

Fishery Management Report No. 21-13

**Inseason Subsistence Salmon Harvest Monitoring,
Lower Kuskokwim River, 2014–2017**

Final Report for Study 14-353

USFWS Office of Subsistence Management

Fisheries Resource Monitoring Program

by

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and

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December 2021

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



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Weights and measures (metric)		General		Mathematics, statistics	
centimeter	cm	Alaska Administrative Code	AAC	<i>all standard mathematical signs, symbols and abbreviations</i>	
deciliter	dL	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	alternate hypothesis	H_A
gram	g	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	base of natural logarithm	e
hectare	ha	at	@	catch per unit effort	CPUE
kilogram	kg	compass directions:		coefficient of variation	CV
kilometer	km	east	E	common test statistics	(F, t, χ^2 , etc.)
liter	L	north	N	confidence interval	CI
meter	m	south	S	correlation coefficient	
milliliter	mL	west	W	(multiple)	R
millimeter	mm	copyright	©	correlation coefficient	
		corporate suffixes:		(simple)	r
Weights and measures (English)		Company	Co.	covariance	cov
cubic feet per second	ft ³ /s	Corporation	Corp.	degree (angular)	°
foot	ft	Incorporated	Inc.	degrees of freedom	df
gallon	gal	Limited	Ltd.	expected value	E
inch	in	District of Columbia	D.C.	greater than	>
mile	mi	et alii (and others)	et al.	greater than or equal to	≥
nautical mile	nmi	et cetera (and so forth)	etc.	harvest per unit effort	HPUE
ounce	oz	exempli gratia	e.g.	less than	<
pound	lb	(for example)		less than or equal to	≤
quart	qt	Federal Information Code	FIC	logarithm (natural)	ln
yard	yd	id est (that is)	i.e.	logarithm (base 10)	log
		latitude or longitude	lat or long	logarithm (specify base)	log ₂ , etc.
Time and temperature		monetary symbols		minute (angular)	'
day	d	(U.S.)	\$, ¢	not significant	NS
degrees Celsius	°C	months (tables and figures): first three letters	Jan, ..., Dec	null hypothesis	H_0
degrees Fahrenheit	°F	registered trademark	®	percent	%
degrees kelvin	K	trademark	™	probability	P
hour	h	United States (adjective)	U.S.	probability of a type I error	
minute	min	United States of America (noun)	USA	(rejection of the null hypothesis when true)	α
second	s	U.S.C.	United States Code	probability of a type II error	
		U.S. state	use two-letter abbreviations (e.g., AK, WA)	(acceptance of the null hypothesis when false)	β
Physics and chemistry				second (angular)	"
all atomic symbols				standard deviation	SD
alternating current	AC			standard error	SE
ampere	A			variance	
calorie	cal			population	Var
direct current	DC			sample	var
hertz	Hz				
horsepower	hp				
hydrogen ion activity (negative log of)	pH				
parts per million	ppm				
parts per thousand	ppt, ‰				
volts	V				
watts	W				

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**INSEASON SUBSISTENCE SALMON HARVEST MONITORING,
LOWER KUSKOKWIM RIVER, 2014–2017**

by
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December 2021

Development and publication of this manuscript were partially financed by the U.S. Fish and Wildlife Service, Office of Subsistence Management (Project No. 14-353), Fisheries Resource Monitoring Program, under agreement F14AC00259.

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This document should be cited as follows:

Esquible, J., and A. Tiernan. 2021. Inseason subsistence salmon harvest monitoring, Lower Kuskokwim River, 2014–2017. Alaska Department of Fish and Game, Fishery Management Report No. 21-13, Anchorage.

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ABSTRACT

The inseason subsistence salmon harvest monitoring on the Lower Kuskokwim River has been a collaborative effort between Orutsararmiut Native Council (ONC) and the Alaska Department of Fish and Game (ADF&G) in the Kuskokwim River since 2001. The project's objective is to provide inseason harvest data and local input on salmon management decisions during the fishing season. From 2014 to 2017, ONC conducted weekly interviews of Bethel-area at fish camps and the Bethel boat harbor from late May through mid-July. Surveyors collected data from area fish camps about weekly fishing methods; progress achieving Chinook (*Oncorhynchus tshawytscha*), chum (*O. keta*) and sockeye (*O. nerka*) salmon harvest goals; salmon run timing; relative fishing success; and comments or concerns about other factors affecting salmon harvest or processing. In 2016, modifications were made to the survey in response to fisheries management needs, and surveyors began asking more quantitative-based questions to obtain fishing catch per unit effort information. Weekly summaries of surveys were shared with fishery managers, Kuskokwim River Salmon Management Working Group (KRSMWG), and the Yukon Delta National Wildlife Refuge (YDNWR). Fishery managers utilized data compiled by ONC surveyors, including salmon catch rates and fishing progress, to determine additional salmon harvest opportunities. ONC surveyors conducted an average of 40 subsistence fishing family surveys each week at Bethel-area fish camps for a total of 783 surveys conducted at Bethel-area fish camps from 2014 to 2017 and opportunistic surveys at the boat harbor in 2016 and 2017.

Keywords: Chinook, *Oncorhynchus tshawytscha*, sockeye, *O. nerka*, chum, *O. keta*, coho, *O. kisutch*, salmon, subsistence, inseason management, Orutsararmiut Native Council (ONC), Kuskokwim River Salmon Management Working Group (KRSMWG), Bethel, Kuskokwim River

INTRODUCTION

This report describes the findings of a collaborative project conducted by Orutsararmiut Native Council (ONC) and the Alaska Department of Fish and Game (ADF&G) in the Kuskokwim River (Figure 1). Researchers collected information about subsistence salmon catches from late May through mid-July 2014–2017. Information was presented at the Kuskokwim River Salmon Management Working Group (KRSMWG) meetings and utilized at inseason fisheries management meetings by ADF&G, Yukon Delta National Wildlife Refuge (YDNWR), and Kuskokwim River Intertribal Fish Commission (KRITFC). KRSMWG serves as an ADF&G advisory group, and members provide input to fishery managers on management decisions for the salmon fisheries in the Kuskokwim River drainage (Peeks and Shelden 2015). Study activities were coordinated through the *Kuskokwim inseason subsistence salmon harvest monitoring program* at ONC. Participants were families at Bethel-area fish camps between the mouth of the Gweek River and the village of Napaskiak (Figure 2), except in 2017. In 2017, ONC and ADF&G initiated the Community-Based Monitoring (CBM) Program; monitors from that village conducted all harvest surveys in Napaskiak Slough. ONC surveyors continued to conduct surveys as far upriver as the mouth of the Gweek River down to Oscarville Slough.

People residing in the Kuskokwim River drainage rely on salmon as the mainstay of their diet. Salmon accounts for 40% of the total wild resource harvest in edible pounds in the Lower Kuskokwim communities from Eek to Tuluksak, 65% in the Central Kuskokwim communities from Lower Kalskag to Stony River, and 25% in the Upper Kuskokwim communities from McGrath to Nikolai (Brown et al. 2012, 2013; Ikuta et al. 2014; Ikuta and Koster 2012; Ikuta et al. 2016). There are 3 types of salmon fisheries in the Kuskokwim River drainage: subsistence, commercial, and a much smaller sport fishery. Although some nonresident sport anglers visit the Kuskokwim River each year, most salmon resource users reside in the drainage. In terms of salmon subsistence harvest, the Kuskokwim River drainage is considered one of the largest in Alaska (Fall et al. 2014). Residents of this region harvest Chinook *Oncorhynchus tshawytscha*, chum *O. keta*, coho *O. kisutch*, sockeye *O. nerka*, and pink *O. gorbuscha* salmon. The inseason

subsistence salmon harvest monitoring project focuses on the subsistence salmon fishery from late May to mid-July.

The inseason subsistence salmon harvest monitoring program began in 2001 as a response to local public and fishery management staff concerns about below-average salmon returns to the Kuskokwim River between 1997 and 2001 (Whitmore et al. 2008; Estensen et al. 2009; Brazil et al. 2013). Runs rebounded to near-record abundance between 2004 and 2008, followed by a sharp decline in Chinook salmon abundance beginning in 2010. The inseason subsistence salmon harvest monitoring program remains an important assessment tool and a mechanism for outreach and communications with residents, particularly during poor runs. Since 2004, the project has been limited to the Bethel-area subsistence fishery and focuses on peak Chinook salmon migration; this reflects the priority to assess harvest effort and timing of Chinook salmon over other salmon species. This project is managed and conducted by staff from ONC (the Bethel Indian Reorganization Act tribal council) in collaboration with ADF&G, Division of Commercial Fisheries, Bethel.

In 2014, the Kuskokwim River salmon fisheries were managed according to the *Kuskokwim River Salmon Management Plan* (5 AAC 07.365) adopted by the Alaska Board of Fisheries (BOF) in 2013. This plan guides salmon fisheries management to provide sustained yields of salmon stocks large enough to meet escapement goals, provide amounts necessary for subsistence uses, and allow commercial and sport fisheries. Management of the Kuskokwim River is based on the best available data, including the Bethel test fishery (BTF) index, subsistence harvest reports, commercial catch statistics, escapement estimates, and age and sex composition.

The Alaska legislature and U.S. Congress have passed laws to protect the customary and traditional uses of fish and wildlife in Alaska. Therefore, inseason fisheries management in the Kuskokwim Management Area must ensure that “reasonable opportunity” to meet subsistence needs will be provided each year before commercial and sport fishing interests.

Recently, the Kuskokwim River commercial fisheries concentrated effort on chum and coho salmon, including Chinook and sockeye salmon catches late in the chum salmon season. In 2013, processors agreed not to buy Chinook salmon due to conservation concerns and the resulting subsistence restrictions on Chinook salmon. Those caught incidentally in the commercial fishery were retained for personal use. In 2014, the commercial fishery was postponed almost 3 weeks to ensure ongoing Chinook salmon conservation, and the commercial fishery began well after the end of the Chinook salmon run and after most of the chum and sockeye salmon had passed. In 2014, there were 8 commercial fishery openings on the Kuskokwim River between July 14 and August 26 (none occurred during the survey period). In 2015, the number of commercial periods declined to 3, and all occurred after August 9 because of below-average Chinook and chum salmon runs. In 2016 and 2017, there was no registered commercial processor in the Kuskokwim area, which limited the commercial fishery to a small number of openings for registered catcher-sellers. Subsistence fishing was closed by emergency order 6 hours before, and 3 hours after, each commercial fishery opening.

2014–2017 SUBSISTENCE RESTRICTIONS

2014

The 2014 Chinook salmon forecast indicated there would not be enough fish to meet escapement and subsistence needs. The conservation concern surrounding Chinook salmon prompted both preseason and inseason subsistence restrictions that affected fishing and therefore survey results.

In 2014, preseason management actions included a closure on subsistence Chinook salmon fishing using rod and reel gear, restricted gillnet mesh size to 4-inch or smaller, and restricted net length no more than 60 feet in lower river tributaries. On April 17, the Federal Subsistence Board adopted a special action to close the Kuskokwim River Chinook salmon fishery to non-federally qualified users within the boundaries of the Yukon Delta National Wildlife Refuge (YDNWR). The special action meant that the United States Fish and Wildlife Service (USFWS) managed the Kuskokwim River drainage within the YDNWR from the mouth of the Kuskokwim River to a line just upriver of the village of Aniak. ADF&G managed marine waters outside the river mouth and the remainder of the Kuskokwim River drainage from the village of Aniak to the headwaters. Restrictions for the area from the mouth of the Kuskokwim River to the village of Tuluksak began May 20, and restrictions for the area from Tuluksak to the boundary above Aniak began May 27. In each conservation section, gillnet size was restricted to 4-inch or smaller mesh to harvest nonsalmon fish species. Rod and reel fishing for Chinook salmon was closed. ADF&G implemented similar restrictions in waters above Aniak beginning June 1. ADF&G also closed an area below the mouth of the Kuskokwim River to further conserve Chinook salmon entering the river. Dip nets were allowed as legal subsistence fishing gear in the Kuskokwim River beginning June 15 to allow selective harvest of salmon species other than Chinook salmon. All Chinook salmon caught in a dip net were required to be returned immediately to the water unharmed. When chum and sockeye salmon abundance began to exceed Chinook salmon abundance, as indicated by BTF data, limited subsistence fishing opportunity using 6-inch mesh gillnet gear was allowed, beginning in the lower river. The first 6-inch mesh fishing period was June 20, and additional opportunities were provided sequentially upstream, as run timing dictated.

2015

In 2015, the Chinook salmon fishery was managed by USFWS under special actions within YDNWR. The Kuskokwim River Chinook salmon fishery was closed to non-federally qualified subsistence users, and subsistence fishing was limited to setnets 3 days per week within YDNWR boundaries beginning May 21. The same restrictions for the area between Tuluksak and Aniak began May 28 (Poetter et al. 2016). USFWS instituted a community harvest permit program between June 10 and June 30. ONC played a primary role in orchestrating and executing the community harvest permit program in Bethel and Bethel-area fish camps. ADF&G resumed management of the Kuskokwim River within the YDNWR on July 2 and limited gillnet mesh size to 6-inch or smaller. Subsistence fishing was restricted for a total of 74 days between May 21 and August 3.

