

Geiger

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES

ANNUAL MANAGEMENT REPORT

1972

ARCTIC-YUKON-KUSKOKWIM REGION

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PREFACE

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

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

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

The report is organized into the following major sections:

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

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

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

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

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

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

AREA INTRODUCTION

Boundaries

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

Fishery Resources

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

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Chum and pink salmon are found throughout the area although these species become relatively scarce north of the Kotzebue Sound drainage. Chum and pink salmon have been found as far north as Barrow and in the Beaufort Sea adjacent to the mouth of the Colville River. The largest spawning runs of king salmon occur from Cape Newenham to Norton Sound. King salmon are uncommon north of the Shaktoolik River in Norton Sound but have been found as far north as the Wulik River located about 100 miles northwest of Kotzebue. The greatest coho salmon runs occur in the Kuskokwim district and occurrence of this species has not been documented north of the Seward Peninsula. Red salmon are common in the Kuskokwim district and a small population exists in Salmon Lake on the Seward Peninsula. Occurrence of this species is very rare in the other districts.

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

Water Quality

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

Commercial Fishing

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

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

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

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

Subsistence Utilization

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

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

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

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

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

Management

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

Operating expenses for the A-Y-K area management and research program from July 1, 1971, through June 30, 1972, were approximately \$235,800. Of this total, state and federal funds provided \$194,400 and \$41,400 respectively.

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

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

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

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

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

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

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

Special Studies

Table 1 lists special studies undertaken during 1972 and includes a summary of objectives, procedures and results for each.

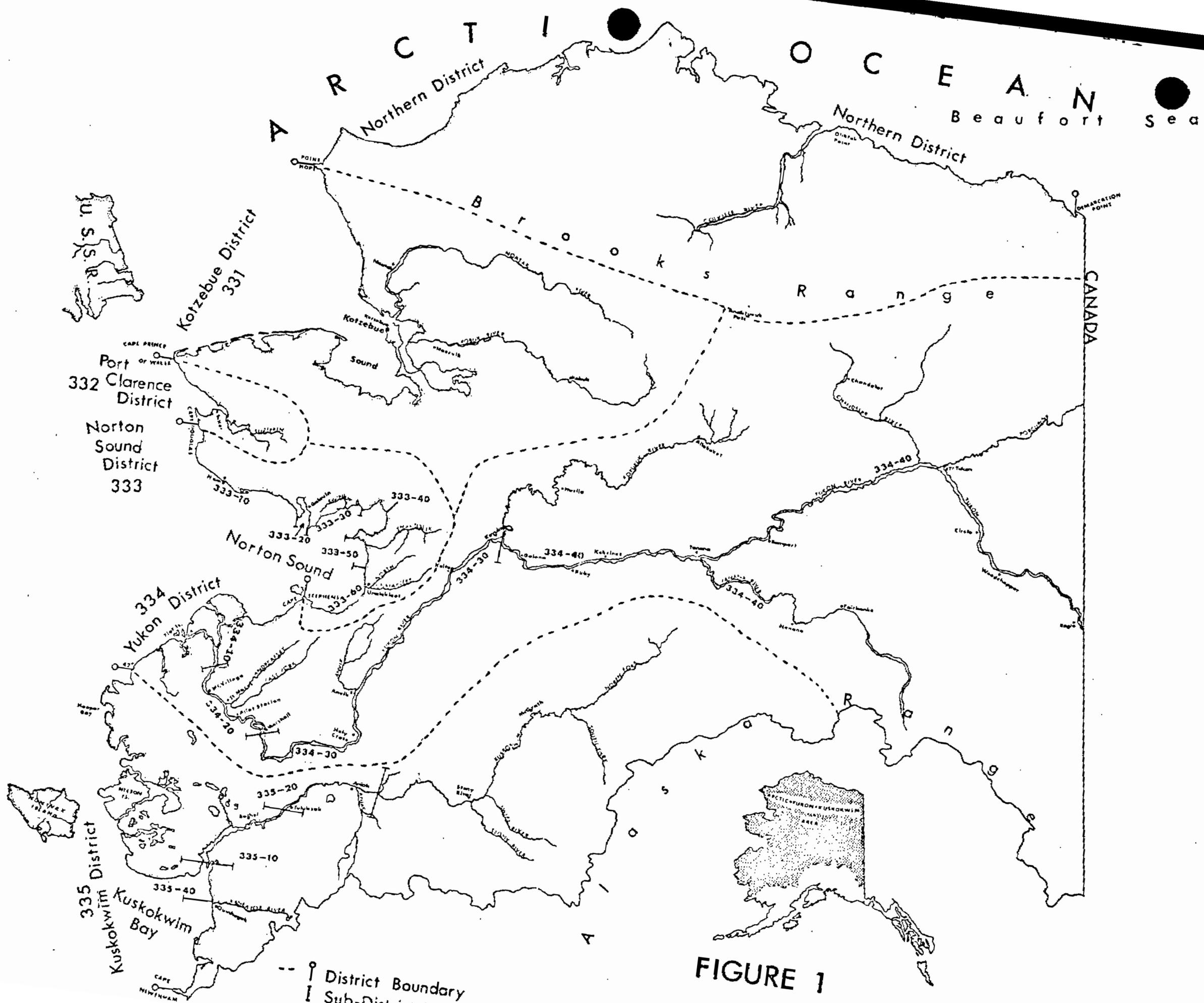


FIGURE 1

A-Y-K AREA MAP

Table 1. Summary of special projects conducted in the Arctic-Yukon-Kuskokwim Region by the Division of Commercial Fisheries, 1972

1. Kuskokwim River Test Fishing

- a. Location: Kweegooyuk on the east bank of the Kuskokwim River located 56 river miles below Bethel.
- b. Objectives: Determine run timing and relative abundance of king, red and chum salmon.
- c. Results: A total of 756 king salmon and 486 chum salmon was taken in test fishing set gill nets that were fished from June 10 through July 14. The king salmon run occurred over a time span of at least 45 days with the run peaking approximately June 15. The chum salmon run peaked during late June.

2. Yukon 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 643 kings and 1,225 chum salmon was taken in the index set gill nets from June 11 through July 14. Peak migrations for king salmon occurred during June 18-19 and also July 5-6. Peaks in the summer chum salmon migration occurred June 23-24, June 28-29 and July 10. Based on comparative catch comparisons, the 1972 king salmon run was below average in magnitude. The 1972 chum salmon run was average in magnitude.

3. Subsistence Salmon Fishery Surveys

- a. Location: Kuskokwim River, Yukon River, Norton Sound, Port Clarence and Kotzebue Sound.
- b. Objectives: Determine subsistence utilization of salmon and fishing effort needed for formulating future management procedures and goals, also collect tagrecoveries from high seas and Department tagging programs.
- c. Results: A total of 1,320 fishing families was surveyed and their catches totaled 63,711 king salmon and 316,751 other salmon. A total of 2,500 river miles was traveled by boat and 1,500 air miles by single-engine aircraft in the conduct of the survey.

4. Kogrukluk River Weir

- a. Location: Mouth of the Kogrukluk River tributary to the Holitna River (Kuskokwim River system).
- b. Objectives: Determine daily and seasonal timing and magnitude of all species of salmon entering this stream; sample for age, sex and size information.

Table 1. (continued) Summary of special projects conducted in the Arctic-Yukon-Kuskokwim Region by the Division of Commercial Fisheries, 1972.

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- c. Results: A total of 2,305 king; 10,149 chum and 734 red salmon was enumerated past the tower site. The peak of the king salmon run occurred during mid-July; chum salmon during mid- to late July; and red salmon during late July. The hourly migration patterns for king, chum and red salmon were similar with a peak in the afternoon and another peak at approximately midnight. An aerial survey conducted on July 22 accounted for only 30 percent of the king and 13 percent of the chum salmon above the tower.
5. Kwiniuk River Counting Tower
- a. Location: About five miles upstream from the mouth of the Kwiniuk River in Norton Sound located about 100 miles east of Nome.
- b. Objectives: Determine daily and seasonal timing and magnitude of the chum and pink salmon runs, also to determine accuracy of aerial survey counts.
- c. Results: A total of 30,686 chum and 62,461 pink salmon was counted past the tower in 1972. These counts were the fourth highest and third highest for chums and pinks respectively since 1965.
6. Yukon River Anadromous Fish Investigations
- a. Location: Yukon River drainage.
- b. Objectives: Develop estimates or indices of the magnitude and quality of king and chum salmon escapements, determine size and effect of commercial and subsistence harvest on various stocks of king and chum salmon plus relate collected data to long-term trends in the salmon stocks evaluating management procedures needed to maintain them at their level of maximum yield.
- c. Results: An estimated 65,202 chum and 527 king salmon were enumerated past the Anvik River tower in 1972. An estimated 403 king salmon passed through the Whitehorse Dam fishway. An exploratory survey crew sampled king salmon carcasses on the Salcha River and selected a counting tower site for the 1973 season. Index streams in the Yukon River drainage were surveyed to obtain information on magnitude of escapement. Test fishing gill nets were operated at Flat Island to obtain advance information on run timing, magnitude and composition.

The age and sex composition of the 1972 salmon run was sampled at several locations on the Yukon River and its tributaries. A subsistence catch survey was made along the Yukon River and it was determined that a minimum of 19,541 king salmon and 140,102 salmon of other species was taken in 1972.

Table 1. (continued) Summary of special projects conducted in the Arctic-Yukon-Kuskokwim Region by the Division of Commercial Fisheries, 1972.

7. Norton Sound Anadromous Fish Investigations

- a. Location: Unalakleet area.
- b. Objectives: Use tagging studies to determine migrational pattern and timing of salmon in Norton Sound; develop estimates or indices of the magnitude and quality of king, chum and pink salmon in the Unalakleet River system by use of tagging studies and a counting tower on the North River. Determine the size and effect of the commercial and subsistence harvest on various stocks of salmon and relate these data to long-term trends in the salmon stocks. Develop management procedures based on data collected to maintain salmon harvest at the level of optimum sustained yield.
- c. Results: A total of 10 king, 301 chum and 192 pink salmon was tagged and released in Norton Sound near Unalakleet. A total of 68, or 14 percent, of the salmon tagged was recovered, the majority within ten miles of Unalakleet. Only four chum salmon and one pink salmon were recovered outside of the Unalakleet area.

An estimated total of 561 king, 54,934 pink and 2,332 chum salmon migrated past the North River tower in 1972, the first year of operation. No useful information was obtained from tagging studies in the Unalakleet River because an insufficient number of fish were tagged.

A sample of 931 chum salmon, taken in the Unalakleet commercial fishery, was composed of 56.6 percent males and 43.4 percent females. Age 5₁ fish was composed of 54 percent of the sample.

The Unalakleet commercial catch totaled 2,244 king, 408 coho, 28,226 pink and 20,445 chum salmon. The subsistence catch consisted of 336 king, 1,756 coho, 2,964 pink and 3,122 chum salmon.

8. Upper Yukon River Salmon Investigations

- a. Location: Upper Yukon River from Ruby to Fort Yukon, including Koyukuk and Tanana Rivers.
- b. Objectives: Obtain accurate commercial catch information in addition to collecting age, sex and size data and tag recoveries; distribute information regarding licensing and regulations.
- c. Results: A temporary F.B. I, stationed in Fairbanks, made several trips during the season to important villages in the area. The commercial catch consisted of 1,092 kings, 22 cohos and 1,254 chums. Several king salmon were sampled for age, sex and size data.

9. Commercial Salmon Catch Sampling

- a. Various locations: In all districts.

Table 1. (continued) Summary of special projects conducted in the Arctic-Yukon-Kuskokwim Region by the Division of Commercial Fisheries, 1972.

- b. Objectives: Obtain age, sex and size information for commercially caught fish.
 - c. Results: Several thousand samples of all species were taken in 1972. This information has been tabulated and analyzed and will be presented in subsequent separate reports.
10. Kuskokwim River Whitefish Investigations
- a. Location: Kuskokwim River drainage
 - b. Objectives: Determine whitefish taxonomy, movements, locations of spawning areas and age, sex and size compositions of various populations.
 - c. Results: A report is being prepared in which all tagging and age, sex and size studies will be summarized; taxonomic studies indicate the need for a standardized method of collecting meristical count data to distinguish species and stocks of whitefish.

