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STATE OF ALASKA
Bill Sheffield, Governor



AGE, SEX, AND SIZE OF YUKON RIVER SALMON
CATCH AND ESCAPEMENT, 1983

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ADF&G TECHNICAL DATA REPORTS

This series of reports is designed to facilitate prompt reporting of data from studies conducted by the Alaska Department of Fish and Game, especially studies which may be of direct and immediate interest to scientists of other agencies.

The primary purpose of these reports is presentation of data. Description of programs and data collection methods is included only to the extent required for interpretation of the data. Analysis is generally limited to that necessary for clarification of data collection methods and interpretation of the basic data. No attempt is made in these reports to present analysis of the data relative to its ultimate or intended use.

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ABSTRACT

Commercial and subsistence harvest of chinook (*Oncorhynchus tshawytscha* Walbaum), summer and fall chum (*O. keta* Walbaum), and coho salmon (*O. kisutch* Walbaum) for the Yukon River in 1983 are presented by age, sex, fishing district, and gear type. Samples are stratified by time period where possible and temporal trends in age and sex composition are discussed. Peak aerial survey salmon escapement counts, side-scan sonar, foot survey, and fishway counts are presented for all salmon escapements enumerated in the Yukon River drainage in 1983. Age, sex, and size composition is presented for those escapements that were sampled. This report includes all Yukon River salmon age-sex-size data collected in 1983. Those samples not used to apportion catches or escapements are summarized in appendices.

KEY WORDS: Yukon River, chinook salmon (*Oncorhynchus tshawytscha*), chum salmon (*O. keta*), coho salmon (*O. kisutch*), fishery synopsis, age classification.

INTRODUCTION

The Yukon River drainage supports major runs of chinook salmon (*Oncorhynchus tshawytscha* Walbaum), summer and fall chum salmon (*O. keta* Walbaum), and coho salmon (*O. kisutch* Walbaum). These species contribute to commercial and subsistence fisheries throughout the Yukon River drainage. Pink salmon (*O. gorbuscha* Walbaum) and sockeye salmon (*O. nerka* Walbaum) are also indigenous to the Yukon River drainage. Pink salmon returns are stronger in even-numbered years, while sockeye salmon are only rarely documented, and neither species is harvested by commercial or subsistence fishermen to any extent.

Most commercial fishing occurs in the lower 230 km (200 mi) of the river, where the harvest consists of mixed species and stocks of salmon bound for spawning areas throughout the Yukon River drainage. Resource management agencies, primarily the Alaska Department of Fish and Game (ADF&G) and the Department of Fisheries and Oceans, Canada (DFO), conduct a variety of programs that supply information used to manage and document the fisheries. These programs include: (1) documentation of catch in each fishery; (2) catch sampling for age, sex, and size data; (3) assessing the magnitude of spawning escapements by aerial survey; and (4) sampling major spawning escapements for age, sex, and size data. In some cases, escapements are estimated by hydroacoustic counts.

Basic fishery statistics for Yukon River salmon are presented in several sources. Commercial and subsistence harvest data (including Canadian catches) are presented in the Yukon River Annual Management Report (1984). Historical escapement data are compiled in a computerized data base by Barton (in prep.). Detailed analysis of escapement sonar count data for the 1983 season is presented by Buklis (1984) for the Anvik and Andreafsky Rivers and by Barton (1984a, 1984b) for the Melozitna and Sheenjek Rivers. Age, sex, and size summaries before 1982 were annually reported in the ADF&G Arctic-Yukon-Kuskokwim Region Age, Sex, and Size Composition of Salmon report series. Hamner (1982) prepared the most recent and final report in that series for the Yukon River. Beginning in 1982 (McBride, Hamner, and Buklis 1983), age, sex, and size composition of Yukon River is presented in the series of which this report is the second edition.

This report presents commercial and subsistence salmon harvest, and enumerated spawning escapements, in number of fish by age and sex. Indices of relative abundance and age and sex summaries are presented for other major spawning escapements. Length is reported by age and sex for each sampled fishery and escapement. No attempt has been made in this report to identify the origin of fish in mixed stock fisheries or to estimate the contribution of any spawning escapement to a fishery. It is hoped that this report will serve as an initial data base for future estimation of these parameters.

METHODS

Study Area Description

The Yukon area includes all waters of the Yukon River and its tributary streams in Alaska (Figure 1) and the Yukon Territory (Figure 2), and all coastal waters

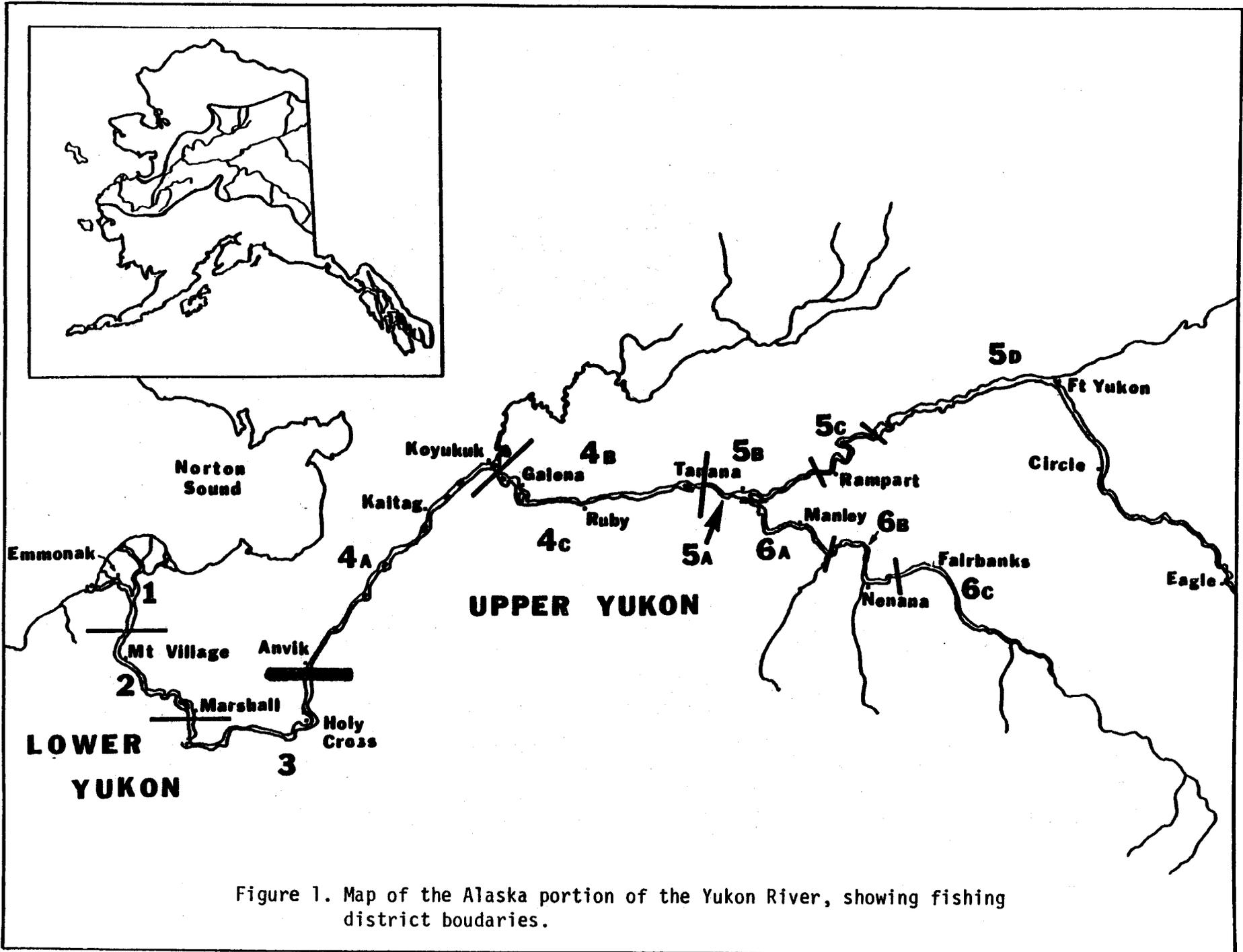


Figure 1. Map of the Alaska portion of the Yukon River, showing fishing district boundaries.

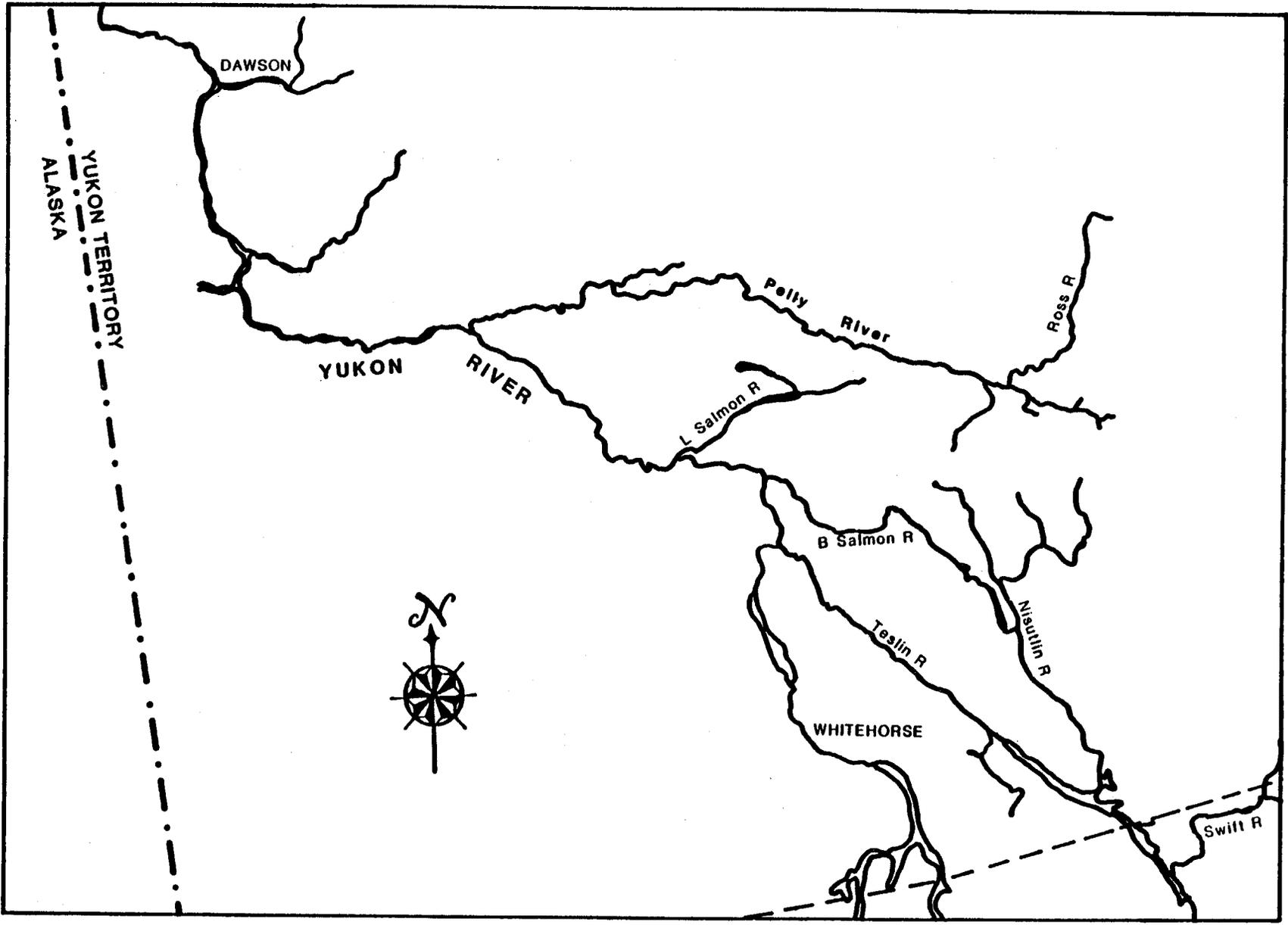


Figure 2. Map of the Canadian portion of the Yukon River.

from Canal Point light near Cape Stephens southward to the Naskonat Peninsula. The Alaska portion of the river is divided into six fishing districts as follows: District 1, 2, and 3 in the lower Yukon area; and Districts 4, 5, and 6 in the upper Yukon area. Commercial fishing occurs throughout the main Yukon River and in the lower 360 km (225 mi) of the Tanana River, however, most of the commercial harvest is taken in Districts 1 and 2. Set and drift gillnets are the legal gear in the lower Yukon, and set gillnets and fishwheels in the upper Yukon. Chinook and fall chum salmon are also commercially harvested in a gillnet fishery near Dawson City, Yukon Territory. Subsistence fishing is allowed throughout the drainage, although most of the effort is concentrated in the main Yukon River. The Annual Management Report (1984) provides a complete description of the Yukon River area and its fisheries.

Abundance of Catch and Escapement

Alaskan commercial catch data presented in this report was compiled by the Division of Commercial Fisheries for each management district and is based on preliminary computer tabulations of individual harvest receipts (fish tickets). These preliminary fish ticket tabulations will not differ significantly from final official tabulations published later by the Alaska Department of Fish and Game. Subsistence catch data were tabulated from catch calendars and personal interviews of subsistence fishermen throughout the drainage. All Yukon Territory catch data were obtained from the Department of Fisheries and Oceans.

Most escapement data presented are peak aerial survey estimates for selected spawning streams (Barton, in preparation). Most of the major spawning populations are surveyed and these indices are taken to represent overall trends in escapement. Total season escapement for several spawning populations was estimated by side-scan sonar. They are: (1) East Fork Andreafsky River summer chums, (2) Anvik River summer chums, (3) Melozitna River summer chums, and (4) Sheenjek River fall chums. Chinook salmon passing the Whitehorse Dam in the Yukon Territory, Canada are visually counted through a fishway. Total abundance of chinook and fall chum salmon in the Yukon Territory in 1982 and 1983 was estimated by a tagging study (Johnston, in preparation).

Age, Sex, and Length

Salmon were sampled for scales, sex, and length. Examination of scale samples provided age information for salmon in the catch and escapement. Scales were taken from the left side of the fish approximately two rows above the lateral line and on the diagonal row downward from the posterior insertion of the dorsal fin (INPFC 1963). Scales were mounted on gum cards and permanent impressions made in cellulose acetate (Clutter and Whitesel 1956). Ages are reported in Gilbert-Rich¹ notations. Sex determination was based on examination of either external morphological features or gonads.

¹ Gilbert-Rich formula: The first digit refers to the total age of the fish. The second digit, usually subscripted, refers to the number of years of freshwater residence. Marine age is the difference between these two.

An attempt was made to sample fish from the commercial catch for each gear type in each district. However, because of logistic considerations involved in sampling such a widely dispersed fishery, many of the smaller harvests were not sampled. The majority of the commercial catch samples were collected in District 1 and 2. Subsistence catches were generally not sampled. An attempt was made to sample most of the major chinook and chum salmon spawning populations. Most escapement data were collected from carcasses, although some live salmon were captured by beach seine and gillnet.

Age and sex composition was computed for each fishery sampled and samples were stratified over time (i.e., sample periods) where there were sufficient data. A sample period is defined as the minimum number of samples needed to attain a level of precision, α , of 0.10 and a level of accuracy, d , of 0.05 for determination of the age composition. The number of categories or age groups, k , for each species was defined as the sum of those age groups that comprise at least 90% of the sample plus one (i.e., all of the age groups that comprise the remaining 10% of the sample were pooled into an "other" category for the purpose of calculating k). The parameter k was calculated for each species as follows: chinook salmon $k=4$, chum salmon $k=3$, and coho salmon $k=2$. These parameters were then applied to the sample size determination formulas described by Cochran (1977). If there were insufficient samples to attain the above levels of precision and accuracy, the samples were pooled into a single sample period for that fishery. For those fisheries not sampled, age and sex composition was estimated based on samples collected from the nearest fishery in space and time. Catch was then allocated by age and sex.

Age and sex composition was determined for each sampled escapement. Samples were collected from carcasses over a short period of time and only an index of relative abundance (aerial survey) was available in most cases. Samples were pooled in a single sample period and no attempt was made to allocate the index escapement estimate by age and sex. For those escapements enumerated by side-scan sonar, total escapement was allocated by age, sex, and size based on carcass, beach seine, or gillnet samples (except for the Melozitna River, where samples were not collected).

Lengths were measured from mid-orbit to fork of tail in millimeters. Average length, by sex and age, is reported for each sampled fishery and escapement. Length samples are not stratified by sample period.

RESULTS

Commercial and Subsistence Harvest

Commercial harvest (Alaska and Canada combined) totaled 160,937 chinook, 894,878 summer chum, 333,652 fall chum, and 13,320 coho salmon in 1983 (Table 1). The chinook salmon harvest was 30% greater than the 1982 harvest, summer chum salmon 46% greater, fall chum salmon 48% greater, and the coho salmon harvest 64% below the 1982 level. The largest commercial harvest of chinook, summer chum, and fall chum salmon occurred in District 1, while District 6 accounted for the largest coho salmon commercial harvest. Gillnets accounted for the majority of the harvest for each species. Commercial harvest by fishing period is presented for each district in Appendix Tables 1-7.

Table 1. Yukon River salmon commercial catch by district, species, and gear type, 1983¹.

District	Chinook			Summer Chum			Fall Chum			Coho		
	GN	FW	Total	GN	FW	Total	GN	FW	Total	GN	FW	Total
1	95,457	-	95,457	451,164	-	451,164	124,371	-	124,371	4,595	-	4,595
2	43,229	-	43,229	248,092	-	248,092	85,645	-	85,645	2,557	-	2,557
3	4,106	-	4,106	14,600	-	14,600	10,018	-	10,018	0	-	0
4A	0	0	0	6,671	126,749	133,420	0	0	0	0	0	0
4B	286	96	382	1,041	19,773	20,814	0	5,272	5,272	0	0	0
4C	56	163	219	28	535	563	0	1,173	1,173	0	0	0
4 Total	342	259	601	7,740	147,057	154,797	0	6,445	6,445	0	0	0
5A	0	0	0	0	242	242	0	3,143	3,143	0	0	0
5B	632	0	632	0	306	306	0	19,771	19,771	0	0	0
5C	2,738	0	2,738	0	1,350	1,350	0	17,987	17,987	0	0	0
5D	236	0	236	0	0	0	0	3,092	3,092	0	0	0
5 Total	3,606	0	3,606	0	1,898	1,898	0	43,993	43,993	0	0	0
6A	249	0	249	0	1,923	1,923	0	3,526	3,526	0	745	745
6B	0	364	364	1,068	20,596	21,664	0	26,105	26,105	0	5,048	5,048
6C	298	0	298	186	554	740	0	7,559	7,559	0	375	375
6 Total	547	364	911	1,254	23,073	24,327	0	37,190	37,190	0	6,168	6,168
Alaska Total	147,287	623	147,910	722,850	172,028	894,878	220,034	87,628	307,662	7,152	6,168	13,320
Canada	13,027	0	13,027				25,990	0	25,990			
Total	160,314	623	160,937	722,850	172,028	894,878	246,024	87,628	333,652	7,152	6,168	13,320

¹ Preliminary data.

Subsistence harvest (Alaska and Canada combined) totaled 54,878 chinook, 240,386 summer chum, 196,030 fall chum, and 23,895 coho salmon in 1983 (Table 2). The chinook salmon harvest was more than twice the 1982 harvest, summer chum salmon 17% greater, fall chum salmon 97% greater, and the coho salmon harvest 20% below the 1982 level. The largest chinook and fall chum salmon subsistence harvest occurred in District 5, the largest summer chum salmon harvest in District 4, and the largest coho salmon harvest in District 6. Fishwheels accounted for the majority of the summer chum, fall chum, and coho salmon subsistence harvests, while the majority of the chinook salmon were taken by gillnet.