2016–2017

In 2016 and 2017, a Chinook salmon subsistence closure began on the mainstem Kuskokwim River on May 20, per recommendation by the KRSMWG. This closure continued through

June 11. Gillnet fishing using 4-inch or smaller mesh allowed harvest of nonsalmon species. On June 1, 2016, USFWS assumed management authority of the Chinook salmon fishery in conjunction with the KRITFC. The mainstem Kuskokwim River within YDNWR was closed to non-federally qualified subsistence users until July 7, at which time ADF&G resumed management of the entirety of the Kuskokwim River. Detailed information regarding the management of the Kuskokwim River is published in the annual report series *Kuskokwim area management report* (e.g., Poetter et al. 2016).

RESULTS

2014–2015

In 2014, an average of 28 families were interviewed each week about subsistence fishing activities, and a total of 197 interviews were conducted. In all, 7 weekly interview summaries were compiled for KRSMWG packets and presented by ONC staff at KRSMWG meetings during June and July 2014 (Appendices B1–B7). In 2015, an average of 42 families were interviewed each week about subsistence fishing activities, and a total of 210 interviews were conducted. In all, 5 weekly interview summaries were compiled for KRSMWG packets and presented by ONC staff at KRSMWG meetings during June and July 2015 (Appendices B8–B12).

Weekly summaries of the catch rates are presented in the way respondents categorized their fishing success (Tables 1 and 2). The chum and sockeye salmon runs typically begin to pass Bethel after the Chinook salmon run is well underway, and families will normally decline to comment on these later species until later in the season. However, in 2014, families were restricted from taking Chinook salmon, and because initial catches of chum and sockeye salmon were considered more important, families did provide comments.

In 2014–2015, the assessment of the run for each species was fairly consistent from week to week. However, the most commonly reported catch rate for Chinook salmon was “Poor” and “Normal” for chum salmon. For sockeye salmon, in 2014, the most commonly reported catch rate was “Very Good,” whereas in 2015, “Very Good” and “Normal” were both commonly reported.

2016–2017

In 2016, ONC delayed surveying at fish camps and the Bethel boat harbor until June 12 because of the regulatory front-end closure for the subsistence fishery, which prohibited fishing with salmon gillnets before June 12. The first verbal report was provided at the KRSMWG on June 14, and the first written summary was included in the KRSMWG packet on June 20. An average of 39 families were interviewed each week about subsistence fishing activities at fish camps, and a total of 196 interviews were conducted at Bethel-area fish camps in 2016. ONC surveyors also conducted 509 interviews at the Bethel boat harbor during the fishery openers on June 12, June 16–17, June 21–24, and June 29–July 2. ONC surveyors conducted a combined total of 705 surveys at the Bethel boat harbor and Bethel-area fish camps. In all, 5 weekly interview summaries were compiled for KRSMWG packets and presented by ONC staff at KRSMWG meetings during June and July 2016 (Appendices B13–B17).

In 2017, the first verbal report was provided at the KRSMWG on June 7. The first written summary included in the KRSMWG packet was on June 12. An average of 52 families were

interviewed each week at fish camps about subsistence fishing activities, and a total of 207 interviews were conducted at Bethel-area fish camps. ONC surveyors also conducted 274 interviews at the Bethel boat harbor during fishery openers on June 12, June 24, July 1, and July 3. In 2017, ONC surveyors conducted 481 surveys at the Bethel boat harbor and Bethel-area fish camps combined. In all, 5 weekly interview summaries were compiled for KRSMWG packets and presented by ONC staff at KRSMWG meetings during June and July 2017 (Appendices B18–B22). In 2016–2017, ONC fisheries technicians could not collect data about local’s assessment of the Chinook, chum, and sockeye salmon runs because of salmon fishing closures from late May to June 11. ONC focused more intensely on collecting quantitative harvest data at the Bethel-area fish camps and Bethel boat harbor. These data were utilized to conduct salmon harvest estimates and inform inseason management decisions (Staton and Coggins 2016 and 2017).

WEEKLY CHARACTERIZATION OF SALMON RUN TIMING

Averaged across the survey weeks, most respondents reported that the Chinook, chum, and sockeye salmon run timings were “Normal” in 2014 and 2015 (Tables 3 and 4). In 2016 and 2017, ONC surveyors did not ask questions about run timing because responses were probably not representative of run timing due to fisheries restrictions.

WEEKLY FISHING ACTIVITY AND GEAR USE

2014

In the first week of the surveys, 17 families were contacted at fish camps, and 10 families reported fishing activities. Eight families reported using a setnet, and 2 families reported the use of rod and reel. Mesh size was restricted during this period, and all families fishing gillnets reported using 6-inch or smaller mesh. In the first 3 weeks of the survey, families reported using primarily smaller-mesh set gillnets and decreasing numbers of families reported using rod and reel. In the fourth week of the survey, the use of drift gillnets became apparent. In the third week of the survey, surveyors began asking if families were taking advantage of the opportunity to fish with dip nets for chum and sockeye salmon. Some dip net use was noted this week, although none reported using this gear in subsequent weeks. It appeared that few families tried out dip net gear, which was adopted as legal subsistence gear in 2014 during times of Chinook salmon conservation. Proportions of families fishing both set and drift gillnet gear increased during the last 4 weeks of the survey (Table 5).

2015

In the first week of the surveys, 26 families were contacted at fish camps, and 7 reported fishing activities. All 7 families reported using a setnet. In the second week of the surveys, 33 of the 46 families contacted were fishing. In that second week, 13 families reported using a setnet, and 7 families reported using a driftnet. During the last 3 weeks of the survey, all participants reported using driftnets, and no families used setnets (Table 6). Mesh size was restricted in 2015, and all families fishing gillnets reported using 6-inch or smaller mesh. There were no reports of rod and reel or dip nets in 2015.

2016–2017

In 2016 and 2017, surveys were not conducted until mid-June due to the front-end fishery closure. In 2016, families reported using a setnet during the first 3 weeks of the survey, whereas in 2017, setnets were only reported in the third week of the survey. In 2017, there was 1 report of a dip net being used during the closure. The most commonly reported gear type in both years was driftnets, using 6-inch or smaller mesh (Tables 7 and 8).

REPORTS TO THE KUSKOKWIM SALMON MANAGEMENT WORKING GROUP

The ONC subsistence fisheries biologist and technicians composed and presented 23 summary reports of the survey results during the project operation period (Appendices B1–B23). These reports were presented via email and teleconference to ADF&G and federal fisheries managers, and other KRSMWG participants, including both members and other interested parties. Oral reports were delivered during inseason meetings of the KRSMWG. Oral reports provided an opportunity to present the data publicly, allow a chance for questions and answers, and encourage additional discussion and feedback from subsistence participants.

DISCUSSION

This project relies on voluntary participation by Bethel-area subsistence users, and most respondents have participated since 2001. Most participants are lifelong residents of the Kuskokwim area, representing some of the most experienced and knowledgeable locals. Most of these families are of Alaska Native descent that harvest and process salmon at seasonal fish camps, which have been maintained across generations. Interviewees typically have between 10 and 50 years of experience fishing in the region. All ONC technicians who participated in this project have many years of local subsistence fishing experience. Their family relations and community connections on the Kuskokwim River foster trust and familiarity essential to the program's success.

Information used to manage the Kuskokwim River fisheries early in the season included BTF indices of salmon abundance (e.g., Bue and Brazil 2012) and subsistence harvest reports such as those provided through this project. Later in the season, data from fisheries monitoring projects augmented this information. In 2014 and 2015, the inseason salmon harvest monitoring interviews provided an early indication of salmon run timing, harvest effort, and the relative success of catch rates in the subsistence fishery, and an indication of whether families' subsistence salmon harvest goals were being met for the season. In 2016 and 2017, the salmon harvest monitoring interviews placed greater emphasis on collecting quantitative data. This was in response to an anticipated weak Kuskokwim River Chinook salmon run and the need to conduct inseason subsistence salmon harvest estimates to make better-informed management decisions regarding fishing opportunities in June through early July.

2014

During the first survey week of the 2014 survey, subsistence fishing was restricted to 4-inch or smaller mesh set gillnets, rod and reel, or dip nets to harvest species other than Chinook salmon. A large number of set gillnets were observed within the survey area, but relatively few fishing families agreed to be surveyed. Some surveys were conducted at the Bethel boat harbor. In

subsequent weeks, survey rates increased. During weeks 5–7, an opportunity to use 6-inch or smaller set or drift gillnets was provided. Effort increased at this time, and a number of families reported setting harvest goals for the season. Over the next 2 weeks, most families appeared to have caught as much chum, sockeye, and incidental Chinook salmon as they could, and although harvest goals were largely unmet, fishery participants were suspending subsistence fishing activity in anticipation of the coming coho salmon run. This project concluded before the bulk of the coho salmon run and associated subsistence fishing was underway (Appendices B1–B7).

Assessment of run timing was fairly consistent. Most families indicated that runs of Chinook, chum, and sockeye salmon had “Normal” run timing character (Table 3).

Assessment of catch performance was also consistent (Table 1). The vast majority of families considered the Chinook salmon catch to be “Poor” in 2014. Assessment of chum and sockeye salmon catches were mostly considered “Very Good.”

Regarding discussions of gear usage, specifically mesh size, project leaders discussed the possibility of changing the questions on the survey instrument. Because gillnet mesh size was restricted to 4-inch or smaller in early June to target nonsalmon fish species such as whitefish, the questions about mesh size appeared inadequate to track the use of that gear type. Ultimately, no change was made in hopes of preserving relationships with area residents. There was a significant amount of anger and distrust in the community, and ONC felt that asking too-probing questions about the harvest of salmon using 4-inch mesh gillnets might be a poor choice. Throughout the survey, participants always reported using 6-inch or smaller mesh for fishing. It was assumed that as long as mesh size was restricted to 4-inch or smaller, fishery participants were in compliance.

2015

During the first survey week of the 2015 season, mesh size was restricted to using 4-inch or smaller set gillnets, rod and reel, or dip nets, to harvest species other than Chinook salmon. Throughout the first week of the survey, gillnet mesh size larger than 4-inch was prohibited and set gillnets were the only reported gear type. Surveyors were very successful in outreach and education about the community harvest permit program during the first week. Throughout the remainder of the ONC inseason survey, gillnets were the most commonly reported gear type.

Anecdotal information on catch composition was shared with ONC surveyors weekly. Families reported catching mainly whitefish and incidental harvest of Chinook salmon. Interestingly, most families reported very good catch rates during the second week of the survey and poor catch rates during the third week of surveys which a few families had attributed to high water levels and poor catchability. During the third week of surveys, families appeared to have caught chum salmon but very few sockeye salmon. In the fourth week of the survey, sockeye salmon catches appeared highest. This project concluded before the bulk of the coho salmon run and associated subsistence fishing was underway (Appendices B8–B12).

Assessment of salmon catch rates varied by species each week. Throughout the entire survey period, the most commonly reported catch rate was “Poor” for Chinook salmon and “Normal” for chum salmon. Respondents most commonly characterized sockeye salmon catch rates to be “Very Good” and “Normal” (Table 2).

Assessment of run timing was fairly consistent. Most families indicated that runs of Chinook, chum, and sockeye salmon had “Normal” run timing character (Table 4).

2016

In 2016, ONC surveyors did not conduct surveys until the second week of June due to the early season gillnet closure passed by the KRSMWG and BOF. As a result of this, the ONC biologist and ADF&G staff decided to no longer ask respondents to characterize salmon catch rates and salmon run timing because of fishing restrictions and closures during a period they would otherwise be fishing, and thus, responses would not be very representative of salmon catch rates and run timing. There was a greater need to collect more quantitative-based data for USFWS, ADF&G, and KRITFC managers during the 6-inch or smaller mesh size gillnet fishery openers throughout June. This allowed for more precise inseason management decisions to be made utilizing the harvest data collected at Bethel-area fish camps and the Bethel boat harbor. These data were utilized to conduct harvest estimates and help managers achieve the harvest objective during Chinook salmon conservation.

Families shared many comments with ONC surveyors throughout the season. During the first survey period, families reported bugs as a problem when drying their fish. During the second survey week, families reported they were catching more Chinook salmon and chum salmon when compared to the prior fishery opener. The majority of families appeared happy and had filled their racks by the last week of June. During the third week of the survey, more families reported having met their Chinook, chum, and sockeye salmon goals than in prior weeks. Several families expressed a desire to have additional 72-hour 6- inch mesh gillnet fishery openers in the future. During the last 2 weeks of the survey and throughout mid-July, some families began transitioning to berry picking and/or were waiting to fish again in anticipation of the coho salmon arrival.

During the final survey week, ONC surveyors asked families a variety of questions to determine the following:

1. If families achieved their harvest goals for Chinook, sockeye, or chum salmon.
2. If families reduced their harvest goals due to conservation concerns.
3. How catch rates for Chinook, sockeye, or chum salmon were when compared to the prior year.

Responses for questions indicated that 58% of families achieved their Chinook and chum salmon harvest goals, and 56% achieved their sockeye salmon harvest goals. Most families (60%) did not reduce their harvest goals due to conservation concerns. Most families reported catch rates for Chinook and sockeye salmon in 2016 as good and average compared to 2015. Chum salmon catch rates were most commonly reported as average when compared to 2015 (Appendix B17).

2017

In 2017, ONC surveyors delayed surveying until the second week of June because of the early season gillnet closure. However, during the early closure, there was some opportunity to use 4-inch or smaller mesh gillnet to target nonsalmon species. During the first survey week, data collected indicated that very few families at fish camps went fishing during the 4-inch or smaller mesh gillnet opportunities during the early closure. Similar to 2016, surveyors continued to expand their surveying efforts and collected data at the Bethel boat harbor during the 6-inch or smaller mesh gillnet openers while also conducting weekly visits to Bethel-area fish camps. During the first 6- inch or smaller mesh gillnet fishing opportunity, families at fish camps and

the Bethel boat harbor reported low catch rates for Chinook salmon and higher catch rates than they expected for chum salmon. During the second 6-inch or smaller mesh gillnet fishing opportunity, catch rates for Chinook, chum, and sockeye salmon were higher when compared to the previous fishery opener.

