

**2007 Yukon Area Subsistence, Personal Use, and  
Commercial Salmon Fisheries Outlook and  
Management Strategies**

by

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and

**Steve J. Hayes**

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May 2007

Alaska Department of Fish and Game

Division of Commercial Fisheries



## Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in the following reports by the Divisions of Sport Fish and of Commercial Fisheries: Fishery Manuscripts, Fishery Data Series Reports, Fishery Management Reports, and Special Publications and the Division of Commercial Fisheries Regional Reports. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figure or figure captions.

<b>Weights and measures (metric)</b>		<b>General</b>		<b>Measures (fisheries)</b>	
centimeter	cm	Alaska Administrative		fork length	FL
deciliter	dL	Code	AAC	mid-eye-to-fork	MEF
gram	g	all commonly accepted		mid-eye-to-tail-fork	METF
hectare	ha	abbreviations	e.g., Mr., Mrs., AM, PM, etc.	standard length	SL
kilogram	kg			total length	TL
kilometer	km	all commonly accepted			
liter	L	professional titles	e.g., Dr., Ph.D., R.N., etc.		
meter	m	at	@	<b>Mathematics, statistics</b>	
milliliter	mL	compass directions:		<i>all standard mathematical</i>	
millimeter	mm	east	E	<i>signs, symbols and</i>	
		north	N	<i>abbreviations</i>	
		south	S	alternate hypothesis	H <sub>A</sub>
		west	W	base of natural logarithm	<i>e</i>
		copyright	©	catch per unit effort	CPUE
		corporate suffixes:		coefficient of variation	CV
		Company	Co.	common test statistics	(F, t, $\chi^2$ , etc.)
		Corporation	Corp.	confidence interval	CI
		Incorporated	Inc.	correlation coefficient	
		Limited	Ltd.	(multiple)	R
		District of Columbia	D.C.	correlation coefficient	
		et alii (and others)	et al.	(simple)	r
		et cetera (and so forth)	etc.	covariance	cov
		exempli gratia		degree (angular)	°
		(for example)	e.g.	degrees of freedom	df
		Federal Information		expected value	<i>E</i>
		Code	FIC	greater than	>
		id est (that is)	i.e.	greater than or equal to	≥
		latitude or longitude	lat. or long.	harvest per unit effort	HPUE
		monetary symbols		less than	<
		(U.S.)	\$, ¢	less than or equal to	≤
		months (tables and		logarithm (natural)	ln
		figures): first three		logarithm (base 10)	log
		letters	Jan, ..., Dec	logarithm (specify base)	log <sub>2</sub> , etc.
		registered trademark	®	minute (angular)	'
		trademark	™	not significant	NS
		United States		null hypothesis	H <sub>0</sub>
		(adjective)	U.S.	percent	%
		United States of		probability	P
		America (noun)	USA	probability of a type I error	
		U.S.C.	United States	(rejection of the null	
			Code	hypothesis when true)	α
			use two-letter	probability of a type II error	
			abbreviations	(acceptance of the null	
			(e.g., AK, WA)	hypothesis when false)	β
				second (angular)	"
				standard deviation	SD
				standard error	SE
				variance	
				population	Var
				sample	var

<b>Weights and measures (English)</b>					
cubic feet per second	ft <sup>3</sup> /s				
foot	ft				
gallon	gal				
inch	in				
mile	mi				
nautical mile	nmi				
ounce	oz				
pound	lb				
quart	qt				
yard	yd				

<b>Time and temperature</b>					
day	d				
degrees Celsius	°C				
degrees Fahrenheit	°F				
degrees kelvin	K				
hour	h				
minute	min				
second	s				

<b>Physics and chemistry</b>					
all atomic symbols					
alternating current	AC				
ampere	A				
calorie	cal				
direct current	DC				
hertz	Hz				
horsepower	hp				
hydrogen ion activity	pH				
(negative log of)					
parts per million	ppm				
parts per thousand	ppt, ‰				
volts	V				
watts	W				

***REGIONAL INFORMATION REPORT NO. 3A07-04***

**2007 YUKON AREA SUBSISTENCE, PERSONAL USE, AND  
COMMERCIAL SALMON FISHERIES OUTLOOK AND  
MANAGEMENT STRATEGIES**

by

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The Regional Information Report Series was established in 1987 and was redefined in 2006 to meet the Division of Commercial Fisheries regional need for publishing and archiving information such as project operational plans, area management plans, budgetary information, staff comments and opinions to Board of Fisheries proposals, interim or preliminary data and grant agency reports, special meeting or minor workshop results and other regional information not generally reported elsewhere. Reports in this series may contain raw data and preliminary results. Reports in this series receive varying degrees of regional, biometric and editorial review; information in this series may be subsequently finalized and published in a different department reporting series or in the formal literature. Please contact the author or the Division of Commercial Fisheries if in doubt of the level of review or preliminary nature of the data reported. Regional Information Reports are available through the Alaska State Library and on the Internet at: <http://www.sf.adfg.ak.us/statewide/divreprots/html/intersearch.cfm>.

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## **PREFACE**

The following important information is for fishers participating in subsistence, personal use and commercial fisheries in the Yukon Area during the 2007 season. Fishers may contact ADF&G, Division of Commercial Fisheries staff at the office locations listed below.

### **Emmonak Seasonal Field Office**

**(June through August)**

Alaska Department of Fish and Game

Division of Commercial Fisheries

P.O. Box 127

Emmonak, Alaska 99581

Telephone: (907) 949-1320

Fax: (907) 949-1830

**Recorded Information: (907) 949-1731**

### **Fairbanks Office**

Alaska Department of Fish and Game

Division of Commercial Fisheries

1300 College Road

Fairbanks, Alaska 99701

Telephone: (907) 459-7274

Fax: (907) 452-7271

### **Anchorage Office**

Alaska Department of Fish and Game

Division of Commercial Fisheries

333 Raspberry Road

Anchorage, Alaska 99518

Telephone: (907) 267-2105

Fax: (907) 267-2442

**For a recording of the current fishing schedule call toll free 1-866-479-7387 or in the Fairbanks area call (907) 459-7387.**

**For Subsistence and Personal Use Permit Reporting call (907) 459-7388.**

## Notice to Fishermen

**Waters subject to ANILCA Title VIII (including waters in which the United States has identified a reserved water right) or “federal subsistence jurisdiction”.** Subject to federal restrictions and closures, waters subject to ANILCA Title VIII are open to fishing under state regulations. If you are subsistence fishing in waters under federal subsistence jurisdiction, you must comply with federal subsistence regulations and some state permit conditions or state regulations may be pre-empted.

To familiarize yourself with the federal regulations you may consult the *Subsistence Management Regulations for the Harvest of Fish and Shellfish on Federal Public Lands and Waters in Alaska* for details. Copies may be obtained at federal offices. Calling the federal agencies is also recommended as inseason closures or temporary regulatory changes can occur at anytime and may not be reflected in the annual regulatory publication.

For more information, or a copy of federal regulations, please contact:

U. S. Fish and Wildlife Service, Office of Subsistence Management: .....1-800-801-5108

Or any of the following agencies:

National Park Service .....907-257-2649

U. S. Fish and Wildlife Service .....1-800-478-1456

Bureau of Land Management.....907-271-5960

National Forests: U.S. Forest Service.....907-586-8806

## ABSTRACT

This management plan provides an overview of the expected salmon outlooks, management issues, and harvest strategies for Yukon River summer and fall salmon fisheries in 2007. Subsistence, personal use, and commercial fisheries occur throughout the Yukon Area. The Yukon Area includes all waters of the Yukon River drainage in Alaska and all coastal waters of Alaska from Point Romanof south to Naskonat Peninsula. Management strategies may change inseason based upon assessment of salmon runs.

Key words: Yukon, Chinook, summer chum, fall chum, coho, outlook, strategy, management plan, ADF&G.

## 1.0 INTRODUCTION

This document provides the 2007 outlook for Yukon Area salmon runs, as well as management strategies for subsistence, personal use, and commercial salmon fisheries. Subsistence fishing in portions of the Yukon Area is under dual management authority of the Alaska Department of Fish & Game (ADF&G) and the U.S. Fish and Wildlife Service (USFWS). Fishermen are reminded that they should consult both the State of Alaska fishing regulations and the Federal Subsistence Management Regulations for Federal Public Lands before fishing in the Yukon Area.

The Yukon Area includes all waters of Alaska within the Yukon River drainage and coastal waters from Point Romanof, northeast of Kotlik, to the Naskonat Peninsula. For management purposes the Yukon Area is divided into 7 districts and 10 subdistricts (Figure 1). Commercial fishing may be allowed along the entire 1,224 miles of the Yukon River in Alaska and along the lower 225 miles of the Tanana River. The Coastal District includes the majority of coastal marine waters within the Yukon Area and is only open to subsistence fishing. The Lower Yukon Area (Districts 1, 2, and 3) includes coastal waters of the Yukon River delta and that portion of the Yukon River drainage downstream of Old Paradise Village (river mile 301). The Upper Yukon Area (Districts 4, 5, and 6) is the Alaskan portion of the Yukon River drainage upstream of Old Paradise Village.

Chinook *Oncorhynchus tshawytscha*, chum *O. keta*, and coho *O. kisutch* salmon are harvested in Yukon River commercial, subsistence and personal use fisheries. In recent years Chinook salmon have become the primary commercial species. Yukon River chum salmon consists of an earlier and typically more abundant summer chum salmon run and a later fall chum salmon run. No directed commercial fishing has occurred for pink *O. gorbuscha* salmon within the Yukon River. Aboriginal, commercial, domestic, and sport salmon fisheries also occur in Canada, which are managed by the Canadian Department of Fisheries and Oceans (DFO).

## 2.0 OUTLOOK FOR 2007

### 2.1 CHINOOK SALMON

Yukon River Chinook salmon return primarily as age-5 and age-6 fish, although age-4 and age-7 fish also contribute to the run<sup>1</sup>. The 4-year-old component in 2006 was below average, whereas the 5-year-old component was above average. The previous 2 years (2005 and 2006) runs have been near average indicating good production from the poor runs of 2000 and 2001. In 2001, the brood year producing 6-year-old fish returning in 2007, successful aerial survey observations were made in all 8 Yukon River index tributaries used for escapement assessment. Minimum aerial survey SEGs have been established in the East and West Fork Andreafsky, Anvik, North

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<sup>1</sup> Salmon ages contained in this document represent the combined freshwater and saltwater age.

and South Fork Nulato, and Gisasa Rivers. With the exception of the East and West Fork Andreafsky Rivers, all aerial survey goals were met. Upper ranges of the biological escapement goals for the Chena and Salcha Rivers were exceeded. The Canadian Yukon River Mainstem spawning escapement in 2001 was the second largest on record.

