistical area charts. Figures 5, 6, and 7 present the upper three subdistrict statistical area charts.

### Commercial Fishery History and Description

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 the 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 Andreefsky (now St. Marys). Relatively large catches of king, coho and chum salmon were made during the first four years of this fishery (Appendix Table 1). 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 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. King salmon season in these two subdistricts opens June 1 and is closed by emergency order during late June or early July depending on 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 3½ 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 the commercial salmon fishing season opens June 1 and is allowed four days a week until the 3,000 king salmon quota is taken.

Excluding the 1920's, 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. 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. In order to allow greater opportunity to use small mesh nets which are selective toward the more abundant chums, all mesh size restrictions were lifted during the king salmon season (from June 1 through early July) beginning with the 1973 season. However, the majority of fishermen continue to fish the larger mesh king salmon nets during the king salmon season.

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 late June was initially for the purpose of insuring an adequate supply of summer chum salmon for upriver subsistence fishermen. This closure also provides

protection for the late stages of the king salmon run. Subsistence fishing for summer chums has declined in recent years and the Department has liberalized regulations to provide for an earlier reopening in July to harvest the surplus. Concurrent with an early reopening of the season, a regulation specifying gill nets of only 6 inch mesh or less may be fished was promulgated in 1973. Use of small mesh gill nets in early July allowed a greater harvest of summer chums and also minimized the king salmon catch.

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 will maintain a 250,000 optimum fall chum salmon harvest goal until future returns from current levels of harvest can be evaluated. Beginning with the 1974 season the Alaska Board of Fish and Game established quotas of 200,000 chum salmon for the lower three sub-districts (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.

Prior to 1974, the commercial fishery in the upper Yukon area (above the mouth of the Koyukuk River), by regulation, 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 has traditionally 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 major regulation changes prior to the 1974 fishing season. These regulations provided for a moderate increase in upriver catches, reduced gear conflicts and at the same time provided 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 sub-district 334-60.
- (3) Salmon catch quotas were established for 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.

In the Yukon district set gill nets, drift nets and fishwheels are legal forms of commercial fishing gear. A fisherman can operate, or assist in operating 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. Fishwheels are fished exclusively in the upper three subdistricts. A minimum distance requirement of 300 feet between units of gear is in effect for subdistrict 334-10. A 200 foot minimum distance between units of gear is in effect in all other subdistricts except subdistrict 334-30 where no minimum distance requirement exists. Gear and vessels registered to fish in subdistricts 334-40, 334-50 and 334-60 may not transfer to another subdistrict. Gear and vessels registered to fish in subdistricts 334-10, 334-20 and 334-30 may not transfer to the upper three subdistricts.

Commercial salmon fishing is prohibited in specified areas along the coast and in all tributaries of the main Yukon and Tanana Rivers. The Tanana River upstream of the mouth of the Chena River is closed to commercial salmon fishing. 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; the upper portion of subdistrict 334-40 (Prospect Point to Illinois Creek); the lower portion of subdistrict 334-50 (Illinois Creek to Long Point); and subdistrict 334-60. Finally, salmon may not be taken for subsistence purposes 24 hours prior to and after the opening and closing of the commercial salmon fishing season in each subdistrict.

Appendix Table 3 presents commercial catches for each subdistrict since 1960.

#### Commercial Fishery, 1975

In 1975 there were 62,912 kings; 2,301 cohos; and 993,312 chums, totaling 1,058,525 salmon taken commercially. This was the largest harvest recorded for chum salmon and for all species combined. The total 1975 salmon catch exceeded the previous record total catch of 991,095 in 1974 by 67,430 fish (Appendix Table 1). Tables 2, 3, and 4 present 1975 commercial salmon catches by fishing season and statistical areas, respectively.

A total of 1,190 commercial, 988 vessel, 840 set gill net and 311 drift gill net licenses was issued for the area in 1975. License registration for all types of gear, except drift gill nets, was at record levels in 1975

(Appendix Table 2). The greatest increase in license registration occurred in the upper Yukon area (subdistricts 334-40, 334-50 and 334-60) where in 1975 a total of 343 commercial, 244 fishing vessel, and 140 set net licenses were issued. This represents an increase of 124%, 122% and 110% respectively over the previous year's total and is due to the rapid expansion of this fishery. Also, a total of 147 fishermen indicated intent to operate fishwheels in the upper Yukon area during 1975, an increase of 99% compared to 1974. 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 5 shows the residency of all persons issued fishing licenses for 1975. 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. In 1975, production of canned king salmon was at a comparatively low level. Only two canneries operated in the lower river. However, a total of 14,226 cases of canned chum salmon was packed in the lower Yukon during 1975 which was exceeded only by the record pack of 21,074 cans in 1974. The majority of the chum and coho salmon were frozen by four floating freezer vessels. Production of salmon roe totaled 201,404 pounds in 1975 including 73,795 pounds of salmon roe purchased from subsistence fishermen, primarily in the upper Yukon area. Commercial salmon production data is presented in Appendix Table 8. All buyers and processors operating in the Yukon district during 1975 are listed in Table 1.

Yukon district commercial fishermen received about \$1,793,900 for their catches in 1975. In addition, a minimum estimate of \$596,600 in wages was 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 1975 pack was estimated at \$4,937,700 (Appendix Table 9).

Mean fish prices and mean salmon weights from 1960 to 1975 are presented in Appendix Tables 10 and 11, respectively.

King Salmon: Under the new regulations established by the Department in 1961, the annual king salmon harvest for the entire district has averaged 101,377 for the period 1961-1974. This average compared to 63,023 for the previous period 1952-1960 represents an increase of 61 percent (Appendix Table 1). The 1975 district catch of 62,912 king salmon was the lowest since statehood and is approximately 38,467 less fish than the previous 14-year average. The greatest catch ever made in the district was 129,706 king salmon in 1967.

The 1975 catch data presented in this report does not include king and chum salmon taken commercially by Canadian fishermen in Yukon Territory (Appendix Table 1).

King salmon catches (and incidental chum salmon catches) made in each subdistrict and statistical area during the 1975 king salmon season are presented in Table 3. Tables 6 through 11 present daily catch data for each subdistrict.

Catch per boat hour data (king salmon season) for the lower Yukon subdistricts is presented in Appendix Table 9.

Based on limited comparative catch and escapement information, it appeared that the 1975 Yukon River king salmon run was considerably below average in abundance. At this time, it is impossible to evaluate king salmon escapements due primarily to the vast size of the Yukon River drainage and to turbid water conditions in the main river. This facet of evaluation is complicated further by the character of the commercial fishery which is harvesting mixed stocks, located up to 2,000 miles in distance and to two and one-half months in time from spawning streams. Presently, management of the lower Yukon River king salmon commercial fishery is based on comparative commercial and test fishery catch data. Due to the changing nature of the commercial fishery and annual differences in timing and pattern of entry into the river's mouth, analysis of catch statistics is of limited value. For example, the 1975 Yukon River king salmon was late, even though the river was clear of ice by early June, and the majority of the fish entered the south mouth. Also, many fishermen use small mesh gill nets, (5 1/2-6 inch) during the king salmon season in order to harvest the larger run of summer chums. As a result, catch data in recent years may not be comparable to earlier years when 8-8 1/2 inch mesh gill nets were primarily used.

Aerial survey escapement estimates conducted after the salmon run passes through the downstream fishery are of limited usefulness for in-season assessment of run magnitude. Comparable index stream estimates only provide post-season information which may eventually be of value in developing run forecasts. In 1975 aerial surveys indicated generally that king salmon escapements were adequate at best. Restrictions placed on the commercial fishery in the lower two subdistricts aided escapements. Similarly, upriver subsistence catches, although below average, benefited from the curtailment of the downriver commercial fishery.

"Breakup" of lower river ice in 1975 was considered "normal" as the river was clear of ice by June 1 when the first king salmon was taken at the mouth of Anuk River (mile 63). However, the bulk of the king salmon run was late, attributed to cold Bering Sea water temperatures. Pack ice, slow to disperse, was observed off the mouth of the Yukon River during mid June. Peak commercial king salmon catches at the mouth occurred during June 23-27. King salmon were first reported upriver, as follows: Pitkas Point (June 10), Paimiut (June 13), Ruby (June 25), Kallands (July 10), Tanana (July 11), Eagle (July 15), Whitehorse (August 9); in the Tanana River drainage: Nenana (July 10) and Chena River (July 11).

Subdistrict 334-10 king salmon catches by statistical area for the years 1965-1975 are presented in Appendix Table 5. In 1975, king salmon catches were primarily taken in the south mouth and Black River areas and were similar to the distribution of catches in 1973. In the middle and north mouth, a total of 1,406 and 506 kings were taken, respectively. These catches represented only 5 percent of the subdistrict 334-10 catch in 1975.

Indicated poor strength of the king salmon run, resulted in reduced fishing time in subdistricts 334-10 and 334-20. Fishing time was reduced to two-24 hour periods a week by emergency order beginning June 26. The king salmon season was closed on June 30 in subdistrict 334-20. In subdistrict 334-10, use of large mesh gill nets was prohibited after the fishing period ending July 1. On July 3 fishing resumed in both subdistricts. Gill nets of 6 inch or smaller mesh were used which reduced the king catch, but allowed the taking of the more abundant summer chums.

In subdistrict 334-30 the 3,000 king salmon quota was exceeded and the fishery was closed by emergency order effective 6 p.m. July 2.

King salmon quotas in the three upriver subdistricts were not attained in 1975. In subdistrict 334-40, a total of 389 kings were reported taken for commercial purposes. Probable reasons for this relatively low catch are two-fold. First, the market for these upriver king salmon was weak due to the variable condition of these more sexually mature fish. These are generally watermarked and flesh quality does not compare favorably with king salmon harvested near the river's mouth. Secondly, commercial fishermen are inclined to retain kings for domestic consumption and/or not report sales, so the season will remain open enabling them to continue fishing for the more abundant summer run of chums. Tables 9-11 present weekly catch data for the upriver subdistricts.

In subdistrict 334-50 (3,000 king salmon quota) a total of 2,865 kings were reported taken commercially. Traditionally, the lower part of this subdistrict has been the center of a small commercial king salmon fishery and has remained so with the recent expansion of the upriver fishery. Unlike subdistrict 334-40 and 334-60, fishermen in this area rely heavily on set gill nets for the capture of kings and fishwheels for chum salmon. It is likely that the king salmon quota was exceeded in this area. As in subdistrict 334-40, some fishermen are not inclined to report all sales of kings and of smoked king salmon strips (a speciality product of this area) in order to keep the season open.

In the Tanana River subdistrict (334-60), 460 kings of the 1,000 fish quota was harvested. Fishermen at various locations on the Tanana were experiencing good catches, however, the major processor in this area was not operating. This combined with extremely high water conditions during the last week of July and early August resulted in a catch within quota limits.

In general, king salmon catches were good in the upriver districts, in part due to severe restrictions of fishing time in subdistricts 334-10 and 334-20. Local market and fishing conditions, however, tended to keep the commercial harvest at relatively low levels.

Chum and Coho Salmon: Commercial catch data by fishing period for these species is presented in Tables 6 through 11. The 1975 chum harvest of 993,312 was the largest in history; 11 percent greater than the previous record catch of 877,368 in 1974. The 1975 Yukon district coho salmon catch totaled 2,301 fish compared to the 14-year average of 13,560 (Appendix Table 3).

The record chum catch was a result of: an exceptionally large run of summer chums; increased fishing effort attributed to high prices paid to the fishermen; and 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 availability of processing and tender facilities. The increased harvest in recent years, also reflects the gradual relaxation of fishery restrictions due to decline in dependence upon subsistence fishing for chum salmon.

In 1975 the total Yukon River commercial chum salmon catch was composed of 728,156 summer chums and 265,156 fall chums. The majority of summer chums were taken in the lower two subdistricts. Comparative summer chum salmon catch data for subdistrict 334-10 and 334-20 are presented in Appendix Table 6.

Summer chum salmon were first taken on June 13 by commercial fishing nets in the south mouth area. Peak commercial catches in subdistrict 334-10 occurred during the period July 7-9. Summer chums were very abundant throughout late June and early July.

A record period catch of 113,484 summer chums was taken in subdistrict 334-10 during July 7-9. A record period catch of 36,396 summer chums was taken in subdistrict 334-20 during July 3-4. Some fishermen made deliveries of over 1,000 chums during these periods.

In the three upper Yukon subdistricts, a total of 252,397 chums were harvested commercially in 1975. Of this total, 192,956 were summer chums and 59,441 were fall chums.