ONC surveyors began asking participants about their progress in meeting subsistence harvest goals for Chinook, sockeye, and chum salmon. After the second 6-inch mesh gillnet fishing opportunity, 76% of respondents had achieved than half their subsistence harvest goals for Chinook salmon, 41% were halfway to reaching their sockeye salmon harvest goals, and 65% had met their chum salmon harvest goals (Appendix B20). During the following 2 survey weeks, families were closer to achieving their chum and sockeye salmon harvest goals. However, for Chinook salmon, the end of the season progress data indicated that 60% of families were less than halfway to achieving their harvest goals. Most families attributed not meeting their Chinook salmon harvest goals to fishing restrictions, and weather was a less commonly reported reason for not meeting their Chinook salmon harvest goals.

ACKNOWLEDGEMENTS

We wish to thank the many subsistence users and families who generously volunteered time from their busy fishing schedule to provide the detailed local information critical to making inseason management decisions for the Kuskokwim River fisheries. We extend great appreciation and regard for the KRSMWG members, many of whom have volunteered years of dedicated service to facilitating this local cooperative management process.

In addition to the normal project objectives, the ONC survey crew provided a public service by helping distribute salmon caught in the ADF&G BTF project to community members. A list of elders and families in crisis was maintained, and salmon were provided on a rotating basis. We'd like to thank all of our workers and funding entities who made this possible.

We thank our prior natural resource director Greg Roczicka for his guidance and hard work to ensure the voice of the YK Delta people is adequately represented through the inseason subsistence salmon harvest monitoring program. He is dearly missed and revered for his outstanding contribution to natural resource management in the YK Delta. We would also like to thank ONC fishery technicians Alissa Joseph Rodgers, Alyse Lincoln, Brian Henry, Charles Guest, Danielle Lowrey, Avery Hoffman, and Elijah Lindley for their hard work and contributions to this project; without them, this project would have not been a success. The ONC fishery technicians' knowledge of families and fish camps in the Bethel area and excellent interviewing skills have greatly facilitated the involvement of subsistence families and the fisheries management process. We would also like to thank Chuck Brazil (ADF&G) and Pippa Kenner (Office of Subsistence Management), who reviewed this document. Pippa has served as a project officer and colleague whose contribution and guidance were much appreciated throughout this project's duration.

ADF&G and ONC wish to thank the USFWS, Office of Subsistence Management for providing \$144,759 in funding support for this study (Project No. 14-353) through the Fisheries Resource Monitoring Program, under agreement F14AC00259. ADF&G and ONC provided additional funds for this project.

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TABLES AND FIGURES

Table 1.–Number of Lower Kuskokwim River area subsistence fishery participants that characterized their weekly salmon catch rates as: very good, normal, or poor, 2014.

Week ending	Number of families			Number of fishing respondents								
	Interviewed	Fishing	Not Fishing	Chinook			Chum			Sockeye		
				Very good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
Jun 01	17	10	7	0	6	0	0	6	0	0	6	0
Jun 08	22	22	0	2	1	12	3	9	10	12	6	4
Jun 15	24	11	13	2	0	4	0	5	1	3	2	1
Jun 22	29	22	7	2	1	12	3	9	10	12	6	4
Jun 28	42	37	5	0	3	18	23	6	3	20	6	6
Jul 06	30	5	25	0	1	3	1	2	1	1	3	0
Jul 13	33	2	31	0	0	2	1	0	1	1	0	1
Total	197	109	88	6	12	51	31	37	26	49	29	16
Average	28	16	13	1	2	7	4	5	4	7	4	2

Note: Represents responses (from those fishing) to the question “Compared with this time in a ‘Normal’ year, how were catch rates for salmon this week?”

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Table 2.–Number of Lower Kuskokwim River area subsistence fishery participants that characterized their weekly salmon catch rates as: very good, normal, or poor, 2015.

Week ending	Number of families			Number of fishing respondents								
	Interviewed	Fishing	Not Fishing	Chinook			Chum			Sockeye		
				Very good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
May 31	26	7	19	1	0	2	0	0	0	0	0	0
Jun 14	46	33	13	7	4	3	5	4	7	0	4	8
Jun 28	51	33	18	2	7	17	6	19	5	5	15	11
Jul 05	40	25	15	2	9	6	2	10	8	18	6	0
Jul 12	47	18	29	2	0	6	6	6	1	6	4	2
Total	210	116	94	14	20	34	19	39	21	29	29	21
Average	42	23	19	3	4	7	4	8	4	6	6	4

Note: Represents responses (from those fishing) to the question “Compared with this time in a ‘Normal’ year, how were catch rates for salmon this week?”

Table 3.–Number of Lower Kuskokwim River area subsistence fishery participants that characterized the salmon run timing (by species) as early, normal, or late, 2014.

Week ending	Number of families			Number of fishing respondents								
	Interviewed	Fishing	Not Fishing	Chinook			Chum			Sockeye		
				Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
Jun 01	17	10	7	0	6	0	0	5	1	0	5	1
Jun 08	22	22	0	3	2	2	1	5	1	1	5	1
Jun 15	24	11	13	1	3	1	1	4	1	2	3	1
Jun 22	29	22	7	4	5	3	5	12	4	6	12	2
Jun 28	42	37	5	4	11	5	6	20	6	6	20	6
Jul 06	30	5	25	0	0	4	1	2	1	0	2	2
Jul 13	33	2	31	0	1	1	0	1	1	0	0	2
Total	197	109	88	12	28	16	14	49	15	15	47	15
Average	28	16	13	2	4	2	2	7	2	2	7	2

Note: Represents responses (from those fishing) to the question “Compared with this time in a ‘Normal’ year, how was salmon run timing this week?”

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Table 4.–Number of Lower Kuskokwim River area subsistence fishery participants that characterized the salmon run timing (by species) as early, normal, or late, 2015.

Week ending	Number of families			Number of fishing respondents								
	Interviewed	Fishing	Not Fishing	Chinook			Chum			Sockeye		
				Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
May 31	26	7	19	0	2	3	0	0	0	0	0	0
Jun 14	46	33	13	2	10	8	5	5	6	2	4	5
Jun 28	51	33	18	2	10	8	0	19	8	0	19	8
Jul 05	40	25	15	1	13	1	2	16	3	1	22	0
Jul 12	47	18	29	1	3	0	1	6	4	3	8	0
Total	210	116	94	6	38	20	8	46	21	6	53	13
Average	42	23	19	1	8	4	2	9	4	1	11	3

Note: Represents responses (from those fishing) to the question “Compared with this time in a ‘Normal’ year, how was salmon run timing this week?”

Table 5.–Number of Lower Kuskokwim River area subsistence fishery participants, by week, that indicated which type of salmon fishing gear they were using, 2014.

Week ending	Number of families		Gear type					Mesh size		
	Interviewed	Fishing	Only driftnet	Only set net	Both set and drift	Rod and Reel	Dip nets	Only >6 inch mesh	Only ≤6 inch mesh	Both >6 inch and ≤6 inch
Jun 01	17	10	0	8	0	2	ND	0	8	0
Jun 08	22	22	0	8	0	1	ND	0	8	0
Jun 15	24	11	0	9	0	1	2	0	9	0
Jun 22	29	22	0	19	3	0	0	0	22	0
Jun 28	42	37	12	12	9	0	0	0	33	0
Jul 06	30	5	4	1	0	0	0	0	5	0
Jul 13	33	2	1	0	1	0	0	0	2	0
Total	197	109	17	57	13	4	2	0	87	0
Average	28	16	2	8	2	<1	<1	0	12	0

Note: Represents responses (from those fishing) to questions regarding gear type usage.

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Table 6.–Number of Lower Kuskokwim River area subsistence participants, by week, that indicated which type of salmon fishing gear they were using, 2015.

Week ending	Number of families		Gear type					Mesh size		
	Interviewed	Fishing	Only driftnet	Only set net	Both set and drift	Rod and reel	Dip nets	Only >6 inch mesh	Only ≤6 inch mesh	Both >6 inch and ≤6 inch
May 31	26	7	0	7	0	0	0	0	0	7
Jun 14	46	33	7	13	13	0	0	0	20	26
Jun 28	51	33	33	0	0	0	0	0	33	0
Jul 05	40	25	25	0	0	0	0	0	25	0
Jul 12	47	18	18	0	0	0	0	0	18	0
Total	210	116	83	20	13	0	0	0	96	33
Average	42	23	17	4	3	0	0	0	19	7

Note: Represents responses (from those fishing) to questions regarding gear type usage.

Table 7.—Number of Lower Kuskokwim River area subsistence fishery participants, by week, that indicated which type of salmon fishing gear they were using, 2016.

Week ending	Number of families		Gear type					Mesh size		
	Interviewed	Fishing	Only driftnet	Only set net	Both set and drift	Rod and reel	Dip nets	Only >6 inch mesh	Only ≤6 inch mesh	Both >6 inch and ≤6 inch
Jun 19	33	29	25	3	3	0	0	0	28	2
Jun 26	32	31	30	4	3	0	0	0	27	2
Jul 04	23	18	17	1	0	0	0	0	18	0
Jul 10	53	52	1	0	0	0	0	0	1	0
Jul 15	55	1	1	0	0	0	0	0	1	0
Total	196	131	74	8	6	0	0	0	75	4
Average	39	26	15	2	1	0	0	0	15	1

Note: Represents responses (from those fishing) to questions regarding gear type usage.

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Table 8.—Number of Lower Kuskokwim River area subsistence fishery participants, by week, that indicated which type of salmon fishing gear they were using, 2017.

Week ending	Number of families		Gear type					Mesh size		
	Interviewed	Fishing	Only driftnet	Only set net	Both set and drift	Rod and reel	Dip nets	Only >6 inch mesh	Only ≤6 inch mesh	Both >6 inch and ≤6 inch
Jun 12	24	14	8	0	0	0	0	0	0	0
Jun 17	46	36	ND	ND	ND	ND	ND	ND	ND	ND
Jun 26	36	33	31	4	0	0	1	0	33	0
Jul 09	81	41	30	9	0	0	0	0	30	0
Total	187	124	69	4	0	0	1	0	63	0
Average	47	31	23	3	0	0	0	0	21	0

Note: Represents responses (from those fishing) to questions regarding gear type usage.

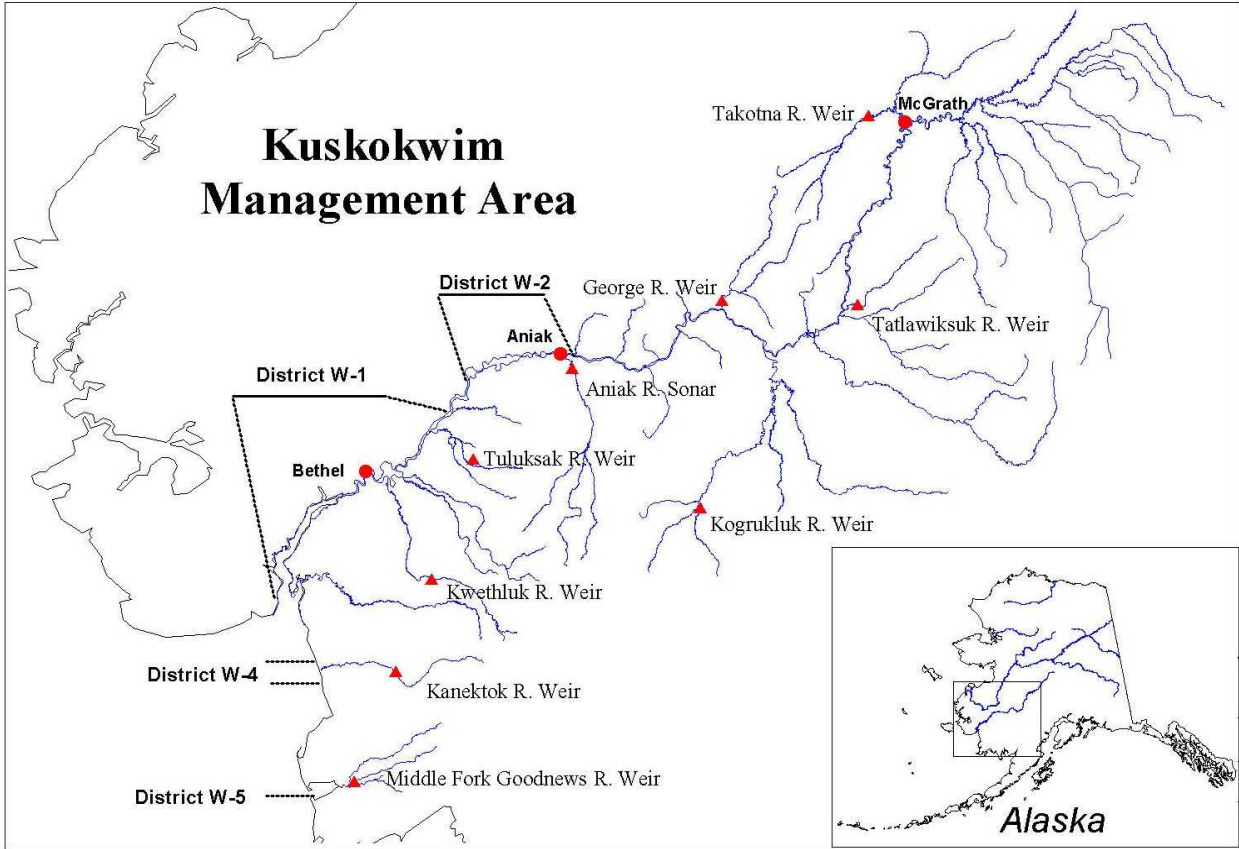


Figure 1.—Kuskokwim Management Area.

