Fishery Management Report No. 10-09

Lower Kuskokwim River Inseason Subsistence Salmon Catch Monitoring, 2008

Annual Report for Study 06-306
USFWS Office of Subsistence Management
Fisheries Resource Monitoring Program

by

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and

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March 2010

Alaska Department of Fish and Game **Divisions of Sport Fish and 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. 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.

Weights and measures (metric)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft^3/s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	lb
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

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

General

Alaska Administrative Code	AAC
all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.
all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.
at	@
compass directions:	
east	E
north	N
south	S
west	W
copyright	©
corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat. or long.
monetary symbols (U.S.)	$, ¢
months (tables and figures): first three letters	Jan,...,Dec
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	use two-letter abbreviations (e.g., AK, WA)

Measures (fisheries)

fork length	FL
mideye to fork	MEF
mideye to tail fork	METF
standard length	SL
total length	TL

Mathematics, statistics

all standard mathematical signs, symbols and abbreviations	
alternate hypothesis	H_A
base of natural logarithm	e
catch per unit effort	CPUE
coefficient of variation	CV
common test statistics	(F, t, χ^2, etc.)
confidence interval	CI
correlation coefficient (multiple)	R
correlation coefficient (simple)	r
covariance	cov
degree (angular)	°
degrees of freedom	df
expected value	E
greater than	>
greater than or equal to	≥
harvest per unit effort	HPUE
less than	<
less than or equal to	≤
logarithm (natural)	ln
logarithm (base 10)	log
logarithm (specify base)	$\log_2$, etc.
minute (angular)	'
not significant	NS
null hypothesis	H_O
percent	%
probability	P
probability of a type I error (rejection of the null hypothesis when true)	α
probability of a type II error (acceptance of the null hypothesis when false)	β
second (angular)	"
standard deviation	SD
standard error	SE
variance	
population	Var
sample	var

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ADF&G Fishery Data Series was established in 1987 for the publication of Division of Sport Fish technically oriented results for a single project or group of closely related projects, and in 2004 became a joint divisional series with the Division of Commercial Fisheries. Fishery Data Series reports are intended for fishery and other technical professionals and are available through the Alaska State Library and on the Internet: http://www.sf.adfg.state.ak.us/statewide/divreports/html/intersearch.cfm This publication has undergone editorial and peer review.

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TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

ABSTRACT

Through a collaborative effort with the Alaska Department of Fish and Game (ADF&G), the Orutsararmiut Native Council (ONC) conducted weekly inseason surveys of Bethel Area subsistence salmon fishermen at selected fish camps and communities in the lower Kuskokwim River during the summer of 2008. The project ran for 6 weeks, from June 1 to July 15. Data collected from these surveys are used to qualitatively assess salmon run timing, relative abundance, fishermen's success in achieving their subsistence harvest goals, fishing activity and gear usage. Summaries of the surveys were relayed to fishery managers and reported at Kuskokwim River Salmon Management Working Group (Working Group) meetings on a weekly basis. Fishery managers and research staff use the inseason survey information as an early indication of salmon run strength and subsistence harvest trends, in conjunction with the Bethel test fishery (BTF) project which provides index of relative abundance and run timing data. The inseason survey also builds management capacity by providing a forum for local users to provide input into the evaluation of salmon abundance and corresponding management strategies. Inseason subsistence catch information has also been used in combination with other information to evaluate the various management actions.

Key words: Bethel, Chinook, *Oncorhynchus tshawytscha*, sockeye, *O. nerka*, chum, *O. keta*, coho, *O. kisutch*, salmon, Kuskokwim River, Orutsararmiut Native Council, subsistence, Kuskokwim River Salmon Management Working Group.

INTRODUCTION

Kuskokwim Area subsistence salmon fisheries rank as one of the largest in the State of Alaska accounting for over 50% of the state's Chinook salmon harvest (Fall et al. 2006; Fall et al. 2007). More than 2,000 households in the Kuskokwim Area annually harvest salmon for subsistence use. In addition, many households not directly involved in catching salmon assist family and friends with processing fish. From June through August, the daily activities of many Kuskokwim Area households revolve around harvesting, processing, and preserving subsistence-caught salmon. The use of family fish camps has been, and remains, an important part of Kuskokwim River subsistence activities.

Alaska Department of Fish and Game (ADF&G), Division of Subsistence (SD) studies indicate wild fish accounts for 85% of the total subsistence-harvested fish and wildlife resources in Kuskokwim River communities; with salmon accounting for up to 53% of the total annual subsistence harvest (Coffing 1991). The harvest of salmon for subsistence in some Kuskokwim River communities may be as high as 650 lbs per capita (Coffing 1991) . The recent 10-year (1997–2006) average subsistence harvest includes 76,589 Chinook *Oncorhynchus tshawytscha*; 55,507 chum *O. keta*; 39,639 sockeye *O. nerka* and 32,845 coho salmon *O. kisutch* (Fall et al. 2009). Depending on species, subsistence harvests are a large part of the total utilization (the sum of all harvest types) of salmon in the area. The 10-year average total utilization is 77,494 Chinook, 94,424 chum, 53,067 sockeye, and 232,424 coho salmon (John Linderman Jr., Department of Commercial Fisheries Biologist, ADF&G, Anchorage; personal communication). From 1997 to 2006, the subsistence harvest averaged 93% of the total utilization for Chinook, 56% for chum, 70% for sockeye, and 14% for coho salmon (Appendices A1 to A4).

State and federal lawmakers have recognized the area residents' dependence on this resource and established subsistence as a priority over other uses of the resource. Alaska Statute **16.05.258**. *Subsistence use and allocation of fish and game* establishes a subsistence priority for reasonable harvest opportunity consistent with sustained yield management.

ADF&G annually conducts postseason household surveys in most of the Kuskokwim Area communities (Figures 1 and 2) to estimate salmon harvest levels in the subsistence fishery (Fall et al. 2007; Figures 3–6). These harvest estimates are important for fishery managers in run

reconstruction, estimating overall abundance of salmon runs, as well as determining if subsistence fishermen are meeting their harvest needs, but they are not available until long after the fishing season has concluded, and are therefore not timely for inseason management.

Through a collaborative effort with ADF&G, the Orutsararmiut Native Council (ONC) has conducted inseason subsistence salmon surveys to qualitatively assess the run timing and abundance at selected fish camps in communities in the lower Kuskokwim River. Surveys typically occurred annually between June 1 and July 15. Data collected from these surveys were relayed to fishery managers and the Kuskokwim River Salmon Management Working Group (Working Group) on a weekly basis, and provided timely inseason information on relative run strength and timing by species, as well as information about fish condition, water levels and any relevant comments about the fishery.

Historically, fishery managers collected inseason information about subsistence activities ad hoc from subsistence fishermen. This project has increased the number and frequency of fishing family interviews and has provided a broader representation of subsistence salmon catch information that more accurately reflects the status of the lower Kuskokwim River salmon fishery. Inseason subsistence catch information is used in conjunction with other information, such as Bethel test fishery (BTF) catch indices, to guide inseason management decisions. Because this project has been running since 2001, information on an 'in progress' Kuskokwim River fishery can be compared to prior years' information. In this manner, inseason subsistence catch information becomes useful in implementing fishery management actions directed towards achieving escapement goals, providing for a subsistence priority, and providing an opportunity for other fisheries (Table 1). Timely access to inseason subsistence catch information has the potential to increase the precision of the Kuskokwim River fishery management by providing information that is used to assess subsistence fishing activity and provide qualitative information on salmon run abundance inseason.

This report summarizes results from inseason subsistence harvest surveys conducted by ONC with subsistence fishermen in the Bethel area of the lower Kuskokwim River from 2008. This document serves as an annual report for project FIS 06-306 funded by U.S. Fish and Wildlife Service Office of Subsistence Management (OSM). Project 06-306 was also operated in 2006 and 2007 and is a continuation of project FIS 05-307 (2005), project FIS 04-353 (2004) and FIS 01-132 (2001-2003) (Martz and Whitmore 2005; Dull and Shelden 2007).

OBJECTIVES

The objectives for Project No. 06-306, Bethel area inseason subsistence salmon catch monitoring data collection were:

1. Characterize salmon run timing and relative abundance in May, June, and July through weekly interviews with Bethel Area subsistence salmon fishermen;
2. Characterize fishing activity and gear usage through weekly interviews with Bethel Area subsistence salmon fishermen in May, June, and July;
3. Build management capacity by providing local input into the management process for the salmon subsistence fishery in May, June, and July through the presentation of weekly summaries of interviews with Bethel Area subsistence salmon fishermen at Working Group meetings; and
4. Build local capacity by providing cross training to an ONC technician in other ADF&G and USFWS projects for up to 2 weeks.

METHODS

In consultation with ADF&G staff, ONC hired a fishery technician to: 1) conduct weekly interviews with subsistence fishermen along the mainstem Kuskokwim River, 2) summarize those data for Working Group meetings and 3) assist another ONC technician with the cooperative agreement project 06-106 between ADF&G and ONC in the collection of biological data from Chinook salmon taken in the subsistence fishery to characterize the age, sex, and length (ASL) composition of the subsistence harvest by gear type (Molyneaux et al. *In prep*). The ONC technician also conducted inseason subsistence surveys and collected Chinook salmon biological data in the Lower Kuskokwim River area between Napaskiak and the mouth of the Gweek River (Figure 7).

INTERVIEWS

The Lower Kuskokwim River subsistence fishery catch monitoring project relies on voluntary participation of local subsistence fishermen. Participants are allowed to remain anonymous and many have participated since 2001 when the project began. The majority participants are life-long residents of the Kuskokwim Area and represent experienced and knowledgeable fishermen in the Bethel area. Most participants are of Alaska Native descent with a long tradition of practicing subsistence as a way of life. The amount of experience in the fishery by those interviewed ranges from 10 to 50 years. The ONC project lead technician has approximately 24 years of subsistence fishing experience in the Kuskokwim River.

Nearly all participants are interviewed at seasonal fishing locations (fish camps) that have been maintained across generations in the areas of Gweek River, Church Slough, Steamboat Slough, Straight Slough, Old Bethel Airport, Oscarville Slough, Napaskiak Slough, the mainstem Kuskokwim River and Bethel (Figure 7). A list of approximately 54 interview participants (developed and maintained since 2001) from previous years formed the initial list for 2008. The fishery technicians interviewed these 54 families, along with opportunistic encounters with fishermen at the Bethel boat ramp or in other areas within the city of Bethel, during which additional families wishing to participate were added. Generally, the subsistence fisherman responsible for the majority of the subsistence salmon harvest was interviewed at each fish camp. This fisherman usually represents a larger group of people participating in the harvest, processing and preserving of subsistence caught salmon. Based on the success in past years, the same family member of a fish camp is interviewed each week.

The interview format was developed in conjunction with staff from ADF&G, USFWS, and ONC. ADF&G staff took the lead in coordinating and finalizing the interview format and protocols (Appendix B1). Interview questions included family name, community of residence, date household began fishing, fish camp location, fishing area, season harvest goals by species, qualitative assessment of weekly fishing success, progress toward achieving harvest goals, gear types utilized, general comments about fishing conditions, opinion on run timing, fishing difficulties, whether subsistence harvest goals were met, and the date the family completed fishing for each species. The survey questions were designed to: 1) provide information from interviews with individual subsistence fishing families to provide a qualitative assessment of subsistence fishing success, 2) determine timing of the harvest 3) determine if fishermen were selectively harvesting specific salmon species using particular mesh sizes or harvest methods, 4) determine if there were factors other than fish abundance that may have affected the relative success of achieving their harvest goals, and 5) determine salmon run timing based on

subsistence fishermen's perspectives. Fishermen were specifically asked: "Compared with this time in a 'normal' year, how were your catch rates for salmon this week?" Their answers were categorized as 'Very Good', 'Normal', or 'Poor' and the summarized answers were viewed as an index of relative abundance. In order to provide a general characterization of salmon run timing, subsistence fishermen were additionally asked the question: "Does the salmon run appear to be running early, late, or normal?" (Appendix B1).

In 2008, field season preparations began on May 28 and subsistence catch monitoring interviews began on June 4. In addition to the ONC crew lead technician, one new fisheries technician was hired in 2008. This technician was trained by the ONC crew leader that has performed the surveys since the project began in 2001. Each week, the technicians would travel by skiff to 54 outlying fish camps in the lower Kuskokwim River between Oscarville and the mouth of the Kwethluk River (Figure 7). The same general fish camp occupants were contacted as in the previous 6 years of project operations. Bethel fishermen were contacted in-person at their fish camps or by phone at their homes. The technician conducted interviews with subsistence fishermen in Bethel and vicinity[1] fish camps beginning Wednesday of every week from June 4 through July 13. The technician asked questions in order to complete a 2 page survey instrument form (Appendix B1). Completed weekly reports summarizing answers were generally received by ADF&G staff the Monday following the interview week and were sent to a distribution list of Working Group members and the public for each upcoming Working Group meeting (Appendices C1–C6). Additionally, the ONC Natural Resource Director regularly attended Working Group meetings and provided oral summaries of the interviews.

In cooperation with the postseason subsistence harvest project, ONC surveyors carry harvest calendars (on which fishermen can record their daily salmon catches) and give them to people as requested.

Once interviews were finished for 2008 fishing season, the new ONC inseason monitoring fisheries technician received cross training with ADF&G staff while working for approximately 10 days at the Kogrukluk River weir.

RESULTS

Subsistence interviews were conducted over a 6 week period beginning June 1 through the week ending July 13, 2008. On average, 32 families (from an active list of 54 participating families) were interviewed weekly regarding their subsistence fishing activities, with a total of 193 interviews conducted in 2008 (Tables 2 and 3). In total, 6 weekly interview summaries were presented at Working Group meetings during June and July 2008 (Appendices C1–C6).