As in 1974, the majority of the summer chum catch was made in the Nulato-Ruby area of subdistrict 334-40. In the Yukon district, this represented the second highest subdistrict catch which resulted in the second highest average income per fisherman.

The first reported chum salmon in subdistrict 334-40 was taken on June 16. Peak catches occurred during the period July 6 to July 11.

It should be noted that summer chums spawn primarily in the lower 500 miles of the Yukon River drainage. The catch to some extent reflects this.

In subdistricts 334-50 and 334-60, summer chums are primarily used for domestic purposes (dog food) and secondarily for commercial channels. This appears to be a function of flesh quality and market demand. In the upper Yukon subdistrict (334-50) 13,137 summer chums were reported sold in 1975. The majority of these fish were canned elsewhere, with the remainder sold fresh in Fairbanks or sold dried for dog food. The peak of this run appears to have arrived in lower Ramparts Canyon during the period August 11 to August 15. Peak commercial deliveries were made during that week.

The 1975 subdistrict 334-60 (Tanana River) harvest of summer chum salmon totaled 14,650. This run appeared to be strong based on escapements into the Chena and Salcha Rivers. Also both commercial and subsistence catches were reflective of the large run. High water and large amounts of driftwood during late July and early August probably diminished this harvest somewhat.

The subdistricts 334-10 and 334-20 second or fall fishing season commenced July 3 (only six-inch maximum mesh size gill nets may be fished). 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 and at the same time minimized the incidental catch of kings. Only 3,855 kings were taken during the early portion of the fall season, July 3-12, in subdistricts 334-10 and 334-20; however, the chum catch during this period totaled 303,258 fish.

The first fall chum salmon were taken in the lower Yukon (subdistrict 334-10) during the period July 17-19, when it was estimated that seven percent of the chum catch was composed of the fall run. The next fishing period, July 21-23, was estimated to be composed of 45% summer chums. Thereafter, the chum salmon catch was composed of almost exclusively fall chums. Because of the large numbers of summer chums present in mid-July, the 200,000 fall chum quota effective date was changed to after July 19 in the lower three subdistricts. This action allowed the fall fishing season to remain open longer and prevented approximately 50,000 summer chums from being counted against the 200,000 quota.

A total of 200,125 fall chum salmon were harvested in the lower Yukon in 1975 compared to 215,590 fall chum taken in 1974. The 1975 Yukon River fall chum salmon run was apparently above average in magnitude, a conclusion based on comparative catch per unit effort data (Appendix Table 7) and observed escapements (Appendix Table 15). Peak fall chum catches in sub-

district 334-10 occurred during July 31 - August 2 when 31,055 fish were taken.

The coho salmon catch in the lower Yukon totaled 2,243 fish. There are indications that the coho run was of relatively large magnitude based on the available commercial catch data and 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 July 28 and 5,590 fall chums were taken, a record chum salmon catch for that subdistrict.

The lower Yukon area (subdistricts 334-10, 334-20 and 334-30) commercial fishery was closed, effective 6:00 p.m. August 16, after the 200,000 chum salmon quota was taken.

Quotas imposed on the harvest of fall chum and coho salmon in subdistricts 334-40, 334-50 and 334-60 of 10,000, 25,000 and 15,000 respectively, do not become effective until after August 15. This was the approximate time of their arrival in the upper river area. As at the mouth of the river, these fish appear sporadically in apparently closely integrated schools, possibly representing distinct spawning populations.

In subdistrict 334-40, the fall season quota was met and closed by emergency order on August 21. This closure occurred three and one-half fishing days after the quota had been in effect. The final fall season catch was 13,552. Approximately 84 percent of these fish were taken by fishermen in the Ruby and Galena area (statistical area 334-42) as processors in the lower portion of the subdistricts had curtailed their operation by this time.

In subdistrict 334-50, a commercial catch of 27,207 fall chums was made. Fishermen in the vicinity of Tanana, especially those fishing on the north bank of the river, made exceptionally large catches of fall chums for a period of approximately 10 days. It is probable that the September 8 emergency order closure of this fishery would have occurred several days earlier had local buyers been capable of handling and reporting the volume of fish being harvested.

Peak catches occurred during the week of August 24-29 with one fishwheel operator taking in excess of 2,000 chums in a 24 hour period.

As in 1974, the fall chum run on the Tanana River (subdistrict 334-60) occurred somewhat later than at the village of Tanana on the Yukon River. Peak catches occurred in the Manley Hot Springs vicinity from September 1 to September 6. Owing, in large measure, to the magnitude of the 1975 Tanana River fall chum run, a relative few commercial fishermen at Manley captured approximately 71% of the fall chum and coho salmon catch. The season was closed by emergency order on September 9. As can be seen in Figure 2, Manley

is located approximately 100 miles downstream from Nenana and 45 miles from Fairbanks. Fishermen in this area essentially closed the fall season before significant numbers of salmon reached the upper portions of the subdistrict.

Coho salmon, due to their late arrival in the upper portion of the Yukon River drainage are generally of minor importance. In 1975, only 58 coho were reported taken commercially in subdistricts 334-50 and 334-60.

#### Enforcement, 1975

Observed commercial fishery violations have increased over previous years. The most common violation in the lower Yukon area was fishing during the closed period. Also, several nets were observed in the closed water area west of the Chris Point marker.

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. Compliance was excellent. 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 subdistricts, observed violations of commercial and subsistence fishing regulations were few. A total of eight citations and ten warnings were issued by Fish and Wildlife Protection Officers; mainly for commercial fishing without licenses and for operating gear during the weekly closure of the commercial fishing season. One net was confiscated for the latter offense, however, it's owner has not been identified for prosecution. Other violations which occurred during the 1975 season included: failure of processors to submit timely reports of commercial harvest and failure of some fishermen to report sales of salmon in an effort to circumvent the commercial quota restrictions.

Based on post-season reports by fishermen and other village residents, it is thought that violations of these and other regulations occurred with more frequency and regularity than had been suspected.

#### Subsistence Fishery, 1975

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

Since 1961, the Department has annually surveyed (personal interviews, catch calendars and/or catch questionnaires) 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 (Whitehorse office) since 1962. In recent years, the Department has conducted surveys of Koyukuk River villages.

In 1975, an estimated 17,309 king and 274,236 other species of salmon, mostly chums, were taken in the Yukon River drainage (including the Yukon Territory catches). In addition, 254 kings and 2,400 other species (not included in the Yukon River drainage totals) were reported taken by 10 fishing families at Scammon Bay, a coastal village located several miles south of the Yukon River mouth. Table 12 presents 1975 catch data for each Yukon River community and Appendix Table 12 shows comparative Yukon River catch data for 1961-1975. Appendix Table 1 shows Yukon River drainage historical subsistence catch data for 1918-1975.

Comparing catches from villages surveyed each year since 1961 ("Equivalent catches"), the 1975 Yukon River king salmon harvest was smaller than the previous 14-year average of 17,227 fish (Appendix Table 12).

For the tenth consecutive season, a small catch of "other salmon" (mostly chums) was taken in 1975. However, the 1975 catch, the second largest since 1967, was attributed to the large chum salmon run. Equivalent catches averaged 400,874 during 1961-1965, compared to an average of 199,138 during 1966-1975, a decrease of 50 percent.

Permits are required for subsistence fishing in three areas: the upper Tanana River drainage upstream from the mouth of the Wood River; in the upper Yukon River drainage from the mouth of Hess Creek to the mouth of Dall River; and that portion of the Middle Fork of the Koyukuk River drainage between Dry Gulch and Hammond River.

In the upper Tanana River drainage, subsistence fishermen are limited to a catch of 5 kings, 75 chums and 75 coho salmon. In order to provide for king salmon escapements, subsistence fishing was prohibited until July 15. A total of 64 permits was issued for salmon fishing. Reported catches totaled 32 king, 136 coho and 1,535 chum salmon.

In addition, 26 permits were issued for the taking of salmon carcasses in the vicinity of Big Delta. A total of 2,573 chum salmon carcasses was reported taken. Seven permits were issued for taking whitefish and miscellaneous species and fishermen reported taking 1,257 whitefish and 153 suckers.

The upper Yukon River drainage between the mouths of Hess Creek and Dall River was restricted to subsistence fishing by permit only; 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 opening 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. A total of 19 permits were issued. Catch reports indicated a total of 727 kings, 778 chums and 70 cohos taken in 1975.

No subsistence permits were issued for the upper portion of the Middle Fork of the Koyukuk River drainage, an area also made accessible by the pipeline haul road.

From all indications, annual Yukon River subsistence salmon harvest, for some years in the early 1900's and even as late as 1940, exceeded one million fish (Appendix Table 1). Recent declines in subsistence catches are 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 if fished properly. Each wheel is capable of taking from 2,000 to 5,000 chum salmon annually. Number of fishwheels recorded during the 1970 survey was an all-time low of 56, a decrease of 113 since 1961. In 1961 each fishing family kept an average of 7.7 sled dogs, while in 1975 this figure was down to 4.4 sled dogs. 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 1975 the average number of snowmachines per family increased to 1.2 (Appendix Table 12).

#### Escapement, 1975

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 prevented surveys from being flown during some years or have resulted in minimum counts. Table 13 presents aerial survey data for all streams surveyed in 1975.

Appendix Table 13 presents comparative king salmon escapement data for selected tributaries during the 1959-1975 period. In 1975, king salmon escapements into the major spawning areas ranged from below average to average. Escapements were aided by restrictions placed on the commercial fishery at the mouth. A total of 1,414 kings were estimated by aerial surveys in the Andreafsky River system. In the Anvik River, a total of 720 kings were enumerated. King salmon escapements into various tributary streams of the Tanana River were considered adequate. In the Chena River 316 kings were observed and in the Salcha River a total of 1,055 kings were enumerated.

In the Yukon Territory, surveys indicated adequate to below average king salmon escapement levels. There are indications based on reports from commercial fishermen at Dawson, that catches were significantly larger than recent years indicating that escapements were probably "fair". The Whitehorse Dam Fishway count of 313 kings was the third lowest ever recorded. Due to possible problems associated with passage of adults through the fishway and mortality of

smolts through 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 of the quality (sex ratio and age composition) of upper Yukon River drainage king salmon escapements were conducted. The Salcha River king salmon sex ratio was 3.5:1 in favor of males. At Whitehorse the ratio was 1.2:1 in favor of males. Similar to catch samples, escapement samples in selected tributaries indicate a low percentage of age 6<sub>2</sub> fish, normally the dominant age class.

Appendix Tables 14 and 15 present comparative summer and fall chum salmon escapements for selected streams. Summer chum escapements were judged excellent throughout the drainage based on selected surveys. In 1975, a total of 1,621,497 summer chum were documented in selected tributaries throughout the drainage. A minimum of 845,500 chums were documented in the Anvik River system (aerial survey) and total escapement probably exceeded 1,000,000 fish for the entire river. In the Andreafsky River (East and West Fork), aerial surveys indicated excellent escapements; in excess of 500,000 chums may have spawned in this system.

During the past four 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 1975, large concentrations of spawning fall chum were documented for the Toklat and Sheenjek Rivers. Surveys in portions of the upper Tanana River drainage were restricted by early freeze-up. In the Yukon Territory, a total of 353,282 fall chums was enumerated in the Fishing Branch River, a tributary of the Porcupine River, in 1975 by Environment Canada - Fisheries Service personnel.

Tanana River drainage coho escapements in 1975 appeared excellent. Coho spawning areas in the Yukon River drainage from the mouth of the Tanana River were documented for the first time. A total of 467 coho salmon were observed in the Anvik River system.

#### OUTLOOK FOR 1976

##### King Salmon

It is difficult to predict the relative magnitude of the 1976 Yukon River king salmon run. There are indications, based on commercial catch and escapement data, that the 1970 brood year run was below average in magnitude. The 1970 commercial catch (79,301 fish) was among the lowest ever recorded since statehood. In order to provide for increased escapements in view of the indicated below average run size, the commercial fishing periods were reduced to two - 24 hour periods a week during late June, 1970. The escapements observed in 1970 were above average in abundance. The majority of the king salmon expected to return in 1976 will probably be composed of

six-year-old fish originating from the 1970 brood year. Accordingly, it may be assumed that the return of six-year-olds (normally the dominant age class) in 1975 (based on brood year escapement levels) will be average and possibly above average in abundance unless the offspring of the 1970 brood year experienced exceptionally poor survival conditions.