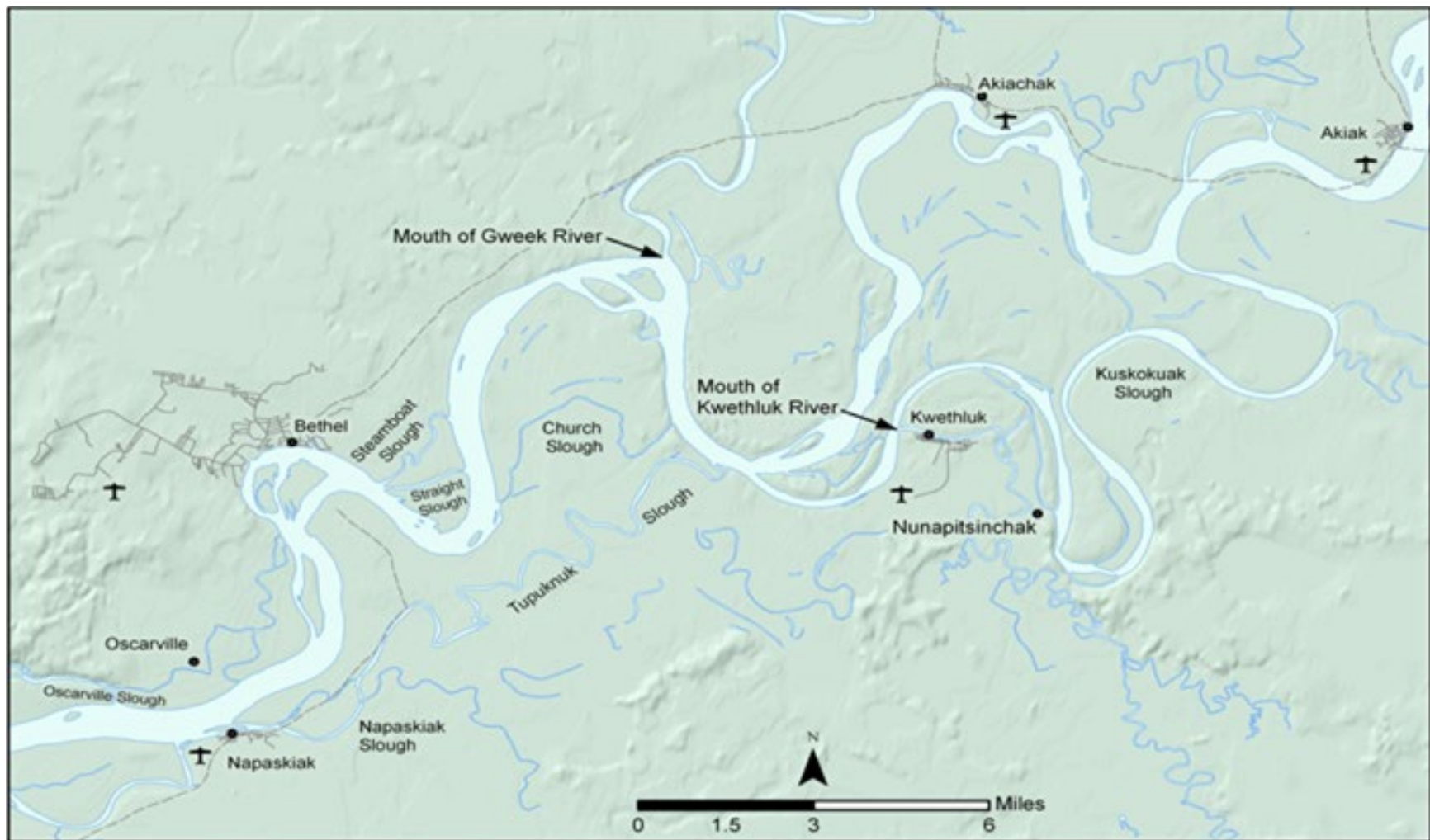


Figure 2.—Inseason subsistence harvest monitoring survey area.

Note: Survey fish camps are located along the main channel of the Kuskokwim River and numerous sloughs located between the mouth of the Gweek River and the village of Napaskiak.

APPENDIX A: EXAMPLE OF SURVEY INSTRUMENT

Appendix A1.-Example of Lower 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 "

Staff initials	Week Ending	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 ?		Rod	Fish	King Salmon			Chum Salmon			Sockeye Salmon			King Salmon			Chum Salmon			Sockeye Salmon		
		Drift Net	Set Net	6" or Less	More than 6"	Reel	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																								

Comments

Staff initials	Week Ending	Few fish ?	Lot of fish ?	Weather affecting fishing?	Water levels?
	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 A2.—Example of Bethel boat harbor subsistence salmon fishing survey form.

ONC BETHEL BOAT HARBOR INTERVIEW FORM

INTERVIEWER:					INTERVIEW DATE:					PAGE ____ OF ____		COMMENTS	
#	Fishing Date	Fishing Location	Trip Start Time	Trip End Time	Soak Time (Min.)	Net Type	Mesh Size (In.)	Net Length (Ft.)	Chinook	Chum	Sockeye		Sheefish
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													

Record times in 24-hr clock (military time) Location is the river section from map
 Soak time is time with net in water Net type is drift or set
 1 fathom = 6 ft.; 25 fathoms = 150 ft.; 50 fathoms = 300 ft.; 1 shackle = 50 fathoms (300 ft.)

**APPENDIX B: LOWER KUSKOKWIM RIVER INSEASON
SUBSISTENCE SALMON HARVEST MONITORING
WEEKLY REPORTS, 2014–2017**

Appendix B1.–Lower Kuskokwim River inseason subsistence salmon harvest monitoring weekly report, Orutsararmiut Native Council, June 1, 2014.

Fishing reports from May 27-June 1, 2014

Families Surveyed	Families Fishing	Driftnets	Setnets	Both Nets	Larger than 6" mesh	6" mesh and smaller	Both Sizes	Rod & Reel
17	10	0	8	0	0	8	0	2
		0%	80%	0%	0%	80%	0%	20%

Percentages are based on the number of families fishing each week.

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	6	0	0	6	0	0	6	0
0%	60%	0%	0%	60%	0%	0%	60%	0%

Percentages are based on the number of families fishing each week.

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

CHINOOK			CHUM			SOCKEYE		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
0	6	0	0	5	1	0	5	1
0%	60%	0%	0%	50%	10%	0%	50%	10%

Percentages are based on the number of families fishing each week.

Harvest Goal Summary:

Four families were unsure about their salmon harvest goals this year. One family commented that in a normal year, they would harvest between 40-100 Chinook salmon to feed 3 families and numerous relatives.

Chinook:

Three families were unsure whether they would target Chinook salmon and 3 families said that they would not harvest Chinook salmon this year.

Chum:

Seven families said that they planned to harvest chum salmon this year. Harvest goals ranged from 5-200, or more.

Sockeye:

Seven families said that they planned to harvest sockeye salmon this year. Harvest goals ranged from 30-200.

-continued-

Other species of fish:

Five families said they planned to harvest between 15-50 coho salmon.

Three families reported actively targeting whitefish. Goals ranged between 15-200.

There are a few families that commented on harvesting and catching a range of other fish species such as Sheefish, whitefish, pike, lush, and trout

Comments:

Out of 8 families fishing, 4 families reported using 4-inch mesh set gillnet; 2 families reported using 3.5-inch mesh set gillnet; and 2 families did not comment. Two families reported using only rod-n-reel, and 2 families reported using 2 different mesh size nets.

Four families declined to comment on run timing and catch rates for salmon.

Chinook:

Six families commented that the Chinook catch rate and run timing were normal.

Chum:

Six families commented that the chum salmon catch rate was normal for this time of year and 5 families commented that the run timing was normal. One family said they were running late.

Sockeye:

Six families commented that the sockeye salmon catch rate was normal and 1 family commented that the run timing was late.

Surveyor comments:

This week the ONC Subsistence Fishery Survey Crew counted a total of 22 setnets between Bethel to the mouth of Church Slough, and a total of 10 setnets from Bethel downriver to Napakiak.

To date the ONC Subsistence Crew distributed a total of 2 Chinook ASL kits. Due to the Chinook restrictions and closures, many fish camps were empty during this week's survey. The ONC Subsistence Survey Crew also observed a lot of fish camps with whitefish and Sheefish on the drying racks.

This year the ONC Subsistence Survey Crew has been collecting Bethel Test Fish catches to be distributed to elders in Bethel. We have distributed a total of 10 Chinook, 2 Sockeye, 1 Chum, 5 Sheefish, and 1 Cisco. The ONC crew has brought salmon to the following locations: Senior Center, Lulu Herron Apartments, and 3 elders. We are keeping a distribution list of elders. If you know of any elders that need fish, please contact the ONC Subsistence Survey Crew to be added to this list.

Appendix B2.–Lower Kuskokwim River inseason subsistence salmon harvest monitoring weekly report, Orutsarmiut Native Council, June 8, 2014.

Families Surveyed	Families Fishing	Driftnets	Setnets	Both Nets	Larger than 6" mesh	6" mesh and smaller	Both Sizes	Rod & Reel
22	9	0	8	0	0	8	0	1
		0%	89%	0%	0%	89%	0%	11%

Percentages are based on the number of families fishing each week.

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	4	2	0	5	2	0	5	2
11%	44%	22%	0%	56%	22%	0%	56%	22%

Percentages are based on the number of families fishing each week.

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

CHINOOK			CHUM			SOCKEYE		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
3	2	2	1	5	1	1	5	1
33%	22%	22%	11%	56%	11%	11%	56%	11%

Percentages are based on the number of families fishing each week.

Harvest Goal Summary:

Seven families reported Chum salmon harvest goals to range from 50 to over 100 this season. Seven families are expecting to harvest a range of 30-200 Sockeye salmon.

A few families set a goal of 400 salmon (all species) to be harvested this year to meet their needs. Two families declined to report harvest goals this year.

Eight families are harvesting more whitefish this week than previous years at this time. One family reported a whitefish harvest goal of 50 or more this season. Five families are expecting to harvest 50-100 Coho salmon this season.

Chinook:

One family reported the catch rate for Chinook salmon to be very good. Four families reported the run timing to be normal for early June. Two families reported the Chinook salmon run timing as late. Three families reported the run timing as normal.

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Chum:

Five families reported the chum salmon catch rate to be normal, and two families reported it to be poor. One family reported the run timing as early, five families reported it as normal, and one family reported it to be late.

Sockeye:

Five families reported the catch rate as normal and two families reported it to be poor. One family reported the run timing as early, five families reported it as normal, and one family reported it to be late.

Comments:

Families reported waiting until restrictions are lifted to harvest salmon.

Four families suggested a Chinook salmon moratorium (similar to the moose moratorium). One family suggested a seven year Chinook salmon moratorium. Two families suggested closing international and high-seas fishing; and stronger enforcement of by-catch restrictions. One family suggested an international Chinook salmon conservation act or agreement.

Surveyor comments:

For the week ending of June 9th, ONC surveyed 22 families from the mouth of Church Slough downriver to Napaskiak Slough.

Some families were unable to comment on the catch rate or the run timing this week.

So far there are two ASL subsistence samplers for this season, but we have yet to receive any samples.

No families reported using gillnets with mesh size bigger than 4” or directly targeting Chinook salmon. From the mouth of the Gweek River down to Napaskiak Slough, we observed a total of 129 setnets.

ONC, USFWS, and ADFG distributed 150 fish this week to Tuluksak, Napaskiak, Tuntutuliak, Akiachak, Kwethluk and Bethel

Fishing reports from June 10-15, 2014

Families Surveyed	Families Fishing	Driftnets	Setnets	Both Nets	Larger than 6" mesh	6" mesh and smaller	Both Sizes	Rod & Reel	Dip net
24	11	0	9	0	0	9	0	1	2
		0%	82%	0%	0%	82%	0%	11%	18%

Percentages are based on the number of families fishing each week.

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
2	0	4	0	5	1	3	2	1
18%	0%	36%	0%	45%	9%	27%	18%	9%

Percentages are based on the number of families fishing each week.

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

CHINOOK			CHUM			SOCKEYE		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
1	3	1	1	4	1	2	3	1
9%	27%	9%	9%	36%	9%	18%	27%	9%

Percentages are based on the number of families fishing each week.

Harvest Goal Summary:

Three families set harvest goals of mixed salmon ranging from 20-100 with no direct target on a specific salmon species. Two families had not set harvest goals, because they have not started fishing yet.

Two families planned to harvest 15-200 whitefish this season. One family reported a plan to harvest 50 or more whitefish.

One family reported to have met their Chum and Sockeye harvest goals this week and are done fishing. Three families reported being half-way done to meeting their harvest goals and plan on being done in the next couple of days.

Chinook:

Five families commented on their Chinook harvest goals this week. Three families were undecided about whether they would directly target Chinook, but planned to keep incidental harvest of that species. Two families expressed strong belief in conservation of Chinook and planned to delay fishing until July.