AREA SUMMARY, 1972

Commercial Fishery

Table 2 presents commercial catches by district for the 1972 season. The total area catch included 152,720 kings, 4,312 reds, 46,567 cohos, 47,134 pinks and 655,625 chums totaling 906,358 salmon.

Appendix Table 1 compares the area commercial catches during the 1960-1972 period. The 1972 harvest of chum salmon and all species combined was the third and second greatest respectively ever recorded.

Table 3 is a list of 1972 buyers and processors, showing associated processing information for each.

During 1972 approximately \$1,507,000 was paid to fishermen for salmon deliveries. Wages earned by processing plant employees, tenderboat operators, etc., added another estimated \$653,000 to the economy of this area.

Subsistence Fishery

In 1972 a minimum total of 63,711 kings and 316,751 other salmon, mostly chums, was taken by 1,320 fishing families. Table 2 shows subsistence catches by district for 1972 and Appendix Table 1 compares area catches made during the 1960-1972 period.

Total Utilization

A minimum total of 1,286,820 salmon of all species was harvested by both commercial and subsistence fishermen in 1972. This was the fourth largest utilization recorded for the 1960-1972 period.

Table 2. Arctic-Yukon-Kuskokwim area total salmon catch by district, 1972

	Kings	Reds	Cohos	Pinks	Chums	All species
Kuskokwim:						
Commercial	56,939	4,312	23,880	1,952	97,197	184,280
Subsistence	<u>43,335</u>	<u>1,134</u>	<u>2,905</u>	<u>782</u>	<u>125,575</u>	<u>173,731</u>
Subtotal	100,274	5,446	26,785	2,734	222,772	358,011
Yukon:						
Commercial	92,840		22,233		287,844 ^{1/}	402,917
Subsistence	<u>19,568</u>				<u>141,490</u>	<u>161,058</u>
Subtotal	112,408		22,233		429,334	563,975
Norton Sound:						
Commercial	2,938		454	45,182	100,920	149,494
Subsistence	<u>804</u>		<u>2,319</u>	<u>14,158</u>	<u>13,966</u>	<u>31,247</u>
Subtotal	3,742		2,773	59,340	114,886	180,741
Port Clarence:						
Commercial						
Subsistence	<u>4</u>	<u>68</u>	<u>388</u>	<u>75</u>	<u>2,806</u>	<u>3,091</u>
Subtotal	4	68	388	75	2,806	3,091
Kotzebue:						
Commercial	3				169,664	169,667
Subsistence					<u>11,085</u>	<u>11,085</u>
Subtotal	3				180,749	180,752
Grand total of A-Y-K Area:						
Commercial	152,720	4,312	46,567	47,134	655,625	906,358
Subsistence	<u>63,711</u>	<u>1,202</u>	<u>5,612</u>	<u>15,015</u>	<u>294,922</u>	<u>380,462</u>
Total	216,431	5,514	52,179	62,149	950,547	1,286,820
Totals, 1971	229,379	7,430	38,835	17,285	1,047,618	1,340,547
Totals, 1970	235,510	13,242	96,575	119,955	1,208,241	1,673,523
Totals, 1969	214,606	10,490	179,774	107,348	852,769	1,364,987
Totals, 1968	201,319	6,572	177,014	185,815	666,172	1,236,892

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

Table 3. 1972 Arctic-Yukon-Kuskokwim Region processors and associated data.

Commercial operator	Product	Average price paid to fishermen (estimated)	District
Kotzebue Sound Area Fishery Co-op Box 270 Kotzebue, Alaska	Fresh salmon	.16 per lb.	Kotzebue
	Fresh sheefish, char	.18 per lb.	
Hansons Trading Co. Box 47 Kotzebue, Alaska	Fresh sheefish	.20 per lb.	Kotzebue
	Fresh char	.30 per lb.	
	Fresh whitefish	<u>1/</u>	
Peninsula Fisheries Co. 1402 K Street Anchorage, Alaska	Frozen salmon		Norton Sound and Kotzebue
	Kings	.27 per lb.	
	Cohos	.14 per lb.	
	Pinks	.06 per lb.	
	Chums	.16-.17 per lb. (Norton Sd.) .16 per lb. (Kotzebue)	
Northern Commercial Co. Nome, Alaska	Fresh & frozen salmon		Norton Sound
	Chums	.16 per lb.	
Northern Commercial Co. Unalakleet, Alaska	Fresh & frozen char	.40 per lb.	Norton Sound
Northern Commercial Co. 419 Colman Building Seattle, Washington	Mild cured, hard salt & frozen		Yukon Subdistrict 1
	Kings	.24 per lb.	
	Cohos	.13 per lb.	
	Chums	.11 per lb.	
	Salmon roe		
Peter E. Merry 1206 Coppet Fairbanks, Alaska	Fresh & frozen king salmon	.35 per lb. (dressed wt.)	Yukon Subdistrict 4
Sterling True Nenana, Alaska	Salmon roe	<u>1/</u>	Yukon Subdistrict 4

Table 3. (continued) 1972 Arctic-Yukon-Kuskokwim Region processors and associated data.

Commercial operator	Product	Average price paid to fishermen (estimated)	District
John Amukon Scammon Bay, Alaska	Hard salt kings	5.00 each	Yukon Subdistrict 1
Yukon Delta Fish Marketing Co-op, Inc. Emmonak, Alaska	Frozen Kings Cohos Chums Salmon roe	.24 per lb. .12 per lb. .11 per lb.	Yukon Subdistrict 1
Les Fickes Box 2618 Fairbanks, Alaska	Fresh king salmon	.55 per lb. (dressed wt.)	Yukon Subdistrict 4
Mountain Village Fish Co. Mountain Village, Alaska	Canned #1/2 flats Kings Chum Hard salt kings Salmon roe	.24 per lb. .10 per lb. .24 per lb.	Yukon Subdistricts 1 & 2
Glenn Miller 226 Northward Building Fairbanks, Alaska	Fresh king salmon	.30 per lb. (dressed wt.)	Yukon Subdistrict 4
Nenana Reefer & Processing Box 26 Nenana, Alaska	Frozen salmon Kings Chums Salmon roe	.50 per lb. .23 per lb.	Yukon Subdistrict 4
Wildred Kozevnikoff Tanana, Alaska	Fresh king salmon	.25 per lb.	Yukon Subdistrict 4

Table 3. (continued) 1972 Arctic-Yukon-Kuskokwim Region processors and associated data.

Commercial operator	Product	Average price paid to fishermen (estimated)	District
Albert M. Yrjana Box 5 Ruby, Alaska	Frozen, salted & smoked king salmon Salmon roe	<u>1/</u>	Yukon Subdistrict 4
Ruben Esau Nenana, Alaska	Fresh dressed salmon Kings Chums	<u>1/</u>	Yukon Subdistrict 4
Arctic Diving & Salvage Charles Anderson 1321 Karen Street Fairbanks, Alaska	Fresh salmon Kings Cohos Chums Salmon roe	<u>1/</u>	Yukon Subdistrict 4
Henry Ketzler Box 35 Nenana, Alaska	Smoked chum salmon Salmon roe	<u>1/</u>	Yukon Subdistrict 4
Gurtler Enterprises 4461 Woodriver Drive Fairbanks, Alaska	Smoked king salmon	<u>1/</u>	Yukon Subdistrict 4
Paul Beard Tanana, Alaska	Fresh king salmon Fresh & smoked chum salmon Salmon roe	.30 per lb. .11 per lb.	Yukon Subdistrict 4
Bering Sea Fisheries, Inc. Rt. 2, Box 252 Everett, Washington	Frozen salmon (in round) & canned (#1 talls) Kings Chums Cohos Mild cure king salmon Salmon roe	.24 per lb. .11 per lb. .13 per lb. .24 per lb.	Yukon Subdistrict 1

Table 3. (continued) 1972 Arctic-Yukon-Kuskokwim Region processors and associated data.

Commercial operator	Product	Average price paid to fishermen (estimated)	District
Arnold Akers Chuloonawick, Alaska (via Kotlik, Alaska)	Mild cure & fresh frozen		Yukon Subdistrict 1
	Kings	.24 per lb.	
Clark Fishing Enterprises Box 517 Aniak, Alaska	Chums	.10 per lb.	Yukon Subdistrict 3 Kuskokwim Subdistrict 2
	Fresh dressed		
J. Bruce Crow & Sons Box 37 Bethel, Alaska	Kings	.25 per lb.	Kuskokwim Subdistricts 1 & 2
	Red	.12 per lb.	
Coho	5.00 each		
Chum	1.00 each		
Kuskokwim Fishermen's Cooperative, Inc. Bethel, Alaska	Chum	1.00 each	Kuskokwim Subdistrict 1
	Frozen	.60 each	
	King	.21 per pound	
	Coho	.17 per pound	
Schenk Seafood Sales, Inc. 1680 Toad Lake Road Bellingham, Washington	Chum	.08 per pound	Kuskokwim Subdistrict 1
	Fresh		
	Salmon roe		
	Fresh dressed		
	King	.23 per lb.	
Swanson's Bros. Box 478 Bethel, Alaska	Coho	.18 per lb.	Kuskokwim Subdistrict 1
	Chum	.11 per lb.	
	Cured		
Swanson's Bros. Box 478 Bethel, Alaska	Salmon roe		Kuskokwim Subdistrict 1
	Fresh, frozen		
	Kings	.11 per lb.	
Swanson's Bros. Box 478 Bethel, Alaska	Cohos	.23 per lb.	Kuskokwim Subdistrict 1
	Chums	.29 per lb.	

Table 3. (continued) 1972 Arctic-Yukon-Kuskokwim Region processors and associated data.

Commercial operator	Product	Average price paid to fishermen (estimated)	District
Theodore Seafoods, Inc. 2340 W. Newton Seattle, Washington	Frozen		Kuskokwim Subdistrict 1
	King	5.00 each	
	Red	1.00 each	
	Coho	.50 each	
	Chum	.50 each	
	Pink	.25 each	
	Fresh		
	Salmon roe		
Togiak Fisheries, Inc. 614 Lowman Building Seattle, Washington	Frozen		Kuskokwim Subdistrict 1
	King	2.50 each	
	Red	1.10 each	
	Cohos	.90 each	
	Pinks	.35 each	
	Chums	.60 each	
	Fresh		
	Salmon roe		
Kuskokwim Inn Cafe Box 122 Bethel, Alaska	Fresh King	2.80 each	Kuskokwim Subdistrict 1

1/ Information not available.

Appendix Table 1. Arctic-Yukon-Kuskokwim total salmon catch, 1960-1972.

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

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

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

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

YUKON DISTRICT

DISTRICT AND SUBDISTRICT BOUNDARIES

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

The present subdistrict boundaries were established in 1961 and 1962. The commercial fishing area is divided into four subdistricts for management and regulatory purposes: 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 Koyukuk River); and subdistrict 334-40 (the remaining drainage above the Koyukuk River). These subdistricts are further subdivided into statistical areas for management and research purposes (Figures 2 and 3).

COMMERCIAL FISHERY

Introduction

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

The first recorded commercial salmon harvest in Alaska was in 1918 when Carlisle Packing Company operated a floating cannery at Andrafsky (now St. Marys). Relatively large catches of king, coho and chum salmon were made during the first four years of this fishery (Appendix Table 19). 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 considerable 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 1922 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 above the Anvik River. During these years, fishing was allowed for five and one-half days a week until the specific quotas were obtained.

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

Commercial fishing in subdistrict 334-30 is allowed for a total of four days a week until quotas of 3,000 king and 3,000 chum and coho salmon combined are taken. In subdistrict 334-40 fishing is allowed seven days a week until quotas of 2,000 king and 2,000 chum and coho salmon combined are taken. These quotas have been established for the purpose of allowing a very limited commercial utilization which traditionally has occurred for many years.

