



## SUMMER SEASON PRELIMINARY FISHERY SUMMARY YUKON AREA, ALASKA, 2000

A Report to the Alaska Board of Fisheries

By:

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## Introduction

This report provides a preliminary season summary for the 2000 Yukon Area chinook and summer chum salmon fishing season. All harvest and escapement figures for 2000 are preliminary. The 2000 preseason outlook was for a weak to below average chinook and summer chum salmon run that would meet subsistence needs and support a commercial harvest of 25,000 to 65,000 chinook and 25,000 to 300,000 summer chum salmon in the Alaskan portion of the drainage. The return of 5-year-old chinook salmon was expected to be near average based on good spawning escapements in 1995 and the number of 4-year-old fish that returned in 1999. The return of 6-year-old chinook salmon was expected to be below average based on the number of 5-year-old fish that returned in 1999.

The ice went out of the river on May 29, about one week later than is normal in recent years. The first subsistence catch of chinook salmon was reported on June 3 near Emmonak. The department's test fishing projects recorded the first chinook salmon catches on June 4. River conditions throughout the early portion of the season were characterized by unusually high water and heavy debris.

Emmonak test fish indices and subsistence harvest reports provide the information managers use to assess the run inseason. As the run progresses upriver, other projects provide additional run assessment information. Based on test fish catch per unit effort (CPUE) (Figure 2), subsistence harvest information and Pilot Station sonar preliminary estimates, the chinook salmon run appeared to be starting slow and tracking similar to the return of 1998, a run that the Department determined could support a commercial harvest of approximately 20,000 chinook salmon. Combined with high water and large amounts of debris, a run lower than 1998 should have resulted in Emmonak test fish CPUE indices substantially lower than 1998.

The commercial fishery opened on the latest date since statehood to provide for upriver escapement and subsistence needs. The two largest pulses of fish were allowed to move through the lower river districts without a commercial harvest. Subsistence harvest information gathered from villages along the drainage indicated as the largest pulses of fish move past a community, subsistence needs were being met. The low commercial harvest, approximately 10% of the recent average, was the lowest since 1937. The harvest was spread over the latter portion of the run and an attempt was made to focus the harvest on lower river stocks.

Emmonak test fish CPUE and Pilot station sonar estimates began to lag behind the 1998 run assessment approximately June 30. As the largest pulses of fish moved past middle river communities, subsistence harvest reports indicated that fewer needs were being met. No additional commercial periods were scheduled.

Approximately 50% of the chinook salmon run had entered the lower river by June 25; five days later than average and several days earlier than 1998. The cumulative test fishing CPUE in 2000 was 14.12 compared to the average of 25.14 for 1989-1999. The Pilot Station sonar cumulative passage preliminary estimate of 69,000 chinook salmon was below the passage estimates of 134,000 fish in

1998, and 188,000 fish in 1999 (Table 1). Further analysis of run assessment will be completed this winter.

The summer chum salmon run was assessed as being poor in abundance. According to test fish CPUE data, approximately 50% of the summer chum run entered the lower river by June 25; two days later than average. The Pilot Station sonar cumulative passage estimate through July 18 was 433,000 summer chum salmon (Table 2). Passage estimates for summer chum salmon were 3.6 million in 1995, 1.4 million in 1997, 746,000 in 1998 and 939,000 in 1999. An estimated one million summer chum salmon are needed for spawning escapements. No directed summer chum commercial harvest was possible this year, based on reported subsistence harvests, Pilot Station sonar passage estimates and escapement counts at the East Fork Andreafsky, Anvik, Nulato, Kaltag, Gisasa, Clear, Chena and Salcha Rivers.

### Subsistence Fishery

In order to conserve chinook and chum salmon, the Department of Fish and Game and the U.S. Fish and Wildlife Service restricted subsistence salmon harvest opportunity in the Yukon Area. Although subsistence harvest information is not available at this time, fishermen reported meeting most of their needs throughout most of the Lower Yukon Area (Figure 1). Fishermen throughout most of the Upper Yukon Area did not meet their needs. A poor return of chinook and summer chum salmon, poor fishing conditions (high water and debris), and a substantial reduction in subsistence harvest opportunity contributed to the low subsistence harvest. Subsistence fishermen reported having to fish different areas and longer hours due to poor fishing conditions.

### Commercial Fishery

Commercial sales in the round were 8,518 chinook and 6,624 summer chum salmon for the Alaskan portion of the Yukon River drainage in 2000 (Table 3). Note that the Alaskan commercial harvest is expressed as the number of salmon sold in the round, pounds of salmon roe sold, and estimated harvest which includes the estimated number of salmon harvested to produce roe sold. No roe sales for chinook and summer chum salmon occurred during the 2000 season. The 2000 chinook salmon harvest was the lowest commercial harvest since 1937. The summer chum salmon harvest was the lowest since the inception of summer chum salmon directed fishing in 1967. The 2000 chinook salmon harvest was 91% below the recent ten-year-average harvest of 97,231 chinook (Table 4 and Figure 3). The summer chum salmon harvest was 98% below the recent ten-year-average harvest of 390,482 fish (Table 5 and Figure 4).

The commercial harvest of chinook salmon was well below the low end of the guideline harvest range for all districts and subdistricts. The commercial fishery was managed conservatively by a reduction in the length of fishing period duration. The summer chum harvest was taken entirely

incidental to fishing directed at chinook salmon. No commercial openings were allowed in Districts 3 – 6.

The 2000 Yukon River chinook and summer chum salmon runs continued to exhibit the decline in productivity observed in recent years. Five and six-year-old chinook salmon abundance was much less than would be expected based on parent-year escapements. Summer chum salmon abundance has been below average to poor since 1997, although parent-year escapements were very good from 1994 through 1996. An extreme flood event in the Koyukuk River drainage in August 1994 and low snow cover during the winter of 1995-96 may account for some of the decline in chum salmon abundance. However, changing climate and ocean conditions also appear to have impacted salmon survival.

A total of 562 permit holders participated in the chinook and summer chum salmon fishery during 2000 (Table 6), which was 26% below the recent ten-year-average of 763 permit holders and the lowest on record. The Lower Yukon Area (Districts 1-3) and Upper Yukon Area (Districts 4-6) are separate CFEC permit areas. A total of 562 permit holders fished in the Lower Yukon Area in 2000, which was 15% below the recent ten-year-average. No commercial openings were allowed in the Upper Yukon Area for the first time since statehood.

Yukon River fishermen in Alaska received an estimated \$734,239 for their chinook and summer chum salmon harvest in 2000, approximately 88% below the recent 10-year-average of \$6.2 million (Table 7 and Figure 5). The decrease in exvessel value was due to the poor chinook and summer chum salmon run. Four buyer-processors operated in the Lower Yukon Area.

Lower Yukon fishers received an estimated average price per pound of \$4.57 for chinook and \$0.17 for summer chum salmon. The average price paid for chinook salmon in the Lower Yukon Area was well above the recent 10-year average of \$2.82 per pound. Prices paid for summer chum salmon in the round continued to be low as observed since 1995. The exvessel value of the Lower Yukon Area fishery of \$734,239 is 86% below the recent 10-year-average of \$5.2 million. The average income for Lower Yukon Area fishers that participated in the 2000 fishery was \$1,306.

A preliminary total of 3,717 chinook salmon was harvested in the 2000 Canadian mainstem Yukon River Aboriginal fisheries. Commercial, domestic and sport fisheries for chinook salmon were closed for the entire 2000 season. The preliminary total Canadian chinook harvest 4,478, which includes 761 chinook salmon harvested in Canadian test fish operations to collect tagging information, was the lowest harvest since 1979 (Figure 6).

### Districts 1-3

The management strategy is to open the chinook salmon directed commercial fishery in the Lower Yukon Area when increasing subsistence and/or test net catches of chinook salmon have occurred over a seven- to ten-day period. The 2000 commercial fishing season opened on June 24 in District 1 (Table 3), which tied with the latest opening on record. This was after approximately nine days

of increasing subsistence and test fishery catches. Based on the lower river test fishery, the chinook migration increased rapidly from June 19 through June 22 and remained fairly steady through June 29. After June 29, abundance of chinook salmon declined.

Management of the commercial fishery was conservative to meet the anticipated harvest of 20,000 chinook salmon. There were two commercial fishing periods allowed in District 1 and one period in District 2. Fishing periods in these districts were reduced to 6-hours duration rather than the more typical 12-hour periods. Unrestricted mesh size gillnets were allowed during all fishing periods in the Lower Yukon Area to direct the harvest at chinook salmon. No six inch maximum mesh size fishing periods were established to target summer chum salmon.

The combined total harvest of 8,518 chinook salmon for Districts 1 and 2 was 86% below the low end of the guideline harvest range of 60,000 fish and 91% below the 1990-1999 average harvest of 89,939 fish. The average weight of chinook salmon was 18.7 pounds.

The combined commercial summer chum salmon harvest in District 1 and 2 of 6,624 fish was 96% below the recent 10-year-average harvest of 155,022 fish. The average weight of summer chum salmon was 7.7 pounds.

District 3 was not opened for commercial fishing periods in 2000. There was no commercial harvest of chinook salmon in District 3 from 1995 through 1998 because of a lack of markets. The recent 10-year average harvest is 966 fish.

#### **Districts 4-6**

Subdistrict 4-A and the Anvik River Management Area (Figure 1) were not opened to commercial fishing for the third consecutive year in 2000, because of poor runs of summer chum salmon. The Anvik River did not meet its minimum escapement goal of 500,000 summer chum salmon. The recent 10-year average harvest for Subdistrict 4-A and the Anvik River Management Area was 1,647 summer chum salmon in the round and 99,076 pounds of summer chum roe. Exvessel value from 1991 through 1999 averaged \$353,777. Prior to 1997 when summer chum salmon abundance dramatically decreased, an average of 60 permit holders fished annually (1991-1996) in this subdistrict.

Commercial fishing was not opened in Subdistricts 4-B and 4-C (Table 3) because of poor chinook and summer chum salmon runs. The recent 10-year average harvest was 1,680 chinook and an estimated 25,434 summer chum salmon.

Subdistricts 5-B and 5-C (Table 3) were not open for commercial fishing. The 1990-1999 average harvest was 2,628 chinook and an estimated 245 summer chum salmon. Typically, the harvest of summer chum salmon is low in these subdistricts as they are located above the vast majority of summer chum spawning areas.

Commercial fishing in Subdistrict 5-D was not opened in 2000. The Subdistrict 5-D recent 10-year average harvest was 441 chinook and an estimated 17 summer chum salmon.

District 6 was not opened for commercial fishing in 2000. The recent 10-year average total estimated commercial harvest is 1,561 chinook and 19,142 summer chum salmon. Management of the fishery is primarily based on Chena and Salcha River tower counts.

