Kuskokwim River Salmon Management Working Group 1 (800) 315-6338 (MEET) Code: 58756# (KUSKO)

300) 315-6338 (MEET) Code: 58756# (KUSK) ADF&G Bethel toll free: 1 (855) 933-2433

Meeting Agenda

Date: 07/06/2018	Time: 10:00 a.m.	Place: Bethel	
Time Called to Order:	Chair: Fritz Charles		
ROLL CALL TO ESTAB Upriver Elder: Downriver Elder: Commercial Fisher: Lower River Subsistence: Middle River Subsistence: Upper River Subsistence: Headwaters Subsistence:	LISH QUORUM:	QUORUM MET? Yes / No Processor: Member at Large: Sport Fisher: Western Interior RAC: Y-K Delta RAC: KRITFC: ADF&G:	
INTRODUCTIONS: INVOCATION: APPROVAL OF AGENDA: APPROVAL OF MINUTES USFWS/KRITFC UPDATE ADF&G MANAGEMENT A PEOPLE TO BE HEARD:	: Optional. ADF&G d	loes not prepare official meeting minutes.	
• Subsistence Reports: Lowe Headwaters		on Subsistence Report, Lower River, Middle Rive	r, Upper River,
Overview of Kuskokwim R a. Test Fisheries (Bethel b. Sonar/Weirs/Aerial Su c. Subsistence Division P d. NVN Project Update:	and Aniak): rveys/Other:	ment:	
 Commercial Catch Report: Processor Report: N/A 	N/A		
 Sport Fish Report: Intercept Fishery Report: o Weather Forecast: 	ptional		
Discussion of ADF&G Ma the Working Group):Motion for Discussion and	_	s and discussion of possible alternatives (recomm	endations from
OLD BUSINESS:			
NEW BUSINESS:			
COMMENTS FROM WOR	KING GROUP MEM	IBERS:	
NEXT MEETING DATE:_	Tim	ne:Place:	

Kuskokwim River Salmon Management Working Group ADF&G Bethel toll free: 1 (855) 933-2433

Informational Packet

Information Packets ARE:

- Intended to help inform Working Group discussions.
- To be viewed and used in context with Working Group meetings only.

Packets ARE NOT:

- To be viewed as standalone documents.
- A final say on fisheries management decisions.

Please use this information responsibly:

Packet information is an incomplete snapshot of an ongoing discussion and changing conditions. Packet information should not be reproduced for any purpose other than to describe Working Group meeting discussions.

Misuse of Packet information can contribute to misunderstandings that can cause harm to salmon users and potentially damage salmon resources.

Ask Questions: ADF&G staff will be happy to answer biology and management questions. Please call 1-855-933-2433 to reach ADF&G Kuskokwim Area staff.

Attend Meetings: Each Working Group meeting is announced at least 48 hours prior to time and date of meeting. In addition, each meeting is recorded. Recordings can be found here: http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakuskokwim.kswg

Viewing the information packet while listening to meetings/recordings will provide a better understanding of the information presented in this packet.

Thank you.
Jennifer Peeks
Aaron Tiernan
Working Group Coordinators

Orutsararmiut Traditional Native Council (OTNC) Inseason Harvest Monitoring Weekly Report

July 6, 2018

Summary of Interview Activities

OTNC conducted surveys with 24 fish camps from Friday, June 29 through Sunday, July 1, 2018. Several fish camps commented on the high abundance of chum salmon in the river. One fish camp requested more openers before the bad weather comes. Another fish camp requested more four-inch opportunities be provided during the closure to target whitefish. Two fish camps commented on restrictions and attributed them to loss of Yup'ik culture and processing fish. One fish camp commented on high seas fisheries and weirs, both of which thought were having negative impacts on the fish. Over the past two survey periods, five fish camp respondents reported they are waiting for coho salmon and fishing closures to end before they begin regularly fishing.

Chinook Salmon ASL (Age-Sex-Length) Sampling Program

Thus far, we've received ASL samples from 11 individuals in the Bethel area.

Fish Distribution

As of Monday, July 2, 2018, OTNC is no longer distributing fish. This season, we've distributed 306 Chinook salmon, 167 chum salmon and 110 sockeye salmon to Bethel elders, disabled and widows caught from the ADFG Bethel Test Fishery. YDNWR distributed fish to Nunapitchuk, Kasigluk and Atmautluak. KRITFC assisted with three deliveries in the Bethel area.