Since 1961 commercial fishing for four days a week has been reopened in subdistrict 334-10 when buyers have been available. This season is referred to as the "fall season" and primarily fall chum and coho salmon are taken. Opening dates for the fall season have ranged from July 11 to August 3 and the season ends in late August or early September when buyers terminate their operations. The mid-season closure during July and often including late June was initially for the purpose of insuring an adequate supply of summer chum salmon for upriver subsistence fishermen. Also this closure provides protection for the late stages of the king salmon run.

Excluding the 1920's, the sale of other species of salmon captured during the king salmon season in the area of the present lower two sub-districts has been allowed only since 1967. The incidental catch of summer chum salmon is limited during this season as most gill nets must have stretched mesh sizes 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.

Set gill nets, drift gill nets and fishwheels are legal forms of commercial fishing gear. Set gill nets in use by any individual fisherman cannot exceed 150 fathoms in length and drift gill nets cannot exceed 50 fathoms. Set gill nets are most commonly used, especially near the river mouth, but the use of drift gill nets is increasing each season. 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.

Finally, subsistence fishing is prohibited during the closed fishing periods of the commercial fishing seasons in the lower two subdistricts.

Appendix Table 21 presents commercial catches for each subdistrict since 1960.

1972 District Summary

In 1972 there were 92,840 kings; 22,233 cohos; and 237,844 chums totaling 402,917 salmon taken commercially (Table 15). This was the fourth largest harvest ever recorded for chum salmon and also for all species combined (Appendix Table 19).

A record total of 765 commercial, 660 vessel, 634 set gill net and 319 drift gill net licenses were issued for the district in 1972. Set gill net registration increased approximately 11 percent over the previous high recorded in 1971 (Appendix Table 20). Much of the increase in total license registration occurred in subdistricts 334-20 and 334-30 where an increase of 11 and 14 percent was recorded compared to 1971.

The above license totals do not include commercial and vessel licenses issued for fish tendering purposes throughout the district and fishwheels that were operated in subdistrict 334-40 (gear licenses are not required for fishwheels). A total of 26 fishermen indicated they planned to operate fishwheels in subdistrict 334-40. Table 17 shows the residency of all persons issued commercial fishing licenses for 1972. The vast majority of the commercial fishermen are Eskimo and Indian residents of the Yukon River drainage.

The majority of the king salmon catch was handled by either mild cure-hard salt or fresh frozen processors. Production of canned king salmon was at a very low level as only two small canneries operated in the lower river. The majority of the chum and coho salmon were frozen by three floaters. Production of salmon roe totaled 68,278 pounds in 1972 (Appendix Table 24). Table 3 includes all buyers and processors that operated in the Yukon district during 1972.

Yukon district commercial fishermen received about \$784,000 for their catches. In addition, a minimum of \$445,400 in wages was estimated to have been earned by processing plant employees and tenderboat operators. The latter figure was obtained from information supplied by a majority of the buyers and processors. The first wholesale value of the 1972 pack was estimated at \$2,405,200 (Appendix Table 25).

Appendix Tables 26 and 27 show mean fish prices and mean salmon weights respectively for 1960-1972. Average size of king salmon in 1972 was relatively large due to a very high proportion of six year old fish in the commercial catch.

King Salmon Season: Under the new regulations established by the Department since 1961, the annual king salmon catch has averaged nearly 105,000 compared to 63,023 for the previous nine-year period (1952-1960), an increase of about 65 percent (Appendix Table 19). The 1972 catch of 92,840 king salmon was approximately 12,000 less fish compared to the previous eleven-year average. The greatest catch ever made in the district was 129,706 king salmon taken in 1967.

The 1972 catch data presented in this report does not include king and chum salmon taken commercially by Canadian commercial fishermen in Yukon Territory (Appendix Table 19).

Table 18 shows the king salmon catches (and incidental chum salmon catches) made in each subdistrict and statistical area during the 1972 king salmon season. Tables 20 through 22 present daily catch data for the lower three subdistricts. Daily catch data for 334-40 are not shown.

The majority of the data available indicate that the 1972 run of king salmon was apparently slightly below average in abundance. King salmon catch per boat hour (king salmon season) of 0.86 for subdistricts 334-10 and 334-20 combined was below average (Appendix Table 22). Subsistence catches were average.

Entry of the run into the river was 5-7 days later than usual. This probably was influenced by below average water temperatures in the Bering Sea. A late breakup of the river ice--the lower Yukon was not ice free until about June 3--was also probably a contributing factor.

The first king salmon was taken in the south mouth on June 9 and the commercial catches in subdistrict 334-10 increased steadily with each successive period peaking on the following dates within certain fishing areas of subdistrict 334-10: June 15-17 (Black River, 334-11); June 19-21 (South mouth, 334-12 and Kwiguk and Bugomowik mouths, 334-14 and Sunshine Bay, 334-13); June 22-24 (Middle mouth, 334-15 and North mouth, 334-16); and June 29-July 1 (Head of Passes and Fish Village 334-17 and 334-18).

A high percentage of the king salmon passed through the middle mouth area, 334-15, providing excellent catches there. A total of 18,235 kings, or approximately 27 percent of the entire subdistrict 334-10 catch, was taken from subarea 334-15 (Table 2). In contrast to the strong showing of kings in the middle mouth, the run entering the south mouth (334-12) where the majority of fishing gear is operated was poor. Only 11,638 kings, or approximately 17 percent of the total subdistrict 334-10 harvest, was taken in 334-12.

The subdistrict 334-20 king salmon catch, boosted by a large number of fish passing through the middle mouth (334-15), peaked during June 25 to July 1.

Unlike the 1971 season when large numbers of kings were "dumped" by processors when the processing plants became glutted with fish, very few kings were discarded in 1972.

Based on the indicated below average king salmon run as indicated by comparative low catch per unit effort data from the commercial and test fishery, the 334-10 and 334-20 fishery was closed by emergency order effective 6:00 p.m. July 1. The 3,000 king salmon quota in subdistrict 334-30 was exceeded and the fishery was closed by emergency order effective 6:00 a.m. July 4. The 2,000 quota for subdistrict 334-40 was never exceeded.

In contrast to the 1971 season when a very large run of kings entered the river after the king salmon season was closed, the "late" run of kings in 1972 was relatively small--based on Flat Island test fishing data and observation of subsistence fishermen's catches in the middle mouth area.

Chum and Coho Salmon: Tables 20, 21 and 22 also present commercial catch data by fishing period for these species. The 1972 chum salmon harvest of 287,844 exceeded the previous 10 year average by 173,488 fish. The 1972 coho salmon harvest of 22,233 was above average, double the previous 11 year average of 10,653 fish (Appendix Table 19).

The large chum catch was a result of several factors including greater fishing effort and increased processing and tender facilities available for this species in recent years. Also, the increased harvest in recent years reflects the gradual relaxation of fishery restrictions due to the decline in the dependence upon subsistence fishing for chum salmon.

The chum catch included 79,225 taken during the king salmon season in the lower three subdistricts (Table 18). Previous catches for these three subdistricts and fishery have ranged between 10,919 (1967) to 104,705 (1970). An estimated 6,000 chums that were purchased during the king salmon season spoiled and had to be discarded due to the unusually warm weather and improper handling procedures. Relatively few fishermen in 1972 took advantage of the regulation allowing the substitution of up to 50 fathoms of gill net of any mesh size, but those that did made excellent catches.

The first chum salmon was taken on June 11 by Department test fishing nets at Flat Island. Peak commercial catches during the king salmon season occurred during the period June 22-24. Peak test fishing catches at Flat Island occurred during June 28-29 (a closed period).

The subdistrict 334-10 and 334-20 fishing seasons were reopened effective 12:01 a.m. July 11 and the subdistrict 334-30 season was reopened 6:00 p.m. August 2 by emergency order. This season--referred to locally as the "fall season"--lasted through September 2 when the last processor terminated operations. The subdistrict 334-20 subsistence fishery was opened to subsistence fishing seven days a week on August 2 when the major processor in this subdistrict ceased buying fish. During the fall season 207,365 chums were taken in addition to 2,531 kings and the entire coho salmon catch reported above (Table 19). Based on catch per unit effort data, the chum run during the fall season was smaller than the 1969-1971 runs (Appendix Table 23). As mentioned above, the large 1972 chum catch was attributed to increased effort. The 1972 large coho salmon catch was attributable to increased effort and, in addition, an apparent large run as indicated by catch per unit effort data (Appendix Table 23).

Enforcement

Observed violations have increased over previous years. The most common violation was fishing during the closed period, especially during the "fall season." Other observed violations included fishing outside boundary markers in the south mouth and fishing farther than one nautical mile offshore from any grassland bank in unmarked coastal areas. Also, fishing unmarked gear is a common violation. Under new procedures enacted this year, commercial fisheries personnel did not issue violation notices, but instead documented violations or in some cases confiscated gear and turned the information over to Division of Fish and Wildlife Protection personnel for follow-up action.

SUBSISTENCE FISHERY

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

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

An estimated 19,541 king and 140,102 other species of salmon, mostly chums, were taken in the Yukon River drainage (including Yukon Territory catches). In addition 27 kings and 1,388 other species (not included in the Yukon River drainage totals) were taken at Stebbins, a coastal village located several miles north of the Yukon River mouth. Table 23 presents 1972 catch data for each Yukon River community and Appendix Table 28 shows comparative Yukon River catch data for 1961-72. Appendix Table 19 shows Yukon River drainage historical subsistence catch data for 1918-72.

During the last few seasons, a greater attempt was made to contact all residents in all Yukon River communities. A total of 798 families was recorded in 1972, but only 461 had one or more members that were subsistence fishermen. There were 256 nonfishing families in addition to 81 families for which it was impossible to determine if they fished or not (Table 24).

Comparing catches from villages surveyed each year since 1961 ("Equivalent catches"), the 1972 Yukon River king salmon harvest was nearly equal to the previous 11-year average of 17,047 fish (Appendix Table 28).

For the seventh consecutive season, a relatively small catch of the "other salmon" (mostly chums) species was taken in 1972. The 1972 catch was the smallest harvest ever recorded. Equivalent catches averaged 400,874 during 1961-1965, compared to an average of only 188,226 during 1966-1972, a decrease of 53 percent.

Permits are required for subsistence fishing in the upper Tanana River drainage upstream from Wood River. In 1972, 16 permits were issued for salmon fishing with 10 fishermen reporting catches of 46 king, 40 coho and 177 chum salmon. Five permittees did not fish and one fisherman did not turn in his catch report. In addition 10 permits were issued for whitefish and other miscellaneous species and 19 permits were issued for taking salmon carcasses.

From all indications the annual Yukon River subsistence salmon harvests for some years in the early 1900's and even as late as 1940 exceeded one million fish (Appendix Table 19). Recent declines in subsistence catches are not necessarily due to fish abundance, but mainly reflect decreases in fishing effort and dependence due to a changing way of life.

To illustrate changes in effort, there were 393 fishwheels operated on the Yukon River in 1918. Fishwheels are very effective and each wheel is capable of taking from 2,000 to 5,000 chum salmon annually if fished properly. The number of fishwheels recorded during the 1970 survey was an all-time low of 56, a decrease of 200 percent since 1961. In 1961 each fishing family kept an average of 7.7 sled dogs, while in 1972 this figure was down to 3.4 sled dogs. Finally, the number of snowmachines owned by fishing families was documented beginning with the 1967 season when the average number of snowmachines per family was 0.41. In 1972 the average number of snowmachines per family increased to 1.1 (Appendix Table 28).

ESCAPEMENT

The Yukon River drainage (330,000 square miles) is too extensive for complete aerial survey coverage during any given season. In addition poor survey conditions have prevented surveys from being flown during some years, or have resulted in minimum counts. Table 25 presents aerial survey data for all surveys conducted in 1972. Aerial survey conditions were generally good.

Appendix Table 29 presents comparative king salmon escapement data for selected tributaries during the 1959-1972 period. Surveys of king salmon index spawning streams in the Alaskan portion of the Yukon River drainage ranged from "fair to good;" however, escapement counts in Canada were below average.