### **Escapement**

Chinook salmon biological escapement goals (BEGs) within the Alaskan portion of the Yukon River drainage are based on aerial surveys. Summer chum salmon BEGs are based on aerial surveys except for the Anvik River BEG, which is a sonar-generated estimate. A number of escapement monitoring projects (counting towers and weirs) were established between 1993 and 1995. Although the database for these projects is still quite limited and no goals have been set for them yet, comparisons can be made between the current year and the recent 5-year average. Most of these are cooperative projects: Nulato tower operated by the Nulato Tribal Council, Bering Sea Fishermen's Association (BSFA) and ADF&G; Kaltag Creek tower project operated by the City of Kaltag and funded by the Alaska Cooperative 4-H Extension Service and BSFA; Clear Creek tower (a tributary of the Hogatza River within the Koyukuk River drainage) operated by BLM; East Fork Andreafsky and Gisasa River weirs operated by USFWS; Chena River tower operated by ADF&G and BSFA; and the Salcha River tower operated by BSFA. More recently initiated projects such as Chatanika tower operated by ADF&G Sport Fish Division, Beaver Creek weir operated by BLM and Henshaw Creek weir operated by USFWS are not summarized in this report.

### **Chinook Salmon**

Yukon River chinook salmon abundance in 2000 was assessed as very poor based on the commercial harvest and escapement estimates from selected tributaries (Table 1). Although the run was dominated by six-year-old chinook salmon, production from the 1994 parent year appears to be poor given the good escapements documented that year. Chinook salmon escapements in 2000 ranged from 29% to 71% below the recent 5-year-average throughout the drainage (Figure 7) with minimum escapement goals achieved in only two surveyed tributaries. Minimum aerial survey escapement goals have been established in the East and West Fork Andreafsky, Anvik, North and South Fork Nulato, Gisasa, Chena and Salcha Rivers within the Alaska portion of the Yukon River drainage and there is a rebuilding step escapement goal of 28,000 chinook for the Canadian mainstem Yukon River.

Chinook salmon escapements were assessed to be below desired levels in the Andreafsky, and Chena Rivers. Aerial surveys indicated escapement goals were met in the Anvik and Salcha Rivers. Aerial surveys were impacted by poor weather conditions and the Gisasa and Nulato Rivers were not flown.

Since 1993, inseason assessment of chinook salmon escapement to the Tanana River drainage has been based on counts of chinook salmon passing the Chena and Salcha River tower sites operated by Sport Fish Division of ADF&G and BSFA. This year BSFA operated the Salcha River counting tower. The preliminary tower count estimate for Chena River was 4,707 chinook salmon, which was 43% below the recent 5-year average, and 23% below the median escapement of 6,400 from 1987-1998. The preliminary tower count estimate for Salcha River was 3,108 chinook salmon, which was 71% below the recent 5-year average, and 61% below the median escapement of 7,900 from 1987-1998.

Preliminary results of the Department of Fisheries and Oceans mark and recapture tagging project at the U.S./Canada border indicated a total spawning escapement for the Canadian portion of the Upper Yukon River drainage of approximately 13,830 chinook salmon. This is 51% below the rebuilding step goal of 28,000 chinook salmon. Further review of the tagging project and other run size indicators will be completed this winter.

### **Summer Chum Salmon**

Preliminary postseason analysis of comparative commercial harvest and escapement data indicate the summer chum salmon run was very poor in abundance. Spawning escapements to selected tributaries were below most other years on record for each project (Table 2). No escapements in monitored tributaries met minimum goals or were considered adequate. Results ranged from 44% to 84% below the recent 5-year averages (Figure 8).

Minimum aerial-survey based escapement goals for summer chum salmon have been established in the East and West Fork Andreafsky River, North Fork Nulato River, Clear and Caribou Creeks of the Hogatza-Koyukuk River drainage, and the Salcha River. However, most aerial surveys were not possible in 2000 because of poor weather conditions.

The preliminary Anvik River sonar-based escapement estimate of 205,815 summer chum salmon was approximately 59% below the minimum escapement goal of 500,000 and the lowest since the project began in 1979. The run was much lower than expected based upon parent year escapements of 1,339,000 and 933,240 in 1995 and 1996, respectively.

### **U.S./Canada Yukon River Salmon Panel And Negotiations**

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

In the mid-1990s, there was realization that, while reaching a comprehensive long term agreement remained a formidable challenge given some of the key unresolved issues, there would be benefits

that could be realized by more formally implementing the areas of agreement to date. In February 1995, an interim Yukon River Salmon Agreement (Agreement) went into effect. A U.S./Canada Yukon River Panel (Panel) was formed to implement the Agreement. The focus of the Panel was on the salmon stocks that spawn in the Canadian portion of the Yukon River drainage. The Panel made recommendations to the management agencies in Alaska and Canada. The Panel also administered a Yukon River Salmon Restoration and Enhancement Fund (Fund).

In April 1996, the Panel agreed to the first six years of a rebuilding plan for Canadian mainstem chinook salmon stocks. Recognizing the desirability of rebuilding stocks, the Panel agreed to an interim, minimum spawning escapement objective for Canadian mainstem Yukon River chinook salmon of 28,000 fish for six years beginning in 1996. The U.S. contribution to this effort was to endeavor to deliver 44,800 to 47,800 chinook salmon to the Canadian mainstem Yukon River. The Canadian contribution to this effort was to endeavor to manage the harvest of chinook salmon in the mainstem Yukon River drainage in Canada by all user groups combined within a guideline harvest range of 16,800 to 19,800 chinook salmon.

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

A key component of the Agreement was administration of the Fund by the Panel to address the restoration and enhancement of Canadian spawned salmon stocks. The U.S. contributed \$400,000 per year into the Fund. At its April 1996, March 1997 and March 1998 meetings, the Panel allocated monies from this special fund to restore and increase salmon production on the river. Applicants included regional organizations, Native groups, private consultants and others, primarily in Canada. In 1999, the monies from the Fund were allocated to projects in the Alaska portion of the drainage.

Initially the Agreement was in place through 1997, with an option to extend if both sides agreed. Negotiations resumed in October 1997 to reach a long-term agreement on the remaining issues and to incorporate the relevant elements of the Agreement. At the October negotiations, the Agreement was extended through March 31, 1998.

Although the U.S. side supported extending the Agreement, the Canadian side allowed the Agreement to expire at the March 1998 negotiations meeting. Since March 1998, the department has continued to endeavor to manage the salmon fisheries on the Yukon River consistent with the stock rebuilding and conservation plans for chinook and fall chum salmon that were contained in the interim agreement.

Table 1. Chinook salmon commercial harvest and escapement comparisons, Yukon River, 1995-2000.

Chinook Salmon Commercial Harvest a									
District/Subdistrict	Guideline Harvest Range	1995	1996	1997	1998	1999	2000	Comparison of 2000 to 5-Yr. Average	Recent 5-Year Average (1995-1999)
Y-1		76,106	56,642	66,384	25,413	37,145	4,735	-91%	52,338
Y-2		41,458	30,209	39,363	16,806	27,070	3,783	-88%	30,981
<b>Subtotal Y1 &amp; Y2</b>	<b>60,000-120,000</b>	<b>117,564</b>	<b>86,851</b>	<b>105,747</b>	<b>42,219</b>	<b>64,215</b>	<b>8,518</b>	<b>-90%</b>	<b>83,319</b>
Y-3	1,800-2,200	0	0	0	0	538	0		108
Y-4A		0	0	0	0	0	0		0
Y-4BC		499	137	1,457	0	1,437	0		706
<b>Subtotal Y-4</b>	<b>2,250-2,850</b>	<b>499</b>	<b>137</b>	<b>1,457</b>	<b>0</b>	<b>1,437</b>	<b>0</b>		<b>706</b>
Y-5ABC	2,400-2,800	2,753	2,309	3,071	475	2,189	0		2,159
Y-5D	300-500	489	448	607	42	415	0		400
<b>Subtotal Y-5</b>		<b>3,242</b>	<b>2,757</b>	<b>3,678</b>	<b>517</b>	<b>2,604</b>	<b>0</b>		<b>2,560</b>
Y-6	600-800	2,747	447	2,728	963	689	0		1,515
<b>Total Alaska</b>	<b>67,350-129,150</b>	<b>124,052</b>	<b>90,192</b>	<b>113,610</b>	<b>43,699</b>	<b>69,483</b>	<b>8,518</b>	<b>-90%</b>	<b>88,207</b>
<b>Canada b</b>	<b>16,800-19,800</b>	<b>20,091</b>	<b>19,546</b>	<b>15,717</b>	<b>5,101</b>	<b>12,455</b>	<b>3,562</b>	<b>-76%</b>	<b>14,582</b>

Chinook Salmon Escapement									
Project	Spawning Escapement Goal	1995	1996	1997	1998	1999	2000	Comparison of 2000 to 5-Yr. Average	Recent 5-Year Average (1995-1999)
East Fork Andreafsky River Weir		5,841	2,955	3,186	4,011	3,347	1,380	-64%	3,868
East Fork Andreafsky River Aerial c	>1,500	1,635		1,140	1,027		1,018		N/A
West Fork Andreafsky River Aerial c	>1,400	1,108	624	1,510	1,249 g	870 g	427		N/A
Pilot Station Sonar		254,142		200,120	134,243	187,523	70,112		N/A
Anvik River Index Aerial c	>500 g	1,147	709	2,690	648 g	950 g	1,394		N/A
Nulato River Tower		1,412	756	4,766	1,536	1,932	908	-56%	2,080
Nulato River Aerial c	>1,300	1,649			1,053				N/A
Gisasa River Weir		4,023	1,952	3,764	2,356	2,631	2,089	-29%	2,945
Gisasa River Aerial c	>600	410		144 g	899 g				N/A
Chena River Tower/MR Tagging		9,680 f	6,833 f	13,390	4,745	6,485	4,707 f	-43%	8,227
Chena River Index Aerial c	>1,700	3,039	2,112	3,303	386 g	2,412	934 g		N/A
Salcha River Tower/MR Tagging		13,643	7,958 f	18,396	5,027	9,198	3,108	-71%	10,844
Salcha River Index Aerial c	>2,500	3,734	4,800	3,457 g	1,923 g	3,608	2,478 g		N/A
Canada Mainstem Tagging	>28,000	32,262	28,409	37,883	16,750	11,153	14,798	-41%	25,251
<b>ESCAPEMENT INDEX h</b>		<b>66,861</b>	<b>48,863</b>	<b>81,185</b>	<b>34,425</b>	<b>34,746</b>	<b>26,990</b>	<b>-49%</b>	<b>53,216</b>

a Commercial harvest includes the estimated harvest of females to produce roe sold.

b Total harvest for all fisheries in Canadian mainstem Yukon River.

c Aerial surveys rated good to fair unless noted otherwise.

d Two year average, 1996-1997.

f Mark and recapture tagging estimate; tower counts were minimum/incomplete due to late installation and/or early removal of project, or high water events/weather conditions.

g Aerial surveys rated poor/incomplete; data not comparable to other years.

h The escapement index is the summed escapements for East Fork Andreafsky weir, Nulato tower, Gisasa weir, Chena and Salcha towers, and Canada mainstem tagging.