Harvest Summary

June 29, 2018 Opener

We collected data from 22 unique fishing trips at fish camps. Most fishing trips (n=19) occurred from Napaskiak to Akiachak.

Table 1. Gear type, mesh size range and soak time reported from the June 29 fishing opener.

Total Drift Nets	Total Set Mesh Size Range Nets		Average Soak Time (hours)	
20	2	5.5"-6"	2.3 hours	

Table 2. Average number of salmon harvested by surveyed fish camps from the June 29 fishing opener.

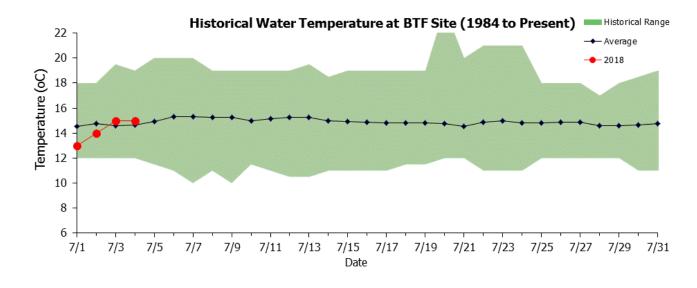
Average Chinook Salmon Harvest Salmon Harvest		Average Sockeye Salmon Harvest	Average other harvest
5.4	21.6	15.3	<1

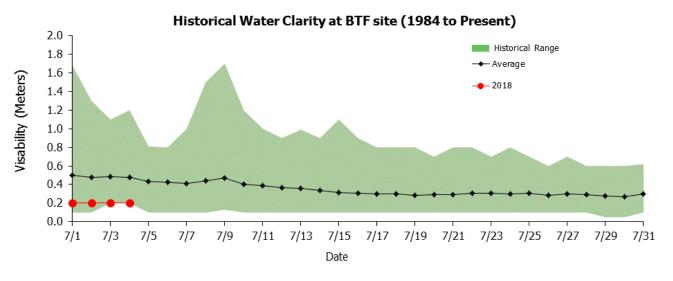
Fishing Progress Data

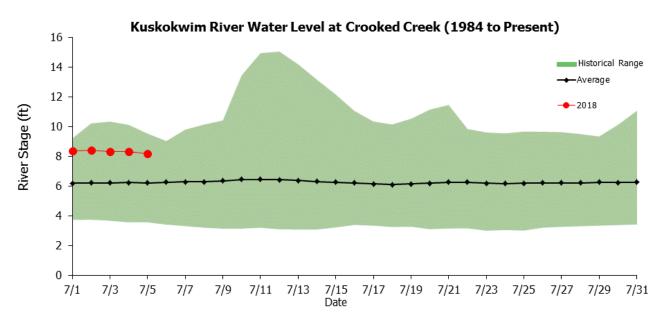
This past survey period, we asked fish camps the following question: "How close are you to achieving your Chinook salmon, chum salmon and sockeye salmon harvest goals?" 11 fish camps had responses for their Chinook salmon and sockeye salmon fishing progress and 10 fish camps had responses for their chum salmon fishing progress.

Table 3. Fishing progress by surveyed fish camps for Chinook salmon, chum salmon and sockeye salmon following the June 29 opener.

Salmon Species	Not at all	Under Half	Halfway	Over Half	Goal Met
Chinook	18.2%	36.3%	18.2%	9.1%	18.2%
salmon	(n=2)	(n=4)	(n=2)	(n=1)	(n=2)
Chum	10%	10%	10%	10%	60%
salmon	(n=1)	(n=1)	(n=1)	(n=1)	(n=6)
Sockeye	0%	36.4%	9.1%	18.2%	36.3%
salmon	(n=0)	(n=4)	(n=1)	(n=2)	(n=4)







Kuskokwim River Salmon Assessment Update 7/4/2018





This document presents the key assessment information considered by managers in-season. The production of this document is a collaborative effort between USFWS and ADF&G. All data and analyses contained are preliminary and are subject to change, so please make interpretations carefully.