Assuming an approximately normal return of 5-year-old and 6-year-old fish, the 2007 run is expected to be average to below average and similar in abundance to the 2006 run. It is anticipated the run will provide for escapements, support a normal subsistence harvest, and a below average commercial harvest. Fishery management will be based upon inseason assessments of the run. If inseason indicators of run strength suggest sufficient abundance exists to have a commercial fishery, the commercial harvest in Alaska could range from 30,000 to 60,000 Chinook salmon. This range of commercial catch is below the 10-year (1997–2006, not including the low return years of (2000–2001) average of approximately 53,181 Chinook salmon (Figure 2).

## **2.2 SUMMER CHUM SALMON**

The strength of the summer chum salmon runs in 2007 will be dependent on production from the 2003 (age-4 fish) and 2002 (age-5-fish) escapements. Though the 2001 run of summer chum salmon was one of the poorest on record and none of the escapement goals were met, the return resulted in the near record run observed in 2006. Summer chum salmon runs have exhibited steady improvements since 2001 with harvestable surpluses in each of the last 5 years (2002-2006). However, it appears production has shifted from spawning tributaries in the lower portion of the drainage, such as the Andreafsky and Anvik Rivers over the last 5 years, to higher production in spawning tributaries upstream of the Anvik River such as the Gisasa and Salcha Rivers. Weak returns for chum salmon from 1998 through 2001 were attributed to reduced productivity and not the result of low levels of parent year escapements since 1995 was one of the highest escapements on record. In 2006, a large number of 5-year-old summer chum salmon returns were observed throughout the Arctic-Yukon-Kuskokwim (AYK) Region.

The BASIS (Bering-Aleutian Salmon International Survey) study has observed significant increases in juvenile chum in the Bering Sea through 2005. Further, Bering Sea trawl bycatch has observed increases in adult chum. Although not all of these fish are bound for Western Alaska, higher bycatch may be an indicator of favorable ocean conditions and chum ocean survival may have increased significantly.

The 2007 run is anticipated to be near average and provide for escapements and support a normal subsistence and commercial harvest. The commercial harvest surplus in Alaska could range from 500,000 to 900,000 summer chum salmon. The actual commercial harvest of summer chum salmon in 2007 will likely be dependent on market conditions for chum salmon and not the amount of surplus available for commercial uses.

## **2.3 FALL CHUM SALMON**

Yukon River drainage-wide estimated escapements of fall chum salmon for the period 1974 through 2002 have ranged from approximately 180,000 (1982) to 1,500,000 (1975), based upon expansion of escapement assessments for selected stocks to approximate overall abundance. Escapements in these years resulted in subsequent returns that ranged in size from approximately 312,000 (1996 production) to 2,900,000 (2001 production) fish, using the same approach to approximating overall escapement. Corresponding return per spawner rates range from 0.3 to 3.2, averaging 1.8 for all years combined (1974–2000).

A considerable amount of uncertainty has been associated with these run projections particularly recently because of unexpected run failures (1997 to 2002) which were followed by a strong improvement in productivity from 2003 through 2006. Weakness in salmon runs prior to 2003 has generally been attributed to reduced productivity in the marine environment and not a result of low levels of parental escapement. Likewise, the recent improvements in productivity may be attributed to the marine environment. Projections have been presented as ranges since 1999 to allow for adjustments based on more recent trends in production. Historical ranges included the normal point projection as the upper end and the lower end was determined by reducing the projection by the average ratio of observed to predicted returns from 1998 to each consecutive current year through 2004. In 2005, the average ratio of the years 2001 to 2004 was used, in attempts to capture some of the observed improvement in the run. Methods used to provide a range around the point estimate in 2006 and 2007 are described below.

Yukon River fall chum salmon return primarily as age-4 and age-5 fish, although age-3 and age-6 fish also contribute to the run. The 2007 run will be comprised of parent years 2001 to 2004 (Table 1). Estimates of return per spawner based on brood year return were used to estimate production for 2001 and 2002 and an auto-regressive Ricker spawner-recruit model was used to predict returns from 2003 and 2004. The point estimate utilizes 1974 to 1983 even/odd maturity schedules to represent years of higher production. The 2007 projected point estimate is 1.0 million fall chum salmon with the following approximate age composition given in Table 2.

The forecast range is based on the upper and lower values of the 80% confidence bounds for the point projection. Confidence bounds were calculated using deviation of point estimates and observed returns from 1987 through 2006. Therefore, the 2007 run size projection is expressed as a range from 900,000 to 1.2 million fall chum salmon.

Escapements for the 2001 and 2002 parent years, that will contribute age-6 and age-5 fish respectively in the 2007 run, were below the midpoint of the drainage-wide escapement goal of 300,000 to 600,000 fall chum salmon (Table 5). The 2003 escapements were above the upper end of the drainage-wide escapement goal range. The major contributor to the 2007 fall chum salmon run is anticipated to be age-4 fish returning from the 2003 parent year. Based on a combination of high production and a fair showing of age-3 fish returning last season there is optimism for an above average return of age-4 fish in the 2007 run. Age-3 fish are typically a small portion of the return but a projection of 6% is higher than average for an odd-numbered year.

**Table 1.**—Preseason drainage-wide fall chum salmon outlooks and observed run sizes for the Yukon River, 1998–2006.

<b>Year</b>	<b>Expected Run Size (Preseason)</b>	<b>Estimated Run Size (Postseason)</b>	<b>Proportion of Expected Run</b>
1998	880,000	334,000	0.38
1999	1,197,000	420,000	0.35
2000	1,137,000	239,000	0.21
2001	962,000	382,000	0.40
2002	646,000	425,000	0.66
2003	647,000	775,000	1.20
2004	672,000	614,000	0.91
2005	776,000	2,163,000	2.79
2006	1,211,000	1,141,000	0.94
Average	(1998 to 2006)		0.87

**Table 2.**—Projected return of fall chum salmon based on parent year escapement for each brood year and predicted return per spawner (R/S) rates, Yukon River, 2001–2004.

Brood Year	Escapement	Estimated production (R/S)	Estimated Production	Contribution Based on age	Current Return
2001	337,765	8.46	2,857,492	0.8%	8,987
2002	397,977	1.34	533,289	11.1%	119,364
2003	695,363	1.64	1,140,395	82.1%	881,908
2004	537,873	1.72	925,142	5.9%	63,881
Total expected run (unadjusted)					1,074,139
Total expressed as a range based on the forecasted vs. observed returns from 1987 to 2006 (80% CI): 900,000 to 1.2 million					

The 2001 brood year produced exceptionally well with a return of nearly 3 million fish including record contributions in nearly all age classes. Return of age-4 fish from odd-numbered brood years during the time period 1974 to 2000 typically average 720,000 chum salmon, and ranges from a low of 175,000 for brood year 1988 to a high of 2 million for brood year 2001. Based on the high production years from 1974 to 1983, the return of odd-numbered brood years averages 979,000 chum salmon. Return of age-5 fish from odd-numbered brood years during the time period 1974 to 2000 typically averages 212,000 chum salmon, and ranges from a low of 57,000 for brood year 1998 to a high of 674,000 for brood year 2001. The estimated 2002 brood year return appears to be near average for an even-numbered year and the 2003 brood year contributed a slightly less than average return of age-3 fish in 2006.

If the 2007 run size is near the projected range of 900,000 to 1.2 million, it will be well above the upper end of the BEG range of 600,000 fall chum salmon (Table 5). A run of this projected size will support normal subsistence fishing activities and provide opportunity for commercial ventures where markets exist. The strength of the run will be monitored in season to determine appropriate management actions and levels of harvest based on stipulations in the *Yukon River Drainage Fall Chum Salmon Management Plan*.

## 2.4 COHO SALMON

Although there is little comprehensive escapement information on Yukon River drainage coho salmon, it is known coho salmon primarily return as age-4 fish and overlap in run timing with fall chum salmon. The major contributor to the 2007 coho salmon run will be the age-4 fish returning from the 2003 parent year. Based on Pilot Station sonar operations from 1995, and 1997 through 2006, the 2003 passage estimate of 269,000 coho salmon was the highest on record. The Delta Clearwater River (DCR) is the major producer of coho salmon in the upper Tanana River drainage, and the parent year escapement of 102,000 fish was six times the upper end of the SEG range of 5,200 to 17,000 coho salmon. Although 2003 was the peak escapement count, DCR abundance has been on the increase since 1972, in particular within the last decade. Evaluations of coho salmon escapements in the Andreafsky, Nenana, and Richardson Clearwater Rivers also indicated the 2003 run was average to above average. Assuming average survival, the 2007 coho salmon run, is anticipated to be average to above average based on good escapements in 2003.

The Yukon River Coho Salmon Management Plan allows a directed commercial coho salmon fishery, but only under unique conditions. Directed coho salmon fishing is dependent on the assessed levels in the return of both coho and fall chum salmon since they migrate together.

### 3.0 MANAGEMENT STRATEGY FOR 2007

ADF&G manages Yukon Area salmon according to policies and regulations established by the Alaska Board of Fisheries (BOF). Management of the Yukon Area commercial salmon fishery is complex due to the mixed stock nature of the fishery, increased efficiency of the commercial fleet, allocation issues, and the complication of State/Federal dual management regimes for the subsistence fishery in approximately half the drainage. The Yukon River Drainage Subsistence Salmon Fishery Management Protocol provides guidelines for coordinated management with federal agencies concerning subsistence fisheries in waters subject to Federal reserved water rights within the Yukon River drainage. However, some state and federal regulations differ and managers may not agree on specific management actions, which could result in differing regulations for waters subject to applicable federal management.

The *Policy for Statewide Salmon Escapement Goals* (Escapement Goal Policy: 5 AAC 39.223) and the *Policy for the Management of Sustainable Salmon Fisheries* (Sustainable Salmon Policy: 5 AAC 39.222) define various levels of escapement in a manner consistent with sustained yield. Escapement objectives that were previously estimated in the absence of a stock specific catch estimate and used as an index, or as an escapement estimate, are now defined as a Sustainable Escapement Goal (SEG). Tables 3, 4, and 5 list Biological Escapement Goals (BEGs), SEGs, and Optimal Escapement Goals (OEGs) that will be used for inseason management and postseason assessment. The Canadian Chinook salmon objective and fall chum salmon escapement objectives are based on limited scientific information and are not classified as a SEG or a BEG. These objectives are negotiated by the U.S./Canada Panel annually as stipulated in the treaty agreement.

**Table 3.**—Escapement goals for Chinook salmon.

<b>Stream</b>	<b>Goal</b>	<b>Type of Goal</b>
East Fork Andreafsky River Aerial Survey	960–1,900	SEG
West Fork Andreafsky River Aerial Survey	640–1,600	SEG
Anvik River Aerial Survey	1,100–1,700	SEG
Nulato River Aerial Survey	940–1,900	SEG
Gisasa River Aerial Survey	420–1,100	SEG
Chena River Tower	2,800–5,700	BEG
Salcha River Tower	3,300–6,500	BEG
Canada Mainstem Tagging Goal*	33,000–43,000	Treaty Goal

\* The US-Canada Panel agreed to a rebuilt spawning escapement goal range of 33,000–43,000 in Canada for 2007.