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Families have reported that the incidental catches of Chinook are healthy and showed no signs of disease or parasites. One family reported catching spawning Chinook.

Chum:

Seven families reported Chum harvest goals this week. Three families reported a harvest goal of 20, two families reported 30, one family reported 100, and one family reported over 200 needed to reach their subsistence harvest goals this year.

Two families reported catching more chum than reds at the beginning of the week.

Sockeye:

Seven families reported Sockeye harvest goals this week. One family reported a harvest goal of 20, two families reported 30, two families reported 40, one family reported 150, and one family reported over 200 needed to reach their subsistence harvest goals this year.

This week families were catching big, healthy, and bright sockeye. One family reported catching a red that had pus under the skin. There was no trace of an open wound. Four families reported catching more reds at the end of the week.

Coho:

Two families planned to target 20-30 Coho salmon instead of targeting Chinook salmon.

Comments:

Two families that had not started fishing this week were getting salmon from Bethel Test Fish.

Two families commented on sharing nets with other families to reach harvest goals. One family reported a push of salmon on the 13th of this week. Respondents indicated that they had caught 20 salmon in a 24 hour period, checking the net twice in that time. Another family reported catching 5 salmon daily in 24 hour sets in Steamboat Slough.

One family reported dip netting for 3-5 hours above Bethel and didn't catch anything.

One family reported while cutting fish that the brains of the salmon were getting smaller.

Surveyor comments:

For the week ending in June 15th, ONC surveyed 24 families from the mouth of Church Slough to Napaskiak Slough. The number of families that are supported per fish camps ranged from one to ten families.

Surveyors observed 132 setnets from Church Slough to Napaskiak this week. On the first dip net opening, a total of three boats were counted from Bethel on down river.

Surveyors have distributed 3 ASL kits to date this year.

Appendix B4.–Lower Kuskokwim River inseason subsistence salmon harvest monitoring weekly report, Orutsarmiut Native Council, June 22, 2014.

Fishing reports from June 16-22, 2014

Families Surveyed	Families Fishing	Driftnets	Setnets	Both Nets	Larger than 6" mesh	6" mesh and smaller	Both Sizes	Rod & Reel	Dip net
2	22	0	19	3	0	22	0	0	0
		0%	86%	14%	0%	100%	0%	0%	0%

Percentages are based on the number of families fishing each week.

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
2	1	12	3	9	10	12	6	4
9%	5%	55%	14%	41%	45%	55%	27%	18%

Percentages are based on the number of families fishing each week.

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

CHINOOK			CHUM			SOCKEYE		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
4	5	3	5	12	4	6	12	2
18%	23%	14%	23%	55%	18%	27%	55%	9%

Percentages are based on the number of families fishing each week.

Harvest Goal Summary:

This week 12 families discussed harvest goals for this season.

Three families planned to harvest 15-200 whitefish this season.

Two families reported having met their Chum and Sockeye harvest goals for the season and are done fishing. Three families reported being half-way to meeting their harvest goals and plan on finishing within the next couple of days.

Chinook:

Four families said they are not targeting Chinook salmon this year. Two families said they are keeping incidental catches of Chinook. Two families did not comment on harvest goals for Chinook salmon. One family commented that they hadn't caught Chinook in their setnet two days in a row. Two families commented on releasing live Chinook salmon from their setnets this week. Two families reported that they have not met their goals but are done fishing until coho's arrive. Some families reported catching Chinook in spawning colors.

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Chum:

This week 11 families reported Chum harvest goals ranging from 10-200 salmon. One family reported catching Chum in spawning colors.

Sockeye:

This week 11 families reported sockeye salmon harvest goals of 5-200. One family reported catching more reds than normal, this week. Two families reported some of the reds they caught had parasites.

Coho:

Six families reported harvest goals ranging from 15-30 salmon.

Comments:

Three families reported having gone fishing below the Johnson River to take advantage of the subsistence opening to 6-inch mesh driftnets. Five families have not started fishing this year and two families have stopped fishing.

Two families reported Chinook salmon catch rates dropping off. One family commented that a group of fishers went fishing for them. One family reported catching small Chinook without reproductive organs. One family reported witnessing salmon floating down the river. One family reported catching Arctic Char, and one reported to releasing a live Arctic Char from their net. One family reported catching Dolly Varden that was bigger than Sockeye and Chum. One family reported that the Kuskokwim water is too swift for dipnetting.

Surveyor comments:

For the week ending of June 22th, ONC surveyed 29 families from the mouth of Church Slough to Napaskiak slough. The number of families that are supported per fish camp ranged from 1 to 20. Surveyors observed 148 setnets from Church Slough to Napaskiak this week. One boat was observed dip netting.

Seven families did not comment on catch rate

Ten families did not comment on run timing.

Surveyors have distributed 5 ASL kits to date this year with no ASL samples returned so far.

Appendix B5.–Lower Kuskokwim River inseason subsistence salmon harvest monitoring weekly report, Orutsarmiut Native Council, June 28, 2014.

Fishing reports from June 22-28, 2014

Families Surveyed	Families Fishing	Driftnets	Setnets	Both Nets	Larger than 6" mesh	6" mesh and smaller	Both Sizes	Rod & Reel	Dip net
42	37	12	12	9	0	33	0	0	0
		32%	32%	24%	0%	89%	0%	0%	0%

Percentages are based on the number of families fishing each week.

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	18	23	6	3	20	6	6
0%	8%	49%	62%	16%	8%	54%	16%	16%

Percentages are based on the number of families fishing each week.

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

CHINOOK			CHUM			SOCKEYE		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
4	11	5	6	20	6	6	20	6
11%	32%	14%	16%	54%	16%	16%	54%	16%

Percentages are based on the number of families fishing each week.

Harvest Goal Summary:

This week 19 families set harvest goals. One family reported a trout and whitefish harvest goal of 20 each, as well as one full drying rack of mixed salmon species. Three families reported a harvest goal of 40-300 mixed species of salmon. One family was still unsure about setting harvest goals because this was the first year they will be harvesting salmon other than Chinook.

Thirteen families reported to being done fishing this week and all reported not to having met their Chinook salmon subsistence needs. Eleven families reported to having met their sockeye and chum salmon seasonal needs and two families reported not having met their needs.

Five families were not willing to comment on the catch rate and run timing. Two families had not started fishing this year and one family had been given salmon. Another family this week reported to stop fishing abruptly, because they were moving.

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Chinook:

Eleven families did not want to comment on the catch rate and twelve families did not want to comment on run timing, these are not included into the table.

Six families said they would not be targeting Chinook salmon this year. Twelve families reported traditional harvest goals for Chinook salmon, but were not directly targeting that species.

Many families that are fishing stated that catch rates for Chinook salmon have slowed down and a majority of the run has passed.

Chum:

Sixteen families reported chum salmon harvest goals ranging from 2-200+ salmon. Many families reported catching spawning or spawned chum salmon. One family reported catching one chum salmon that had already began deteriorating flesh. Families have been reporting chum salmon having a white-milky looking puss in the meat.

Sockeye:

Eleven families reported to having harvest goals ranging from 5-200 salmon. One family reported catching more sockeye salmon, this week, than normal. Two families reported some of the sockeye salmon they caught had parasites.

Coho:

Four families reported harvest goals ranging from 20-300 salmon.

Comments:

One family had reported seeing dead chum salmon floating down the river.

No families reported using a dip net.

Surveyor comments:

Five families did not comment this week. One family didn't comment on run timing or catch rate.

For the week ending on June 29th, ONC surveyed 42 families from the mouth of Gweek River to Napaskiak Slough.

Surveyors observed 64 setnets from the mouth of the Gweek River to Napaskiak this week.

Surveyors have distributed 5 ASL kits and one family turned in their subsistence samples.

Appendix B6.–Lower Kuskokwim River inseason subsistence salmon harvest monitoring weekly report, Orutsararmiut Native Council, July 6, 2014.

Fishing reports from July 1-6, 2014

Families Surveyed	Families Fishing	Driftnets	Setnets	Both Nets	Larger than 6" mesh	6" mesh and smaller	Both Sizes	Rod & Reel	Dip net
30	5	4	1	0	0	5	0	0	0
		80%	20%	%	%	100%	%	%	%

Percentages are based on the number of families fishing each week.

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	1	3	1	2	1	1	3	0
0%	20%	60%	20%	40%	20%	20%	60%	0%

Percentages are based on the number of families fishing each week.

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

CHINOOK			CHUM			SOCKEYE		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
0	0	4	1	2	1	0	2	2
0%	0%	80%	20%	40%	20%	%	40%	40%

Percentages are based on the number of families fishing each week.

Harvest Goal Summary:

24 families reported being done fishing. No families met their King harvest goals this year. 13 families met harvest goals for chum and 5 did not. 12 families met harvest goals for sockeye and 6 did not. 6 families did not comment on meeting harvest goals but are done fishing. 1 family reported a harvest goal of 53 mixed salmon species.

Chinook:

All families that were surveyed this week reported not to have met their harvest goals for Chinook. Some families are reporting catching a few Chinook when driftnet fishing and small jacks are still being caught in setnets

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Chum:

1 family reported that they only targeted chum. 1 family reported a chum having different color eggs. 1 family reported seeing dead chum floating down river.

Sockeye:

1 family reported a harvest goal of 100 sockeye. The catch rate for sockeye is slowing down and in setnets big reds getting caught by their lower jaw. More spawning reds are being caught that are headed toward lower tributaries.

Comments:

Fisherman reported drifting with 5 ¾” and 6” mesh. All setnets being used are 4” mesh. One family has not started fishing and one family is fishing for those who aren’t.

Surveyor comments:

For the week ending of July 7th surveyors observed 10 setnets from Napaskiak to Gweek River and 4 driftnet fisherman.

Appendix B7.–Lower Kuskokwim River inseason subsistence salmon harvest monitoring weekly report, Orutsararmiut Native Council, July 13, 2014.

Fishing reports from July 6-13, 2014

Families Surveyed	Families Fishing	Driftnets	Setnets	Both Nets	Larger than 6" mesh	6" mesh	4" mesh	Rod & Reel	Dip net
33	2	1	0	1	0	1	1	0	0
		50%	0%	50%	0%	50%	50%	0%	0%

Percentages are based on the number of families fishing each week.

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	0	2	1	0	1	1	0	1
0%	0%	100%	50%	0%	50%	50%	0%	50%

Percentages are based on the number of families fishing each week.

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

CHINOOK			CHUM			SOCKEYE		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
0	1	1	0	1	1	0	0	2
0%	50%	50%	0%	50%	50%	0%	0%	100%

Percentages are based on the number of families fishing each week.

Harvest Goal Summary:

Thirty families reported being done fishing. No families met their king salmon harvest goals this year. Twenty-one families met their harvest goals for chum salmon and 9 did not. Twenty families met their harvest goals for sockeye salmon and 10 did not. Seven families did not comment on meeting their harvest goals but were done fishing.

Chinook:

Families that were fishing didn't report catching any king salmon.

Chum:

It was reported that people were catching more chum salmon downriver.

Sockeye:

It was reported that people going up river for fishing were catching more sockeye salmon.

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Comments:

People were done fishing because the bugs and rainy season had arrived.

Surveyor comments:

Surveyors observed three drifters from the Gweek River to Napaskiak.

ONC coordinated with the Bethel Test Fishery to deliver caught fish to Kuskokwim River communities. ONC Fisheries began delivering of fish to Bethel community members on May 30, 2014 and made their last delivery on June 15, 2014. A total of 211 households received fish. Fish caught during the late night/early morning tide went to the USFWS to distribute to the surrounding villages. The second drift of BTF was distributed by ONC's Natural Resources Department. Approximately, 195 king salmon, 46 chum salmon, 20 sockeye salmon, 11 Sheefish, 2 Cisco, and 11 Humpback whitefish were distributed. A total of 285 fish were distributed by the ONC Natural Resources staff.

Appendix B8.–Lower Kuskokwim River inseason subsistence salmon harvest monitoring weekly report, Orutsarmiut Native Council, May 31, 2015.

Fishing reports from May 25th-May 31st

Families Surveyed	Families Fishing	Drift-nets	Set-nets	>6" Mesh	>4"-6" Mesh	4" or Less	Rod & Reel	Dip net	Fish Wheel
26	7	0	7	0	0	7	0	0	0
		0%	100%	0%	0%	100%	0%	0%	0%

Percentages are based on the number of families fishing each week.

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	0	2	0	0	0	0	0	0
14%	0	29%	0	0	0	0	0	0

Percentages are based on the number of families fishing each week.

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

CHINOOK			CHUM			SOCKEYE		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
0	2	3	0	0	0	0	0	0
0	29%	43%	0	0	0	0	0	0

Percentages are based on the number of families fishing each week.

Harvest Goal Summary:

None of the families surveyed this week had set harvest goals.

Majority families surveyed that started fishing this week are putting up smelt and whitefish.

Chinook:

One family stated they are not targeting Chinook salmon this year. Six families stated they are keeping incidental catches of Chinook. Two families have reported catching Chinook and distributing between elders of their community. All Chinook that were caught this week were bright silver and the majority where mid-size to small males. 57% of the families surveyed this week were unable to comment on Catch Rate or Run Timing.

Chum:

There are no reports for Chum at this time.

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Sockeye:

There are no reports for Sockeye at this time.

Coho:

Three families are waiting to harvest Coho to substitute for Chinook.