The most concentrated subsistence fishing activity in the study area occurred during the period from the week ending June 15 through the week ending July 6. This period typically coincides with the highest Chinook salmon abundance, as indicated by the BTF cumulative Catch Per Unit Effort (CPUE) index (Figure 8). During this period, a total of 134 interviews were conducted and 64% of those interviewed reported fishing. The percentage of interviewed families who reported fishing each week ranged from 43% to 84% (Tables 2 and 3). During this time, 37% of fishermen reported Chinook salmon fishing as 'Very Good,' 58% reported Chinook salmon fishing as 'Normal,' and 5% reported Chinook salmon fishing as 'Poor.' During the same time

[1] The Bethel vicinity is defined as: those waters of the mainstem Kuskokwim River between Napaskiak and the lower end of Kuskokuak Slough, including Church Slough.

period, no respondents classified Chinook salmon run timing as early, 1% classified it as normal, and 99% classified the run timing as late.

From mid June through the first week of July, the majority of families interviewed reported using gillnets, with only 3 families using rod and reel as a harvest method. Of the families using gillnets, 80% used only drift gillnet gear, 3 % used only set gillnets and 15% used a combination of set and drift gillnets (Table 4). Of the fishermen using gillnets, 80% used nets with a mesh size greater than 6 inches during this period, as gillnets of this size are primarily used to target Chinook salmon. Whereas slightly over 2% of interviewed fishermen reported only using gillnets with mesh sizes 6 inches or smaller, and 14% reported using a combination of net sizes. A few respondents did not comment on the mesh size of nets they used.

Interviewees declined to comment on the chum and sockeye salmon runs until the week ending June 15, either because they felt it was too early in the run to make an assessment or they were not fishing for those species (Table 2). During mid June to the first week of July, chum salmon fishing was classified as 'Very Good' by 5% of the 86 respondents, 87% classified chum fishing as 'Normal', and 8% classified chum fishing as 'Poor.' In the same 86 interviews, 51% classified sockeye salmon fishing as 'Very Good', 49% classified sockeye fishing as 'Normal,' and no respondents classified sockeye fishing as 'Poor.'

In the 71 interviews conducted from the week ending June 15 through the week ending June 29, 4% of fishermen classified chum salmon run timing as early, 86% classified it as normal, and 10% classified it as late. During the same time period 60% of fishermen classified sockeye salmon run timing as early, 41% classified it as normal, and no fishermen classified the run as late (Table 2).

Of the 32 families interviewed in the final survey week (ending July 13), only 3 families were still fishing for salmon. Of these 3 fishing families, 1 used nets with greater than 6 inch mesh, 1 family used nets 6 inch mesh or less, and 1 family used a combination of net sizes. Because the majority of the salmon runs had concluded, run timing questions were not asked of the interviewees during this time.

Overall in 2008, fishermen were asked to compare the run timing of each species of subsistence caught salmon to what they considered "Normal" for the majority of years they had fished. Answers to these questions by date and species are recorded in Table 5. In addition to run timing and abundance of fish, weather conditions conducive to thoroughly drying fish on open air fish racks is critical to preserving the fish harvest for the year. Rainy weather created difficulty for some subsistence fishermen for drying fish during the beginning of the Chinook run. A few fishermen interviewed indicated that some of their fish soured on the drying racks and had to be replaced, requiring additional fishing effort.

DISCUSSION

Information used to manage the Kuskokwim River fisheries includes: subsistence harvest reports, test fishery project data, and reports of salmon abundance from weir, sonar, and aerial survey programs as salmon approach spawning grounds. The inseason catch monitoring interviews provide an early indication of salmon abundance and subsistence harvest effort. Based on this information, comparisons of inseason subsistence catch information can be made among weeks, within a year, and among years (Tables 2–5; Appendices D1–E2). If the majority of interviewed fishermen rate fishing as 'Very Good' for a given species and week, this may

indicate that a particular run is performing well for that time. Likewise, if the majority of interviewed fishermen rate subsistence fishing as 'Poor', the run may be performing poorly for that time. Now that several years of catch monitoring reports have been collected, it is possible to compare responses among years. Subsistence catch monitoring information, used concurrently with Bethel test fishery catch data, provides a general assessment on salmon abundance and run timing.

Because the majority of salmon harvested for subsistence uses in the Kuskokwim River are Chinook salmon, responses to questions about this species are of particular importance to fishery managers. Chinook salmon arrival and rainy weather in 2008 influenced many participating fishermen to delay fishing activity until after the first week of the 2008 surveys, but fishing effort increased over the following 3 weeks (Table 2, Figure 8). Survey responses indicated low Chinook salmon harvest relative to fishing effort early in the season and higher harvest relative to effort during late June and early July. As shown in Figure 8, subsistence fishing effort for Chinook salmon was highest during the last 3 weeks of June and first week of July. The majority of fishermen surveyed in the last 2 weeks of June were fishing at this time with over 80% fishing in the weeks ending June 22 and June 29. This is consistent with information from 2007, which suggested that the highest subsistence fishing effort for Chinook salmon occurred approximately in the last 2 weeks of June (Smith and Linderman 2008). When compared with run timing data from BTF, the 2008 inseason survey data indicate fishing activity occurred throughout the Chinook salmon run with the majority of effort occurring during the periods of highest CPUE (Figures 8 and 9; Appendix E2). BTF data, which is one indicator used to assess salmon abundance inseason, showed an increase in CPUE from mid June through early July. Data from 2008 indicated higher fishing effort during high Chinook salmon abundance and that harvest was weighted towards the middle part of the run (Figure 9). Fishermen interviewed indicated that the low salmon catches influenced their decision to wait to begin fishing until later in the second week of June. During reconnaissance of the survey route at the start of the season, technicians observed numerous set gillnets and only a few fishermen out on the river with drift gillnets. Some fishermen interviewed who were using less than 6-inch mesh set gillnets indicated they were harvesting whitefish. Over half the interviewed families that were fishing for Chinook with drift gillnets during the second week of June indicated that many Chinook were smaller than average and that there was a high percentage of males being caught.

Bethel test fishery cumulative CPUE abundance indices from 1984 through 2007 indicate that 50% of the Chinook salmon run passes Bethel between June 16 and 29 (Figure 9). During this time period each year, catch numbers in the BTF and participation among interviewees in the subsistence fishery typically decreased following the 50% passage point for Chinook salmon (Bue and Martz 2006; Martz and Dull 2006). In the first few weeks of fishing in 2008, most fishermen interviewed indicated the Chinook salmon run was late. The midpoint of the run in 2008 (determined after completion of the run by BTF) was June 24, roughly 2 days later than average (Figure 9).

During 2008, inseason subsistence survey report summaries were presented at Working Group meetings and compared with historical data (Appendices C, D). In conjunction with inseason run assessment projects such as the BTF, subsistence surveys were used to determine if a reasonable expectation could be made that adequate Chinook salmon abundance existed to meet escapement goals, provide sufficient subsistence fishing opportunity, and support a salmon-directed commercial fishery. By the third week of June, ADF&G biologists determined that there was a

harvestable surplus of Chinook and sockeye salmon in the Kuskokwim River and recommended a commercial opening to the Working Group. The Working Group voted by narrow margin to support a commercial opening; however there was much discussion expressing concern that subsistence harvest had not yet picked up in the lower river and upriver subsistence fishermen had not yet seen many Chinook salmon.

CONCLUSIONS

Management of the Kuskokwim River subsistence salmon fishery is challenging because run assessment information is limited, particularly early in the season as salmon begin migrating to spawning grounds. Incorporating information from an inseason subsistence monitoring program into a management process is beneficial for managing the Kuskokwim subsistence salmon fisheries. Collection of inseason harvest information early in the run is especially beneficial because run assessment information is limited to the Bethel test fishery program. Salmon do not begin arriving at escapement monitoring programs in large numbers until mid to late June, or July in the upper Kuskokwim River area.

This program has been well received by the participating subsistence fishermen each year, who appreciate the opportunity to provide information toward management of Kuskokwim River fisheries. The information gathered by this inseason subsistence catch monitoring project has become very useful to both Working Group members and state and federal managers in making fishery management decisions. In addition to providing information regarding fish availability, subsistence fishing effort, qualitative catch rates, and subsistence fishermen's perceptions on salmon run timing, the inseason subsistence catch monitoring program provides feedback from subsistence fishermen regarding the subsistence fishing schedule, and subsistence fishing closures around commercial fishing periods. This forum provided an excellent opportunity to discuss subsistence fishing issues with fishermen.

The weekly reporting process resulted in discussions of survey data from the lower Kuskokwim River Area, which drew comments from Working Group members and fishermen from the Middle and Upper River areas where surveys were not conducted. These discussions allowed fishermen living and fishing upstream of the survey area to be briefed on surveyed fishing family success in the Lower River area and allowed lower river fishermen to recognize the difference in fish availability (particularly Chinook salmon) in the middle and upper Kuskokwim River. Specifically, discussions focused on the success of subsistence fishermen during the month of June, the abundance of Chinook, chum, and sockeye salmon in the BTF, potential effects of early commercial fisheries openings on upriver subsistence harvest and rainy weather influence on fish drying conditions.

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TABLES AND FIGURES

Table 1.–District 1, Kuskokwim River, commercial fishing periods and subsistence closures, 2008.

Period Number	Date	Subdistrict	Length of Commercial Opening (h)	Subsistence Closure Total (h)
1	Jun 20	1-B	6	15
2	Jun 24	1-B	3	12
3	Jun 27	1-B	3	12
4	Jul 2	Full District	4	0
5	Jul 12	Full District	6	0
6	Jul 19	Full District	6	0
7	Jul 22	Full District	6	0
8	Jul 25	Full District	6	0
9	Jul 30	Full District	6	0
10	Aug 2	Full District	6	0
11	Aug 4	1-A	3	12
12	Aug 6	1-B	4	13
13	Aug 8	Full District	6	15
14	Aug 11	1-A	4	13
15	Aug 13	1-B	4	13
16	Aug 15	1-B	4	13
17	Aug 18	1-A	4	13
18	Aug 20	1-B	4	13
19	Aug 22	Full District	6	15
20	Aug 25	Full district		15

Table 2.–Kuskokwim River inseason subsistence summary report, summary of salmon fishing, 2008.

Summary of Subsistence Salmon Information Collected by ONC Technicians [a]												
	Number of Families			Chinook Salmon			Chum Salmon			Sockeye Salmon		
Week Ending	Interviewed	Fishing	Not Fishing	Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
Jun 08	27	5	22	1	3	0	[b]	[b]	[b]	[b]	[b]	[b]
Jun 15	34	17	17	0	13	4	0	17	0	0	17	0
Jun 22	32	27	5	15	12	0	0	20	7	22	5	0
Jun 29	33	27	6	14	13	0	4	23	0	15	12	0
Jul 06	35	15	20	3	12	0	0	15	0	7	8	0
Jul 13	32	3	29	0	3	0	1	2	0	0	3	0
Total [c]	193	94	99	33	56	4	5	77	7	44	45	0
Average	32	16	17	6	9	1	1	15	1	9	9	0

[a] Represents responses from the question "Compared with this time in a "Normal" year how were catch rates for salmon this week?"

[b] Indicates interviewees declined to comment.

[c] Represents the total number of interviews conducted during the survey year, most families were interviewed more than once.

Table 3.–Kuskokwim River subsistence salmon summary, quality of fishing report, 2008.

Summary of Subsistence Salmon Information Collected by ONC Technicians [a]												
Week Ending	Number		%	% Describing Chinook Fishing as			% Describing Chum Fishing as			% Describing Sockeye Fishing as		
	Interviewed	Fishing	Fishing	Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
Jun 08	27	5	19%	20%	60%	0%	[b]	[b]	[b]	[b]	[b]	[b]
Jun 15	34	17	50%	0%	76%	24%	0%	100%	0%	0%	100%	0%
Jun 22	32	27	84%	56%	44%	0%	0%	74%	26%	81%	19%	0%
Jun 29	33	27	82%	52%	48%	0%	15%	85%	0%	56%	44%	0%
Jul 06	35	15	43%	20%	80%	0%	0%	100%	0%	47%	53%	0%
Jul 13	32	3	9%	0%	100%	0%	33%	67%	0%	0%	100%	0%
Total [c]	193	94										
Average	32	16										

[a] Represents responses from the question “Compared with this time in a “Normal” year how were catch rates for salmon this week?"

[b] Indicates respondents declined to comment.

[c] Represents the total number of interviews conducted during the survey year, most families were interviewed more than once.

Table 4.–Kuskokwim River inseason subsistence survey fishing gear use summary, 2008.

Summary of Subsistence Salmon Information Collected by ONC Technicians									
Week	Number of Families		Fishing with Only		Using Both		Fishing with Only		Using Both
Ending	Interviewed	Fishing	Driftnet	Setnet	Drift & Setnet	Rod & Reel	> 6" mesh	≤ 6" mesh	>6" and ≤6"
Jun 08	27	5	2	1	2	0	0	2	3
Jun 15	34	17	10	1	6	0	15	0	2
Jun 22	32	27	22	1	4	0	23	1	3
Jun 29	33	27	24	1	1	1	20	1	5
Jul 06	35	15	13	0	2	2	11	0	2
Jul 13	32	3	3	0	0	0	1	1	1
Total [a]	193	94	74	4	15	3	70	5	16
Average	32	16	12	1	3	1	12	1	3

[a] Represents the total number of interviews conducted during the survey year, most families were interviewed more than once.

Table 5.–Kuskokwim River subsistence summary report, run timing, 2008.

Summary of Subsistence Salmon Information Collected by ONC Technicians												
Week	Number of Families			Chinook Salmon			Chum Salmon			Sockeye Salmon		
Ending	Interviewed	Fishing	Not Fishing	Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
Jun 08	27	5	22	1	2	2	[a]	[a]	[a]	[a]	[a]	[a]
Jun 15	34	17	17	0	1	16	1	16	0	8	9	0
Jun 22	32	27	5	0	0	27	0	20	7	22	5	0
Jun 29	33	29	6	0	0	33	2	25	0	12	15	0
Jul 06	35	15	20	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jul 13	32	3	29	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total	193	94	74	1	3	78	3	61	7	42	29	0
Average	32	16	12	0	1	20	1	20	2	14	10	0

Note: NA indicates not asked due to majority of run already arrived and respondents indicated timing at start of run.