**Table 4.**—Escapement goals for summer chum salmon.

<b>Stream</b>	<b>Goal</b>	<b>Type of Goal</b>
East Fork Andreafsky River Weir	65,000–130,000	BEG
Anvik River Sonar	350,000–700,000	BEG
Drainage-wide Escapement (above Pilot Station)*	600,000–1,600,000	OEG

\* Inriver run goal: This is a specific management objective for salmon stocks that are subject to harvest upstream of the point where escapement is estimated.

**Table 5.**—Escapement goals for fall chum salmon.

<b>Stream</b>	<b>Goal</b>	<b>Type of Goal</b>
Drainage-wide Escapement	300,000–600,000	BEG
Tanana River drainage	61,000–136,000	BEG
Delta River	6,000–13,000	BEG
Toklat River	15,000–33,000	BEG
Upper Yukon Tributaries	152,000–312,000	BEG
Chandalar River	74,000–152,000	BEG
Sheenjek River	50,000–104,000	BEG
Fishing Branch	33,667	Interim Goal*
Canadian Yukon River Mainstem	80,000	Treaty Goal**

\*Interim Goal agreed to by the Yukon River Panel for the 2007 season.

\*\* The US-Canada Panel agreed to a rebuilt spawning escapement goal of greater than 80,000.

### **3.1 ALASKA BOARD OF FISHERIES ACTIONS**

In response to the guidelines established in the Sustainable Salmon Policy, the BOF discontinued the Yukon River summer and fall chum salmon as stocks concern during the February 2007 work session. The Yukon River Chinook salmon stock was continued as a stock of yield concern based on the inability, despite the use of specific management measures, to maintain expected yields, or harvestable surpluses, above the stock’s escapement needs since 1998.

To keep Yukon Area salmon fishermen, processors, and other interested individuals informed of current fishing regulations, the department is providing this partial summary of regulatory changes recently taken by the BOF. For more information concerning these or other regulations, contact the Alaska Department of Fish and Game, Division of Commercial Fisheries office in Anchorage at 907-267-2383 or in Fairbanks at 907-459-7274. *The following summary is for informational purposes only and is not intended to detail, reflect, or fully interpret reasons for the Board’s actions.*

**5 AAC 01.240. MARKING AND USE OF SUBSISTENCE-TAKEN SALMON.** The BOF adopted new language defining the marking of subsistence taken salmon in Districts 1–3. In Districts 1–3, from **June 1 to July 15** a person may not possess king salmon taken for subsistence uses unless **both tips (lobes) of the tail fin** have been removed before the person conceals the salmon from plain view or transfers the salmon from the fishing site. A person may not sell or purchase salmon from which both lobes of the tail fin have been removed.

**5 AAC 05.369. YUKON RIVER COHO MANAGEMENT PLAN.** The BOF modified the plan by reducing the threshold required to allow a directed coho salmon fishery from a run size of 625,000 fall chum salmon down to **550,000** fall chum salmon (600,000 fall chum salmon is the threshold required to allow a directed fall chum salmon fishery). The closure of the directed coho salmon season was extended to **September 10** in Districts 1, 2, and 3. Also management of **Subdistrict 4-A** was added to the remainder of District 4. The BOF considered but made no changes to harvest allocation.

**5 AAC 70.015. SEASONS, BAG, POSSESSION, AND SIZE LIMITS, AND METHODS AND MEANS IN THE TANANA RIVER MANAGEMENT AREA.** The BOF passed the following regulation: The Goodpaster River drainage is closed to sport fishing for salmon;

**except sport fishing for king salmon is open to catch-and-release fishing only from department markers located approximately 25 miles upstream from the confluence with the Tanana River; king salmon may not be removed from the water and must be released immediately and returned to the water unharmed;**

**(d)(x) in the Goodpaster River, only one unbaited, single-hook artificial lure may be used.**

### 3.2 SUBSISTENCE FISHERY

Subsistence fishing occurs throughout most of the Yukon River Area and has the highest priority among all uses of the resource in the State of Alaska. When salmon stocks are abundant and commercial fishing will occur, it is necessary to place some restrictions on the subsistence fishery in order to enforce commercial fishing regulations. For example, subsistence salmon fishing is closed in most areas 24 hours prior to the commercial salmon fishing season to discourage the illegal sale of subsistence caught salmon or salmon roe. However, substantially more fishing time is allowed throughout the fishing season for subsistence than for commercial activities.

Since 2001, the subsistence salmon fishery has been based on a schedule implemented chronologically by ADF&G consistent with migratory timing as the run progresses upstream. The subsistence salmon fishing schedule is based on current or past fishing schedules and provides reasonable opportunity for subsistence during years of normal to below average runs. The objectives of the schedule are to 1) reduce harvest early in the run when there is a higher level of uncertainty, 2) spread the harvest throughout the run to reduce harvest impacts on any particular component of the run and 3) provide subsistence fishing opportunity among all users during years of low salmon runs. Table 6 shows the 2007 subsistence fishing schedule based in regulation 5AAC 01.210 and 5AAC 05.360. Depending on run strength, the schedule is subject to change.

**Table 6.**–Yukon Area subsistence salmon fishing schedule, 2007.

**Note: this schedule is subject to change depending on run strength.**

Area	Regulatory subsistence salmon fishing periods	Schedule to begin	Days of the week
Coastal District	7 days/week	by regulation	M/T/W/TH/F/SA/SU – 24 hours
District 1	Two 36-hour periods/week	May 28, 2007	Mon. 8 pm to Wed. 8 am /Thu. 8 pm to Sat. 8 am
District 2	Two 36-hour periods/week	May 30, 2007	Wed. 8 pm to Fri. 8 am / Sun. 8 pm to Tue. 8 am
District 3	Two 36-hour periods/week	June 1, 2007	Tue. 8 am to Wed. 8 pm / Fri. 8 am to Sat. 8 pm
District 4	Two 48-hour periods/week	June 10, 2007	Sun. 6 pm to Tue. 6 pm / Wed. 6 pm to Fri. 6 pm
Koyukuk River	7 days/week	By Regulation	M/T/W/TH/F/SA/SU – 24 hours
Subdistricts 5-A, B, C	Two 48-hour periods/week	June 19, 2007	Tue. 6 pm to Thu. 6 pm /Fri. 6 pm to Sun. 6 pm
Subdistrict 5-D	7 days/week	By Regulation	M/T/W/TH/F/SA/SU – 24 hours
District 6	Two 42-hour periods/week	By Regulation	Mon. 6 pm to Wed. Noon /Fri. 6 pm to Sun. Noon
Old Minto Area	5 days/week	By Regulation	Friday 6pm to Wednesday 6pm

Once it has been determined there is a harvestable surplus of salmon in excess of subsistence uses, the subsistence fishing schedule may revert to the schedule specified in 5AAC 01.210, (c-h) FISHING SEASONS AND PERIODS.

During closed subsistence salmon fishing periods, subsistence fishing for whitefish, suckers, and other non-salmon species will be allowed throughout the drainage. Gillnets with greater than 4 inch mesh must be removed from the water and fish wheels may not be operated during closed subsistence salmon fishing periods in an effort to avoid salmon species. In addition, gillnets used to take species other than salmon during subsistence salmon closures are limited to 60 feet in length. This opportunity to target non-salmon species, while protecting salmon stocks of concern, may be discontinued if found ineffective at adequately reducing salmon harvest.

The summer and fall chum salmon management plans adopted by the BOF provide guidelines for managing subsistence salmon fisheries based on inseason run size projections. If subsistence harvest reductions are necessary, efforts will be made to spread the burden of conservation throughout the drainage. Potential harvest reduction measures include gear restrictions, reductions in fishing time, or extended periods of closed fishing. Conservation of salmon may require fish wheels to be equipped with a live box or live chute.

Subsistence fishing permits are required for Subdistricts 6-A and 6-B and upper Tanana River in the Tanana River drainage, portions of District 5 in the upper Yukon River drainage near the Haul Road Bridge, and from above the community of Fort Yukon to the U.S./Canada border. ADF&G requires fishermen to keep track of their subsistence salmon harvests on their permit in permit areas. Subsistence fishers in permit areas are reminded that they must have their permit in possession while fishing. In non-permit areas, ADF&G conducts a postseason harvest survey and encourages fishermen to use catch calendars to keep track of their harvest. Non-permitted fishermen who did not receive a subsistence salmon calendar by mail may obtain one by contacting ADF&G in Emmonak or Fairbanks. ADF&G has prepaid postage for the calendar in an effort to encourage fishermen to use and return catch calendars. Additionally, a lottery awarding six \$100 cash prizes will be conducted following the season for which all households that have returned properly filled out calendars will be entered.

### **3.2.1 Districts 1, 2, and 3**

The subsistence salmon fishing schedule in Districts 1, 2, and 3 will begin with two, 36-hour periods per week. During the Chinook and summer chum salmon commercial fishing season, subsistence salmon fishing will be closed 18 hours before, during, and 12 hours following a commercial salmon fishing period. During the fall season, subsistence salmon fishing will be closed 12 hours before, during, and 12 hours following each District 1, 2, or 3 commercial salmon fishing period. If commercial fishing periods become frequent in the fall, the amount of subsistence fishing closure time may be reduced to 6 hours before, during and 6 hours after each commercial fishing period to offset lost subsistence fishing opportunity. Also during the commercial season, the two lobes of the caudal fin (both tips of the tail) are required to be removed from subsistence caught Chinook salmon.

### **3.2.2 District 4**

The subsistence salmon fishing schedule in District 4 is two, 48-hour periods per week. Regulations separate subsistence fishing periods from commercial fishing periods in Subdistrict 4-A. By regulation, during the commercial salmon fishing season, subsistence salmon fishing

with set nets and fish wheels will be closed 12 hours before, during, and 12 hours following each Subdistrict 4-A commercial salmon fishing period. Also by regulation, subsistence fishing for Chinook salmon with drift gillnets will be allowed for two 48-hour periods each week by emergency order during the commercial fishing season. However, if a small commercial fishery with little effort occurs in Subdistrict 4-A, subsistence fishing may be allowed 5 days per week and uninterrupted by commercial periods.

If the commercial salmon fishing season is opened in Subdistricts 4-B and 4-C, managers will attempt to coincide allowable commercial salmon fishing periods with the traditional subsistence salmon fishing schedule of two 48-hour periods per week. If subsistence salmon fishing opportunities in District 4 are not sufficient to meet needs due to the commercial fishing schedule, additional subsistence-only fishing time will be allowed. When ADF&G announces a commercial fishing closure that will last longer than 5 days in duration during the commercial salmon season in District 4, subsistence salmon fishing will be allowed 5 days per week, unless modified by emergency order.

From November 1 through June 31, waters open for subsistence fishing in the Koyukuk River drainage are expanded to include the Middle Fork of the Koyukuk River upstream of its confluence with the North Fork, and the South Fork of the Koyukuk River upstream from the mouth of the Jim River. A household subsistence fishing permit is required as a condition of this increased fishing opportunity to harvest non-salmon species. Only gillnet gear is allowed and the mesh size may not exceed 3½ inches. This was done in an effort to protect salmon species in known spawning area with road access.