If you have any questions about the content, please contact Ben Staton (USFWS; benjamin_staton@fws.gov) or Nick Smith (ADF&G; nick.smith@alaska.gov).

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Abbreviations:

- BTF: Bethel Test Fishery
- ATF: Aniak Test Fishery
- CPUE: Catch-per-unit-effort
- EOS: End-of-Season
- ADF&G: Alaska Department of Fish and Game
- KRITFC: Kuskokwim River Inter-Tribal Fish Commission
- OTNC: Orutsaramiut Traditional Native Council
- USFWS: United States Fish and Wildlife Service
- YDNWR: Yukon Delta National Wildlife Refuge

To view escapement information, please visit the ADF&G Kuskokwim River Fish Counts page:

 $\bullet \ \ http://www.adfg.alaska.gov/index.cfm?adfg=commercial by a reakuskokwim.salmon\#fishcounts$

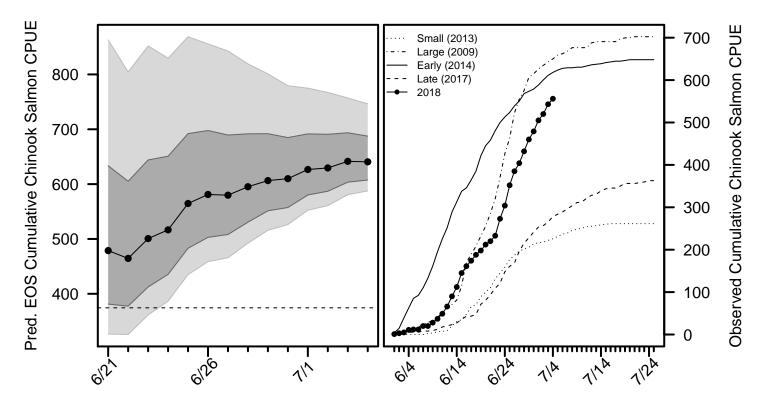
For the most up-to-date information regarding fishing opportunities please visit:

- USFWS: https://www.fws.gov/refuge/yukon_delta/wildlife_and_habitat/dailyupdate.html
- ADF&G: http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.main

Chinook Salmon BTF Summary (7/4)

- The BTF daily CPUE was 13.
- The BTF cumulative CPUE is now **556**.
- 80% years since 2008 fell below this cumulative CPUE on this date.
- 87% of the run is complete based on historical average run timing.
- 81% 91% of the run is complete based the central 50% of all historical run timing scenarios.
- 4% 9% of the run is expected to pass Bethel in the next 5 days.
- Over the last 3 days, Chinook salmon made up 5% of the BTF catches, compared to 4% on average.

Chinook Salmon Figure 1. Left: predicted cumulative EOS BTF CPUE according to various run timing scenarios: central 80% (light grey band), central 50% (dark grey band), and the historical median (circles). The dashed horizontal line shows the EOS value from 2017. Right: The cumulative BTF CPUE from 2018 plotted along with four previous years intended to represent a range of early/late and small/large index values.

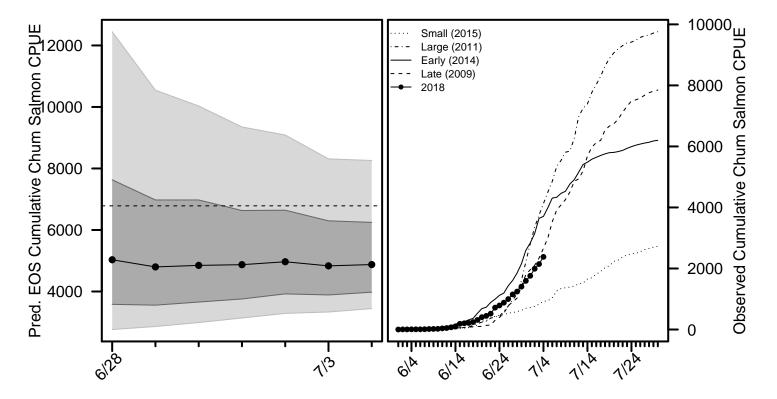


For more detailed information, see the Chinook salmon appendix at the end of this document.