[a] Indicates respondents declined to comment.

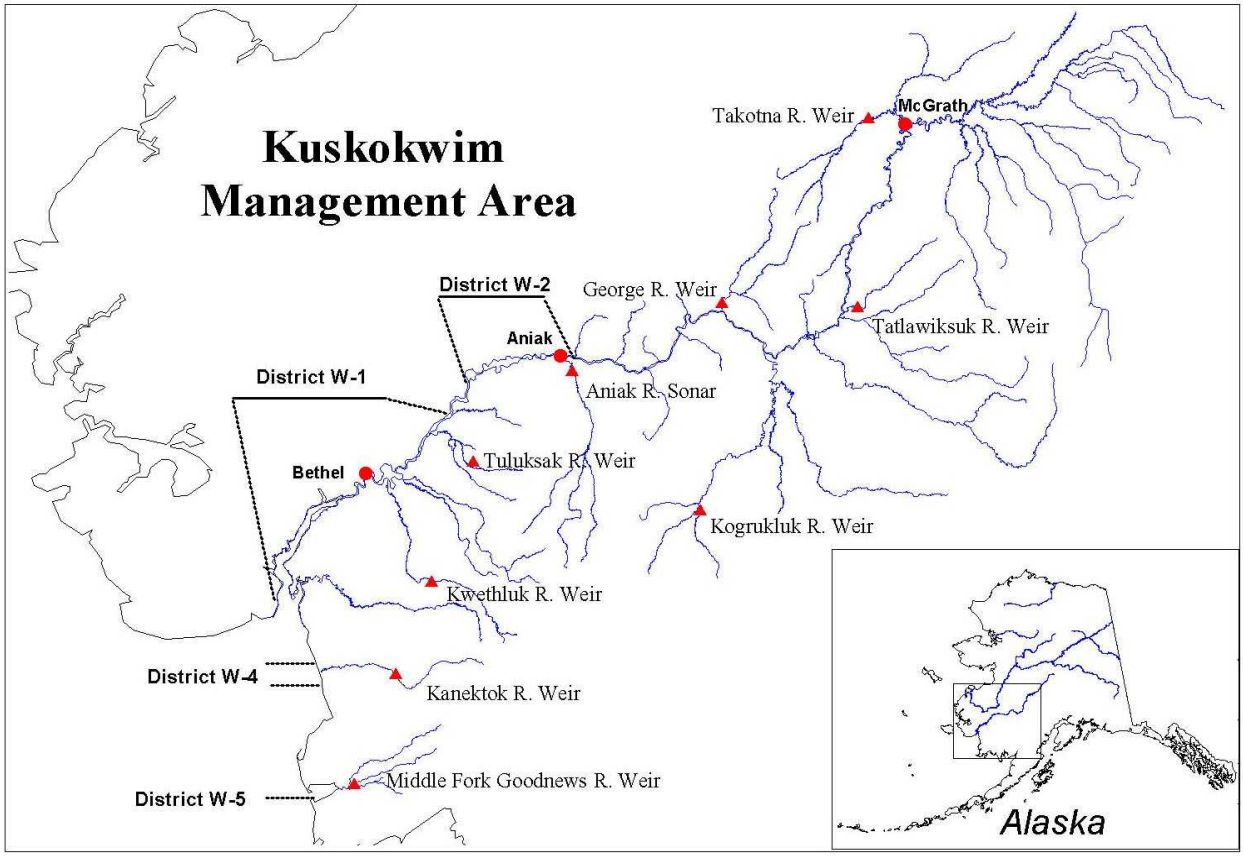
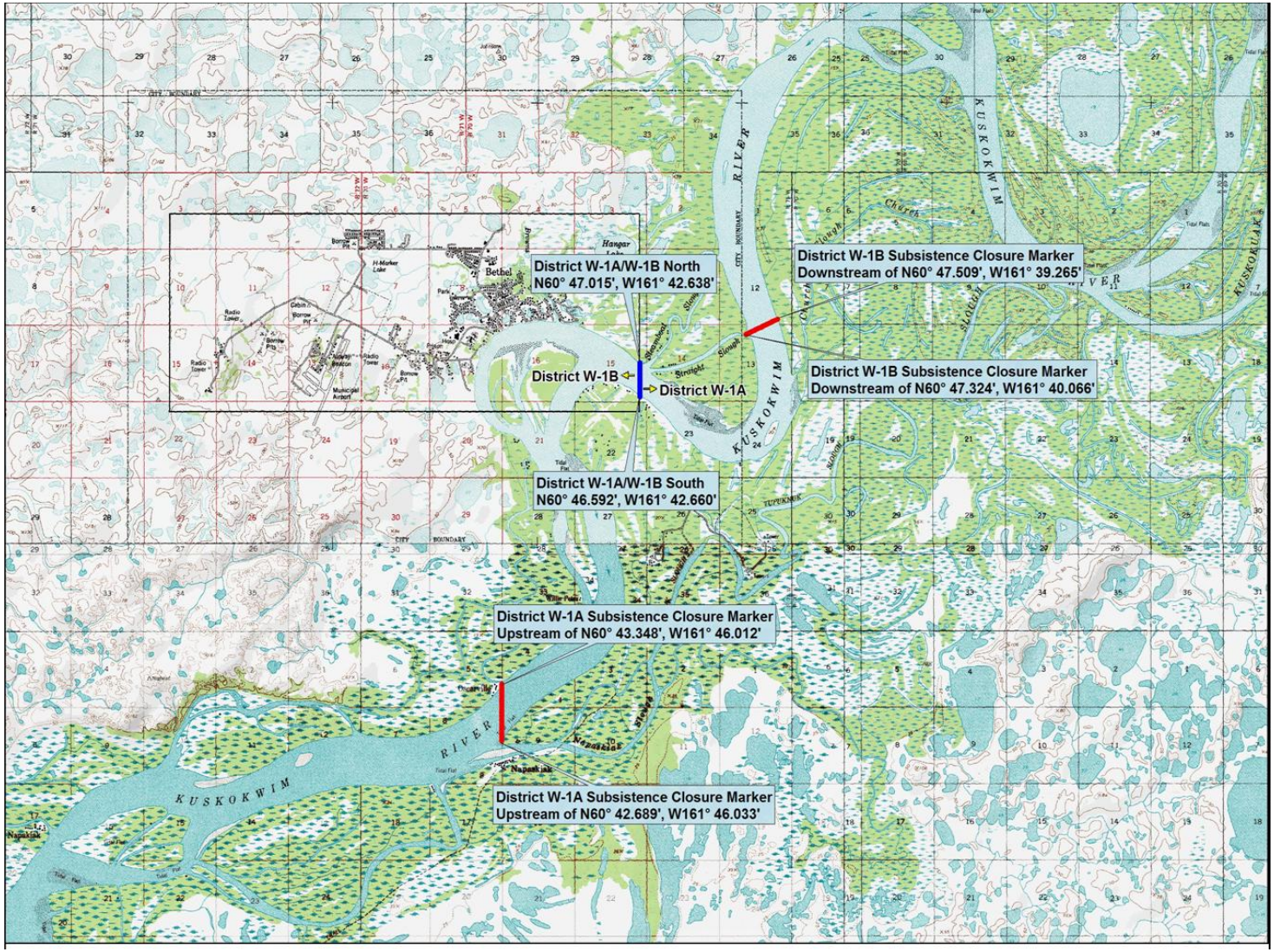


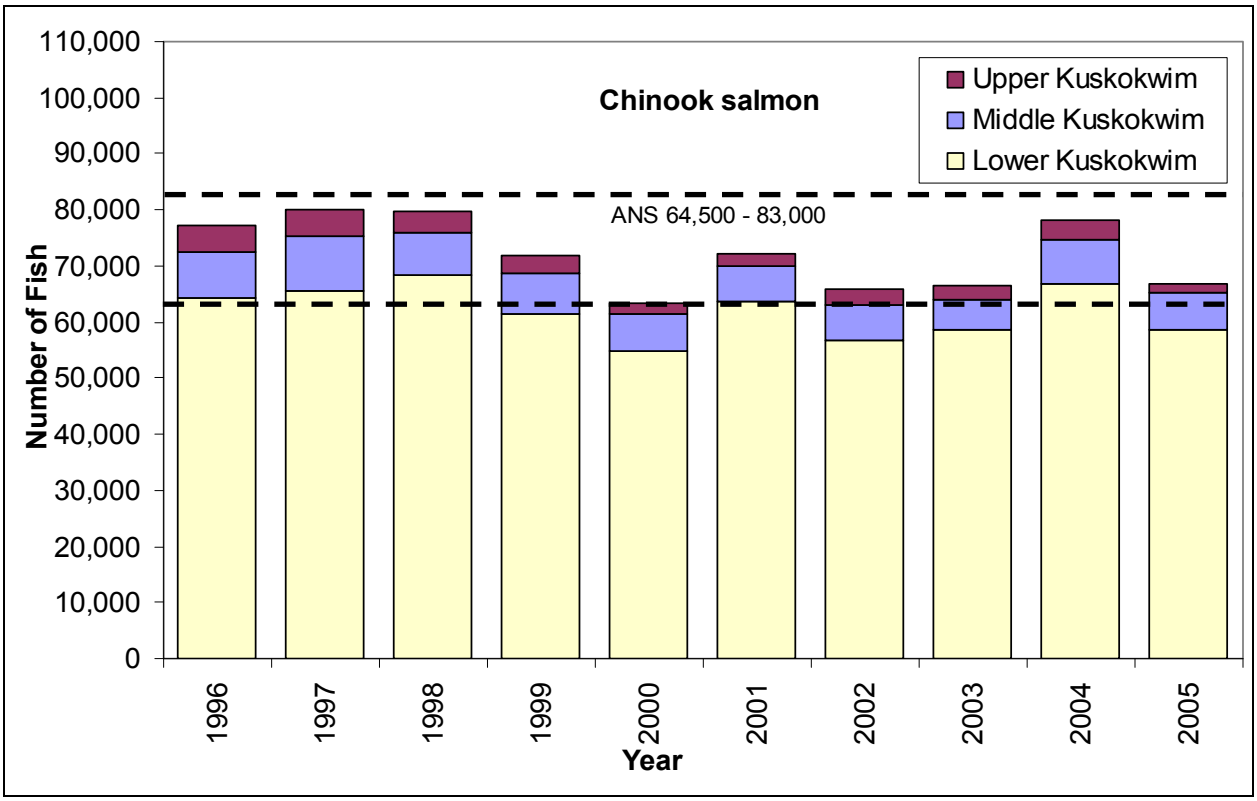
Figure 1.–Kuskokwim Management Area.



Note: Bethel Area commercial salmon subdistrict W-1A and W-1B boundary and subsistence salmon fishing closure boundaries during subdistrict W1-A and W-1B commercial openings (ADF&G 2004).

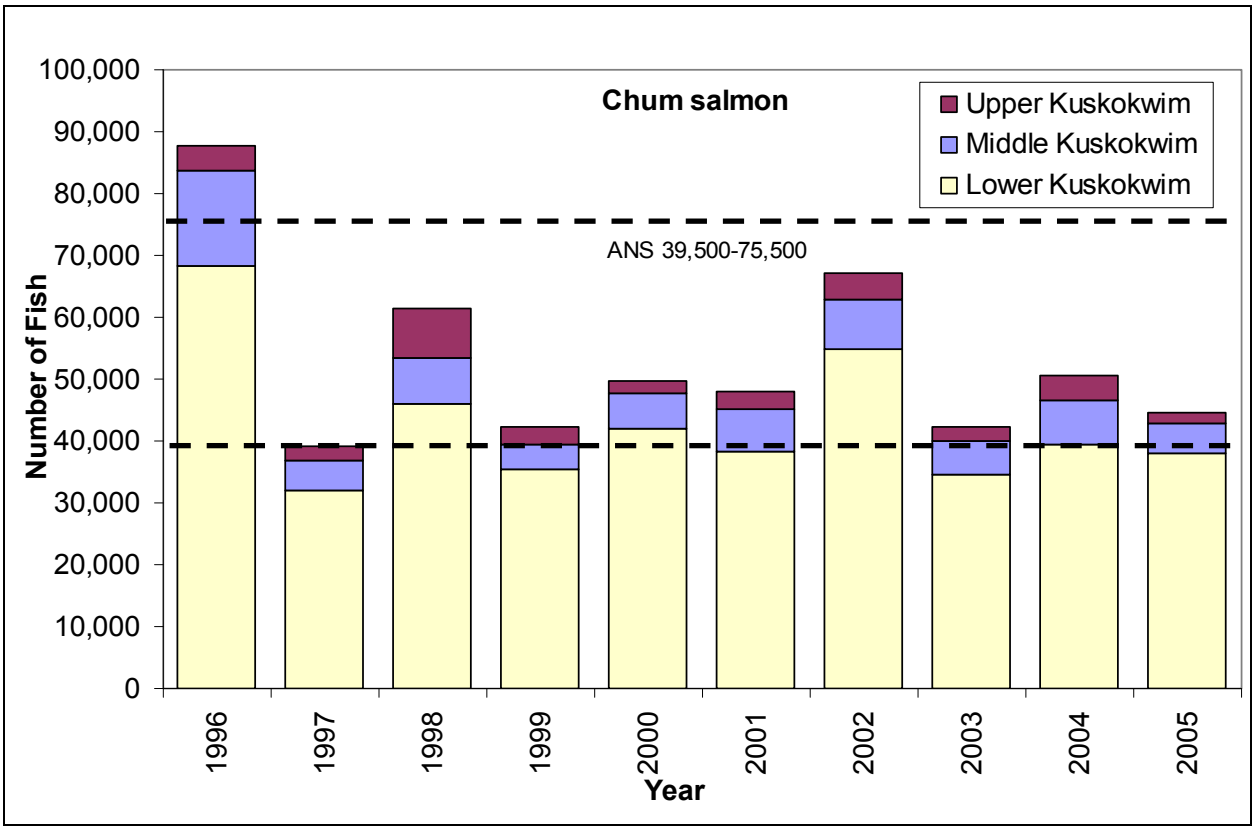
Source: Map not to scale. © 2002 DeLorme (www.delorme.com) 3-D TopoQuads®

Figure 2.–District 1, Subdistricts 1-A and 1-B.