Escapement Abundance

Chinook salmon spawn in tributary streams throughout the Yukon River drainage (Figure 3). Aerial survey counts in the lower portion of the drainage numbered 653 chinook salmon for the Anvik River and 1,006 for the Nulato River (Table 3). Escapement to the East Fork Andreafsky River was estimated to be 2,720 chinook salmon based on side-scan sonar counts. The Chena and Salcha Rivers are the two largest producers in the middle portion of the Yukon River drainage, and had peak estimates of 2,560 and 1,961 chinook salmon, respectively. The largest escapements in the Canadian portion of the drainage occurred in the Nisutlin and Big Salmon Rivers (1,015 and 640 chinook salmon, respectively). A total of 905 chinook salmon passed through the Whitehorse fishway (Appendix Table 8). Overall, chinook salmon escapement were about 15% below the recent 5-year average for 12 selected index streams.

Summer chum salmon spawn primarily in streams tributary to the lower Yukon and Koyukuk Rivers, although small populations occur in a few tributaries in the upper portion of the drainage as well (Figure 4). Escapements of 362,912 and 110,608 summer chum salmon were estimated by side-scan sonar in the Anvik and East Fork Andreafsky River, respectively. Both estimates are below average for these streams. However, escapements to the upper Koyukuk River drainage were excellent, and a record high of 28,141 summer chum salmon was observed in the Hogatza River drainage. Escapement to the Melozitna River was estimated by side-scan sonar to be 20,126 summer chum salmon in 1983, similar to the 1982 level. Inclement weather precluded peak surveys of summer chum salmon in the Tanana River drainage.

Fall chum salmon spawn in spring-fed upwelling areas in streams and sloughs in the upper Yukon River drainage (Figure 5). Escapement to the Sheenjek River was estimated by side-scan sonar to be 45,733 fall chum salmon, and 10,000 fall chum salmon were estimated by aerial survey of the Fishing Branch River. Both of these Porcupine River drainage escapements are greater than 1982 levels, but below the return expected for a peak cycle year. Escapements to spawning areas in the upper Tanana River (including the Delta River) totaled 25,662 fall chum salmon, which is similar to recent years. However, escapement to the upper Toklat River was below normal, as indicated by a peak foot survey count of only 15,105 fall chum salmon.

Coho salmon spawn in widely scattered tributaries throughout the Yukon River drainage, although major concentrations have been documented in the upper Tanana River drainage (Figure 6). Coho salmon escapement counts are generally obtained ancillary to fall chum salmon escapement survey priorities, and therefore a comprehensive data base does not exist. Escapement magnitude, where documented, was strong in 1983. Over 10,000 coho salmon were counted in the Tanana River drainage, with the Delta Clearwater River accounting for 8,019 of that total.

Table 2. Yukon River salmon subsistence catch by district, species, and gear type, 1983¹.

District	Chinook			Summer Chum ¹³			Fall Chum ¹⁴			Coho ¹⁵		
	GN	FW	Total	GN	FW	Total	GN	FW	Total	GN	FW	Total
1 ²	6,263	-	6,263	24,679	-	24,679	8,238	-	8,238	3,590	-	3,590
2 ³	9,065	-	9,065	27,396	-	27,396	10,341	-	10,341	6,072	-	6,072
3 ⁴	4,910	-	4,910	4,609	-	4,609	2,863	-	2,863	917	-	917
4 ⁵	2,064 ⁹	7,690 ¹⁰	9,754	20,407	115,638	136,045	3,421	30,788	34,209	395	3,551	3,946
5 ⁶	16,780	0	16,780	2,394	21,549	23,943	10,510	94,595	105,105	245	2,203	2,448
6 ⁷	1,740 ¹¹	966 ¹²	2,706	4,743	18,971	23,714	3,217	28,957	32,174	692	6,230	6,922
Alaska Total	40,822	8,656	49,478	84,228	156,158	240,386	38,590	154,340	192,930	11,911	11,984	23,895
Canada ⁸	5,400	0	5,400				3,100	0	3,100			
Total	46,222	8,656	54,878	84,228	156,158	240,386	41,690	154,340	196,030	11,911	11,984	23,895

¹ Preliminary data.

² Villages of Sheldons Point, Alakanuk, Emmonak, and Kotlik.

³ Villages of Mountain Village, Pitkas Point, St. Marys, Pilot Station, and Marshall.

⁴ Villages of Russian Mission and Holy Cross.

⁵ Main Yukon River villages from Anvik to Ruby, and Koyukuk River villages.

⁶ Main Yukon River villages from Tanana to Eagle, and Chandalar River villages.

⁷ Includes catches from Manley, Minto, Nenana, and Fairbanks.

⁸ Includes catches from Mayo, Pelly, Carmacks, Dawson, Ross River, Teslin, Burwash Landing, Stewart River, Pelly River, and Lake Laberge.

⁹ Catches from Galena and 25% of Ruby catches.

¹⁰ Catches from main Yukon River villages from Anvik to Koyukuk, Koyukuk River villages, and 75% of Ruby catches.

¹¹ Catches from Manley, Minto, and Fairbanks.

¹² Catches from Nenana.

¹³ Fishwheels account for an estimated 85% of the District 4 summer chum salmon subsistence catch, 90% of the District 5 catch, and 80% of the District 6 catch.

¹⁴ Fishwheels account for an estimated 90% of the fall chum salmon subsistence catch in Districts 4, 5, and 6.

¹⁵ Fishwheels account for an estimated 90% of the coho salmon subsistence catch in Districts 4, 5, and 6.

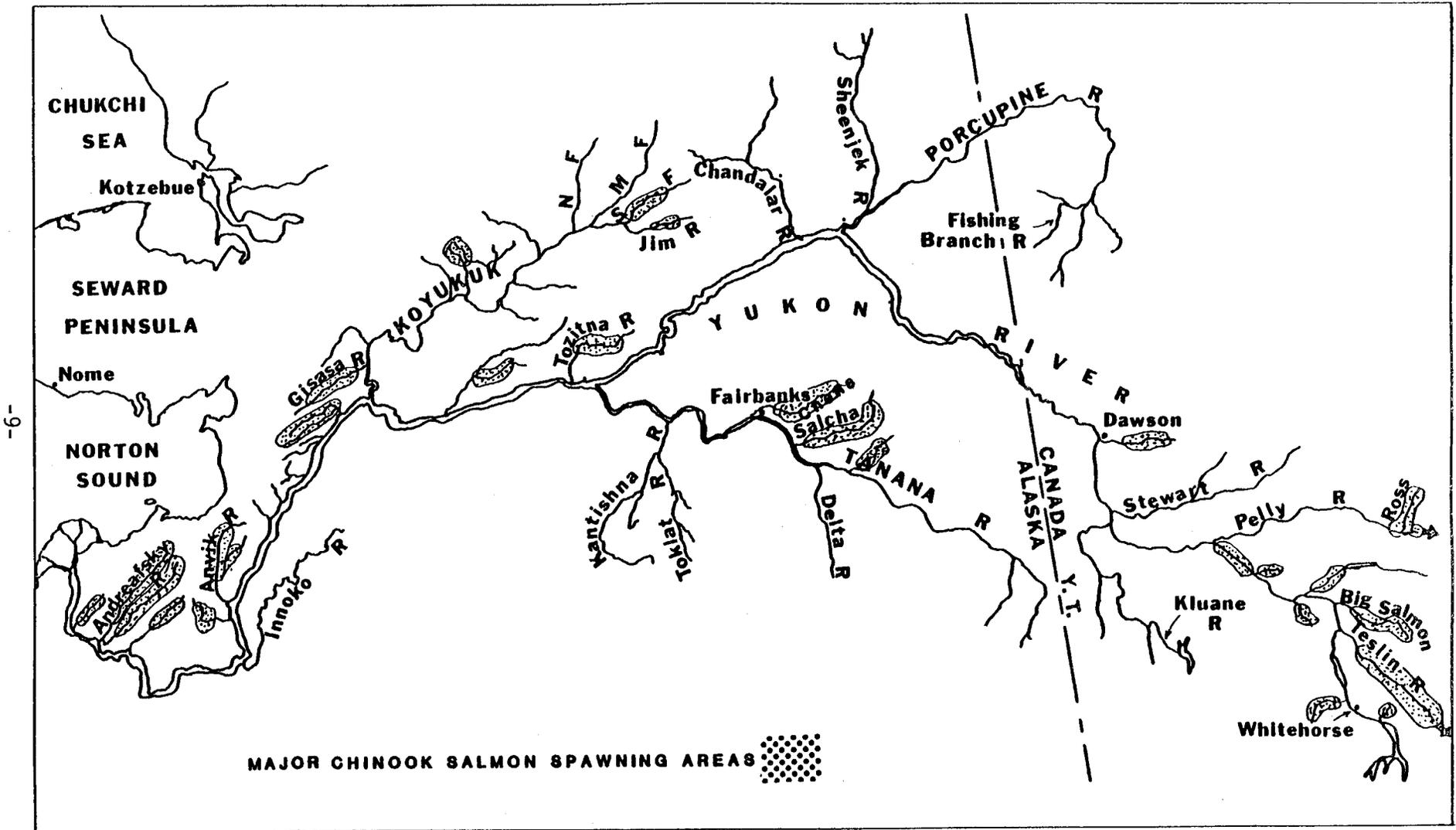


Figure 3. Chinook salmon spawning areas in the Yukon River drainage.

Table 3. Yukon River salmon aerial survey escapement counts by river and species, 1983 ^a.

Stream (drainage)	Date	Survey rating	Chinook	Summer chum	Fall chum	Coho
<u>Andreafsky River</u>						
East Fork sonar count ^b	6/15-7/20		2,720	110,608	-	-
<u>Anvik River</u>						
	7/23	poor	653	-	-	-
Sonar count ^b	6/21-7/23		-	362,912	-	-
Subtotal			653	362,912	-	-
<u>Nulato River</u>						
Below forks	7/14, 7/29	fair-good	1	2,363	-	-
South fork	7/14, 7/29	fair-good	480	1,268	-	-
North fork	7/14, 7/29	fair-good	525	17,199	-	-
Subtotal			1,006	20,830	-	-
<u>Koyukuk River Drainage</u>						
Gisasa River	7/14, 7/29	poor-fair	572	2,356	-	-
Dakli River	7/13	good	-	4,313	-	-
Wheeler Creek	7/13	good	-	8,120	-	-
Subtotal			-	12,433	-	-
Hogatza River						
Caribou Creek	7/13	good	-	14,090	-	-
Clear Creek	7/13	good	-	14,051	-	-
Subtotal			-	28,141	-	-
Indian River	7/13	good	93	836	-	-
Henshaw Creek	7/28	good	283	1,484	-	-
South Fork Koyukuk	7/28	good	307	726	-	-
Jim River	7/28	good	282	431	-	-
Prospect Creek	7/28	good	1	-	-	-
Subtotal			590	1,157	-	-
Total Koyukuk River Drainage			1,538	46,407	-	-
<u>Melozitna River Drainage</u>						
Melozitna Hot Springs Creek	7/29	poor-fair	11	(776)	-	-
Sonar count ^{b,c}	6/29-7/23		-	20,126	-	-
Subtotal			11	20,126	-	-
<u>Tozitna River</u>	7/29, 9/20	good	388	1,604	gd,e	5d,e
<u>Tanana River Drainage</u>						
<u>Kantishna River Drainage</u>						
<u>Toklat River</u>						
Barton Creek	7/21	fair	561	-	-	-
Geiger Creek ^f	10/18	good	-	-	4,219	42
Sushana River ^f	10/18	good	-	-	3,442	3
Toklat-Roadhouse ^f	10/18	good	-	-	7,444	-
Subtotal			561	-	15,105	45
Clear Creek	8/2	fair	57	-	-	-
Bearpaw River	7/21, 10/17	poor	24	-	287	-
Moose Creek	10/17		-	-	218	-
Subtotal			24	-	505	-

-Continued-

Table 3. Yukon River salmon aerial survey escapement counts by river and species, 1983 ^a (continued).

Stream (drainage)	Date	Survey rating	Chinook	Summer chum	Fall chum	Coho
<u>Menana River Drainage</u>						
Seventeenmile Slough	10/17	good	-	-	2,169	103
Julius Creek						
Wood Creek ^g	9/12-10/30		-	-	327	1,044
Lost Slough	10/17	good	-	-	69	766
Subtotal			-	-	665	1,913
Chatanika River	7/26, 8/10	poor	27	12	-	-
Chena River	7/22, 7/29	good	2,560	-	-	-
	8/10	good	-	1,097	-	-
Subtotal			2,560	1,097	-	-
Saicha River	7/26	fair	1,961	716	-	-
<u>Upper Tanana River Drainage</u>						
Unnamed slough near Eielson	10/27	fair	-	-	313	-
Richardson Clearwater Ri	10/27	fair	-	-	8	88
Andersen Slough	10/27	fair	-	-	551	-
Delta River	11/1	fair	-	-	7,230 ^f	-
Goodpaster River	7/29	good	150	60	-	-
South Bank Tanana	10/27	poor	-	-	1,350	-
Bluff Cabin Slough	11/1	fair	-	-	12,715 ^f	-
Clearwater Lk Outlet S1	10/27	poor-fair	-	-	2,380	-
Clearwater Lk Outlet	10/27	fair	-	-	-	253
Onemile Slough	10/27	poor	-	-	1,115	5
Delta Clearwater Rid,e,h	10/25		-	-	-	8,019
Subtotal			150	60	25,662	8,365
TOTAL TANANA RIVER DRAINAGE			5,340	1,885	41,937	10,323
<u>Hodzana River^{e,i}</u>	7/29		-	31	-	-
<u>Porcupine River Drainage</u>						
Sheenjek River	9/21	fair	-	-	(22,230)	-
Sonar Count ^b	8/29-9/24		-	-	45,733	-
Fishing Branch River ^j	10/7	good	-	-	10,000	-
Total Porcupine River			-	-	55,733	-
<u>Yukon Territory Streams</u>						
Nisling River ^j	8/30	poor	2	-	-	-
Kluane River ^{e,j}	10/18-21		-	-	8,578	-
Tincup Creek	8/17	fair	54	-	-	-
Mainstem Yukon ^{e,j,k}	8/10-25; 10/9-24		232	-	7,560	-
Tatchun Creek ^{f,j}	8/25		264	-	-	-
Little Salmon River	8/14	poor	101	-	-	-
Big Salmon River ^{f,j}	8/18-26		640	-	-	-
Lower Teslin River ^j	8/26	poor	25	-	-	-
Nisutlin River	8/15	fair	1,015	-	-	-
Wolf River	8/15	fair	252	-	-	-
Fish Lk Outlet ^j	8/24	good	25	-	-	-
Morley River	8/15	poor	90	-	-	-
Swift River	8/16	fair	173	-	-	-
Jennings River	8/16	fair	37	-	-	-
Upper Teslin River	8/16	poor	125	-	-	-
Gladys River ^j	8/27	fair	2	-	-	-
Takhini River ^j	9/1		105	-	-	-

-Continued-

Table 3. Yukon River salmon aerial survey escapement counts by river and species, 1983 ^a (continued).

Stream (drainage)	Date	Survey rating	Chinook	Summer chum	Fall chum	Coho
Whitehorse Fishway	8/1-31		905	-	-	-
Mitchie Creek ^f	9/18		40	-	-	-
Pelly River Drainage						
Ross River ^j	8/29	poor-fair	31	-	-	-
Lewis Lk Outlet ^j	8/20	poor-fair	12	-	-	-
Pelly Lks Outlet ^j	8/20	fair	5	-	-	-
Riddell River ^j	8/20	fair-good	3	-	-	-
Earn River ^j	8/21	fair	23	-	-	-
McQuesten River ^j	8/6	fair-good	8	-	-	-
Subtotal			4,169	-	16,138	-
YUKON RIVER DRAINAGE TOTALS			15,825	564,403	113,817	10,328

- ^a Only peak estimates listed, carcasses included (data in parentheses not included in subtotals).
^b Side-scan sonar estimates.
^c Sonar count includes a few chinook salmon.
^d Surveyed by Sport Fish Division.
^e Boat survey.
^f Foot survey.
^g FRED weir count. All chums sacrificed, and 205 coho artificially spawned for Clear Hatchery.
^h Population estimate.
ⁱ Surveyed by U.S. Fish and Wildlife Service.
^j Survey by Environment Canada Fisheries Service (Yukon Territory).
^k Mainstem Yukon River from Yukon Crossing to Fort Selkirk.

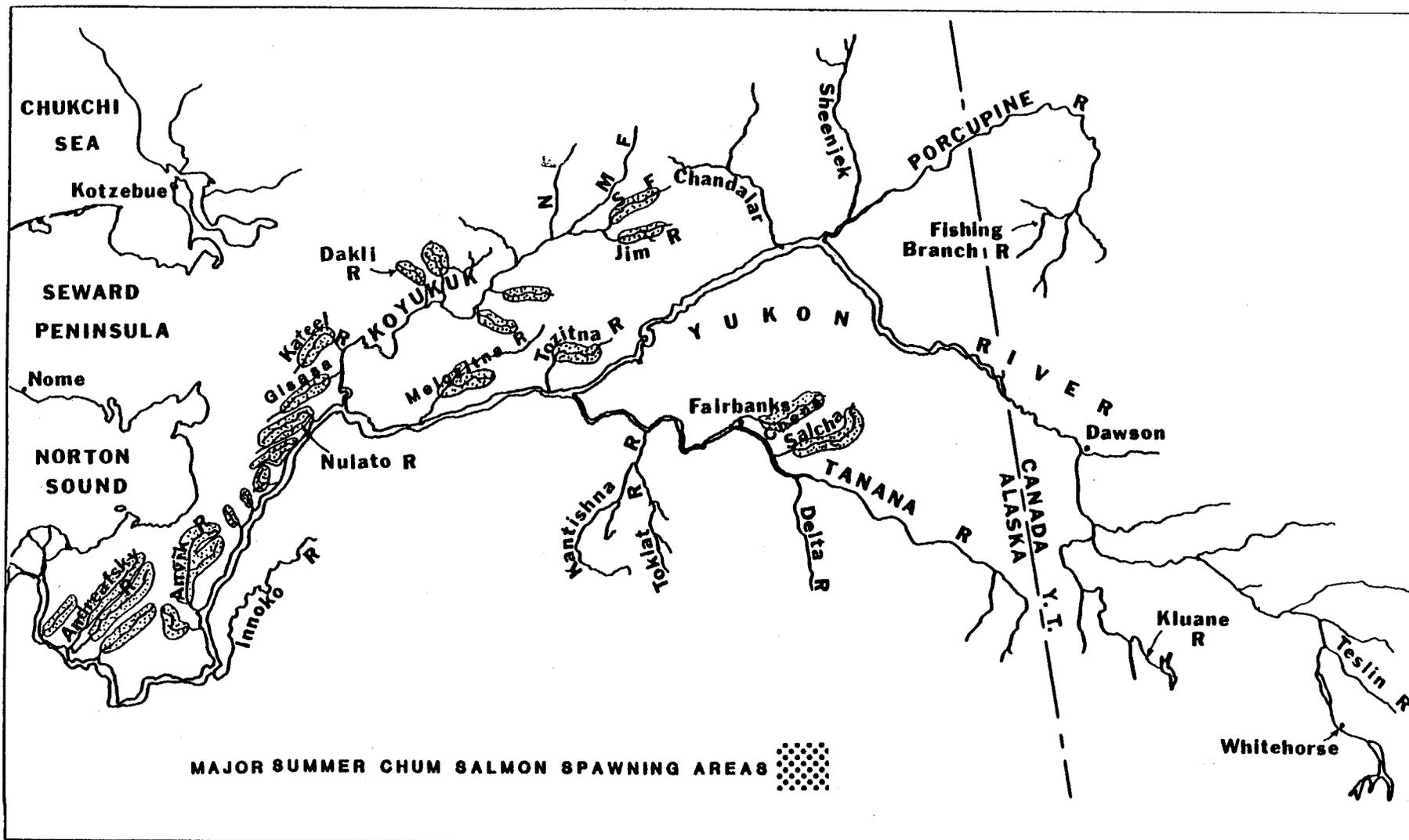


Figure 4. Summer chum salmon spawning areas in the Yukon River drainage.