Table 2. Summer chum salmon commercial harvest and escapement comparisons, Yukon River, 1995-2000.

*Summer Chum Salmon Commercial Harvest a									
District/Subdistrict	Guideline Harvest Range	1995	1996	1997	1998	1999	2000	Comparison of 2000 to 5-Yr. Average	Recent 5-Year Average (1995-1999)
Y-1		142,266	92,506	59,915	21,270	16,181	3,315	-95%	66,428
Y-2		83,817	30,727	18,242	6,848	11,702	3,309	-69%	30,267
Subtotal Y-1 & Y-2	251,000-755,000	226,083	123,233	78,157	28,118	27,883	6,624	-93%	96,695
Y-3	6,000-19,000	0	1,534	0	0	0	0		307
Anvik River	Est. Fish	54,744	84,863	13,548	0	0	0		30,591
	lbs. Roe	100,000	48,477	76,318	13,067	0	0		27,572
Y-4A	Est. Fish	419,688	356,938	100,389	0	0	0		175,403
	lbs. Roe	61,000-183,000	189,252	181,050	56,301	0	0		85,321
Y-4BC	Est. Fish	80,155	68,639	10,734	0	1,267	0		32,159
	lbs. Roe	16,000-47,000	43,345	37,882	4,863	0	0		28,697
Subtotal Y-4		554,587	425,577	111,123	0	1,267	0		218,511
Y-5ABC		316	209	125	110	114	0		175
Y-5D		0	127	12	0	1	0		28
Subtotal Y-5	1,000-3,000	316	336	137	110	115	0		203
Y-6	Est. Fish	37,428	46,890	25,287	570	148	0		22,065
	lbs. Roe	13,000-38,000	9,475	18,332	9,036	140	24	0	7,401
Total	400,000-1,200,000	818,414	682,233	228,252	28,798	29,413	6,624	-98%	357,422

*Summer Chum Salmon Escapement									
Project	Spawning Escapement Goal	1995	1996	1997	1998	1999	2000	Comparison of 2000 to 5-Yr. Average	Recent 5-Year Average (1995-1999)
East Fork Andreafsky River Weir		172,148	108,450	51,139	67,591	32,229	23,500	-73%	86,311
Pilot Station Sonar		3,438,655		1,342,650	745,919	939,348	410,528		N/A
Anvik River Sonar	>500,000	1,339,418	933,240	609,118	471,865	441,305	205,815	-73%	758,989
Kallag River Tower		77,193	51,269	48,018	8,113	5,300	6,727	-82%	37,979
Nulato River Tower		236,890	129,694	157,975	49,140	30,076	24,308	-80%	120,755
Gisasa River Weir		136,886	157,589	31,800	18,228	9,920	11,415	-84%	70,885
Clear Creek Tower		116,735	100,912	76,454	212 c	11,300	18,698	-81%	98,034 d
Chena River Tower		3,519 c	12,810 c	9,439 c	5,901 c	9,165 c	3,515 c		N/A
Chena River Aerial b		185 f	2,061	594 f	24 f	520 f	107 f		N/A
Salcha River Tower		30,784	74,827	35,741	17,289	23,221	20,516	-44%	36,372
Salcha River Aerial b	>3,500	934 f	9,722	3,968 f	370 f	150 f	124 f		N/A
ESCAPEMENT INDEX g		1,993,319	1,455,069	933,791	632,226	551,216	295,796	-73%	1,113,124

a Commercial harvest includes the estimated harvest of females to produce roe sold, except for Districts 3 and 4, which also includes the estimated number of males harvested to produce roe sold.

b Aerial surveys rated good to fair unless noted otherwise.

c Project counts not comparable to other years; incomplete counts due to early removal of project or high water events/weather conditions.

d Three year average 1995-1997.

f Aerial surveys rated poor/incomplete; data not comparable to other years.

g The escapement index is the summed escapements for East Fork Andreafsky weir, Anvik sonar, Gisasa weir, Kallag, Nulato, and Salcha towers.

Table 3. Preliminary lower Yukon area Summer season commercial harvest, 2000.

District 1												
Period Number	Starting Time	Start Date	Ending Time	End Date	Hours Fished	Number of Fishermen	Chinook Salmon			Summer Chum Salmon		
							Numbers	Pounds	Average Weight	Numbers	Pounds	Average Weight
1	6:00 PM	25-Jun	12 Midnight	25-Jun	6	315	2,550	48,254	18.9	1,973	15,211	7.7
2	9:00 PM	29-Jun	3:00 AM	30-Jun	6	275	2,176	41,624	19.1	1,342	9,783	7.3
District 1 Subtotal:		Current as of:		30-Jun	12	350	4,735	89,878	19.0	3,315	24,974	7.5

District 2												
Period Number	Starting Time	Start Date	Ending Time	End Date	Hours Fished	Number of Fishermen	Chinook Salmon			Summer Chum Salmon		
							Numbers	Pounds	Average Weight	Numbers	Pounds	Average Weight
1	6:00 PM	27-Jun	12 Midnight	27-Jun	6	214	3,783	68,989	18.2	3,309	25,808	7.8
District 2 Subtotal:		Current as of:		27-Jun	6	214	3,783	68,989	18.2	3,309	25,808	7.8

District 3													
Period Number	Starting Time	Start Date	Ending Time	End Date	Hours Fished	Number of Fishermen	Chinook Salmon			Summer Chum Salmon			Pounds Roe
							Numbers	Pounds	Average Weight	Numbers	Pounds	Average Weight	
No Commercial Fishing Periods													
District 3 Subtotal:		Current as of:		-	-	-	-	-	-	-	-	-	

Lower Yukon Area, Summer Season, Districts 1 and 2 Subtotal:					18.0	562	8,518	158,867	18.7	6,624	50,782	7.7
Districts 3 Subtotal:					-	-	-	-	-	-	-	-
Districts 1,2 and 3 Subtotal:					18.0	562	8,518	158,867	18.7	6,624	50,782	7.7

U=UNRESTRICTED, R=6" MAXIMUM MESH SIZE

Table 3. (page 2 of 3) Preliminary upper Yukon area Summer season commercial harvest, 2000.

Subdistrict 4-A												
Period Number	Starting Time	Start Date	Ending Time	End Date	Hours Fished	Number of Fishermen	Chinook Salmon			Summer Chum Salmon		
							Numbers	Pounds of Roe	Estimated Harvest 'a	Numbers	Pounds of Roe	Estimated Harvest 'a
No Commercial Fishing Periods												
Subdistrict 4-A Subtotal: Current as of: - - - - -												

Anvik River												
Period Number	Starting Time	Start Date	Ending Time	End Date	Hours Fished	Number of Fishermen	Chinook Salmon			Summer Chum Salmon		
							Numbers	Pounds of Roe	Estimated Harvest 'a	Numbers	Pounds of Roe	Estimated Harvest 'a
No Commercial Fishing Periods												
Anvik River Subtotals Current as of: - - - - -												

Subdistricts 4-B and 4-C												
Period Number	Starting Time	Start Date	Ending Time	End Date	Hours Fished	Number of Fishermen	Chinook Salmon			Summer Chum Salmon		
							Numbers	Pounds of Roe	Estimated Harvest 'a	Numbers	Pounds of Roe	Estimated Harvest 'a
No Commercial Fishing Periods												
Subdistricts 4-B and 4-C Subtotal: Current as of: - - - - -												

Table 3. (page 3 of 3) Preliminary upper Yukon area Summer season commercial harvest, 2000.

Subdistricts 5-B, and 5-C												
Period Number	Starting Time	Start Date	Ending Time	End Date	Hours Fished	Number of Fishermen	Chinook Salmon			Summer Chum Salmon		
							Numbers	Pounds of Roe	Estimated Harvest 'a	Numbers	Pounds of Roe	Estimated Harvest 'a
No Commercial Fishing Periods												
Subdistricts 5-B, and 5-C Subtotals:		Current as of:		-	-	-	-	-	-	-	-	-

Subdistrict 5-D												
Period Number	Starting Time	Start Date	Ending Time	End Date	Hours Fished	Number of Fishermen	Chinook Salmon			Summer Chum Salmon		
							Numbers	Pounds of Roe	Estimated Harvest 'a	Numbers	Pounds of Roe	Estimated Harvest 'a
No Commercial Fishing Periods												
Subdistrict 5-D Subtotal:		Current as of:		-	-	-	-	-	-	-	-	-

Subdistricts 6-A, 6-B, and 6-C												
Period Number	Starting Time	Start Date	Ending Time	End Date	Hours Fished	Number of Fishermen	Chinook Salmon			Summer Chum Salmon		
							Numbers	Pounds of Roe	Estimated Harvest 'a	Numbers	Pounds of Roe	Estimated Harvest 'a
No Commercial Fishing Periods												
District 6 Subtotal:		Current as of:		-	-	-	-	-	-	-	-	-

Upper Yukon Area, Summer Season, Districts 4, 5, and 6 Subtotals:												
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Yukon Area, Summer Season, All Districts Total:					18	8,518	18.7	6,824	7.7			
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Table 4. Commercial chinook salmon sales and estimated harvest by area, district, and country, Yukon River drainage, 1961-2000.