Chum Salmon BTF Summary (7/4)

- The BTF daily CPUE was 236.
- The BTF cumulative CPUE is now 2,381.
- 30% years since 2008 fell below this cumulative CPUE on this date.
- 49% of the run is complete based on historical average run timing.
- 38% 60% of the run is complete based the central 50% of all historical run timing scenarios.
- 18% 19% of the run is expected to pass Bethel in the next 5 days.
- Over the last 3 days, chum salmon made up 61% of the BTF catches, compared to 68% on average.

Chum Salmon Figure 1. Left: predicted cumulative EOS BTF CPUE according to various run timing scenarios: central 80% (light grey band), central 50% (dark grey band), and the historical median (circles). The dashed horizontal line shows the EOS value from 2017. Right: The cumulative BTF CPUE from 2018 plotted along with four previous years intended to represent a range of early/late and small/large index values.

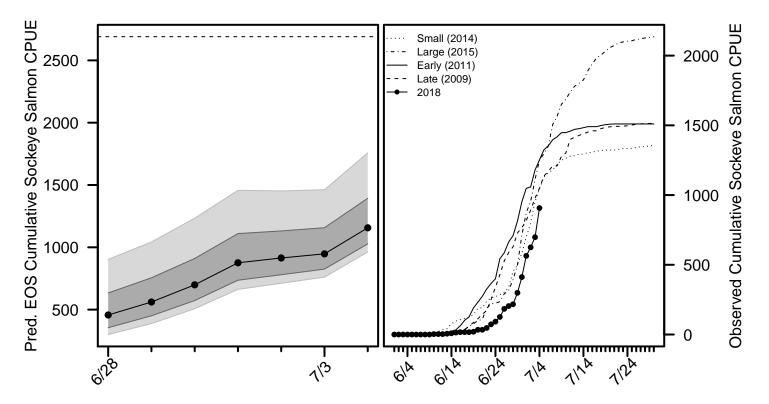


For more detailed information, see the **chum salmon appendix** at the end of this document.

Sockeye Salmon BTF Summary (7/4)

- The BTF daily CPUE was 209.
- The BTF cumulative CPUE is now 907.
- 30% years since 2008 fell below this cumulative CPUE on this date.
- 78% of the run is complete based on historical average run timing.
- 64% 88% of the run is complete based the central 50% of all historical run timing scenarios.
- 10% 20% of the run is expected to pass Bethel in the next 5 days.
- Over the last 3 days, sockeye salmon made up 34% of the BTF catches, compared to 28% on average.

Sockeye Salmon Figure 1. Left: predicted cumulative EOS BTF CPUE according to various run timing scenarios: central 80% (light grey band), central 50% (dark grey band), and the historical median (circles). The dashed horizontal line shows the EOS value from 2017. Right: The cumulative BTF CPUE from 2018 plotted along with four previous years intended to represent a range of early/late and small/large index values.

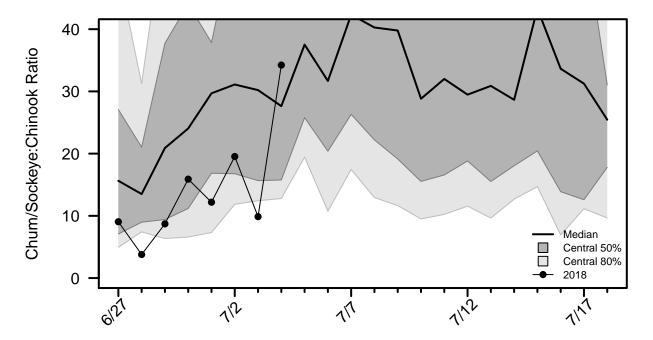


For more detailed information, see the sockeye salmon appendix at the end of this document.

Chum/Sockeye:Chinook Salmon Ratio

This ratio is calculated by dividing the total number of chum and sockeye salmon counted by the number of Chinook salmon counted by a project each day. A value of zero indicates Chinook salmon were counted that day, but not chum or sockeye salmon. A missing value on a day the project operated indicates no Chinook salmon were counted that day.

Species Ratio Figure 1. Time series of the species ratio in the BTF with historical quantiles shown as grey regions and the ratio time series for 2018 shown with points connected by lines.



Ratio Table 1. A subset of the species ratios displayed in Ratio Figure 1, including the ratios from the ATF.