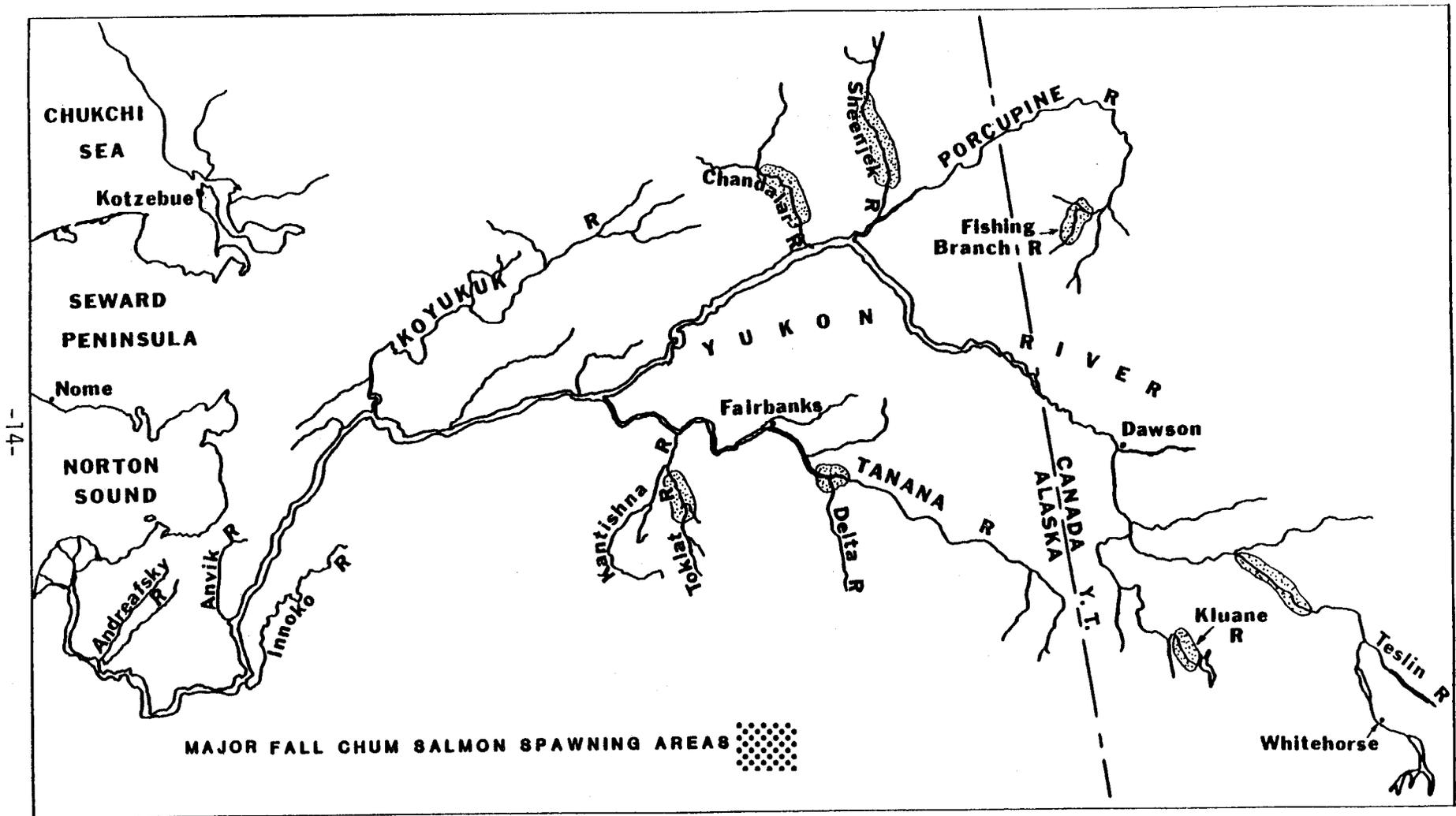


Figure 5. Fall chum salmon spawning areas in the Yukon River drainage.

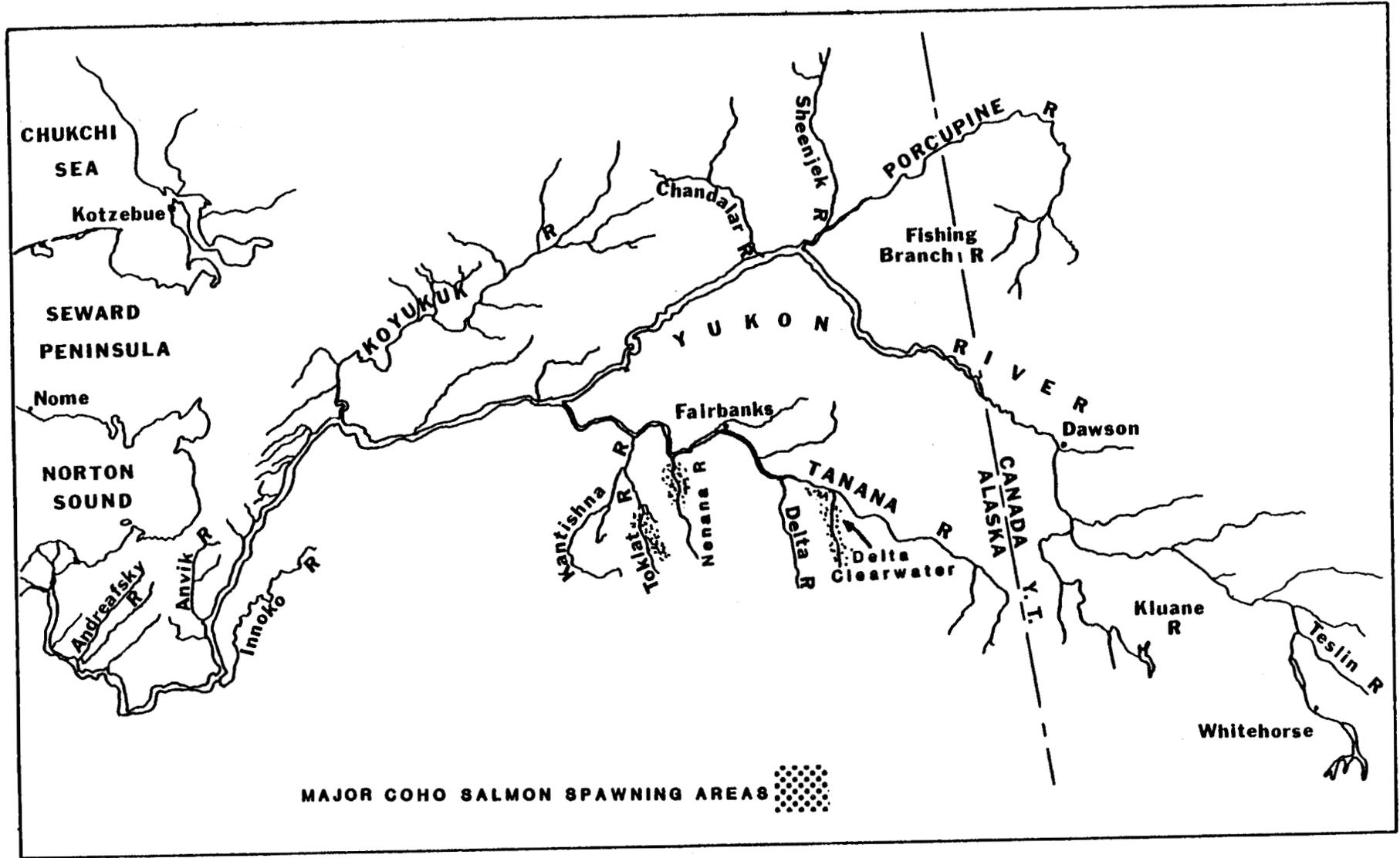


Figure 6. Coho salmon spawning areas in the Yukon River drainage.

Age, Sex, and Length Composition

Age, sex, and length composition of Yukon River salmon catches and escapements in 1983 are presented separately for each species.

Chinook Salmon:

In 1983, as in most recent years, age 6₂ chinook salmon were the dominant age class in Yukon River commercial catches (Table 4, Appendix Tables 9-15). District 1 and District 2 gillnet catches, which together comprise nearly 75% of the total river harvest, were composed of 64% and 59% age 6₂ fish, respectively. The age 6₂ component was even higher for the District 3 and Canadian harvests (80% and 71%, respectively). Age 5₂ chinook salmon were the next most abundant age class, comprising 19% and 25% of the respective District 1 and 2 catches.

There was essentially no change in age structure during the first two sample periods in either District 1 or District 2. However, the proportion of older fish decreased markedly while the proportion of younger fish increased for the third sample period in each district (small mesh season). Contribution of age 6₂ fish decreased from 66% for the first sample period in Districts 1 and 2, to only 40% for the third sample period in each district. Contribution of age 5₂ fish in District 1 increased from 16% to 32%, while it increased from 22% to 33% in District 2. The incidence of age 4₂ fish likewise increased from about 2% to 24% in each district.

Very few samples were collected from fisheries in Districts 4 and 6, and no attempt was made to apportion catches in these districts. Commercial and subsistence harvests for these two districts together comprised less than 7% of the total Yukon River chinook salmon harvest in 1983.

Subsistence harvests in Districts 1, 2, 3, and Canada were not sampled. Since these fisheries utilize the same gear types and occur concurrently with commercial fisheries in these districts, we allocated harvests by age and sex from the appropriate commercial catch samples (Appendix Table 16-19). Because of significant intermixing of commercial and subsistence gillnet and fishwheel catches by fishermen in District 5, we pooled estimates for both gear types and fisheries in this district and assumed them to be self-weighting. The pooled harvest for District 5 (Appendix Table 15), predominantly from fishwheels, was composed of fewer older fish (49% age 6₂), more younger fish (35% age 5₂), and more males (70%) than was found for the other districts.

Age 6₂ chinook salmon comprised 63% of the total Yukon River chinook salmon harvest (commercial and subsistence combined), followed in abundance by age 5₂ (21%), and age 4₂ (7%) fish (Table 4). Males accounted for 56% of the total catch. Samples which were not used for catch apportionment are summarized in Appendix Table 20.

Size of chinook salmon with District 1 commercial gillnet catch ranged from 563 mm for age 4₂ to 992 mm for age 7₂ males, and from 78 mm for age 5₂ to 958 mm for age 7₂ females (Table 5). Fish sampled from the Yukon Territory commercial gillnet catch tended to be larger, ranging from 576 mm for age 4₂ to 1,104 mm for age 7₂ males, and from 767 mm for age 5₂ to 1,000 mm for age 7₂ females.

Table 4. Total utilization of Yukon River chinook salmon by age, sex, and fishery, 1983.

District	Fishery	Sample Size	Sex	AGE GROUP								Total
				42	52	53	62	63	72	73	83	
1	Commercial Gillnet	1,601	Males	6,178	16,275	0	24,312	328	2,389	1,024	92	50,598
			Females	77	1,972	0	36,549	49	4,316	1,896	0	44,859
			Combined	6,255	18,247	0	60,861	377	6,705	2,920	92	95,457
	Subsistence Gillnet	1	Males	405	1,068	0	1,595	21	157	67	6	3,319
			Females	5	130	0	2,398	3	283	125	0	2,944
			Combined	410	1,198	0	3,993	24	440	192	6	6,263
2	Commercial Gillnet	957	Males	4,090	9,729	0	10,617	0	893	89	0	25,418
			Females	0	1,177	0	14,765	0	1,869	0	0	17,811
			Combined	4,090	10,906	0	25,382	0	2,762	89	0	43,229
	Subsistence Gillnet	2	Males	470	1,827	0	2,276	0	223	24	0	4,820
			Females	0	270	0	3,507	0	468	0	0	4,245
			Combined	470	2,097	0	5,783	0	691	24	0	9,065
3	Commercial Gillnet	153	Males	27	242	0	2,066	27	188	53	0	2,603
			Females	0	107	0	1,208	0	188	0	0	1,503
			Combined	27	349	0	3,274	27	376	53	0	4,106
	Subsistence Gillnet	3	Males	32	289	0	2,471	32	225	64	0	3,113
			Females	0	128	0	1,444	0	225	0	0	1,797
			Combined	32	417	0	3,915	32	450	64	0	4,910
4	4	Males	-	-	-	-	-	-	-	-	-	
		Females	-	-	-	-	-	-	-	-	-	
		Combined	-	-	-	-	-	-	-	-	10,355	
5	4	461	Males	1,902	6,545	44	5,174	133	442	88	0	14,328
			Females	0	619	0	4,864	88	398	88	0	6,058
			Combined	1,902	7,164	44	10,038	221	840	176	0	20,386
6	4		Males	-	-	-	-	-	-	-	-	-
			Females	-	-	-	-	-	-	-	-	-
			Combined	-	-	-	-	-	-	-	-	3,617
Dawson	Commercial Gillnet	629	Males	145	1,222	0	4,432	41	891	83	0	6,814
			Females	0	186	0	4,805	0	870	352	0	6,213
			Combined	145	1,408	0	9,237	41	1,760	435	0	13,027
	Subsistence Gillnet	5	Males	60	507	0	1,837	17	369	34	0	2,824
			Females	0	77	0	1,992	0	361	146	0	2,576
			Combined	60	584	0	3,829	17	730	180	0	5,400
TOTAL HARVEST			Males	13,308	37,700	44	54,762	599	5,773	1,525	98	113,809
			Females	82	4,665	0	71,512	140	8,974	2,606	0	87,979
			Combined	13,390	42,365	44	126,274	739	14,747	4,131	98	215,815 ⁶

1 Allocation based on District 1 commercial catch samples.

2 Allocation based on District 2 commercial catch samples.

3 Allocation based on District 3 commercial catch samples.

4 Combined commercial and subsistence, gillnet, and fishwheel catches.

5 Allocation based on Dawson commercial catch samples.

6 Total includes commercial and subsistence harvests in Districts 4 and 6 that are not apportioned by age and sex due to lack of sample data.

Table 5. Yukon River chinook salmon commercial and subsistence catch samples, length (mm) by age and sex, 1983¹.

District	Fishery	Sex		AGE GROUP							
				42	52	53	62	63	72	73	83
1	Commercial 6" and 8 1/2" Gillnets	Males	Avg. Length	562.8	727.7		863.9	729.0	992.0	868.0	
			Std. Error	3.3	3.9		3.7	3.5	15.8	15.8	
			Sample Size	135	258		296	3	24	11	
		Females	Avg. Length		780.8		866.1		957.9	867.7	
			Std. Error		13.0		2.1		8.6	5.7	
			Sample Size		32		439		41	16	
2	Commercial 6" and 8 1/2" Gillnets	Males	Avg. Length	561.8	719.9		845.2		967.9	807.5	
			Std. Error	5.9	5.1		5.9		10.8	35.5	
			Sample Size	65	147		156		12	2	
		Females	Avg. Length		792.3		868.0		920.4		
			Std. Error		12.6		5.2		8.8		
			Sample Size		18		228		29		
3	Commercial 8 1/2" Gillnets	Males	Avg. Length	550.0	755.0	655.0	874.2	855.0	957.1		
			Std. Error	0.0	18.7	0.0	6.3	15.0	16.1		
			Sample Size	1	9	1	77	2	7		
		Females	Avg. Length		801.3		863.9		961.4		
			Std. Error		30.2		6.5		19.1		
			Sample Size		4		45		7		
5	2	Males	Avg. Length	553.2	693.9	443.0	867.3	727.0	990.0	811.5	
			Std. Error	7.7	4.5	0.0	7.1	18.3	23.8	1.5	
			Sample Size	43	148	1	117	3	10	2	
		Females	Avg. Length		785.8		841.9	790.0	914.3	809.5	
			Std. Error		14.6		5.9	64.0	18.0	55.5	
			Sample Size		14		110	2	9	2	
Yukon Territory 3	Commercial 8 1/2" Gillnets	Males	Avg. Length	576.0	792.7		974.3	752.5	1104.1	992.5	1100.0
			Std. Error	28.6	8.3		6.0	37.5	11.4	59.8	0.0
			Sample Size	7	59		214	2	43	4	1
		Females	Avg. Length		766.7		936.7		999.6	925.9	
			Std. Error		24.8		3.3		8.1	12.8	
			Sample Size		9		232		42	17	

¹ Length is mid-eye to fork-of-tail, except where noted.

² Combined commercial and subsistence, gillnets of unknown mesh size and fishwheels.

³ Length reported is tip-of-snout to fork-of-tail.

Escapements to lower Yukon River tributaries were comprised largely of 6₂ fish in 1983 (Table 6), making up 46% and 45% samples from the Andreefsky and Anvik Rivers, respectively. Males predominated, comprising 70% and 57% of the Andreefsky and Anvik River samples, respectively. Middle Yukon River spawning escapements to the Chena and Salcha Rivers were comprised of somewhat higher proportions of age 6₂ chinook salmon (53% and 58%, respectively) than lower river escapements (Table 6). The abundance of Chena and Salcha River age 5₂ fish was lower (20% and 22%, respectively) than the same components for the Andreefsky and Anvik Rivers (39% and 36%, respectively). Sex compositions of the two middle river escapements were variable, being more than half males (57%) in the Chena River and more than half females (58%) in the Salcha River.

Escapements in the Canadian portion of the drainage tended to be made up of more older fish and more females than escapements in the other regions (Table 6), which has also been observed in previous years. Age 6₂ fish were the most abundant age group, averaging about 71% for escapements to the Big Salmon, Nisutlin, and Little Salmon Rivers. The frequency of females also averaged about 71% in samples from each of these locations. As has been the case in recent years, the occurrence of fish with two freshwater annuli was much greater in the upper Yukon River spawning streams than in other parts of the drainage.

Chinook salmon escapement samples tended to be larger for a given age-sex group in upper Yukon River tributaries as compared to lower river tributaries (Table 7). Size of chinook salmon from the Andreefsky River ranged from 528 mm for age 4₂ to 892 for age 6₃ males, and from 809 mm for age 5₂ to 895 mm for age 7₂ females. Samples from the Big Salmon River in Yukon Territory, however, ranged from 545 mm for age 4₂ to 1,020 mm for age 7₂ males, and from 820 mm for age 5₂ to 1,040 mm for age 8₃ females.

Summer Chum Salmon:

Summer chum salmon were sampled from the District 1 and 2 commercial gillnet catch, and the District 4 commercial gillnet and fishwheel catches. The District 3 harvest was apportioned by age and sex based on the District 2 sample composition, while District 5 and 6 harvests could not be apportioned due to the lack of appropriate sample data. Subsistence harvest for each district was apportioned by age and sex using the commercial catch sample data for that district. Summer chum salmon harvest by age, sex, and fishery for the entire drainage is presented in Table 8, while age and sex composition for each fishery is presented by sample period in Appendix Tables 21-31. Age, sex, and size composition of samples collected but not used to apportion catches is shown in Appendix Table 32.

Age 4₁ accounted for 49% of the commercial gillnet catch, 53% of the subsistence gillnet catch, and 67% of the commercial and subsistence fishwheel catches for all districts combined. Age 5₁ followed in importance, accounting for 49% of the commercial gillnet catch, 45% of the subsistence gillnet catch, and 30% for the commercial and subsistence fishwheel catches. Ages 3₁ and 6₁ accounted for 1% and 0.8%, respectively, of total harvest for all districts and fisheries combined.

Temporal trends in age composition were evident for the District 1 commercial gillnet fishery (Appendix Table 21). Age 5₁ declined from 53% to 30%, while age 4₁ increased from 46% to 67%. This trend is not apparent in the District 2 sample

Table 6. Yukon River chinook salmon escapement carcass samples, age and sex by spawning area, 1983.

