

Kuskokwim River Salmon Management Working Group

1 (800) 315-6338 (MEET) Code: 58756# (KUSKO)

ADF&G Bethel toll free: 1 (855) 933-2433

Meeting Agenda

Date: 06/9/2021

Time: 10:00 a.m.–12:00 p.m.

Place: ADF&G Office, Bethel, AK

Time Called to Order:

Chair: TBA

ROLL CALL TO ESTABLISH QUORUM:

Upriver Elder:
Downriver Elder:
Commercial Fisher:
Lower River Subsistence:
Middle River Subsistence:
Upper River Subsistence:
Headwaters Subsistence:

QUORUM MET? Yes / No

Member at Large 1:
Member at Large 2:
Sport Fisher:
Western Interior RAC:
Y-K Delta RAC:
KRITFC:
ADF&G:

INTRODUCTIONS:

INVOCATION:

APPROVAL OF MINUTES: *Optional. ADF&G does not prepare official meeting minutes.*

APPROVAL OF AGENDA: *the agenda may be amended at this time.*

USFWS/KRITFC UPDATE:

ADF&G MANAGEMENT ACTIONS UNDER CONSIDERATION:

PEOPLE TO BE HEARD: *Non-Working Group Members*

CONTINUING BUSINESS:

- Subsistence Reports: Lowest River, ONC Inseason Subsistence Report, Lower River, Middle River, Upper River, Headwaters
- Inseason Harvest Report (ONC/KRITFC)
- Overview of Kuskokwim River salmon run assessment:
 - a. Test Fisheries (Bethel and Aniak):
 - b. Sonar/Weirs/Aerial Surveys/Other:
 - c. Subsistence Division Project Update:
 - d. NVN Report:
- Working Group KRITFC Representative Report:
- Commercial Catch Report: N/A
- Processor Report: N/A
- Sport Fish Report:
- Trawl Bycatch Report
- Donlin Gold
- Intercept Fishery Report: *optional*
- Weather Forecast:
- Discussion of ADF&G Management considerations and discussion of possible alternatives (recommendations from the Working Group):
- Motion for Discussion and Action:

OLD BUSINESS:

NEW BUSINESS:

COMMENTS FROM WORKING GROUP MEMBERS:

NEXT MEETING DATE: _____ **Time:** _____ **Place:** _____

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=commercialbyarea_kuskokwim.kswg

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

**Thank you,
Nick Smith and Ben Gray
Working Group Coordinators**

Orutsarmiut Native Council (ONC) Inseason Harvest Monitoring Weekly Report

June 9, 2021

Summary of Interview Activities

ONC fisheries staff contacted prior year Bethel area fish camp users and were granted permission by 74 fish camps to continue conducting surveys this season. All ONC fisheries staff will maintain social distancing while surveying. We will continue our efforts in seeking authorization to conduct surveys with the other camps that we've been unable to contact thus far. ONC staff also asked where their fish camps were located. A total of three fish camps moved their fish camp into their backyard in Bethel. Reasons were not asked why. The majority of fish camps we've contacted are not yet actively fishing.

Comments from interviewees at the boat harbor and fish camp from the June 2nd and June 5th set net opportunity include the following: Three subsistence users desired more fishing opportunities, two stated to keep the river open all summer especially before flies start laying eggs, some fishers said the month of June is the best time to fish for Chinook salmon, fishers stated the openers were too early, one wanted the openers to follow tides, and one fisher wanted the Kuskokwim River open every three days. Two fishers regarded the size of the Chinook salmon, one saying that bigger Chinook come later on in the month while another said early Chinook are the largest because they have the farthest to travel to the headwaters. One fisher had a concern that commercial fishing is depleting Chinook salmon for the Kuskokwim River. One fisher commented upon the decline of Chinook salmon and catching more red salmon than they used to when they were younger. Four fishers recommended increasing the gear type allowed. Lastly, two fishers did not care who manages the river, while one was in support of federal management.

Table 1. Average number of salmon harvested by surveyed Bethel area fish camps and Bethel boat harbor from the June 2nd set net opportunity.

Data Source	Number of Surveys Conducted	Average Chinook Salmon Harvest	Average Chum Salmon Harvest	Average Sockeye Salmon Harvest	Average other harvest	Net Length Range (ft.)	Mesh Size Range (in.)
Bethel Area Fish Camps	1	1	0	0	1	60	6
Bethel Boat Harbor	15*	0.8	0	0	3.67	25-300	5.385-6

*1 of the surveys collected at the Bethel Boat Harbor was not used to produce harvest estimates because it was outside of the area used in the harvest estimates program (stratum O).