### **3.2.3 District 5**

The Subdistricts 5-A, 5-B, and 5-C subsistence fishing schedule is two, 48-hour fishing periods per week. Attempts will be made to coincide the subsistence salmon fishing schedule with commercial periods. Additionally, “subsistence only” salmon fishing periods may also be scheduled. When ADF&G announces a commercial fishing closure that will last longer than 5 days in duration during the commercial salmon season in Subdistricts 5-A, 5-B, and 5-C, subsistence salmon fishing will be allowed 5 days per week, unless modified by emergency order. In Subdistrict 5-D, subsistence salmon fishermen may harvest salmon 7 days per week throughout the season unless restricted by emergency order.

Subsistence fishing permits are required on the Yukon River from the western tip of Garnet Island to the Dall River including the community of Rampart and the Haul Road bridge area. Permits are also required for portions of the Yukon River near the communities of Circle and Eagle from Twenty-two Mile Slough to the U.S./Canada border. Subsistence fishermen must obtain a permit prior to subsistence fishing which can be done by contacting ADF&G’s office in Fairbanks. Permits can be issued in person, by mail, and more recently by email. All permit holders are required to report harvest information on their permits and return their permits to ADF&G at the end of the fishing season.

### **3.2.4 District 6**

Within the majority of Subdistricts 6-A and 6-B, the subsistence salmon fishing schedule is two, 42-hour periods per week from 6:00 p.m. Monday until 12 noon Wednesday and from 6:00 p.m. Friday until 12 noon Sunday. Exceptions are within the Old Minto Area where subsistence

salmon fishing is allowed 5 days a week from 6:00 p.m. Friday until 6:00 p.m. Wednesday and within the Kantishna River, which is open 7 days per week.

Regulations require subsistence salmon permits in District 6, the Tanana River drainage, except for Subdistrict 6-C, which is managed under personal use regulations (see Section 3.3). Subsistence salmon fishermen can obtain a permit by contacting the ADF&G office in Fairbanks. Subsistence permit holders in that portion of Subdistrict 6-B, from a point 3 miles upstream of the mouth of Totchaket Slough to the upper boundary of Subdistrict 6-B, are required to report to ADF&G the number of salmon harvested each week. Permit holders can report their weekly catch on a message recording at (907) 459-7388. All Tanana River subsistence permit holders are required to record their harvest information on their permit and return expired permits to ADF&G's office in Fairbanks at the end of the fishing season.

### **3.3 PERSONAL USE FISHERY**

Subdistrict 6-C falls entirely within the Fairbanks Nonsubsistence Area and is managed under personal use regulations. Personal use salmon fishing permits are required in Subdistrict 6-C and can be obtained from ADF&G's office in Fairbanks. Personal use fishermen must possess a valid State of Alaska resident sport fishing license and report their harvests to ADF&G each week. Only one personal use salmon permit per household is allowed annually. The annual possession limit per permit holder is 10 Chinook salmon and 75 chum salmon for periods through August 15, and 75 chum and coho salmon in combination for the time period after August 15. Subdistrict 6-C fishery harvest limits are 750 Chinook, 5,000 summer chum, and 5,200 fall chum and coho salmon combined. If a harvest limit is reached inseason, the Subdistrict 6-C personal use fishery will be closed.

The personal use fishing schedule is two, 42-hour periods per week by regulation and fishing is from 6:00 p.m. Monday until 12:00 noon Wednesday and from 6:00 p.m. Friday until 12:00 noon Sunday. Whitefish and suckers may also be taken with dip nets under personal use fishing regulations and a separate personal use whitefish/sucker permit is required.

### **3.4 COMMERCIAL FISHERY AND REPORTING REQUIREMENTS**

All processors, buyers, and catcher/sellers of salmon are required to register with ADF&G before operating in the Yukon Area. Processors, buyers and catcher/sellers in Districts 1, 2, and 3 must register with ADF&G's office in Emmonak. Processors, buyers, and catcher/sellers in Districts 4, 5, and 6 must register with ADF&G's office in Fairbanks. Registered salmon buyers are required to provide a verbal report of their salmon purchases within 18 hours following the closure of a commercial fishing period. Buyers may verbally report harvest information in the Upper Yukon Area after office hours by calling a 24-hour message recording at (907) 459-7388. Buyers are also required to mail or deliver fish tickets to ADF&G within 48 hours following the closure of each commercial fishing period in the Lower Yukon Area. In the Upper Yukon Area, buyers are required to mail or deliver fish tickets to ADF&G within 36 hours following the closure of each commercial fishing period. If there is incomplete reporting, ADF&G may delay additional commercial fishing periods until the needed harvest reports are received. In addition, it is very important for buyers to accurately report on each fish ticket the statistical area where salmon were harvested.

All salmon caught by CFEC permit holders during commercial periods, in which salmon roe was sold, shall be reported as numbers of fish on fish tickets in numbers of males and females. Buyers are requested to ensure this information is reported on fish tickets. Regulations also

require commercial fishermen in Subdistrict 6-C to report, on each fish ticket, the number of salmon harvested but not sold during commercial fishing periods.

### 3.5 CHINOOK AND SUMMER CHUM SALMON COMMERCIAL SEASON

Inseason Chinook salmon run assessment will be based on lower river test fisheries, subsistence catch reports, age and sex composition, and preliminary sonar passage and escapement monitoring information. As in years past, ADF&G will participate in Yukon River Drainage Fisheries Association (YRDFA) teleconferences inseason to gather information from the public, disseminate project information, and to discuss run status and management actions. The YRDFA teleconferences have provided an excellent venue for not only distributing information, but also to provide tentative management actions for YRDFA and public participants to comment on. More recently, management decisions have been made with recommendations from these teleconferences.

There is a Chinook salmon and a Summer Chum Salmon Management Plan which guide ADF&G management actions. Table 7 summarizes the summer chum salmon management plan. If the abundance of summer chum salmon in 2007 is greater than 800,000 as projected, a directed summer chum salmon fishery will be allowed provided markets are available to sell the catch.

**Table 7.**–Summary of the Summer Chum Salmon Management Plan.

<i>Summer Chum Salmon Management Plan Overview</i>					
RECOMMENDED MANAGEMENT ACTION					
Projected Run Size <sup>1</sup>	Commercial	Personal Use	Sport	Subsistence	Targeted Drainage-wide Escapement
600,000 or less	Closure	Closure	Closure	Closure <sup>2</sup>	≤600,000
600,001 to 700,000	Closure	Closure	Closure	Possible Restrictions <sup>2</sup>	
700,001 to 1,000,000	Restrictions <sup>2</sup>	Restrictions <sup>2</sup>	Restrictions <sup>2</sup>	Normal Fishing Schedules	
Greater than 1,000,000	Open <sup>3</sup>	Open	Open	Normal Fishing Schedules	≥800,000

<sup>1</sup> PROJECTED RUN SIZE: Mainstem river sonar passage estimate plus the estimated harvests below the sonar site and the Andreafsky River escapement.

<sup>2</sup> The fishery may be opened or less restrictive in areas that indicator(s) suggest the escapement goal(s) in that area will be achieved.

<sup>3</sup> DRAINAGE-WIDE COMMERCIAL FISHERIES: The harvestable surplus will be distributed by district or subdistrict in proportion to the guidelines harvest levels established in 5AAC 05.362 (f) and (g) and 5 AAC 05.365 if buying capacity allows.

#### 3.5.1 Districts 1, 2, and 3

If the Chinook salmon run in 2007 is similar to the run in 2006, a directed Chinook salmon commercial fishery will be possible. Typically, the first commercial opening occurs at the first quarter point of the run. This management strategy provides for passage of a portion of the early run segment through the lower river districts before commercial fishing starts. In 2007, based on the preseason projection, the management strategy is to schedule a commercial fishing period, near the first quarter point (historically, June 15) in District 1 or 2, which may be of short duration, and continue with spreading any additional commercial periods over the middle 50% of the run. Additional commercial fishing periods after the third quarter point depends on

information from assessment projects and available markets. Lower Yukon River set net test fishing catch per unit effort (CPUE) and Pilot Station sonar data will be used for relative timing and abundance information. The opening of the fishing season is normally announced 48 hours in advance to provide fishermen and buyers adequate time to prepare.

Directed Chinook salmon commercial fishing periods with unrestricted mesh size gillnets are anticipated to be 6 to 9 hours in duration, but may be as short as 2 hours. The fishery has become more actively managed and fishing periods may be scheduled further apart, if necessary, to spread the commercial harvest across the run. Districts 1 and 2 have a combined guideline harvest range and because of the influence of tides affecting efficiency in the coastal portion of District 1 and market conditions, there may not be an equal amount of fishing time for each district.

Any summer chum salmon directed commercial fishing in Districts 1 and 2 will be dependent on market conditions. If a market exists, 6 inch or smaller mesh size gillnets will be utilized to direct the harvest toward summer chum salmon.

Commercial fishing periods may be established in District 3 based on input from buyers and fishermen. Regulations allow a permit holder registered in District 1, 2 or 3 to transfer to another district by contacting a representative of the department and following a 72-hour waiting period. Only one district transfer per fisher is allowed in the Lower Yukon Area prior to July 15.

### **3.5.2 District 4**

Historically, the first District 4 commercial fishing period usually occurs between June 21 and June 25. Management for summer chum salmon will be dependent on buyer input in consideration of market quality and capacity. Permit holders are reminded that Chinook salmon roe may not be sold in Subdistrict 4-A.

If commercial fishing is allowed, it is anticipated Subdistricts 4-B and 4-C would be placed on a schedule of two 48-hour periods per week beginning at 6:00 p.m. Sunday and 6:00 p.m. Wednesday. Subdistricts 4-B and 4-C may open earlier than Subdistrict 4-A to allow harvest of earlier migrating Chinook salmon. Historically, there is a much lower harvest of summer chum salmon in Subdistricts 4-B and 4-C than in Subdistrict 4-A when directing harvest at Chinook salmon.

### **3.5.3 Anvik River Management Area**

The Anvik River may be opened to summer chum salmon commercial fishing if the escapement is anticipated to exceed 500,000 fish. Fishing periods in the Anvik River will be based upon size of the surplus available for commercial harvest and the availability of a commercial market. The intent is to allow a harvest of Anvik River summer chum salmon that is in excess of the spawning escapement goal and to decrease harvest pressure on non-Anvik River summer chum salmon stocks. Permit holders are reminded that all Chinook salmon caught during Anvik River commercial fishing periods must be released alive.

### **3.5.4 District 5**

Assessment of run abundance and timing from downstream districts, along with subsistence catch reports, will be used to determine a commercial season opening. By regulation, no commercial fishing will be allowed in Subdistrict 5-A during the Chinook and summer chum salmon fishing season.

If commercial fishing is allowed in Subdistricts 5-B and 5-C, it is anticipated that fishing periods would be 12-hours in duration. For Subdistrict 5-D, 24-hour commercial fishing periods are typical.