Comments:

19 families surveyed have not started fishing this season. The number of families supported per fish camp ranged from 1 to 6. Some families have not started fishing, because they do not own a 4" net. One family also stated that they are going to fish outside the refuge boundary, because they do not own a 4" net.

This week was very successful for outreach, ASL kit distribution and recording Permit fishery information. All of surveyed families were curious and had multiple questions about the upcoming 804 ANILCA Permit Fishery.

A few surveyed families are moving fish camp locations due to erosion and sandbars.

Surveyor comments:

For the week ending of May 31st, ONC surveyed 26 families from the "Y" of Akiachak and Kwethluk downriver to Napaskiak Slough. Surveyors observed 40 setnets from the top of Church Slough to Napaskiak.

Surveyors have distributed a total of 9 ASL kits to date this year.

Appendix B9.–Lower Kuskokwim River inseason subsistence salmon harvest monitoring weekly report, Orutsarmiut Native Council, June 14, 2015.

Fishing reports from June 8-14th, 2015

Families Surveyed	Families Fishing	Drift-nets	Set-nets	Both	>6” Mesh	>4”-6” Mesh	4” or Less	Rod & Reel	Dip net
46	33	7	13	13	0	20	26	0	0
		21%	39%	39%	0%	0%	%	0%	0%

Percentages are based on the number of families fishing each week.

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
11	7	3	5	4	7	0	4	8
33%	21%	9%	15%	12%	21%	0	12%	24%

Percentages are based on the number of families fishing each week.

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

CHINOOK			CHUM			SOCKEYE		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
2	10	8	5	5	6	2	4	5
6%	30%	24%	15%	15%	18%	6%	12%	15%

Percentages are based on the number of families fishing each week.

Harvest Goal Summary:

This week 7 families discussed harvest goals for this season.

Chinook harvest goals ranged from 12-20. Chum harvest goals ranged from 20-100.

Sockeye harvest goals ranged from 20-100. Coho harvest goals ranged from 30-100.

Two families commented on a total salmon harvest goals ranged from 60-150.

Ten families were not able to comment on a salmon harvest goals as this week.

Chinook:

One family will not be targeting Chinook salmon this year. One family was unable to comment on catch rate or run timing, because they have not caught Chinook. Many of the Chinook caught this week were bright sliver, but one was very red. Reported gender caught this week was mainly small to medium males and some large females. 3% of the families were unable to comment on catch rate and run timing this week. 18 out of the 33 families surveyed this week were permit fisherman. Half of the families fishing reported Chinook catch rates to be improving this week.

Appendix B10.–Lower Kuskokwim River inseason subsistence salmon harvest monitoring weekly report, Orutsarmiut Native Council, June 28, 2015.

Fishing reports from June 22-28th, 2015

Families Surveyed	Families Fishing	Drift-nets	Set-nets	Both	>6” Mesh	>4”-6” Mesh	4” or Less	Rod & Reel	Dip net
51	33	33	0	0	0	33	0	0	0
		100%	0%	0%	0%	100%	%	0%	0%

Percentages are based on the number of families fishing each week.

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
2	7	17	6	19	5	5	15	11
6%	21%	52%	19%	58%	16%	16%	45%	33%

Percentages are based on the number of families fishing each week.

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

CHINOOK			CHUM			SOCKEYE		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
2	10	8	0	19	8	0	19	8
6%	30%	24%	0%	58%	24%	0%	58%	24%

Percentages are based on the number of families fishing each week.

Harvest Goal Summary:

This week, three families discussed harvest goals for this season.

Chinook salmon harvest goals ranged from 0- 20 fish. Chum salmon harvest goals ranged from 10-100 fish.

Sockeye salmon harvest goals ranged from 20-100 fish. Coho salmon harvest goals ranged from 0 to 150.

Two families commented on total salmon harvest goals ranging from 60-150.

Chinook:

Of the families surveyed, 21% of were unable to comment on catch rate and 39% were unable to comment on run timing this week. One family will not be targeting Chinook salmon this year. One family reported catching a large Chinook salmon with very light colored meat compared to a normal Chinook salmon.

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Chum:

Of the families surveyed, 9% were unable to comment on catch rate and 18% were unable to comment on run timing. Two families reported catching chum salmon with mushy meat and puss oozing out. One family reported a few chum salmon with parasites in the meat.

Sockeye:

Of the families surveyed, 6% were unable comment on catch rate and 18% were unable to comment on run timing. Many of the families are still concerned about the sockeye salmon return due to the low catch rates. One family caught a few reds with parasites located in the belly meat.

Comments:

Some of the families expressed their concern in opening the whole river when they are trying to conserve Chinook salmon, because there were too many boats fishing at once. A few families expressed the water being too high for fishing causing poor catch rates..

Surveyor comments:

One family turned in their ASL kit this week and a few more were still working on them until the end of next week.

ONC Fishery Technicians have distributed BTF fish to the following locations: Lulu Herron, Prematernal home care, Ayalpik Apartments, Long Term Care Facility, Teen Center, TWC, Moravian Volunteers, VFW, and the Bethel Community Action Center for Evacuees. ONC was still distributing to the Community Distribution List with the priority going to elders, widows, disabled individuals, individuals with no means to fish, and funerals. USFWS and ONC partnered to distribute to the community of Akiachak, Red Devil, Eek, Napaimute, Napakiak, and Napaskiak.

ONC Total Distribution (updated):

Chinook: 272

Sockeye: 127

Chum: 234

Inconnu: 32

Burbot: 7

Humpback: 2

Appendix B11.–Lower Kuskokwim River inseason subsistence salmon harvest monitoring weekly report, Orutsarmiut Native Council, July 5, 2015.

Fishing reports from June 29th, 2015- July 5th, 2015

Families Surveyed	Families Fishing	Drift-nets	Set-nets	>6” Mesh	>4”-6” Mesh	4” or Less	Rod & Reel	Dip net	Fish Wheel
40	25	25	0	0	25	0	0	0	0
		100%	0%	0%	100%	0%	0	0%	0%

Percentages are based on the number of families fishing each week.

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
2	9	6	2	10	8	18	6	0
8%	36%	24%	8%	40%	32%	72%	24%	0%

Percentages are based on the number of families fishing each week.

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

CHINOOK			CHUM			SOCKEYE		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
1	13	1	2	16	3	1	22	0
4%	52%	4%	8%	64%	12%	4%	88%	0%

Percentages are based on the number of families fishing each week.

Harvest Goal Summary:

There are no new harvest goals recorded for this week.

Chinook:

Seven families have reported meeting their harvest needs for Chinook salmon. Of the families surveyed, 32% were unable to comment on catch rate and 40% were unable to comment on run timing.

Chum:

A few families reported catching chum salmon with white and red puss oozing from the meat. Of the families surveyed, 20% were unable to comment on catch rates and 16% were unable to comment on run timing.

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Sockeye:

Many of the families surveyed reported a higher catch rate of sockeye salmon this past week than any other salmon species during the previous openers. A few families commented that the meat of a sockeye salmon appeared to be sickly and lighter colored. Of the families fishing 4% were unable to comment on catch rate and 8% were unable to comment for run timing.

Coho:

Some families are waiting for coho salmon to finish their harvest goal needs for chum salmon and sockeye salmon. There are no reports of any coho salmon being caught this week.

Comments:

Fisherman commented on using mesh size ranging from 4", 5 ½", 5, 3/8", 5 ¾", and 6". One family reported catching pink salmon in their driftnet this past subsistence opener.

Surveyor comments:

For the week ending in July 5th, 2015, ONC Surveyors observed 0 setnets and 0 driftnets.

There were no additional ASL kits distributed this week, we have been receiving trickles of ASL kits.

Bethel Test Fish Distribution:

ONC Fishery Technicians have distributed Bethel Test Fish to the following locations: Senior Center, Lions Club, Lulu Herron, Prematernal home care, Ayalpik Apartments, Long Term Care Facility, Teen Center, TWC, Moravian Volunteers, VFW, Bethel Readiness Center, ONC Community Distribution List with the priority going to elders, widows, disabled individuals, and individuals with no means to fish. USFWS and ONC partnered in distribution to the following communities Akiachak, Red Devil, Eek, Oscarville, Napaimute, and Napaskiak.

ONC Total Distribution (updated):

Chinook Salmon: 271

Sockeye Salmon: 195

Chum Salmon: 236

Pink Salmon: 1

Dolly Varden: 2

Inconnu: 32

Humpback: 2

Burbot: 8

Appendix B12.–Lower Kuskokwim River inseason subsistence salmon harvest monitoring weekly report, Orutsarmiut Native Council, July 12, 2015.

Fishing reports from July 6th, 2015- July 12th, 2015

Families Surveyed	Families Fishing	Drift-nets	Set-nets	>6” Mesh	>4”-6” Mesh	4” or Less	Rod & Reel	Dip net	Fish Wheel
47	18	18	0	0	18	0	0	0	0
		100%	0%	0%	100%	0%	0	0%	0%

Percentages are based on the number of families fishing each week.

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
2	0	6	6	6	1	6	4	2
11%	0%	33%	33%	33%	6%	33%	22%	11%

Percentages are based on the number of families fishing each week.

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

CHINOOK			CHUM			SOCKEYE		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
1	3	0	1	6	4	3	8	0
6%	17%	0%	6%	33%	22%	17%	44%	0%

Percentages are based on the number of families fishing each week.

Harvest Goal Summary:

There are no new harvest goals recorded for this week.

Chinook:

Of the families surveyed 21% where unable to comment on catch rate and 28% where unable to comment on run timing. Thirteen families reported meeting their harvest goals for Chinook salmon, and 8 families reported being done fishing but did not meet their harvest goals for Chinook salmon this year.

Chum:

Of the families surveyed 11% where unable to comment on catch rates and 15% where unable to comment on run timing of chum salmon.

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Twelve families reported meeting harvest goals while 3 families reported being done fishing but not meeting their harvest goals for chum salmon.

A few families reported catching chum salmon with white and red puss oozing from the meat. One family reported catching a chum salmon with tapeworms all over the outside of the fish.

Sockeye:

Of the families surveyed 13% where unable to comment on catch rates and 15% where unable to comment on run timing of sockeye salmon. Thirteen families reported having met harvest goals while 3 families reported being done fish but not meeting their harvest goals for sockeye salmon.

A few families reported catching sockeye salmon with puss in the meat.

Coho:

Twenty-three families are waiting to fish for coho salmon to finish their harvest goals.

One family reported catching one coho salmon this week.

Comments:

Of the families surveyed 10 reported using 6” mesh, 3 used 5 ½” mesh, 4 used 4 ¾” mesh and 1 reported using 4 ½” mesh.

A few families commented that the bugs are getting bad for drying fish. One family reported that due to restrictions they were unable to put away as many fish as usual and will have less fish to share with family.

Surveyor comments:

Bethel Test Fish Distribution:

ONC Fishery Technicians have distributed Bethel Test Fish to the following locations: Senior Center, Lions Club, Lulu Herron, Pre-maternal Home Care, Ayalpik Apartments, Long Term Care Facility, Teen Center, TWC, Moravian volunteers, VFW, Bethel Readiness Center, ONC Community Distribution List with the priority going to elders, widows, disabled individuals, and individuals with no means to fish. USFWS and ONC partnered in distribution to the following communities Akiachak, Red Devil, Eek, Oscarville, Napaimute, and Napaskiak.

ONC Total Distribution (updated):

Chinook Salmon: 277

Sockeye Salmon: 216

Chum Salmon: 310

Pink Salmon: 2

Dolly Varden: 2

Inconnu: 32

Humpback: 2

Burbot: 8

Appendix B13.–Lower Kuskokwim River inseason subsistence salmon harvest monitoring weekly report, Orutsarmiut Native Council, June 19, 2016.

Fishing reports from 13-19th June 2016

Families Surveyed	Families Not Fishing	Drift-nets	Set-nets	Both	6" Mesh	4" or Less	5/12" Mesh	5 ¾" Mesh	5 7/8" Mesh
33	4	25	3	3	14	2	8	3	3
		75%	9%	9%	42%	6%	24%	9%	9%

Percentages are based on the number of families fishing each week.

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	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Percentages are based on the number of families fishing each week.

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

CHINOOK			CHUM			SOCKEYE		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Percentages are based on the number of families fishing each week.

Sockeye:

Of the families surveyed 13% were unable to comment on catch rates and 15% were unable to comment on run timing of sockeye salmon. Thirteen families reported having met harvest goals while 3 families reported being done fish but not meeting their harvest goals for sockeye salmon.

A few families reported catching sockeye salmon with puss in the meat.

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Coho:

Twenty-three families are waiting to fish for coho salmon to finish their harvest goals.

One family reported catching one coho salmon this week.

Comments:

Of the families surveyed 10 reported using 6” mesh, 3 used 5 ½” mesh, 4 used 4 ¾” mesh and 1 reported using 4 ½” mesh.

A few families commented that the bugs are getting bad for drying fish. One family reported that due to restrictions they were unable to put away as many fish as usual and will have less fish to share with family.

Surveyor comments:

Bethel Test Fish Distribution:

ONC Fishery Technicians have distributed Bethel Test Fish to the following locations: Senior Center, Lions Club, Lulu Herron, Pre-maternal Home Care, Ayalpik Apartments, Long Term Care Facility, Teen Center, TWC, Moravian volunteers, VFW, Bethel Readiness Center, ONC Community Distribution List with the priority going to elders, widows, disabled individuals, and individuals with no means to fish. USFWS and ONC partnered in distribution to the following communities Akiachak, Red Devil, Eek, Oscarville, Napaimute, and Napaskiak.