Studies indicated the 1972 king salmon spawning escapement was composed of a moderately high percentage of females. The 1972 Salcha River escapement sample was composed of 1.2:1 sex ratio in favor of females versus a 3.8:1 ratio in favor of males in 1970. The 1972 Whitehorse dam sex ratio was similar, 1.3:1 in favor of females.

Good comparative data are lacking for summer chum salmon escapements. The 1972 aerial survey count of 211,633 chums in the Anvik River system is similar to the count of 232,780 made in 1970.

Intensive aerial surveys of fall chum and coho salmon were made in upper Tanana River drainage in 1972 by the Division of Commercial Fisheries for the first time. Large concentrations of fall chums were observed spawning in the Tanana River (Harding Lake to Delta Clearwater River) and Delta River during late October-early November. A total of 19,657 and 3,650 chum salmon was observed in the Tanana and Delta Rivers respectively. Coho salmon were enumerated in the following Tanana River tributaries: Richardson-Clearwater Creek (349), Clearwater Lake and Stream (417) and Delta Clearwater Creek (434).

In the Yukon Territory a total of 35,326 fall chums was estimated spawning in the Fishing Branch River, a tributary of the Porcupine River, in 1972 by Canadian Department of Fisheries personnel.

OUTLOOK FOR 1973

It is difficult to predict the relative magnitude of the 1973 Yukon River king salmon run. Based on only commercial catch data of the 1967 brood year, it is indicated that the magnitude of the run was relatively large. A total of 129,706 kings, the largest catch in history, was harvested by commercial fishermen. However, escapements appear to be only "fair" based on upriver catches and limited aerial surveys of spawning escapements. There are indications that the 1967 run was possibly over-harvested resulting in escapements that were not proportional to the commercial catch.

In addition, the severe flooding of the upper Tanana River drainage during July and August, 1967, may have adversely affected egg survival in many salmon spawning streams including the Salcha River, an important king salmon producer. There are some indications that the 1967 flood has already affected the brood year stocks in the upper Tanana River drainage. For example, the return of 5-year old kings to the Salcha River in 1972 was composed of only 7.5 percent of the escapement compared to 38.3 percent 5-year olds sampled in 1970.

In summary it appears that the 1973 king salmon run may be less than average as a result of possible insufficient escapements and unfavorable environmental conditions in the upper Tanana River drainage which may have caused poor survival of progeny. Fishing time restrictions may be required during the 1973 season in order to obtain adequate spawning escapements. Also, until future returns can be studied, the commercial harvest goal for Yukon River king salmon should not exceed 105,000 fish (the 1961-1972 average) unless an exceptionally large run is indicated.

There is little information on which to estimate the relative magnitude of the 1973 runs of chum and coho salmon. It is anticipated that the chum run will be average, or possibly larger, and the commercial harvest will total 300-400,000 fish depending on effort for summer chums.

Present fall chum salmon harvest levels appear to be approaching maximum sustained yield.

Increases in the commercial chum salmon harvest should be directed toward the larger summer chum salmon run. Since 1967 the Department has taken steps to liberalize regulations in order to allow an increase in the commercial harvest of summer chum salmon as the subsistence fishery declined. For the 1973 season several important changes in gill net mesh size regulations have been promulgated for subdistricts 1 and 2 in order to increase the harvest of summer chums: (1) the 8 inch maximum mesh size restriction previously in effect for the king salmon season has been lifted and now fishermen can operate gill nets of any mesh size; (2) a 6 inch maximum mesh size is required after July 4; and (3) commercial fishing will be allowed during the early to mid-July period when the season is normally closed and when summer chum salmon are present in large numbers.

The relaxation of the regulations as outlined above should result in a substantial increase in harvest of summer chum salmon as compared to the average catch of 66,000 made during 1969-1972. A conservative estimate is that the summer chum run can withstand an annual commercial harvest of 150,000-300,000 fish.

The coho salmon catch is expected to be average: 12,000-15,000 fish.

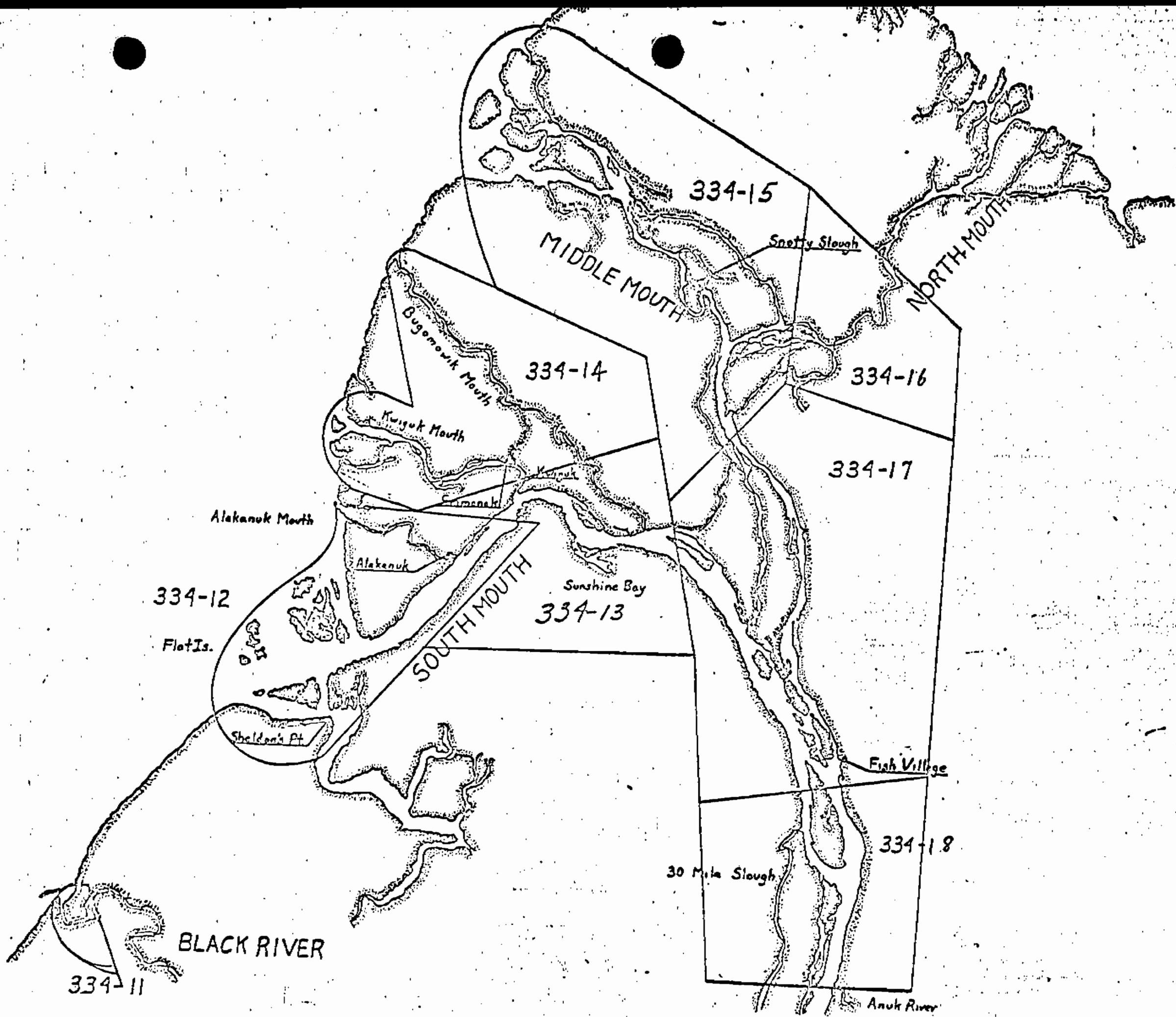


Figure 2. Sub-district 334-10, Yukon district.

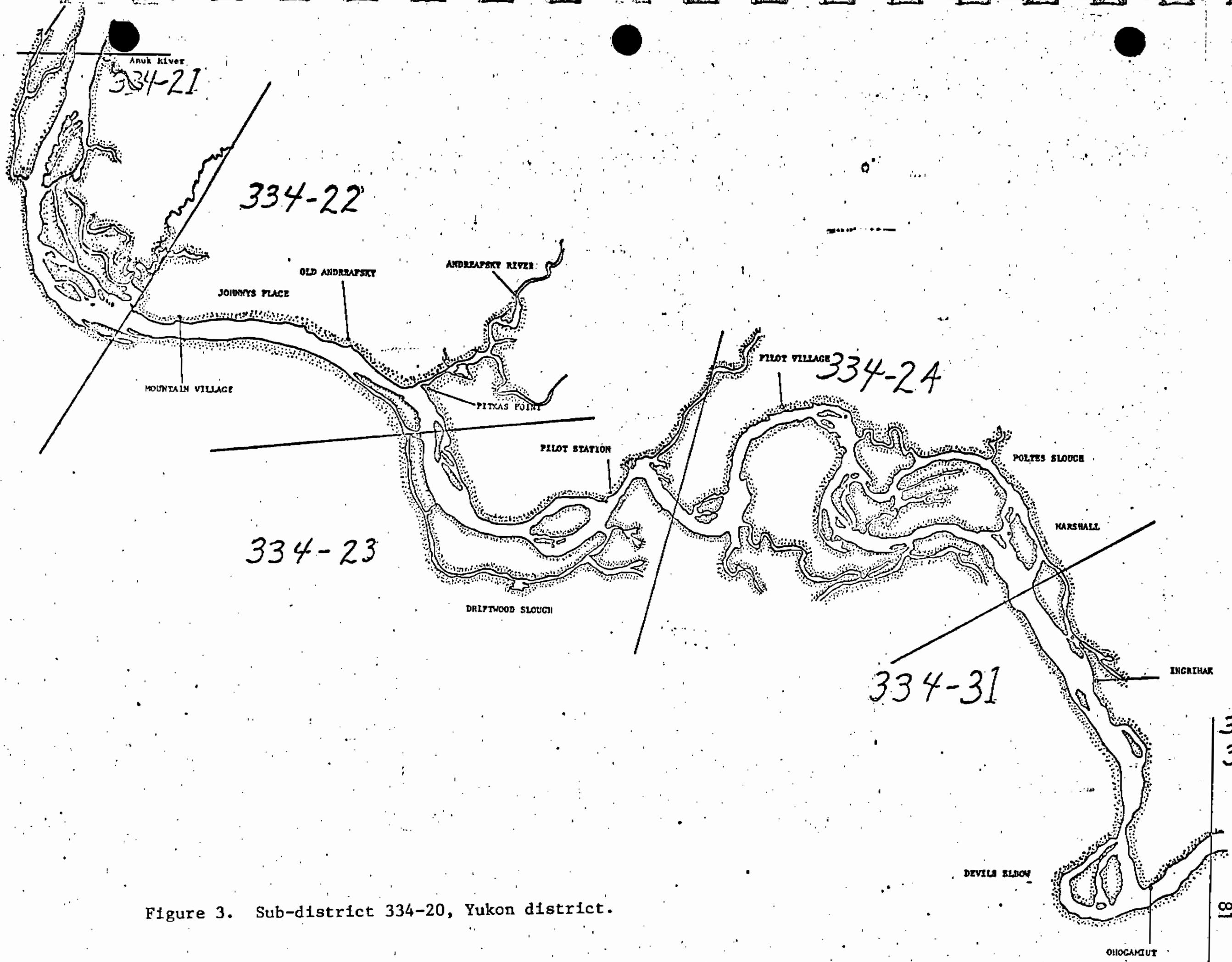


Figure 3. Sub-district 334-20, Yukon district.

334
32.

Table 15. Commercial salmon catches by species and subdistrict, Yukon district, 1972.