This allows ADF&G to monitor and maintain the harvest within guideline harvest ranges. In years with average returns and run timing, the first commercial fishing period usually occurs between July 1 and July 7 in Subdistricts 5-B and 5-C, and between July 1 and July 10 in Subdistrict 5-D.

### 3.5.5 District 6

District 6 is managed inseason using salmon run strength and timing indicators in the Tanana River drainage including test fish wheel catches near the community of Nenana and escapement information on Chinook and summer chum salmon collected by tower counting projects on the Chena and Salcha Rivers. The District 6 commercial fishing season typically opens in early to mid-July. ADF&G can exceed the upper end of the guideline harvest ranges in years when it has been determined that escapement goals and subsistence needs will be met.

Directed summer chum salmon commercial fishing periods would likely occur later in July and into August and will depend on inseason run assessment. The length and duration of commercial fishing periods will depend on run strength and buyer capacity.

### 3.6 FALL CHUM AND COHO SALMON COMMERCIAL SEASON

The 2007 fall chum salmon outlook is for an above average run and coho salmon are expected to be average to above average. A commercial fishery for both chum and coho salmon is anticipated. In managing the 2007 Yukon River fall chum salmon fishery, ADF&G will follow guidelines provided by the BOF in 5 AAC 01.249 *Yukon River Drainage Fall Chum Salmon Management Plan*. The plan stipulates that directed fall chum salmon commercial fisheries may only be allowed on the projected surplus of the run above 600,000 fall chum salmon for the entire Yukon River drainage. There is an exception to this plan where commercial fishing may be allowed in portions of the drainage where escapement and subsistence needs are projected to be exceeded and when the drainage-wide run size is projected to be greater than 500,000. Since the 2007 preseason projection is for a run size ranging from 900,000 to 1.2 million fall chum salmon, it is anticipated that the run will provide sufficient abundance for escapement and subsistence uses and may exceed commercial market capacity. Table 8 summarizes the fall chum salmon management plan.

**Table 8.**—Summary of the Fall Chum Salmon Management Plan.

<i>Fall Chum Salmon Management Plan Overview</i>					
Projected Run Size <sup>1</sup>	RECOMMENDED MANAGEMENT ACTION				Targeted Drainage-wide Escapement
	Commercial	Personal Use	Sport	Subsistence	
300,000 or less	Closure	Closure	Closure	Closure <sup>2</sup>	
300,000 to 500,000	Closure	Closure <sup>2</sup>	Closure <sup>2</sup>	Possible Restrictions <sup>2,3</sup>	
500,000 to 600,000	Restrictions <sup>2</sup>	Open	Open	Pre-2001 Fishing Schedules	300,000 to 600,000
Greater than 600,000	Open <sup>4</sup>	Open	Open	Pre-2001 Fishing Schedules	

<sup>1</sup> PROJECTED RUN SIZES use the best available data (including preseason projections, mainstem river sonar passage estimates, test fisheries indices, subsistence and commercial fishing reports, and passage estimates from escapement monitoring projects)

<sup>2</sup> The fishery may be opened or less restrictive in areas that indicator(s) suggest the escapement goal(s) in that area will be achieved.

<sup>3</sup> Subsistence fishing will be managed to achieve a minimum drainage-wide escapement goal of 300,000.

<sup>4</sup> DRAINAGE-WIDE COMMERCIAL FISHERIES may be open and the harvestable surplus above 600,000 will be distributed by district or subdistrict (in proportion to the guidelines harvest levels established in 5AAC 05.365 and 5 AAC 05.367.

Management of directed coho salmon fishing during the fall season is complicated by an overlapping run of more abundant fall chum salmon stocks. The 2007 coho salmon fishery will be managed consistent with regulation 5 AAC 05.369 *Yukon River Coho Salmon Management Plan*. The plan allows a directed coho salmon commercial fishery when the coho salmon run is judged to be average to above average and the fall chum salmon run is below the 600,000 fish threshold necessary to allow a directed fall chum salmon fishery, yet still above 550,000 fall chum salmon. Therefore, the commercial harvest of coho salmon will likely be dependent upon the abundance of fall chum salmon and accompanying management strategies used to harvest fall chum salmon. In 2007 it is anticipated that commercial fishing for both fall chum and coho salmon will occur simultaneously.

ADF&G will monitor the fall salmon runs inseason by using the Pilot Station sonar passage estimates, lower Yukon River drift gillnet test fishery near Emmonak, the Mountain Village drift gillnet test fishery, subsistence catch reports, and, if available, commercial catch statistics. This information, in combination with the preseason expectation and the performance of the summer chum salmon run, will be the basis for initial management. The fall season outlook anticipates a commercial harvest of fall chum salmon of 50,000 to 400,000 and a potential coho salmon harvest of 50,000 to 70,000. Fishery managers will work closely with commercial buyers to maximize market capacity and distribute harvest.

### **3.6.1 Districts 1, 2, and 3**

The majority of fall chum salmon enter the Yukon River from mid-July through early September in erratic pulses usually lasting 2 to 3 days. Typically, 4 or 5 large pulses occur each season. These pulses are often associated with onshore wind events and/or high tides. This entry pattern makes it difficult to accurately assess run strength inseason, particularly early in the season. Therefore, initial commercial fishing period length and frequency will be based on the performance of the summer chum salmon return, the distribution of fishing interest and on the assumption that there will likely be a surplus of fall chum salmon available drainage-wide for commercial harvest. Maintaining good salmon flesh-quality will be a primary objective. Managers will work closely with buyers to maximize opportunities to harvest good quality fish, to maximize available processing capacities and transportation opportunities, and to spread harvest throughout the fall salmon run.

Regulations require District 1 commercial fishermen to register for the coastal *Set Net Only Area* prior to opening of the fall commercial season. Registration “sign-in” sheets will be available at Lower Yukon Area village post offices and at ADF&G’s field office in Emmonak. There are provisions that allow fishermen to transfer into and out of the *Set Net Only Area*. After initial registration for the *Set Net Only Area*, a permit holder may not commercially fish for salmon in the remainder of District 1, or in another district, until 72 hours after re-registration with ADF&G. After the first fall season commercial fishing period, a permit holder not registered for the *Set Net Only Area* may transfer to the *Set Net Only Area* after re-registration with ADF&G. The re-registration and 72-hour waiting period begins at the time the notification is received and noted by ADF&G.

### **3.6.2 District 4**

In January 2001, the BOF took regulatory action to include Subdistrict 4-A with the Subdistricts 4-B and 4-C guideline harvest range of 5,000 to 40,000 fall chum salmon. In years with average run timing and a commercially harvestable surplus, the first District 4 fall season commercial fishing period normally occurs in early to mid-August. In the event a directed coho salmon

commercial fishery is allowed, a commercial fishing period in Subdistrict 4-A may only occur on or after August 20 and would close by September 15. It is anticipated that there will be a surplus available for commercial harvest, however weak market conditions may limit commercial harvests in the district for 2007.

### **3.6.3 Subdistricts 5-B, 5-C, and 5-D**

In years with average run timing and a commercially harvestable surplus, the first fall season commercial fishing period in Subdistricts 5-B and 5-C typically occurs in mid-August with Subdistrict 5-D starting later in August or early September. Market interest has been weak in recent years and will likely dictate commercial fishing opportunity. Commercial fishing periods are usually scheduled concurrent with subsistence periods, but may be shifted to accommodate market limitations.

### **3.6.4 Subdistrict 5-A and District 6**

Management of Subdistrict 5-A and District 6 is outlined in regulation 5 AAC 05.367 *Tanana River Salmon Management Plan*. This management plan directs ADF&G to manage Subdistrict 5-A and District 6 based on the stock status and timing of salmon bound for, and into, the Tanana River. Based on tagging studies conducted in 1979 and 1980, it is believed that the majority of fall chum and coho salmon harvested in Subdistrict 5-A are bound for the Tanana River, located in District 6.

ADF&G will initially manage the fall season in Subdistrict 5-A and District 6 based on the run strength and timing of the overall Yukon River fall chum salmon run. As the run progresses into the Tanana River, the Tanana and Kantishna River mark-recapture tagging projects will be used to assess the run size in the Tanana River portion of the drainage along with other harvest and test fish wheel information.

The Tanana River management plan allows Subdistrict 5-A commercial activities only during the fall season. In most years, the Subdistrict 5-A commercial fishery would be managed for a guideline harvest range of 0 to 4,000 pounds of fall chum salmon roe. No waste of carcasses will be permitted. In adopting this regulation, the Board recognized that carcasses produced by this commercial roe fishery should be incorporated into the subsistence utilization in the village of Tanana.

Depending on the inseason Tanana River fall chum salmon run strength and timing indicators, ADF&G does have the authority to manage Subdistrict 5-A and District 6 for a different harvest level within the guideline harvest range or to exceed the guideline harvest range. The first fall season commercial salmon fishing period normally occurs in early to mid-September. Managers will work closely with commercial buyers and fishermen in coordinating fishing periods to utilize available markets efficiently. Commercial and subsistence fishing periods are typically opened concurrently.

## **3.7 GUIDELINE HARVEST RANGES**

Table 9 shows a summary of the guideline harvest ranges for all districts in the Yukon Area for the commercial harvest of Chinook, summer, and fall chum salmon.

#### **4.0 U.S./CANADA YUKON RIVER SALMON PANEL AGREEMENT**

Negotiations were initiated in 1985 between the U.S. and Canada regarding a Yukon River salmon treaty. In December 2002, the United States and Canada signed an agreement that set salmon harvest share target ranges based on a postseason assessment of run strength for Chinook and fall chum salmon into the Canadian mainstem of the Yukon River. The Alaskan and Canadian fisheries will be managed consistent with stock rebuilding and conservation objectives that have been jointly developed.

For the 2007 season, the U.S./Canada panel agreed to a Canadian escapement goal range of 33,000–43,000 Chinook salmon (JTC 2007). This is a rebuilt escapement goal range agreed to in the Yukon River Treaty Agreement. The panel agreed to a fall chum salmon Canadian Yukon River Mainstem spawning escapement objective of >80,000 chum salmon, and an interim spawning escapement goal of >33,667 chum salmon into the Fishing Branch River. A management plan was laid out to rebuild the Canadian Fishing Branch River fall chum salmon stock over three lifecycles which is considered a 12-year period. The intent of these interim goals is to minimize hardships in the subsistence and aboriginal fisheries while continuing efforts towards rebuilding the stock to higher levels.

**Table 9.**—Guideline harvest ranges and midpoints for commercial harvest of Yukon River Chinook, summer, and fall chum salmon.