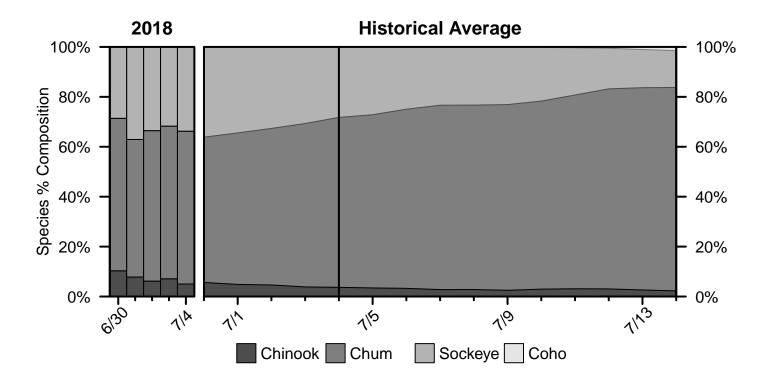
Date	2018 BTF	BTF Median	BTF Lower 10%	BTF Upper 10%	2018 Sonar	2018 ATF
7/1	12.19	29.69	7.31	58.18	5.99	20.49
7/2	19.53	31.11	11.85	83.81	10.12	12.6
7/3	9.87	30.21	12.43	76.65	11.29	15.37
7/4	34.23	27.64	12.78	$\boldsymbol{93.35}$		37.6
7/5		37.52	19.44	76.13		
7/6		31.67	10.74	116.8		
7/7		42.32	17.45	103.1		

Ratio Table 2. The percent of previous years in which a given species ratio was exceeded at least once before a certain day in the BTF.

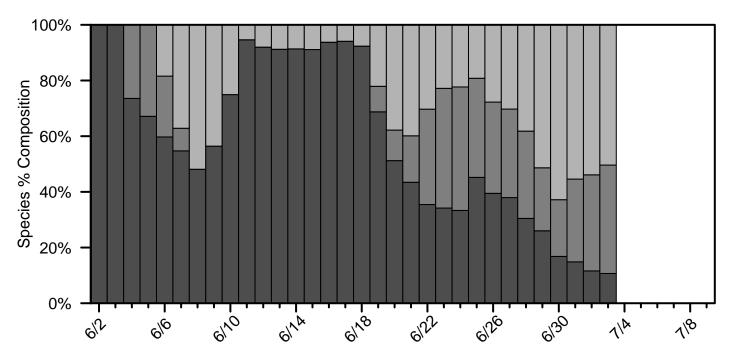
Date	Ratio > 20	Ratio > 25	Ratio > 30	Ratio > 35
7/1	88%	88%	85%	74%
7/2	88%	88%	85%	79%
7/3	91%	88%	85%	79%
7/4	94 %	91 %	88%	82%
7/5	97%	94%	91%	88%
7/6	97%	94%	94%	91%
7/7	97%	97%	97%	94%

Percent Composition by Salmon Species

Percent Composition Figure 1. Species percent composition in the BTF from 2018 and based on the historical average. The composition presented on each day represents the average composition over the past 3 days.