Year	Lower Yukon Area <sup>a</sup>				Upper Yukon Area <sup>b</sup>									Total Estimated Harvest <sup>c</sup>	Canada Total	Grand Total			
	District 1	District 2	District 3	Subtotal	District 4			District 5			District 6						Subtotal		
					Number	Roe	Estimated Harvest <sup>c</sup>	Number	Roe	Estimated Harvest <sup>c</sup>	Number	Roe	Estimated Harvest <sup>c</sup>				Number	Roe	Estimated Harvest <sup>c</sup>
1961	84,466	29,026	4,368	117,860	-	-	-	-	-	-	-	-	-	1,804	-	1,804	119,664	3,446	123,110
1962	67,099	22,224	4,687	94,010	-	-	-	-	-	-	-	-	-	724	-	724	94,734	4,037	98,771
1963	85,004	24,221	7,020	116,245	-	-	-	-	-	-	-	-	-	803	-	803	117,048	2,283	119,331
1964	67,555	20,246	4,705	92,506	-	-	-	-	-	-	-	-	-	1,081	-	1,081	93,587	3,208	96,795
1965	89,268	23,763	3,204	116,235	-	-	-	-	-	-	-	-	-	1,863	-	1,863	118,098	2,265	120,363
1966	70,788	16,927	3,612	91,327	-	-	-	-	-	-	-	-	-	1,988	-	1,988	93,315	1,942	95,257
1967	104,350	20,239	3,618	128,207	-	-	-	-	-	-	-	-	-	1,449	-	1,449	129,656	2,187	131,843
1968	79,465	21,392	4,543	105,400	-	-	-	-	-	-	-	-	-	1,126	-	1,126	106,526	2,212	108,738
1969	71,688	14,756	3,595	90,039	-	-	-	-	-	-	-	-	-	988	-	988	91,027	1,540	92,567
1970	56,648	17,141	3,705	77,494	-	-	-	-	-	-	-	-	-	1,651	-	1,651	79,145	2,611	81,756
1971	86,042	19,226	3,490	108,758	-	-	-	-	-	-	-	-	-	1,749	-	1,749	110,507	3,178	113,685
1972	70,052	17,855	3,841	91,748	-	-	-	-	-	-	-	-	-	1,092	-	1,092	92,840	1,769	94,609
1973	56,981	13,859	3,204	74,044	-	-	-	-	-	-	-	-	-	1,309	-	1,309	75,353	2,199	77,552
1974 <sup>d</sup>	71,840	17,948	3,480	93,268	685	-	685	2,663	-	2,663	1,473	-	1,473	4,821	-	4,821	98,089	1,808	99,897
1975	44,585	11,315	4,177	60,077	389	-	389	2,872	-	2,872	500	-	500	3,761	-	3,761	63,838	3,000	66,838
1976	62,410	16,556	4,148	83,114	409	-	409	3,151	-	3,151	1,102	-	1,102	4,662	-	4,662	87,776	3,500	91,276
1977	69,915	16,722	3,965	90,602	985	-	985	4,162	-	4,162	1,008	-	1,008	6,155	-	6,155	96,757	4,720	101,477
1978	50,006	32,924	2,916	85,846	608	-	608	3,079	-	3,079	635	-	635	4,322	-	4,322	96,168	2,975	102,143
1979	75,007	41,498	5,018	121,523	1,989	-	1,989	3,389	-	3,389	772	-	772	6,150	-	6,150	127,673	6,175	133,848
1980	90,382	50,004	5,240	145,626	1,521	-	1,521	4,891	-	4,891	1,947	-	1,947	8,359	-	8,359	153,985	9,500	163,485
1981	99,506	45,781	4,023	149,310	1,347	-	1,347	6,374	-	6,374	987	-	987	8,708	-	8,708	158,018	8,593	166,611
1982	74,450	39,132	2,609	116,191	1,087	-	1,087	5,385	-	5,385	981	-	981	7,453	-	7,453	123,644	8,640	132,284
1983	95,457	43,229	4,106	142,792	601	-	601	3,606	-	3,606	911	-	911	5,118	-	5,118	147,910	13,027	160,937
1984	74,671	36,697	3,039	114,407	961	-	961	3,669	-	3,669	867	-	867	5,497	-	5,497	119,904	9,885	129,789
1985	90,011	48,365	2,588	140,964	664	-	664	3,418	-	3,418	1,142	-	1,142	5,224	-	5,224	146,188	12,573	158,761
1986	53,035	41,849	901	95,785	502	-	502	2,733	-	2,733	950	-	950	4,185	-	4,185	99,970	10,797	110,767
1987	76,643	47,458	2,039	126,140	1,524	-	1,524	3,758	-	3,758	3,338	-	3,338	8,620	-	8,620	134,760	10,864	145,624
1988 <sup>e</sup>	56,120	35,120	1,767	93,007	3,159	-	3,159	3,436	-	3,436	762	-	762	7,357	-	7,357	100,364	13,217	113,581
1989	81,570 <sup>g</sup>	33,166	1,645	96,381	2,790	-	2,790	3,286	-	3,286	1,741	-	1,741	7,817	-	7,817	104,198	9,789	113,987
1990	51,199 <sup>h</sup>	33,061	2,341	86,601	3,536	8	3,538	3,353	47	3,365	1,757	1,676	2,156	8,646	1,731	9,059	95,660	11,324	106,984
1991 <sup>i</sup>	56,332	39,260	2,344	97,936	2,446	2,222	3,582	3,810	62	3,826	686	1,545	1,072	6,942	3,829	8,480	106,416	10,906	117,322
1992 <sup>j</sup>	74,212	38,139	1,819	114,170	1,651	2,273	2,394	3,852	7	3,855	572	884	753	6,075	3,164	7,002	121,172	10,877	132,049
1993	49,285	37,293	1,501	88,080	1,349	701	1,577	3,008	0	3,008	1,113	1,313	1,445	5,470	2,014	6,030	94,110	10,350	104,460
1994	62,241	41,892	1,114	105,047	2,216	584	2,443	3,739	10	3,744	2,135	1,820	2,606	8,090	2,394	8,793	113,840	12,028	125,868
1995	76,106	41,458	0	117,564	262	626	499	3,242	0	3,242	1,660	4,731	2,747	5,164	5,357	6,488	124,052	11,146	135,198
1996	56,642	30,209	0	86,851	45	202	137	2,497	518	2,757	278	750	447	2,820	1,470	3,341	90,192	10,164	100,356
1997	66,384	39,363	0	105,747	1,450	14	1,457	3,678	0	3,678	1,966	3,211	2,728	7,094	3,225	7,863	113,610	5,311	118,921
1998	25,413	16,806	0	42,219	0	0	0	517	0	517	882	260	963	1,399	260	1,480	43,699	390	44,089
1999	37,161	27,133	538	64,832	1,437	0	1,437	2,604	0	2,604	402	1,096	689	4,443	1,096	4,730	69,562	3,140	72,702
2000 <sup>k</sup>	4,735	3,783	-	8,518	-	-	-	-	-	-	-	-	-	-	-	-	8,518	0	8,518
10 Yr Avg. 1990-1999	55,498	34,441	968	90,905	1,439	-	1,706	3,030	-	3,060	1,145	-	1,561	5,614	-	6,327	97,231	8,564	105,795

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

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

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

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

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

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

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

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

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

j No commercial fishing periods in Districts 3, 4, 5 and 6.

Table 5. Commercial summer chum salmon areas and estimated harvest by area and district, Yukon River drainage in Alaska, 1967-2000.

Year	Lower Yukon Area							
	District 1 b	District 2 b	District 3 a			Subtotal		
			Number	Roe	Estimated Harvest <sup>c</sup>	Number	Roe	Estimated Harvest <sup>c</sup>
1967	9,453	1,425	57			10,935	-	10,935
1968	12,995	1,407	68			14,470	-	14,470
1969	56,886	5,080	-			61,966	-	61,966
1970	117,357	19,649	-			137,006	-	137,006
1971	93,928	6,112	50			100,090	-	100,090
1972	114,234	20,907	527			135,668	-	135,668
1973	221,644	63,402	463			285,509	-	285,509
1974 <sup>b</sup>	466,004	74,152	1,721			541,877	-	541,877
1975	418,323	99,139	-			517,462	-	517,462
1976	273,204	99,190	9,802			382,196	-	382,196
1977	250,652	105,679	3,412			359,743	-	359,743
1978	393,785	227,548	27,003			648,336	-	648,336
1979	369,934	172,838	40,015			582,787	-	582,787
1980	391,252	308,704	44,782			744,738	-	744,738
1981	507,158	351,878	54,471			913,507	-	913,507
1982	249,516	182,344	4,086			435,946	-	435,946
1983	451,164	248,092	14,600			713,856	-	713,856
1984	292,676	236,931	1,087			530,694	-	530,694
1985	247,486	188,099	1,792			437,377	-	437,377
1986	381,127	288,427	442			669,996	-	669,996
1987	222,898	174,876	3,501			401,275	-	401,275
1988	645,322	424,461	13,965			1,083,748	-	1,083,748
1989	544,373 <sup>t</sup>	343,032	7,578			894,983	-	894,983
1990	146,725	131,755	643			279,123	-	279,123
1991	140,470 <sup>n</sup>	175,149	8,912			324,531	-	324,531
1992 <sup>t</sup>	177,329	147,129	65			324,523	-	324,523
1993	73,659	19,332	463			93,454	-	93,454
1994	42,332	12,869	35			55,236	-	55,236
1995	142,266	83,817	0			226,083	-	226,083
1996	92,506	30,727	0	935	1,534	123,233	935	124,767
1997	59,915	18,242	-	-	-	78,157	0	78,157
1998	21,270	6,848	-	-	-	28,118	0	28,118
1999	16,181	11,702	0	0	0	27,883	0	27,883
2000 <sup>k</sup>	3,315	3,309	-	-	-	6,624	0	6,624
10 Yr Ave. 1989-1999	91,265	63,757	1,265	-	-	156,034	-	156,188

-Continued-

Table 5. (page 2 of 2).

Year	Upper Yukon Area <sup>a</sup>														
	District 4			District 5			District 6			Subtotal		Total			
	Number	Estimated Roe Harvest <sup>c</sup>		Number	Estimated Roe Harvest <sup>c</sup>		Number	Estimated Roe Harvest <sup>c</sup>		Number	Estimated Roe Harvest <sup>c</sup>	Number	Roe	Estimated Harvest <sup>c</sup>	
1967	-	-	-	-	-	-	-	-	-	0	0	0	10,935	0	10,935
1968	-	-	-	-	-	-	-	-	-	0	0	0	14,470	0	14,470
1969	-	-	-	-	-	-	-	-	-	0	0	0	61,966	0	61,966
1970	-	-	-	-	-	-	-	-	-	0	0	0	137,006	0	137,006
1971	-	-	-	-	-	-	-	-	-	0	0	0	100,090	0	100,090
1972	-	-	-	-	-	-	-	-	-	0	0	0	135,668	0	135,668
1973	-	-	-	-	-	-	-	-	-	0	0	0	285,509	0	285,509
1974 <sup>d</sup>	27,866	-	27,866	6,831	-	6,831	13,318	-	13,318	48,015	0	48,015	589,892	0	589,892
1975	165,054	-	165,054	12,997	-	12,997	14,782	-	14,782	192,833	0	192,833	710,295	0	710,295
1976	211,307	-	211,307	774	-	774	6,617	-	6,617	218,698	0	218,698	600,894	0	600,894
1977	169,541	-	169,541	1,274	-	1,274	4,317	-	4,317	175,132	0	175,132	534,875	0	534,875
1978	364,184	16,920	381,104	4,892	605	5,497	34,814	8,236	43,050	403,890	25,761	429,651	1,052,226	25,761	1,077,987
1979	169,430	35,317	204,747	8,608	1,008	9,617	18,491	3,891	22,382	196,529	40,217	236,746	779,316	40,217	819,533
1980	147,560	135,824	283,384	456	-	456	35,855	3,282	39,137	183,871	139,106	322,977	928,609	139,106	1,067,715
1981	59,718	187,032	330,445	1,236	49	1,285	32,477	1,987	34,464	93,431	189,068	386,194	1,006,938	189,068	1,279,701
1982	3,647	151,281	257,719	213	21	234	21,597	1,517	23,114	25,457	152,819	281,067	461,403	152,819	717,013
1983	6,672	148,125	255,388	42	1,856	1,898	24,309	18	24,327	31,023	149,999	281,613	744,879	149,999	995,469
1984	1,009	166,842	278,070	645	47	692	56,249	335	56,584	57,903	167,224	335,346	588,597	167,224	866,040
1985	12,007	247,085	427,483	700	-	700	68,913	1,540	70,453	79,620	248,625	496,636	516,987	248,625	934,013
1986	300	269,545	465,535	690	-	690	50,483	2,146	52,629	51,473	271,691	518,854	721,469	271,691	1,188,850
1987	29,991	121,474	209,800	362	44	406	10,610	450	11,060	40,963	121,960	221,266	442,238	121,960	622,541
1988	24,051	254,526	490,074	722	363	1,085	40,129	1,646	41,775	64,902	256,535	532,934	1,148,650	256,535	1,616,682
1989	18,554	283,305	510,244	154	373	527	42,115	4,871	46,986	60,823	288,549	557,757	955,806	288,549	1,452,740
1990	12,364	105,723	222,550	11	594	671	11,127 <sup>e</sup>	3,059	14,833	23,502	109,376	238,054	302,625	109,376	517,177
1991	6,381	137,232	309,644	4	28	35	18,197	4,716	23,892	24,582	141,976	333,571	349,113	141,976	658,102
1992	2,059	110,809	211,396	102	295	430	5,029	1,892	7,228	7,790	112,996	219,054	332,313	112,996	543,577
1993	27	22,447	42,957	0	0	0	3,041	515	3,705	3,068	22,962	46,662	96,522	22,962	140,116
1994	3,611	89,717	171,607	229	212	464	21,208	7,828	31,434	25,048	97,757	203,505	80,284	97,757	258,741
1995	8,873	281,074	554,587	107	188	316	24,711	9,475	37,428	33,691	290,737	592,331	250,774	290,737	818,414
1996	0	295,190	510,240	0	302	336	22,360	18,332	40,890	22,360	313,824	557,466	145,503	314,750	682,233
1997	2,062	74,231	124,671	137	0	137	14,886	9,036	25,287	17,085	83,267	150,095	95,242	83,267	228,252
1998	0	0	0	96	13	110	397	140	570	493	153	680	28,611	153	28,796
1999	1,267	0	1,267	115	0	115	124	24	147	1,506	24	1,529	29,389	24	29,412
2000 <sup>f</sup>	-	-	-	-	-	-	-	-	-	-	-	-	6,624	0	6,624
10 Yr Ave. 1989-1999	3,724	111,642	214,892	80	163	261	12,108	5,502	19,141	15,913	117,307	234,295	171,947	117,401	390,482