Subdistrict	Kings	Cohos	Chums	Total
<u>334-10 (Mouth-Anuk River)</u>				
King salmon season (6/8-7/1)	68,059	-	69,658	137,717
Fall season (7/11-9/2)	<u>1,993</u>	<u>21,705</u>	<u>181,287</u>	<u>204,985</u>
Total	70,052	21,705	250,945	342,702
<u>334-20 (Anuk River-Owl Slough)</u>				
King salmon season (6/11-7/1)	17,317	-	9,040	26,357
Fall season (7/11-8/26)	<u>538</u>	<u>506</u>	<u>24,765</u>	<u>25,809</u>
Total	17,855	506	33,805	52,166
<u>334-30 (Owl Slough-Koyukuk River)</u>				
King salmon season (6/19-7/4)	3,841	-	527	4,368
Fall season (8/2-8/30)	<u>-</u>		<u>1,313</u>	<u>1,313</u>
Total	3,841		1,840	5,681
<u>334-40 (Above Koyukuk River)</u>	1,092	22	1,254	2,368
GRAND TOTAL	92,840	22,233	287,844	402,917

Table 16. Commercial salmon catches by species, subdistrict and gear, Yukon district, 1972.

Subdistrict	Kings	Cohos	Chums	Total
<u>334-10</u>				
Set gill net	59,737 (85.3%)	20,019 (92.2%)	218,192 (86.9%)	297,948 (86.9%)
Drift gill net	10,315 (14.7%)	1,686 (7.8%)	32,753 (13.1%)	44,754 (13.1%)
Subtotal	70,052 (100.0%)	21,705 (100.0%)	250,945 (100.0%)	342,702 (100.0%)
<u>334-20</u>				
Set gill net	3,481 (19.5%)	232 (45.8%)	5,600 (16.6%)	9,313 (17.9%)
Drift gill net	14,374 (81.5%)	274 (54.2%)	28,205 (83.4%)	42,853 (82.1%)
Subtotal	17,855 (100.0%)	506 (100.0%)	33,805 (100.0%)	52,166 (100.0%)
<u>334-30</u>				
Set gill net	2,042 (53.2%)	-	1,735 (94.3%)	3,777 (66.5%)
Drift gill net	1,799 (46.8%)	-	105 (5.7%)	1,904 (33.5%)
Subtotal	3,841 (100.0%)	-	1,840 (100.0%)	5,681 (100.0%)
<u>334-40</u>				
Set gill net	785 (71.9%)	-	-	785 (33.2%)
Fishwheel	307 (28.1%)	22 (100.0%)	1,254 (100.0%)	1,583 (66.8%)
Subtotal	1,092 (100.0%)	22 (100.0%)	1,254 (100.0%)	2,368 (100.0%)
<u>District 334</u>				
Set gill net	66,045 (71.1%)	20,251 (91.1%)	225,527 (78.4%)	311,823 (77.4%)
Drift gill net	26,488 (28.5%)	1,960 (8.8%)	61,063 (21.2%)	89,511 (22.2%)
Fishwheel	307 (0.4%)	22 (0.1%)	1,254 (0.4%)	1,583 (0.4%)
Total	92,840 (100.0%)	22,233 (100.0%)	287,844 (100.0%)	402,917 (100.0%)

Table 17. Yukon district commercial fishing licenses issued by residence, 1972.

Residence	334-10	334-20	334-30	334-40	Total--334
Sheldons Point	24				24
Alakanuk	99				99
Emmonak	105				105
Kotlik	70				70
Hamilton	1				1
Scammon Bay	38				38
Stebbins	8				8
Mt. Village	38	79			117
Pitkas Point		14			14
St. Marys	26	36			62
Pilot Station	21	42			63
Fortuna Ledge	6	21	13		40
Russian Mission	6		12		18
Holy Cross	1		16		17
Bethel	3				3
Anchorage	3	1			4
Kenai			2		2
Homer	2				2
Shaktoolik	5				5
Everett, Washington	5				5
Seattle, Washington	1				1
Chehalis, Washington	2				2
Concrete, Washington	2				2
Myrtle Point, Oregon	4				4
Springfield, Oregon	1				1
New Bedford, Mass.	2				2
Nenana				11	11
Tanana				14	14
Fairbanks				12	12
College				2	2
Central				1	1
Galena				2	2
Ruby				3	3
Fort Yukon				1	1
Rampart				3	3
Stevens Village				3	3
Manley Hot Springs				1	1
Koyukuk				1	1
Eagle				2	2
Totals	473	193	43	56	765

Table 18. Commercial salmon catches by statistical area, during king salmon season, Yukon district, 1972.

Statistical area	King	Coho	Chum
334-11	2,730		3,277
334-12	11,638		34,881
334-13	3,435		1,309
334-14	9,073		4,868
334-15	18,375		11,325
334-16	5,276		1,611
334-17	13,059		7,933
334-18	<u>4,473</u>		<u>4,454</u>
Subtotal 334-10	68,059		69,658
334-21	1,802		1,806
334-22	10,916		6,992
334-23	1,337		65
334-24	<u>3,262</u>		<u>177</u>
Subtotal 334-20	17,317		9,040
334-31	1,783		-
334-32	<u>2,058</u>		<u>527</u>
Subtotal 334-30	3,841		527
334-40	<u>1,092</u>	<u>22</u>	<u>1,254</u>
Subtotal 334-40	1,092	22	1,254
Total 334	90,309	22	80,479

Table 19. Commercial salmon catches by statistical area, during fall season, Yukon district, 1972.

Statistical area	King	Coho	Chum
334-11	115	-	1,909
334-12	669	7,296	64,028
334-13	173	1,219	10,837
334-14	330	1,944	21,075
334-15	207	5,821	44,714
334-16	55	1,156	2,462
334-17	410	3,518	30,341
334-18	34	751	5,921
Subtotal 334-10	<u>1,993</u>	<u>21,705</u>	<u>181,287</u>
334-21	37	-	1,285
334-22	300	506	15,754
334-23	89	-	185
334-24	<u>112</u>	<u>-</u>	<u>7,541</u>
Subtotal 334-20	<u>538</u>	<u>506</u>	<u>24,765</u>
334-31	-	-	-
334-32	<u>-</u>	<u>-</u>	<u>1,313</u>
Subtotal 334-30	<u>-</u>	<u>-</u>	<u>1,313</u>
Total 334	2,531	22,211	207,365

Table 20. Commercial salmon catches from subdistrict 334-10, Yukon district, drift and set gill nets combined, 1972.

Date of landing	Hours fished	No. of boats	Total catch (catch/boat hour)			Cumulative catch		
			King	Coho	Chum	King	Coho	Chum
6/8	6							
6/9	24		7			7		
6/10	18		36		2	43		2
	48	11	43 (0.1)		2 (+)			
6/12	6		32		8	75		10
6/13	24		571		163	646		173
6/14	6		391		47	1,037		220
	36	150	994 (0.2)		218 (+)			
6/15	6		422		92	1,459		312
6/16	24		1,355		340	2,814		652
6/17	18		1,734		674	4,548		1,326
	48	274	3,511 (0.3)		1,106 (0.1)			
6/19	6		1,953		1,064	6,501		2,390
6/20	24		9,809		3,935	16,310		6,325
6/21	6		5,181		1,727	21,491		8,052
	36	347	16,943 (1.4)		6,726 (0.5)			
6/22	6		405		363	21,896		8,415
6/23	24		6,125		8,343	28,021		16,758
6/24	18		9,775		17,223	37,796		33,981
	48	355	16,305 (1.0)		25,929 (1.5)			
6/26	6		925		167	38,721		34,148
6/27	24		6,013		6,660	44,734		40,808
6/28	6		8,476		11,799	53,210		52,607
	36	368	15,414 (1.2)		18,626 (1.4)			

Table 20. (continued) Commercial salmon catches from subdistrict 334-10, Yukon district, drift and set gill nets combined, 1972.

Date of landing	Hours fished	No. of boats	Total catch (catch/boat hour)			Cumulative catch		
			King	Coho	Chum	King	Coho	Chum
6/29	6		1,204		800	54,414		53,407
6/30 ⁷	24		9,244		9,273	63,658		62,680
7/1	18		4,401		6,978	68,059		69,658
	<u>48</u>	362	14,849 (0.9)		17,051 (1.0)			
Subtotal ^{1/}	300	426	68,059 (0.9)		69,658 (0.8)			
7/11 ⁹	24		384		4,594	384		4,594
7/12	18		531		8,297	915		12,891
	<u>42</u>	171 ^{2/82}	915 (0.1)		12,891 (1.8)			
7/13	6		61		841	976		13,732
7/14 ¹	24		336		7,406	1,312		21,138
7/15	18		217		4,876	1,529		26,014
	<u>48</u>	194 ^{3/10}	614 (0.1)		13,123 (1.4)			
7/17	6		33		1,694	1,562		27,708
7/18 ¹⁰	24		128		7,958	1,690		35,666
7/19	18		102	1	8,910	1,792	1	44,576
	<u>48</u>	203 ^{4/11}	263 (+)	1 (+)	18,562 (1.9)			
7/20	6		3	1	1,876	1,795	2	46,452
7/21 ¹¹	24		62	3	14,539	1,857	5	60,991
7/22	18		28		10,837	1,885		71,828
	<u>48</u>	224 ^{5/12}	93 (+)	4 (+)	27,252 (2.5)			
7/24	6			1	157		6	71,985
7/25 ¹	24		22	19	2,479	1,907	25	74,464
7/26	18		23	21	6,322	1,930	46	80,786
	<u>48</u>	182 ^{6/13}	45 (+)	41 (+)	8,958 (1.0)			

Table 20. (continued) Commercial salmon catches from subdistrict 334-10, Yukon district, drift and set gill nets combined, 1972.

Date of landing	Hours fished	No. of boats	Total catch (catch/boat hour)			Cumulative catch		
			King	Coho	Chum	King	Coho	Chum
7/27	6		2	3	263	1,932	49	81,049
7/28 ¹³	24		9	17	2,673	1,941	66	83,722
7/29	18		6	112	5,980	1,947	178	89,702
	<u>48</u>	162	<u>17 (+)</u>	<u>132 (+)</u>	<u>8,916 (1.1)</u>			
7/31	6			8	1,169		186	90,871
8/1 ¹⁴	24		10	81	4,540	1,957	267	95,411
8/2	18		3	53	1,046	1,960	320	96,457
	<u>48</u>	170	<u>13 (+)</u>	<u>142 (+)</u>	<u>6,755 (0.8)</u>			
8/3	6			2	61		322	96,518
8/4 ¹⁵	24		5	137	2,000	1,965	459	98,518
8/5	18		2	145	1,127	1,967	604	99,645
	<u>48</u>	110	<u>7 (+)</u>	<u>284 (0.1)</u>	<u>3,188 (0.6)</u>			
8/7	6			83	693		687	100,338
8/8 ¹⁶	24		5	1,035	11,813	1,972	1,722	112,151
8/9	13		4	1,427	22,444	1,976	3,149	134,595
	<u>48</u>	173	<u>9 (+)</u>	<u>2,545 (0.3)</u>	<u>34,950 (4.2)</u>			
8/10	6			214	2,190		3,363	136,785
8/11 ¹⁷	24		2	1,264	9,573	1,978	4,627	146,358
8/12	18			939	3,173		5,566	149,531
	<u>48</u>	153	<u>2 (+)</u>	<u>2,417 (0.3)</u>	<u>14,936 (2.0)</u>			
8/14	6			23	11		5,589	149,542
8/15 ¹⁸	24		3	386	155	1,981	5,975	149,697
8/16	18		4	1,550	1,443	1,985	7,525	151,140
	<u>48</u>	109	<u>7 (+)</u>	<u>1,959 (0.4)</u>	<u>1,609 (0.3)</u>			
8/17	6			502	912		8,027	152,052
8/18 ¹⁹	24		1	1,790	5,586	1,986	9,817	157,638
8/19	18		1	4,570	14,637	1,987	14,387	172,275
	<u>48</u>	145	<u>2 (+)</u>	<u>6,862 (1.0)</u>	<u>21,135 (3.0)</u>			

Table 20. (continued) Commercial salmon catches from subdistrict 334-10, Yukon district, drift and set gill nets combined, 1972.