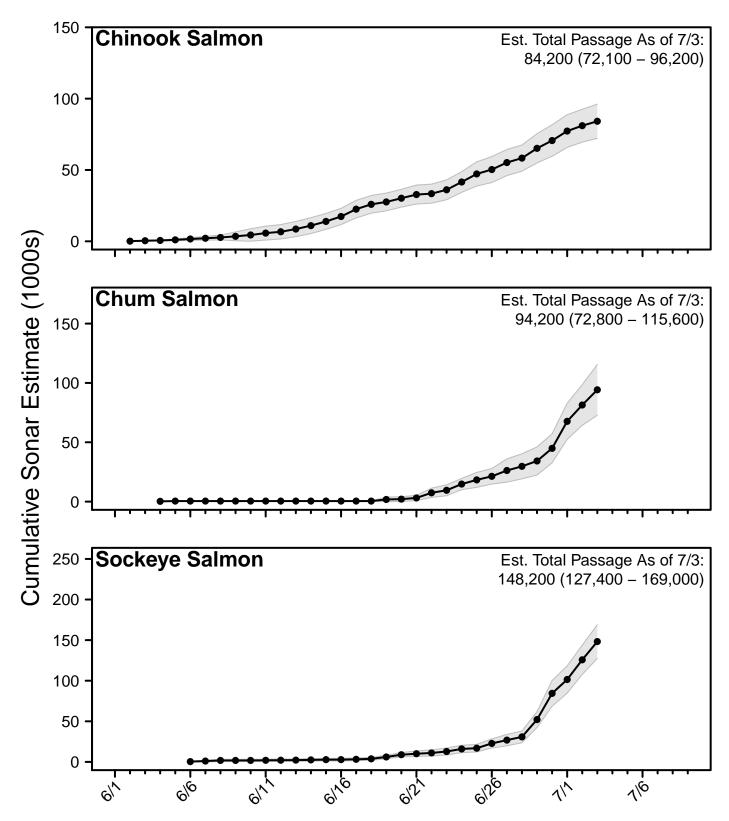


Species Composition Figure 2. Species percent composition from the sonar estimates from 2018 (salmon species only, excluding pink salmon). The composition presented on each day represents the average composition over the past 3 days.



Sonar Passage Estimates

Sonar Figure 1. Cumulative estimates of salmon passage from the 2018 sonar operation through the last complete reporting day. Grey bands show the 95% confidence intervals on each complete reporting day. Sonar operations are back in full operation. The sonar made partial counts between 6/21 and 6/29.



In-Season Harvest Estimates

In-season harvest estimates are produced by combining counts of total fishing effort (usually obtained via aerial survey) and on-the-ground fisher interview information using statistically-rigorous methodology. The data collection efforts to produce these estimates is a highly collaborative effort, involving staff from ADF&G, KRITFC, OTNC, and USFWS. Although USFWS performs the data analysis and harvest estimation, all estimates undergo technical review by a panel comprised of representatives from each of these entities.

Much more detailed information can be found on the YDNWR website (https://www.fws.gov/refuge/yukon_delta/wildlife_and_habitat/dailyupdate.html).

In the tables below, CV stands for coefficient of variation, which is a commonly-used measure of uncertainty in the estimate (larger CV values are more uncertain).

Spatial Coverage:

- The 6/6 estimate was for a set net only opportunity and covers the main stem Kuskokwim River between Tuntutuliak and Akiak.
- The 6/12 and 6/16 estimates cover the main stem between Tuntutuliak and Akiak and between Kalskag and Aniak.
- \bullet The 6/24 and 6/29 estimates cover the main stem between Tuntutuliak and Akiak.

Harvest Table 1. Estimated total Chinook salmon harvest within the YDNWR.

Date	Daily Harvest	Cumulative Harvest	Daily CV	Cumulative CV
6/6	100	100	0.21	0.21
6/12	5,340	5,440	0.09	0.09
6/16	5,710	11,150	0.09	0.06
6/24	6,100	17,250	0.07	0.05
6/29	3,160	20,410	0.11	0.04

Harvest Table 2. Estimated Chinook salmon harvested downstream of the BTF.

Date	Daily Harvest	Cumulative Harvest	Daily CV	Cumulative CV
6/6	30	30	0.29	0.29
6/12	3,210	3,240	0.1	0.1
6/16	3,530	6,770	0.11	0.07
6/24	3,700	10,470	0.08	0.06
6/29	1,890	12,360	0.11	0.05

Harvest Table 3. Estimated total chum salmon harvest within the YDNWR.

Date	Daily Harvest	Cumulative Harvest	Daily CV	Cumulative CV
6/12	1,830	1,830	0.16	0.16
6/16	2,800	4,630	0.1	0.09
6/24	8,890	13,520	0.07	0.06
6/29	18,260	31,780	0.11	0.07

Harvest Table 3. Estimated total sockeye salmon harvest within the YDNWR.

Date	Daily Harvest	Cumulative Harvest	Daily CV	Cumulative CV
$\overline{6/12}$	250	250	0.21	0.21
6/16	450	700	0.19	0.14
6/24	3,660	4,360	0.08	0.07
6/29	7,530	11,890	0.11	0.07

Chinook Salmon Appendix

Chinook Salmon Table A1. Cumulative CPUE from the BTF.