River	Aerial Survey Estimate	Sample Size	Sex	AGE GROUP								TOTAL
				32	42	52	62	63	72	73	83	
Andreafsky	2,720 ¹	355 ²	Males	0.00	15.21	36.06	18.87	0.28	0.00	0.00	0.00	70.42
			Females	0.00	0.00	1.97	27.32	0.00	0.28	0.00	0.00	29.58
			Combined Std. Err.	0.00	15.21 4.93	38.03 4.19	46.20 3.90	0.28 0.00	0.28 0.00	0.00 0.00	0.00 0.00	100.00
Arvik	653 ²	306 ⁴	Males	0.33	17.97	27.45	10.78	0.00	0.00	0.00	0.00	56.54
			Females	0.00	0.00	8.50	33.99	0.98	0.00	0.00	0.00	43.46
			Combined Std. Err.	0.33 0.00	17.97 5.23	35.95 4.60	44.77 4.26	0.98 6.97	0.00 0.00	0.00 0.00	0.00 0.00	100.00
Chena	2,487	395	Males	0.00	22.03	15.19	18.48	0.00	1.27	0.00	0.00	56.96
			Females	0.00	0.00	4.81	34.68	0.00	3.54	0.00	0.00	43.04
			Combined Std. Err.	0.00 0.00	22.03 4.47	20.00 4.53	53.16 3.45	0.00 0.00	4.81 5.04	0.00 0.00	0.00 0.00	100.00
Salcha	1,961	451	Males	0.00	16.63	12.64	13.30	0.00	0.44	0.00	0.00	42.35
			Females	0.00	0.00	8.87	44.79	0.00	3.10	0.22	0.00	57.65
			Combined Std. Err.	0.00 0.00	16.63 4.33	21.51 4.19	58.09 3.05	0.00 0.00	3.55 4.78	0.22 0.00	0.00 0.00	100.00
Big Salmon	640 ⁵	199	Males	0.00	0.50	9.55	15.58	0.00	3.02	0.00	0.00	28.64
			Females	0.00	0.00	2.01	54.77	0.00	14.07	0.00	0.50	71.36
			Combined Std. Err.	0.00 0.00	0.50 0.00	11.56 6.82	70.35 3.87	0.00 0.00	17.09 6.55	0.00 0.00	0.50 0.00	100.00
Little Salmon	101	117	Males	0.00	6.84	10.26	11.11	0.00	1.71	0.00	0.00	29.91
			Females	0.00	0.00	5.98	58.97	0.00	4.27	0.85	0.00	70.09
			Combined Std. Err.	0.00 0.00	6.84 9.54	16.24 8.69	70.09 5.09	0.00 0.00	5.98 9.68	0.85 0.00	0.00 0.00	100.00
Nisutlin	1,015	189	Males	0.00	0.53	12.17	12.17	1.06	0.53	1.59	0.00	28.04
			Females	0.00	0.00	2.12	60.32	0.00	1.06	8.47	0.00	71.96
			Combined Std. Err.	0.00 0.00	0.53 0.00	14.29 6.86	72.49 3.83	1.06 10.23	1.59 8.84	10.05 7.09	0.00 0.00	100.00
Miclie	40 ^{5 6}	30	Males	0.00	3.33	10.00	3.33	13.33	0.00	3.33	0.00	33.33
			Females	0.00	0.00	3.33	30.00	0.00	0.00	33.33	0.00	66.67
			Combined Std. Err.	0.00 0.00	3.33 0.00	13.33 19.63	33.33 15.71	13.33 19.63	0.00 0.00	36.67 15.24	0.00 0.00	100.00
Tatchun	264 ⁵	53	Males	0.00	0.00	37.74	13.21	0.00	0.00	0.00	0.00	50.94
			Females	0.00	0.00	5.66	39.62	0.00	3.77	0.00	0.00	49.06
			Combined Std. Err.	0.00 0.00	0.00 0.00	43.40 10.57	52.83 9.61	0.00 0.00	3.77 19.06	0.00 0.00	0.00 0.00	100.00

¹ Sonar estimate.

² Carcass samples = 252. Beach seine samples = 103.

³ Poor survey.

⁴ Carcass samples = 302. Beach seine samples = 4.

⁵ Foot survey, Department of Fisheries and Oceans, Canada.

⁶ Whitehorse fishway count = 905.

Table 7. Yukon River chinook salmon escapement carcass samples, length (mm) by age and sex, 1983.

River	Sex		AGE GROUP							83
			32	42	52	62	63	72	73	
Andreafsky	Males	Avg. Length		527.9	714.1	831.2	892.0			
		Std. Error		6.4	5.4	6.8	0.0			
		Sample Size		54	128	67	1			
	Females	Avg. Length			808.9	847.8		895.0		
		Std. Error			21.9	4.5		0.0		
		Sample Size			7	97		1		
Arvik	Males	Avg. Length	340.0	517.9	707.7	804.5				
		Std. Error	0.0	8.2	8.2	15.5				
		Sample Size	1	55	84	33				
	Females	Avg. Length			788.1	828.1		876.0		
		Std. Error			10.4	4.0		65.1		
		Sample Size			26	104		3		
Chena	Males	Avg. Length		534.4	727.3	920.0		999.0		
		Std. Error		5.9	7.2	8.8		39.4		
		Sample Size		87	60	73		5		
	Females	Avg. Length			792.4	876.2		945.0		
		Std. Error			11.2	4.5		15.7		
		Sample Size			19	137		14		
Salcha	Males	Avg. Length		549.7	728.1	910.6		992.5		
		Std. Error		7.0	8.9	9.2		32.5		
		Sample Size		72	57	60		2		
	Females	Avg. Length			781.4	876.9		955.0	945.0	
		Std. Error			9.5	3.6		15.1	0.0	
		Sample Size			40	202		14	1	
Big Salmon	Males	Avg. Length		545.0	721.9	880.1		1020.0		
		Std. Error		0.0	13.3	14.4		17.7		
		Sample Size		1	19	31		6		
	Females	Avg. Length			820.0	870.7		944.6	1040.0	
		Std. Error			14.0	4.1		9.0	0.0	
		Sample Size			4	109		28	1	
Little Salmon	Males	Avg. Length		565.6	784.2	905.8		987.5		
		Std. Error		17.0	30.5	26.6		2.5		
		Sample Size		8	12	13		2		
	Females	Avg. Length			795.7	833.1		934.0	745.0	
		Std. Error			21.5	5.9		22.7	0.0	
		Sample Size			7	69		5	1	
Nisutlin	Males	Avg. Length		700.0	731.5	853.7	707.5	954.0	866.7	
		Std. Error		0.0	11.1	17.1	12.5	0.0	9.3	
		Sample Size		1	23	23	2	1	3	
	Females	Avg. Length			742.5	825.6		890.0	825.0	
		Std. Error			27.8	3.8		10.0	8.9	
		Sample Size			4	114		2	16	
Michie Cr.	Males	Avg. Length		510.0	695.0	832.0	703.8		840.0	
		Std. Error		0.0	53.9	0.0	35.4		0.0	
		Sample Size		1	3	1	4		1	
	Females	Avg. Length			760.0	816.7			829.5	
		Std. Error			0.0	12.4			8.8	
		Sample Size			1	9			10	
Tatchun Cr.	Males	Avg. Length			693.0	817.1				
		Std. Error			11.8	42.5				
		Sample Size			20	7				
	Females	Avg. Length			704.1	803.0		835.0		
		Std. Error			12.0	12.7		15.0		
		Sample Size			23	28		2		

¹ Carcass samples = 252. Beach seine samples = 103.

² Carcass samples = 302. Beach seine samples = 4.

Table 8. Total utilization of Yukon River summer chum salmon by age, sex, and fishery, 1983.

Fishery	Sample Size	Age 3 ₁			Age 4 ₁			Age 5 ₁			Age 6 ₁			Combined Ages		
		M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total
District 1																
Commercial Gillnet	1,812	1,190	1,009	2,199	98,929	150,683	249,612	91,383	103,171	194,554	2,684	2,115	4,799	194,186	256,978	451,164
Subsistence Gillnet	-	54	54	108	5,666	7,682	13,348	5,598	5,366	10,964	177	82	259	11,495	13,184	24,679
Total		1,244	1,063	2,307	104,595	158,365	262,960	96,981	108,537	205,518	2,861	2,197	5,058	205,681	270,162	475,843
District 2																
Commercial Gillnet	986	1,468	0	1,468	51,638	40,916	92,554	75,448	76,631	152,079	1,691	300	1,991	130,245	117,847	248,092
Subsistence Gillnet	-	28	0	28	7,335	5,001	12,336	9,225	5,529	14,754	111	167	278	16,699	10,697	27,396
Total		1,496	0	1,496	58,973	45,917	104,890	84,673	82,160	166,833	1,802	467	2,269	146,944	128,544	275,488
District 3																
Commercial Gillnet	-	15	0	15	3,909	2,665	6,574	4,916	2,947	7,863	59	89	148	8,899	5,701	14,600
Subsistence Gillnet	-	5	0	5	1,234	841	2,075	1,551	931	2,482	19	28	47	2,809	1,800	4,609
Total		20	0	20	5,143	3,506	8,649	6,467	3,878	10,345	78	117	195	11,708	7,501	19,209
District 4																
Commercial Fishwheel	756	1,245	2,951	4,196	25,257	73,686	98,943	19,338	24,215	43,553	365	0	365	46,205	100,852	147,057
Commercial Gillnet	556	56	97	153	1,642	3,341	4,983	947	1,643	2,590	0	14	14	2,645	5,095	7,740
Subsistence Fishwheel	-	1,000	1,333	2,333	19,329	57,985	77,314	16,329	19,329	35,658	333	0	333	36,991	78,647	115,638
Subsistence Gillnet	-	147	257	404	4,331	8,808	13,139	2,496	4,331	6,827	0	37	37	6,974	13,433	20,407
Total		2,448	4,638	7,086	50,559	143,820	194,379	39,110	49,518	88,628	698	51	749	92,815	198,027	290,842
District 5																
Commercial Fishwheel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,898
Subsistence Fishwheel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21,549
Subsistence Gillnet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,394
Total		-	-	-	-	-	-	-	-	-	-	-	-	-	-	25,841
District 6																
Commercial Fishwheel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23,073
Commercial Gillnet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,254
Subsistence Fishwheel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18,971
Subsistence Gillnet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,743
Total		-	-	-	-	-	-	-	-	-	-	-	-	-	-	48,041
Districts Combined																
Commercial Fishwheel		1,245	2,951	4,196	25,257	73,686	98,943	19,338	24,215	43,553	365	0	365	46,205	100,852	172,028 ¹
Commercial Gillnet		2,729	1,106	3,835	156,118	197,605	353,723	172,694	184,392	357,086	4,434	2,518	6,952	335,975	385,621	722,850 ²
Subsistence Fishwheel		1,000	1,333	2,333	19,329	57,985	77,314	16,329	19,329	35,658	333	0	333	36,991	78,647	156,158 ¹
Subsistence Gillnet		234	311	545	18,566	22,332	40,898	18,870	16,157	35,027	307	314	621	37,977	39,114	84,228 ¹
Total		5,208	5,701	10,909	219,270	351,608	570,878	227,231	244,093	471,324	5,439	2,832	8,271	457,148	604,234	1,135,264 ¹

¹ Total includes summer chum salmon harvested in Districts 5 and 6 that are not apportioned by age and sex due to lack of sample data.

² Total includes summer chum salmon harvested in District 6 that are not apportioned by age and sex due to lack of sample data.

data, probably due to inadequate sampling of the later part of the run (Appendix Table 22).

Females outnumbered males in the District 1 and 4 gillnet fisheries and the District 4 fishwheel fishery, while males were more abundant in the District 2 gillnet harvest. Females comprised 57% of total harvest for all districts and fisheries combined. Size of fish captured in the District 1 gillnet fishery was slightly larger than for those captured in Districts 2 and 4, but was similar to those taken by fishwheel in District 4 (Table 9).

The East Fork Andreafsky River and Anvik River were the only summer chum salmon escapements sampled in 1983 (Tables 10-12). Temporal trends in age composition were evident in the East Fork Andreafsky River escapement sample. Age 5₁ comprised 81% of the period 1 sample and 48% of the period 2 sample, while age 4₁ increased from 17% to 50% for each of these periods. The age composition for the Anvik River was 57% age 4₁ and 41% age 5₁. Sex composition was 57% female for each escapement sample. Anvik River summer chum salmon had greater average lengths for most age and sex groups.

Fall Chum Salmon:

Fall chum salmon were sampled from the District 1 and Canadian commercial gillnet catches, and the District 4 and 5 commercial fishwheel catches. Fall chum salmon harvest by age, sex, and fishery for the entire drainage is presented in Table 13, while age and sex composition for each fishery is presented by sample period in Appendix Tables 33-45. Age, sex, and size composition of samples collected but not used to apportion catches is shown in Appendix Table 46.

Age 4₁ accounted for 88% of the commercial and subsistence gillnet catches, and 97% of the commercial and subsistence fishwheel catches (Table 13). Age 5₁ comprised 11% of the gillnet harvest and only 3% of the fishwheel harvest, while age 3₁ contributed 0.7% of the total harvest for all districts and fisheries combined. No age 6₁ fall chum salmon were present in commercial fishery samples. Fall chum salmon harvested along the north bank of the Yukon River in District 4B have in past years demonstrated a higher percentage of age 5₁ fish and fewer age 3₁ than those harvested on the south bank in District 4C (Hamner 1982; McBride, Hamner, and Buklis 1983). No difference in age composition is apparent for the 1983 data (Appendix Tables 36 and 37).

Females outnumbered males in the District 1 and 4 gillnet fisheries and the District 4 fishwheel fishery, while they were about equally represented in the Canadian gillnet sample (Table 13). Males were more abundant than females in a small sample (n=93) from the District 5 commercial fishwheel catch. Females comprised 52% of total harvest for all districts and fisheries combined.

Size of fall chum salmon in the District 1 commercial catch ranged from 549 mm for age 3₁ females to 611 mm for age 4₁ males (Table 14). Fewer fish were sampled from upriver fisheries, but data indicate similar mean lengths to those of the District 1 sample.

Escapement samples were collected by gillnet from the Sheenjek River, and by carcass survey from the Toklat River, Delta River, and Kl'uane and main Yukon River in Canada. As for commercial catch samples, age 4₁ accounted for 80% or more of

Table 9. Yukon River summer chum salmon commercial catch samples, length (mm) by age and sex, 1983¹.

Fishery	Sex		Age Group			
			3 ₁	4 ₁	5 ₁	6 ₁
District 1 8-1/2" + 6" Gillnet	Male	Mean	581	591	609	608
		Std Error	23.8	1.4	1.5	6.8
		Sample Size	4	416	411	13
	Female	Mean	521	571	590	616
		Std Error	6.6	1.1	1.3	10.5
		Sample Size	4	564	394	6
District 2 8-1/2" + 6" Gillnet	Male	Mean	525	580	605	620
		Std Error	0.0	2.2	2.3	10.4
		Sample Size	1	264	332	4
	Female	Mean		556	585	523
		Std Error		2.3	2.4	14.3
		Sample Size		180	199	6
District 4 5-1/2" Gillnet	Male	Mean	546	586	615	
		Std Error	4.6	2.4	3.5	
		Sample Size	4	118	68	
	Female	Mean	516	554	578	640
		Std Error	5.6	1.3	2.3	0.0
		Sample Size	7	240	118	1
District 4A Fishwheel	Male	Mean	526	591	617	643
		Std Error	13.7	3.7	4.6	0.0
		Sample Size	3	58	49	1
	Female	Mean	518	550	582	
		Std Error	13.7	1.8	3.3	
		Sample Size	4	174	58	
District 4B & 4C Fishwheel	Male	Mean	565	590	625	
		Std Error	9.3	3.5	5.0	
		Sample Size	3	82	29	
	Female	Mean	542	563	588	
		Std Error	3.9	1.7	3.4	
		Sample Size	30	204	61	

¹ Length measured from mid-orbit to fork of tail.

Table 10. East Fork Andreafsky River summer chum salmon escapement, age and sex by sample period, 1983¹

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 6/21- 7/01						
PERIOD SAMPLE SIZE		426				
MALE	COUNT	0	4,474	16,574	305	21,352
	PERCENT	0.00	10.33	38.26	0.70	49.30
FEMALE	COUNT	0	2,949	18,709	305	21,963
	PERCENT	0.00	6.81	43.19	0.70	50.70
SEXES COMBINED	COUNT	0	7,423	35,282	610	43,315
	PERCENT	0.00	17.14	81.46	1.41	100.00
SAMPLE PERIOD 2 7/02- 7/18						
PERIOD SAMPLE SIZE		408				
MALE	COUNT	495	11,545	13,195	495	25,730
	PERCENT	0.74	17.16	19.61	0.74	38.24
FEMALE	COUNT	165	22,266	18,802	330	41,563
	PERCENT	0.25	33.09	27.94	0.49	61.76
SEXES COMBINED	COUNT	660	33,811	31,997	825	67,293
	PERCENT	0.98	50.25	47.55	1.23	100.00
PERIODS COMBINED						
SAMPLE SIZES COMBINED		834				
MALE	COUNT	495	16,019	29,768	800	47,082
	PERCENT	0.45	14.48	26.91	0.72	42.57
FEMALE	COUNT	165	25,215	37,511	635	63,526
	PERCENT	0.15	22.80	33.91	0.57	57.43
SEXES COMBINED	COUNT	660	41,234	67,280	1,435	110,608
	PERCENT	0.60	37.28	60.83	1.30	100.00
	STD ERROR	.39	2.25	2.26	.56	

¹ Samples collected by beach seine. Escapement estimated by side-scan sonar.

Table 11. East Fork Andreafsky River summer chum salmon escapement beach seine sample, length (mm) by age and sex, 1983.

	AGE GROUP				
	31	41	51	61	TOTAL
MALES					
AV LENGTH	530.0	583.5	609.2	621.0	600.8
STD ERROR	19.1	1.9	1.9	24.7	1.6
SAMP SIZE	3	114	243	6	366
FEMALES					
AV LENGTH	489.0	544.7	569.9	585.0	561.1
STD ERROR	0.0	1.7	1.4	10.6	1.2
SAMP SIZE	1	164	298	5	468

Table 12. Anvik River summer chum salmon escapement, length (mm) by age and sex, 1983 ¹

	AGE GROUP				
	31	41	51	61	TOTAL
MALES					
NUMBER	0	85,340	71,548	862	157,750
PERCENT	0.00	23.52	19.72	.24	43.47
AV LENGTH	0.0	593.3	616.0	590.0	603.6
STD ERROR	0.0	3.0	3.2	0.0	2.3
SAMP SIZE	0	99	83	1	183
FEMALES					
NUMBER	3,448	122,407	77,582	1,724	205,162
PERCENT	.95	33.73	21.38	.48	56.53
AV LENGTH	526.8	553.6	575.2	586.5	561.6
STD ERROR	8.8	2.4	2.9	8.5	1.9
SAMP SIZE	4	142	90	2	238
SEXES COMBINED					
NUMBER	3,448	207,748	149,130	2,586	362,912
PERCENT	.95	57.24	41.09	.71	100.00
STD ERROR	.47	2.41	2.40	.41	
SAMP SIZE	4	241	173	3	421

¹ Samples collected by beach seine during period 6/24-7/23. Escapement estimated by side-scan sonar.

Table 13. Total utilization of Yukon River fall chum salmon by age, sex, and fishery, 1983.