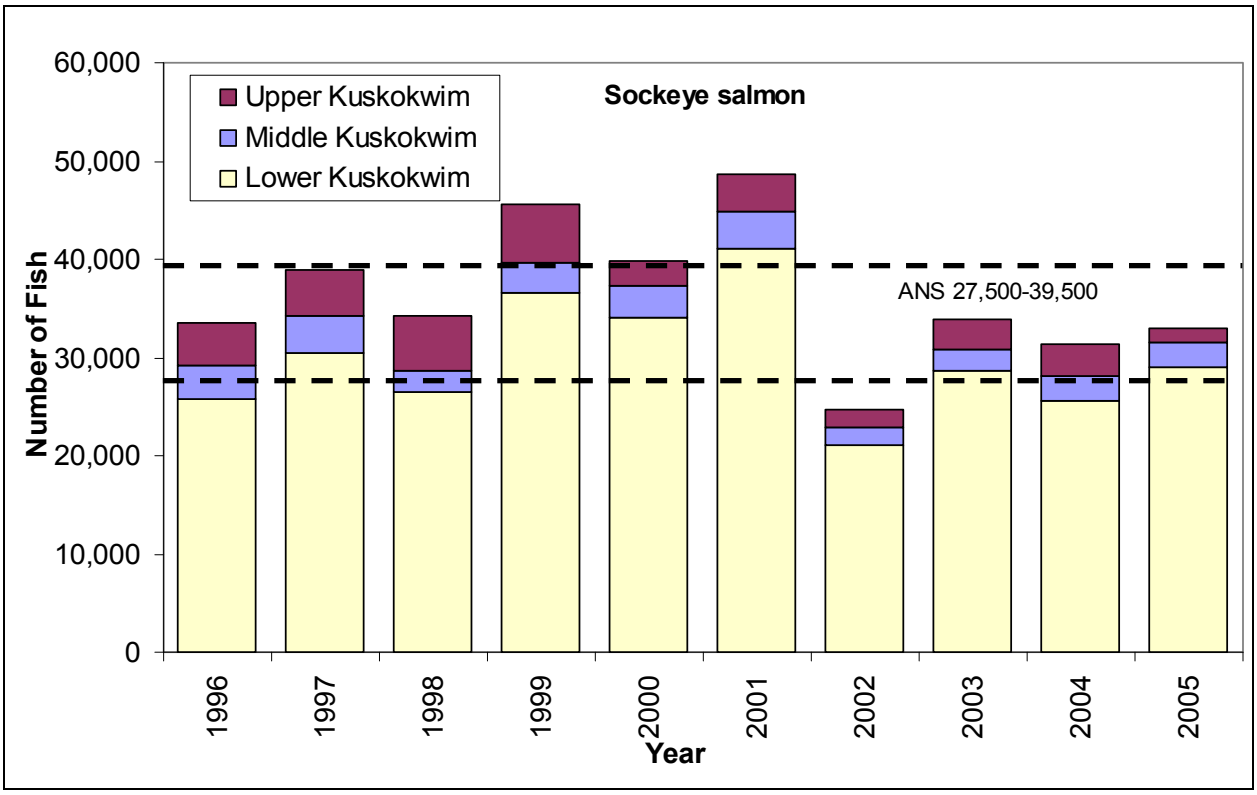
Note: ANS = amount necessary for subsistence.

Figure 3.–Subsistence Chinook salmon harvest as reported by postseason harvest surveys, Kuskokwim River, 1996–2005.



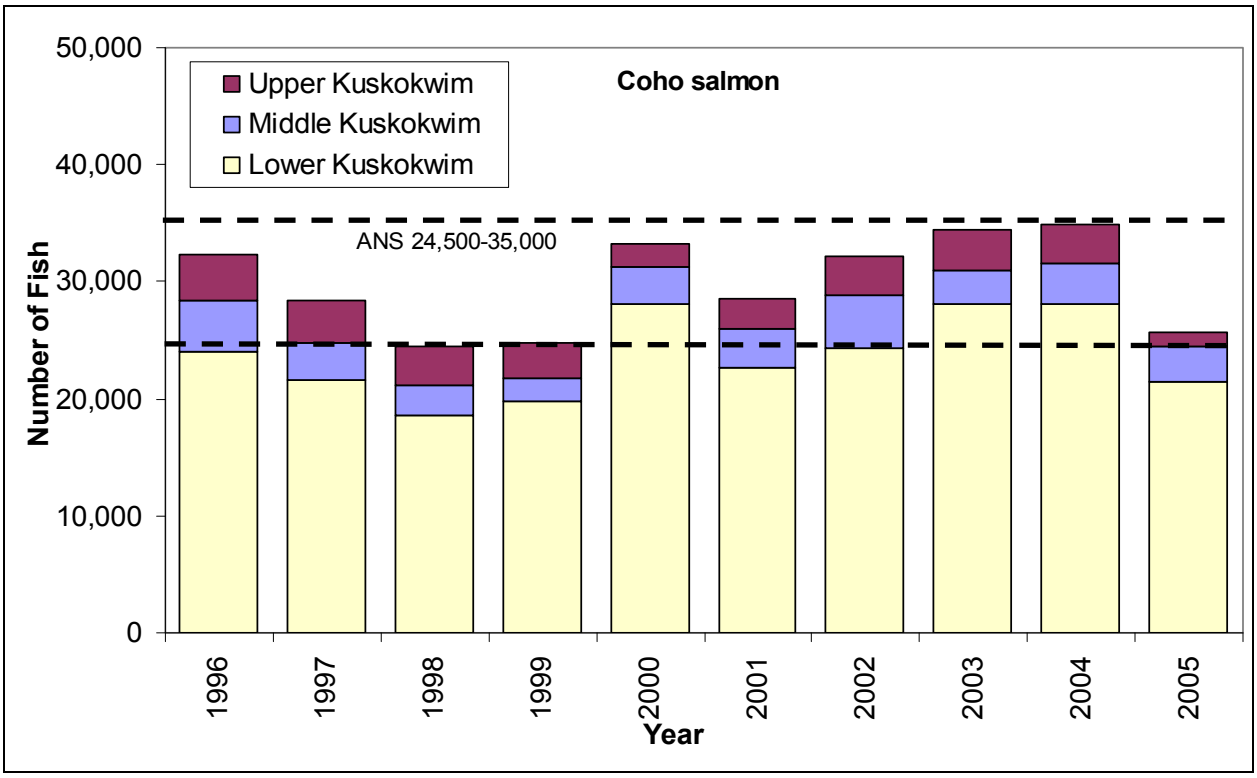
Note: ANS = amount necessary for subsistence.

Figure 4.–Subsistence chum salmon harvest as reported by postseason harvest surveys, Kuskokwim River, 1996–2005.



Note: ANS = amount necessary for subsistence.

Figure 5.–Subsistence sockeye salmon harvest as reported by postseason harvest surveys, Kuskokwim River, 1996–2005.



Note: ANS = amount necessary for subsistence.

Figure 6.–Subsistence coho salmon harvest as reported by postseason harvest surveys, Kuskokwim River, 1996–2005

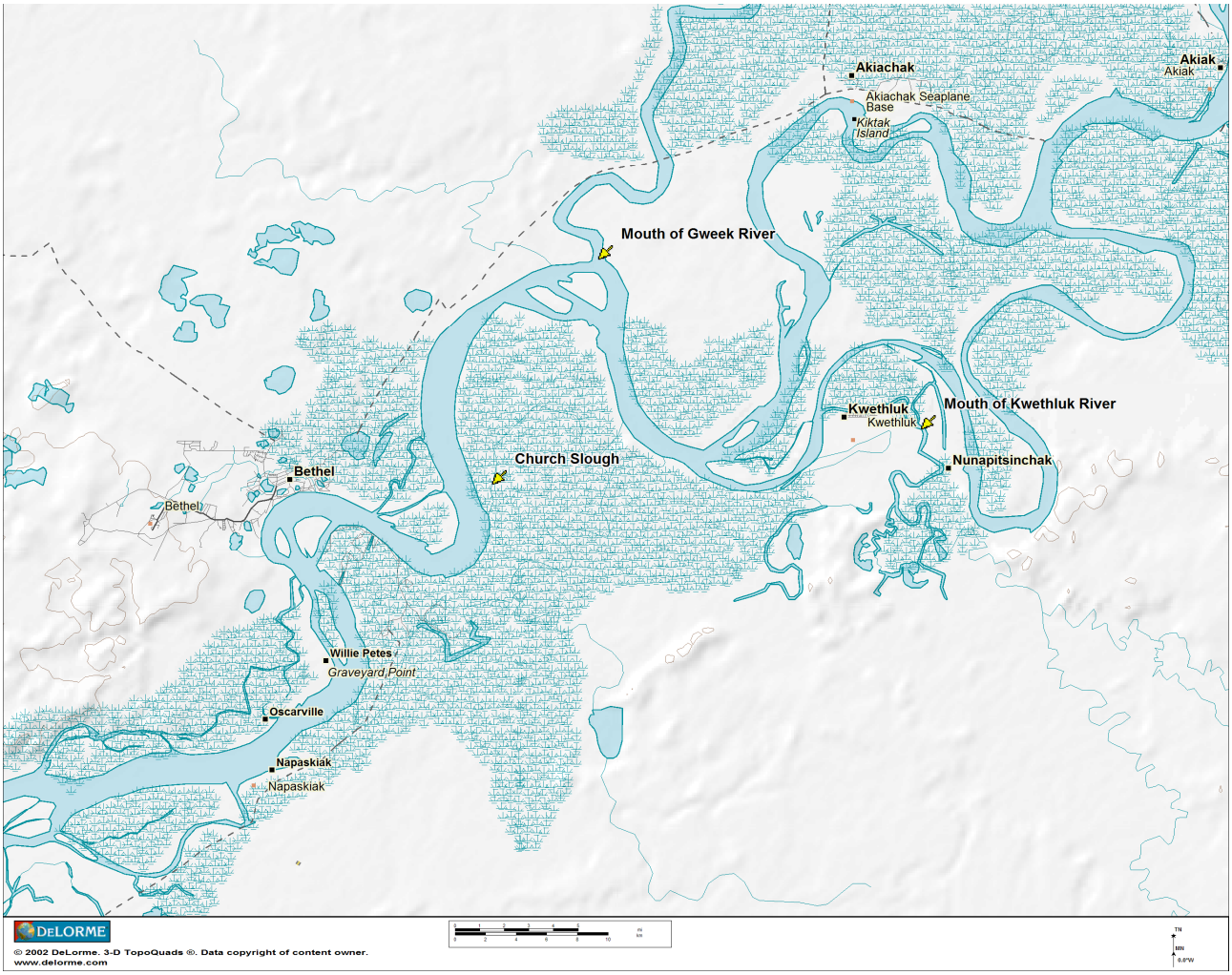


Figure 7.–Subsistence survey area, 2007.

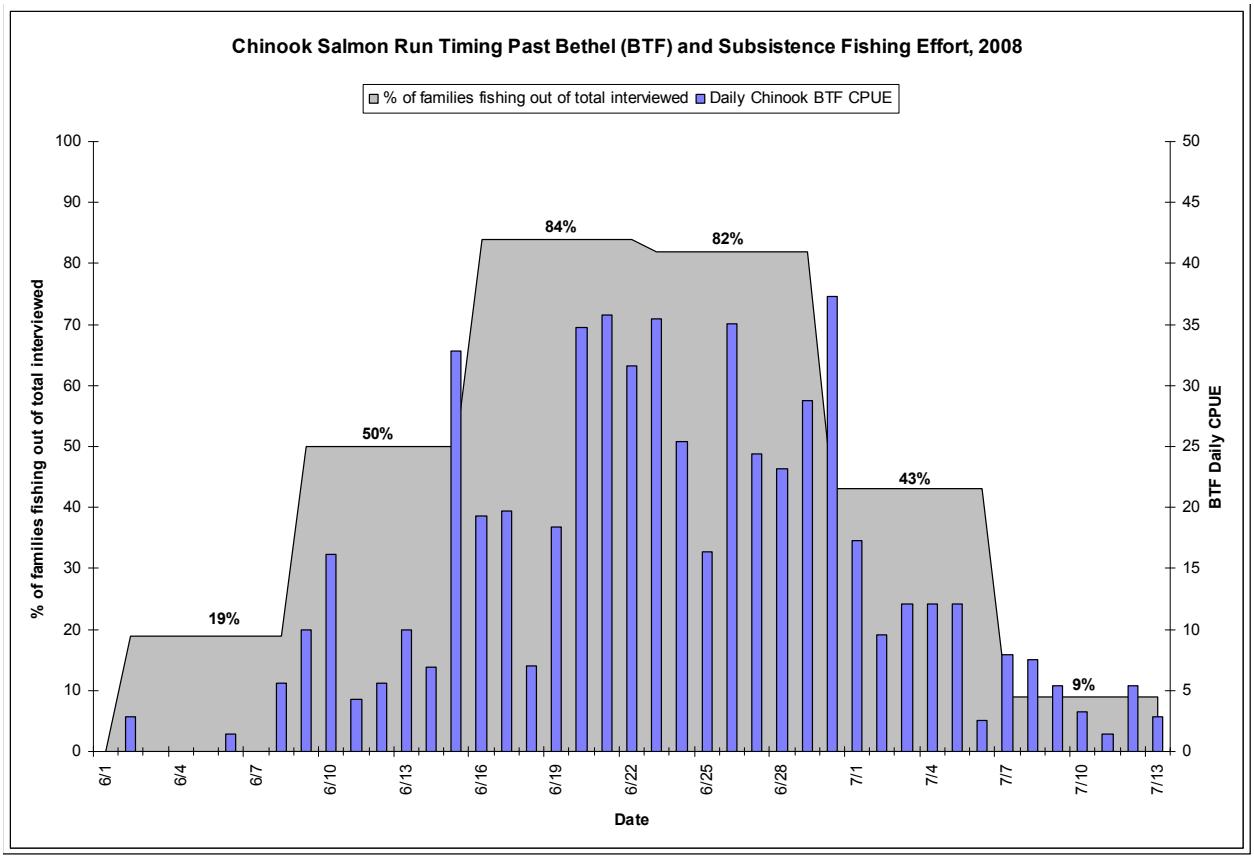


Figure 8.–Chinook salmon run timing past Bethel as estimated by CPUE in the Bethel test fishery, compared with fishing effort by week as shown by the inseason subsistence monitoring program. Percentages on graph represent the number of families fishing out of total families interviewed.