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

<sup>b</sup> All sales are fish in the round in District 1 and 2. Includes department test fish sales prior to 1988.

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

<sup>d</sup> In 1974, District 4 was subdivided to include Districts 5 and 6.

<sup>e</sup> Includes the illegal sales of 150 summer chum salmon in District 1.

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

<sup>g</sup> Includes the illegal sales of 1,023 summer chum salmon.

<sup>h</sup> Includes the illegal sales of 31 summer chum salmon in District 1, and 91 summer chum salmon in District 2.

<sup>i</sup> No commercial fishing periods in Districts 3, 4, 5 and 6.

Table 6. Number of commercial salmon fishing gear permit holders by district and season, Yukon Area, 1971-2000. <sup>a</sup>

Chinook and Summer Chum Salmon Season									
Year	Lower Yukon Area				Upper Yukon Area				Total
	District 1	District 2	District 3	Subtotal <sup>b</sup>	District 4	District 5	District 6	Subtotal	
1971	405	154	33	592	-	-	-	-	592
1972	426	153	35	614	-	-	-	-	614
1973	438	167	38	643	-	-	-	-	643
1974	396	154	42	592	27	31	20	78	670
1975	441	149	37	627	93	52	36	181	808
1976	453	189	42	684	80	46	29	155	839
1977	392	188	46	626	87	41	18	146	772
1978	429	204	22	655	80	45	35	160	815
1979	425	210	22	657	87	34	30	151	808
1980	407	229	21	657	79	35	33	147	804
1981	448	225	23	696	80	43	26	149	845
1982	450	225	21	696	74	44	20	138	834
1983	455	225	20	700	77	34	25	136	836
1984	444	217	20	613	54	31	27	112	725
1985	425	223	18	666	74	32	27	133	799
1986	441	239	7	672	75	21	27	123	795
1987	440	239	13	659	87	30	24	141	800
1988	456	250	22	678	95	28	33	156	834
1989	445	243	16	687	98	32	29	159	846
1990	453	242	15	679	92	27	23	142	821
1991	489	253	27	678	85	32	22	139	817
1992	438	263	19	679	90	28	19	137	816
1993	448	238	6	682	75	30	18	123	805
1994	414	250	7	659	55	28	20	103	762
1995	439	233	0	661	87	28	21	136	797
1996	448	189	9	627	87	23	15	125	752
1997	457	188	0	639	39	29	15	83	722
1998	434	231	0	643	0	18	10	28	671
1999	412	217	5	631	5	26	6	37	668
2000	350	214	-	562	-	-	-	-	562
10-Yr. Avg 1990-1999	443	230	9	658	62	27	17	105	763

a Number of permit holders which delivered fish.

b 1984-1995 is the unique number of permits fished. Prior year totals are additive for District 1, 2, and 3. Some individual fishermen in the Lower Yukon Area may have operated in more than one district during the year.

Table 7. Exvessel value of Yukon Area commercial chinook and summer chum salmon fishery, 1977-2000.

Year	Chinook					Summer Chum					Total Value	
	Lower Yukon		Upper Yukon			Lower Yukon			Upper Yukon			
	\$/lb	Value	\$/lb	\$/Roe	Value	\$/lb	\$/Roe	Value	\$/lb	\$/Roe		Value
1977	0.85	1,841,033	1.37		148,766	0.40		1,007,280	0.27	2.66	306,481	3,303,560
1978	0.90	2,048,674	0.87		66,472	0.45		2,071,434	0.24	N/A	655,738	4,842,318
1979	1.09	2,763,433	1.00		124,230	0.52		2,242,564	0.25	3.00	444,924	5,575,151
1980	1.04	3,409,105	0.85		113,662	0.20		1,027,738	0.23	2.50	627,249	5,177,754
1981	1.20	4,420,669	1.00		206,380	0.40		2,741,178	0.20	3.00	699,876	8,068,103
1982	1.41	3,768,107	1.02		162,699	0.40		1,237,735	0.18	2.75	462,837	5,621,378
1983	1.40	4,093,562	1.08		105,584	0.34		1,734,270	0.16	1.66	281,883	6,215,299
1984	1.50	3,510,923	0.95		102,354	0.26		926,922	0.23	1.78	382,776	4,922,975
1985	1.50	4,294,432	0.86		82,644	0.35		1,032,700	0.23	1.94	593,801	6,003,577
1986	1.63	3,165,078	0.89		73,363	0.38		1,746,455	0.22	2.08	634,091	5,618,987
1987	1.98	5,428,933	0.79		136,196	0.48		1,313,618	0.19	2.22	323,611	7,202,358
1988	2.97	5,463,800	1.04		142,284	0.66		5,001,100	0.23	4.33	1,213,991	11,821,175
1989	2.77	5,181,700	0.84		108,178	0.34		2,217,700	0.24	4.41	1,377,117	8,884,695
1990	2.84	4,820,859	0.72		105,295	0.24		497,571	0.11	4.41	506,611	5,930,336
1991	3.70	7,128,300	0.70	2.92	97,140	0.36		782,300	0.18	4.21	627,177	8,634,917
1992	4.12	9,957,002	0.91	2.82	168,999	0.27		606,976	0.30	4.53	525,204	11,258,181
1993	2.70	4,884,044	1.06	5.52	113,217	0.37		226,772	0.35	8.53	203,762	5,427,794
1994	2.07	4,169,270	0.92	3.11	124,270	0.21		79,206	0.20	3.77	396,685	4,769,431
1995	2.09	5,317,508	0.77	2.64	87,059	0.16		241,598	0.13	3.57	1,060,322	6,706,487
1996	1.95	3,491,582	0.95	2.57	47,282	0.09	2.96	89,020	0.07	3.05	966,277	4,594,181
1997	2.46	5,450,433	0.97	1.62	110,713	0.10		56,535	0.07	1.08	96,806	5,714,487
1998	2.51	1,911,370	0.91	2.00	17,285	0.14		26,415	0.18	1.93	821	1,955,891
1999	3.80	4,950,522	1.10	2.11	74,475	0.10		19,687	0.18	2.25	1,719	5,046,403
2000	4.57	725,806				0.17		8,633				734,239
10-Yr Avg												
1990-1999	2.82	5,208,089	0.90		94,574	0.20	2.96	262,608	0.18	3.73	438,538	6,003,809

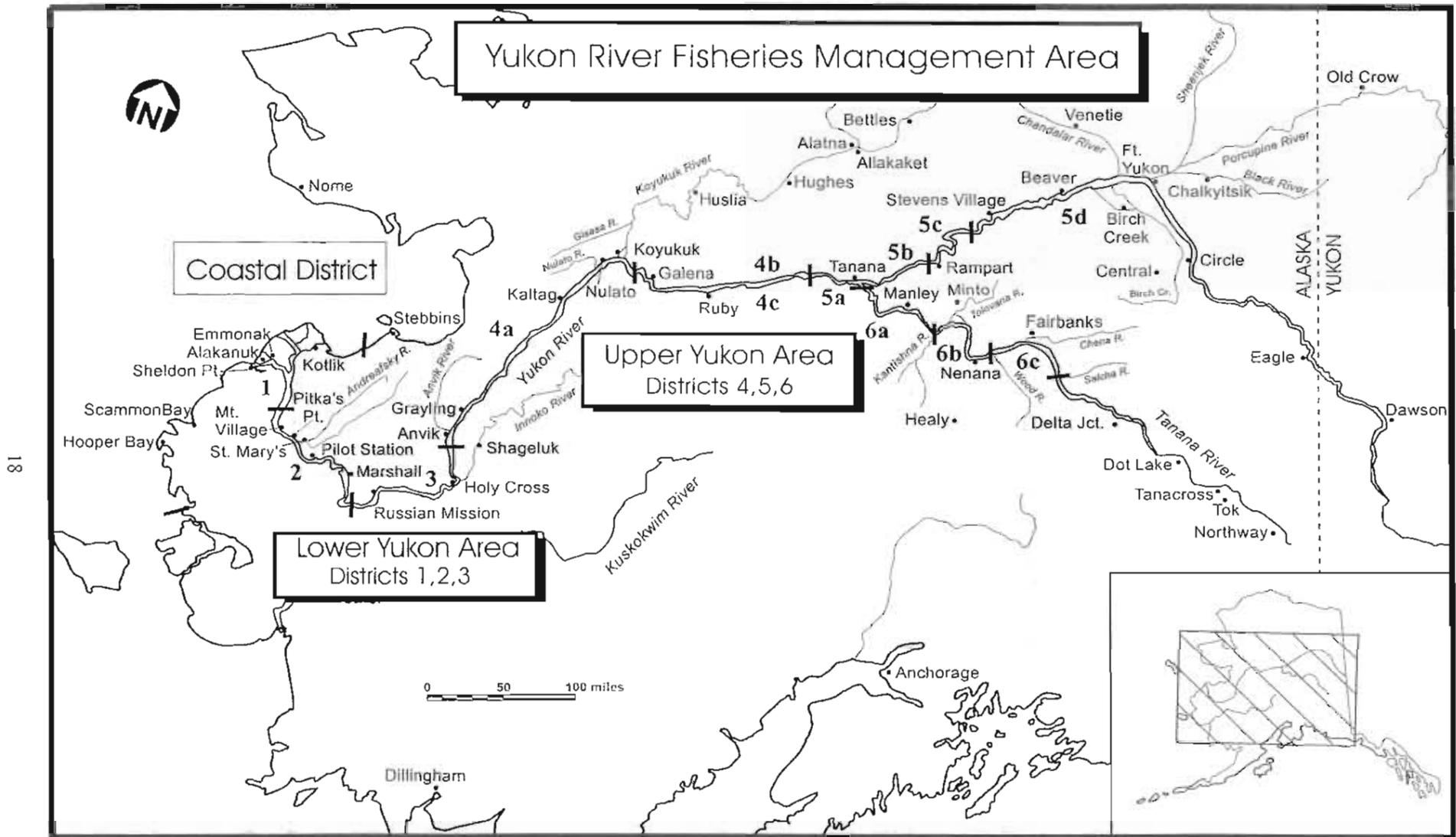


Figure 1. Map of the Alaska portion of the Yukon River drainage showing communities and fishing districts.