Date	2018	2017	2016	2015	2014	5-Yr Avg.	2008 - 2017 Avg.
7/1	505	254	510	444	588	402	424
7/2	520	257	522	456	600	410	432
7/3	543	266	531	465	611	419	444
7/4	556	278	$\bf 542$	484	618	430	455
7/5		284	564	493	624	439	466
7/6		289	578	504	628	447	474
7/7		296	596	513	629	455	482
EOS		374	687	625	650	519	538

Chinook Salmon Table A2. Cumulative CPUE from the ATF.

Date	2018	2017	2016	2015
7/1	445	3,996	2,056	2,286
7/2	491	$4,\!258$	2,207	2,381
7/3	522	4,522	2,267	2,408
7/4	531	4,943	$2,\!372$	$2,\!467$
7/5		$5,\!293$	2,418	$2,\!526$
7/6		5,604	2,479	$2,\!585$
7/7		5,766	$2,\!522$	2,681
EOS		$6,\!508$	2,729	2,916

Chinook Salmon Table A3. Percent of run complete according to various historical run timing scenarios from the BTF.

Timing	Midpoint	7/4 Cumulative %
Earliest	6/14	97%
Early 10%	6/17	95%
Early 25%	6/21	91%
Median	6/22	87%
Late 25%	6/24	81%
Late 10%	6/27	75%
Latest	7/3	67%

Chum Salmon Appendix

Chum Salmon Table A1. Cumulative CPUE from the BTF.

Date	2018	2017	2016	2015	2014	5-Yr Avg.	2008 - 2017 Avg.
7/1	1,759	2,454	817	722	2,836	1,636	1,951
7/2	1,991	$2,\!574$	886	760	3,144	1,784	2,178
7/3	2,145	2,744	943	829	3,644	1,994	2,433
7/4	$2,\!381$	$2,\!849$	1,028	$\bf 923$	3,707	$2,\!125$	$2,\!654$
7/5		3,030	1,166	944	3,992	2,326	2,895
7/6		3,346	1,290	1,041	4,307	$2,\!542$	3,139
7/7		3,691	1,410	$1,\!261$	4,333	2,768	3,407
EOS		6,785	3,894	2,943	6,343	5,135	6,525

Chum Salmon Table A2. Cumulative CPUE from the ATF.

Date	2018	2017	2016	2015
7/1	2,092	2,629	1,769	969
$7^{'}\!/2$	2,656	3,112	1,915	1,037
7/3	3,129	3,724	2,091	1,379
7/4	$3,\!445$	$4,\!670$	$2,\!429$	1,568
7/5		5,664	2,655	1,748
7/6		6,499	2,937	2,048
7/7		7,323	3,333	2,316
\mathbf{EOS}		$11,\!588$	5,304	5,669

Chum Salmon Table A3. Percent of run complete according to various historical run timing scenarios from the BTF.

Timing	Midpoint	7/4 Cumulative %
Earliest	6/23	78%
Early 10%	7/1	70%
Early 25%	7/2	60%
Median	7/5	49%
Late 25%	7/7	38%
Late 10%	7/11	29%
Latest	7/14	20%

Sockeye Salmon Appendix

Sockeye Salmon Table A1. Cumulative CPUE from the BTF.

Date	2018	2017	2016	2015	2014	5-Yr Avg.	2008 - 2017 Avg.
7/1	564	793	547	873	697	724	753
7/2	625	810	615	955	800	790	819
7/3	698	917	699	1,113	954	908	913
7/4	$\boldsymbol{907}$	982	781	1,248	1,041	993	984
7/5		1,100	879	1,296	1,129	1,068	1,053
7/6		1,308	932	1,351	1,160	1,148	1,125
7/7		1,363	1,142	1,505	1,181	1,240	1,199
EOS		2,690	2,463	$2,\!157$	1,367	1,965	1,711

Sockeye Salmon Table A2. Cumulative CPUE from the ATF.

Date	2018	2017	2016	2015
$\overline{7/1}$	42	126	61	177
7/2	52	135	69	205
7/3	60	145	77	257
7/4	60	196	110	290
7/5		233	146	393
7/6		268	171	584
7/7		268	248	669
EOS		393	405	1,245

Sockeye Salmon Table A3. Percent of run complete according to various historical run timing scenarios from the BTF.