<b>Chinook Salmon</b>						
District or Subdistrict	Guideline Harvest Range <sup>a</sup>					
	Lower		Midpoint		Upper	
	Numbers	Percent	Numbers	Percent	Numbers	Percent
1 and 2	0 to 60,000	89.1	90,000	91.6	120,000	92.9
3	0 to 1,800	2.7	2,000	2.0	2,200	1.7
4	0 to 2,250	3.3	2,550	2.6	2,850	2.2
5-B & 5-C	0 to 2,400	3.6	2,600	2.6	2,800	2.2
5-D	0 to 300	0.4	400	0.4	500	0.4
6	0 to 600	0.9	700	0.7	800	0.6
Total	67,350	100.0	98,250	100.0	129,150	100.0

<b>Summer Chum Salmon</b>						
District or Subdistrict	Guideline Harvest Range <sup>b</sup>					
	Lower		Midpoint		Upper	
	Numbers	Percent	Numbers	Percent	Numbers	Percent
1 and 2	0 to 251,000	62.8	503,000	62.9	755,000	62.9
3	0 to 6,000	1.5	12,500	1.6	19,000	1.6
4-A <sup>c</sup>	0 to 113,000	28.3	225,500	28.2	338,000	28.2
4-B & 4-C	0 to 16,000	4.0	31,500	3.9	47,000	3.9
5-B, -C, -D	0 to 1,000	0.3	2,000	0.3	3,000	0.3
6	0 to 13,000	3.3	25,500	3.2	38,000	3.2
Total	400,000	100.0	800,000	100.0	1,200,000	100.0

Anvik River Management Area roe cap of 100,000 pounds. <sup>d</sup>

<b>Fall Chum Salmon</b>						
District or Subdistrict	Guideline Harvest Range <sup>e</sup>					
	Lower		Midpoint		Upper	
	Numbers	Percent	Numbers	Percent	Numbers	Percent
1, 2, and 3	0 to 60,000	82.5	140,000	71.2	220,000	68.6
4	0 to 5,000	6.9	22,500	11.4	40,000	12.5
5-B and 5-C	0 to 4,000	5.5	20,000	10.2	36,000	11.2
5-D	0 to 1,000	1.4	2,500	1.3	4,000	1.2
6	0 to 2,750	3.8	11,625	5.9	20,500	6.4
Total	0 to 72,750	100.0	196,625	100.0	320,500	100.0

Subdistrict 5A range of 0 to 4,000 pounds of roe. <sup>f</sup>

<sup>a</sup> The Chinook salmon guideline harvest ranges have been in effect since 1981.

<sup>b</sup> Summer chum salmon guideline harvest ranges were established in February 1990 based on the average harvest shares from 1975–1989.

<sup>c</sup> Or the equivalent roe poundage of 61,000 to 183,000 pounds or some combination of fish and pounds of roe.

<sup>d</sup> The current Anvik River Management Area roe cap was established in March 1996.

<sup>e</sup> The current fall chum salmon guideline harvest ranges were established in 1990.

<sup>f</sup> Subdistrict 5-A was removed from the guideline harvest ranges for Chinook and summer chum and a separate guideline harvest range of 0–4,000 pounds of fall chum salmon roe was established in November 1998.

## **REFERENCES CITED**

JTC (Joint Technical Committee of the Yukon River US/Canada Panel). 2007. Yukon River salmon 2006 season summary and 2007 season outlook. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report No. 3A07-01, Anchorage.