Date of landing	Hours fished	No. of boats	Total catch (catch/boat hour)			Cumulative catch		
			King	Coho	Chum	King	Coho	Chum
8/21	6			418	856		14,805	173,131
8/22 ²⁰	24		1	1,127	1,684	1,988	15,932	174,815
8/23	<u>18</u>		2	<u>1,052</u>	<u>1,700</u>	1,990	16,984	176,515
	48	123	3 (+)	2,597 (0.4)	4,240 (0.7)			
8/24	6		1	260	191	1,991	17,244	176,706
8/25 ²¹	24			1,019	1,030		18,263	177,736
8/26	<u>18</u>			<u>1,393</u>	<u>1,592</u>		19,656	179,328
	48	58	1 (+)	2,672 (1.0)	2,813 (1.0)			
8/28	6		1	22	42	1,992	19,678	179,370
8/29 ²²	24			500	620		20,178	179,990
8/30	<u>18</u>			<u>664</u>	<u>603</u>		20,842	180,593
	48	42	1 (+)	1,186 (0.6)	1,265 (0.6)			
8/31	6			129	127		20,971	180,720
9/1 ²³	24		1	436	339	1,993	21,407	181,059
9/2	<u>18</u>			<u>298</u>	<u>228</u>		21,705	181,287
	48	31	1 (+)	863 (0.6)	694 (0.5)			
Subtotal ^{2/}	762	353	1,993 (0.02)	21,705 (0.2)	181,287 (1.7)			
Grand Total	1,062	476	70,052	21,705	250,945			

1/ King salmon season (6/8-7/1).

2/ Fall season (7/11-9/2).

Table 21. Commercial salmon catches from subdistrict 334-20, Yukon district, drift and set gill nets combined, 1972.

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		4			4		
6/13	<u>18</u> 48	12	<u>54</u> 58 (0.1)			58		
6/15	6		15			73		
6/16	24		33		4	106		4
6/17	<u>6</u> 36	37	<u>117</u> 165 (0.1)		<u>2</u> 6 (+)	223		6
6/18	6							
6/19	24		35		8	258		14
6/20	<u>18</u> 48	73	<u>968</u> 1,003 (0.3)		<u>137</u> 145 (+)	1,226		151
6/22	6							
6/23	24		2,156		602	3,382		753
6/24	<u>6</u> 36	123	<u>2,657</u> 4,813 (1.1)		<u>829</u> 1,431 (0.3)	6,039		1,582
6/25	6		3		3	6,042		1,585
6/26	24		1,569		2,088	7,611		3,673
6/27	<u>18</u> 48	122	<u>4,129</u> 5,701 (1.0)		<u>3,517</u> 5,608 (1.0)	11,740		7,190
6/29	6							
6/30	24		2,632		748	14,372		7,938
7/1	<u>6</u> 36	116	<u>2,945</u> 5,577 (1.3)		<u>1,102</u> 1,850 (0.4)	17,317		9,040
Subtotal ^{1/}	252	153	17,317 (0.9)		9,040 (0.5)			

Table 21. (continued) Commercial salmon catches from subdistrict 334-20, Yukon district, drift and set gill nets combined, 1972.

Date of landing	Hours fished	No. of boats	Total catch (catch/boat hour)			Cumulative catch		
			King	Coho	Chum	King	Coho	Chum
7/11	24		73		323	73	323	
7/12	<u>18</u>		<u>231</u>		<u>906</u>	304	<u>1,229</u>	
	42	32	304 (0.2)		1,229 (0.9)			
7/13	6							
7/14	24		48		2,203	352	3,432	
7/15	<u>18</u>		<u>73</u>		<u>4,682</u>	425	8,114	
	48	38	121 (0.1)		6,885 (3.8)			
7/17	6							
7/18	24		11		847	436	8,961	
7/19	<u>18</u>		<u>26</u>		<u>2,906</u>	462	11,867	
	48	33	37 (+)		3,753 (2.4)			
7/20	6		1		21	463	11,888	
7/21	24		15		1,846	478	13,734	
7/22	<u>18</u>	39	<u>45</u>		<u>2,051</u>	523	15,785	
	48		61 (+)		3,918 (2.1)			
7/24	6				5		15,790	
7/25	24		9		1,332	532	17,122	
7/26	<u>18</u>		<u>6</u>		<u>676</u>	538	17,798	
	48	33	15 (+)		2,013 (1.3)			
7/27								
7/28								
7/29								
7/31	6							
8/1	24				141		17,939	
8/2	<u>18</u>				<u>472</u>		18,411	
	48	5			613 (2.6)			

Summer
chum
↑
fall
chum
↓

Table 21. (continued) Commercial salmon catches from subdistrict 334-20, Yukon district, drift and set gill nets combined, 1972.

Date of landing	Hours fished	No. of boats	Total catch (catch/boat hour)			Cumulative catch		
			King	Coho	Chum	King	Coho	Chum
8/3	6							
8/4	24				391			18,802
8/5	<u>18</u>				<u>427</u>			<u>19,229</u>
	48	6			818 (2.8)			
8/7	6							
8/8	24				57			19,286
8/9	<u>18</u>				<u>119</u>			<u>19,405</u>
	48	6			176 (0.6)			
8/10	6							
8/11	24			26	566		26	19,971
8/12	<u>18</u>			<u>38</u>	<u>1,131</u>		<u>64</u>	<u>21,102</u>
	48	4		64 (0.3)	1,697 (8.8)			
8/14	6							
8/15	24				621			21,723
8/16	<u>18</u>			<u>98</u>	<u>740</u>		162	<u>22,463</u>
	48	15		98 (0.1)	1,361 (1.9)			
8/17	6							
8/18	24							
8/19	<u>18</u>			<u>95</u>	<u>153</u>		257	<u>22,616</u>
	48	2		95 (1.0)	153 (1.6)			
8/21	6							
8/22	24			76	187		333	22,803
8/23	<u>18</u>			<u>153</u>	<u>1,450</u>		<u>486</u>	<u>24,253</u>
	48	14		229 (0.3)	1,637 (2.4)			

Table 21. (continued) Commercial salmon catches from subdistrict 334-20, Yukon district, drift and set gill nets combined, 1972.

Date of landing	Hours fished	No. of boats	Total catch (catch/boat hour)			Cumulative catch		
			King	Coho	Chum	King	Coho	Chum
8/24	6							
8/25	24				462			24,715
8/26	<u>18</u>			<u>20</u>	<u>50</u>	538	506	24,765
	48	9		20 (+)	512 (1.1)			
Subtotal ^{2/}	666	75	538 (0.05)	506 (0.05)	24,765 (2.2)			
Grand Total	918	153	17,855	506	33,805			

^{1/} King salmon season (6/11-7/1).

^{2/} Fall season (7/11-8/26).

Table 22. Commercial salmon catches from subdistrict 334-30 Yukon district, drift and set gill nets combined, 1972.

Date of landing	Hours fished	No. of boats	Total catch (catch/boat hour)		Cumulative catch	
			King	Chum	King	Chum
6/19	6					
6/20	24		49		49	
6/21	24		90	7	139	7
6/22	24		86	14	225	21
6/23	<u>18</u>		<u>285</u>	<u>14</u>	<u>510</u>	<u>35</u>
	96	25	510 (0.2)	35 (+)		
6/26	6		44	2	554	37
6/27	24		532	74	1,086	111
6/28	24		434	33	1,520	144
6/29	24		586	117	2,106	261
6/30	<u>18</u>		<u>705</u>	<u>152</u>	<u>2,811</u>	<u>413</u>
	96	33	2,301 (0.7)	378 (0.1)		
7/3	6		126	14	2,937	427
7/4	<u>6</u>		<u>904</u>	<u>100</u>	<u>3,841</u>	<u>527</u>
	12	29	1,030 (3.0)	114 (0.3)		
Subtotal ^{1/}	204	35	3,841 (0.6)	527 (0.1)		
8/2	6			16		16
8/3	24					
8/4	<u>18</u>			<u>16</u>		
	48	1		16 (0.3)		
8/7						
8/8						
8/9						
8/10						
8/11						

Table 22. (continued) Commercial salmon catches from subdistrict 334-30 Yukon district, drift and set gill nets combined, 1972.

Date of landing	Hours fished	No. of boats	Total catch (catch/boat hour)		Cumulative catch	
			King	Chum	King	Chum
8/14	6					
8/15	24					
8/16	24			190		206
8/17	24			115		321
8/18	18			271		592
	<u>96</u>	2		576 (3.0)		
8/21	6					
8/22	24			54		646
8/23	24			114		760
8/24	24					
8/25	18			330		1,090
	<u>96</u>	2		498 (2.6)		
8/28	6					
8/29	24			151		1,241
8/30	24			72		1,313
	<u>54</u>	2		223 (2.1)		
Subtotal ^{2/}	294	3		1,313 (2.4)		
Grand Total	498	35	3,841	1,840		

^{1/} King salmon season (6/19-7/4).

^{2/} Fall season (8/2-8/30).

Table 23. Yukon River subsistence salmon catch data, 1972 (includes Canadian catches).

Village	Date of survey	Fishing families	Dogs ^{1/}	Snow-machines ^{1/}	Kings	Other salmon ^{2/}	Total salmon	5 1/2" nets	8 1/2" nets	Fishwheels
Sheldons Point	8/4	17	16	16	462	3,514	3,976	22	17	
Alakanuk	8/7	41	50	53	647	5,633	6,280	67	41	
Emmonak	8/5	33	17	34	300	5,178	5,478		25	
Lamont Slough	8/9	1	1	2		12	12	4		
Aproka Pass and vicinity	8/10	2	2	3	37	332	369	4	3	
Kotlik	8/11	24	19	26	366	4,824	5,190	36	16	
Mt. Village	8/13-14	(114) 35	42	48	(1812) 907	5,923	6,830	45	26	
Pitkas Point	8/15	8	26	12	203	2,329	2,532	6	5	
St. Marys	8/16-17	32	45	33	1,312	8,803	10,115	37	24	
Pilot Station	8/18	35	76	24	1,513	7,021	8,534	24	29	
Marshall	8/22	23	102	20	656	4,743	5,399	27	13	1
Russian Mission	8/24	(132) 15	43	18	(4591) 914	2,737	3,651	10	17	
Holy Cross	8/26	14	28	10	2,202	2,695	4,897	7	40	
Anvik	8/26	13	49	14	72	3,362	3,434	9	2	4
Grayling	8/26	15	60	19	185	6,428	6,613	15	5	4
Kaltag	8/28	11	91	9	123	3,543	3,666	15	2	2
Nulato	8/29	16	193	20	364	7,298	7,662	29	5	3
Koyukuk	8/29	8	51	6	371	1,575	1,946	10	3	1
Galena	8/30	7	55	9	532	1,184	1,716	5	5	1
Ruby	8/31	8	48	7	1,110	6,470	7,580	3	4	5
Tanana	9/6	9	103	13	917	7,713	8,630	1	12	8
Rampart	9/2	5	19	4	1,236	3,694	4,930	0	6	3
Stevens Village ^{5/}	9/2	7	30	2	1,002	1,118	2,120	4	3	3
Beaver	9/2	5	38	7	241	3,057	3,298	4	5	2
Fort Yukon	9/3	7	58	6	520	1,597	2,117	1		7
Circle	9/2	2	20	1	345	752	1,097	1	1	2
Eagle	9/2	2	6		235	391	626	1	2	1
Pelly ^{3/}	8/15	4			380		380			
Carmacks ^{3/}	8/15	8			1,080		1,080			
Minto ^{3/}	8/15	1			15		15			
Ross River ^{3/}	8/16	1			35		35			
Stewart ^{3/}	8/15	2			100		100			
Fort Selkirk ^{3/}						2,000	2,000			

Table 23. (Continued) Yukon River subsistence salmon catch data, 1972 (includes Canadian catches).