Fishery	Sample Size	Age 3 ₁			Age 4 ₁			Age 5 ₁			Combined Ages		
		M	F	Total	M	F	Total	M	F	Total	M	F	Total
District 1													
Commercial Gillnet	679	0	733	733	43,594	64,841	108,435	8,426	6,777	15,203	52,020	72,351	124,371
Subsistence Gillnet	-	0	49	49	2,888	4,294	7,182	558	449	1,007	3,446	4,792	8,238
Total	-	0	782	782	46,482	69,135	115,617	8,984	7,226	16,210	55,466	77,143	132,609
District 2													
Commercial Gillnet	-	0	505	505	30,020	44,651	74,671	5,802	4,667	10,469	35,822	49,823	85,645
Subsistence Gillnet	-	0	61	61	3,624	5,391	9,015	701	564	1,265	4,325	6,016	10,341
Total	-	0	566	566	33,644	50,042	83,686	6,503	5,231	11,734	40,147	55,839	95,986
District 3													
Commercial Gillnet	-	0	59	59	3,511	5,223	8,734	679	546	1,225	4,190	5,828	10,018
Subsistence Gillnet	-	0	17	17	1,003	1,493	2,496	194	156	350	1,197	1,666	2,863
Total	-	0	76	76	4,514	6,716	11,230	873	702	1,575	5,387	7,494	12,881
District 4													
Commercial Fishwheel	401	21	200	221	2,769	3,100	5,869	200	155	355	2,990	3,455	6,445
Subsistence Fishwheel	-	230	845	1,075	13,282	14,895	28,177	845	691	1,536	14,357	16,431	30,788
Subsistence Gillnet	-	-	-	-	-	-	-	-	-	-	-	-	3,421
Total	-	251	1,045	1,296	16,051	17,995	34,046	1,045	846	1,891	17,347	19,886	40,654 ¹
District 5													
Commercial Fishwheel	93	0	0	0	24,598	18,449	43,047	946	0	946	25,544	18,449	43,993
Subsistence Fishwheel	-	0	0	0	52,892	39,669	92,561	2,034	0	2,034	54,926	39,669	94,595
Subsistence Gillnet	-	-	-	-	-	-	-	-	-	-	-	-	10,510
Total	-	0	0	0	77,490	58,118	135,608	2,980	0	2,980	80,470	58,118	149,098 ¹
District 6													
Commercial Fishwheel	-	-	-	-	-	-	-	-	-	-	-	-	37,190
Subsistence Fishwheel	-	-	-	-	-	-	-	-	-	-	-	-	28,957
Subsistence Gillnet	-	-	-	-	-	-	-	-	-	-	-	-	3,217
Total	-	-	-	-	-	-	-	-	-	-	-	-	69,364
Canada													
Commercial Gillnet	562	92	92	185	12,579	12,209	24,788	740	277	1,017	13,411	12,579	25,990
Subsistence Gillnet	-	11	11	22	1,500	1,456	2,957	88	33	121	1,600	1,500	3,100
Total	-	103	103	207	14,079	13,665	27,745	828	310	1,138	15,011	14,079	29,090
Districts Combined													
Commercial Fishwheel	-	21	200	221	27,367	21,549	48,916	1,146	155	1,301	28,534	21,904	87,628 ²
Commercial Gillnet	-	92	1,389	1,482	89,704	126,924	216,628	15,647	12,267	27,914	105,443	140,581	246,024
Subsistence Fishwheel	-	230	845	1,075	66,174	54,564	120,738	2,879	691	3,570	69,283	56,100	154,340 ²
Subsistence Gillnet	-	11	138	149	9,015	12,634	21,650	1,541	1,202	2,743	10,568	13,974	41,690 ³
Total	-	354	2,572	2,927	192,260	215,671	407,932	21,213	14,315	35,528	213,828	232,559	529,682 ⁴

¹ Total includes fall chum salmon harvested by gillnet that are not apportioned by age and sex due to lack of sample data.

² Total includes fall chum salmon harvested in District 6 that are not apportioned by age and sex due to lack of sample data.

³ Total includes fall chum salmon harvested in Districts 4, 5, and 6 that are not apportioned by age and sex due to lack of sample data.

⁴ Total includes fall chum salmon harvested by fishwheel in District 6 and by gillnet in Districts 4, 5, and 6 that are not apportioned by age and sex due to lack of sample data.

Table 14. Yukon River fall chum salmon commercial catch samples, length (mm) by age and sex, 1983¹.

Fishery	Sex		Age Group		
			3 ₁	4 ₁	5 ₁
District 1 6" Gillnet	Male	Mean		611	608
		Std Error		2.4	4.7
		Sample Size		238	46
	Female	Mean	549	592	600
		Std Error	16.0	1.4	4.6
		Sample Size	4	354	37
District 4B Fishwheel	Male	Mean		618	635
		Std Error		2.8	12.3
		Sample Size		101	8
	Female	Mean	554	589	603
		Std Error	8.7	2.5	10.6
		Sample Size	8	113	6
District 4C Fishwheel	Male	Mean	578	609	597
		Std Error	8.5	3.8	20.8
		Sample Size	3	72	3
	Female	Mean	542	586	615
		Std Error	10.6	3.2	9.8
		Sample Size	3	81	3
District 5 Fishwheel	Male	Mean		609	632
		Std Error		4.4	28.5
		Sample Size		52	2
	Female	Mean		598	
		Std Error		4.4	
		Sample Size		39	

¹ Length measured from mid-orbit to fork of tail.

the samples collected from each spawning area (Tables 15-18). A few age 6₁ fish were present in the Toklat and Delta River samples. Females comprised 44% of the Toklat River sample, 46% of the Delta River, 47% of the Sheenjek River, and 51% of the Canadian sample.

Coho Salmon:

Coho salmon were sampled from the District 1 commercial gillnet catch. These data were used to apportion commercial and subsistence gillnet harvests in the lower three districts. Coho salmon harvest by age, sex, and fishery for the entire drainage is presented in Table 19, while age and sex composition for each fishery is presented by sample period in Appendix Tables 47-51. Age, sex, and size composition of samples collected but not used to apportion catches is shown in Appendix Table 52.

Age 4₃ accounted for 92% of the District 1 sample, followed by ages 3₂ and 5₄ with 4% each (Table 19). Females comprised 46% of the catch. Average lengths ranged from a low of 532 mm for age 3₂ males to 610 mm for age 5₄ females (Table 20). No coho salmon escapement samples were collected.

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Table 15. Sheenjek River fall chum salmon escapement, length (mm) by age and sex, 1983¹.

	AGE GROUP			
	31	41	51	TOTAL
MALES				
NUMBER	1,282	21,798	1,282	24,362
PERCENT	2.80	47.66	2.80	53.27
AV LENGTH	603.00	613.06	609.33	612.33
STD ERROR	25.70	4.16	24.13	4.16
SAMP SIZE	3	51	3	57
FEMALES				
NUMBER	1,710	17,951	1,710	21,371
PERCENT	3.74	39.25	3.74	46.73
AV LENGTH	554.00	592.64	625.75	592.20
STD ERROR	11.90	3.44	12.89	3.22
SAMP SIZE	4	42	4	50
SEXES COMBINED				
NUMBER	2,992	39,749	2,992	45,733
PERCENT	6.54	86.92	6.54	100.00
STD ERROR	1.21	1.65	1.21	
SAMP SIZE	7	93	7	107

¹ Samples collected with 5-7/8 inch mesh drift gillnet during period 9/03-9/21. Escapement estimated by side-scan sonar.

Table 16. Toklat River fall chum salmon escapement carcass sample, length (mm) by age and sex, 1983¹.

	AGE GROUP				TOTAL
	31	41	51	61	
MALES					
PERCENT	2.00	45.50	8.70	.30	56.50
AV LENGTH	550.00	608.71	622.50	575.00	608.58
STD ERROR	12.63	2.71	7.46	0.00	2.51
SAMP SIZE	7	157	30	1	195
FEMALES					
PERCENT	1.20	35.30	6.70	.30	43.50
AV LENGTH	535.00	571.80	591.09	655.00	574.33
STD ERROR	5.40	2.72	7.12	0.00	2.47
SAMP SIZE	4	122	23	1	150
SEXES COMBINED					
PERCENT	3.20	80.80	15.40	.60	100.00
STD ERROR	.95	2.12	1.95	.42	
SAMP SIZE	11	279	53	2	345

¹ Samples collected 10/18-10/19.

Table 17. Delta River fall chum salmon escapement carcass sample, length (mm) by age and sex, 1983¹.

	AGE GROUP				TOTAL
	31	41	51	61	
MALES					
PERCENT	1.40	43.80	7.10	1.40	53.70
AV LENGTH	555.00	598.13	620.80	595.00	599.92
STD ERROR	6.52	2.17	3.76	7.91	1.86
SAMP SIZE	5	155	25	5	190
FEMALES					
PERCENT	1.40	36.70	7.90	.30	46.30
AV LENGTH	533.00	575.50	590.89	555.00	576.71
STD ERROR	13.66	2.67	5.80	0.00	2.38
SAMP SIZE	5	130	28	1	164
SEXES COMBINED					
PERCENT	2.80	80.50	15.00	1.70	100.00
STD ERROR	.88	2.11	1.90	.69	
SAMP SIZE	10	285	53	6	354

¹ Samples collected on 11/9.

Table 18. Kluane River and Canadian Yukon River fall chum salmon escapement carcass samples, age and sex by sample period, 1983¹.

		AGE GROUP			
		31	41	51	TOTAL
SAMPLE PERIOD 1 10/9-10/23					
PERIOD SAMPLE SIZE 152					
MALE	COUNT	1	63	10	74
	PERCENT	.66	41.45	6.58	48.68
FEMALE	COUNT	0	70	8	78
	PERCENT	0.00	46.05	5.26	51.32
SEXES COMBINED	COUNT	1	133	18	152
	PERCENT	.66	87.50	11.84	100.00
	STD ERROR	.66	2.69	2.63	

¹ Samples collected from Kluane River 10/18-10/20, from the Yukon River at Fort Selkirk on 10/23, and from the Yukon River at Minto 10/9-10/15. Samples from all three locations pooled.

Table 19. Total utilization of Yukon River coho salmon by age, sex, and fishery, 1983.

Fishery	Sample Size	Age 3 ₂			Age 4 ₃			Age 5 ₄			Combined Ages		
		M	F	Total	M	F	Total	M	F	Total	M	F	Total
District 1													
Commercial Gillnet	121	190	0	190	2,202	2,013	4,215	76	114	190	2,468	2,127	4,595
Subsistence Gillnet	-	148	0	148	1,722	1,572	3,294	59	89	148	1,929	1,661	3,590
Total		338	0	338	3,924	3,585	7,509	135	203	338	4,397	3,788	8,185
District 2													
Commercial Gillnet	-	106	0	106	1,226	1,120	2,346	42	63	105	1,374	1,183	2,557
Subsistence Gillnet	-	251	0	251	2,911	2,659	5,570	100	151	251	3,262	2,810	6,072
Total		357	0	357	4,137	3,779	7,916	142	214	356	4,636	3,993	8,629
District 3													
Subsistence Gillnet	-	38	0	38	440	401	841	15	23	38	493	424	917
District 4													
Subsistence Fishwheel	-	-	-	-	-	-	-	-	-	-	-	-	3,551
Subsistence Gillnet	-	-	-	-	-	-	-	-	-	-	-	-	395
Total		-	-	-	-	-	-	-	-	-	-	-	3,946
District 5													
Subsistence Fishwheel	-	-	-	-	-	-	-	-	-	-	-	-	2,203
Subsistence Gillnet	-	-	-	-	-	-	-	-	-	-	-	-	245
Total		-	-	-	-	-	-	-	-	-	-	-	2,448
District 6													
Commercial Fishwheel	-	-	-	-	-	-	-	-	-	-	-	-	6,168
Subsistence Fishwheel	-	-	-	-	-	-	-	-	-	-	-	-	6,230
Subsistence Gillnet	-	-	-	-	-	-	-	-	-	-	-	-	692
Total		-	-	-	-	-	-	-	-	-	-	-	13,090
Districts Combined													
Commercial Fishwheel		-	-	-	-	-	-	-	-	-	-	-	6,168
Commercial Gillnet		296	0	296	3,428	3,133	6,561	118	177	295	3,842	3,310	7,152
Subsistence Fishwheel		-	-	-	-	-	-	-	-	-	-	-	11,984
Subsistence Gillnet		437	0	437	5,073	4,632	9,705	174	263	437	5,684	4,895	11,911 ¹
Total		733	0	733	8,501	7,765	16,266	292	440	732	9,526	8,205	37,215 ²

¹ Total includes coho salmon harvested by gillnet in Districts 4, 5, and 6 but not apportioned by age and sex due to lack of sample data.

² Total includes coho salmon harvested by gillnet and fishwheel in Districts 4, 5, and 6 but not apportioned by age and sex due to lack of sample data.

Table 20. Yukon River coho salmon commercial catch samples, length (mm) by age and sex, 1983¹.

Fishery	Sex	Age Group			
		3 ₂	4 ₃	5 ₄	
District 1 6" Gillnet	Male	Mean	532	569	592
		Std Error	13.6	4.3	32.5
		Sample Size	5	58	2
	Female	Mean		574	610
		Std Error		4.2	2.9
		Sample Size		53	3

¹ Length measured from mid-orbit to fork of tail.

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APPENDICES

Appendix Table 1. Yukon River District 1 salmon commercial catch by period, 1983¹.

Period Dates	Hours Fished	Number Fishermen	Chinook	Summer Chum	Fall Chum	Coho
6/09-6/10 ²	24	380	22,292	12,591		
6/13-6/14	24	387	12,678	14,449		
6/16-6/17	24	431	28,669	26,113		
6/20-6/21	24	404	12,641	26,195		1
6/23-6/24 ³	24	356	4,698	54,593		1
6/27-6/28	24	389	4,821	76,736		8
6/30-7/01	24	391	4,690	106,034		11
7/04-7/05	24	275	1,310	16,137		10
7/07-7/08	24	312	1,256	28,365		1
7/11-7/12	24	338	1,371	49,022		1
7/14-7/15	24	292	632	40,929		2
7/18-7/19 ⁴	24	263	239		16,139	3
7/28-7/29	24	149	69		2,971	32
8/01-8/02	24	245	16		18,521	212
8/04-8/05	24	237	22		23,649	719
8/08-8/09	24	241	18		44,034	1,319
8/11-8/12	24	236	35		19,057	2,275
TOTAL			95,457	451,164	124,371	4,595

¹ Preliminary data. All fish captured by set or drift gillnet.

² Chinook season through 6/21.

³ Summer chum season through 7/15.

⁴ Fall chum season through 8/12.

Appendix Table 2. Yukon River District 2 salmon commercial catch by period, 1983¹.

Period Dates	Hours Fished	Number Fishermen	Chinook	Summer Chum	Fall Chum	Coho
6/12-6/13 ²	24	191	5,964	3,742		
6/15-6/16	24	192	7,319	6,872		
6/19-6/20	24	198	10,586	14,334		
6/22-6/23	24	198	6,929	17,631		
6/26-6/27 ³	24	182	3,607	35,829		
6/29-6/30	24	187	2,767	56,995		
7/03-7/04	24	182	3,214	43,798		
7/06-07/07	24	132	1,438	20,014		
7/10-7/11	24	141	540	13,932		
7/13-7/14	24	119	319	17,108		1
7/17-7/18	24	141	339	17,837		1
7/20-7/21 ⁴	24	128	159		9,737	1
7/31-7/31	12	96	11		6,602	20
8/03-8/03	12	122	14		10,461	79
8/07-8/07	12	119	10		14,596	220
8/10-8/10	12	140	11		15,676	471
8/14-8/14	12	159	2		28,573	1,764
Total			43,229	248,092	85,645	2,557

¹ Preliminary data. All fish captured by set or drift gillnet.

² Chinook season through 6/23.

³ Summer chum season through 7/18.

⁴ Fall chum season through 8/14.

Appendix Table 3. Yukon River District 3 salmon commercial catch by period, 1983¹.

Period Dates	Hours Fished	Number Fishermen	Chinook	Summer Chum	Fall Chum	Coho
6/16-6/17 ²	24	15	713	176		
6/20-6/21	24	15	1,673	394		
6/23-6/24	24	19	932	914		
7/07-7/09 ³	36	16	530	9,131		
7/11-7/13	36	11	209	3,218		
7/14-7/16	36	6	49	767		
8/01-8/02 ⁴	24	1			489	
8/04-8/05	24	0			0	
8/08-8/09	24	10			1,278	
8/11-8/12	24	12			1,959	
8/15-8/16	24	16			6,292	
Total			4,106	14,600	10,018	0

¹ Preliminary data. All fish captured by set or drift gillnet.

² Chinook season through 6/24.

³ Summer chum season through 7/16.

⁴ Fall chum season through 8/16.

Appendix Table 4. Yukon River District 4 salmon commercial catch by period, 1983¹.

Period Dates	Hours Fished	Number Fishermen	Chinook			Summer Chum			Fall Chum ⁹	Coho
			GN ⁵	FW ⁶	Total	GN ⁷	FW ⁸	Total		
6/15-6/17 ²	48	2	6	2	8	5	91	96		
6/19-6/21	48	12	9	3	12	100	1,899	1,999		
6/22-6/24	48	26	17	7	24	334	6,348	6,682		
6/26-6/28	48	51	39	15	54	943	17,911	18,854		
6/29-7/01	48	63	9	3	12	1,261	23,968	25,229		
7/03-7/05	48	63	51	42	93	934	17,753	18,687		
7/06-7/08	48	64	67	33	100	950	18,053	19,003		
7/10-7/12	48	62	54	54	108	1,210	22,992	24,202		
7/13-7/15	48	60	66	77	143	1,006	19,109	20,115		
7/17-7/19	48	50	11	18	29	523	9,929	10,452		
7/20-7/22	48	44	10	4	14	278	5,291	5,569		
7/24-7/26	48	25	3	1	4	119	2,256	2,375		
7/27-7/29	48	16				45	863	908		
8/07-8/09 ³	48	1				7	138	145		
8/10-8/12	48	1				24	457	481		
8/14-8/16 ⁴	48	8							582	
8/17-8/19	48	7							612	
8/21-8/23	48	1							517	
8/24-8/26	48	4							1,525	
8/28-8/30	48	10							1,618	
8/31-9/2	48	5							773	
9/07-9/09	48	1							169	
9/11-9/13	48	2							486	
9/14-9/16	48	1							163	
Total			342	259	601	7,739	147,058	154,797	6,445	0

¹ Preliminary data.

² Summer chum season through 8/12.

³ Subdistricts 4B and 4C only.

⁴ Fall chum season through 9/16.

⁵ Gillnets account for an estimated 75% of the subdistrict 4B chinook salmon catch, and 25% of the subdistrict 4C catch.

⁶ Fishwheels account for an estimated 25% of the subdistrict 4B chinook salmon catch, and 75% of the subdistrict 4C catch.

⁷ Gillnets account for an estimated 5% of the District 4 summer chum salmon catch.

⁸ Fishwheels account for an estimated 95% of the District 4 summer chum salmon catch.

⁹ Fishwheel catches.

Appendix Table 5. Yukon River District 5 salmon commercial catch by period, 1983¹.

Period Dates	Hours Fished	Number Fishermen	Chinook ⁵	Summer Chum ⁶	Fall Chum ⁶	Coho
6/24-6/26 ²	48	4	37			
6/28-6/30	48	5	69			
7/01-7/03	48	17	496	1		
7/05-7/07	48	12	452	44		
7/08-7/10	48	14	378	209		
7/12-7/14	48	13	673	0		
7/15-7/17	48	18	524	618		
7/19-7/21	48	11	344	0		
7/22-7/24	48	16	367	954		
7/26-7/28	48	8	216	72		
7/29-7/31	48	1	50			
8/30-9/01 ³	48	24			15,150	
9/02-9/04	48	24			26,291	
9/11-9/17 ⁴		1			1,451	
9/18-9/22 ⁴		1			1,101	
Total			3,606	1,898	43,993	0

¹ Preliminary data.

² Chinook season through 7/31.

³ Fall chum season through 9/4 for subdistricts 5A, 5B, and 5C, and through 9/22 for subdistrict 5D.

⁴ Subdistrict 5D only.

⁵ Gillnet catches.

⁶ Fishwheel catches.

Appendix Table 6. Yukon River District 6 salmon commercial catch by period, 1983¹.

Period Dates	Hours Fished	Number Fishermen	Chinook			Summer Chum			Fall Chum ⁸	Coho ⁸
			GN ⁴	FW ⁵	Total	GN ⁶	FW ⁷	Total		
6/27-6/29 ²	48	3	8	0	8					
7/01-7/03	48	6	47	0	47					
7/04-7/06	48	7	122	0	122	5	29	34		
7/08-7/10	48	5	45	38	83	5	14	19		
7/11-7/13	48	6	90	73	163	13	39	52		
7/15-7/17	48	8	39	143	182	44	838	882		
7/18-7/20	48	12	113	71	184	92	1,899	1,991		
7/22-7/24	48	14	17	39	56	264	5,337	5,601		
7/25-7/27	48	15	45	0	45	273	5,325	5,598		
7/29-7/31	48	18	17	0	17	306	5,361	5,667		
8/02-8/04	48	10	0	0	0	93	1,531	1,624		
8/05-8/07	48	11	4	0	4	96	1,511	1,607		
8/08-8/10	48	6				63	1,189	1,252		
9/13-9/14 ³	24	20							15,144	2,167
9/16-9/17	24	22							11,501	2,078
9/19-9/20	24	20							10,545	1,923
Total			547	364	911	1,254	23,073	24,327	37,190	6,168

¹ Preliminary data.