ONC Total Distribution (updated):

Chinook Salmon: 277

Sockeye Salmon: 216

Chum Salmon: 310

Pink Salmon: 2

Dolly Varden: 2

Inconnu: 32

Humpback: 2

Burbot: 8

Appendix B14.–Lower Kuskokwim River inseason subsistence salmon harvest monitoring weekly report, Orutsarmiut Native Council, June 26, 2016.

Fishing reports from 19-26th June 2016

Families Surveyed	Families Not Fishing	Drift-nets	Set-nets	Both	6" Mesh	4" or Less	5 1/2" Mesh	5 3/4" Mesh	5 7/8" Mesh
32	1	30	4	3	15	2	7	2	3
		75%	9%	9%	42%	6%	24%	9%	9%

Percentages are based on the number of families fishing each week.

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	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Percentages are based on the number of families fishing each week.

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

CHINOOK			CHUM			SOCKEYE		
Early	Normal	Late	Early	Normal	Late	Early	Normal	Late
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Percentages are based on the number of families fishing each week.

Harvest Goal Summary:

Chinook harvest goals: 10 to 300. Some of the families are still waiting till the restrictions are over and reported to not be targeting Chinook salmon. **Sockeye harvest goals:** 0 to 400. **Chum harvest goals:** 0 to 400. **Coho harvest goals:** 0 to 300. Some families only target king salmon, and therefore, identify other salmon species as “bycatch.” Other families did not quantify their harvest goals, but rather wanted enough to fill their racks. **Chinook:** Most families were content with the amount of king salmon caught during the 72 hour opener. The majority of catches reported were male king salmon. Many families indicated they had higher catch rates this opener in comparison to the previous openers, indicative of a higher CPUE by fish camp families.

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Chum: Some families indicated that they were catching much more chums this prior 72 hour opener, but it depended on where they were fishing.

Sockeye: Many of the families had commented that there were hardly any reds this opener. The reds that were caught were reported to be small.

Coho: (No current data)

Comments:

Some families had lower chum catches than the previous openers, with barely any sockeye salmon harvested. Other families indicated that by this time last year, their sockeye salmon catch was much higher. Families reported catching mainly male king salmon. Fish jumping out of the river was observed by fish camps, indicating high densities of fish in the river. People were content with the fishing this opener. Many families said they caught enough fish to fill their racks, with higher CPUE than previous openers. Overall, families surveyed at fish camps were happy.

Surveyor comments:

Families were very busy cutting and hanging fish. There were more people assisting with cutting this opener, than observed in prior openers. Fish racks were starting to fill up with different species of fish. Many families were out fishing during evening hours, as indicated by absence of boats and people during those survey periods. Families were very happy and willing to report their fish catches. The majority of families seemed to have already filled their racks, with anticipation to harvest sockeye salmon and coho salmon later in the season.

Bethel Test Fish Distribution:

ONC Test Fish Distribution from the ADFG Bethel Test Fishery fish has completed conducting deliveries as of June 24th, 2016. ONC has delivered fish to elders, disabled individuals and many others residing in Bethel and other villages. The community fish bin was put out by ADFG as of June 26th, 2016. ADFG can address any question about the community fish bin.

Appendix B15.–Lower Kuskokwim River inseason subsistence salmon harvest monitoring weekly report, Orutsarmiut Native Council, July 4, 2016.

Table 1: Fishing reports from 26th June- 4th July 2016

Families Surveyed	Families Fishing	Drift-nets	Set-nets	Both	6" Mesh	5 7/8" Mesh	5 3/4" Mesh	5 1/2" Mesh	5" Mesh
23	18	17	1	0	9	1	1	6	1
		94%	5%	0	50%	5%	5%	33%	5%

Percentages are based on the number of families fishing each week.

Table 2: Compared with the previous 72-hour opener, how are catch rates for salmon this week?

CHINOOK			CHUM			SOCKEYE		
Very Good	Normal	Poor	Very Good	Normal	Poor	Very Good	Normal	Poor
0	6	4	0	6	4	2	7	1
0	33%	22%	0	33%	22%	1%	38%	1%

Percentages are based on the number of families fishing in the last two 72-hour openers (6/21-6/24 & 6/29-7/2).

Table 3: Quantitative Fish Camp Data

	Opener 2	Opener 3	Opener 4
Total Number of Quantitative Based Interviews	20	31	9
Mean Soak Time	5.19	2.15	1.31

Fish camp data was obtained by ONC and calculated by Ben Staton, USFWS. Soak time refers to total time of net in water actively fishing.

Table 4: Fish Camp Salmon Catch Data

Species	Mean (Opener 2)	Mean (Opener 3)	Mean (Opener 4)
Chinook	12.95	10.87	2.11
Chum	4.63	10.55	10.56
Sockeye	1.75	5.81	14

Fish camp data was obtained by ONC and calculated by Ben Staton, USFWS.

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Harvest Goal Summary:

No new harvest goals were documented last week. Fourteen families reported to be done harvesting salmon and are now waiting to harvest coho salmon. Two families were unable to comment on their final harvest goals. One family reported that they were done fishing due to conservation concerns, despite their inability to meet their harvest goals. One family reported they were unable to meet their goals due to physical injuries in the prior opening. One family reported that they had not started fishing this year and were waiting for the coho salmon run to begin harvesting salmon.

Chinook: Eight families reported they had met their harvest goals. Four families did not meet their harvest goals.

Chum: Six families reported they had met their harvest goals. Five families did not meet their harvest goals.

Sockeye: Seven families reported they had met their harvest goals. Four families did not meet their harvest goals.

Comments:

Chinook: A few families reported the Chinook salmon harvest to be average. Most families continue to catch mainly male Chinook salmon. The size of the Chinook salmon was reported as medium. A few families reported that many of the Chinook salmon were caught by the teeth on their nets, and escaped. A few of our fisherman reported large numbers of Chinook salmon jumping around and over their nets. Other families reported they were not able to catch any Chinook salmon this opener, which was contrary to their harvest in the previous 72-hour opener. Some families reported higher Chinook salmon harvest this season in comparison to last season.

Chum: Chum salmon catches were reported to be higher this opener, compared to the previous two openers. One family reported they were catching more chum salmon than last year. Certain families reported not catching any chum salmon where they were fishing. Certain families harvested many chum salmon, while others did not harvest any, due to location of fishing activity. A few families reported on the importance of fishing location and speed of current when targeting different salmon species.

Sockeye: Families this opener reported the number of sockeye salmon has increased in run size and abundance. Sockeye salmon size was average for most nets, and large for 5 7/8” net.

Fish Openings: They had better openings this year. Two families commented on their desire to have more 72-hour opening this year. One family reported that they were cut off by other fishermen who were using 300ft length nets. A few families reported witnessing other people using illegal 300ft length nets.

Tagged salmon: Two families reported their harvest of tagged salmon and have notified ADFG already.

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Additional: One family reported that after fishing they had to use only half of the net, because they would have sunk their net with fish. One family reported information from a family living in a village of the mouth of the Kuskokwim River, who indicated there was still an abundance of fish in that area. A few families reported that flies were causing fish to rot, or were preventing them from hanging fish on racks. One family was hoping for a commercial opener.

Surveyor comments:

Last week's fish camp surveys were conducted at the fish camps and boat harbor. Quantitative and qualitative data were collected in efforts to calculate catch per unit effort in collaboration with USFWS. We also obtained qualitative information to compare catch rates this 72-hour opener with the last 72-hour opener. This week more than half of our families that were surveyed had reported to be done fishing for the year and were waiting to harvest coho salmon. A lot of families were already putting away their salmon when we visited fish camps. All of the fish camps surveyed this week looked well maintained.

ASL Kits: Eight kits were distributed. Three kits were turned in. ASL was conducted at the boat Harbor and at fish camps during the previous 72-hour opener.

Fishing Reports from July 4th-10th

Families Surveyed	Families Fishing	Drift-nets	Set-nets	>6” Mesh	>4”-6” Mesh	4” or Less	Rod & Reel	Dip net	Fish Wheel
53	1	1	0	0	1	0	0	0	0

Harvest Goal Summary:

Questions regarding Chinook salmon, chum salmon and sockeye salmon harvest goals will be addressed during this week, our final week of surveying.

Comments:

Of all families surveyed, 4% of the families surveyed were not focused on fishing, and were focused on berry picking at this time. 28% of the families surveyed were not planning to fish until the coho salmon run starts. 32% of the families surveyed plan to fish in the upcoming week or two. 2 families were out of town, and therefore, unable to fish, but planned on fishing upon return. 15% of families surveyed stated they were done fishing for the year. Of those 8 families that were done fishing, one family had no means to fish, while the other family did not participate in subsistence fishing all season due to conservation concerns. Other families were unable to fish this past weekend for a variety of reasons, including injuries, being too busy, needing to fix their nets, waiting for other family members to return home and/or weather related reasons. One family was confused on the most current fishery regulations, and did not go fishing for that reason.

Surveyor comments:

Surveyors went out to fish camps Friday late afternoon/early evening and only came across one family that was actually at fish camp, and actively fished. Due to limited number of people out at fish camps Friday, surveyors made phone calls on Saturday and Sunday to inquire if families had went out fishing following the opening of the fishery on Thursday, July 7th. Out of all 53 families surveyed Friday-Sunday, only one family was actually fishing during that three day period. We plan to survey fish camps and conduct phone surveys this entire week, now that the fishery has no time restrictions. Last weeks’ time restrictions limited our surveys to a three day time period. Families do not like to be surveyed during periods of fishery closures, considering their inability to report any potential updates during that time.

Quantitative Surveys

Our more extensive quantitative based surveys including questions on fishing location, soak time, start time, finish time, net length, mesh size, number of salmon species caught, number of tagged fish caught and comments on fishing were completed during the last 72-hr opener on July 2nd, and limited during last week’s surveys to one active fishing family.

This season, we conducted a total of 402 quantitative based fishing surveys, which included people returning to Bethel boat harbor, as well as fish camp families. We will continue to inquire about quantitative aspects of fishing, but limit our questions to inquiring about mesh size, net length, gear type, total soak time and total salmon species caught during our final week of surveying.

Appendix B17.–Lower Kuskokwim River inseason subsistence salmon harvest monitoring weekly report, Orutsarmiut Native Council, July 15, 2016.

Table 1: Fishing Reports from July 11th-15th

Families Surveyed	Families Fishing	Drift-nets	Set-nets	>6” Mesh	>4”-6” Mesh	4” or Less	Rod & Reel	Dip net	Fish Wheel
55	1	1	0	0	1	0	0	0	0

Table 2: Did you achieve harvest goals for King salmon, sockeye salmon and/or chum salmon?

Total Family Responses	King Harvest Goals Achieved (Y)	Sockeye Harvest Goals Achieved (Y)	Chum Harvest Goals Achieved (Y)	King Harvest Goals Achieved (N)	Sockeye Harvest Goals Achieved (N)	Chum Harvest Goals Achieved (N)
45	58%	56%	58%	42%	40%	33%

Table 3: Were your harvest goals reduced due to conservation concerns?

Total Family Responses	Yes	No
45	22%	60%

Table 4: How were catch rates this year compared to catch rates last year?

CHINOOK			CHUM			SOCKEYE		
Good	Average	Poor	Good	Average	Poor	Good	Average	Poor
31%	22%	18%	4%	40%	16%	26%	27%	16%

-continued-

Harvest Goal Summary:

Questions regarding Chinook salmon, chum salmon and sockeye salmon harvest goals are illustrated in table 1. More than half of the families surveyed did achieve King salmon, sockeye salmon and chum salmon harvest goals. Four families did not respond to the question addressing if chum salmon harvest goals were achieved because they were not targeting chum salmon. Two families were not targeting sockeye salmon, and therefore, did not respond to the question addressing if sockeye salmon harvest goals were achieved. 10 families did not respond to this question at all. Of those ten families, five families did not respond because they did not have a boat or were too busy. The other five families did not respond to this question because they had no set goals in mind due to regulations. These five families fished for whatever they were able to harvest with no set goal in mind.

Surveyors followed up with an additional question to all 45 families inquiring if they reduced their harvest goals due to conservation concerns. As shown in table 3, the majority of families did not reduce their harvest goals due to conservation concerns. 8 families did not respond to this question because they did not have any set harvest goals.

Catch Rates:

Surveyors inquired how this year's catch rates compared to last year's catch rates. 55 families responded to this question. For Chinook salmon, 29% of the families did not respond to this question. For chum salmon, 40% of the families did not respond. For sockeye salmon, 31% of the families did not respond. These families did not respond because they were not targeting that particular species this season, and did not target them in the past. Other families did not respond because they did not fish at all this season. Certain families were only focused on responding to how King salmon catch rates varied from last season to this season, and therefore, did not respond to this question for chum salmon and sockeye salmon.

Comments:

As illustrated in table 1, only one of the 55 families surveyed was actively fishing. Families were not fishing for a multitude of reasons including the following: no boat, limited gear, too busy, limited restrictions and no desire to "combat fish." Other families were not fishing because it is too late in the season, and complained about having to tend to their fish more than desired as a result of bugs and larvae sacs. Families that did fish were relatively happy to be out fishing, and commented that the fishing was good this season. Although this may not be as heavily reflected in table 4, families said the catch rates for King salmon were much better this year than last year. Multiple families commented on low sockeye salmon abundance this year compared to last year. Certain families commented on the fish looking relatively healthy this year in comparison to last year.