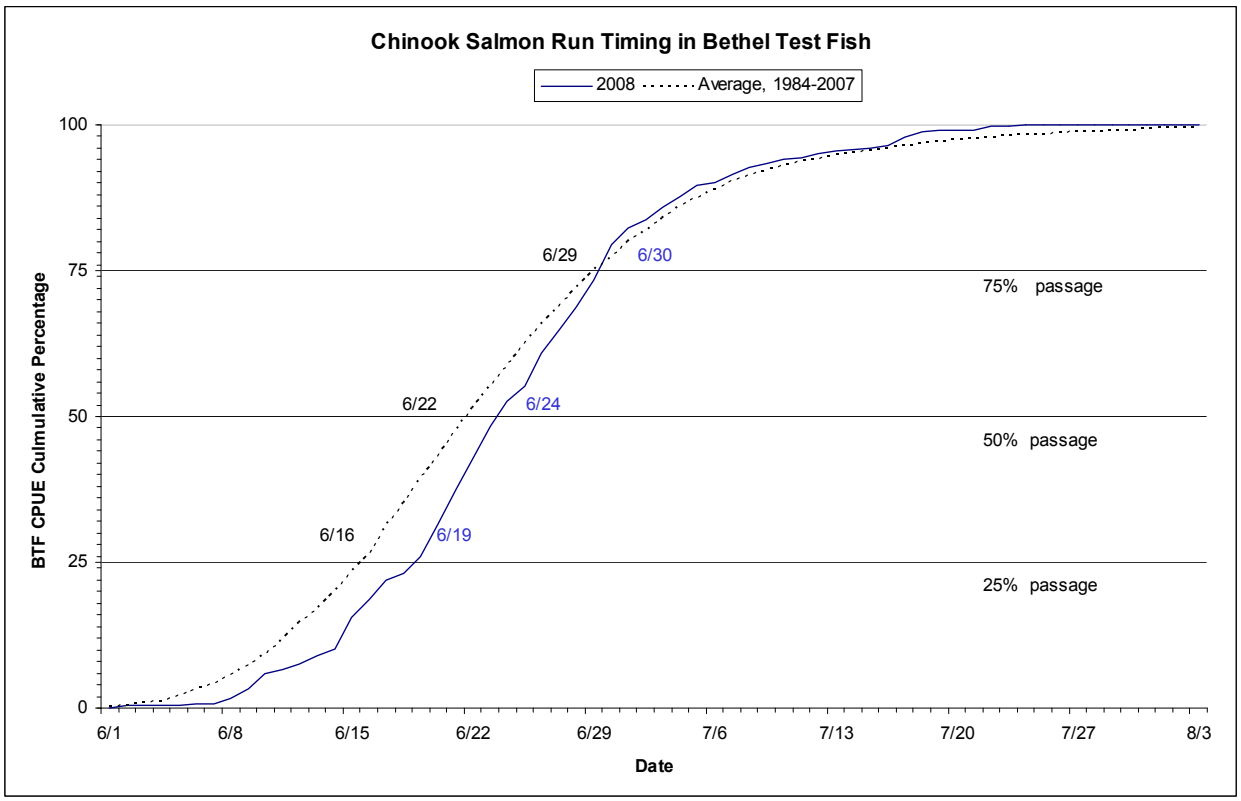


Figure 9.–2008 Chinook salmon run timing past Bethel, as indicated by Bethel Test Fish project.

APPENDIX A. KUSKOKWIM RIVER SALMON UTILIZATION

Appendix A1.–Historical utilization of Chinook salmon in the Kuskokwim River 1960-2008.

Year	Commercial Harvest[a]		Subsistence Harvest[b,c]		Test-Fish Harvest	Sport Fish Harvest	Utilization	Total Average
	Annual	10-yr Ave	Annual	10-yr Ave				
1960	5,969		18,887				24,856	
1961	18,918		28,934				47,852	
1962	15,341		13,582				28,923	
1963	12,016		34,482				46,498	
1964	17,149		29,017				46,166	
1965	21,989		24,697				46,686	
1966	25,545		49,325		285		75,155	
1967	29,986		59,913		766		90,665	
1968	34,278		32,942		608		67,828	
1969	43,997	22,519	40,617	33,240	833		85,447	
1970	39,290	25,851	69,612	38,312	857		109,759	56,008
1971	40,274	27,987	43,242	39,743	756		84,272	64,498
1972	39,454	30,398	40,396	42,424	756		80,606	68,140
1973	32,838	32,480	39,093	42,885	577		72,508	73,308
1974	18,664	32,632	27,139	42,698	1,236		47,039	75,909
1975	22,135	32,646	48,448	45,073	704		71,287	75,997
1976	30,735	33,165	58,606	46,001	1,206		90,547	78,457
1977	35,830	33,750	56,580	45,668	1,264	33	93,707	79,996
1978	45,641	34,886	36,270	46,000	1,445	116	83,472	80,300
1979	38,966	34,383	56,283	47,567	979	74	96,302	81,864
1980	35,881	34,042	59,892	46,595	1,033	162	96,968	82,950
1981	47,663	34,781	61,329	48,404	1,218	189	110,399	81,671
1982	48,234	35,659	58,018	50,166	542	207	107,001	84,284
1983	33,174	35,692	47,412	50,998	1,139	420	82,145	86,923
1984	31,742	37,000	56,930	53,977	231	273	89,176	87,887
1985	37,889	38,576	43,874	53,519	79	85	81,927	92,100
1986	19,414	37,443	51,019	52,761	130	49	70,612	93,164
1987	36,179	37,478	67,325	53,835	384	355	104,243	91,171
1988	55,716	38,486	70,943 [d]	57,303	576	528	127,763	92,225
1989	43,217	38,911	81,175	59,792	543	1,218	126,153	96,654
1990	53,504	40,673	85,976	62,400	512	394	140,386	99,639
1991	37,778	39,685	85,556	64,823	117	401	123,852	103,981
1992	46,872	39,549	64,794	65,500	1,380	367	113,413	105,326
1993	8,735	37,105	87,513	69,511	2,483	587	99,318	105,967
1994	16,211	35,552	93,243	73,142	1,937	1,139	112,530	107,684
1995	30,846	34,847	96,435	78,398	1,421	541	129,243	110,020
1996	7,419	33,648	78,062	81,102	247	1,432	87,160	114,751

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Appendix A1.–Page 2 of 2.

Year	Commercial Harvest[a] Annual	Commercial Harvest[a] 10-yr Ave	Subsistence Harvest[b,c] Annual	Subsistence Harvest[b,c] 10-yr Ave	Test-Fish Harvest	Sport Fish Harvest	Total Utilization	10-Year Average
1997	10,441	31,074	81,577	82,527	332	1,227	93,577	115,340
1998	17,359	27,238	81,264	83,560	210	1,434	100,267	112,590
1999	4,705	23,387	73,194	82,761	98	252	78,249	107,800
2000	444	18,081	64,893	80,653	64	105	65,506	100,312
2001	90	14,312	73,610	79,459	86	290	74,076	95,334
2002	72	9,632	66,807	79,660	288	319	67,486	90,741
2003	158	8,775	67,788	77,687	409	401	68,756	87,685
2004	2,300	7,383	80,065	76,370	691	857	83,913	84,823
2005	4,784	4,777	70,393 [e]	73,765	608	572	76,357	79,535
2006	2,777	4,313	63,177 [e]	72,277	352	444	66,750	77,494
2007	179	3,287	[f]	71,243	305	[f]	484	68,184
10 Yr Avg (1997–2006)	4,313		72,277		314	590	77,494	

[a] Districts 1 and 2 also includes harvests in District 3 from 1960 to 1965.

[b] Estimated subsistence harvest expanded from villages surveyed.

[c] Discrepancies in subsistence harvest numbers by area may be attributable to changes in geographic area definitions over time.

[d] Beginning in 1988, estimates are based on a new formula so data since 1988 is not comparable with previous years.

[e] Preliminary estimate as of February 2008.

[f] Data not yet available.

Appendix A2.–Historical utilization of chum salmon in the Kuskokwim River.

	Commercial Harvest[a]		Subsistence Harvest[b]		Test-Fish	Sport Fish		Total
Year	Annual	10-yr Ave	Annual	10-yr Ave	Harvest	Harvest	Utilization	Average
1960	0		301,753 [c]				301,753	
1961	0		179,529 [c]				179,529	
1962	0		161,849 [c]				161,849	
1963	0		137,649 [c]				137,649	
1964	0		190,191 [c]				190,191	
1965	0		250,878 [c]				250,878	
1966	0		175,735 [c]		502 [d]		176,237	
1967	148		208,445 [c]		338		208,931	
1968	187		275,008 [c]		562		275,757	
1969	7,165	750	204,105 [c]		384		211,654	
1970	1,664	916	246,810 [c]	203,020	1,139 [d]		249,613	209,443
1971	68,914	7,808	116,391 [c]	196,706	254		185,559	204,229
1972	78,619	15,670	120,316 [c]	192,553	486		199,421	204,832
1973	148,746	30,544	179,259 [c]	196,714	675		328,680	208,589
1974	171,887	47,733	277,170 [c]	205,412	2,021		451,078	227,692
1975	184,171	66,150	176,389 [c]	197,963	1,062		361,622	253,781
1976	177,864	83,937	223,792 [c]	202,769	2,101		403,757	264,855
1977	248,721	108,794	198,355 [c]	201,760	576	129	447,781	287,607
1978	248,656	133,641	118,809 [c]	186,140	2,153	555	370,173	311,492
1979	261,874	159,112	161,239 [c]	181,853	412	259	423,784	320,934
1980	483,751	207,320	165,172 [c]	173,689	2,058	324	651,305	342,147
1981	418,677	242,297	157,306 [c]	177,781	1,793	598	578,374	382,316
1982	278,306	262,265	190,011 [c]	184,750	504	1,125	469,946	421,598
1983	276,698	275,061	146,876 [c]	181,512	1,069	922	425,565	448,650
1984	423,718	300,244	142,542 [c]	168,049	1,186	520	567,966	458,339
1985	199,478	301,774	94,750	159,885	616	150	294,994	470,027
1986	309,213	314,909	141,931 [c]	151,699	1,693	245	453,082	463,365
1987	574,336	347,471	70,709	138,935	2,302	566	647,913	468,297
1988	1,381,674	460,773	151,967 [e]	142,250	4,379	764	1,538,784	488,310
1989	749,182	509,503	139,672	140,094	2,082	2,023	892,959	605,171
1990	461,624	507,291	126,509	136,227	2,107	533	590,773	652,089
1991	431,802	508,603	93,077	129,804	931	378	526,188	646,036
1992	344,603	515,233	96,491	120,452	15,330	608	457,032	640,817
1993	43,337	491,897	59,394	111,704	8,451	359	111,541	639,526
1994	271,115	476,636	72,022	104,652	11,998	1,280	356,415	608,123
1995	605,918	517,280	67,861	101,963	17,473	226	691,478	586,968
1996	207,877	507,147	88,966	96,667	2,864	280	299,987	626,617

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Appendix A2.–Page 2 of 2.

	Commercial Harvest[a]		Subsistence Harvest[b]		Test-Fish	Sport Fish	Total	10-Year
Year	Annual	10-yr Ave	Annual	10-yr Ave	Harvest	Harvest	Utilization	Average
1997	17,026	451,416	39,987	93,595	790	86	57,889	552,305
1998	207,809	334,029	63,537	84,752	1,140	291	272,777	425,704
1999	23,006	261,412	43,601	75,145	562	180	67,349	343,143
2000	11,570	216,406	51,696	67,663	1,038	26	64,330	290,499
2001	1,272	173,353	49,874	63,343	1,743	112	53,001	243,180
2002	1,900	139,083	69,019	60,596	2,666	53	73,638	204,841
2003	2,764	135,026	43,320	58,988	1,713	53	47,850	198,471
2004	20,429	109,957	52,374	57,024	1,810	84	74,697	170,300
2005	69,139	56,279	46,777 [f]	54,915	4,459	500	120,875	113,239
2006	44,070	39,899	64,206 [f]	52,439	3,547	13	111,836	94,424
2007	10,783	39,274	[g]	53,823	3,237	[g]	14,020	90,037
10 Yr Avg (1997-2006)	39,899		52,439		1,947	140	94,424	

[a] Districts 1 and 2 only; no chum harvests were reported in District 3.

[b] Estimated subsistence harvest expanded from villages surveyed.

[c] Includes small numbers of small Chinook, sockeye and coho salmon.

[d] Includes small numbers of sockeye.

[e] Beginning in 1988, estimates are based on a new formula so data since 1988 is not comparable with previous years.

[f] Preliminary estimate as of February 2008.

[g] Data not yet available.

Appendix A3.–Historical utilization of sockeye salmon in the Kuskokwim River.