² Summer chum season through 8/10.

³ Fall chum season through 9/20.

⁴ Subdistricts 6A and 6C only.

⁵ Subdistrict 6B only.

⁶ Gillnets account for an estimated 5% of the subdistrict 6B summer chum salmon catch, and 25% of the subdistrict 6C catch.

⁷ Fishwheels account for an estimated 100% of the subdistrict 6A summer chum salmon catch, 95% of the subdistrict 6B catch, and 75% of the subdistrict 6C catch.

⁸ Fishwheel catches.

Appendix Table 7. Yukon Territory, Canada, salmon commercial catch by period, 1983¹.

Period Dates	Chinook	Fall Chum
-07/03	80	
07/04-07/10	1,132	
07/11-07/17	2,284	
07/18-07/24	2,719	6
07/25-07/31	3,480	40
08/01-08/07	2,030	50
08/08-08/14	1,017	69
08/15-08/21	220	24
08/22-08/27	57	43
08/28-09/04	8	1,195
09/05-09/11		4,639
09/12-09/18		7,198
09/19-09/25		8,632
09/26-10/02		3,816
10/03-10/09		178
10/10-10/16		60
10/17-10/23		40
Total	13,027	25,990

¹ Preliminary data. All fish captured by gillnet.

Appendix Table 8. Whitehorse fishway daily chinook salmon escapement counts, 1983.

Month	Day	Count	Cummulative	
			Count	Percent
July	21	1	1	0.1
	22	0	1	0.1
	23	6	7	0.8
	24	6	13	1.4
	25	8	21	2.3
	26	4	25	2.8
	27	9	34	3.6
	28	16	50	5.5
	29	7	57	6.3
	30	22	79	8.7
	31	7	86	9.5
August	1	18	104	11.5
	2	17	121	13.4
	3	25	146	16.1
	4	22	168	18.6
	5	18	186	20.5
	6	26	212	23.4
	7	31	243	26.9
	8	46	289	31.9
	9	54	343	37.9
	10	52	395	43.6
	11	49	444	49.1
	12	38	482	53.5
	13	58	540	59.7
	14	66	606	67.0
	15	15	621	68.6
	16	74	695	76.8
	17	45	740	81.0
	18	41	781	86.3
	19	35	816	90.2
	20	29	845	93.4
	21	11	856	94.6
22	22	878	97.0	
23	9	887	98.0	
24	5	892	98.6	
25	3	895	98.9	
26	3	898	99.2	
27	3	901	99.6	
28	1	902	99.7	
29	1	903	99.8	
30	0	903	99.8	
31	2	905	100.0	

Appendix Table 9. Yukon River District 1 chinook salmon commercial gillnet catch, age, and sex by fishing period, 1983.

Sex	AGE GROUP								TOTAL
	42	52	62	63	72	73	83		
Period 1 6/09-6/10 ¹ Sample Size 241									
Males	Catch	277	2,948	6,695	277	854	308	92	11,453
	Percent	1.24	13.23	30.03	1.24	3.83	1.38	0.41	51.38
Females	Catch	0	197	8,105	0	1,921	617	0	10,839
	Percent	0.00	0.88	36.36	0.00	8.62	2.77	0.00	48.62
Sexes Combined	Catch	277	3,145	14,800	277	2,775	925	92	22,292
	Percent	1.24	14.11	66.39	1.24	12.45	4.15	0.41	100.00
Period 2 6/13-6/14 ¹ Sample Size 259									
Males	Catch	294	2,446	4,258	0	387	74	0	7,459
	Percent	2.32	19.29	33.59	0.00	3.06	0.58	0.00	58.84
Females	Catch	0	148	4,259	49	543	220	0	5,219
	Percent	0.00	1.17	33.59	0.39	4.28	1.74	0.00	41.16
Sexes Combined	Catch	294	2,594	8,517	49	930	294	0	12,678
	Percent	2.32	20.46	67.18	0.39	7.34	2.32	0.00	100.00
Period 3 6/16-6/17 ¹ Sample Size 244									
Males	Catch	587	3,357	7,100	0	633	509	0	12,186
	Percent	2.05	11.71	24.77	0.00	2.21	1.78	0.00	42.51
Females	Catch	0	403	14,049	0	1,012	1,018	0	16,483
	Percent	0.00	1.41	49.00	0.00	3.53	3.55	0.00	57.49
Sexes Combined	Catch	587	3,760	21,149	0	1,645	1,527	0	28,669
	Percent	2.05	13.11	73.77	0.00	5.74	5.33	0.00	100.00
Period 4 6/20-6/21 ¹ Sample Size 276									
Males	Catch	458	1,919	3,229	0	220	46	0	5,872
	Percent	3.62	15.18	25.54	0.00	1.74	0.36	0.00	46.45
Females	Catch	46	600	5,519	0	604	0	0	6,769
	Percent	0.36	4.74	43.66	0.00	4.78	0.00	0.00	53.55
Sexes Combined	Catch	504	2,519	8,748	0	824	46	0	12,641
	Percent	3.99	19.93	69.20	0.00	6.52	0.36	0.00	100.00
Period 5 6/23-6/24 ² Sample Size 161									
Males	Catch	788	1,256	751	29	197	0	0	3,003
	Percent	16.77	26.74	15.99	0.62	4.19	0.00	0.00	63.92
Females	Catch	0	203	1,408	0	66	0	0	1,666
	Percent	0.00	4.31	29.98	0.00	1.40	0.00	0.00	35.47
Sexes Combined	Catch	788	1,459	2,159	29	263	0	0	4,698
	Percent	16.77	31.06	45.96	0.62	5.59	0.00	0.00	100.00
Period 6 6/27-6/28 ² Sample Size 142									
Males	Catch	1,052	1,562	781	0	68	34	0	3,497
	Percent	21.83	32.39	16.20	0.00	1.41	0.70	0.00	72.54
Females	Catch	0	136	1,018	0	170	0	0	1,324
	Percent	0.00	2.82	21.13	0.00	3.52	0.00	0.00	27.46
Sexes Combined	Catch	1,052	1,698	1,799	0	238	34	0	4,821
	Percent	21.83	35.21	37.32	0.00	4.93	0.70	0.00	100.00

-Continued-

Appendix Table 9. Yukon River District 1 chinook salmon commercial gillnet catch, age, and sex by fishing period, 1983 (continued).

Sex		AGE GROUP						TOTAL	
		42	52	62	63	72	73		83
Period 7 6/30-7/01 ²									
Sample Size 83									
Males	Catch	1,808	1,356	622	0	0	0	0	3,786
	Percent	38.55	28.92	13.25	0.00	0.00	0.00	0.00	80.72
Females	Catch	0	226	678	0	0	0	0	904
	Percent	0.00	4.82	14.46	0.00	0.00	0.00	0.00	19.28
Sexes Combined	Catch	1,808	1,582	1,300	0	0	0	0	4,690
	Percent	38.55	33.73	27.71	0.00	0.00	0.00	0.00	100.00
Period 8 7/04-7/05 ²									
Sample Size 43									
Males	Catch	396	305	213	0	30	0	0	944
	Percent	30.23	23.26	16.28	0.00	2.33	0.00	0.00	72.09
Females	Catch	31	0	335	0	0	0	0	366
	Percent	2.33	0.00	25.58	0.00	0.00	0.00	0.00	27.91
Sexes Combined	Catch	427	305	548	0	30	0	0	1,310
	Percent	32.56	23.26	41.86	0.00	2.33	0.00	0.00	100.00
Period 9 7/07-7/08 ²									
Sample Size 31									
Males	Catch	365	486	81	0	0	40	0	972
	Percent	29.03	38.71	6.45	0.00	0.00	3.23	0.00	77.42
Females	Catch	0	0	243	0	0	41	0	284
	Percent	0.00	0.00	19.35	0.00	0.00	3.23	0.00	22.58
Sexes Combined	Catch	365	486	324	0	0	81	0	1,256
	Percent	29.03	38.71	25.81	0.00	0.00	6.45	0.00	100.00
Period 10 7/11-7/12 ²									
Sample Size 65									
Males	Catch	127	337	338	21	0	0	0	823
	Percent	9.23	24.62	24.62	1.54	0.00	0.00	0.00	60.00
Females	Catch	0	21	527	0	0	0	0	548
	Percent	0.00	1.54	38.46	0.00	0.00	0.00	0.00	40.00
Sexes Combined	Catch	127	359	865	21	0	0	0	1,371
	Percent	9.23	26.15	63.08	1.54	0.00	0.00	0.00	100.00
Period 11 7/14-7/15 ²									
Sample Size 25									
Males	Catch	0	252	152	0	0	0	0	404
	Percent	0.00	40.00	24.00	0.00	0.00	0.00	0.00	64.00
Females	Catch	0	26	202	0	0	0	0	228
	Percent	0.00	4.00	32.00	0.00	0.00	0.00	0.00	36.00
Sexes Combined	Catch	0	278	354	0	0	0	0	632
	Percent	0.00	44.00	56.00	0.00	0.00	0.00	0.00	100.00
Periods 12-17 7/18-8/12 ³									
Sample Size 31									
Males	Catch	26	51	90	0	0	13	0	180
	Percent	6.45	12.90	22.58	0.00	0.00	3.23	0.00	45.16
Females	Catch	0	13	206	0	0	0	0	219
	Percent	0.00	3.23	51.61	0.00	0.00	0.00	0.00	54.84
Sexes Combined	Catch	26	64	296	0	0	13	0	399
	Percent	6.45	16.13	74.19	0.00	0.00	3.23	0.00	100.00

¹ Chinook salmon season. No mesh size restrictions, most fish taken with 8-1/2 inch mesh.

² Summer chum salmon season, 6-inch stretch mesh maximum.

³ Fall chum salmon season, 6-inch stretch mesh maximum.

Appendix Table 10. Yukon River District 1 chinook salmon commercial gillnet catch, age, and sex by sample period, 1983.

Sex		AGE GROUPS						TOTAL	
		42	52	62	63	72	73		83
Sample Period 1 6/09-6/14 ¹									
Sample Size 500									
Males	Catch	571	5,394	10,955	277	1,241	382	92	18,912
	Percent	1.63	15.42	31.33	0.79	3.55	1.09	0.26	54.08
Females	Catch		345	12,364	49	2,464	837		16,059
	Percent	0.00	0.99	35.36	0.14	7.05	2.39	0.00	45.92
Sexes Combined	Catch	571	5,739	23,319	326	3,705	1,219	92	34,971
	Percent	1.63	16.41	66.68	0.93	10.59	3.49	0.26	100.00
Sample Period 2 6/16-6/21 ¹									
Sample Size 520									
Males	Catch	1,045	5,276	10,329		853	555		18,058
	Percent	2.53	12.77	25.00	0.00	2.06	1.34	0.00	43.71
Females	Catch	46	1,003	19,568		1,616	1,018		23,251
	Percent	0.11	2.43	47.37	0.00	3.91	2.46	0.00	56.29
Sexes Combined	Catch	1,091	6,279	29,897	0	2,469	1,573	0	41,309
	Percent	2.64	15.20	72.37	0.00	5.98	3.81	0.00	100.00
Sample Period 3 6/23-8/12 ²									
Sample Size 581									
Males	Catch	4,562	5,605	3,028	51	295	87		13,628
	Percent	23.79	29.23	15.79	0.27	1.54	0.45	0.00	71.06
Females	Catch	31	624	4,617		236	41		5,549
	Percent	0.16	3.25	24.08	0.00	1.23	0.21	0.00	28.94
Sexes Combined	Catch	4,593	6,229	7,645	51	531	128	0	19,177
	Percent	23.95	32.48	39.87	0.27	2.77	0.67	0.00	100.00
SEASON TOTAL 6/09-8/12									
Total Sample 1,601									
Males	Catch	6,178	16,275	24,312	328	2,389	1,024	92	50,598
	Percent	6.47	17.05	25.47	0.34	2.50	1.07	0.10	53.01
Females	Catch	77	1,972	36,549	49	4,316	1,896		44,859
	Percent	0.08	2.07	38.29	0.05	4.52	1.99	0.00	46.99
Sexes Combined	Catch	6,255	18,247	60,861	377	6,705	2,920	92	95,457
	Percent	6.55	19.12	63.76	0.39	7.02	3.06	0.10	100.00
	Std. Error	1.98	3.00	3.52	0.48	1.85	1.22	0.22	

¹ Chinook salmon season. No mesh size restriction, most fish taken with 8-1/2 inch mesh.

² Chum salmon season, 6-inch stretch mesh maximum.

Appendix Table 11. Yukon River District 2 chinook salmon commercial gillnet catch, age, and sex by fishing period, 1983.

Sex	AGE GROUP					TOTAL	
	42	52	62	72	73		
Period 1 6/12-6/13 ^{1 2} Sample Size 280							
Sexes Combined	Catch	106	1,443	3,799	488	127	5,964
	Percent	1.78	24.20	63.70	8.19	2.14	100.00
Period 2 6/15-6/16 ¹ Sample Size 198							
Males	Catch	259	1,208	2,111	196	0	3,773
	Percent	3.54	16.50	28.84	2.67	0.00	51.55
Females	Catch	0	234	2,843	470	0	3,546
	Percent	0.00	3.19	38.84	6.42	0.00	48.45
Sexes Combined	Catch	259	1,442	4,953	665	0	7,319
	Percent	3.54	19.70	67.68	9.09	0.00	100.00
Period 3 6/19-6/20 ¹ Sample Size 191							
Males	Catch	222	2,162	2,383	259	55	5,081
	Percent	2.09	20.42	22.51	2.44	0.52	47.99
Females	Catch	0	166	4,822	517	0	5,505
	Percent	0.00	1.57	45.55	4.89	0.00	52.01
Sexes Combined	Catch	222	2,328	7,205	776	55	10,586
	Percent	2.09	21.99	68.06	7.33	0.52	100.00
Period 4 6/22-6/23 ¹ Sample Size 202							
Males	Catch	412	1,213	1,620	193	34	3,472
	Percent	5.94	17.50	23.39	2.78	0.50	50.11
Females	Catch	0	331	2,805	322	0	3,457
	Percent	0.00	4.77	40.48	4.64	0.00	49.89
Sexes Combined	Catch	412	1,544	4,425	515	34	6,929
	Percent	5.94	22.28	63.86	7.43	0.50	100.00
Period 5 6/26-6/27 ³ Sample Size 86							
Males	Catch	786	1,135	897	24	0	2,842
	Percent	21.78	31.48	24.87	0.66	0.00	78.80
Females	Catch	0	61	656	48	0	765
	Percent	0.00	1.69	18.20	1.32	0.00	21.20
Sexes Combined	Catch	786	1,196	1,554	72	0	3,607
	Percent	21.78	33.17	43.07	1.98	0.00	100.00

¹ Chinook salmon season. No mesh size restriction, most fish taken with 8-1/2 inch mesh.

² All fish shipped in the round. No sex data obtained.

³ Chum salmon season, 6-inch stretch mesh maximum.

Appendix Table 12. Yukon River District 2 chinook salmon commercial gillnet catch, age, and sex by sample period, 1983.

Sex		AGE GROUP					TOTAL
		42	52	62	72	73	
Sample Period 1 6/12-6/16 ¹							
Sample Size		478					
Males	Catch	366	2,421	3,735	371	0	6,893
	Percent	2.76	18.23	28.12	2.79	0.00	51.90
Females	Catch	0	469	5,031	890	0	6,390
	Percent	0.00	3.53	37.87	6.70	0.00	48.10
Sexes Combined	Catch	366	2,890	8,766	1,261	²	13,283
	Percent	2.76	21.76	65.99	9.49	0.00	100.00
Sample Period 2 6/19-6/23 ¹							
Sample Size		393					
Males	Catch	634	3,375	4,003	452	89	8,553
	Percent	3.62	19.27	22.85	2.58	0.51	48.83
Females	Catch	0	497	7,626	839	0	8,962
	Percent	0.00	2.84	43.54	4.79	0.00	51.17
Sexes Combined	Catch	634	3,872	11,629	1,291	89	17,515
	Percent	3.62	22.11	66.39	7.37	0.51	100.00
Sample Period 3 6/26-6/27 ³							
Sample Size		86					
Males	Catch	3,090	3,933	2,879	70	0	9,973
	Percent	24.86	31.64	23.16	0.56	0.00	80.23
Females	Catch	0	211	2,107	140	0	2,458
	Percent	0.00	1.69	16.95	1.13	0.00	19.77
Sexes Combined	Catch	3,090	4,144	4,986	211	0	12,431
	Percent	24.86	33.33	40.11	1.69	0.00	100.00
SEASON TOTAL 6/12-6/27							
Total Sample		957					
Males	Catch	4,090	9,729	10,617	893	89	25,418
	Percent	9.46	22.50	24.56	2.07	0.21	58.80
Females	Catch	0	1,177	14,764	1,869	0	17,810
	Percent	0.00	2.72	34.15	4.32	0.00	41.20
Sexes Combined	Catch	4,090	10,906	25,381	2,762	89	43,229
	Percent	9.46	25.22	58.71	6.39	0.21	100.00
	Std. Error	4.81	5.81	6.19	2.36	0.36	

¹ Chinook salmon season. No mesh size restrictions, most fish taken with 8-1/2 inch mesh.

² One fish sampled without sex information, 6/13/83.

³ Chum salmon season (6-inch stretch mesh maximum), allocated based on samples obtained during fishing period 5.

Appendix Table 13. Yukon River District 3 chinook salmon commercial gillnet catch, age and sex composition, 1983 ¹.

Sex		AGE GROUP						TOTAL	
		42	52	53	62	63	72		73
	Sample Period	6/21							
	Sample Size	153							
Males	Catch	27	242	0	2,066	27	188	54	2,603
	Percent	0.65	5.88	0.00	50.33	0.65	4.58	1.31	63.40
Females	Catch	0	107	0	1,208	0	188	0	1,503
	Percent	0.00	2.61	0.00	29.41	0.00	4.58	0.00	36.60
Sexes Combined	Catch	27	349	0	3,274	27	376	54	4,106
	Percent	0.65	8.50	0.00	79.74	0.65	9.15	1.31	100.00
	Std. Error	0.00	8.05	0.00	3.65	0.00	8.00	11.36	

¹ Allocation based on 8-1/2 inch mesh gillnet samples from District 3 commercial catch.

Appendix Table 14. Yukon River District 5 chinook salmon catch, age and sex composition, 1983¹.

Sex	AGE GROUP							TOTAL	
	42	52	53	62	63	72	73		
Sample Period	7/6-7/17								
Sample Size	461								
Males	Catch	1,902	6,545	44	5,174	133	442	88	14,328
	Percent	9.33	32.10	0.22	25.38	0.65	2.17	0.43	70.28
Females	Catch	0	619	0	4,864	88	398	88	6,058
	Percent	0.00	3.04	0.00	23.86	0.43	1.95	0.43	29.72
Sexes Combined	Catch	1,902	7,164	44	10,038	221	840	177	20,386
	Percent	9.33	35.14	0.22	49.24	1.08	4.12	0.87	100.00
	Std. Error	4.49	3.76	0.00	3.33	5.18	4.69	5.35	

¹ Pooled commercial and subsistence, gillnet and fishwheel catch. Allocation based on District 5 commercial and subsistence catch samples pooled, taken with gillnet (various mesh sizes, 8-1/2 inch maximum) and fishwheel.

Appendix Table 15. Yukon Territory chinook salmon commercial catch, age and sex composition, 1983¹.