Table 2. Average number of salmon harvested by surveyed Bethel area fish camps and Bethel boat harbor from the June 5th set net opportunity.

Data Source	Number of Surveys Conducted	Average Chinook Salmon Harvest	Average Chum Salmon Harvest	Average Sockeye Salmon Harvest	Average other harvest	Net Length Range (ft.)	Mesh Size Range (in.)
Bethel Area Fish Camps	5	0.6	0	0	0	45-60	6
Bethel Boat Harbor	18*	1.06	0	0	0.12	25-350	5.5-6

*3 of the surveys collected at the Bethel Boat Harbor were not used to produce harvest estimates because it was outside of the area used in the harvest estimates program (stratum O).

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

Thus far this season, there are 37 interested samplers from the Bethel community. We are continuing recruitment efforts at the Bethel boat harbor, Bethel area fish camps, and in the community.

Fish Distribution

Thus far from May 26-June 7, we've delivered 10 Chinook salmon and 6 sheefish to Bethel area Elders. These fish were caught by the Alaska Department of Fish & Game Bethel Test Fishery.

Contact Info

Please contact ONC Fisheries at 545-6001 with any questions. If you are interested in becoming a Chinook Salmon Age-Sex-Length Sampler or signing up for fish distribution please contact ONC Fisheries as well.

Kuskokwim River In-season Harvest and Effort Estimates

6/2/2021 Subsistence Harvest Opportunity (Set Nets Only)

Opportunity Time Period: 6:00 AM – 10:00 PM (16 Hours)

Area Covered by Estimates: Tuntutuliak ↔ Akiak

Contact Person(s): Kevin Whitworth (kevinwhitworth@kritfc.org), Katie Russell (krussell@nativecouncil.org)

Special Action #: 3-KS-01-21

Special Action: https://www.fws.gov/uploadedFiles/3-KS-01-21_Final_5.7.2021.pdf



Data Sources

TABLE 1. The number and percent of fisher interviews conducted by location and organization.

Data Source	Interviews	Percent
Bethel Boat Harbor (ONC)	14	61%
Other Villages (BSFA/KRITFC)	8	35%
Bethel Area Fish Camps (ONC)	1	4%
Total	23	100%

TABLE 2. The time each flight was conducted and fishers counted each flight.

Time Information			Nets Counted	
Start Time	End Time	Hours	Drift	Set
6:12 PM	7:47 PM	1.58	2	29

Effort Estimates

- An estimated **29** total set net trips occurred.