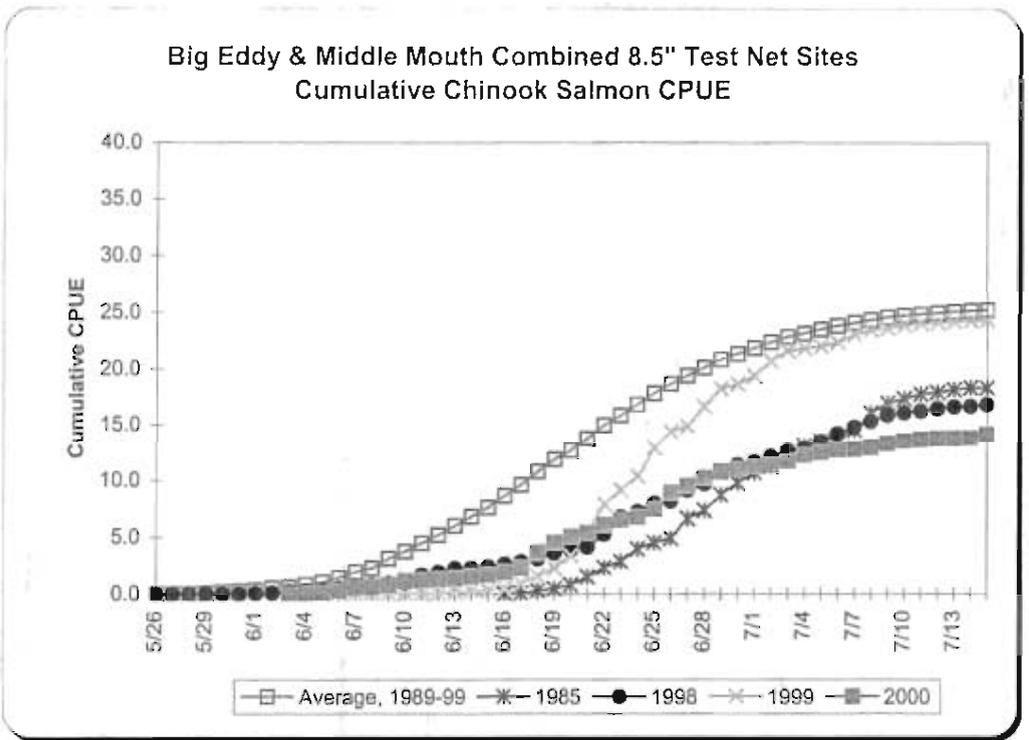
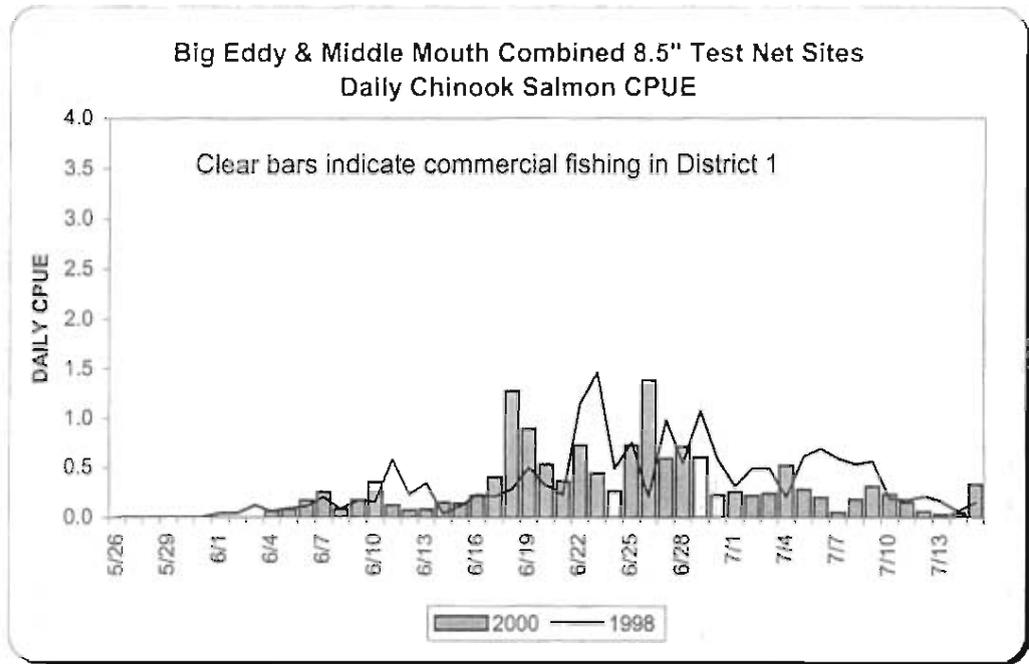
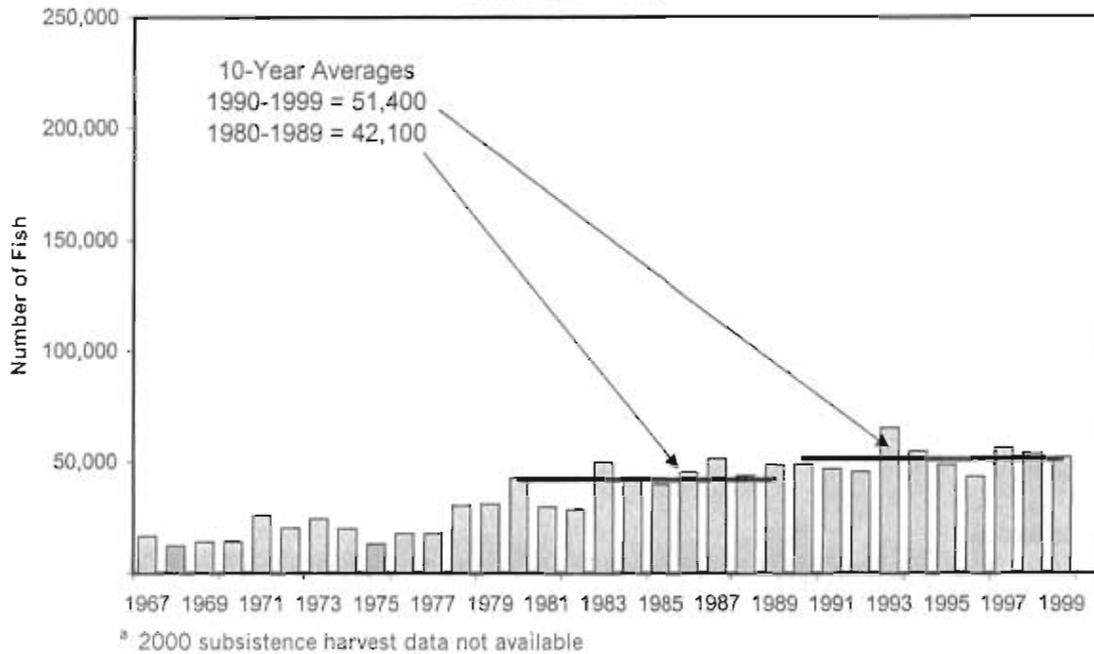


Figure 2. Daily test fish CPUE for chinook salmon test fish sites (above). Cumulative test fish CPUE for chinook salmon test fish sites (below) compared to the 1989-1999 average CPUE.