The expansion of the Japanese mothership fisheries in the high seas during recent years may possibly affect the numbers of king salmon returning to western Alaska. Most of the high seas king salmon harvest is 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 1974 the Japanese mothership fishing fleet harvested an estimated 234,000 kings in the Bering Sea. The 1974 high seas catch was one of the largest in recent years. The large 1974 catch and high catch per unit effort data may indicate that numbers of four-year-old kings were abundant. Therefore the 1976 return of six-year-olds to western Alaska rivers may be average to above average in magnitude.

If a poor run develops, fishing time restrictions may be required during the 1976 season in order to obtain adequate spawning escapements. Until future returns can be studied, the commercial harvest goal for Yukon River king salmon should not exceed 70 - 80 thousand fish unless an exceptionally large run is indicated. The commercial harvest goal has been revised downward from the previously established goal of 90 - 105,000 kings in view of recent below average size runs and necessity to provide for adequate escapements.

#### Chum and Coho Salmon.

There is very little information on which to estimate relative magnitude of the 1976 run of Yukon River summer chum, fall chum and coho salmon. Normally, Yukon River summer and fall chum runs are primarily composed of four-year-old fish. The return of four-year-olds in 1976 will be dependent on the strength of the 1972 brood year run and the survival of the resulting progeny (eggs, alevins and fry). Based on available commercial and test fishing catch and escapement data, 1972 summer and fall chum runs were considered average in magnitude. Winter and spring temperatures of 1972-73 were not severe and consequently were probably favorable for survival of eggs and alevins.

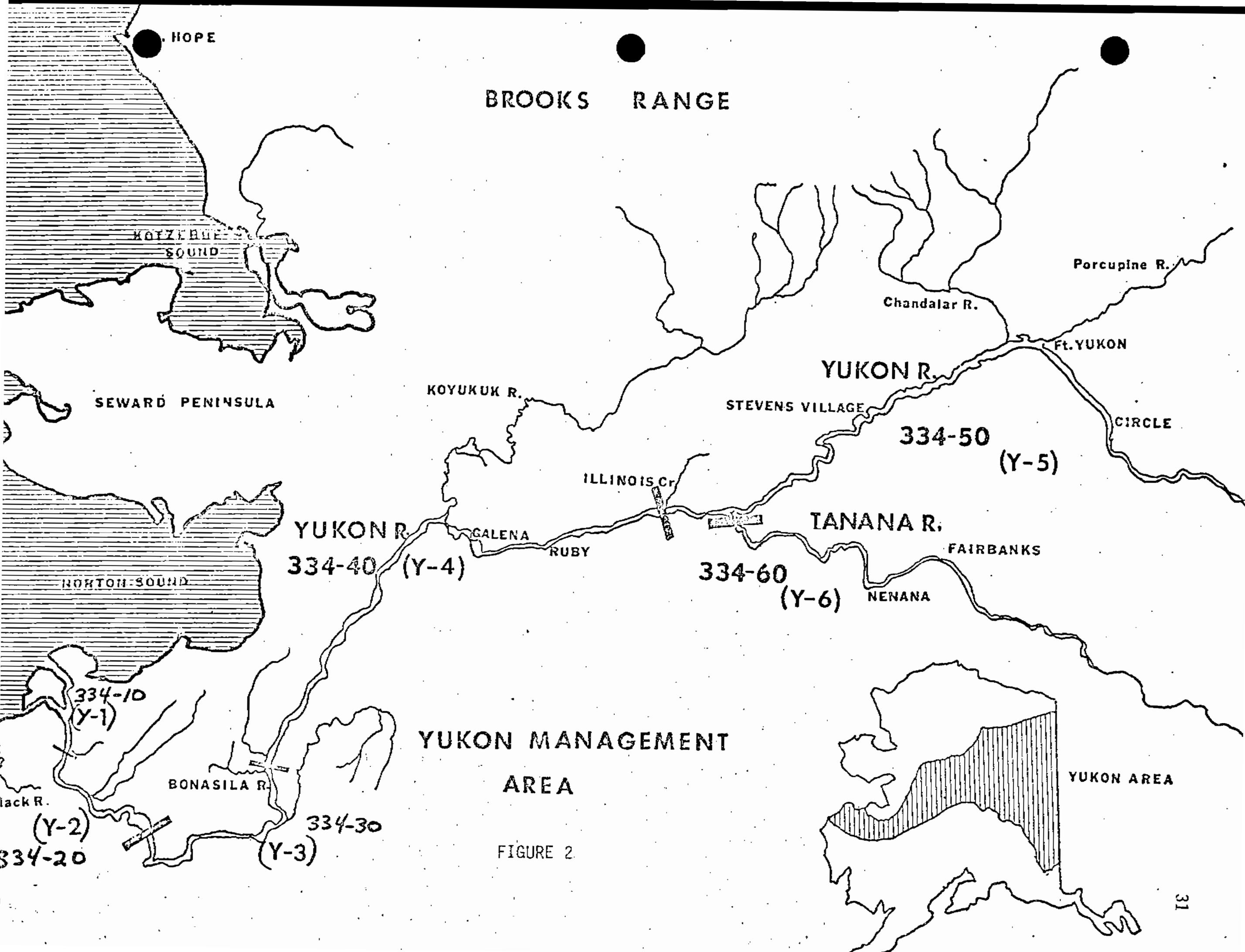
The 1976 Yukon River summer chum salmon run is expected to be primarily composed of five and four-year-old fish. The return of five-year-old fish from the 1971 brood year is expected to substantially contribute to the 1976 run. In 1975, the exceptionally large summer chum run was composed of in excess of 95% four-year-old fish. Usually, when there are large numbers and a high proportion of four-year-old chums in the previous year, there is a "carryover" of five-year-old fish the following year. If mortalities were not severe during winter-spring of 1972-1973, the return of four-year-olds in 1976 may be expected to be average in abundance. It is expected that the magnitude of the 1976 summer chum run will be average and possibly above average in abundance depending on the return of five-year-olds from the 1971 brood year.

Fall chums spawn in spring-fed ground water source areas which are less susceptible to freezing than 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 returns of three and four-year-old fish was at a very high level in 1974 and 1975, respectively. In 1975, the proportion of four-year-old fall chums from the lower Yukon River commercial fishery samples exceeded 95 percent. Also, upriver catch (Tanana River and Dawson) and escapement samples (Delta River and Sheenjek River) were composed of very large numbers of four-year-old fish in 1975. If there is a large "carryover" of five-year-olds, then the 1976 Yukon River fall chum salmon run may be above average in magnitude.

In summary, the 1976 Yukon River chum salmon run (both summer and fall) is expected to be average in magnitude. A larger run may develop if carry-over of five-year-olds from the 1971 brood year contribute substantially to the 1976 return.

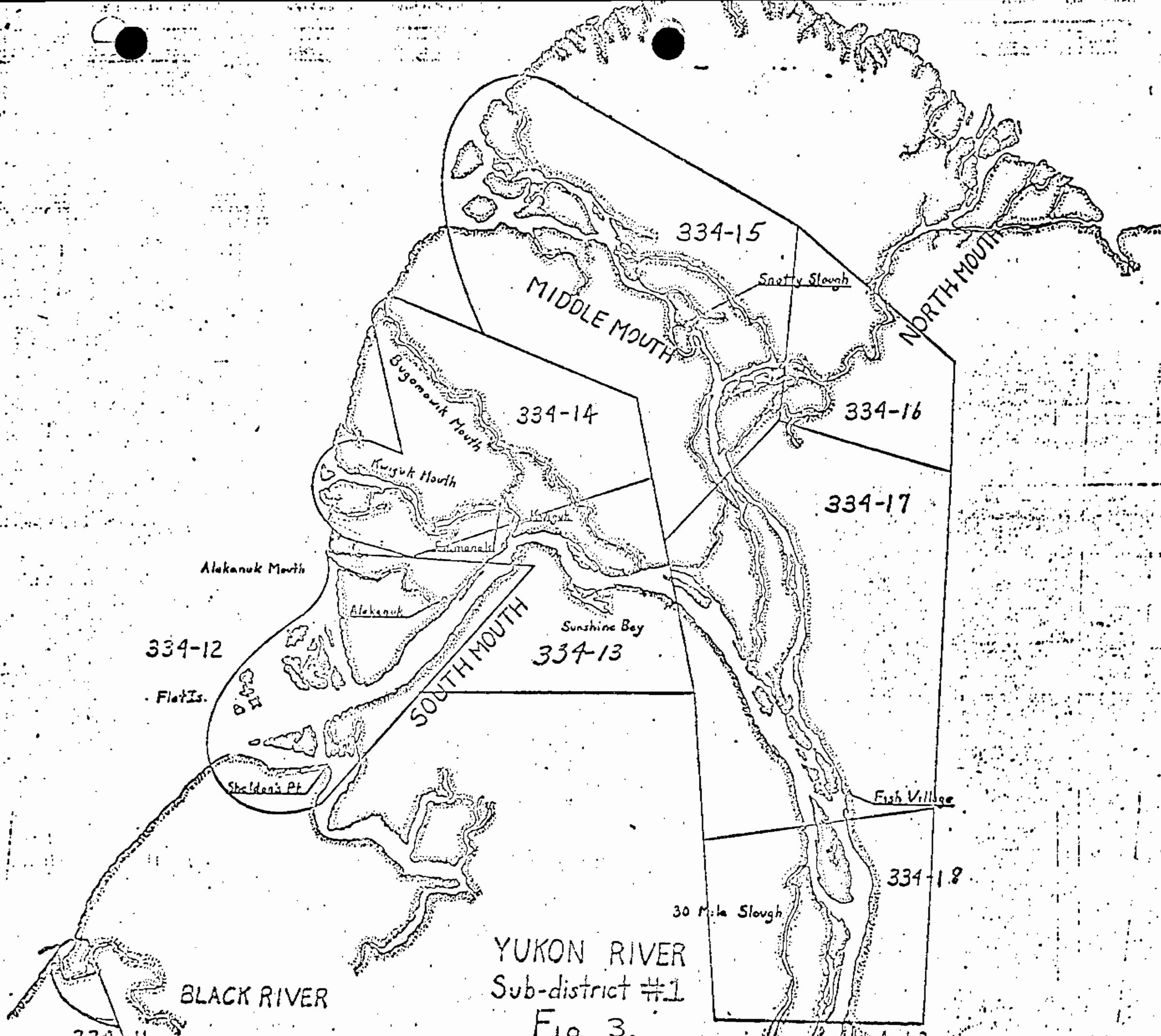
The management staff has established harvest goals of 500,000 summer and 250,000 fall chum salmon for the Yukon River commercial fisheries. An additional catch of summer chums in excess of the 500,000 harvest can be made only if the run is larger than average as in 1974 and 1975. The fall chum salmon run is presently being harvested at the maximum rate and an increased catch is not warranted until future runs can be evaluated. If chum salmon runs in 1976 are below average in magnitude, fishing time restrictions may be necessary to insure adequate escapements.

The coho salmon catch is expected to total 5,000 - 15,000 fish, depending on amount of fishing effort exerted on the fall chum run and the duration of the fishing season.



**YUKON MANAGEMENT  
AREA**

FIGURE 2



YUKON RIVER  
 Sub-district #1  
 Fig 3.