Sex	AGE GROUP							TOTAL	
	42	52	53	62	63	72	73		
Sample Period 7/18-8/8									
Sample Size 629									
Males	Catch	145	1,222	0	4,432	41	891	83	6,814
	Percent	1.11	9.38	0.00	34.02	0.32	6.84	0.64	52.31
Females	Catch	0	186	0	4,805	0	870	352	6,213
	Percent	0.00	1.43	0.00	36.88	0.00	6.68	2.70	47.69
Sexes Combined	Catch	145	1,408	0	9,237	41	1,760	435	13,027
	Percent	1.11	10.81	0.00	70.91	0.32	13.51	3.34	100.00
	Std. Error	4.28	3.79	0.00	2.15	5.63	3.73	4.02	

¹ Allocation based on 8-1/2 inch mesh gillnet samples from Yukon Territory commercial catch.

Appendix Table 16. Yukon River District 1 chinook salmon subsistence catch, age and sex composition, 1983¹.

Sex		AGE GROUP						TOTAL	
		42	52	62	63	72	73		83
Males	Catch	405	1,068	1,595	21	157	67	6	3,319
	Per cent	6.47	17.05	25.47	0.34	2.50	1.07	0.10	53.00
Females	Catch	5	130	2,398	3	283	125	0	2,944
	Per cent	0.08	2.07	38.29	0.05	4.52	1.99	0.00	47.00
Sexes Combined	Catch	410	1,198	3,993	24	440	192	6	6,263
	Per cent	6.55	19.12	63.76	0.39	7.02	3.06	0.10	100.00

¹ Allocation based on District 1 commercial 6 and 8-1/2 inch mesh gillnet samples.

Appendix Table 17. Yukon River District 2 chinook salmon subsistence gillnet catch, age and sex composition, 1983¹.

Sex		AGE GROUP							TOTAL
		42	52	62	63	72	73	83	
Males	Catch	470	1,827	2,276	0	223	24	0	4,820
	Per cent	5.19	20.15	25.10	0.00	2.46	0.26	0.00	53.13
Females	Catch	0	270	3,507	0	468	0	0	4,245
	Per cent	0.00	2.98	38.69	0.00	5.16	0.00	0.00	46.83
Sexes Combined	Catch	470	2,097	5,783	0	691	24	0	9,065
	Per cent	5.19	23.13	63.79	0.00	7.62	0.26	0.00	100.00

¹ Allocation based on District 2 commercial 8-1/2 and 6 inch mesh gillnet samples.

Appendix Table 18. Yukon River District 3 chinook salmon subsistence gillnet catch, age and sex composition, 1983¹.

Sex		AGE GROUP					TOTAL	
		42	52	62	63	72		73
Males	Catch	32	289	2,471	32	225	64	3,113
	Percent	0.65	5.88	50.33	0.65	4.58	1.31	63.40
Females	Catch	0	128	1,444	0	225	0	1,797
	Percent	0.00	2.61	29.41	0.00	4.58	0.00	36.60
Sexes Combined	Catch	32	417	3,915	32	449	64	4,910
	Percent	0.65	8.50	79.74	0.65	9.15	1.31	100.00

¹ Allocation based on District 3 commercial 8-1/2 inch mesh gillnet samples.

Appendix Table 19. Yukon Territory chinook salmon subsistence catch, age and sex composition, 1983¹.

Sex		AGE GROUP						TOTAL
		42	52	62	63	72	73	
Males	Catch	60	507	1,837	17	369	34	2,824
	Percent	1.11	9.38	34.02	0.32	6.84	0.64	52.31
Females	Catch	0	77	1,992	0	361	146	2,576
	Percent	0.00	1.43	36.88	0.00	6.68	2.70	47.69
Sexes Combined	Catch	60	584	3,829	17	730	180	5,400
	Percent	1.11	10.81	70.91	0.32	13.51	3.34	100.00

¹ Allocation based on Yukon Territory commercial 8-1/2 inch mesh gillnet samples.

Appendix Table 20. Age, sex, and size of Yukon River chinook salmon catch samples collected in 1983, but not used to apportion harvest.

Location Gear Date	Sample Size	Sex		AGE GROUP						Total		
				42	52	62	63	72	73		83	
Big Eddy ¹ 5 1/2 in. Gillnets 5/31-6/30	22	Males	Percent	31.8	40.9	9.1					81.8	
			Mean Length	559.57	701.00	822.00				0.00		
		Females	Percent			13.6		4.5				18.2
			Mean Length			862.00		906.00		0.00		
		Combined	Percent	31.8	40.9	22.7		4.5				100.0
Big Eddy ¹ 8 1/2 in. Gillnets 5/29-7/15	532	Males	Percent	1.7	13.7	39.5	1.1	1.3	0.6	0.2	58.1	
			Mean Length	575.11	772.53	864.89	784.17	904.14	864.33	964.00		
		Females	Percent		2.3	35.7		3.4	0.4	0.2		41.9
			Mean Length		819.25	575.57		946.67	848.00	846.00		
		Combined	Percent	1.7	16.0	75.2	1.1	4.7	0.9	0.4		100.0
Arvik ² Gillnet and Fishwheel 6/27-7/21	46	Males	Percent	41.3	39.1	8.7	2.2				91.3	
			Mean Length	550.10	730.80	819.30	689.00			0.00		
		Females	Percent		2.2	6.5						8.7
			Mean Length		747.00	920.70				0.00		
		Combined	Percent	41.3	41.3	15.2	2.2					100.0
Galens ² Gillnet and Fishwheel 6/30-7/26	74	Males	Percent	16.2	23.0	21.6					60.8	
			Mean Length	531.40	717.60	847.30						
		Females	Percent		2.7	33.8		1.4	1.4			39.2
			Mean Length		739.20	881.00		870.00	869.00	0.00		
		Combined	Percent	16.2	25.7	55.4		1.4	1.4			100.0
Stink Cr. ¹ Fishwheel 6/14-8/27	120	Males	Percent	68.3	12.5	2.5					83.3	
			Mean Length	495.40	686.30	795.30						
		Females	Percent	0.8	5.0	8.3	0.8					15.0
			Mean Length	610.00	658.80	849.60	653.00					
		Combined	Percent	69.2	17.5	10.8	0.8					98.3
Ruby ¹ Fishwheel 8/8-8/28	7	Males	Percent		14.3						14.3	
			Mean Length		813.00							
		Females	Percent			85.7						85.7
			Mean Length			776.20						
		Combined	Percent		14.3	85.7						100.0
Nenana ³ Fishwheel 7/19	34	Males	Percent	11.8	32.4	26.5			2.9		73.5	
			Mean Length	520.30	762.90	881.60			838.00			
		Females	Percent		5.9	17.6		2.9				26.5
			Mean Length		820.00	833.50		901.00				
		Combined	Percent	11.8	38.2	44.1		2.9	2.9			100.0

¹ Test fish samples.

² Combined commercial and subsistence samples.

³ Subsistence samples.

Appendix Table 21. Yukon River District 1 summer chum salmon commercial gill-net, age, and sex by sample period, 1983.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 6/10- 6/14 ¹						
PERIOD SAMPLE SIZE		423				
MALE	COUNT	0	6,392	8,374	128	14,894
	PERCENT	0.00	23.64	30.97	.47	55.08
FEMALE	COUNT	0	6,009	6,073	64	12,146
	PERCENT	0.00	22.22	22.46	.24	44.92
SEXES COMBINED	COUNT	0	12,401	14,447	192	27,040
	PERCENT	0.00	45.86	53.43	.71	100.00
SAMPLE PERIOD 2 6/17- 6/21 ¹						
PERIOD SAMPLE SIZE		446				
MALE	COUNT	0	11,846	13,136	586	25,568
	PERCENT	0.00	22.65	25.11	1.12	48.88
FEMALE	COUNT	117	15,716	10,790	117	26,740
	PERCENT	.22	30.05	20.63	.22	51.12
SEXES COMBINED	COUNT	117	27,562	23,926	703	52,308
	PERCENT	.22	52.69	45.74	1.34	100.00
SAMPLE PERIOD 3 6/24- 7/ 1 ²						
PERIOD SAMPLE SIZE		491				
MALE	COUNT	0	43,508	51,728	483	95,719
	PERCENT	0.00	18.33	21.79	.20	40.33
FEMALE	COUNT	0	75,414	64,296	1,934	141,644
	PERCENT	0.00	31.77	27.09	.81	59.67
SEXES COMBINED	COUNT	0	118,922	116,024	2,417	237,363
	PERCENT	0.00	50.10	48.88	1.02	100.00
SAMPLE PERIOD 4 7/ 5- 7/15 ²						
PERIOD SAMPLE SIZE		452				
MALE	COUNT	1,190	37,183	18,145	1,487	58,005
	PERCENT	.89	27.66	13.50	1.11	43.14
FEMALE	COUNT	892	53,544	22,012	0	76,448
	PERCENT	.66	39.82	16.37	0.00	56.86
SEXES COMBINED	COUNT	2,082	90,727	40,157	1,487	134,453
	PERCENT	1.55	67.48	29.87	1.11	100.00
PERIODS COMBINED						
SAMPLE SIZES COMBINED		1,812				
MALE	COUNT	1,190	98,929	91,383	2,684	194,186
	PERCENT	.26	21.93	20.25	.59	43.04
FEMALE	COUNT	1,009	150,683	103,171	2,115	256,978
	PERCENT	.22	33.40	22.87	.47	56.96
SEXES COMBINED	COUNT	2,199	249,612	194,554	4,799	451,164
	PERCENT	.49	55.33	43.12	1.06	100.00
	STD ERROR	.18	1.39	1.38	.29	

¹ Allocation based on 8-1/2 inch mesh gillnet samples from District 1 commercial catch.

² Allocated based on 6-inch mesh gillnet samples from District 1 commercial catch.

Appendix Table 22. Yukon River District 2 summer chum salmon commercial gillnet catch, age, and sex by sample period, 1983.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 6/13- 6/16 ¹						
PERIOD SAMPLE SIZE		416				
MALE	COUNT	0	2,934	4,057	0	6,991
	PERCENT	0.00	27.64	38.22	0.00	65.87
FEMALE	COUNT	0	1,633	1,913	77	3,623
	PERCENT	0.00	15.39	18.02	.73	34.13
SEXES COMBINED	COUNT	0	4,567	5,970	77	10,614
	PERCENT	0.00	43.03	56.25	.73	100.00
SAMPLE PERIOD 2 6/20- 6/23 ¹						
PERIOD SAMPLE SIZE		430				
MALE	COUNT	0	9,069	9,738	223	19,030
	PERCENT	0.00	28.37	30.46	.70	59.53
FEMALE	COUNT	0	6,988	5,724	223	12,935
	PERCENT	0.00	21.86	17.91	.70	40.47
SEXES COMBINED	COUNT	0	16,057	15,462	446	31,965
	PERCENT	0.00	50.23	48.37	1.40	100.00
SAMPLE PERIOD 3 6/27- 6/27 ²						
PERIOD SAMPLE SIZE		140				
MALE	COUNT	1,468	39,635	61,653	1,468	104,224
	PERCENT	.71	19.29	30.00	.71	50.71
FEMALE	COUNT	0	32,295	68,994	0	101,289
	PERCENT	0.00	15.71	33.57	0.00	49.29
SEXES COMBINED	COUNT	1,468	71,930	130,647	1,468	205,513
	PERCENT	.71	35.00	63.57	.71	100.00
PERIODS COMBINED						
SAMPLE SIZES COMBINED		986				
MALE	COUNT	1,468	51,638	75,448	1,691	130,245
	PERCENT	.59	20.81	30.41	.68	52.50
FEMALE	COUNT	0	40,916	76,631	300	117,847
	PERCENT	0.00	16.49	30.89	.12	47.50
SEXES COMBINED	COUNT	1,468	92,554	152,079	1,991	248,092
	PERCENT	.59	37.31	61.30	.80	100.00
	STD ERROR	.83	3.33	3.43	.83	

¹ Allocation based on 8-1/2 inch mesh gillnet samples from District 2 commercial catch.

² Allocation based on 6-inch mesh gillnet samples from District 2 commercial catch.

Appendix Table 23. Yukon River District 3 summer chum salmon commercial gillnet catch, age and sex by sample period, 1983¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 6/13- 6/27						
PERIOD	SAMPLE SIZE					986
MALE	COUNT	15	3,909	4,916	59	8,899
	PERCENT	.10	26.77	33.67	.40	60.95
FEMALE	COUNT	0	2,665	2,947	89	5,701
	PERCENT	0.00	18.25	20.18	.61	39.05
SEXES COMBINED	COUNT	15	6,574	7,863	148	14,600
	PERCENT	.10	45.03	53.86	1.01	100.00

¹ Allocation based on 8-1/2 inch and 6 inch mesh gillnet samples from District 2 commercial catch.

Appendix Table 24. Yukon River District 4 summer chum salmon commercial gillnet catch, age and sex by sample period, 1983¹.

		AGE GROUP				TOTAL
		31	41	51	61	
SAMPLE PERIOD 1 6/24- 7/22						
PERIOD SAMPLE SIZE		556				
MALE	COUNT	56	1,642	947	0	2,645
	PERCENT	.72	21.21	12.24	0.00	34.17
FEMALE	COUNT	97	3,341	1,643	14	5,095
	PERCENT	1.25	43.17	21.23	.18	65.83
SEXES COMBINED	COUNT	153	4,983	2,590	14	7,740
	PERCENT	1.98	64.38	33.46	.18	100.00
	STD ERROR	.59	2.03	2.00	.18	

¹ Allocation based on 5-1/2 inch mesh and smaller gillnet samples from District 4A commercial catch.

Appendix Table 25. Yukon River District 4A summer chum salmon commercial fishwheel catch, age and sex by sample period, 1983¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 6/24- 7/25						
PERIOD SAMPLE SIZE 347						
MALE	COUNT	1,096	21,186	17,898	365	40,545
	PERCENT	.86	16.71	14.12	.29	31.99
FEMALE	COUNT	1,461	63,557	21,186	0	86,204
	PERCENT	1.15	50.14	16.71	0.00	68.01
SEXES COMBINED	COUNT	2,557	84,743	39,084	365	126,749
	PERCENT	2.02	66.86	30.84	.29	100.00
	STD ERROR	.76	2.53	2.48	.29	

¹ Allocation based on fishwheel samples from District 4A commercial catch.

Appendix Table 26. Yukon River District 4B and 4C summer chum salmon commercial fishwheel catch, age and sex by sample period, 1983¹.

		AGE GROUP			TOTAL
		31	41	51	
SAMPLE PERIOD 1 6/30- 8/ 5					
PERIOD SAMPLE SIZE		409			
MALE	COUNT	149	4,071	1,440	5,660
	PERCENT	.73	20.05	7.09	27.87
FEMALE	COUNT	1,490	10,129	3,029	14,648
	PERCENT	7.34	49.88	14.92	72.13
SEXES COMBINED	COUNT	1,639	14,200	4,469	20,308
	PERCENT	8.07	69.92	22.01	100.00
	STD ERROR	1.35	2.27	2.05	

¹ Allocation based on fishwheel samples from District 4B commercial catch.

Appendix Table 27. Yukon River District 1 summer chum salmon subsistence gillnet catch, age and sex by sample period, 1983¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 6/10- 7/15						
PERIOD SAMPLE SIZE 1,812						
MALE	COUNT	54	5,666	5,598	177	11,495
	PERCENT	.22	22.96	22.68	.72	46.58
FEMALE	COUNT	54	7,682	5,366	82	13,184
	PERCENT	.22	31.13	21.74	.33	53.42
SEXES COMBINED	COUNT	108	13,348	10,964	259	24,679
	PERCENT	.44	54.09	44.43	1.05	100.00

¹ Allocation based on 8-1/2 inch and 6 inch mesh gillnet samples from District 1 commercial catch.

Appendix Table 28. Yukon River District 2 summer chum salmon subsistence gillnet catch, age and sex by sample period, 1983¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 6/13- 6/27						
PERIOD SAMPLE SIZE 986						
MALE	COUNT	28	7,335	9,225	111	16,699
	PERCENT	.10	26.77	33.67	.41	60.95
FEMALE	COUNT	0	5,001	5,529	167	10,697
	PERCENT	0.00	18.25	20.18	.61	39.05
SEXES COMBINED	COUNT	28	12,336	14,754	278	27,396
	PERCENT	.10	45.03	53.85	1.01	100.00

¹ Allocation based on 8-1/2 inch and 6 inch mesh gillnet samples from District 2 commercial catch.

Appendix Table 29. Yukon River District 3 summer chum salmon subsistence gillnet catch, age and sex by sample period, 1983 ¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 6/13- 6/27						
PERIOD SAMPLE SIZE 986						
MALE	COUNT	5	1,234	1,551	19	2,809
	PERCENT	.11	26.77	33.65	.41	60.95
FEMALE	COUNT	0	841	931	28	1,800
	PERCENT	0.00	18.25	20.20	.61	39.05
SEXES COMBINED	COUNT	5	2,075	2,482	47	4,609
	PERCENT	.11	45.02	53.85	1.02	100.00

¹ Allocation based on 8-1/2 inch and 6 inch mesh gillnet samples from District 2 commercial catch.

Appendix Table 30. Yukon River District 4 summer chum salmon subsistence gillnet catch, age and sex by sample period, 1983 ¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 6/24- 7/22						
PERIOD SAMPLE SIZE 556						
MALE	COUNT	147	4,331	2,496	0	6,974
	PERCENT	.72	21.22	12.23	0.00	34.17
FEMALE	COUNT	257	8,808	4,331	37	13,433
	PERCENT	1.26	43.16	21.22	.18	65.83
SEXES COMBINED	COUNT	404	13,139	6,827	37	20,407
	PERCENT	1.98	64.38	33.45	.18	100.00

¹ Allocation based on 5-1/2 inch mesh and smaller gillnet samples from District 4A commercial catch.

Appendix Table 31. Yukon River District 4 summer chum salmon subsistence fishwheel catch, age and sex by sample period, 1983 ¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 6/24- 7/25						
PERIOD SAMPLE SIZE 347						
MALE	COUNT	1,000	19,329	16,329	333	36,991
	PERCENT	.86	16.72	14.12	.29	31.99
FEMALE	COUNT	1,333	57,985	19,329	0	78,647
	PERCENT	1.15	50.14	16.72	0.00	68.01
SEXES COMBINED	COUNT	2,333	77,314	35,658	333	115,638
	PERCENT	2.02	66.86	30.84	.29	100.00

¹ Allocation based on fishwheel samples from District 4A commercial catch.

Appendix Table 32. Age, sex, and size of Yukon River summer chum salmon catch samples collected in 1983, but not used to apportion harvest.

Location Gear & Date	Combined Age Classes				Age 31			Age 41			Age 51			Age 61		
	Sex	N	%	Length	N	%	Length	N	%	Length	N	%	Length	N	%	Length
Big Eddy ¹	Male	49	73.1	627.5	0	-	-	15	22.4	600.9	33	49.2	639.9	1	1.5	618.0
8-1/2" Gillnet	Female	18	26.9	592.2	0	-	-	6	9.0	572.0	11	16.4	600.6	1	1.5	622.0
6/04-6/23	Total	67	100.0	618.0	0	-	-	21	31.4	592.6	44	65.6	630.1	2	3.0	620.0
Big Eddy ¹	Male	159	43.4	609.1	0	-	-	76	20.8	594.2	81	22.1	622.3	2	0.5	646.0
5-1/2" Gillnet	Female	207	56.6	589.8	0	-	-	80	21.9	578.6	127	34.7	596.9	0	-	-
6/01-6/23	Total	366	100.0	598.2	0	-	-	156	42.7	586.2	208	56.8	606.8	2	0.5	646.0
Middle Mouth ¹	Male	6	54.5	602.2	0	-	-	2	18.2	614.0	4	36.3	596.2	0	-	-
5-1/2" Gillnet	Female	5	45.5	579.4	0	-	-	3	27.3	569.0	2	18.2	595.0	0	-	-
6/18	Total	11	100.0	591.8	0	-	-	5	45.5	587.0	6	54.5	595.8	0	-	-
Stink Creek ²	Male	317	32.6	589.0	5	0.5	509.2	178	18.3	574.3	134	13.8	611.4	0	-	-
Fishwheel	Female	655	67.4	552.1	11	1.1	514.4	455	46.9	544.0	189	19.4	573.9	0	-	-
6/14-7/27	Total	972	100.0	564.2	16	1.6	512.8	633	65.2	552.5	323	33.2	589.5	0	-	-
Galena N. Bank	Male	8	61.5	621.4	0	-	-	3	23.1	617.0	5	38.4	624.0	0	-	-
8" Gillnet ³	Female	5	38.5	573.4	0	-	-	3	23.1	550.0	2	15.4	608.5	0	-	-
7/19-7/29	Total	13	100.0	602.9	0	-	-	6	46.2	583.5	7	53.8	619.6	0	-	-
Galena N. Bank	Male	22	59.5	630.2	0	-	-	19	51.4	623.5	3	8.1	672.7	0	-	-
Fishwheel ³	Female	15	40.5	585.5	0	-	-	13	35.1	585.3	2	5.4	587.0	0	-	-
8/11-8/12	Total	37	100.0	612.1	0	-	-	32	86.5	608.0	5	13.5	638.4	0	-	-
Galena S. Bank	Male	19	32.2	615.1	1	1.7	530.0	12	20.3	617.8	6	10.2	623.8	0	-	-
Fishwheel ³	Female	40	67.8	572.2	3	5.1	529.0	32	54.2	569.2	5	8.5	617.2	0	-	-
8/09-8/12	Total	59	100.0	586.0	4	6.8	529.2	44	74.5	582.5	11	18.7	620.8	0	-	-

¹ Test fishing project located in District 1 near Emmonak.