### Chinook Salmon Subsistence Harvest <sup>a</sup> Yukon River Drainage



### Chinook Salmon Commercial Harvest Yukon River Drainage

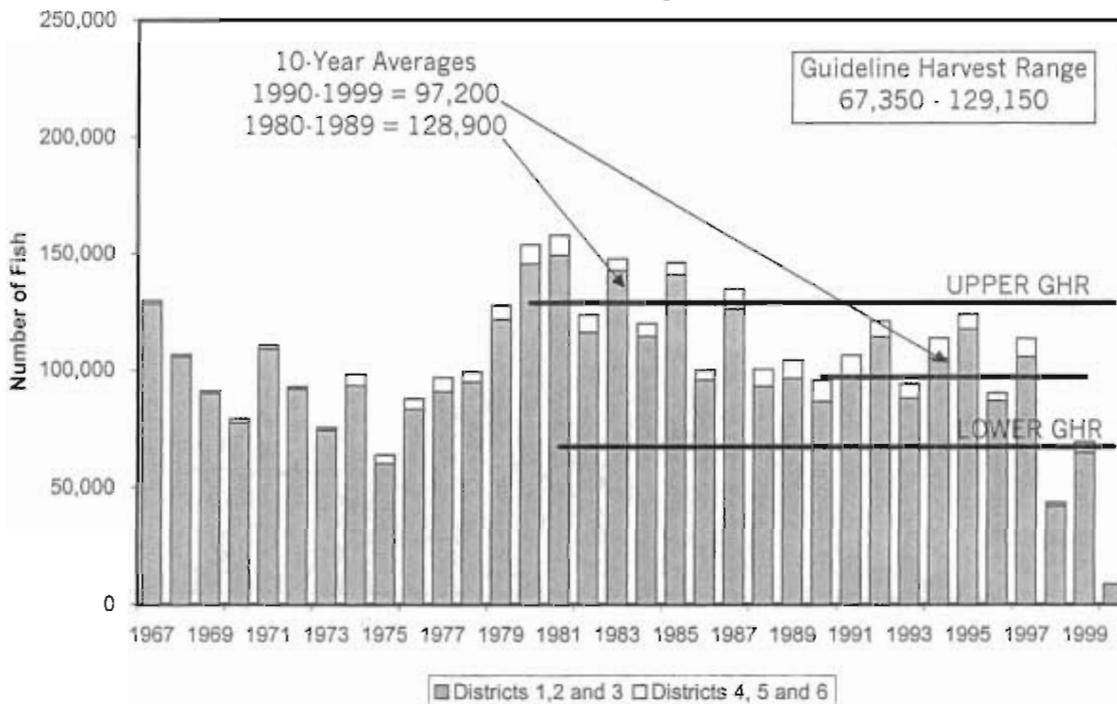
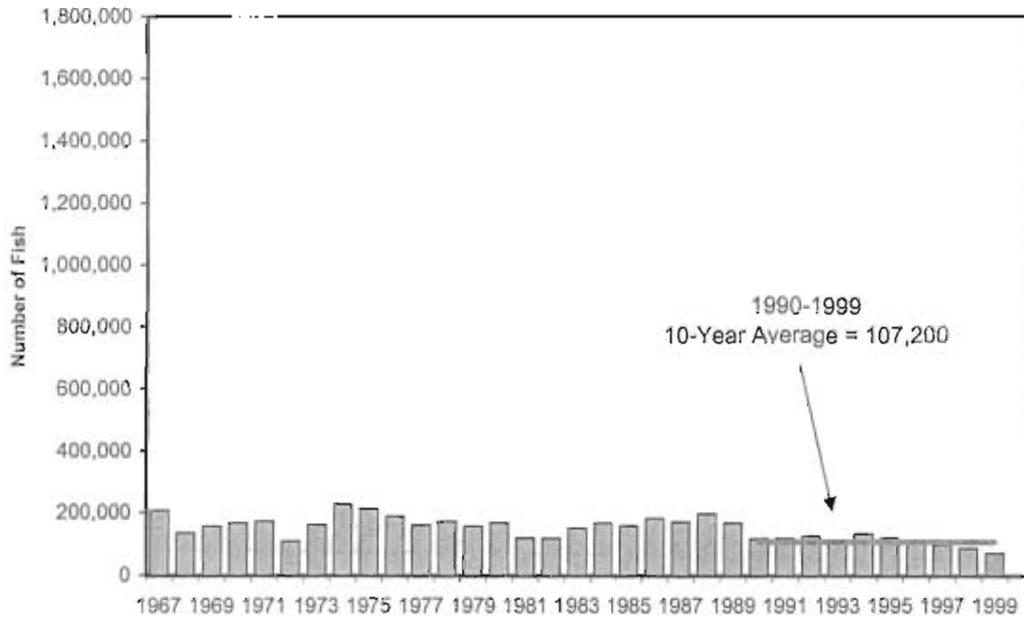


Figure 3. Subsistence and commercial harvest of chinook salmon, Yukon Area, 1967-2000.

**Summer Chum Salmon Subsistence Harvest <sup>a</sup>**  
 Yukon River Drainage  
 (Does not include use from commercial related harvest)



<sup>a</sup> 2000 subsistence harvest data not available

**Summer Chum Salmon Commercial Harvest**  
 Yukon River Drainage

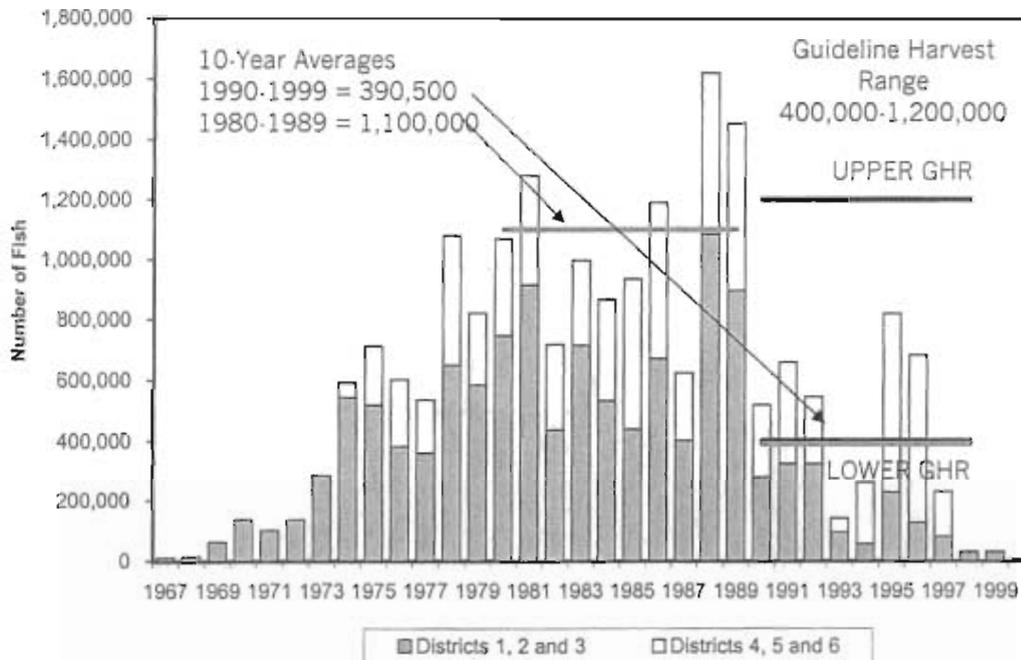


Figure 4. Subsistence and commercial harvest of summer chum salmon, Yukon Area, 1967-2000.

### Yukon Area Chinook and Summer Chum Salmon Exvessel Value, 1977-2000

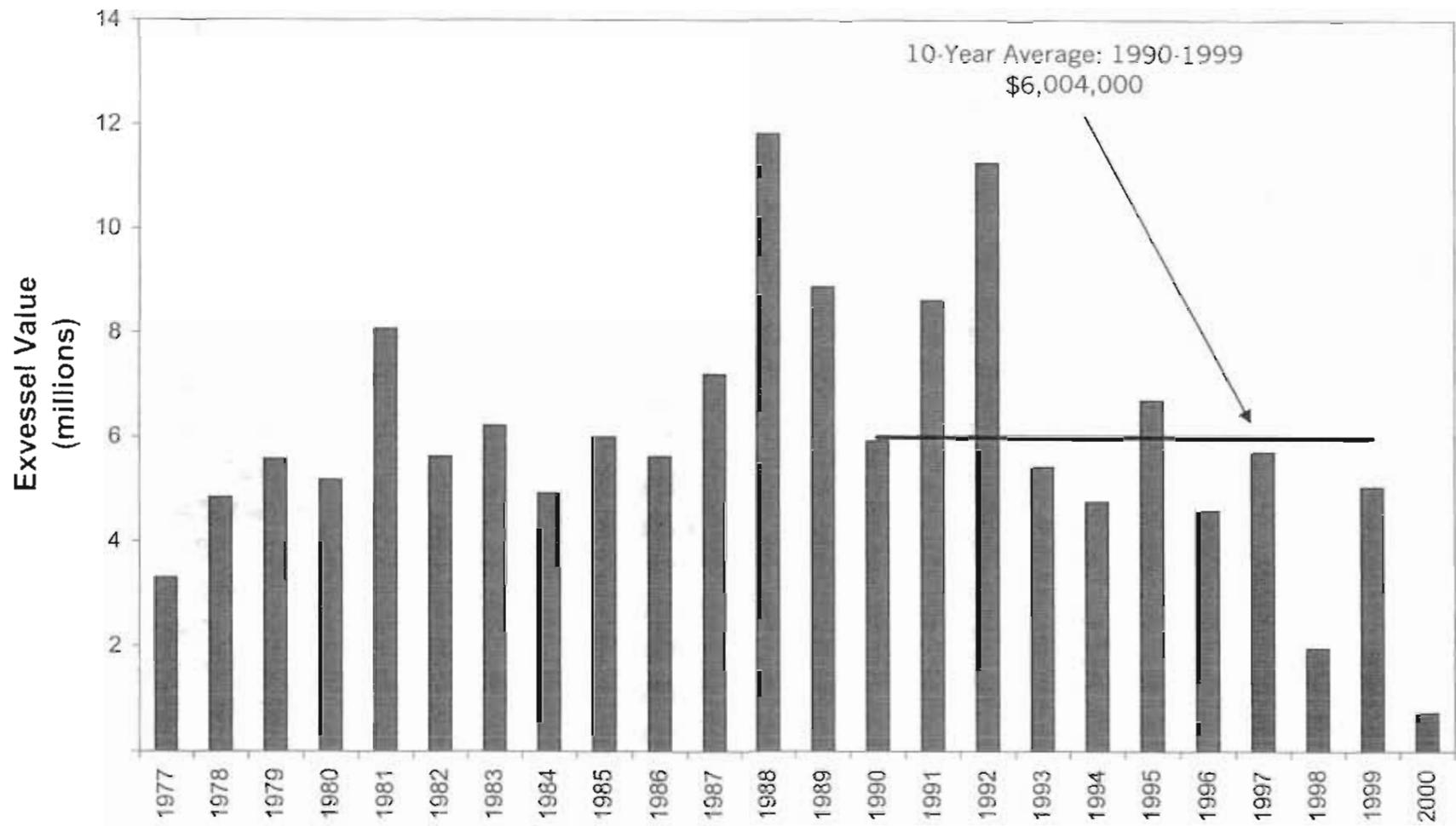
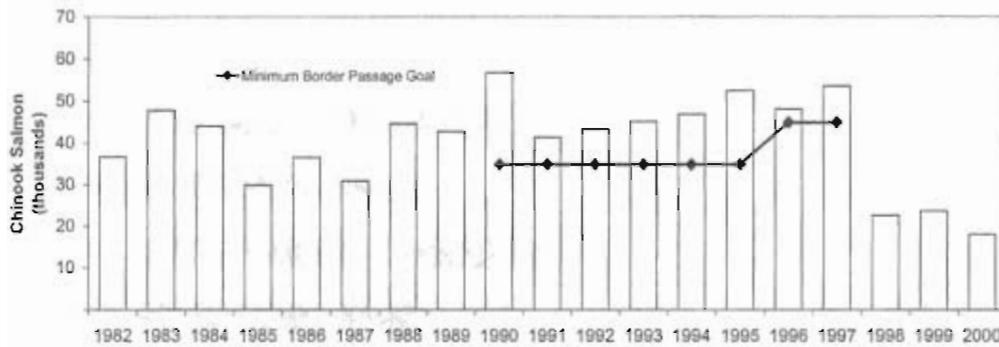
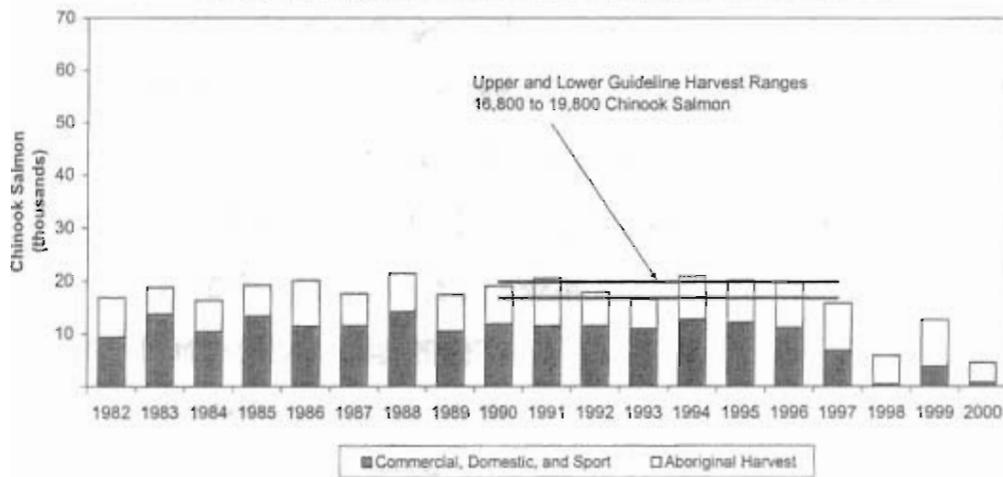


Figure 5. Exvessel value of commercial chinook and summer chum salmon fishery to Yukon Area fishermen, 1977-2000.