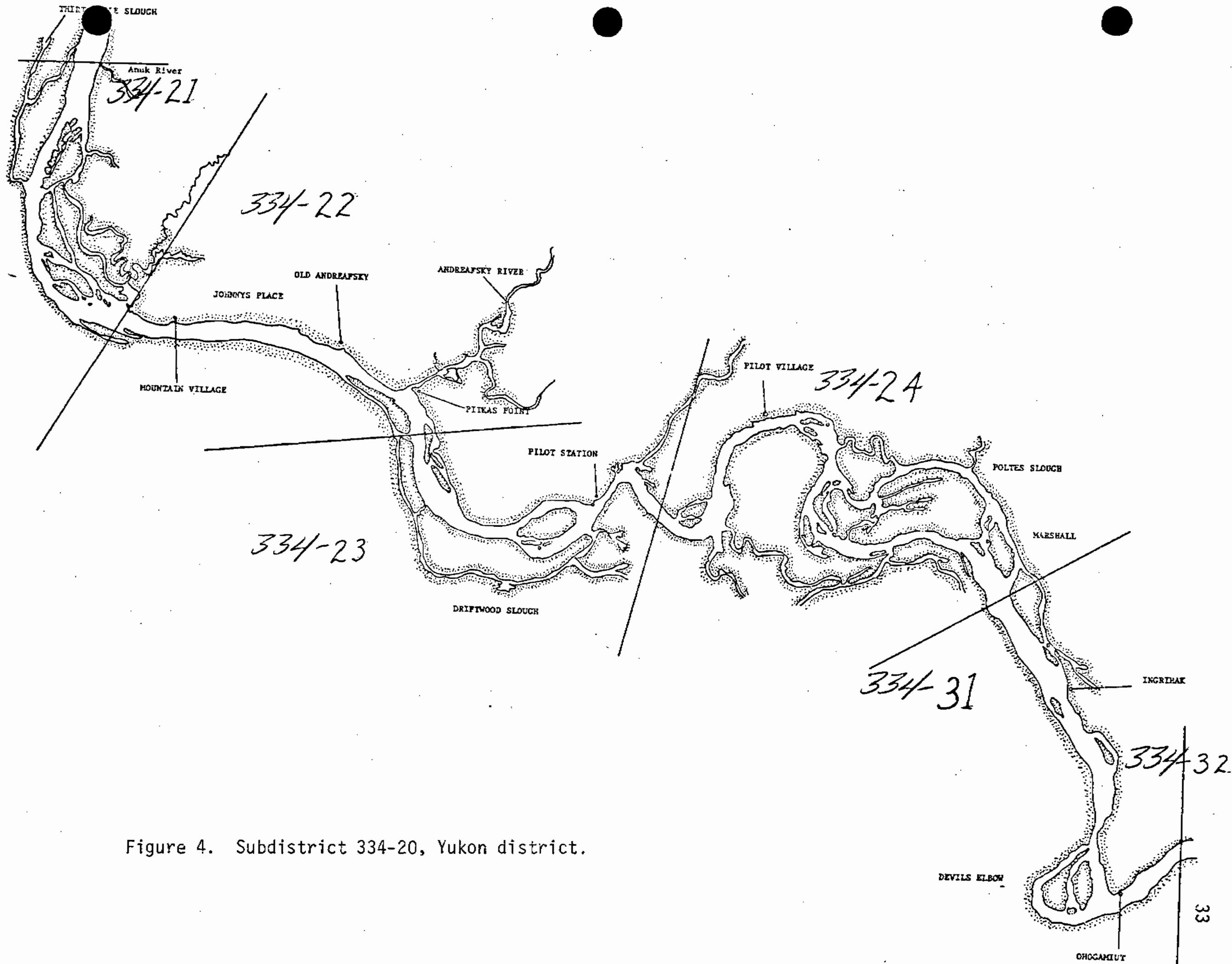


Figure 4. Subdistrict 334-20, Yukon district.

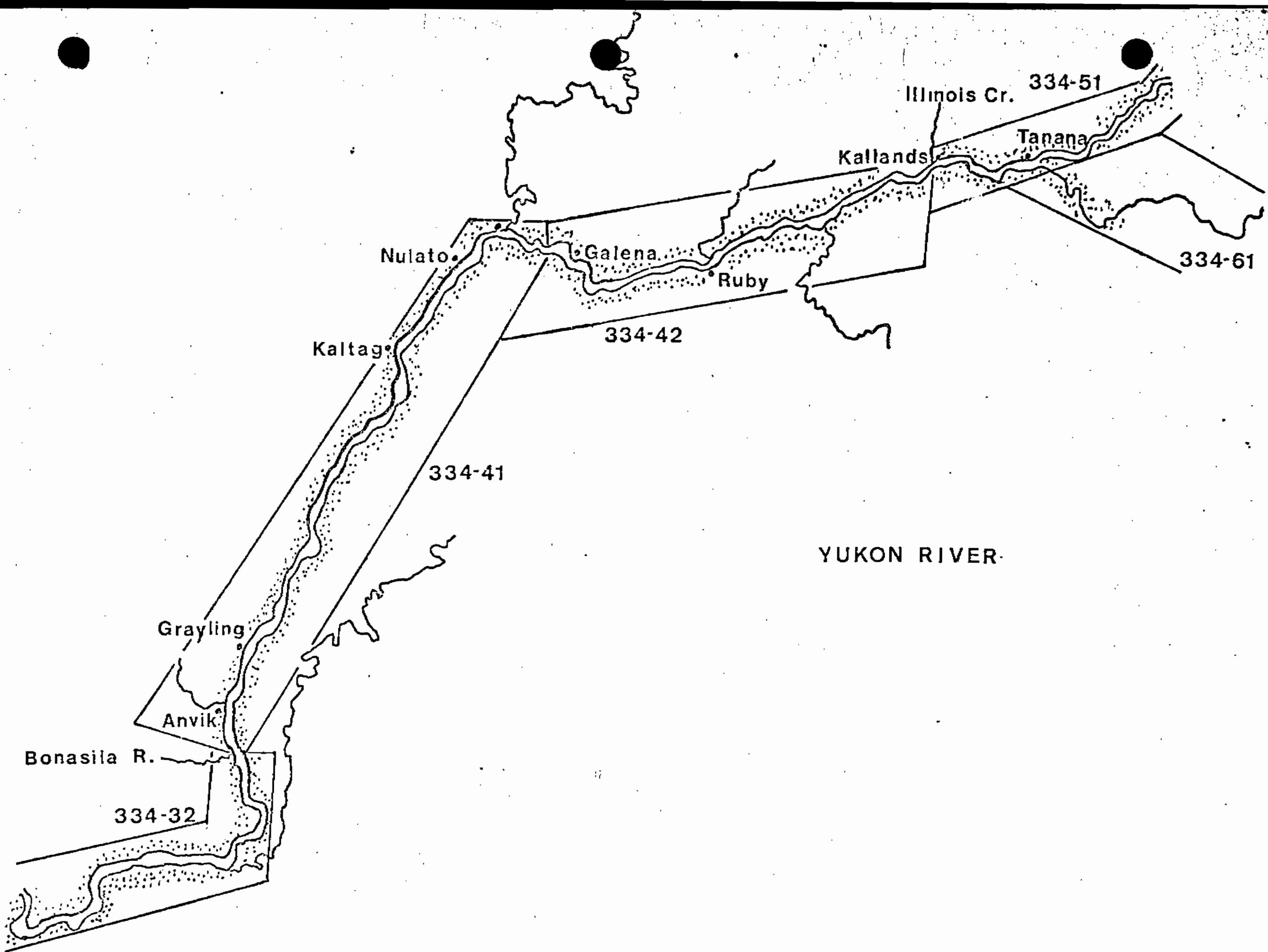


FIGURE 5 YUKON SUBDISTRICT 334-40

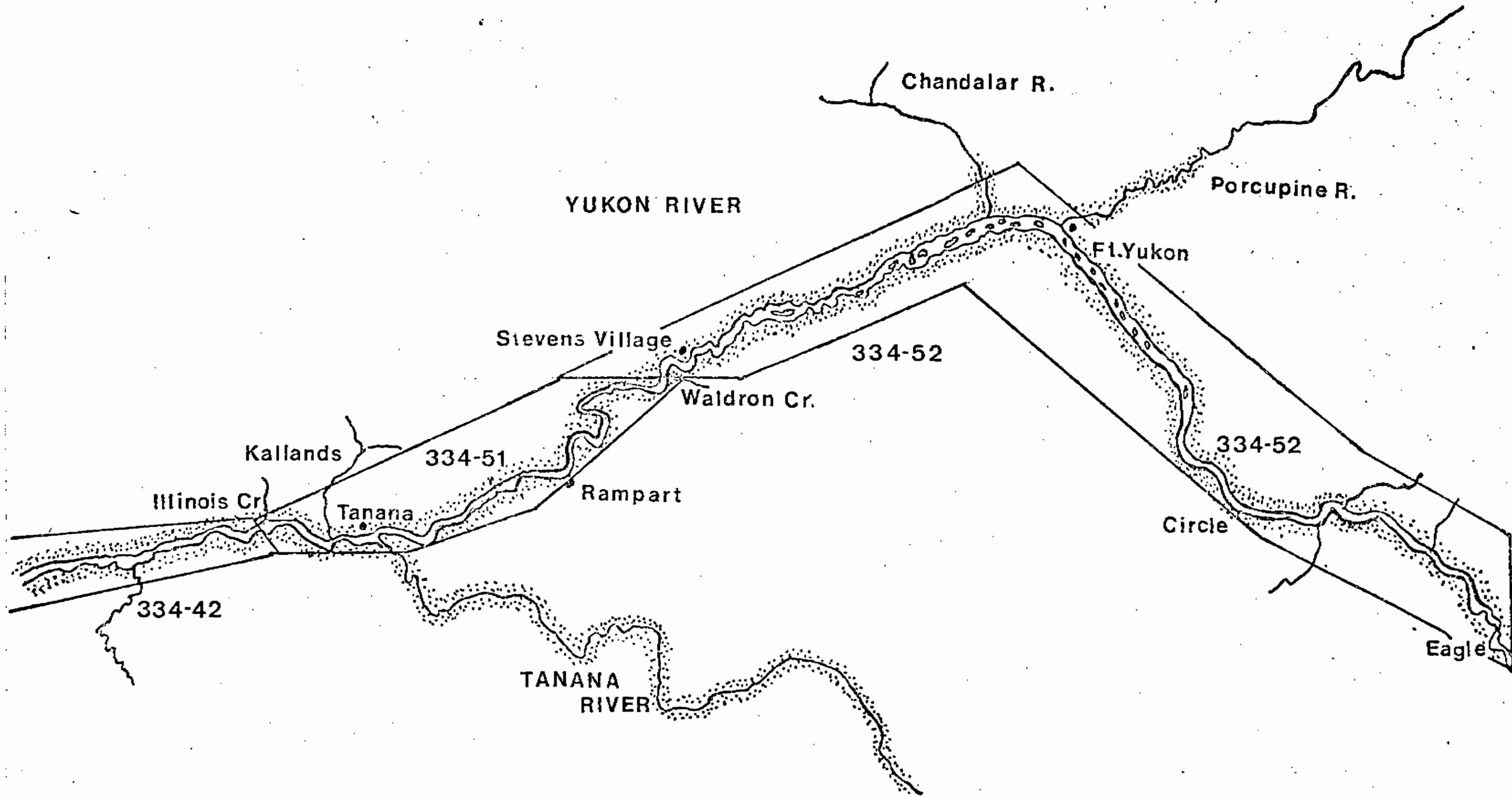


FIGURE 6 YUKON SUBDISTRICT 334-50

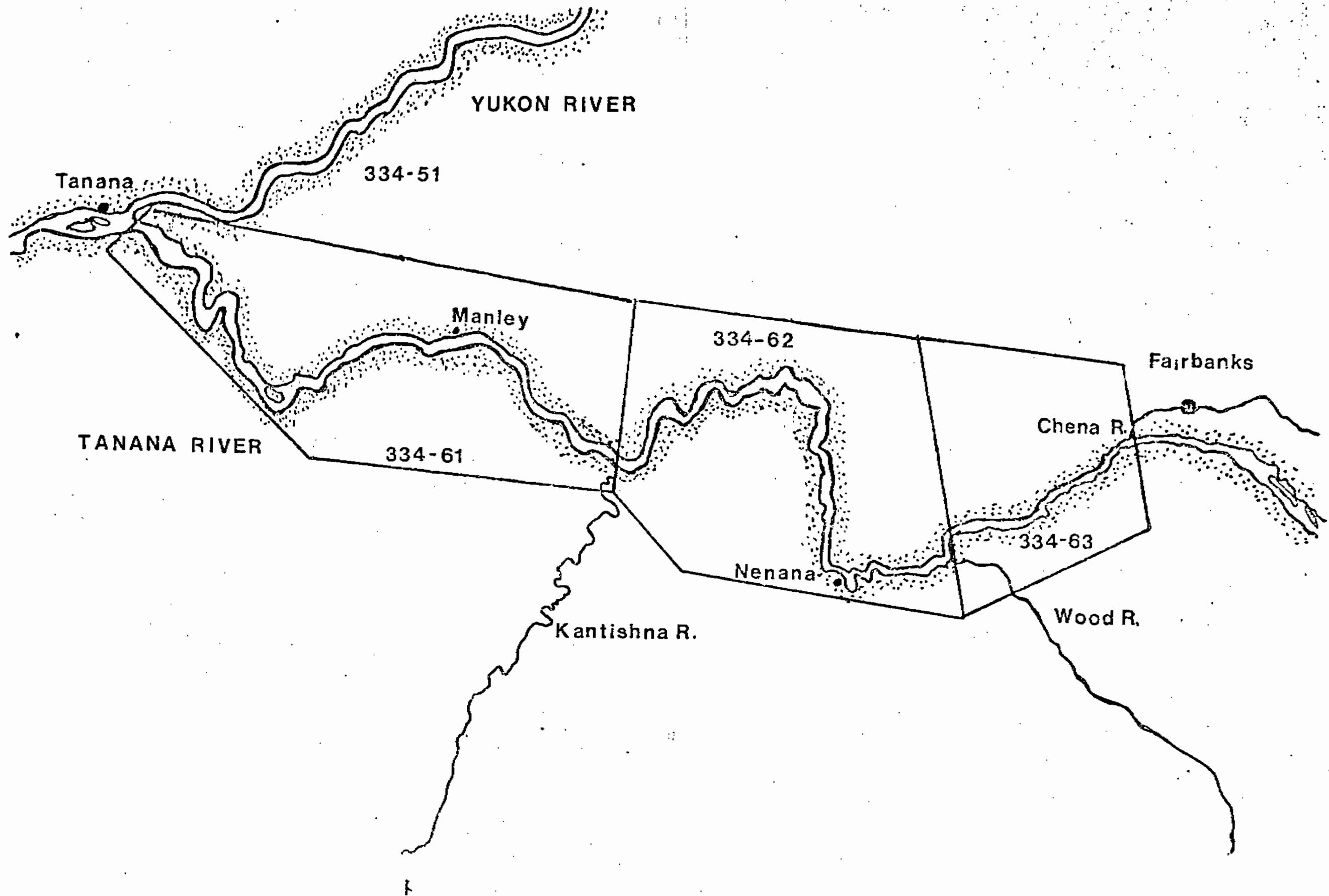


FIGURE 7 YUKON SUBDISTRICT 334-60

Table 2 . Commercial salmon catches by species and subdistrict, Yukon district, 1975.