Timing	Midpoint	7/4 Cumulative %
Earliest	6/22	98%
Early 10%	6/24	94%
Early 25%	6/25	88%
Median	6/29	78%
Late 25%	7/1	65%
Late 10%	7/5	52%
Latest	7/10	37%

July 6, 2018 ADF&G Subsistence Division Inseason Salmon Harvest Survey Project Update

Department of Fish and Game Division of Subsistence staff are working with local fishers in several communities in the lower and middle Kuskokwim River to learn more about subsistence salmon harvests, and to share that information with the Working Group and fishery managers.

Lower Kuskokwim

Division staff are out of Bethel to begin the transition to fieldwork in the middle Kuskokwim. The community-based monitor in Kasigluk has completed surveys for the FWS Refuge staff's harvest estimate from the July 5th opening.

On Thursday July 28th, 3 Subsistence Division staff and Working Group Coordinator Jen Peeks (Commercial Fisheries Division) traveled to Tuluksak where they met with the tribal council and members of the public. The purpose of the meeting was to discuss community concerns about salmon fishing this season, and to provide information about management and regulations. You can read a summary of the meeting prepared by Jen Peeks and Chris McDevitt on the next page of your packet.

Middle Kuskokwim

Subsistence Division is collaborating with Native Village of Napaimute (NVN) in middle Kuskokwim River villages. Starting July 12th, NVN and Subsistence Division will travel to all communities from Kalskag to Stony River to ask people about how far along they are in fishing and whether they will be able to meet their salmon fishing goals for the season. Information from those surveys will be reported in WG meetings.

July 6, 2018 ADF&G Subsistence Division Inseason Salmon Harvest Survey Project Update (continued)

Notes from a meeting with the community of Tuluksak, Thursday June 28 at 1:00 P.M.

- Prepared by Jen Peeks and Chris McDevitt.

4 ADF&G staff were in attendance.

21 Tuluksak community members were in attendance, including members of the tribal council.

Following is a summary of community concerns discussed at the meeting:

Concerns regarding regulations:

- Short openers (6–12 hrs.) force residents to fish all at once in an area with limited fishing locations.
- Limited fishing locations in Tuluksak are similar to the situation in Kalskag: fewer eddies, lots of snags, etc.
- The downriver end of the Refuge's recent (6/22/18) boundary line at Uknavik Slough is 27 miles from Tuluksak. This does not accommodate the needs of Tuluksak fishers. Residents explained that traveling 54 miles round trip to take advantage of the 24/7 fishing is very difficult. or impossible, financially for most Tuluksak fishers. Several people suggested that the boundary line be moved further downriver so that the lower end of boundary is at Mishevik Slough, approximately 6.5 miles downriver of Tuluksak. This would allow residents to take advantage of other fishing locations near the village.
- Concerns were expressed regarding the 4" mesh set gillnet openings during the early season closure.

Others Concerns:

- Contaminants in Tuluksak River resulting from mining activity at NYAC
- Current barge traffic, and future increased barge traffic with the propose Donlin Mine, disrupted fish habitat, the riverbed, and environment.
- Net seizures by enforcement officers. (What do officers do with the nets?)
- High seas commercial fishing and bycatch of Kuskokwim River king salmon

Suggestions for managers:

- Management agencies need to increase public outreach efforts to villages.
- Discussions about the fishery need to be all-inclusive, not just meetings between management agencies.
- Some residents noted that prior to restrictions, Tuluksak fishers caught what they needed and nothing more. Regulations have impacted fishers' ability to meet their harvest needs and have financial burdens on fishers (e.g., needing to buy different gear to stay in compliance with restrictions, creating boundaries that increase travel distance and fuel consumption, etc.).
- One person explained that their traditional knowledge taught them that talking about the fish made the fish want to pass by and not be caught/ harvested. People were concerned that talking too much about the fish was not good.
- A few people commented that, traditionally, people would fish for only a few fish at a time and then stop; fishing was spread out. Traditionally, most fishing was completed by the end of June.
- A feasibility study was suggested for 2019: Have no fishing restrictions in 2019 and then compare fishing effort and harvest to 2018. The community hypothesized that harvests would be similar in each year.