Village	Date of survey	Fishing families	Dogs ^{1/}	Snow-machines ^{1/}	Kings	Other salmon ^{2/}	Total salmon	5 1/2" nets	8 1/2" nets	Fishwheels
MAIN RIVER TOTALS		411+	1,288	416+	18,382	103,926	122,308	387+	311+	47+
Huslia	9/5	3	12	9	1	256	257	3		
Hughes	9/8	8	52	8	27	2,777	2,804	10		
Alatna	9/5	2	16	2	3	490	493	3		
Allakaket	9/5	9	30	11	21	771	792	9	5	
KOYUKUK RIVER TOTALS		22	110	30	52	4,294	4,346	25	5	
Manley Hot Springs		1	1		99	6	105		1	
Nenana	9/5	9	112	8	788	18,546	19,334	4		10
Fairbanks and vicinity ^{4/}		17	39	4	220	8,280	8,500		4	6
TANANA RIVER TOTALS		27	152	12	1,107	26,832	27,939	4	5	16
Venetie	9/3	1	14	1		50	50	2		
CHANDALAR RIVER TOTALS		1	14	1		50	50	2		
Old Crow ^{3/}						5,000	5,000			
PORCUPINE RIVER TOTALS						5,000	5,000			
GRAND TOTAL--YUKON RIVER		461+	1,564+	459+	19,541	140,102	159,643	418+	321+	63+

^{1/} Data from fishing families only.

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

^{3/} From Canadian Department of Fisheries, Whitehorse; only catch data available.

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

^{5/} Includes 200 king salmon taken by two fishing families at the New Minto fish camp.

Table 24. Yukon River subsistence salmon fishery data from nonfishermen, 1972.

Village	Nonfishing families	People in families	Sled dogs	Snow-machines	Families with no information ^{1/}
Alakanuk	21	25	24	26	8
Sheldons Point	1	7	-	-	3
Emmonak	39	172	12	38	9
Lamont Slough	2	6	2	3	0
Kotlik	8	38	5	8	5
Mt. Village	26	134	25	19	9
Pitkas Point	4	15	8	2	0
St. Marys	9	44	6	8	2
Pilot Station	13	65	17	4	3
Marshall	8	16	9	4	2
Russian Mission	13	33	2	5	1
Holy Cross	10	45	7	6	1
Anvik	5	19	5	5	0
Grayling	9	35	15	7	0
Kaltag	16	59	19	5	3
Nulato	11	59	27	6	5
Koyukuk	7	30	49	2	1
Galena	4	12	2	3	2
Ruby	3	16	15	3	3
Tanana	8	44	21	2	6
Rampart	1	5	-	1	4
Stevens Village	3	10	10	2	1
Beaver	1	3	7	1	1
Fort Yukon	6	37	40	3	1
Circle	1	10	13	-	0
Eagle	1	-	1	-	0
Huslia	8	42	20	10	5
Hughes	0	-	-	-	1
Allakaket	7	31	26	7	3
Alatna	0	-	-	-	0
Nenana	2	5	9	1	1
Venetie	9	37	50	13	1
Total	256	1,054	446	194	81

^{1/} Most of the families were not interviewed and it was not possible to determine if they fished or not.

Table 25. Aerial survey salmon escapement counts, Yukon district, 1972

Stream (Drainage)	Date	Survey Rating	Kings	Cohos	Chums
Andreafsky River					
West Fork	7/26	Poor	582		25,573
East Fork	7/22	Fair	798		41,460
Total			1,380		67,033
Anvik River	7/22	Fair	414		211,633
Chatanika River ^{1/}	8/10-20		13		
Glacier Creek (Nenana R.)	11/28	Poor			150
Toklat River	11/28	Poor			1,000
Chena River ^{1/}	8/5		138		54
Chena River	8/25		25		670
Salcha River	8/3	Good	1,193		
Salcha River	8/8	Poor	81		947
Tanana River	10/31	Fair			19,657
Delta River	10/31	Good			3,650
Richardson Clearwater Creek	10/31	Poor		349	
Clearwater Lake & Stream	10/17	Poor		450	
Delta Clearwater Creek ^{1/}	11/9	Good		632	
Goodpaster River	8/8	Poor	21		
Fishing Branch River ^{2/} (Porcupine River)	9/22-10/21		1		35,326
Tahkini River	8/25	Poor	17		
McNeil River	8/20	Good	2		
Wolf River	8/20	Very good	45		
Nisutlin River	8/19	Fair	317		
Red River	8/20	Very good	10		
Swift River	8/23	Good	15		
Morley River	8/21	Good	30		
Jennings River	8/22	Good	3		
Gladys River	8/21	Good	10		
Big Salmon River	8/19	Excellent	556		
Little Salmon River	8/19	Very good	126		
Teslin River	9/5	Fair	220		
Teslin River	10/13	Poor			20
Tatchun Creek ^{3/}	8/25	Excellent	80		
Big Kalzas River	8/23	Fair	4		
Little Kalzas River	8/23	Poor	13		
Earn River	8/23	Fair	20		
Pelly Lakes	8/22	Good	5		

Table 25. (Continued) Aerial survey salmon escapement counts, Yukon district, 1972.

Stream (Drainage)	Date	Survey Rating	Kings	Cohos	Chums
Lewis Lakes	8/22	Excellent	20		
Sheldon Lake	8/22	Excellent	2		
Ollie Lakes	8/22	Good	6		
Husky Dog Creek	8/22	Fair	7		
Riddell Creek	8/22	Fair	5		
Glenlyon Creek	8/22	Poor	1		
Russell Creek	8/22	Fair	2		
Klondike River ^{4/}	8/20-31		100		50
Kluane River ^{3/}	10/18	Poor			198
Mayo River	8/26	Good	20		

1/ Boat survey.

2/ Weir count and tagging population estimate.

3/ Foot survey.

4/ Aerial and foot survey.

Appendix Table 19. Yukon River drainage commercial and subsistence salmon catches, 1918-1972.

Year	Commercial Catch												Subsistence Catch						Total Utilization										
	Alaska				Yukon Territory				Total				Alaska ^{1/}		Yukon Territory				Alaska		Yukon Territory								
	King	Coho	Chum	Total	King	Chum	Total	King	Coho	Chum	Total	King	Other Salmon ^{2/}	Total	King	Other Salmon ^{2/}	Total	King	Other Salmon ^{2/}	Total	King	Other Salmon ^{2/}	Total	King	Other Salmon ^{2/}	Total			
1918	12,239	26,144	73,921	112,304				12,239	26,144	73,921	112,304		1,400,000	1,400,000				12,239	1,500,065	1,512,304				12,239	1,500,065	1,512,304			
1919	104,822	37,070	327,898	469,790				104,822	37,070	327,898	469,790		269,000	269,000				104,822	633,968	738,790				104,822	633,968	738,790			
1920	58,467		155,655	214,122				58,467		155,655	214,122		860,000	860,000				58,467	1,015,655	1,094,122				58,467	1,015,655	1,094,122			
1921	69,646	1,000	111,098	181,744				69,646	1,000	111,098	181,744							69,646	112,098	181,744				69,646	112,098	181,744			
1922	16,825			16,825				16,825			16,825		330,000	345,000				16,825	330,000	361,825				16,825	330,000	361,825			
1923	13,393			13,393				13,393			13,393		435,000	452,500				13,393	435,000	465,893				13,393	435,000	465,893			
1924	27,375			27,375				27,375			27,375		1,130,000	1,130,000				27,375	1,130,000	1,157,375				27,375	1,130,000	1,157,375			
1925													259,000	274,000				15,000	259,000	274,000				15,000	259,000	274,000			
1926													555,000	575,500				20,500	555,000	575,500				20,500	555,000	575,500			
1927													520,000	520,000					520,000	520,000					520,000	520,000			
1928													670,000	670,000					670,000	670,000					670,000	670,000			
1929													537,000	537,000					537,000	537,000					537,000	537,000			
1930													633,000	633,000					633,000	633,000					633,000	633,000			
1931													565,000	591,693					26,693	565,000	591,693				26,693	565,000	591,693		
1932	4,739			4,739				4,739			4,739		1,092,000	1,115,160				23,160	1,092,000	1,119,899				23,160	1,092,000	1,119,899			
1933	8,829			8,829				8,829			8,829		603,000	622,950				19,950	603,000	631,779				19,950	603,000	631,779			
1934	25,365			25,365				25,365			25,365		474,000	474,000				23,365	474,000	497,365				23,365	474,000	497,365			
1935	7,265			7,265				7,265			7,265		537,000	557,400				20,400	537,000	564,665				20,400	537,000	564,665			
1936	20,963			20,963				20,963			20,963		560,000	582,750				22,750	560,000	603,713				22,750	560,000	603,713			
1937	6,226			6,226				6,226			6,226		346,000	351,528				5,528	346,000	358,154				5,528	346,000	358,154			
1938	13,727			13,727				13,727			13,727		340,450	359,694				19,244	340,450	373,421				19,244	340,450	373,421			
1939	9,987			9,987				9,987			9,987		327,650	345,700				18,050	327,650	355,687				18,050	327,650	355,687			
1940	18,053			18,053				18,053			18,053		1,029,000	1,043,400				14,400	1,029,000	1,061,453				14,400	1,029,000	1,061,453			
1941	29,905			29,905				29,905			29,905		438,000	455,703				17,703	438,000	485,608				17,703	438,000	485,608			
1942	22,487			22,487				22,487			22,487		197,000	197,000					197,000	197,000					197,000	197,000			
1943	27,650			27,650				27,650			27,650		200,000	200,000					200,000	200,000					200,000	200,000			
1944	14,232			14,232				14,232			14,232								14,232	14,232					14,232	14,232			
1945	19,727			19,727				19,727			19,727								19,727	19,727					19,727	19,727			
1946	22,782			22,782				22,782			22,782								22,782	22,782					22,782	22,782			
1947	54,026			54,026				54,026			54,026								54,026	54,026					54,026	54,026			
1948	33,842			33,842				33,842			33,842								33,842	33,842					33,842	33,842			
1949	36,379			36,379				36,379			36,379								36,379	36,379					36,379	36,379			
1950	41,808			41,808				41,808			41,808								41,808	41,808					41,808	41,808			
1951 ^{3/}	56,278			56,278				56,278			56,278								56,278	56,278					56,278	56,278			
1952	38,637	10,868		49,505				38,637	10,868		49,505								38,637	10,868	49,505				38,637	10,868	49,505		
1953	58,859		5,977	64,836				58,859		5,977	64,836		380,000	380,000					58,859	385,977	444,836				58,859	385,977	444,836		
1954	64,545		14,375	78,920				64,545		14,375	78,920								64,545	14,375	78,920				64,545	14,375	78,920		
1955	55,925			55,925				55,925			55,925								55,925	55,925					55,925	55,925			
1956	62,208	1	10,742	72,951				62,208	1	10,742	72,951								62,208	10,743	72,951				62,208	10,743	72,951		
1957	63,623			63,623				63,623			63,623								63,623	63,623					63,623	63,623			
1958	63,735			63,735	3,000	1,500	4,500 ^{2/}	66,735		1,500	68,235	11,890	337,500	349,390	8,000		8,000	19,890	337,500	357,390	75,625	337,500	413,125	11,000	1,500	12,500	86,625	339,000	425,625
1959	78,370			78,370	2,477	1,098	3,575	80,847		1,098	81,945				5,957	2,000 ^{2/}	7,957	5,957	2,000	7,957	78,370	8,434	3,098	11,532	86,804	3,098	89,902		
1960 ^{6/}	67,597			67,597	4,085	5,493	9,578	71,682		5,493	77,175				6,965	8,429	15,394	6,965	8,429	15,394	67,597	11,050	19,922	24,972	78,647	19,922	92,569		
1961	119,664	2,855	42,577 ^{2/}	165,096	3,446	3,278	6,724	123,110	2,855	45,855	171,820	21,488	407,079	428,577	10,376	5,800	16,176	31,864	412,889	444,753	141,152	452,521	593,673	13,822	9,078	22,900	154,974	461,599	616,573
1962	94,736	23,339	53,766 ^{2/}	171,841	4,037	936	4,973	98,773	23,339	54,702	176,814	13,110	349,141	360,251	10,500	8,500	19,000	21,610	357,641	379,251	105,846	426,246	532,092	14,537	9,436	23,973	120,203	435,682	555,885
1963	117,048	5,575 ^{2/}		122,623	2,283	2,192	4,475	119,331	5,575	2,192	127,098	24,862	390,075	420,937	8,108	25,500	33,608	32,970	421,575	454,545	141,910	401,650	543,560	10,391	27,692	38,083	152,301	429,342	581,643
1964	93,587	2,430	8,347	104,364	3,208	1,929	5,137	96,795	2,430	10,276	109,501	16,171	481,449	497,620				16,171	481,449	497,620	109,758	492,226	601,984	3,208	1,929	5,137	112,966	494,155	607,121
1965	118,014	661	23,211	141,886	2,265	2,071	4,336	120,279	661	25,282	146,222	16,608	448,861	465,469	3,000	9,800	12,800	19,608	458,661	478,269	134,622	472,733	607,355	5,265	11,871	17,136	139,887	484,604	624,491
1966	93,315	19,254	71,058 ^{2/}	183,627	1,942	3,157	5,099	95,257	19,254	74,215	188,726	11,572	213,186	224,758	2,700	8,600	11,300	14,272	221,786	236,058	104,887	303,498	408,385	4,642	11,757	16,399	109,529	315,255	424,784
1967	129,430	11,047	49,412 ^{2/}	189,889	2,187	3,343	5,530	131,617	11,047	52,755	195,419	16,448	274,977	291,425	3,000	13,600	16,600	19,448	288,577	308,025	145,878	335,436	481,314	5,187	16,943	22,130	151,065	352,379	503,444
1968	106,526	13,303	67,375	187,204	2,212	435	2,647	108,738	13,303	67,810	189,851	12,106	181,024	193,130	2,900	11,100	14,000	15,006	192,124	207,130	118,632	261,702	380,334	5,112	11,535	16,647	123,744	273,237	396,981
1969	90,720	15,076	192,582	298,378	1,640	2,279	3,919	92,360	15,076	194,861	302,297	14,000	210,772	224,772	1,000	5,500	6,500	15,000	216,272	231,272	104,720	418,430	523,150	2,640	7,779	10,419	107,360	426,209	533,569
1970	79,301	13,188	347,348 ^{2/}	439,837	2,611	2,479	5,090	81,912	13,188	349,827	444,927	1																	