Subdistrict	Kings	Summer Chums	Fall Chums	Total Chums	Cohos	Total All Species
<u>334-10</u>						
King Salmon Season (6/9-7/1)	41,550	143,744	-	143,744	-	185,294
Fall or Second Season	3,647	291,512	148,459	439,971	2,243	445,861
(Before Quota Period 7/3-19)	(3,531)	(279,612)	(2,176)	(281,788)	(3)	(285,322)
(After Quota Period 7/20-8/16)	(116)	(11,900)	(146,283)	(158,183)	(2,240)	(160,539)
Total 334-10	45,197	435,256	148,459	583,715	2,243	631,155
<u>334-20</u>						
King Salmon Season (6/11-30)	9,064	5,175	-	5,175	-	14,239
Fall or Second Season	760	94,769	51,666	146,435	-	147,195
(Before Quota Period 7/3-19)	(716)	(94,769)	-	(94,769)	-	(95,485)
(After Quota Period 7/20-8/15)	(44)	-	(51,666)	(51,666)	-	(51,710)
Total 334-20	9,824	99,944	51,666	151,610	-	161,434
<u>334-30</u>						
King Salmon Season (6/23-7/2)	4,177	-	-	-	-	4,177
Fall or Second Season (7/28-8/15)	-	-	5,590	5,590	-	5,590
Total 334-30	4,177	-	5,590	5,590	-	9,767
<u>334-40</u>						
Before Quota Period (7/6-8/15)	389	165,169	-	165,169	-	165,558
After Quota Period (8/16-21)	-	-	13,552	13,552	-	13,552
Total 334-40	389	165,169	13,552	178,721	-	179,110
<u>334-50</u>						
Before Quota Period (6/29-8/15)	2,865	13,137	-	13,137	-	16,002
After Quota Period (8/16-9/8)	-	-	27,207	27,207	5	27,212
Total 334-50	2,865	13,137	27,207	40,344	5	43,214
<u>334-60</u>						
Before Quota Period (6/30-8/15)	460	14,650	-	14,650	-	15,110
After Quota Period (8/16-9/9)	-	-	18,682	18,682	53	18,735
Total 334-60	460	14,650	18,682	33,332	53	33,845
<b>GRAND TOTAL</b>	<b>62,912</b>	<b>728,156</b>	<b>265,156</b>	<b>993,312</b>	<b>2,301</b>	<b>1,058,525</b>

Table 3 . Commercial salmon catches by statistical area during king salmon season, Yukon district, 1975.

Statistical Area	King	Chum
334-11	7,109	22,091
12	13,746	68,936
13	8,167	27,958
14	259	5,344
15	1,406	6,920
16	506	1,348
17	6,760	9,647
18	3,597	1,500
Subtotal 334-10	<u>41,550</u>	<u>143,744</u>
334-21	2,356	78
22	2,563	4,070
23	1,712	1,027
24	2,433	-
Subtotal 334-20	<u>9,064</u>	<u>5,175</u>
334-31	2,761	-
32	1,416	-
Subtotal 334-30	<u>4,177</u>	<u>-</u>
334-41	15	105,696
42	374	59,473
Subtotal 334-40	<u>389</u>	<u>165,169</u>
334-51	2,602	13,127
52	263	10
Subtotal 334-50	<u>2,865</u>	<u>13,137</u>
334-61	77	5,472
62	130	2,324
63	253	6,854
Subtotal 334-60	<u>460</u>	<u>14,650</u>
Total 334	58,505	341,875

Table 4 . Commercial salmon catches by statistical area during fall season, Yukon district, 1975.

Statistical Area	King	Coho	Chum
334-11	166	-	11,004
12	1,966	829	185,364
13	531	814	75,615
14	49	92	7,429
15	338	135	39,193
16	100	9	4,431
17	384	364	90,081
18	113	-	26,854
Subtotal 334-10	<u>3,647</u>	<u>2,243</u>	<u>439,971</u>
334-21	57	-	20,809
22	466	-	95,581
23	75	-	10,001
24	162	-	20,044
Subtotal 334-20	<u>760</u>	-	<u>146,435</u>
334-31	-	-	-
32	-	-	5,590
Subtotal 334-30	-	-	<u>5,590</u>
334-41	-	-	2,117
42	-	-	11,435
Subtotal 334-40	-	-	<u>13,552</u>
334-51	-	5	27,207
52	-	-	-
Subtotal 334-50	-	<u>5</u>	<u>27,207</u>
334-61	-	-	13,289
62	-	-	2,823
63	-	53	2,570
Subtotal 334-60	-	<u>53</u>	<u>18,682</u>
Total 334	4,407	2,301	651,437

Table 5 Yukon district licenses issued by residence, 1975.

Subdistrict	Residence	Commercial	Fishing Vessel	Set Net	Drift Net	Fishwheel <sup>1/</sup>
334-10	Sheldons Point	28	28	28	2	-
	Alakanuk	111	107	107	16	-
	Emmonak	140	130	132	18	-
	Hamilton	1	1	1	-	-
	Kotlik	94	93	93	13	-
	Mt. Village	44	34	31	28	-
	Pitkas Point	1	1	1	-	-
	St. Marys	15	13	10	10	-
	Pilot Station	15	13	12	12	-
	Marshall	10	10	9	8	-
	Russian Mission	7	5	5	5	-
	Scammon Bay	43	42	42	1	-
	Hooper Bay	1	1	1	1	-
	Cape Romanzof	1	-	-	-	-
	Stebbins	11	9	10	2	-
	Unalakleet	10	10	10	-	-
	Shaktoolik	2	1	1	-	-
	Wainwright Village	1	1	1	-	-
	Bethel	3	1	1	-	-
	Anchorage	8	4	5	-	-
Paxson	1	1	-	1	-	
Kodiak	2	2	2	-	-	
Juneau	2	2	2	-	-	
Everett, Washington	2	2	2	-	-	
	Subtotal	553	511	506	117	
334-20	Mt. Village	98	73	59	63	-
	Pitkas Point	22	17	16	16	-
	St. Marys	50	43	31	39	1
	Pilot Station	36	33	25	32	-
	Marshall	34	29	28	29	-
	Anchorage	1	1	1	1	-
	Sitka	1	1	-	1	-
	Spanaway, Washington	1	-	1	-	-
	Subtotal	243	197	161	181	1
334-30	Marshall	15	11	8	10	-
	Russian Mission	9	9	9	1	2
	Holy Cross	25	16	16	2	2
	Bethel	2	-	-	-	-
	Subtotal	51	36	33	13	4
TOTAL Lower Yukon		847	744	700	311	4
334-40	Anvik	8	8	6	2	2
	Grayling	6	5	4	3	3
	Kaltag	15	14	8	7	7
	Nulato	42	22	1	33	33
	Koyukuk	6	7	3	3	3
	Galena	50	38	20	25	25
	Ruby	24	15	4	16	16
	Other	8	7	8	1	1
	Subtotal	159	116	54	90	
334-50	Tanana	38	30	20	24	24
	Rampart	12	11	11	2	2
	Stevens Village	3	3	2	1	1
	Beaver	1	-	1	-	-
	Ft. Yukon	1	1	-	1	1
	Circle	3	3	2	1	1
	Eagle	4	3	3	1	1
	Fairbanks	24	17	20	7	7
	Other	14	9	6	5	5
	Subtotal	100	77	65	42	
334-60	Manley Hot Springs	4	2	1	4	4
	Nenana	35	24	7	26	26
	Fairbanks	35	20	11	16	16
	Other	10	5	2	5	5
		Subtotal	84	51	21	51
TOTAL Upper Yukon		343	244	140	183	
GRAND TOTAL		1,190	988	840	311	188

<sup>1/</sup> Licenses are not required for fishwheels, these figures represent the number of wheels to be operated taken from commercial and vessel license applications.

Table 6 . Commercial salmon catches from subdistrict 334-10, Yukon district, drift and set gill nets combined, 1975. 38

Date of landing	Hours fished	No. of boats	Total catch (catch/boat hour)			Cumulative catch		
			King	Coho	Chum	King	Coho	Chum
1 6/9	6							
6/10	24		104			104		
6/11	6		96			200		
	<u>36</u>	61	200(.01)					
2 6/12	6		6			206		
6/13	24		284		2	490		2
6/14	6		156		6	646		8
	<u>36</u>	100	446(.12)		8(+)			
3 6/16	6		40		2	686		10
6/17	24		692		2	1,378		12
6/18	6		352		8	1,730		20
	<u>36</u>	121	1,084(.25)		12(+)			
4 6/19	6		889		38	2,619		58
6/20	24		3,822		218	6,441		276
6/21	6		915		60	7,356		336
	<u>36</u>	247	5,626(.63)		316(.04)			
5 6/23	6		2,827		6,782	10,183		7,118
6/24	24		10,697		25,326	20,880		32,444
6/25	6		3,579		13,708	24,459		46,152
	<u>36</u>	383	17,103(1.24)		45,816(3.32)			
6 6/26	6		2,999		6,762	27,458		52,914
6/27	18		6,809		35,512	34,267		88,426
	<u>24</u>	353	9,808(1.14)		42,274(4.93)			
7 6/30	6		1,449		11,341	35,716		99,767
7/1	18		5,834		43,977	41,550		143,744
	<u>24</u>	360	7,283(.90)		55,318(6.40)			
Subtotal <sup>1/</sup>	228	441	41,550(.83)		143,744(2.88)			
8 7/3	6		44		1,329	44		1,329
7/4	18		1,176		42,814	1,220		44,143
	<u>24</u>	249	1,220(.20)		44,143(7.29)			
9 7/7	6		242		20,484	1,462		64,627
7/8	24		983		73,861	2,446		138,488
7/9	6		223		19,139	2,668		157,627
	<u>36</u>	309	1,448(.13)		113,484(10.10)			
10 7/10	6		148		16,367	2,816		173,994
7/11	24		326	1	36,970	3,142	1	210,964
7/12	6		121		16,212	3,263	1	227,176
	<u>36</u>	306	595(.05)	1(+)	69,549(6.31)			
11 7/14	6		27		4,307	3,290	1	231,483
7/15	24		94	1	14,742	3,384	2	246,225
7/16	6		62		4,478	3,446	2	250,703
	<u>36</u>	229	183(.02)	1(+)	23,527(2.85)			
12 7/17	6		6		3,561	3,452	2	254,264
7/18	24		39		20,158	3,491	2	274,422
7/19	6		40	1	7,366	3,531	3	281,788
	<u>36</u>	238	85(.01)	1(+)	31,085(3.63)			
13 7/21	6		8		3,581	3,539	3	285,369
7/22	24		19		7,196	3,558	3	292,565
7/23	6		19		2,077	3,577	3	294,642
	<u>36</u>	237	46(.01)		12,854(1.51)			
14 7/24	6			3	2,419	3,577	6	297,061
7/25	24		18	2	15,678	3,595	8	312,739
7/26	6		5		6,051	3,600	8	318,790
	<u>36</u>	206	23(+)	5(+)	24,148(3.26)			
15 7/28	6			1	1,075	3,600	9	319,865
7/29	24		7	6	8,041	3,607	15	327,906
7/30	6		7	6	9,731	3,614	21	337,637
	<u>36</u>	169	14(+)	13(+)	18,847(3.10)			
16 7/31	6		4	23	8,053	3,618	44	345,690
8/1	24		8	73	16,836	3,626	122	362,526
8/2	6		3	50	6,166	3,629	172	368,692
	<u>36</u>	248	15(+)	151(.02)	31,055(3.48)			

Table 6 . (continued) Commercial salmon catches from subdistrict 334-10, Yukon district, drift and set gill nets combined, 1975.