## **FIGURES**

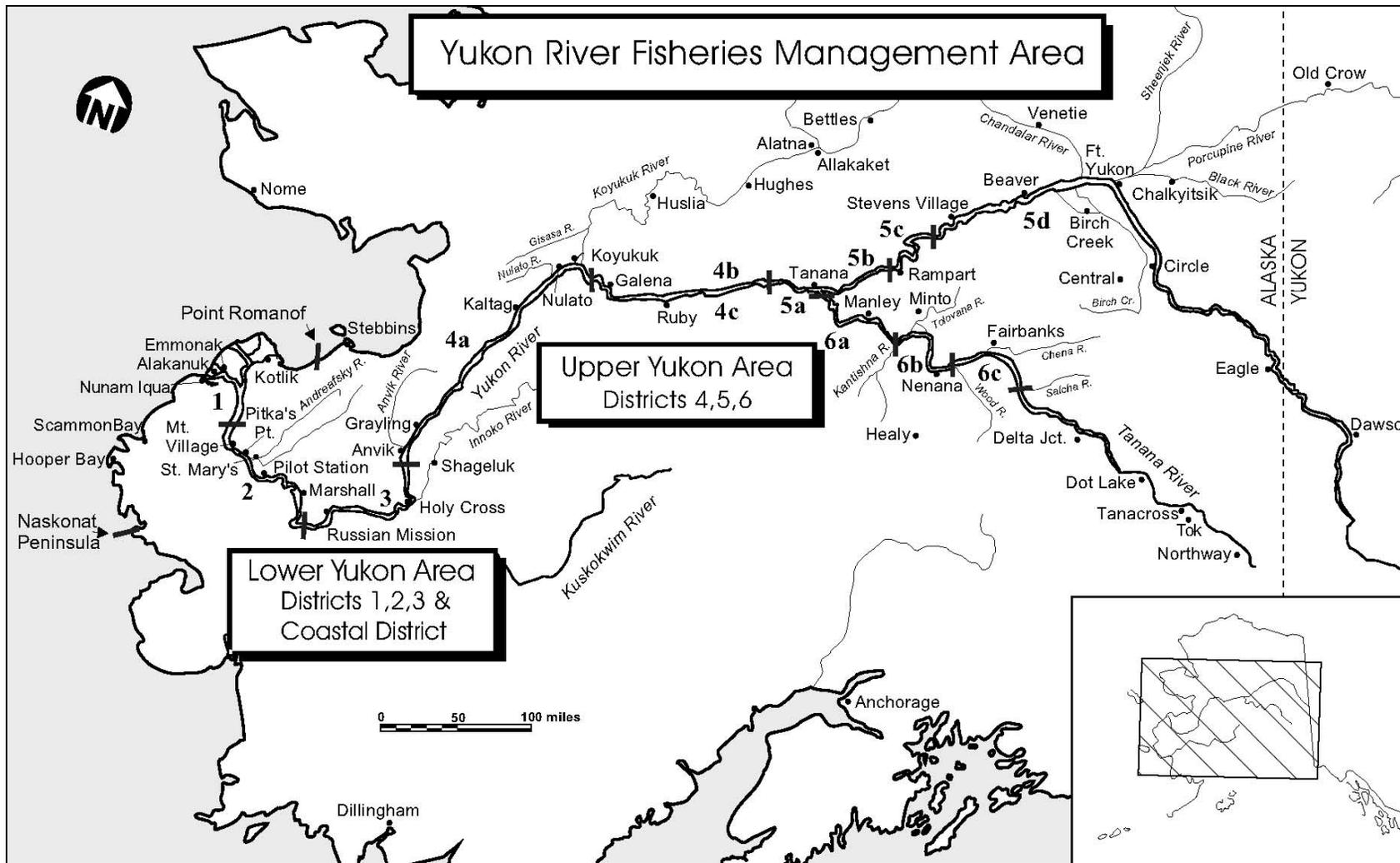
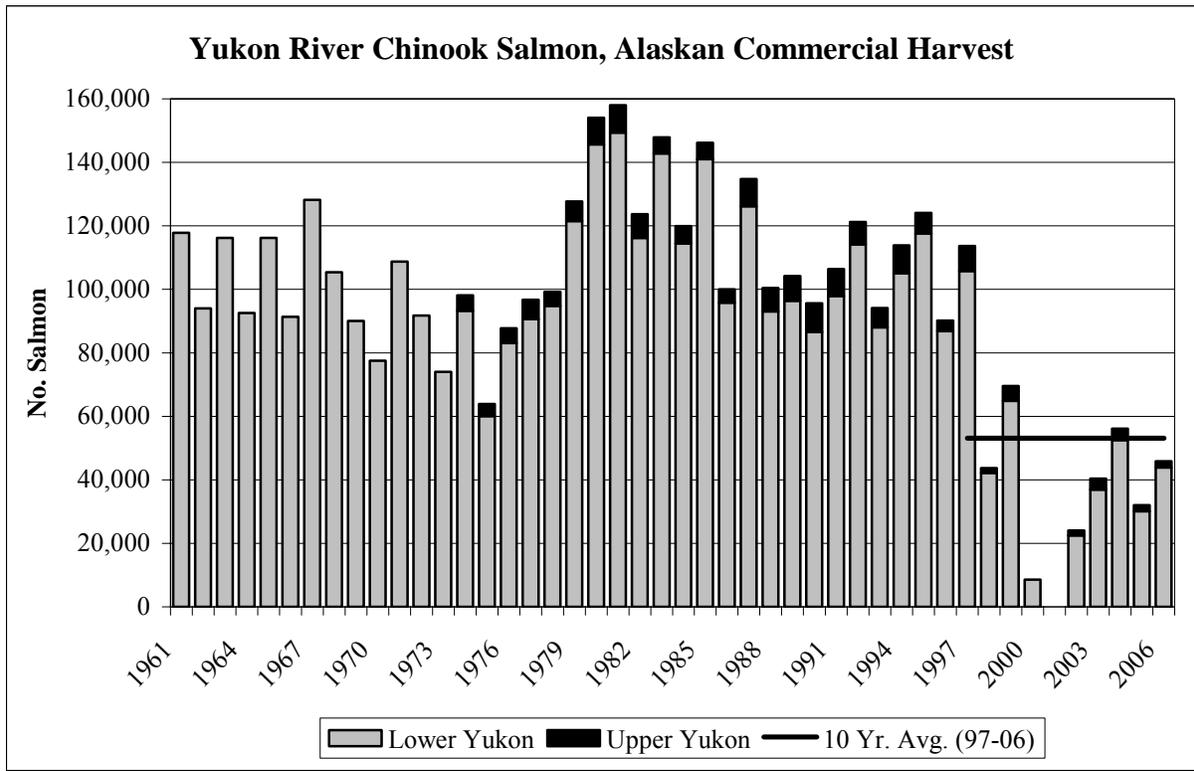
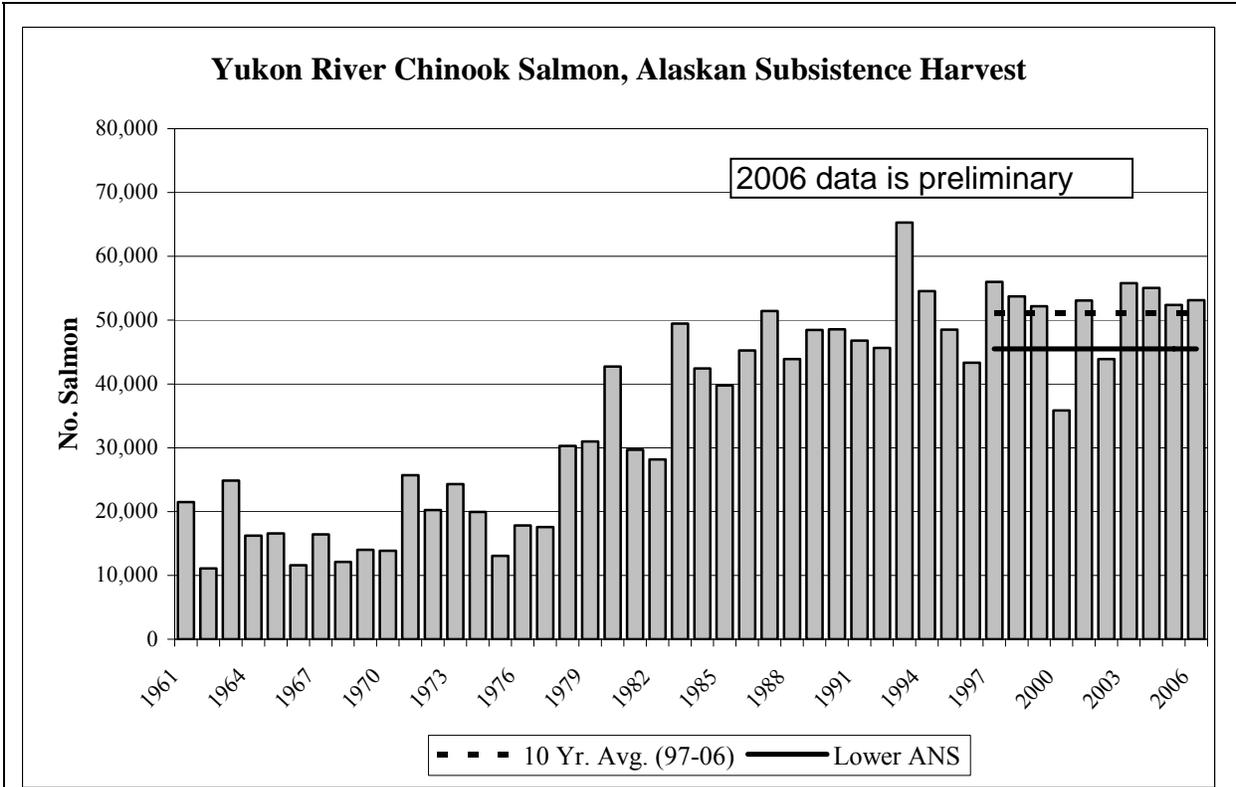
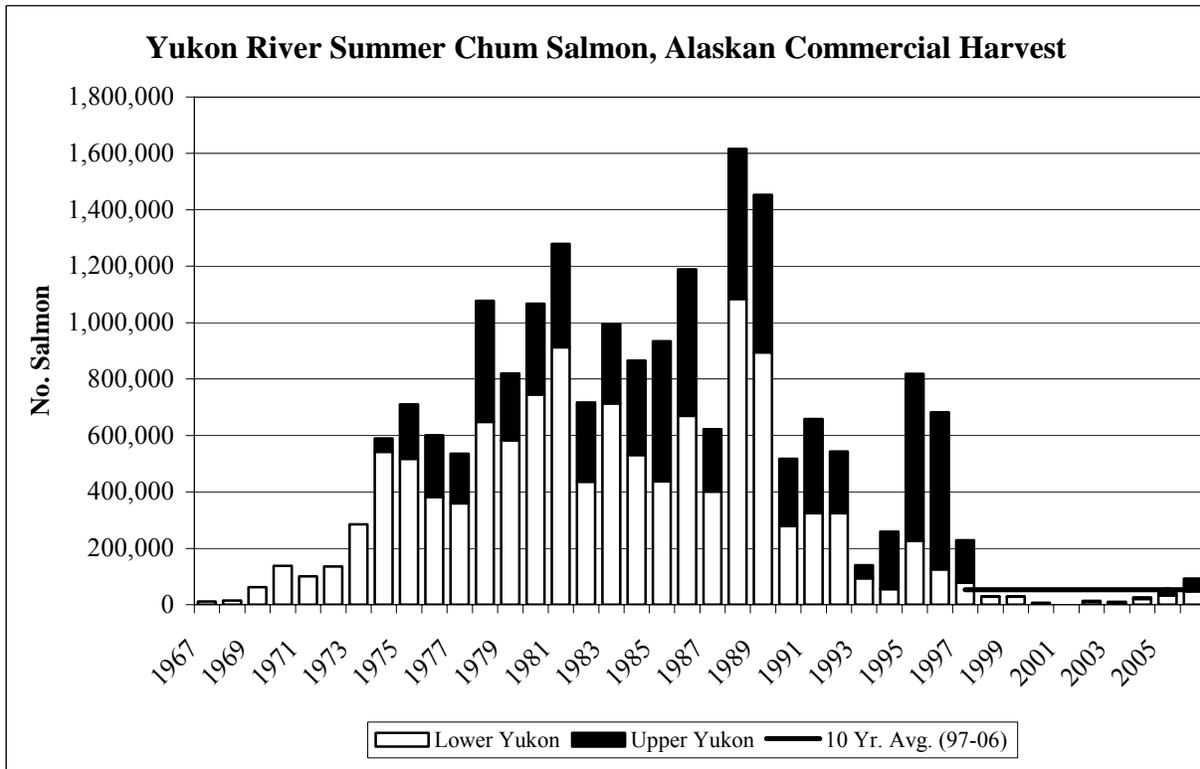
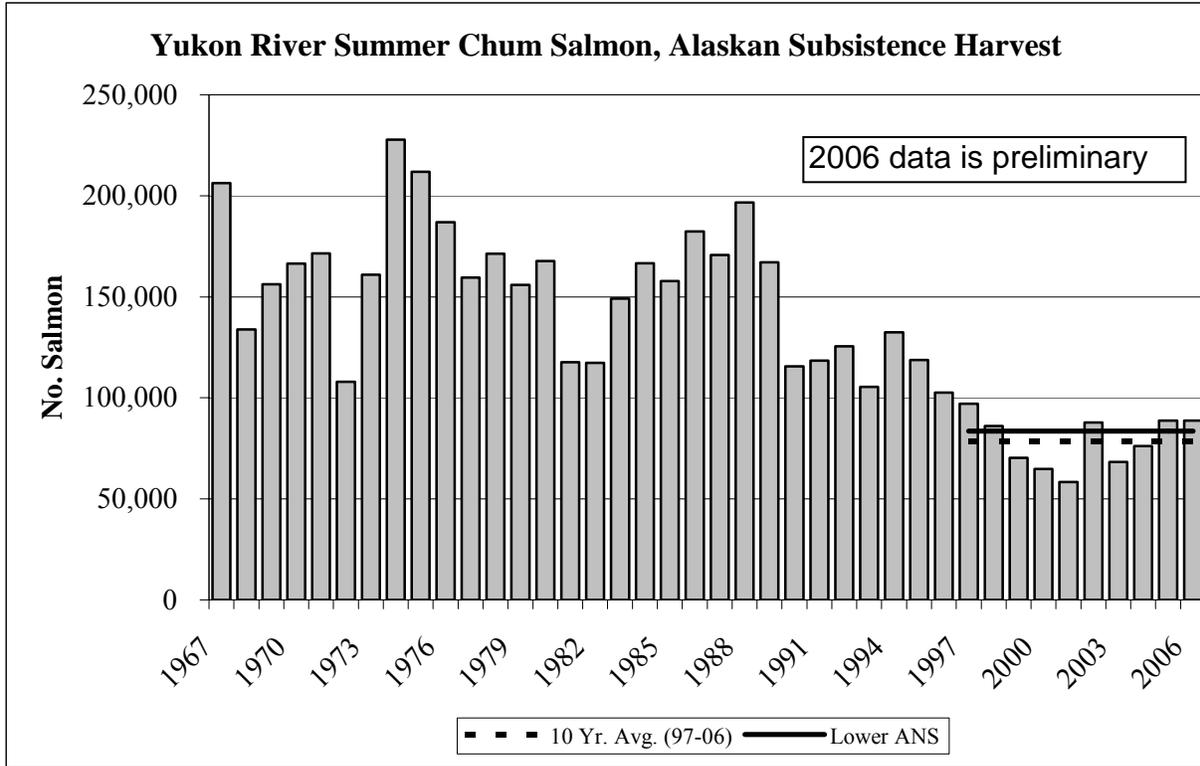


Figure 1.—Yukon Area communities and fishing districts.



Note: ANS = Amount necessary for subsistence. 2006 subsistence data is preliminary.

**Figure 2.**—Yukon River Chinook salmon subsistence and commercial harvests compared to the recent 10-year average, and the lower ANS range.