Surveyor comments:

Surveyors went out to fish camps this week and also conducted phone interviews. Most families were putting away their fish for the winter when surveyors visited the fish camps. Only one family was actively fishing, while the others were at fish camps enjoying time with family and friends, not fishing. Not many boats were observed when surveyors were out on the water. Phone call surveys were conducted, and gathered similar results. Most of the families were content with over-the-phone surveys, and responded to all questions answered

Appendix B18.–Lower Kuskokwim River inseason subsistence salmon harvest monitoring weekly report, Orutsararmiut Native Council, June 12, 2017.

Orutsararmiut Native Council Inseason Harvest Monitoring Weekly Report

Interview Activities from June 9 – June 12

Fish Camps Visited	Fish Camps Interviewed	Fishing Start Date (6/3)	Fishing Start Date (6/10)	Fishing Start Date (6/12)	Haven't Begun Fishing
25	24	1	4	9	10

ONC also conducted 109 surveys on Monday, June 12 from 2PM-1230AM at the Bethel Boat Harbor. USFWS will provide a summary of the data collected.

Communities Represented at Fish Camps

Bethel, Nunapitchuk and Kasigluk

Fishing Trip Summary for June 12

Driftnet	Average Soak Time (hours)	Average Chinook salmon catch	Average chum salmon catch	Average sockeye salmon catch
8	1.76	1	3	<1

All fish camps that were interviewed and fished on June 12 used 6 inch mesh size or less. All fishing occurred within the area just above Napaskiak upriver to Akiachak.

Average CPUE (catch-per-unit-effort) for June 12

Species	Chinook salmon	Chum salmon	Sockeye salmon
Average CPUE (Catch Per Unit Effort)	1.42	3.64	0.89

Summary of Comments

Two fish camps suggested the need for more restrictions for Chinook salmon. Four fish camps indicated there were too many restrictions on Chinook salmon harvest. One fish camp indicated, due to restrictions, it was becoming much harder to carry on their tradition and culture. One fish camp reported that high fuel costs restricted their ability to fish. Two fish camps also reported that chum salmon were arriving too early in the season. Overall, active fishing families reported fishing to be rather slow during the June 12 opener with low Chinook salmon catches.

Appendix B19.–Lower Kuskokwim River inseason subsistence salmon harvest monitoring weekly report, Orutsararmiut Native Council, June 17, 2017.

Orutsararmiut Native Council Inseason Harvest Monitoring Weekly Report

ONC Bethel Test Fishery Distribution

Thus far, we have delivered to 113 elders in Bethel. We also delivered fish to Kasigluk and Oscarville for a family funeral. A total of 42 Chinook salmon, 69 chum salmon, 46 sockeye salmon, and 96 whitefish were delivered between the dates of May 25th through June 19th.

Interview Activities from June 8th - 17th

Total Fish Camps Interviewed	Fishing Start Date (6/3)	Fishing Start Date (6/10)	Fishing Start Date (6/12)	Haven't Begun Fishing
46	3	4	29	10

Summary of Comments

This week, we reduced our survey efforts due to limited gillnet fishing opportunities available for fishermen on the Kuskokwim. The comments provided to us are as follows:

Eight fish camps commented on fishery management. Six of these fish camps reported there are too many restrictions and the limited number of openers prevents them from harvesting Chinook salmon. One fish camp suggested having more restrictions to allow more Chinook salmon to “pass by.” One fish camp recommended an alternative management strategy which would divide the river into sections and manage it section by section, requiring different communities to fish at different times. Two fish camps reported on family harvest changes, which included the desire to harvest more fish as a result of supporting a larger number of households. Two fish camps reported personal reasons for not fishing. Two additional fish camps expressed feelings of disappointment and frustration to our surveyors in regards to the recent fishery management actions.

Orutsararmiut Native Council Inseason Harvest Monitoring Weekly Report

ONC Bethel Test Fishery Distribution

As of Sunday, 25 June, 611 fish harvested in the Bethel Test Fishery have been distributed to 182 households/organizations representing Bethel, Kasigluk, Kwethluk, Oscarville, and Atmautluak. Distributions included 98 Chinook salmon, 218 chum salmon, 133 sockeye salmon, 87 sheefish and 75 other fishes (primarily whitefish).

Summary of Interview Activities

ONC has conducted weekly surveys of Bethel Area fish camps since 8 June. So far this season, we have surveyed **66** unique fish camps. From 24 June through 26 June, ONC interviewed 36 fish camps, the survey responses provide general insight into fishing activities during the fishery opener on 24 June.

Summary of Fishing Activities during the 24 June Opener

- 92% of surveyed fish camps (n=33) went out fishing during the recent opener.
- A total of 37 separate fishing trips were conducted by the 33 surveyed fish camps.
- Majority (88%) of the surveyed fish camps conducted one fishing trip during the opener, while the minority (12%) made multiple fishing trips.
- Drift gillnets were the most common gear type used (87%), followed by set gillnets (11%), and one dip net.
- Gillnet mesh sizes ranged between 5.25 inch and 6.0 inch stretched.
- Most fishing trips (70%) conducted by surveyed fish camps occurred between Napaskiak and Akiachak. The remaining trips were conducted between Napaskiak and the confluence with the Johnson River (19%) and downriver from the confluence with the Johnson River (11%). No survey respondents fished upriver from Akiachak.

Table 1. Average number of salmon harvested by surveyed fish camps on 24 June

Species	Chinook Salmon	Chum Salmon	Sockeye Salmon
Average Number of Fish Harvested	8	41	17

The information above includes data obtained from 37 unique fishing trips.

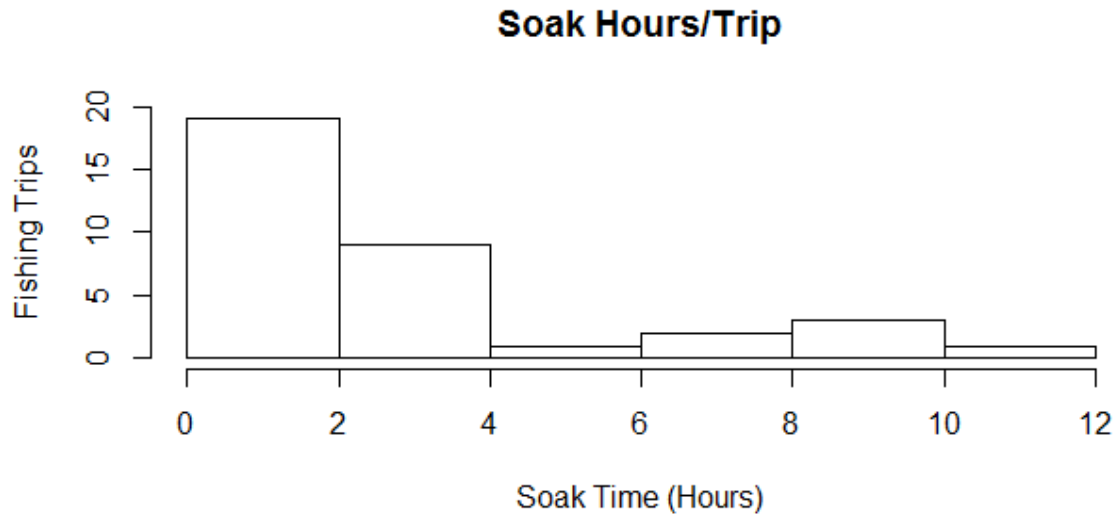
Table 2. Average Catch-Per-Unit-Effort (CPUE) for the surveyed fish camps that fished on 24 June

Species	Chinook Salmon	Chum Salmon	Sockeye Salmon
Average CPUE	5	28	11

Numbers represent the expected catch using a 150 foot net for one hour.

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Figure 1. Distribution of soak time for 37 unique fishing trips.



Median soak time = 2 hours

Table 3. Fishing Progress for 33 fish camps surveyed between 24 June and 26 June
We asked fish camps about their progress for meeting their subsistence salmon harvest goals.

Salmon Species	Less Than Half	Halfway	More than Half/Met	Total N
Chinook salmon	76%	14%	7%	28
Chum salmon	21%	14%	65%	29
Sockeye salmon	42%	41%	17%	29

Summary of Comments

Comments listed below were provided to us during and after the 24 June opener. Five fish camps indicated that they were grateful for the opener and the opportunity to catch more fish. Two fish camps reported that they had no goals for Chinook salmon; one fish camp does not target Chinook salmon and the other fish camp was happy for whatever Chinook salmon they can harvest. Two fish camps commented on restrictions; one fish camp stated the allowable mesh size was too small and the other fish camp stated it was too late to provide an opportunity to harvest Chinook because the Chinook salmon had already moved upriver. Another fish camp reported that with current restrictions, they were attempting to put more fish away this season, to sustain them through next season. Two fish camps commented that there wasn't enough notice before the opener and they didn't have a chance to go fishing; one of which didn't know where to find information on the 24 June opener.

Orutsararmiut Native Council Inseason Harvest Monitoring Weekly Report

Summary of Interview Activities

ONC has conducted weekly surveys of Bethel Area fish camps since 8 June. So far this season, we have surveyed 101 unique fish camps. From 1 July through 9 July, ONC interviewed 81 unique fish camps. Of these fish camps, 41 reported information on their catch and effort for their most recent fishing trips.

- 30 fish camps reported to have fished during the 7/1 opener
- 23 fish camps went out during the 7/3 opener
- 6 fish camps went fishing more recently, between 7 July through 9 July
- Drift gillnets were the most common gear type used (73%), followed by set gillnets (27%)
- Average soak time=1.7 hours

Of the fish camps surveyed, most fishing trips (79%) occurred between Napaskiak and Akiachak. The remaining trips were conducted between Napaskiak and the confluence with the Johnson River (18%) and downriver from the confluence with the Johnson River (3%). No survey respondents fished upriver from Akiachak.

Table 1. Average number of salmon harvested by surveyed fish camps since July 1

Species	Chinook Salmon	Chum Salmon	Sockeye Salmon
Average Number of Fish Harvested	1	19	19

Table 2. Average Catch-Per-Unit-Effort (CPUE) for the surveyed fish camps that fished since July 1

Species	Chinook Salmon	Chum Salmon	Sockeye Salmon
Average CPUE	2	47	37

Numbers represent the expected catch using a 150 foot net for one hour.

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Table 3. Fishing Progress for 49 fish camps surveyed between 1 July and 9 July. Please note that not all fish camps have set harvest goals for salmon.

Salmon Species	Less Than Half	Halfway	More than Half	Met	Total N
Chinook salmon	58%	2%	5%	35%	48
Chum salmon	15%	4%	6%	75%	48
Sockeye salmon	22%	29%	20%	29%	49

Summary of Comments

This week, surveyors conducted fish camp surveys over the phone and at fish camp. The following summary of comments only includes comments from fish camps surveyed between 5 July and 9 July. Eleven fish camps are still attempting to meet their sockeye salmon goals with a plan to target coho salmon afterwards. Seven fish camps stated that gillnet fishing opportunities should be provided earlier. One fish camp claimed that the restrictions were good and allowed more Chinook salmon to get up the river. Three fish camps commented on bad weather causing their fish to spoil and go to waste. One fish camp reported to not target Chinook salmon. Three fish camps didn't harvest Chinook salmon because of their low abundance. One fish camp is waiting to fish more until berry season passes. Twenty-five fish camps reported to be done fishing until coho salmon fishing begins.

Orutsararmiut Native Council Inseason Harvest Monitoring Weekly Report

Summary of Final Interview Activities (2 July-23 July)

ONC has conducted weekly surveys of Bethel Area fish camps since 8 June. So far this season, we have surveyed **101** unique fish camps. The majority of these fish camps (n=78) were actively fishing throughout our survey period (12 June-19 July), with a minority (n=23) of fish camps reporting one of following: not actively fishing during our survey period, not interested in being a participant in this project, no response/not seen at fish camp. Therefore, we attempted to make contact with those 78 active fish camps throughout the season. Of these 78 fish camps, on average, each was contacted twice. Most fish camps (n=50) were contacted two and three times throughout the season.

Chinook salmon ASL (Age-Sex-Length) Sampling Program Recruits

We were able to successfully recruit 16 fish camps to participate in the Chinook salmon ASL program.

Table 1. Fishing Progress for 73 fish camps surveyed this season.

Salmon Species	Less Than Half	Halfway	More than Half	Met	Total N
Chinook salmon	60%	6%	3%	31%	71
Chum salmon	13%	7%	4%	76%	72
Sockeye salmon	15%	22%	12%	51%	73

Summary of Progress Comments

We obtained progress information from fish camps that reported having a harvest goal for at least one of the three salmon species we inquired about. Roughly half (n=38) of these fish camps provided us with comments in addition to their progress data. Seventeen reported to be done fishing until the coho salmon starting entering this part of the river in larger numbers. Eight fish camps wanted to harvest a few more sockeye salmon. One fish camp planned to target white fish. One fish camp stopped fishing because they were getting too many chum salmon. Two fish camps commented about restrictions and the bad weather causing some of their fish to spoil.

Two fish camps expressed being happy to fish.

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End of Season Comments

During the last interview, surveyors asked fish camps, “If any of your harvest goals were not met, please explain why.” Of the fish camps that did not meet at least one of their salmon harvest goals, thirty-five reported restrictions being the reason for not meeting their salmon harvest goal(s). Seven reported weather as a main reason for not having met their salmon harvest goals. Three fish camps did not meet one of their salmon harvest goals because they stopped fishing in fear of harvesting too many chum salmon. An additional three fish camps reported personal reasons for not meeting one of their salmon harvest goals including motor and health issues.