Date of landing	Hours fished	No. of boats	Total catch (catch/boat hour)			Cumulative catch		
			King	Coho	Chum	King	Coho	Chum
8/4	6		2	77	5,690	3,631	249	374,382
8/5	24		8	218	16,670	3,639	467	391,052
8/6	6		3	58	3,149	3,642	525	394,201
	<u>36</u>	225	<u>13(+)</u>	<u>353(.04)</u>	<u>25,509(3.04)</u>			
8/7	6			96	2,134	3,642	621	396,335
8/8	24		3	533	16,740	3,645	1,154	413,075
8/9	6		1	81	2,876	3,646	1,235	415,951
	<u>36</u>	199	<u>4(+)</u>	<u>710(.10)</u>	<u>21,750(3.04)</u>			
8/11	6			8	13	3,646	1,243	415,962
8/12	24			132	269	3,646	1,362	416,214
8/13	6			74	146	3,646	1,410	416,267
	<u>36</u>	60		<u>214(.10)</u>	<u>428(.20)</u>			
8/14	6			47	2,286	3,646	1,457	418,553
8/15	24			316	11,290	3,646	1,773	429,843
8/16	6		1	470	10,128	3,647	2,243	439,971
	<u>36</u>	104	<u>1</u>	<u>833(.22)</u>	<u>23,704(6.33)</u>			
Subtotal <sup>2/</sup>	456	428	3,647(.04)	2,243(.02)	439,971(4.53)			
Grand Total	684	491	45,197	2,243	583,715			

<sup>1/</sup> King salmon season (6/9-7/1).

<sup>2/</sup> Fall season (7/3-8/16).

Table 7 . Commercial salmon catches from subdistrict 334-20, Yukon district, drift and set gill nets combined, 1975.

Date of landing	Hours fished	No. of boats	Total catch (catch/boat hour)			Cumulative catch		
			King	Coho	Chum	King	Coho	Chum
6/11	6							
6/12	24							
6/13	6		2			2		
	<u>36</u>	1	2(.06)					
6/15	6					2		
6/16	24					2		
6/17	6		8			10		
	<u>36</u>	4	8(.06)					
6/18	6		1			11		
6/19	24		3			14		
6/20	6		3			17		
	<u>36</u>	6	7(.03)					
6/22	6					17		
6/23	24		397		11	414		11
6/24	6		1,021		48	1,435		59
	<u>36</u>	83	1,418(.47)		59(.04)			
6/25	6		56			1,491		59
6/26	18		5,067		2,182	6,558		2,241
	<u>24</u>	123	5,123(1.74)		2,182(.43)			
6/29	6		62			6,620		2,241
6/30	18		2,444		2,934	9,064		5,175
	<u>24</u>	85	2,506(1.23)		2,934(1.17)			
Subtotal <sup>1/</sup>	192	149	9,064(1.08)		5,175(.57)			
7/3	6		39		2,364	39		2,364
7/4	18		374		34,032	413		36,396
	<u>24</u>	134	413(.13)		36,396(11.32)			
7/6	6		11		1,529	424		37,925
7/7	24		25		7,248	449		45,173
7/8	6		16		917	465		46,090
	<u>36</u>	43	52(.03)		9,694(6.26)			
7/9	6		17		4,553	482		50,643
7/10	24		79		15,828	561		66,471
7/11	6		31		9,611	592		76,082
	<u>36</u>	116	127(.08)		29,992(7.18)			
7/13	6		26		1,681	618		77,763
7/14	24		40		3,179	658		80,942
7/15	6					658		80,942
	<u>36</u>	38	66(.05)		4,860(3.55)			
7/16	6		5		2,110	663		83,052
7/17	24		21		5,673	684		88,725
7/18	6		32		6,044	716		94,769
	<u>36</u>	76	58(.02)		13,827(5.05)			
7/20	6		1		474	717		95,243
7/21	24		31		9,895	748		105,138
7/22	6		1		4,110	749		109,248
	<u>36</u>	90	33(.01)		14,479(4.47)			
7/23	6				28	749		109,276
7/24	24		8		2,081	757		111,357
7/25	6				202	757		111,559
	<u>36</u>	41	8(.01)		2,311(1.56)			
7/27	6		1		293	758		111,852
7/28	24				5,010	758		116,862
7/29	6				2,801	758		119,663
	<u>36</u>	65	1(+)		8,104(3.46)			
7/30	6				308	758		119,971
7/31	24				856	758		120,827
8/1	6		1		3,805	759		124,632
	<u>36</u>	41	1(+)		4,969(3.34)			
8/3	6				964	759		125,596
8/4	24		1		5,266	760		130,862
8/5	6				1,178	760		132,040
	<u>36</u>	56	1(+)		7,408(3.69)			
8/6	6				2,136	760		134,176
8/7	24				6,014	760		140,190
8/8	6				812	760		141,002
	<u>36</u>	56			8,962(4.05)			

Table 7 . (continued) -Commercial salmon catches from subdistrict 334-20, Yukon district, drift and set gill nets combined, 1975.

Date of landing	Hours fished	No. of boats	Total catch (catch/boat hour)			Cumulative catch		
			King	Coho	Chum	King	Coho	Chum
8/10	6				1,195	760		142,197
8/11	24				4,213	760		146,410
8/12	6					760		146,410
	<u>36</u>	41			<u>5,408</u> (3.66)			
8/13	6					760		146,410
8/14	24				16	760		146,426
8/15	6				9	760		146,435
	<u>36</u>	2			<u>25</u> (.35)			
Subtotal <sup>2/</sup>	456	185	760(.03)					151,610
Grand Total	648	197	9,824					151,610

<sup>1/</sup> King salmon season (6/11-30).

<sup>2/</sup> Fall season (7/2-8/15).

Table 8 . Commercial salmon catches from subdistrict 334-30, Yukon district, drift and set gill nets combined, 1975.

Date of Landing	Hours Fished	No. of Boats	Total catch (catch/boat hour)			Cumulative catch		
			King	Coho	Chum	King	Coho	Chum
6/23	6							
6/24	24		7			7		
6/25	24		32			39		
6/26	24		1,261			1,300		
6/27	18		763			2,063		
	<u>96</u>	21	2,063(1.02)					
6/30	6		700			2,763		
7/1	24		751			3,514		
7/2	18		663			4,177		
	<u>48</u>	32	2,114(1.37)					
Subtotal <sup>1/</sup>	144	35	4,177(1.18)					
7/28	6							
7/29	24				43			43
7/30	24				43			86
7/31	24				179			265
8/1	18				141			406
	<u>96</u>	7			406(.60)			
8/4	6				142			548
8/5	24				384			932
8/6	24				860			1,792
8/7	24				418			2,210
8/8	18				400			2,610
	<u>96</u>	11			2,204(2.09)			
8/11	6				180			2,790
8/12	24				873			3,663
8/13	24				474			4,137
8/14	24				647			4,784
8/15	18				806			5,590
	<u>96</u>	10			2,980(3.10)			
Subtotal <sup>2/</sup>	288	12			5,590(2.08)			
Grand Total	432	40	4,177		5,590			

<sup>1/</sup> King salmon season (6/23-7/2).

<sup>2/</sup> Fall season (7/28-8/15).

Table 9 . Commercial salmon catches subdistrict 334-40, Yukon district, set gill nets and fishwheel gear combined, 1975.

Period Ending	Boats	King	Chum	Coho	Total
7/11		136	52,741		52,877
7/18		186	47,134		47,320
7/25		52	38,153		38,205
8/1		13	7,310		7,323
8/8		2	9,388		9,390
8/15		-	10,443		10,443
8/21		-	13,552		13,552
Total	93	389	178,720		179,110

Table 10 . Commercial salmon catches subdistrict 334-50, Yukon district, set gill nets and fishwheel gear combined, 1975.

Period Ending	Boats	King	Chum	Coho	Total
7/4		9	80	-	89
7/11		691	-	-	691
7/18		1,209	225	-	1,434
7/25		643	2,629	-	3,272
8/1		229	1,196	-	1,425
8/8		82	4,262	-	4,344
8/15		2	4,820	-	4,822
8/22		-	5,327	-	5,327
8/29		-	7,390	5	7,395
9/5		-	9,328	-	9,328
9/8		-	5,087	-	5,087
Total	56	2,865	40,344	5	43,214

Table 11 . Commercial salmon catches subdistrict 334-60, Yukon district, set gill nets and fishwheel gear combined, 1975.

Period Ending	Boats	King	Chum	Coho	Total
7/5			1	-	1
7/12		120	138	-	258
7/19		202	2,233	-	2,435
7/26		73	4,831	-	4,904
8/2		60	4,872	-	4,932
8/9		5	2,576	-	2,581
8/16		-	817	-	817
8/23		-	1,791	-	1,791
8/30		-	1,943	-	1,943
9/6		-	8,681	38	8,719
9/9		-	5,449	15	5,464
Total	29	460	33,332	53	33,845

Table 12 Yukon River subsistence salmon catch data, 1975 (includes Canadian catches).

Village	Date of Survey	Fishing Families	Dogs <sup>1/</sup>	Snow Machines <sup>1/</sup>	Kings	Other Salmon <sup>2/</sup>	Total Salmon	8' Nets	5' Nets	Fishwheels
Sheldons Point	8/5	11	15	12	92	1,332	1,424	28	30	
Alakanuk	8/4	39	50	42	142	3,080	3,222	39	76	
Ennonak	8/6	33	40	39	167	5,161	5,328	41	62	
Lamont Slough	8/5	1	2	2		47	47		2	
Aproka Pass	8/7	1	3	3		135	135		3	
Kotlik	8/8	25	26	28	436	5,938	6,374	16	39	
Mt. Village	8/9	41	81	53	532	7,239	7,771	36	44	
Pitkas Point	8/9	8	41	7	112	1,933	2,045	8	10	
St. Marys	8/10	24	61	25	301	6,769	7,070	20	32	
Pilot Station	8/11	35	82	39	929	8,855	9,784	33	45	
Marshall	8/12	26	117	25	465	6,179	6,644	27	35	
Russian Mission	8/14	14	55	14	1,661	3,232	4,893	20	9	
Holy Cross	8/15	12	22	13	2,094	3,518	5,612	27	19	
Anvik	8/15	12	107	24	77	32,610	32,887	1	6	5
Grayling	8/16	17	122	33	90	23,828	23,918	5	9	9
Kaltag	8/17	19	153	25	163	10,745	10,908	5	15	10
Nulato	8/18	23	241	32	861	17,348	18,209	11	14	9
Koyukuk	8/18	3	66	5	15	1,750	1,765	0	2	1
Galena	9/21	20	133	42	1,247	10,063	11,310	8	13	12
Ruby		8	32	6	912	8,820	9,732	4	3	7
Tanana	9/13	22	111	17	1,885	15,862	17,747	2	1	14
Rampart	9/13	11	52	9	467	9,759	10,226	3	8	1
Stevens Village	9/14	6	14	5	391	2,000	2,391	2	6	1
Beaver	9/14	2	7	1	84	635	719	2	1	0
Fl. Yukon	9/27	19	148	29	428	19,777	20,205	3	5	12
Circle	9/27	4	12	2	110	775	885	2	1	2
Eagle	9/27	10	21	4	213	3,032	3,245	2	6	1
Yukon Territory Villages <sup>3/</sup>					2,500	1,900	4,400			
MAIN RIVER TOTALS		446	1,814	536	16,374	212,522	228,896	345	496	84
Huslia	8/19	7	61	8	23	5,026	5,049	7	1	0
Hughes	8/19	5	58	5	25	5,429	5,454	0	10	0
Alatna	8/19	2	17	2	0	950	950	1	3	0
Allakaket	8/19	11	77	12	151	5,609	5,760	2	19	0
KOYUKUK RIVER TOTALS		25	213	27	199	17,014	17,213	10	33	0
Venetie	9/14	6	35	6	0	2,401	2,401	0	6	0
CHANDALAR RIVER TOTALS		6	35	6	0	2,401	2,401	0	6	0
Manley		2	94	6	71	2,450	2,521	1		2
Nenana		6	57	3	533	26,634	27,167	1	2	5
Fairbanks <sup>4/</sup>		54			32	1,615	1,647	20	25	5
TANANA RIVER TOTALS		62	151	9	636	30,699	31,335	22	27	12
Old Crow <sup>3/</sup>					100	11,600	11,700			
PORCUPINE RIVER TOTALS					100	11,600	11,700			
GRAND TOTAL-YUKON RIVER <sup>5/</sup>		539	2,213	578	17,309	274,236	291,545	377	562	96

<sup>1/</sup> Data from fishing families only.