	Commercial Harvest		Subsistence Harvest[a,b,c]		Test Fish	Sport Fish	Total	10-Year
Year	Annual	10-yr Ave	Annual	10-yr Ave	Harvest	Harvest	Utilization	Average
1960								
1961								
1962								
1963								
1964								
1965								
1966								
1967								
1968								
1969	322	322					322	
1970	117	220					117	
1971	2,606	1,015					2,606	
1972	102	787					102	
1973	369	703					369	
1974	136	609					136	
1975	23	525					23	
1976	2,971	831					2,971	
1977	9,379	1,781					9,379	
1978	733	1,676					733	
1979	1,054	1,749					1,054	
1980	360	1,773					360	
1981	48,375	6,350					48,375	
1982	33,154	9,655					33,154	
1983	68,855	16,504				41	68,896	16,508
1984	48,575	21,348					48,575	21,352
1985	106,647	32,010				72	106,719	32,022
1986	95,433	41,257				196	95,629	41,287
1987	136,602	53,979				217	136,819	54,031
1988	[b] 92,025	63,108				291	92,316	63,190
1989	42,747	67,277	35,224			33	78,004	70,885
1990	84,870	75,728	36,274			61	121,205	82,969
1991	108,946	81,785	52,982			38	161,966	94,328
1992	92,218	87,692	32,065			131	124,414	103,454
1993	27,008	83,507	49,347			348	76,703	104,235
1994	49,365	83,586	37,159			359	86,883	108,066
1995	92,500	82,171	27,792			95	120,387	109,433
1996	33,878	76,016	34,214			315	68,407	106,710

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Appendix A3.–Page 2 of 2.

	Commercial Harvest		Subsistence Harvest[a,b,c]		Test Fish	Sport Fish	Total	10-Year
Year	Annual	10-yr Ave	Annual	10-yr Ave	Harvest	Harvest	Utilization	Average
1997	21,989	64,555	40,078			423	62,490	99,277
1998	60,906	61,443	35,426	38,056		178	96,510	99,697
1999	16,976	58,866	46,677	39,201	503	54	64,210	98,317
2000	4,130	50,792	41,783	39,752	413	46	46,372	90,834
2001	84	39,905	50,065	39,461	510	231	50,890	79,727
2002	84	30,692	25,499	38,804	228	42	25,853	69,870
2003	282	28,019	34,452	37,314	646	140	35,520	65,752
2004	9,748	24,058	32,433	36,842	742	400	43,323	61,396
2005	27,645	17,572	34,129 [d]	37,476	1,062	636	63,472	55,705
2006	12,618	15,446	30,226 [d]	37,077	519	231	43,594	53,223
2007	703	13,318	[e]	36,743	488	[e]	1,191	47,094
10 Yr Avg (1997-2006)	15,446		37,077		618 [f]	198	99,697	

[a] Estimated subsistence harvest expanded from villages surveyed.

[b] Beginning in 1988, estimates are based on a new formula so data since 1988 is not comparable with previous years.

[c] Discrepancies in subsistence harvest numbers by area may be attributable to changes in geographic area definitions over time.

[d] Preliminary estimate as of February 2008.

[e] Data not yet available.

[f] Average of test fish harvest 1999–2006.

Appendix A4.–Historical utilization of coho salmon in the Kuskokwim River.

	Commercial Havest		Subsistence Harvest[a,b,c]		Test Fish	Sport Fish	Total	10-Year
Year	Annual	10-Yr Ave	Annual	10-Yr Ave	Harvest	Harvest	Utilization	Average
1960	2,498							
1961	5,044							
1962	12,432							
1963	15,660							
1964	28,613							
1965	12,191							
1966	22,985							
1967	56,313							
1968	127,306							
1969	83,765	36,681						
1970	38,601	40,291						
1971	5,253	40,312						
1972	22,579	41,327						
1973	130,876	52,848						
1974	147,269	64,714						
1975	81,945	71,689						
1976	88,501	78,241						
1977	241,364	96,746						
1978	213,393	105,355						
1979	219,060	118,884						
1980	222,012	137,225						
1981	211,251	157,825						
1982	447,117	200,279						
1983	196,287	206,820				1,375	197,662	
1984	623,447	254,438				1,442	624,889	
1985	335,606	279,804				136	335,742	
1986	659,988	336,953				1,222	661,210	
1987	399,467	352,763				1,767	401,234	
1988 [b]	524,296	383,853				927	525,223	
1989	479,856	409,933	52,857			2,459	535,172	
1990	410,332	428,765	44,786			581	455,699	
1991	500,935	457,733	50,369			1,003	552,307	
1992	666,170	479,638	40,167			1,692	708,029	
1993	610,739	521,084	31,737			980	643,456	
1994	724,689	531,208	33,050			1,925	759,664	
1995	471,461	544,793	36,276			1,497	509,234	
1996	937,299	572,524	32,742			3,423	973,464	

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Appendix A4.–Page 2 of 2.

	Commercial Havest		Subsistence Harvest[a,b,c]		Test Fish	Sport Fish	Total	10-Year
Year	Annual	10-Yr Ave	Annual	10-Yr Ave	Harvest	Harvest	Utilization	Average
1997	130,803	545,658	29,035		33,703 [d]	2,408	195,949	585,820
1998	210,481	514,277	24,864	37,588		2,419	237,764	557,074
1999	23,593	468,650	25,004	34,803	213 [e]	1,998	50,808	508,637
2000	261,379	453,755	33,786	33,703	2,828 [e]	1,689	299,682	493,036
2001	192,998	422,961	29,504	31,617	1,723 [e]	1,204	225,429	460,348
2002	83,463	364,691	32,780	30,878	2,484 [e]	2,030	120,757	401,621
2003	284,064	332,023	35,240	31,228	2,377 [e]	3,244	324,925	369,768
2004	433,809	302,935	35,735	31,497	2,259 [e]	4,996	476,799	341,481
2005	142,319	270,021	27,613 [f]	30,630	1,499 [e]	3,539	174,970	308,055
2006	185,598	194,851	30,706 [f]	30,427	1,186 [e]	1,474	218,964	232,605
2007	141,049	195,875	[g]	30,581	1,821 [e]	[g]	142,870	
10 Yr Avg (1997-2006)	194,851		30,427		1,821 [h]	2,500	232,605	

[a] Estimated subsistence harvest expanded from villages surveyed.

[b] Beginning in 1988, estimates are based on a new formula so data since 1988 is not comparable with previous years.

[c] Discrepancies in subsistence harvest numbers by area may be attributable to changes in geographic area definitions over time.

[d] Includes Bethel and Aniak test fisheries.

[e] Bethel test fishery only.

[f] Preliminary estimate as of February 2008.

[g] Data not yet available.

[h] Average of test fish harvest 1999–2006.

APPENDIX B. EXAMPLE OF SURVEY INSTRUMENT

Appendix B1.–Example of Kuskokwim River subsistence salmon fishing survey form.

Family Name: Lastname Firstname _____ Community _____ Fishcamp Location _____

Date family started salmon fishing this year (month, day) _____ Primary Subsistence Salmon Fishing Areas _____

What are your family's salmon harvest goals this year ? (number of salmon) King _____, Chum _____, Sockeye _____,
Chinook " Red "

		Salmon Fishing Gear Used This Week					Compared with this time in a "NORMAL" year, how were catch rates for salmon this week?									Does the salmon run appear to be running early, late, or normal?								
		Net Type		Mesh ?			King Salmon			Chum Salmon			Sockeye Salmon			King Salmon			Chum Salmon			Sockeye Salmon		
Staff initials	Week Ending	Drift Net	Set Net	6" or Less	More than 6"	Rod Reel	Fish Wheel	Very Good	OK Normal	Poor	Very Good	OK Normal	Poor	Very Good	OK Normal	Poor	Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
	28-May																								
	4-Jun																								
	11-Jun																								
	18-Jun																								
	25-Jun																								
	2-Jul																								
	9-Jul																								
	16-Jul																								
	31-Jul																								

Staff initials	Week Ending	Comments
		Few fish ? Lot of fish ? Weather affecting fishing? Water levels? Size of Fish ? Fish look healthy ? Fishing harder this year ? Drying condidtions? Fishing in more places/areas than usual
	28-May	
	4-Jun	
	11-Jun	
	18-Jun	
	25-Jun	
	2-Jul	
	9-Jul	
	16-Jul	
	31-Jul	

Were your family's salmon harvest goals achieved ? Kings _____, Chum _____, Sockeye_____.

When did your family stop subsistence fishing for: King Salmon_____, Chum Salmon_____, Sockeye Salmon_____,
(month, day) (month, day) (month, day)

APPENDIX C. KUSKOKWIM RIVER INSEASON SUBSISTENCE SALMON CATCH MONITORING WEEKLY REPORTS, 2008

Fishing ending the week of June 8, 2008.

Families Surveyed	Families Not Fishing	Using Driftnets	Using Setnets	Both	Gillnets More than 6" mesh	Gillnets less than 6" mesh	Both
27	22	2	1	2	0	2	3

Compared with this time in a normal year, how are catch rates for salmon this week?

Chinook			Chum			Sockeye		
Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
1	3	0	N/A	N/A	N/A	N/A	N/A	N/A

Does the salmon run appear to be running early, late, or normal?

Chinook			Chum			Sockeye		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
1	2	2	N/A	N/A	N/A	N/A	N/A	N/A

Comments: 27 families were surveyed this week starting Wednesday. 22 families did not fish this week. 5 families reported fishing this week. 2 families reported fishing with drift nets. 1 family reported using only a set net. 2 families reported using both set and drift nets. This week we organized our survey forms, put together ASL kits, and got our boat ready for the season. Efforts focused on re-contacting past or previous ASL samplers as families prepare their camps for their harvests for the coming season. There is not a lot of fishing activity in camps yet, although it is expected to pick up to full speed over the coming week. On Sunday, observing the fishing activity on the river from the mouth of Church slough down to Oscarville, there were 30 set nets, and drifting activity appeared light with only 4 boats fishing at the regular sites. Water levels are higher compared to last year with water clarity about average for this time of year as noted by our fishing families.

Chinook: 1 family reported their Chinook catches as very good. 3 families reported their catches as normal. No families reported their catches as poor. Those fishermen with set nets out report their catches picking up dramatically in the past couple days. Drifters reported catching one or 2 per couple drifts and commented that they will wait until the run picks up for better catch rates. Two fishermen report their catches as smaller on average for first catches but expect a strong return of Chinook this year. 1 family reported the run return as early compared to the last couple of years. 2 families reported the salmon run timing as normal. 2 fishermen report compared to on average over prior years the run appears to be late.

Chum: Still too early in the season to asses the run. Fisherman using less than 6 inch mesh are using whitefish gear set nets.

Sockeye: N/A

Appendix C2.–Kuskokwim River inseason subsistence salmon harvest weekly report, Orutsararmiut Native Council, June 15, 2008.

Fishing ending the week of June 15, 2008.

Families Surveyed	Families Not Fishing	Using Driftnets	Using Setnets	Both	Gillnets More than 6" mesh	Gillnets less than 6" mesh	Both
34	17	10	1	6	15	0	2

Compared with this time in a normal year, how are catch rates for salmon this week?

Chinook			Chum			Sockeye		
Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
0	13	4	0	17	0	0	17	0

Does the salmon run appear to be running early, late, or normal?

Chinook			Chum			Sockeye		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
0	1	16	1	16	0	8	9	0

Comments: 34 families were surveyed this week. 17 families did not fish this week. 17 families reported fishing this week. 10 families reported fishing with drift nets. 1 family reported using only a set net. 6 families reported using both set and drift nets. This week we distributed 8 more ASL sampling kits on top of the 15 sampling packs distributed the previous week. Half of the families surveyed this week have been fishing towards their harvest goals for Chinook this week. Observing the fishing activity on the river from the upper mouth of Church slough down to Oscarville, there were 25 set nets, and drifting activity has been picking up at the regular sites.

Chinook: No families reported their Chinook catches as very good. 13 families reported their catches as normal. 4 families reported their catches as poor. 8 families that have not started their Chinook harvests are waiting for the bigger fish and higher catch rates. 9 families reported their catches as smaller on average with a higher number of males in their catch. One fisherman switched out their 8" mesh to 6" mesh to target the abundance of smaller Chinook to reach their harvest goal quicker. 6 families reported on Sunday that the bigger fish are just starting to run. 2 families report their Chinook harvest goals almost complete. With an additional week into the season fishermen on our survey list have a better assessment on the run timing. No families reported the run return as early. 1 family reported the salmon run timing as normal. 16 families report the run to be late compared to previous years.

Chum: No families reported their chum catches as very good. 17 families reported their catches as normal. No families reported their chum catches as poor. The majority of families are still using their Chinook gear and assessments made on the chum run are a reflection of by-catch rates compared to a normal year. 1 family reported the run return as early. 16 families report the salmon run timing as normal. No families report the run to be late compared to previous years.

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Sockeye: No families reported their sockeye catches as very good. 17 families reported their catches as normal. No families reported their sockeye catches as poor. The majority of families are still using their Chinook gear and assessments made on the sockeye run are a reflection of by-catch rates compared to a normal year. 8 families reported the run return as early. 9 families report the salmon run timing as normal. No families report the run to be late compared to previous years.

Appendix C3.–Kuskokwim River inseason subsistence salmon harvest weekly report, Orutsararmiut Native Council, June 24, 2008.

Fishing ending the week of June 22, 2008.

Families Surveyed	Families Not Fishing	Using Driftnets	Using Setnets	Both	Gillnets More than 6" mesh	Gillnets 6" mesh or less	Both
32	5	22	1	4	23	1	3

Compared with this time in a normal year, how are catch rates for salmon this week?

Chinook			Chum			Sockeye		
Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
15	12	0	0	20	7	22	5	0

Does the salmon run appear to be running early, late, or normal?

Chinook			Chum			Sockeye		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
0	0	27	0	20	7	22	5	0

Comments: Of the 32 families contacted; 27 families reported fishing this week, 5 families reported not fishing this week. 22 families reported using drift nets. 1 family reported using only a setnet. 4 families reported using both drift and setnets. 14 families reported just starting this week. 5 families on the survey route were complete with their salmon harvests. 4 families reported being close to their harvest goals for all salmon this season. This week was a busy week for many families as fish racks are filling up, catches are increasing and fishing spots crowded due to the commercial opening on Friday June 20th. 2 families' fish have soured due to bad weather and have to start their harvests all over again. 4 fishermen report a lot of fish are running now. There were a couple concerned families worried that due to the lateness of the run; the commercial opening might have been too early to determine the excess in escapement for the season.