² Test fishing project located in District 4 near Kaltag.

³ Subsistence catch sample, located in District 4.

Appendix Table 33. Yukon River District 1 fall chum salmon commercial gillnet catch, age and sex by sample period, 1983¹.

		AGE GROUP			
		31	41	51	TOTAL
SAMPLE PERIOD 1 7/19- 8/12					
PERIOD SAMPLE SIZE 679					
MALE	COUNT	0	43,594	8,426	52,020
	PERCENT	0.00	35.05	6.77	41.83
FEMALE	COUNT	733	64,841	6,777	72,351
	PERCENT	.59	52.14	5.45	58.17
SEXES COMBINED	COUNT	733	108,435	15,203	124,371
	PERCENT	.59	87.19	12.22	100.00
	STD ERROR	.29	1.28	1.26	

¹ Allocation based on 6 inch mesh gillnet samples from District 1 commercial catch.

Appendix Table 34. Yukon River District 2 fall chum salmon commercial gillnet catch, age and sex by sample period, 1983¹.

		AGE GROUP			
		31	41	51	TOTAL
SAMPLE PERIOD 1 7/19- 8/12					
PERIOD SAMPLE SIZE		679			
MALE	COUNT	0	30,020	5,802	35,822
	PERCENT	0.00	35.05	6.77	41.83
FEMALE	COUNT	505	44,651	4,667	49,823
	PERCENT	.59	52.13	5.45	58.17
SEXES COMBINED	COUNT	505	74,671	10,469	85,645
	PERCENT	.59	87.19	12.22	100.00

¹ Allocation based on 6 inch mesh gillnet samples from District 1 commercial catch.

Appendix Table 35. Yukon River District 3 fall chum salmon commercial gillnet catch, age and sex by sample period, 1983 ¹.

		AGE GROUP			
		31	41	51	TOTAL
SAMPLE PERIOD 1 7/19- 8/12					
PERIOD SAMPLE SIZE 679					
MALE	COUNT	0	3,511	679	4,190
	PERCENT	0.00	35.05	6.78	41.82
FEMALE	COUNT	59	5,223	546	5,828
	PERCENT	.59	52.14	5.45	58.18
SEXES COMBINED	COUNT	59	8,734	1,225	10,018
	PERCENT	.59	87.18	12.23	100.00

¹ Allocation based on 6 inch mesh gillnet samples from District 1 commercial catch.

Appendix Table 36. Yukon River District 4B fall chum salmon commercial fishwheel catch, age and sex by sample period, 1983 ¹.

		AGE GROUP			
		31	41	51	TOTAL
SAMPLE PERIOD 1 8/16- 9/ 5					
PERIOD SAMPLE SIZE 236					
MALE	COUNT	0	2,256	179	2,435
	PERCENT	0.00	42.79	3.40	46.19
FEMALE	COUNT	179	2,524	134	2,837
	PERCENT	3.40	47.88	2.54	53.81
SEXES COMBINED	COUNT	179	4,780	313	5,272
	PERCENT	3.40	90.67	5.94	100.00
	STD ERROR	1.18	1.90	1.54	

¹ Allocation based on fishwheel samples from District 4B commercial catch.

Appendix Table 37. Yukon River District 4C fall chum salmon commercial fishwheel catch, age and sex by sample period, 1983 ¹.

		AGE GROUP			
		31	41	51	TOTAL
SAMPLE PERIOD	1 8/16- 9/ 1				
PERIOD SAMPLE SIZE	165				
MALE	COUNT	21	513	21	555
	PERCENT	1.79	43.73	1.79	47.31
FEMALE	COUNT	21	576	21	618
	PERCENT	1.79	49.10	1.79	52.69
SEXES COMBINED	COUNT	42	1,089	42	1,173
	PERCENT	3.58	92.84	3.58	100.00
	STD ERROR	1.45	2.01	1.45	

¹ Allocation based on fishwheel samples from District 4C commercial catch.

Appendix Table 38. Yukon River District 5 fall chum salmon commercial fishwheel catch, age and sex by sample period, 1983¹.

		AGE GROUP		
		41	51	TOTAL
SAMPLE PERIOD	1 9/ 1- 9/ 6			
PERIOD SAMPLE SIZE	93			
MALE	COUNT	24,598	946	25,544
	PERCENT	55.91	2.15	58.06
FEMALE	COUNT	18,449	0	18,449
	PERCENT	41.94	0.00	41.94
SEXES COMBINED	COUNT	43,047	946	43,993
	PERCENT	97.85	2.15	100.00
	STD ERROR	1.51	1.51	

¹ Allocation based on fishwheel samples from District 5 commercial catch.

Appendix Table 39. Canadian Yukon River fall chum salmon commercial gillnet catch, age and sex by sample period, 1983 ¹.

		AGE GROUP			
		31	41	51	TOTAL
SAMPLE PERIOD	1 9/14- 9/25				
PERIOD	SAMPLE SIZE 562				
MALE	COUNT	92	12,579	740	13,411
	PERCENT	.36	48.40	2.85	51.60
FEMALE	COUNT	92	12,209	277	12,579
	PERCENT	.36	46.98	1.07	48.40
SEXES COMBINED	COUNT	185	24,788	1,017	25,990
	PERCENT	.71	95.37	3.91	100.00
	STD ERROR	.35	.89	.82	

¹ Allocation based on gillnet samples from Dawson area commercial catch.

Appendix Table 40. Yukon River District 1 fall chum salmon subsistence gillnet catch, age and sex by sample period, 1983¹.

		AGE GROUP			
		31	41	51	TOTAL
SAMPLE PERIOD 1 7/19- 8/12					
PERIOD	SAMPLE SIZE				679
MALE	COUNT	0	2,888	558	3,446
	PERCENT	0.00	35.06	6.77	41.83
FEMALE	COUNT	49	4,294	449	4,792
	PERCENT	.59	52.12	5.45	58.17
SEXES COMBINED	COUNT	49	7,182	1,007	8,238
	PERCENT	.59	87.18	12.22	100.00

¹ Allocation based on 6 inch mesh gillnet samples from District 1 commercial catch.

Appendix Table 41. Yukon River District 2 fall chum salmon subsistence gillnet catch, age and sex by sample period, 1983¹.

		AGE GROUP			
		31	41	51	TOTAL
SAMPLE PERIOD 1	7/19- 8/12				
PERIOD SAMPLE SIZE	679				
MALE	COUNT	0	3,624	701	4,325
	PERCENT	0.00	35.04	6.78	41.82
FEMALE	COUNT	61	5,391	564	6,016
	PERCENT	.59	52.13	5.45	58.18
SEXES COMBINED	COUNT	61	9,015	1,265	10,341
	PERCENT	.59	87.18	12.23	100.00

¹ Allocation based on 6 inch mesh gillnet samples from District 1 commercial catch.

Appendix Table 42. Yukon River District 3 fall chum salmon subsistence gillnet catch, age and sex by sample period, 1983¹.

		AGE GROUP			
		31	41	51	TOTAL
SAMPLE PERIOD 1 7/19- 8/12					
PERIOD SAMPLE SIZE 679					
MALE	COUNT	0	1,003	194	1,197
	PERCENT	0.00	35.03	6.78	41.81
FEMALE	COUNT	17	1,493	156	1,666
	PERCENT	.59	52.15	5.45	58.19
SEXES COMBINED	COUNT	17	2,496	350	2,863
	PERCENT	.59	87.18	12.22	100.00

¹ Allocation based on 6 inch mesh gillnet samples from District 1 commercial catch.

Appendix Table 43. Yukon River District 4 fall chum salmon subsistence fishwheel catch, age and sex by sample period, 1983¹.

		AGE GROUP			
		31	41	51	TOTAL
SAMPLE PERIOD 1	8/16- 9/ 5				
PERIOD SAMPLE SIZE	401				
MALE	COUNT	230	13,282	845	14,357
	PERCENT	.75	43.14	2.74	46.63
FEMALE	COUNT	845	14,895	691	16,431
	PERCENT	2.74	48.38	2.24	53.37
SEXES COMBINED	COUNT	1,075	28,177	1,536	30,788
	PERCENT	3.49	91.52	4.99	100.00

¹ Allocation based on fishwheel samples from District 4B and 4C commercial catch.

Appendix Table 44. Yukon River District 5 fall chum salmon subsistence fishwheel catch, age and sex by sample period, 1983¹.

		AGE GROUP		
		41	51	TOTAL
SAMPLE PERIOD	1 9/ 1- 9/ 6			
PERIOD SAMPLE SIZE	93			
MALE	COUNT	52,892	2,034	54,926
	PERCENT	55.91	2.15	58.06
FEMALE	COUNT	39,669	0	39,669
	PERCENT	41.94	0.00	41.94
SEXES COMBINED	COUNT	92,561	2,034	94,595
	PERCENT	97.85	2.15	100.00

¹ Allocation based on fishwheel samples from District 5 commercial catch.

Appendix Table 45. Canadian Yukon River fall chum salmon subsistence gillnet catch, age and sex by sample period, 1983¹.

		AGE GROUP			
		31	41	51	TOTAL
SAMPLE PERIOD	1	9/14- 9/25			
PERIOD SAMPLE SIZE		562			
MALE	COUNT	11	1,500	88	1,600
	PERCENT	.36	48.40	2.85	51.60
FEMALE	COUNT	11	1,456	33	1,500
	PERCENT	.36	46.98	1.07	48.40
SEXES COMBINED	COUNT	22	2,957	121	3,100
	PERCENT	.71	95.37	3.91	100.00

¹ Allocation based on gillnet samples from Dawson area commercial catch.

Appendix Table 46. Age, sex, and size of Yukon River fall chum salmon catch samples collected in 1983, but not used to apportion harvest.

Location Gear & Date	Combined Age Classes				Age 31			Age 41			Age 51			Age 61		
	Sex	N	%	Length	N	%	Length	N	%	Length	N	%	Length	N	%	Length
Big Eddy ¹	Male	138	38.1	610.1	0	-	-	117	32.3	611.7	20	5.5	601.1	1	0.3	600.0
6" Gillnet	Female	224	61.9	596.0	3	0.8	585.0	198	54.7	593.8	21	5.8	614.2	2	0.6	627.5
7/21-8/27	Total	362	100.0	601.3	3	0.8	585.0	315	87.0	600.5	41	11.3	607.8	3	0.9	618.3
Middle Mouth ¹	Male	116	39.6	604.6	2	0.7	571.0	106	36.2	604.7	8	2.7	611.4	0	-	-
6" Gillnet	Female	177	60.4	589.5	1	0.3	532.0	166	56.7	590.4	10	3.4	579.9	0	-	-
7/26-8/26	Total	293	100.0	595.5	3	1.0	559.3	272	92.9	596.0	18	6.1	593.8	0	-	-
Galena N. Bank ²	Male	4	40.0	627.5	0	-	-	2	20.0	610.5	2	20.0	644.5	0	-	-
6" Gillnet	Female	6	60.0	592.7	0	-	-	5	50.0	595.2	1	10.0	580.0	0	-	-
8/16	Total	10	100.0	606.6	0	-	-	7	70.0	599.6	3	30.0	623.0	0	-	-
Galena N. Bank ³	Male	9	33.3	605.4	1	3.7	575.0	8	29.6	609.2	0	-	-	0	-	-
6" Gillnet	Female	18	66.7	601.3	1	3.7	599.0	17	63.0	601.4	0	-	-	0	-	-
8/29	Total	27	100.0	602.7	2	7.4	587.0	25	92.6	603.9	0	-	-	0	-	-
Ruby N. Bank ⁴	Male	477	51.8	602.5	14	1.5	562.8	429	46.6	602.4	33	3.6	621.2	1	0.1	632.0
Fishwheel	Female	443	48.2	575.3	21	2.3	544.4	399	43.4	575.4	21	2.2	602.0	2	0.2	609.5
8/04-9/13	Total	920	100.0	589.4	35	3.8	551.8	828	90.0	589.3	54	5.8	613.7	3	0.3	617.0
Ruby S. Bank ⁴	Male	417	50.2	590.7	21	2.5	537.5	359	43.2	591.1	35	4.2	615.7	2	0.2	634.0
Fishwheel	Female	413	49.8	569.9	25	3.0	528.2	372	44.8	572.2	16	1.9	583.2	0	-	-
8/04-9/14	Total	830	100.0	580.4	46	5.5	532.5	731	88.0	581.5	51	6.1	605.5	2	0.2	634.0
Yukon Territory	Male	1039	45.0	-	13	0.6	-	960	41.5	-	65	2.8	-	1	0.1	-
Fishwheel ⁵	Female	1274	55.0	-	29	1.2	-	1204	52.0	-	41	1.8	-	0	-	-
7/27-10/02	Total	2313	100.0	-	42	1.8	-	2164	93.5	-	106	4.6	-	1	0.1	-

¹ Test fishing project located in District 1 near Emmonak.

² Commercial catch sample, located in District 4.

³ Subsistence catch sample, located in District 4.

⁴ Test fishing project located in District 4.

⁵ Tagging study located on Yukon River just upstream from U.S.-Canadian border.

Appendix Table 47. Yukon River District 1 coho salmon commercial gillnet catch, age and sex by sample period, 1983¹.

		AGE GROUP			
		32	43	54	TOTAL
SAMPLE PERIOD	1	7/29- 8/12			
PERIOD SAMPLE SIZE		121			
MALE	COUNT	190	2,202	76	2,468
	PERCENT	4.13	47.92	1.65	53.71
FEMALE	COUNT	0	2,013	114	2,127
	PERCENT	0.00	43.81	2.48	46.29
SEXES COMBINED	COUNT	190	4,215	190	4,595
	PERCENT	4.13	91.73	4.13	100.00
	STD ERROR	1.82	2.51	1.82	

¹ Allocation based on 6 inch mesh gillnet samples from District 1 commercial catch.

Appendix Table 48. Yukon River District 2 coho salmon commercial gillnet catch, age and sex by sample period, 1983¹.

		AGE GROUP			TOTAL
		32	43	54	
SAMPLE PERIOD 1 7/29- 8/12					
PERIOD SAMPLE SIZE 121					
MALE	COUNT	106	1,226	42	1,374
	PERCENT	4.15	47.95	1.64	53.73
FEMALE	COUNT	0	1,120	63	1,183
	PERCENT	0.00	43.80	2.46	46.27
SEXES COMBINED	COUNT	106	2,346	105	2,557
	PERCENT	4.15	91.75	4.11	100.00

¹ Allocation based on 6 inch mesh gillnet samples from District 1 commercial catch.

Appendix Table 49. Yukon River District 1 coho salmon subsistence gillnet catch, age and sex by sample period, 1983 ¹.

		AGE GROUP			
		32	43	54	TOTAL
SAMPLE PERIOD 1 7/29- 8/12					
PERIOD	SAMPLE SIZE				121
MALE	COUNT	148	1,722	59	1,929
	PERCENT	4.12	47.97	1.64	53.73
FEMALE	COUNT	0	1,572	89	1,661
	PERCENT	0.00	43.79	2.48	46.27
SEXES COMBINED	COUNT	148	3,294	148	3,590
	PERCENT	4.12	91.75	4.12	100.00

¹ Allocation based on 6 inch mesh gillnet samples from District 1 commercial catch.

Appendix Table 50. Yukon River District 2 coho salmon subsistence gillnet catch, age and sex by sample period, 1983 ¹.

		AGE GROUP			
		32	43	54	TOTAL
SAMPLE PERIOD 1	7/29- 8/12				
PERIOD SAMPLE SIZE	121				
MALE	COUNT	251	2,911	100	3,262
	PERCENT	4.13	47.94	1.65	53.72
FEMALE	COUNT	0	2,659	151	2,810
	PERCENT	0.00	43.79	2.49	46.28
SEXES COMBINED	COUNT	251	5,570	251	6,072
	PERCENT	4.13	91.73	4.13	100.00

¹ Allocation based on 6 inch mesh gillnet samples from District 1 commercial catch.

Appendix Table 51. Yukon River District 3 coho salmon subsistence gillnet catch, age and sex by sample period, 1983 ¹.

		AGE GROUP			
		32	43	54	TOTAL
SAMPLE PERIOD 1 7/29- 8/12					
PERIOD SAMPLE SIZE 121					
MALE	COUNT	38	440	15	493
	PERCENT	4.14	47.98	1.64	53.76
FEMALE	COUNT	0	401	23	424
	PERCENT	0.00	43.73	2.51	46.24
SEXES COMBINED	COUNT	38	841	38	917
	PERCENT	4.14	91.71	4.14	100.00

¹ Allocation based on 6 inch mesh gillnet samples from District 1 commercial catch.

Appendix Table 52. Age, sex, and size of Yukon River coho salmon catch samples collected in 1983, but not used to apportion harvest.

Location, Gear & Date	Combined Age Classes				Age 32			Age 43			Age 54		
	Sex	N	%	Length	N	%	Length	N	%	Length	N	%	Length
Big Eddy 6" Gillnet ¹ 8/14-8/27	Male	60	45.8	577.9	2	1.5	567.5	55	42.0	577.2	3	2.3	596.7
	Female	71	54.2	577.4	3	2.3	539.7	65	49.6	579.3	3	2.3	575.0
	Total	131	100.0	577.6	5	3.8	550.7	120	91.6	578.4	6	4.6	585.8
Middle Mouth 6" Gillnet ¹ 8/15-8/26	Male	95	51.4	575.6	4	2.2	588.0	87	47.0	575.3	4 ⁴	2.2	570.2
	Female	90	48.6	576.8	2	1.1	612.0	86	46.4	575.5	2	1.1	595.5
	Total	185	100.0	576.2	6	3.3	596.0	173	93.4	575.4	6	3.3	578.7
Galena N. Bank 6" Gillnet ² 8/29	Male	2	66.7	575.0	0	-	-	2	66.7	575.0	0	-	-
	Female	1	33.3	590.0	0	-	-	1	33.3	590.0	0	-	-
	Total	3	100.0	580.0	0	-	-	3	100.0	580.0	0	-	-
Ruby N. Bank Fishwheel ³ 8/29-9/13	Male	17	68.0	547.9	0	-	-	15	60.0	546.1	2	8.0	562.0
	Female	8	32.0	565.5	0	-	-	8	32.0	565.5	0	-	-
	Total	25	100.0	553.6	0	-	-	23	92.0	552.8	2	8.0	562.0
Ruby S. Bank Fishwheel ³ 8/21-9/14	Male	150	72.1	543.2	2	1.0	496.0	143	68.7	544.1	5 ⁴	2.4	537.8
	Female	58	27.9	541.4	3	1.4	559.0	55	26.5	540.5	0	-	-
	Total	208	100.0	542.7	5	2.4	532.8	198	95.2	543.1	5	2.4	537.8

¹ Test fishing project located in District 1 near Emmonak.

² Subsistence catch sample, located in District 4.

³ Test fishing project located in District 4.

⁴ Includes one age 5₃ male.

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