<sup>2/</sup> Mostly chums, but includes small numbers of pink and coho salmon.

<sup>3/</sup> From Environment Canada-Fisheries Service, Whitehorse; only catch data available.

<sup>4/</sup> Includes reports turned in by permittees (subsistence fishing permits required for Tanana River upstream of Wood River).

<sup>5/</sup> Does not include catches of 254 kings and 2,400 other salmon made by 10 fishing families from Scammon Bay, a small coastal village located outside the Yukon River drainage boundary.

Table 13 . Aerial survey escapement estimates,<sup>1/</sup> Yukon River drainage, 1975.

Stream (drainage)	Date	Survey Rating	Kings	Cohos	Pinks	Summer Chums	Fall Chums
<u>Archuelinguk River</u>	7/26-27	good-fair	25	-	765	3,440	-
<u>Andreafsky River</u>							
West Fork	7/22	poor-good	421	-	25,540	235,954	-
East Fork	7/22-26	poor-good	993	-	25,400	223,485	-
Subtotal			<u>1,414</u>		<u>50,940</u>	<u>459,439</u>	
<u>Bonasila River drainage</u>							
Stuyahok River	7/28	poor	-	-	-	6,040	-
<u>Anvik River drainage</u>							
Anvik River Tower Count	7/6-27		548	-	1,366	(601,880) <sup>8/</sup>	-
Anvik River Boat survey below tower			172	-	-	-	-
Anvik River	7/23-9/22	poor-fair	(218) <sup>8/</sup>	11	-	752,825	-
Beaver Creek	7/23-9/22	fair-good	(10)	257	-	19,005	-
Otter Creek	7/23-9/22	fair	(1)	2	-	47,645	-
McDonald Creek	7/23	fair	-	-	-	4,465	-
Swift River	7/23-9/22	poor-fair	(3)	197	-	21,545	-
Subtotal			<u>720</u>	<u>467</u>	<u>1,366</u>	<u>845,485</u>	
<u>Innoko River drainage</u>							
Dishna River	8/1	poor	1	-	-	2,047	-
Tolstoi Creek	8/1	poor	-	-	-	491	-
Windy Creek	8/1	poor	-	-	-	1	-
Subtotal			<u>1</u>			<u>2,539</u>	
<u>Rodo River</u>	7/31		37	-	-	25,335	-
<u>Kaltag River</u>	7/31		6	-	-	4,450	-
<u>Nulato River</u>							
North Fork	7/24	fair	123	-	-	87,280	-
South Fork	7/24	fair	81	-	-	51,215	-
Subtotal			<u>204</u>			<u>138,495</u>	

Table 13 . (Continued) Aerial survey escapement estimates,<sup>1/</sup> Yukon River drainage, 1975.

Stream (drainage)	Date	Survey Rating	Kings	Cohos	Pinks	Summer Chums	Fall Chums
<u>Koyukuk River drainage</u>							
Gisasa River	7/24		385	-	-	56,904	-
Kateel River	7/25	fair	30	-	-	4,176	-
Box Creek	7/25	fair	-	-	-	100	-
Subtotal						4,276	
Dakli River	7/24	good	-	-	-	4,175	-
Wheeler Creek	7/24	good	-	-	-	8,675	-
Subtotal						12,850	
Hogatza River							
Caribou Creek	7/25	good	-	-	-	14,745	-
Clear Creek	7/25	good	-	-	-	7,610	-
Subtotal						22,355	
Batza Creek	7/25	-	-	-	-	372	-
Alatna River	8/6	fair	2	-	-	396	-
Henshaw (Sozhekla) Cr.	8/6	good	118	-	-	1,219	-
South Fork Koyukuk	8/5	fair	147	-	-	14,626	-
Fish Creek							
Bonanza Creek	8/6		-	-	-	11	-
Jim River	8/6	fair	53	-	-	1,057	-
Subtotal South Fork			200			15,694	
Subtotal Koyukuk River drainage			735			114,066	
<u>Melozitna River drainage</u>							
Melozitna River drainage	7/29		136	-	-	8,743	-
<u>Tozitna River</u>							
Tozitna River	7/29		202	-	-	3,512	-
<u>Tanana River drainage</u>							
<u>Kantishna River drainage</u>							
Toklat River drainage	10/6	poor	-	-	-	-	78,285
Bear Paw River	8/2-9/29	fair	36	-	-	-	1,657
Subtotal			36				79,942

Table 13 . (Continued) Aerial survey escapement estimates,<sup>1/</sup> Yukon River drainage, 1975.

Stream (drainage)	Date	Survey Rating	Kings	Cohos	Pinks	Summer Chums	Fall Chums
<u>Tanana River drainage (continued)</u>							
Nenana River	10/6	good	-	827	-	-	-
Seventeen Mile Slough	9/29	good	-	956	-	-	-
Lost Slough	9/29	good	-	116	-	-	-
Subtotal				<u>1,899</u>			
Chena River <sup>2/</sup>	8/5-15		316	-	-	2,380	-
Salcha River	8/11-18	fair	1,055	-	-	7,573	-
Banner Creek <sup>6/</sup>	10/14	poor					4
<u>Upper Tanana River drainage</u>							
Five Mile Clearwater	11/17	poor	-	5	-	-	-
Richardson Clearwater	11/17		-	4	-	-	-
Delta River <sup>9/</sup>	10/7-11/30	good	-	-	-	-	3,946
Bluff Cabin Slough	10/30	poor	-	-	-	-	5,000
Clearwater Lake & outlet	11/1-7	good	-	1,575	-	-	-
Delta Clearwater Creek	11/1-7	good	-	5,100	-	-	-
Delta Clearwater Slough	10/6	poor	-	-	-	-	745
Volkmer River Slough <sup>3/</sup>	10/5-10		-	-	-	-	100
Chisana River			-	-	-	-	-
✓ Sheep Creek	10/27	poor	-	-	-	-	29
Subtotal Upper Tanana River				<u>6,684</u>		9,953	<u>9,320</u>
Subtotal Tanana River drainage			1,407	6,693		9,953	89,766
<u>Chandalar River</u>	9/27	poor	-	-	-	-	6,345
<u>Porcupine River drainage</u>							
Sheenjok River	10/8	fair	-	6	-	-	78,060
Black River		poor	-	-	-	-	50
Salmon Fork	10/7	poor	-	-	-	-	1,517
Salmon Trout River	9/27	poor	-	-	-	-	350
Fishing Branch River <sup>4/ 5/</sup>	9/3-10/9		-	-	-	-	353,282
Subtotal				<u>6</u>			<u>433,259</u>

Table 13 . (Continued) Aerial survey escapement estimates,<sup>1/</sup> Yukon River drainage, 1975.

Stream (drainage)	Date	Survey Rating	Kings	Cohos	Pinks	Summer Chums	Fall Chums
<u>Yukon Territory Streams<sup>5/</sup></u>							
Tatchun Creek <sup>6/</sup>			175	-	-	-	-
Nisutlin River	8/24	poor-fair	337	-	-	-	-
Big Salmon River	8/26		800	-	-	-	-
Morley River	8/26		30	-	-	-	-
Takhini River	8/29		165	-	-	-	-
Mitchie Creek			(39)	-	-	-	-
Wolf River	8/26		40	-	-	-	-
Kluane River	10/15			-	-	-	362
Yukon River (main stem) <sup>6/</sup>			600	-	-	-	7,000
Whitehorse Fishway <sup>7/</sup>			313	-	-	-	-
Subtotal			2,460				7,362
Total for Yukon River drainage			7,347	9,056	53,071	1,621,497	530,387

- <sup>1/</sup> Only peak counts listed, salmon carcasses included.  
<sup>2/</sup> Boat surveys by on Ross, USF&W.  
<sup>3/</sup> Aerial survey by Gary Pearse, Sport Fish Division, ADF&G.  
<sup>4/</sup> Weir count.  
<sup>5/</sup> Survey data supplied by Environment Canada-Fisheries Service, Whitehorse.  
<sup>6/</sup> Foot survey.  
<sup>7/</sup> Fishway count.  
<sup>8/</sup> Data in parenthesis not included in subtotals or totals.



Appendix Table 2. Yukon district commercial, vessel and gill net licenses issued and numbers of fishwheels operated by subdistrict, 1960-1975.

COMMERCIAL									
Year	Lower Yukon Area 1/				Upper Yukon Area			Totals	
	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60		Subtotals
1960	133	96		229				18	307
1961	232	130	26	394				18	412
1962	321	148	46	515				21	536
1963	265	131	30	446				6	452
1964	319	119	31	469				20	489
1965	327	143	34	504				38	542
1966	333	143	21	557				21	578
1967									607
1968				563				22	585
1969	406	13	32	569				30	599
1970	353	164	33	550				38	628
1971	459	162	37	658				57	715
1972	473	133	43	709				56	765
1973	515	206	50	771				101	872
1974	460	232	55	747	39	45	69	153	900
1975	553	243	51	847	159	100	84	343	1,190

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		Subtotals
1960	2	44		46					46
1961	17	86		103					120
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				1	294
1972	155	142	17	314				2	316
1973	165	151	18	334				5	339
1974	109	168	21	298				1	300
1975	117	181	13	311					311

FISHING VESSEL									
Year	Lower Yukon Area 1/				Upper Yukon Area			Totals	
	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60		Subtotals
1960	185	33		219				10	229
1961	210	112	18	340				10	350
1962	320	127	31	478				12	490
1963	272	113	22	407				5	413
1964	314	101	24	439				13	452
1965	272	111	26	409				28	437
1966	365	113	18	496				21	517
1967	331	126	22	529				20	549
1968	340	124	26	490				22	512
1969	351	93	24	478				25	503
1970	349	143	27	519				30	549
1971	416	145	29	590				44	634
1972	425	153	35	613				47	661
1973	433	157	32	663				77	740
1974	431	189	42	662	30	34	46	110	771
1975	511	197	36	744	116	77	51	244	988

FISHWHEELS 2/									
Year	Lower Yukon Area 1/				Upper Yukon Area			Totals	
	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60		Subtotals
1960									
1961									
1962								13	13
1963								3	3
1964								7	7
1965								29	29
1966								17	17
1967									
1968								18	18
1969								15	15
1970								17	17
1971								26	26
1972								26	26
1973								57	57
1974								55	55
1975		1	4	5	24	23	38	85	174

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		Subtotals
1960	123	59		242				2	244
1961	217	101	19	337				1	338
1962	303	117	14	434				4	438
1963	239	101	21	361				4	365
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				13	420
1969	346	62	15	423				16	439
1970	345	105	24	474				27	501
1971	355	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
1975	506	161	33	700	54	65	21	140	840

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.  
 2/ Fishwheels were operated in the vicinity of Kaltag and Nylato. Beginning in 1974, these villages are in subdistrict 334-40.