Chinook: 15 families reported the fishing as very good. 12 families reported the fishing as normal. No families reported the fishing as poor. As hoped, the larger in size Chinook run has picked up over the week and the average catches have increased. 9 families reported the larger Chinook are finally here, while 4 families are not sure that their larger catches are due to the thinning out of smaller fish during the commercial opening. It was noted by fishermen that fishing at the right tide is crucial for better drifting.

Chum: No families report the fishing as very good. 20 families reported the fishing as normal. 7 families report the fishing as poor. Most fishermen surveyed are still using larger mesh Chinook gear and report their chum catches as by catch due as comparison to previous years. There have been 4 reports that chum are fewer in numbers than in previous years.

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Sockeye: 22 families reported their sockeye catches as very good. 5 families reported the fishing as normal. No families reported the fishing as poor. The majority of our families on our survey list have reported this year's run of sockeye very good. Most fishermen surveyed are still using large mesh Chinook gear and report their by catch sockeye compared to previous normal years as very good. 8 fisherman report as seen in the past there is a waxing and waning of sockeye numbers year to year. This year is in favor of the sockeye.

Appendix C4.–Kuskokwim River inseason subsistence salmon harvest weekly report, Orutsararmiut Native Council, June 29, 2008.

Fishing ending the week of June 29, 2008.

Families Surveyed	Families Not Fishing	Using Driftnets	Using Setnets	Both	Rod & Reel	Gillnets More than 6" mesh	Gillnets 6" mesh Or less	Both
33	6	24	1	1	1	20	1	5

Compared with this time in a normal year, how are catch rates for salmon this week?

Chinook			Chum			Sockeye		
Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
14	13	0	4	23	0	15	12	0

Does the salmon run appear to be running early, late, or normal?

Chinook			Chum			Sockeye		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
0	0	33	2	25	0	12	15	0

Comments: Of the 33 families contacted; 27 families reported fishing this week. 6 families reported not fishing this week. 1 family from Kipnuk did not make it this year due to high gas prices. 9 families reported they are all finished with their harvests of Chinook, Chum, and Sockeye harvests for the season. Harvest goals in our survey area are reaching success this week with 10 families planning on going out again to finish their goals. 4 families that started late report their harvest goals are easily being met and the weather finally nice for drying. 3 families reported their catch rates have slowed down since the commercial harvests. It was noted by 5 fishermen that fishing at the right time of tide is crucial for better drifting. 24 families reported using drift nets. 1 family reported using only a setnet. 1 family reported using both drift and setnets. 1 family reported using rod and reel.

Chinook: 14 families reported the fishing as very good. 13 families reported the fishing as normal. No families reported the fishing as poor. The majority of fishermen reported this week that the run has picked up and the majority of their catches have been big fish and mainly females. 3 fishermen reported the Chinook are starting to show color, an indication of the run slowing down. 9 families are complete with their Chinook harvests. Out of all the families surveyed, 7 families will still be fishing for Chinook next week.

Chum: 4 families reported the fishing as very good. 23 families reported the fishing as normal. No families reported the fishing as poor. As expected, Chums have pick up in numbers and make up about half of catches when fished with smaller gear. 7 fishermen report their chums

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starting to show color, an indication of the end of the run. Most fishermen surveyed are still using large mesh Chinook gear and report chum catches as by catch due to their increased focus on targeting Chinook.

Sockeye: 15 families reported the fishing as very good. 12 families reported the fishing as normal. No families reported the fishing as poor. Most fishermen surveyed are still using large mesh Chinook gear and report their by catch sockeye sufficient enough and had no need to switch to smaller gear. The majority of fishermen noted that this is a Sockeye year as their abundance alternates on an every other year cycle. 1 family reported going out for one day with 8" gear and catching all their sockeye they needed as well as Chinook.

Appendix C5.–Kuskokwim River inseason subsistence salmon harvest weekly report, Orutsararmiut Native Council, July 6, 2008.

Fishing ending the week of July 6, 2008.

Families Surveyed	Families Not Fishing	Using Driftnets	Using Setnets	Both	Rod & Reel	Gillnets More than 6" mesh	Gillnets 6" mesh Or less	Both
35	20	13	0	2	2	11	0	2

Compared with this time in a normal year, how are catch rates for salmon this week?

Chinook			Chum			Sockeye		
Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
3	12	0	0	15	0	7	8	0

Comments: Of the 35 families contacted; 15 families reported fishing this week. 13 families reported using drift nets. No families reported using only setnets. No families reported using both drift and setnets. 11 families reported using gillnets with greater then 6" mesh. No families reported using gillnets with 6" mesh or less. 2 families reported using both larger and smaller than 6" mesh. 18 families reported they are all finished with their harvests of Chinook, Chum, and Sockeye harvests for the season. 2 families on the survey route list could not fish this season. This week families are finishing up with their salmon for the season as smokehouses continue to smoke and harvest goals satisfied. 3 families plan to go out one last time to meet their harvest goals. The rod & reelers we interviewed reported a lot of fishing activity at the mouth of the Little Kasigluk and a good average of bites.

Chinook: 3 families reported the fishing as very good. 12 families reported the fishing as normal. No families reported the fishing as poor. 6 fishermen reported the majority of their catches have been big fish and mainly females. 11 reported the Chinook run has slowed down and the Chinook are starting to show color, an indication that the run is ending. Out of all the families surveyed, 3 families plan on fishing one last time for next week. One family that started late reported their season fairly easy and harvest goals no problem to reach.

Chum: No families reported the fishing as very good. 15 families reported the fishing as normal. No families reported the fishing as poor. Those families that drifted reported an abundance of large Chum by catch rates in their Chinook gear. 8 families reported their chum catches are showing color, an indication that the run is ending.

Sockeye: 7 families reported the fishing as very good. 8 families reported the fishing as normal. No families reported the fishing as poor. Fishermen noted that this is a Sockeye year as their abundance alternates on an every other year cycle. 7 families that were still using their larger mesh gear this week reported their by catch rates of sockeye still very good.

Appendix C6.–Kuskokwim River inseason subsistence salmon harvest weekly report, Orutsararmiut Native Council, July 13, 2008.

Fishing ending the week of July 13, 2008.

Families Surveyed	Families Not Fishing	Using Driftnets	Using Setnets	Both	Rod & Reel	Gillnets More than 6" mesh	Gillnets 6" mesh Or less	Both
32	29	3	0	0	0	1	1	1

Compared with this time in a normal year, how are catch rates for salmon this week?

Chinook			Chum			Sockeye		
Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
0	3	0	1	2	0	0	3	0

Comments: Of the 32 families contacted; 3 families reported fishing this week. 3 families reported using drift nets. No families reported using only setnets. No families reported using both drift and setnets. 1 family reported using gillnets with greater then 6" mesh. 1 family reported using gillnets with 6" mesh or less. 1 family reported using both larger and smaller than 6" mesh. All 32 families reported they are all finished with their harvests of Chinook, Chum, and Sockeye harvests for the season as of this week. 2 families on the survey route list could not fish this season. 3 families that started late reported no problems or set backs in reaching harvest goals. 2 families plan to go out fishing until the run is over for their dog teams. 2 families plan to rod & reel if the weather is good next week. The bad weather over the past few days disabled a couple fishermen who did want to go and drift.

Chinook: No families reported the fishing as very good. 3 families reported the fishing as normal. No families reported the fishing as poor. All families on our survey list are complete with their Chinook harvests. Overall, the run of Chinook this year was about ten days late and harvest goals took a little more effort due to the required closures of subsistence fishing on both ends of the commercial opening. Some families had to suspend their fishing efforts when they had just begun to endure the logistical hardship of pulling set nets earlier than planned. The Chinook run has slowed down significantly through this week. Chinook caught in drift nets are red in color, commented as an indication of the end of the run. One lucky fisherman reported going out earlier in the week and catching eleven Chinook in 2 drifts.

Chum: 1 family reported the fishing as very good. 2 families reported the fishing as normal. No families reported the fishing as poor. Those families that drifted reported an abundance of large Chum by catch rates in their Chinook gear and an overwhelming catch rate in their smaller mesh gear. 3 families reported their chum catches are showing color, an indication that the run is ending.
Sockeye: No families reported the fishing as very good. 3 families reported the fishing as normal. No families reported the fishing as poor. All families on our survey list are complete with their sockeye harvests. Fishermen noted that this is a Sockeye year as their abundance alternates on an every other year cycle.

APPENDIX D. EXAMPLE OF LOWER KUSKOKWIM RIVER SUBSISTENCE CATCH MONITORING INFORMATION PRESENTED AT KUSKOKWIM RIVER SALMON MANAGEMENT WORKING GROUP MEETINGS

Appendix D1.–Example of Lower Kuskokwim River inseason subsistence catch monitoring historical information presented at Kuskokwim River Salmon Management Working Group Meetings, 2001 to 2008.

Summary of Subsistence Salmon Information Collected by ONC Technicians [a,b]

	Week	Number of Families			Chinook Salmon			Chum Salmon			Sockeye Salmon		
Year	Ending	Interviewed	Fishing	Not Fishing	Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
2001	9 Jun	16	16	0	6	6	4	[c]	[c]	[c]	[c]	[c]	[c]
	16 Jun	39			18	15	6	1	19	15	13	24	1
	23 Jun	35			27	7	1	0	15	20	24	11	0
	30 Jun	40	25	15	8	7	8	5	12	8	19	6	0
	7 Jul	44	7	37	0	1	5	4	1	1	0	5	2
	14 Jul	44	6	38	0	0	4	4	2	0	0	0	4
2002	8 Jun	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]
	15 Jun	27	23	4	21	2	0	3	8	7	3	11	3
	22 Jun	33	25	8	17	5	3	12	9	3	2	10	10
	29 Jun	34	22	12	16	6	0	21	0	0	0	3	16
	6 Jul	34	5	29	0	2	3	3	2	0	0	0	5
	13 Jul	36	10	26	0	3	5	8	0	0	0	0	8
2003	7 Jun	18	9	9	7	2	0	[c]	[c]	[c]	[c]	[c]	[c]
	14 Jun	33	24	9	22	2	0	0	2	0	0	3	0
	21 Jun	48	32	14	30	2	1	1	0	0	7	18	3
	28 Jun	50	34	16	30	4	0	3	9	13	27	7	0
	5 Jul	45	21	24	16	5	0	8	13	0	16	5	0
	12 Jul	46	14	32	0	12	2	13	1	0	0	12	2
2004	5 Jun	31	10	21	6	4	0	[c]	[c]	[c]	[c]	[c]	[c]
	12 Jun	41	37	4	27	8	2	[c]	[c]	[c]	[c]	[c]	[c]
	19 Jun	35	31	4	23	8	0	4	27	0	4	27	0
	26 Jun	43	31	12	19	12	0	24	7	0	5	22	4
	3 Jul	44	22	22	3	17	0	10	10	0	0	13	7
	10 Jul	44	13	31	0	10	0	8	2	0	0	4	6
2005	4 Jun	34	12	22	0	12	0	[c]	[c]	[c]	[c]	[c]	[c]

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Appendix D1.–Page 2 of 2.

Year	Week Ending	Number of Families			Chinook Salmon			Chum Salmon			Sockeye Salmon		
		Interviewed	Fishing	Not Fishing	Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
2005	11 Jun	39	26	13	20	6	0	[c]	[c]	[c]	[c]	[c]	[c]
	18 Jun	48	42	6	36	6	0	14	28	0	31	11	0
	25 Jun	48	34	14	25	5	0	19	15	0	28	6	0
	2 Jul	32	3	29	3	0	0	2	1	0	3	0	0
	9 Jul	22	2	20	0	2	0	1	1	0	1	1	0
2006	3 Jun	22	0	22	0	0	0	[c]	[c]	[c]	[c]	[c]	[c]
	10 Jun	32	19	13	6	13	0	0	0	0	[c]	[c]	[c]
	17 Jun	36	30	6	28	2	0	18	12	0	16	14	0
	24 Jun	48	43	5	34	9	0	39	4	0	8	24	11
	1 Jul	46	14	32	3	11	0	10	4	0	6	8	0
	8 Jul	38	8	30	0	8	0	2	6	0	3	5	0
	15 Jul	26	5	21	0	5	0	5	0	0	0	5	0
2007	3 Jun	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]
	12 Jun	39	28	11	0	8	20	[c]	[c]	[c]	[c]	[c]	[c]
	17 Jun	40	33	7	0	10	23	[c]	[c]	[c]	[c]	[c]	[c]
	24 Jun	44	40	4	0	14	26	[c]	[c]	[c]	[c]	[c]	[c]
	3 Jul	36	20	13	9	9	2	16	4	0	0	8	12
	9 Jul	33	10	22	6	4	0	8	2	0	3	7	0
	17 Jul	33	6	27	0	0	6	0	2	4	0	1	5
2008	8 Jun	27	5	22	1	3	0	[d]	[d]	[d]	[d]	[d]	[d]
	15 Jun	34	17	17	0	13	4	0	17	0	0	17	0
	22 Jun	32	27	5	15	12	0	0	20	7	22	5	0
	29 Jun	33	27	6	14	13	0	4	23	0	15	12	0
	06 Jul	35	15	20	3	12	0	0	15	0	7	8	0
	13 Jul	32	3	29	0	3	0	1	2	0	0	3	0

[a] Represents responses from the question "Compared with this time in a "Normal" year how were catch rates for salmon this week?"

[b] Only reports from the month of June and the first 2 weeks of July were used for comparison.

[c] No data available

[d] Indicates respondents declined to comment.

APPENDIX E. KUSKOKWIM RIVER INSEASON SUBSISTENCE SALMON SUMMARY OF FISHING REPORTS

Appendix E1.–Kuskokwim River subsistence summary report, summary of salmon fishing, 2001–2008.