**CANADIAN MAINSTEM YUKON RIVER  
Chinook Salmon Border Passag :**



**Canadian Chinook Salmon Harvest  
(Includes Aboriginal, Commercial, Domestic, and Sport Harvests)**



**Canadian Chinook Salmon Spawning Escapement**

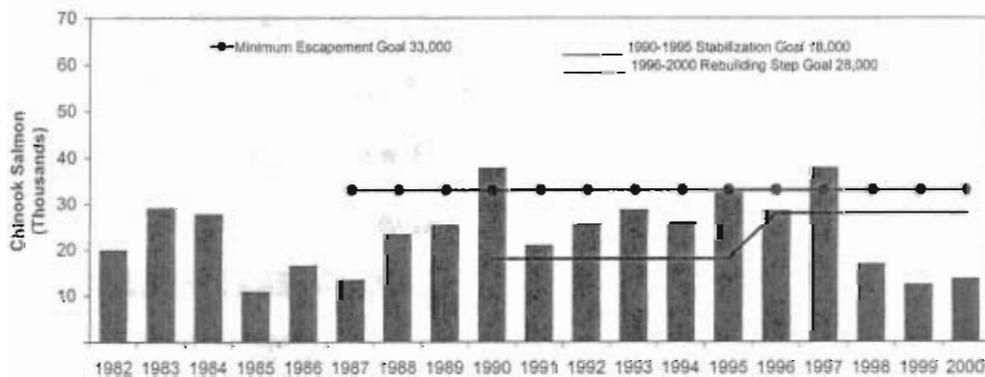
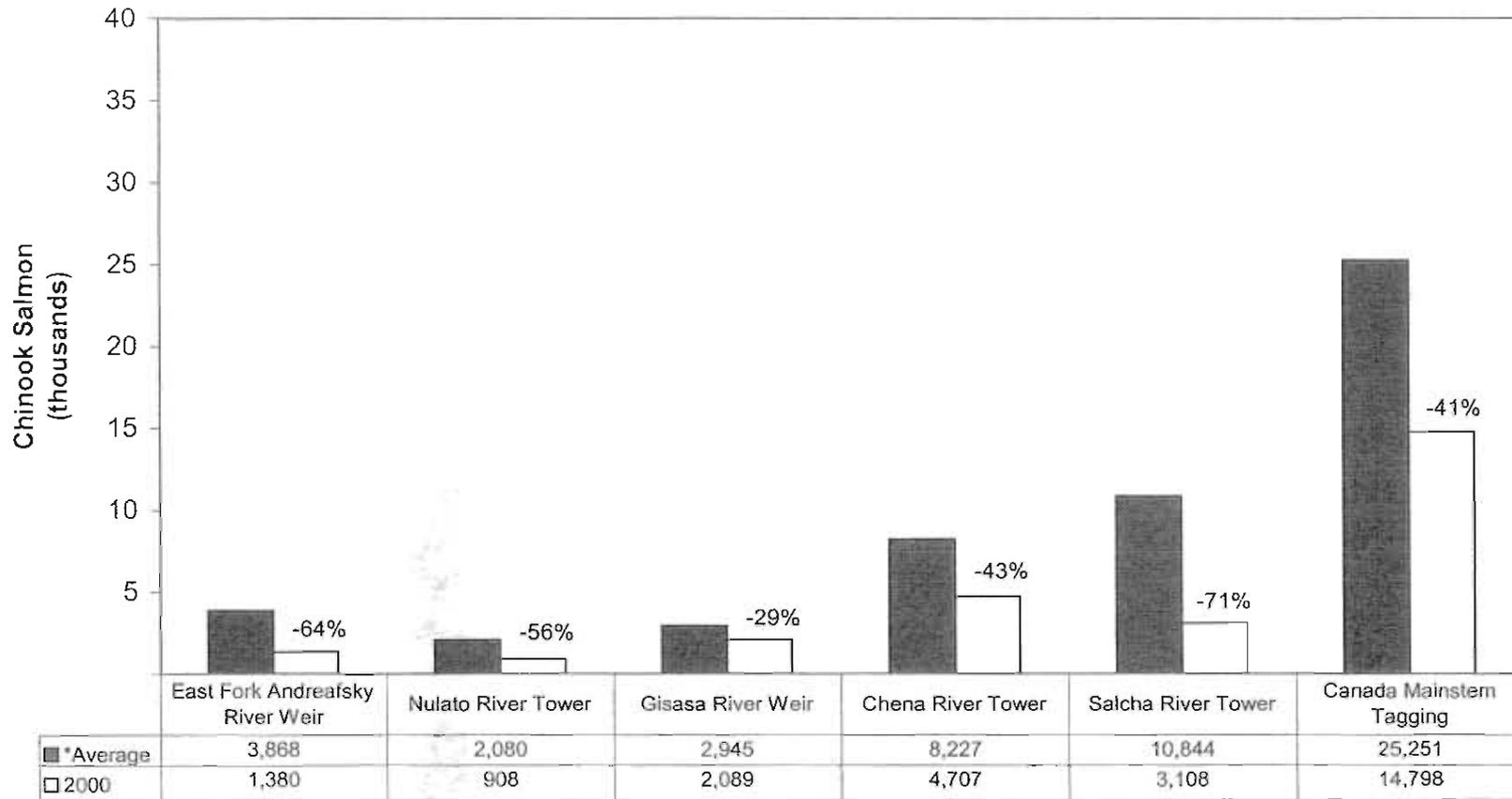


Figure 6. Canadian mainstem border passage, harvest and escapement estimates, 1982-2000; and stabilization and rebuilding step escapement goals.

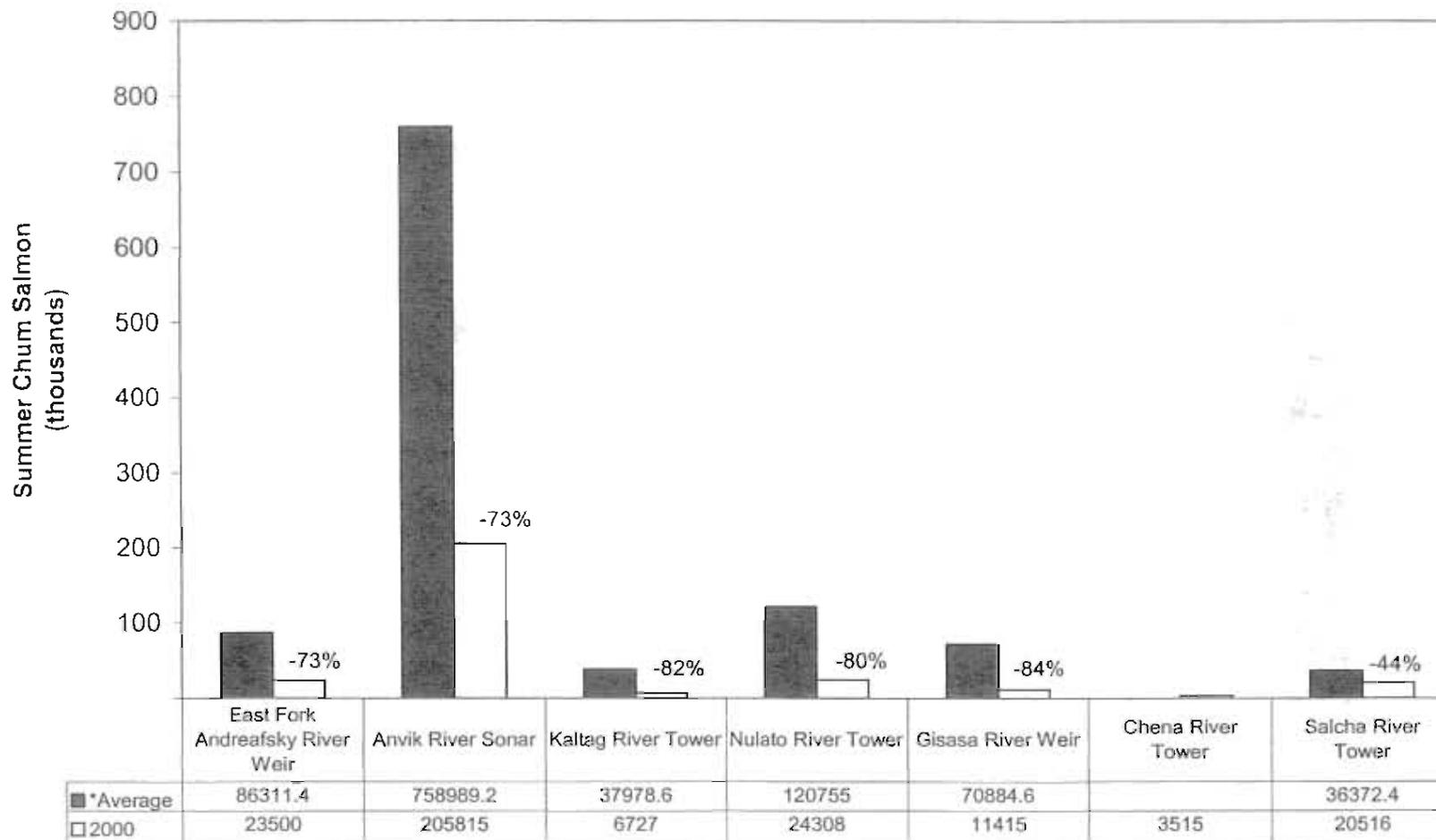
## Yukon River Drainage Chinook Salmon Escapement



\*Recent 5-Year Average (1995-1999)

Figure 7. Selected chinook salmon escapements, 5-year average compared to 2000, Yukon River drainage.

## Yukon River Drainage Summer Chum Salmon Escapement



\*Recent 5-Year Averages (1995-1999)

Figure 8. Selected summer chum salmon escapements, 5-year average compared to 2000, Yukon River drainage.