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Appendix Table 3 . Commercial salmon catches by species and subdistrict, Yukon district, 1960-1975

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	64,453	29,028	4,965	118,456	-	-	-	1,804	120,260
1962	57,099	22,224	4,667	94,010	-	-	-	724	94,734
1963	65,004	24,211	6,976	116,191	-	-	-	803	116,994
1964	67,555	20,246	4,705	92,506	-	-	-	1,021	93,527
1965	85,258	23,763	3,204	116,235	-	-	-	1,863	118,098
1966	70,722	16,927	3,612	91,261	-	-	-	1,988	93,249
1967	104,350	20,229	3,612	128,191	-	-	-	1,449	129,640
1968	73,455	21,392	4,543	105,400	-	-	-	1,126	106,526
1969	75,552	14,799	3,577	93,928	-	-	-	985	94,913
1970	57,521	17,210	3,712	78,443	-	-	-	1,666	80,109
1971	66,042	19,226	3,490	108,758	-	-	-	1,749	110,507
1972	70,052	17,855	3,241	91,148	-	-	-	1,092	92,240
1973	56,921	13,859	3,204	74,044	-	-	-	1,309	75,353
1974	71,067	17,587	3,413	92,067	679	2,661	1,495	4,835	96,902
1975	45,107	9,824	4,177	59,108	389	2,865	460	3,714	62,917

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 <sup>1/</sup>	-	-	42,577	-	-	-	-	42,577
1962	53,160 <sup>1/</sup>	-	-	53,160	-	-	-	-	53,160
1963	-	-	-	-	-	-	-	-	-
1964	8,347	-	-	8,347	-	-	-	-	8,347
1965	22,936	-	-	22,936	-	-	-	387	23,323
1966	69,836	-	1,209	71,045	-	-	-	-	71,045
1967	46,148	1,425	1,880	49,453	-	-	-	-	49,453
1968	62,852 <sup>1/</sup>	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	345,817	-	-	-	907	346,724
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	453	504,921	-	-	-	13,003	517,924
1974	641,052	125,821	2,157	769,030	30,914	28,013	41,411	108,338	877,368
1975	583,715	151,610	5,590	740,915	179,721	40,344	33,332	253,397	994,312

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	2,855	-	-	2,855	-	-	-	-	2,855
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	9,325	-	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	34,820	1,721	-	36,541	-	-	-	-	36,541
1974	12,751	175	-	12,926	-	1,500	1,388	2,888	15,814
1975	2,243	-	-	2,243	-	5	53	58	2,301

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	4,667	170,076	-	-	-	724	170,800
1963	90,576	24,211	6,976	121,763	-	-	-	803	122,566
1964	78,348	20,246	4,705	103,299	-	-	-	1,021	104,320
1965	112,554	23,763	3,204	139,521	-	-	-	2,244	141,765
1966	159,878	16,927	4,821	181,626	-	-	-	1,938	183,564
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	19,923	6,144	295,381	-	-	-	1,783	297,164
1970	390,064	39,604	6,997	436,665	-	-	-	2,573	439,238
1971	380,568	25,338	3,540	409,446	-	-	-	2,845	412,291
1972	342,702	52,166	5,631	400,549	-	-	-	2,363	402,912
1973	487,272 <sup>1/</sup>	124,778 <sup>1/</sup>	3,667	615,717	-	-	-	14,312	630,029
1974	725,880	143,594	5,570	875,044	39,593	32,174	44,294	116,061	991,095
1975	631,155	151,434	9,767	802,356	179,110	43,214	33,845	256,169	1,058,525

<sup>1/</sup> Includes small numbers of pink or red salmon.

Appendix Table 4. Comparative commercial king salmon catch data, Yukon district, 1960-1975. 1/ 54

	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
	1975	41,550	9,064	50,614	4,177

	Year	334-10	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) <u>2/</u>
	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)
	1975	49,944 (0.83)	8,376 (1.08)	58,320 (0.87)	3,552 (1.18)

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 5 . King salmon catches by statistical areas, subdistrict 334-10 of the Yukon district 1965-1975.<sup>1/</sup>

Statistical Area	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
334-11 (Black River)	2,266	2,495	2,110	4,047	1,405	4,992	3,038	2,730	7,193	2,973	7,109
12 (South Mouth)	18,140	20,038	25,811	27,859	21,894	23,367	25,105	11,638	28,166	28,372	13,746
13 (Sunshine Bay)	8,137	5,460	6,203	7,997	9,635	5,258	7,135	3,435	4,302	6,863	8,167
14 (Kwiguk)	6,836	4,143	7,730	3,202	5,594	5,351	10,342	9,073	3,468	3,964	259
15 (Middle Mouth)	23,729	10,858	27,202	6,700	12,875	6,079	16,853	18,375	756	12,801	1,406
16 (North Mouth)	4,458	3,009	4,729	919	3,833	849	3,924	5,276	40	1,930	506
17 (Head of Passes)	16,114	12,898	18,583	17,378	9,930	4,890	12,037	13,059	6,683	6,674	6,760
18 (Fish Village)	9,588	11,882	11,967	11,363	5,422	6,716	5,963	4,473	2,182	5,880	3,597
334-10 Total	89,268	70,783	104,335	79,465	70,588	57,502	84,397	68,059	52,790	69,457	41,550

<sup>1/</sup> Catch data only for king salmon season (June and early July).

Appendix Table 6 . Comparative commercial summer chum salmon catch data, subdistricts 334-10 and 334-20, Yukon district, 1967-1975.

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)
1975	6/9-7/16	15.0	86,304	394,447	(4.72)	6/22-7/18	10.5	21,024	99,944	(4.75)

*Note: Catch data for Subdistrict 334-20 for 1967 is not available.*

Appendix Table 7. Comparative commercial coho and chum salmon catch data for the fall season, subdistrict 334-10 Yukon district, 1961-1975.

Year	Duration	Days <sup>1/</sup> 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 <sup>3/</sup>	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 <sup>3/</sup>	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 <sup>3/</sup>	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 <sup>3/</sup>	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 <sup>3/</sup>	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 <sup>3/</sup>	12	41,868	13,758 (0.2)	137,235 (3.3)
1975	7/14-8/16	15	68,940	2,242 (0.03)	212,795 (3.1)
	7/21-8/16 <sup>3/</sup>	12	52,128	2,240 (0.04)	158,183 (3.0)

<sup>1/</sup> One "day" is equivalent to 24 hours during open fishing period.

<sup>2/</sup> Information not available.

<sup>3/</sup> More comparable to duration of fishing for past seasons.

Appendix Table 8 Commercial salmon pack by species and type of processing, Yukon district, 1960-1975. <sup>1/</sup>

Year	Cases (48#)			Fresh-frozen (round wt. in lbs.)			Cured King Salmon		Salmon Roe (lbs.)
	King	Coho	Chum	King	Coho	Chum	Tierces	½ 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 <sup>3/</sup>	841,586 <sup>3/</sup>	647	95	29,000
1970	6,431	1,002	6,413	716,600	12,900	1,725,000	498 <sup>4/</sup>	191	26,300
1971	6,500	502	3,213	1,058,034	45,836	1,432,455	798 <sup>5/</sup>	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 <sup>6/</sup>	137,594
1974	6,660	603	21,074	1,062,666	58,816	3,879,300	438 <sup>7/</sup>	56	208,842
1975	5,297	40	14,226	781,902	13,299	4,751,941	125 <sup>8/</sup>	172 <sup>9/</sup>	201,404

<sup>1/</sup> Pack represents type of processing when fish were shipped out of district.

<sup>2/</sup> Information not available.

<sup>3/</sup> 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).

<sup>4/</sup> Includes 51 tierces chum salmon.

<sup>5/</sup> Includes 139 tierces chum salmon.

<sup>6/</sup> Includes 72 half tierces chum salmon.

<sup>7/</sup> Includes 57 tierces chum salmon.

<sup>8/</sup> Includes 45 tierces of chum salmon.

<sup>9/</sup> Includes 119 half tierces of chum salmon.

Appendix Table 9 Dollar value estimates of Yukon district commercial fishery, 1960-1975.<sup>1/</sup>

Year	Gross value of catch to fishermen	Wages earned <sup>2/</sup>	Total income to district	Wholesale value of pack <sup>3/</sup>	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	62,800
1974	1,921,000	500,100	2,421,100	6,035,900	84,100
1975	1,793,900	596,600+	2,390,500	4,939,700	87,100

<sup>1/</sup> Information not available for 1960 and wages earned during 1961-1966.

<sup>2/</sup> Includes wages paid to tender boat operators, processing plant employees in district.

<sup>3/</sup> Based on type of processing when fish were shipped out of the district.

Appendix Table 10 Estimated mean prices paid to fishermen, Yukon district, 1961-1975 <sup>1/</sup> (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	
1975	9.24	1.50	1.36	

<sup>1/</sup> Information not available for some species.

Appendix Table II. Mean weights and numbers of salmon per case, Yukon district, 1962-1975.<sup>1/</sup>

<u>Year</u>	<u>Mean round weight in pounds<sup>2/</sup></u>			<u>Mean no. of fish/case<sup>3/</sup></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
1975	22.0	7.2	6.8	3.8	10.4	11.6
	21.9	7.6	7.0			

<sup>1/</sup> Information is not available for some species.

<sup>2/</sup> Based on age-length-weight samples or fish ticket entries.

<sup>3/</sup> Standard 48 lb. case.

Appendix Table 12. Yukon River comparative subsistence catch effort data, 1961-1975 (numbers per fishing family are in parenthesis).

Year	Total Catch		Equivalent Catch <sup>1/</sup>		Mean Equivalent Catch per Family <sup>1/</sup>	
	King Salmon	Other salmon <sup>2/</sup>	King salmon	Other salmon <sup>2/</sup>	King salmon	Other salmon <sup>2/</sup>
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 <sup>3/</sup>	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
1975	17,309	274,236	14,155	250,054	32	568

Year	Fishing families surveyed <sup>1/</sup>	People in fishing families <sup>1/</sup>	Snowmachines <sup>1/</sup>	Sled dogs <sup>1/</sup>	Gear operated <sup>1/</sup>	
					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
1975	440	2,772 (6.3)	539 (1.2)	1,932 (4.4)	834	88

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

<sup>2/</sup> Mostly chum salmon, some pinks and cohos.

<sup>3/</sup> Total king and other salmon catches have been corrected.

Appendix Table 13. Comparative Yukon River drainage king salmon escapement counts 1959-1975.<sup>1/</sup>

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 <sup>2/</sup>	762 <sup>2/</sup>	
1963			
1964	867	705	
1965		355 <sup>2/</sup>	650 <sup>2/</sup>
1966	361	303	638
1967		276 <sup>2/</sup>	336 <sup>2/</sup>
1968	380	383	297 <sup>2/</sup>
1969	231 <sup>2/</sup>	274 <sup>2/</sup>	296 <sup>2/</sup>
1970	665	574 <sup>2/</sup>	368 <sup>2/</sup>
1971	1,904	1,284	
1972	798	582 <sup>2/</sup>	1,172 <sup>4/</sup>
1973	825	788	613 <sup>4/</sup>
1974		285	506 <sup>5/</sup>
1975	993	421	720 <sup>6/</sup>

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 <sup>2/</sup>	105	334
1970	1,882	615	625
1971	159 <sup>2/</sup>	640 <sup>3/</sup>	856
1972	1,193	317	392
1973	249	36 <sup>2/</sup>	228
1974	1,857	48 <sup>2/</sup>	273
1975	1,055	249	313

<sup>1/</sup> 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.

<sup>2/</sup> Incomplete survey or poor survey conditions resulting in a very minimal count.

<sup>3/</sup> Environment Canada - Fisheries Service survey.

<sup>4/</sup> Combination tower counts and aerial survey estimates.

<sup>5/</sup> Tower count. <sup>6/</sup> Combination tower and boat counts.

Appendix Table 14. Comparative Yukon River drainage summer chum salmon aerial survey escapement estimates, 1958-1975.

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>
1975	223,485	235,954	845,485 <u>5/</u>	7,573

- 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.  
6/ Includes several tributary streams.

Appendix Table 15. Comparative Yukon River drainage aerial survey estimates, fall chum salmon, 1971-1975. 1/

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
Tanana River drainage					
Bear Paw River		<u>2/</u>	1,530	2,996	1,657
Toklat River		1,000 <sup>3/</sup>	6,957	34,310	78,285 <sup>3/8/</sup>
Benchmark 735 slough		5,255	127 <sup>4/</sup>	1,450	<u>2/</u> <sup>9/</sup>
Delta River		3,650	7,971	4,010	3,946 <sup>9/</sup>
Tanana River <u>7/</u>		8,350	5,635	4,567	<u>2/</u>
Bluff Cabin slough		6,040	3,450	4,840	5,000 <sup>3/</sup>
Delta Clearwater slough		<u>2/</u>	1,720 <sup>3/</sup>	1,235	745
Chandalar River		<u>2/</u>	<u>5/</u>	17,455	6,345 <sup>3/</sup>
Porcupine River drainage					
Sheenjek River		<u>2/</u>	1,175 <sup>3/</sup>	40,507	78,060
Fishing Branch River	250-300,000	35,125 <sup>6/</sup>	15,989 <sup>6/</sup>	31,525 <sup>6/</sup>	353,282 <sup>6/</sup>

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.

8/ Surveyed entire river.

9/ Foot Survey