Summary of Subsistence Salmon Information Collected by ONC Technicians [a]																
		Number of Families			Chinook Salmon			Chum Salmon			Sockeye Salmon			Coho Salmon		
Year	Week Ending	Interviewed	Fishing	Not Fishing	Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
2001	Jun 09	16	16	0	6	6	4									
	Jun 16	39	ND	ND	18	15	6	1	19	15	13	24	1			
	Jun 23	35	ND	ND	27	7	1	0	15	20	24	11	0	0	0	0
	Jun 30	40	25	15	8	7	8	5	12	8	19	6	0	0	0	0
	Jul 07	44	7	37	0	1	5	4	1	1	0	5	2	0	0	0
	Jul 14	44	6	38	0	0	4	4	2	0	0	0	4	0	0	0
	Jul 21	44	0	44	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jul 28	44	9	35	0	0	0	1	7	0	0	0	0	0	7	1
	Aug 04	42	20	22				0	1	17				18	2	0
	Aug 11	37	3	34				0	0	0				2	1	0
	Aug 18	37	3	34				0	0	3				1	2	0
	Aug 25	37	3	34				0	0	3				3	0	0
Total [b]		459														
Average		38	9	29	8	5	4	2	6	7	9	8	1	3	1	0
2002	Jun 08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jun 15	27	23	4	21	2	0	3	8	7	3	11	3			
	Jun 22	33	25	8	17	5	3	12	9	3	2	10	10			
	Jun 29	34	22	12	16	6	0	21	0	0	0	3	16			
	Jul 06	34	5	29	0	2	3	3	2	0	0	0	5			
	Jul 13	36	10	26	0	3	5	8	0	0	0	0	8	0	0	0
	Jul 20	40	9	31	0	9	0	1	7	1	0	0	9	0	0	0
	Jul 27	35	31	4	0	31	0	0	31	0	0	31	0	9	22	0
	Aug 03	37	13	24	0	0	0	0	10	2	0	0	0	9	4	0
	Aug 10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total [b]		276														
Average		35	17	17	7	7	1	6	8	2	1	7	6	5	7	0
2003	Jun 07	18	9	9	7	2	0									
	Jun 14	33	24	9	22	2	0	0	2	0	0	3	0			

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Appendix E1.–Page 2 of 3.

Year	Week Ending	Number of Families			Chinook Salmon			Chum Salmon			Sockeye Salmon			Coho Salmon		
		Interviewed	Fishing	Not Fishing	Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
2003	Jun 21	48	32	14	30	2	1	1	0	0	7	18	3			
	Jun 28	50	34	16	30	4	0	3	9	13	27	7	0			
	Jul 05	45	21	24	16	5	0	8	13	0	16	5	0			
	Jul 12	46	14	32	0	12	2	13	1	0	0	12	2			
	Jul 19	48	5	43	0	5	0	5	0	0	0	5	0	2	3	0
	Jul 26	48	7	41	0	7	0	4	3	0	0	7	0	6	1	0
	Aug 09	49	11	38	0	0	0	0	0	0	0	0	0	10	1	0
	Aug 16	48	10	38	0	0	0	0	0	0	0	0	0	9	1	0
Total [b]		433														
Average		43	17	26	11	4	0	4	3	1	6	6	1	7	2	0
2004	Jun 05	31	10	21	6	4	0									
	Jun 12	41	37	4	27	8	2									
	Jun 19	35	31	4	23	8	0	4	27	0	4	27	0			
	Jun 26	43	31	12	19	12	0	24	7	0	5	22	4			
	Jul 03	44	22	22	3	17	0	10	10	0	0	13	7			
	Jul 10	44	13	31	0	10	0	8	2	0	0	4	6			
	Jul 17	35	6	29	0	6	0	0	6	0	0	6	0	0	6	0
	Jul 24	46	8	38										0	8	0
	Jul 31	47	7	40										7	0	0
	Aug 07	58	22	36										19	3	0
	Aug 14	44	16	28										16	0	0
	Aug 21	52	8	44										8	0	0
Total [b]		520														
Average		43	18	26	11	9	0	9	10	0	2	14	3	8	3	0
2005	Jun 04	34	12	22	0	12	0									
	Jun 11	39	26	13	20	6	0									
	Jun 18	48	42	6	36	6	0	14	28	0	31	11	0			
	Jun 25	48	34	14	25	5	0	19	15	0	28	6	0			
	Jul 02	32	3	29	3	0	0	2	1	0	3	0	0			

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Appendix E1.–Page 3 of 3.

		Number of Families			Chinook Salmon			Chum Salmon			Sockeye Salmon			Coho Salmon		
Year	Week Ending	Interviewed	Fishing	Not Fishing	Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
2005	9 Jul	22	2	20	0	2	0	1	1	0	1	1	0			
Total [b]		223														
Average		37	20	17	14	5	0	9	11	0	16	5	0	ND	ND	ND
2006	3 Jun	22	0	22	0	0	0									
	10 Jun	32	19	13	6	13	0	0	0	0						
	17 Jun	36	30	6	28	2	0	18	12	0	16	14	0			
	24 Jun	48	43	5	34	9	0	39	4	0	8	24	11			
	1 Jul	46	14	32	3	11	0	10	4	0	6	8	0			
	8 Jul	38	8	30	0	8	0	2	6	0	3	5	0			
	15 Jul	26	5	21	0	5	0	5	0	0	0	5	0			
Total [b]		248														
Average		35	17	18	10	7	0	12	4	0	7	11	2	ND	ND	ND
2007	3 Jun	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
	12 Jun	39	28	11	0	8	20	[d]	[d]	[d]	[d]	[d]	[d]			
	17 Jun	40	33	7	0	10	23	[d]	[d]	[d]	[d]	[d]	[d]			
	24 Jun	44	40	4	0	14	26	[d]	[d]	[d]	[d]	[d]	[d]			
	2 Jul	36	20	12	9	9	2	16	4	0	0	8	12			
	8 Jul	33	10	23	6	4	0	8	2	0	3	7	0			
	14 Jul	33	6	27	0	0	6	0	2	4	0	1	5			
Total [b]		225														
Average		38	23	14	3	8	13	8	3	1	1	5	6	ND	ND	ND
2008	8 Jun	27	5	22	1	3	0	[c]	[c]	[c]	[c]	[c]	[c]			
	15 Jun	34	17	17	0	13	4	0	17	0	0	17	0			
	22 Jun	32	27	5	15	12	0	0	20	7	22	5	0			
	29 Jun	33	27	6	14	13	0	4	23	0	15	12	0			
	06 Jul	35	15	20	3	12	0	0	15	0	7	8	0			
	13 Jul	32	3	29	0	3	0	1	2	0	0	3	0			
Total [b]		193														
Average		32	16	17	6	9	1	1	15	1	9	9	0			

[a] Represents responses from the question "Compared with this time in a "Normal" year how were catch rates for salmon this week?"

[b] Represents the total number of interviews conducted during the survey year, most families were interviewed more than once.

[c] Indicates interviewees declined to comment

Appendix E2.–Kuskokwim River subsistence salmon summary, quality of fishing report, 2001–2008.

Summary of Subsistence Salmon Information Collected by ONC Technicians [a]																	
					% Describing Chinook fishing as			% Describing Chum fishing as			% Describing Sockeye fishing as			% Describing Coho fishing as		
Year	Week Ending	Number Interviewed	Fishing	Percent Fishing	Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
2001	Jun 09	16	16	100%	38%	38%	25%									
	Jun 16	39	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
	Jun 23	35	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jun 30	40	25	63%	32%	28%	32%	20%	48%	32%	76%	24%	0%	0%	0%	0%
	Jul 07	44	7	16%	0%	14%	71%	57%	14%	14%	0%	71%	29%	0%	0%	0%
	Jul 14	44	6	14%	0%	0%	67%	67%	33%	0%	0%	0%	67%	0%	0%	0%
	Jul 21	44	0	0%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jul 28	44	9	20%	0%	0%	0%	11%	78%	0%	0%	0%	0%	0%	78%	11%
	Aug 04	42	20	48%				0%	5%	85%				90%	10%	0%
	Aug 11	37	3	8%				0%	0%	0%				67%	33%	0%
	Aug 18	37	3	8%				0%	0%	100%				33%	67%	0%
	Aug 25	37	3	8%				0%	0%	100%				100%	0%	0%
Total [b]		459														
Average		38	9													
2002	Jun 08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jun 15	27	23	85%	91%	9%	0%	13%	35%	30%	13%	48%	13%			
	Jun 22	33	25	76%	68%	20%	12%	48%	36%	12%	8%	40%	40%			
	Jun 29	34	22	65%	73%	27%	0%	95%	0%	0%	0%	14%	73%			
	Jul 06	34	5	15%	0%	40%	60%	60%	40%	0%	0%	0%	100%			
	Jul 13	36	10	28%	0%	30%	50%	80%	0%	0%	0%	0%	80%	0%	0%	0%
	Jul 20	40	9	23%	0%	100%	0%	11%	78%	11%	0%	0%	100%	0%	0%	0%
	Jul 27	35	31	89%	0%	100%	0%	0%	100%	0%	0%	100%	0%	29%	71%	0%
	Aug 03	37	13	35%	0%	0%	0%	0%	77%	15%	0%	0%	0%	69%	31%	0%
	Aug 10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total [b]		276														
Average		35	17													
2003	Jun 07	18	9	50%	78%	22%	0%									
	Jun 14	33	24	73%	92%	8%	0%	0%	8%	0%	0%	13%	0%			

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Appendix E2.–Page 2 of 3.

Year	Week Ending	Number Interviewed	Fishing	Percent Fishing	% Describing Chinook fishing as			% Describing Chum fishing as			% Describing Sockeye fishing as			% Describing Coho fishing as		
					Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
2003	Jun 21	48	32	67%	94%	6%	3%	3%	0%	0%	22%	56%	9%			
	Jun 28	50	34	68%	88%	12%	0%	9%	26%	38%	79%	21%	0%			
	Jul 05	45	21	47%	76%	24%	0%	38%	62%	0%	76%	24%	0%			
	Jul 12	46	14	30%	0%	86%	14%	93%	7%	0%	0%	86%	14%			
	Jul 19	48	5	10%	0%	100%	0%	100%	0%	0%	0%	100%	0%	40%	60%	0%
	Jul 26	48	7	15%	0%	100%	0%	57%	43%	0%	0%	100%	0%	86%	14%	0%
	Aug 09	49	11	22%	0%	0%	0%	0%	0%	0%	0%	0%	0%	91%	9%	0%
	Aug 16	48	10	21%	0%	0%	0%	0%	0%	0%	0%	0%	0%	90%	10%	0%
Total [b]		433														
Average		43	17	0												
2004	Jun 05	31	10	32%	60%	40%	0%									
	Jun 12	41	37	90%	73%	22%	5%									
	Jun 19	35	31	89%	74%	26%	0%	13%	87%	0%	13%	87%	0%			
	Jun 26	43	31	72%	61%	39%	0%	77%	23%	0%	16%	71%	13%			
	Jul 03	44	22	50%	14%	77%	0%	45%	45%	0%	0%	59%	32%			
	Jul 10	44	13	30%	0%	77%	0%	62%	15%	0%	0%	31%	46%			
	Jul 17	35	6	17%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
	Jul 24	46	8	17%										0%	100%	0%
	Jul 31	47	7	15%										100%	0%	0%
	Aug 07	58	22	38%										86%	14%	0%
	Aug 14	44	16	36%										100%	0%	0%
	Aug 21	52	8	15%										100%	0%	0%
Total [b]		520														
Average		43	18	0												
2005	Jun 04	34	12	35%	0%	100%	0%									
	Jun 11	39	26	67%	77%	23%	0%									
	Jun 18	48	42	88%	86%	14%	0%	33%	67%	0%	74%	26%	0%			
	Jun 25	48	34	71%	74%	15%	0%	56%	44%	0%	82%	18%	0%			

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Appendix E2.–Page 3 of 3.

Year	Week Ending	Number Interviewed	Fishing	Percent Fishing	% Describing Chinook fishing as Very Good	Normal	Poor	% Describing Chum fishing as Very Good	Normal	Poor	% Describing Sockeye fishing as Very Good	Normal	Poor	% Describing Coho fishing as Very Good	Normal	Poor
2005	2-Jul	32	3	9%	100%	0%	0%	67%	33%	0%	100%	0%	0%			
	9-Jul	22	2	9%	0%	100%	0%	50%	50%	0%	50%	50%	0%			
Total [b]		223														
Average		37	20	0												
2006	3-Jun	22	0	0%	0%	0%	0%									
	10-Jun	32	19	59%	32%	68%	0%	0%	0%	0%						
	17-Jun	36	30	83%	93%	7%	0%	60%	40%	0%	53%	47%	0%			
	24-Jun	48	43	90%	79%	21%	0%	91%	9%	0%	19%	56%	25%			
	1-Jul	46	14	30%	21%	79%	0%	71%	29%	0%	43%	57%	0%			
	8-Jul	38	8	21%	0%	100%	0%	25%	75%	0%	38%	62%	0%			
	15-Jul	26	5	19%	0%	100%	0%	100%	0%	0%	0%	100%	0%			
Total [b]		248														
Average		35	17													
2007	3-Jun															
	12-Jun	39	28	59%	0%	29%	71%									
	17-Jun	40	33	83%	0%	30%	70%									
	24-Jun	44	40	91%	0%	35%	65%									
	2-Jul	36	20	56%	45%	45%	10%	80%	20%	0%	0%	40%	60%			
	8-Jul	33	10	30%	60%	40%	0%	80%	20%	0%	30%	70%	0%			
	14-Jul	33	6	18%	0%	0%	100%	0%	33%	67%	0%	17%	83%			
Total [b]		225														
Average		38	23													
2008	8-Jun	27	5	19%	20%	60%	0%									
	15-Jun	34	17	50%	0%	76%	24%	0%	100%	0%	0%	100%	0%			
	22-Jun	32	27	84%	56%	44%	0%	0%	74%	26%	81%	19%	0%			
	29-Jun	33	27	82%	52%	48%	0%	15%	85%	0%	56%	44%	0%			
	6-Jul	35	15	43%	20%	80%	0%	0%	100%	0%	47%	53%	0%			
	13-Jul	32	3	9%	0%	100%	0%	33%	67%	0%	0%	100%	0%			
Total [b]		193														
Average		32	16													

[a] Represents responses from the question "Compared with this time in a "Normal" year how were catch rates for salmon this week?"

[b] Represents the total number of interviews conducted during the survey year, most families were interviewed more than once.