Appendix Table 20. Yukon district commercial, vessel and gill net licenses issued by sub-district, 1960-1972.^{1/}

	<u>Year</u>	<u>334-10</u>	<u>334-20</u>	<u>334-30</u>	<u>334-40^{2/}</u>	<u>Totals</u>
Commercial	1960	193	96		18	307
	1961	238	130	26	18	412
	1962	321	148	46	18	533
	1963	285	131	30	5	451
	1964	319	119	31	18	487
	1965	327	143	34	35	539
	1966	393	143	21	20	577
	1967					607
	1968					585
	1969	406	131	32	21	590
	1970	393	164	33	36	625
	1971	459	162	37	57	715
	1972	473	193	43	56	765
Fishing vessel	1960	186	33		10	229
	1961	210	112	18	10	350
	1962	320	127	31	12	490
	1963	272	113	22	6	413
	1964	314	101	24	12	451
	1965	322	111	26	27	486
	1966	365	113	18	20	516
	1967	381	126	22	20	549
	1968	340	124	26	20	510
	1969	361	93	24	20	498
	1970	349	143	27	28	546
	1971	416	145	29	43	633
	1972	426	153	35	46	660
Set net	1960	183	59		2	244
	1961	217	101	19	1	338
	1962	303	117	14	2	436
	1963	259	101	21	2	383
	1964	277	100	28	4	409
	1965	292	98	23	7	420
	1966	345	101	17	5	468
	1967	333	72	21	5	431
	1968	314	62	26	8	410
	1969	346	62	15	14	437
	1970	345	105	24	17	490
1971	399	115	30	27	571	
1972	439	130	36	29	634	

Appendix Table 20. (continued) Yukon district commercial, vessel and gill net licenses issued by sub-district, 1960-1972.^{1/}

	<u>Year</u>	<u>334-10</u>	<u>334-20</u>	<u>334-30</u>	<u>334-40</u>	<u>Totals</u>
Drift net	1960	2	44			46
	1961	17	86			103
	1962	55	98	24		177
	1963	24	85	5		114
	1964	65	89	5		159
	1965	62	98	4		164
	1966	97	88	4		189
	1967	135	109	5		249
	1968	111	104	8		223
	1969	142	100	10		252
	1970	110	127	16	1	254
	1971	140	134	19	2	295
	1972	155	142	17	5	319

1/ Distribution of licenses by sub-district represents that at the beginning of the fishing season (June 1), some fishermen transfer to other sub-districts during the season.

2/ Fishwheels operated each year were: 1965 (5), 1966 (17), 1967 (?), 1968 (10), 1969 (11), 1970 (17), 1971 (24), 1972 (26).

Appendix Table 21. Commercial salmon catches by species and subdistrict, Yukon district, 1960-1972.

Year	King salmon					Coho salmon				
	334-10	334-20	334-30	334-40	Total	334-10	334-20	334-30	334-40	Total
1960	50,713	15,994	-	884	67,591	-	-	-	-	-
1961	84,463	29,028	4,965	1,804	120,260	2,855	-	-	-	2,855
1962	67,099	22,224	4,687	724	94,734	22,926	-	-	-	22,926
1963	85,004	24,211	6,976	803	116,994	5,572	-	-	-	5,572
1964	67,555	20,246	4,705	1,081	93,587	2,446	-	-	-	2,446
1965	89,268	23,763	3,204	1,863	118,098	350	-	-	-	350
1966	70,788	16,927	3,612	1,988	93,315	19,254	-	-	-	19,254
1967	104,350	20,289	3,618	1,449	129,706	9,925	-	1,122	-	11,047
1968	79,465	21,392	4,543	1,126	106,526	13,153	-	150	-	13,303
1969	70,862	14,799	3,577	985	90,223	14,041	-	845	95	14,981
1970	57,681	17,210	3,712	1,666	80,269	12,245	-	-	-	12,245
1971	86,042	19,226	3,490	1,749	110,507	12,165	-	-	38	12,203
1972	70,052	17,855	3,841	1,092	92,840	21,705	506	-	22	22,233

Year	Chum salmon					Total salmon				
	334-10	334-20	334-30	334-40	Total	334-10	334-20	334-30	334-40	Total
1960	-	-	-	-	-	50,713	15,994	-	884	67,591
1961	42,577 ^{1/}	-	-	-	42,577 ^{1/}	129,895	29,028	4,965	1,804	165,692
1962	53,160 ^{1/}	-	-	-	53,160 ^{1/}	143,185	22,224	4,687	724	170,820
1963	-	-	-	-	-	90,576	24,211	6,976	803	122,566
1964	8,347	-	-	-	8,347	78,348	20,246	4,705	1,081	104,380
1965	22,936	-	-	381	23,317	112,554	23,763	3,204	2,244	141,765
1966	69,836	-	1,209	-	71,045	159,878	16,927	4,821	1,988	183,614
1967	46,148	1,425	1,880	-	49,453	160,423	21,714	6,620	1,449	190,206
1968	62,852 ^{1/}	1,407	3,136	-	67,395	155,470	22,799	7,829	1,126	187,224
1969	184,411	5,024	1,722	703	191,860	269,314	19,823	6,144	1,783	297,064
1970	320,138	22,394	3,285	907	346,724	390,064	39,604	6,997	2,573	439,238
1971	282,461	6,112	50	1,061	289,684	380,668	25,338	3,540	2,848	412,394
1972	250,945	33,805	1,840	1,254	287,844	342,702	52,166	5,681	2,368	402,917

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

Appendix Table 22. Comparative commercial king salmon catch data, Yukon district, 1960-1972^{1/}.

Year	334-10	334-20	Sub-total (10+20)	334-30	334-40	Totals -334
Commercial Catch						
1960	50,713	15,994	66,707		884	67,591
1961	84,406	29,028	113,434	4,965	1,804	120,203
1962	67,072	22,224	89,296	4,687	724	94,707
1963	85,004	24,211	109,215	6,976	803	116,994
1964	67,555	20,246	87,801	4,705	1,081	93,587
1965	89,268	23,763	113,031	3,204	1,863	118,098
1966	70,783	16,927	87,710	3,612	1,988	93,310
1967	104,335	20,289	124,624	3,618	1,449	129,691
1968	79,465	21,392	100,857	4,543	1,126	106,526
1969	70,588	14,799	85,387	3,577	985	89,949
1970	57,502	17,210	74,712	3,712	1,666	80,090
1971	84,397	19,226	103,623	3,490	1,749	108,862
1972	68,059	17,317	85,376	3,841	1,092	90,309

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) ^{2/}
1967	102,456 (1.02)	37,488 (0.54)	139,944 (0.89)	4,050 (0.89)
1968	92,450 (0.86)	32,280 (0.66)	124,730 (0.81)	3,745 (1.21)
1969	84,864 (0.83)	27,828 (0.53)	112,692 (0.76)	3,577 (0.72)
1970	61,260 (0.94)	20,460 (0.84)	81,720 (0.91)	3,566 (1.04)
1971	73,272 (1.15)	19,956 (0.96)	93,228 (1.11)	4,790 (0.73)
1972	79,236 (0.86)	19,872 (0.87)	99,108 (0.86)	5,916 (0.65)

^{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 23. Comparative commercial coho and chum salmon catch data for the fall season, subdistrict 334-10 Yukon district, 1961-1972.

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

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

2/ Information not available.

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

Appendix Table 24. Commercial salmon pack by species and type of processing, Yukon district, 1960-1972.^{1/}

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

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

^{2/} Information not available.

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

^{4/} Includes 51 tierces chum salmon.

^{5/} Includes 139 tierces chum salmon.

Appendix Table 25. Dollar value estimates of Yukon district commercial fishery, 1960-1972.^{1/}

<u>Year</u>	<u>Gross value of catch to fishermen</u>	<u>Wages earned^{2/}</u>	<u>Total income to district</u>	<u>Wholesale value of pack^{3/}</u>	<u>Tax revenues to State</u>
1960	\$	\$	\$	\$	\$
1961	437,000.00			1,292,300.00	37,500.00
1962	361,900.00			1,275,250.00	50,400.00
1963	412,300.00			1,550,400.00	42,000.00
1964	354,400.00			1,203,800.00	35,000.00
1965	542,300.00			1,412,700.00	42,000.00
1966	454,500.00			1,308,100.00	37,000.00
1967	606,400.00	250,000.00	856,400.00	1,864,800.00	41,700.00
1968	535,000.00	264,000.00+	799,000.00+	1,655,156.00	47,000.00
1969	519,200.00	234,000.00+	753,000.00+	1,976,179.00	40,000.00
1970	623,100.00	185,800.00+	808,900.00+	2,113,100.00	45,000.00
1971	783,000.00	357,700.00+	1,140,700.00+	2,106,600.00	42,000.00
1972	784,000.00	445,400.00	1,229,400.00	2,405,200.00	45,300.00

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

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

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

Appendix Table 26. Estimated mean prices paid to fishermen, Yukon district, 1961-1972^{1/} (prices per fish)

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

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

Appendix Table 29. Comparative Yukon River drainage king salmon escapement counts 1959-1972.^{1/}

Year	Andreafsky River (East fork)	Andreafsky River (West fork)	Anvik River
1960	1,020	1,220	1,950
1961	1,003		1,226
1962	675 ^{2/}	762 ^{2/}	
1963			
1964	867	705	
1965		355 ^{2/}	650 ^{2/}
1966	361	303	638
1967		276 ^{2/}	336 ^{2/}
1968	380	383	297 ^{2/}
1969	231 ^{2/}	274 ^{2/}	296 ^{2/}
1970	665	574 ^{2/}	368 ^{2/}
1971	1,904	1,284	
1972	798	582 ^{2/}	414

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

- ^{1/} With exception of Whitehorse fishway counts, the data was obtained from aerial surveys which were made only of the main stem of each river listed.
- ^{2/} Incomplete survey or poor survey conditions resulting in a very minimal count.
- ^{3/} Canadian Department of Fisheries survey.