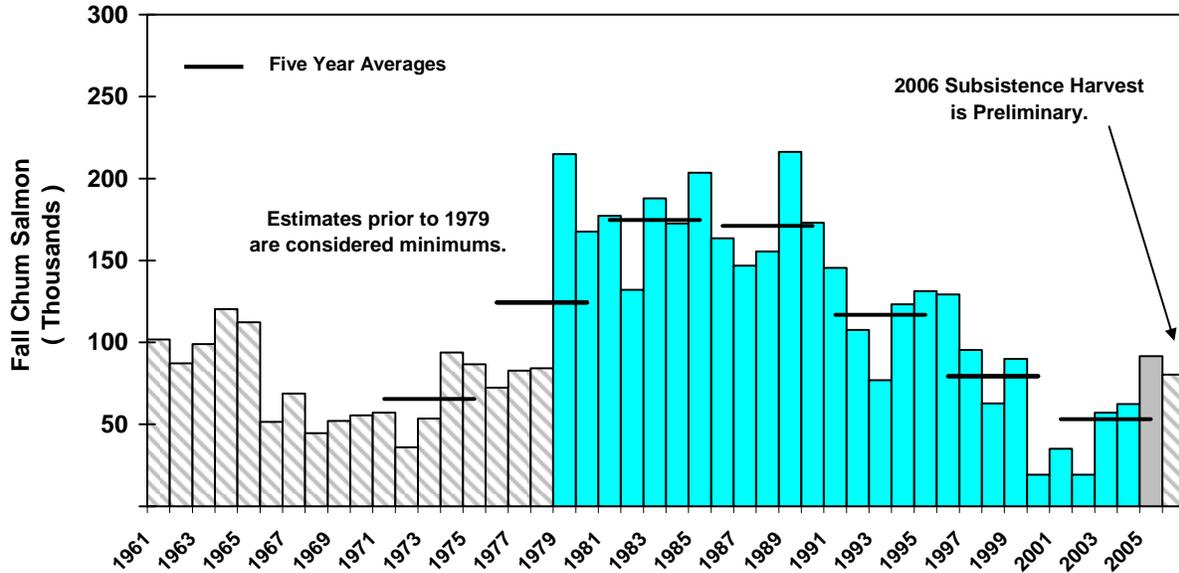


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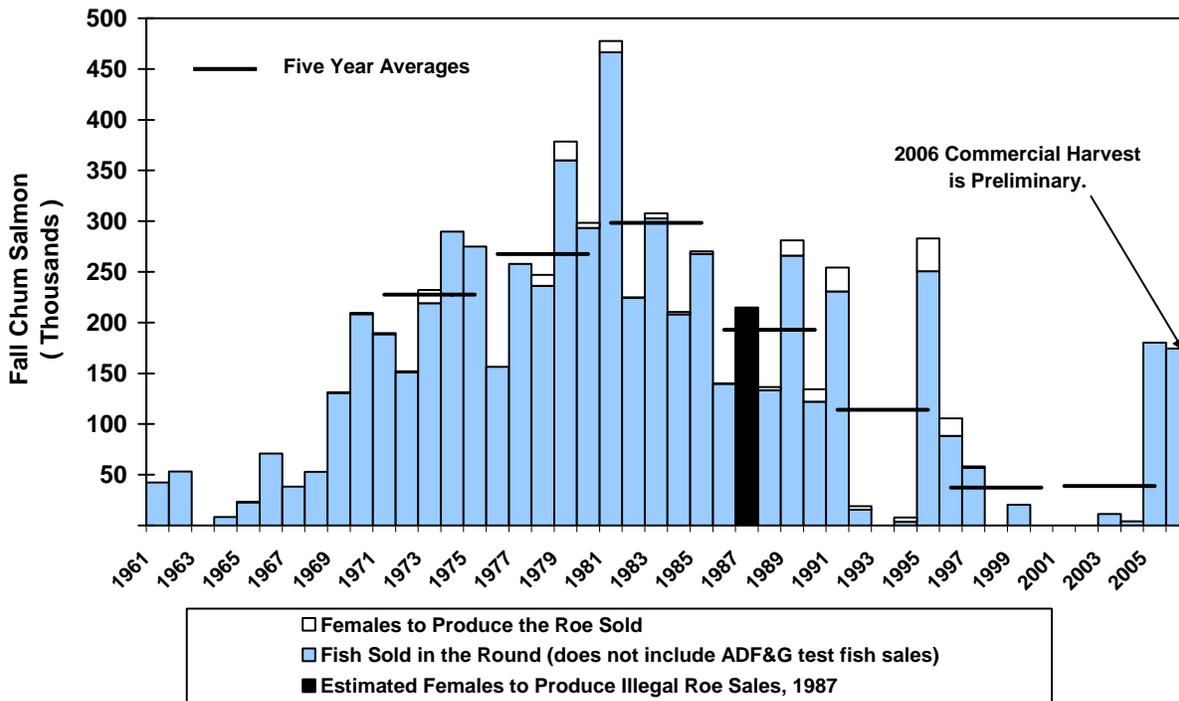
**Figure 3.**—Yukon River summer chum salmon subsistence and commercial harvests compared to the recent 10-year average, and the lower ANS range.

## ALASKAN PORTION OF YUKON RIVER DRAINAGE AREA, FALL CHUM SALMON

### SUBSISTENCE HARVEST



### COMMERCIAL HARVEST

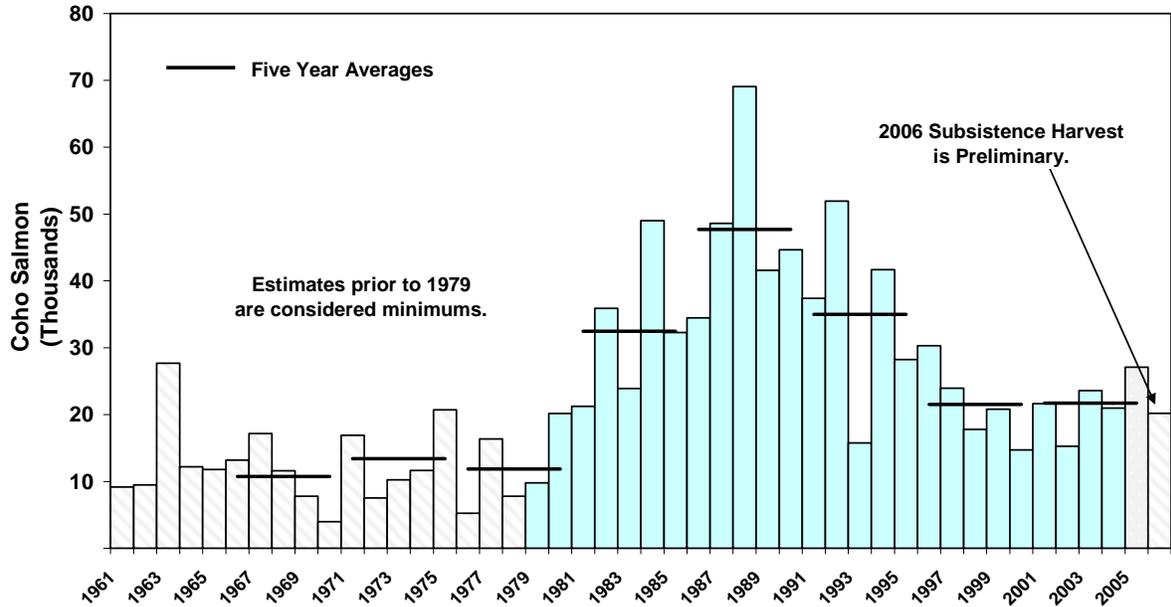


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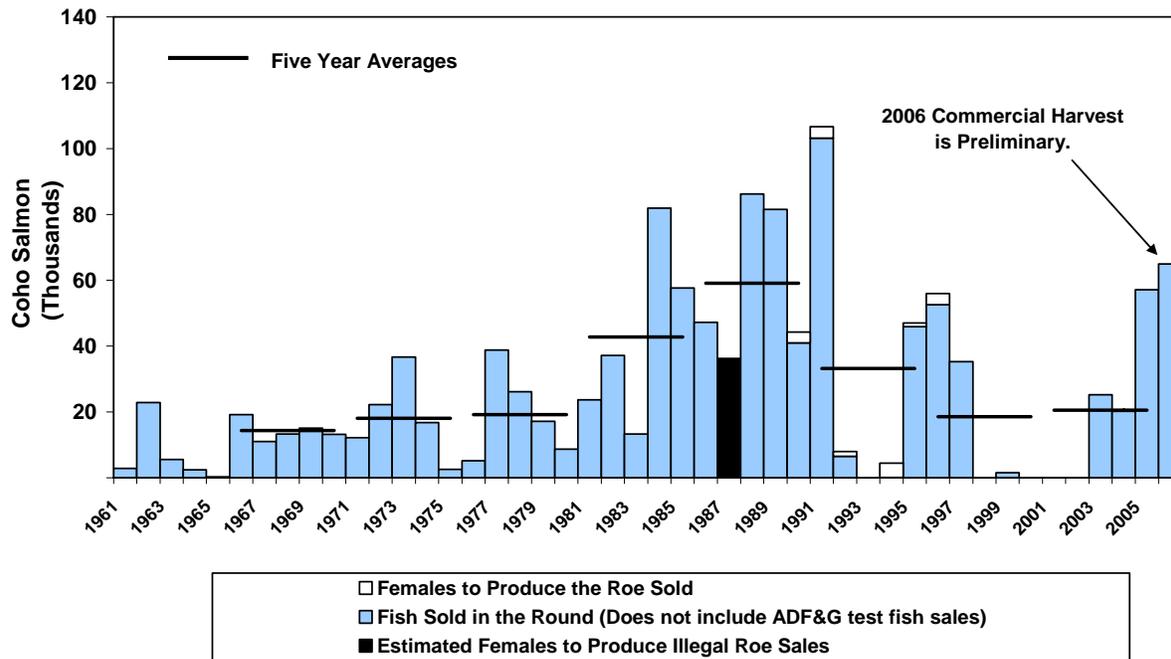
**Figure 4.**—Subsistence and commercial harvest of fall chum salmon, 1961 to 2006.

## ALASKAN PORTION OF YUKON RIVER DRAINAGE COHO SALMON

### SUBSISTENCE HARVEST

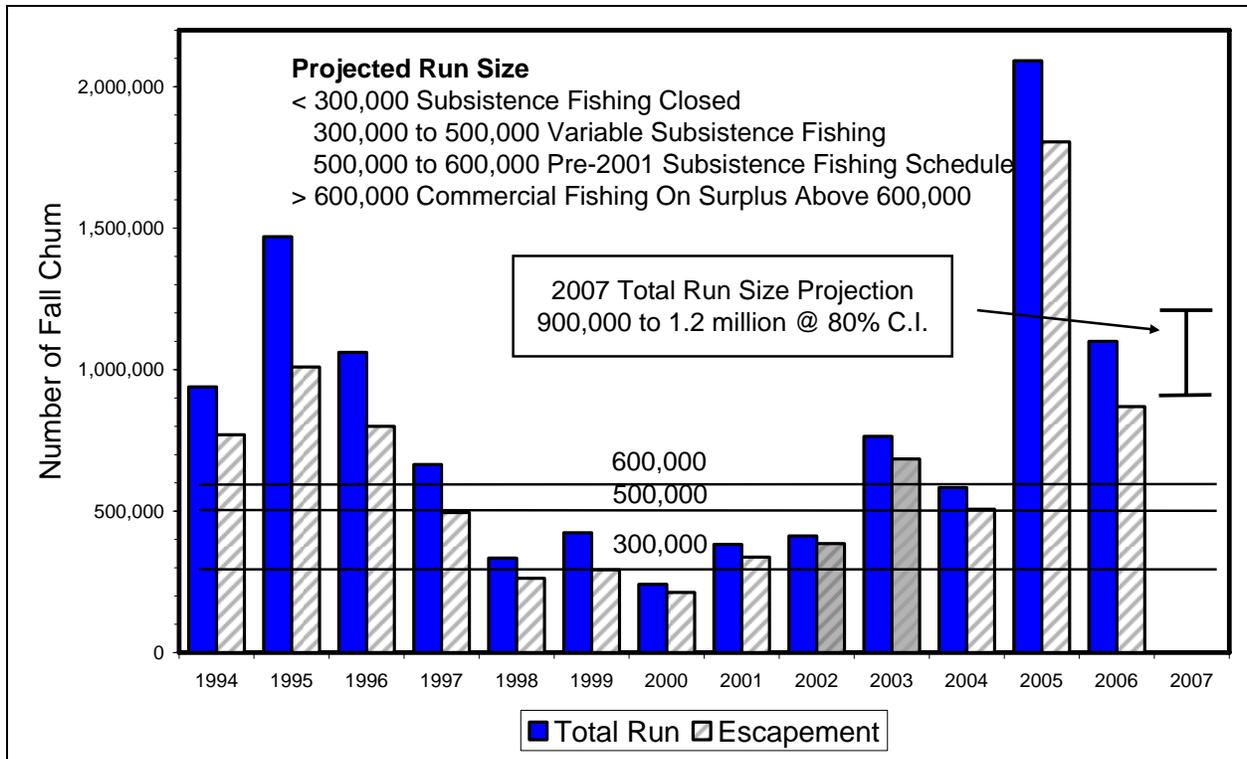


### COMMERCIAL HARVEST



Note: 2006 subsistence data preliminary.

Figure 5.—Subsistence and commercial harvest of coho salmon, 1961 to 2006.



**Figure 6.**—Yukon River fall chum salmon management plan overview and comparison with historical run sizes.