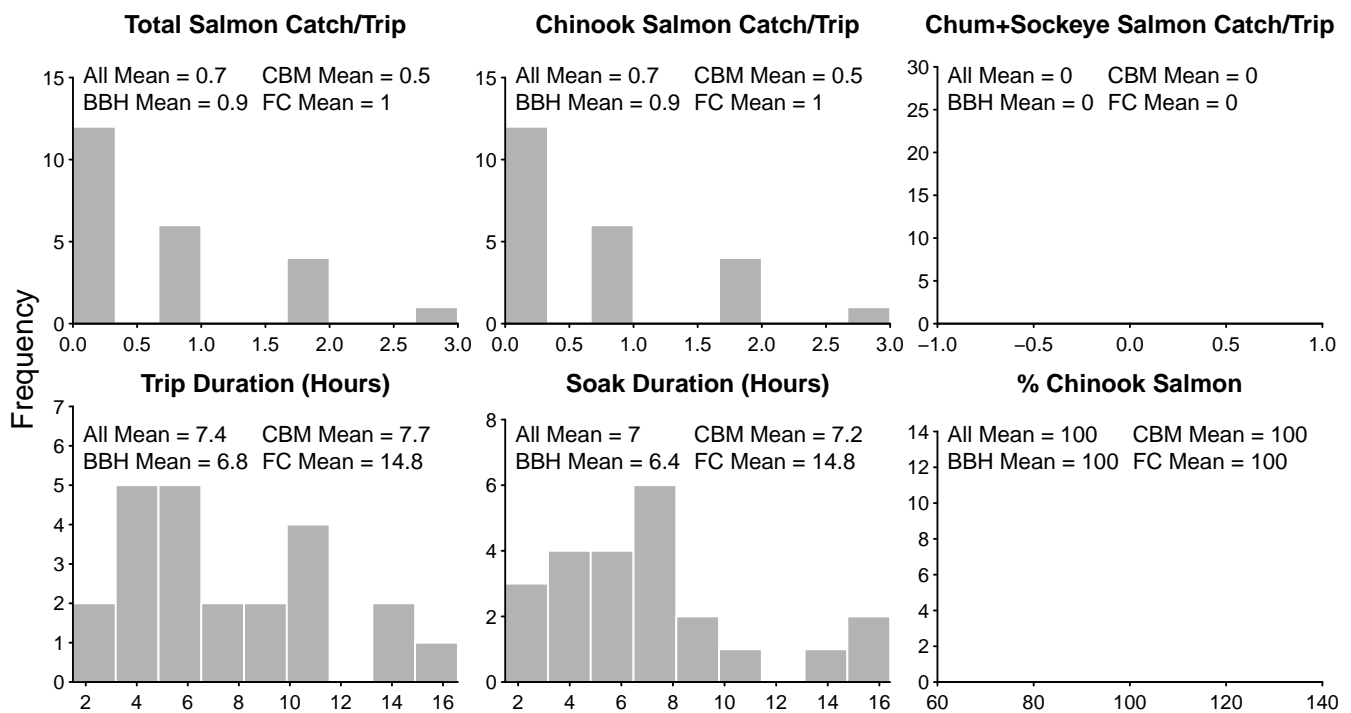
Harvest Estimates

- An estimated total of **30 (10 – 40)** salmon were harvested.
 - An estimated total of **30 (10 – 40)** Chinook salmon were harvested.
 - An estimated total of **0 (0 – 0)** chum salmon were harvested.
 - An estimated total of **0 (0 – 0)** sockeye salmon were harvested.

TABLE 3. Summary of relevant quantities by river stratum (area) for set nets. Numbers in parentheses are 95% confidence intervals.

Stratum	Interviews	Effort Est.	Estimated Harvest			
			Chinook	Chum	Sockeye	Total
Tuntutuliak ↔ Johnson R.	0	0	0 (0 – 0)	0 (0 – 0)	0 (0 – 0)	0 (0 – 0)
Johnson R. ↔ Napaskiak	5	2	0 (0 – 0)	0 (0 – 0)	0 (0 – 0)	0 (0 – 0)
Napaskiak ↔ Akiachak	18	19	20 (10 – 30)	0 (0 – 0)	0 (0 – 0)	20 (10 – 30)
Akiachak ↔ Akiak	0	8	10 (0 – 10)	0 (0 – 0)	0 (0 – 0)	10 (0 – 10)
All	23	29	30 (10 – 40)	0 (0 – 0)	0 (0 – 0)	30 (10 – 40)

FIGURE 1. Distributions of relevant quantities from all completed trips using set nets. The mean quantity by primary data source is shown in the top right; BBH = Bethel Boat Harbor (ONC), CBM = Other Villages (BSFA/KRITFC), FC = Bethel Area Fish Camps (ONC).



Kuskokwim River In-season Harvest and Effort Estimates

6/5/2021 Subsistence Harvest Opportunity (Set Nets Only)

Opportunity Time Period: 6:00 AM – 10:00 PM (16 Hours)

Area Covered by Estimates: Tuntutuliak ↔ Akiak

Contact Person(s): Katie Russell (krussell@nativecouncil.org), Kevin Whitworth (kevinwhitworth@kritfc.org)

Special Action #: 3-KS-01-21

Special Action: https://fws.gov/uploadedFiles/3-KS-01-21_Final_5.7.2021.pdf



Data Sources

TABLE 1. The number and percent of fisher interviews conducted by location and organization.

Data Source	Interviews	Percent
Other Villages (BSFA/KRITFC)	18	47%
Bethel Boat Harbor (ONC)	15	39%
Bethel Area Fish Camps (ONC)	5	13%
Total	38	100%

TABLE 2. The time each flight was conducted and fishers counted each flight.

Time Information			Nets Counted	
Start Time	End Time	Hours	Drift	Set
4:25 PM	5:40 PM	1.25	0	91

Effort Estimates

- An estimated **91** total set net trips occurred.

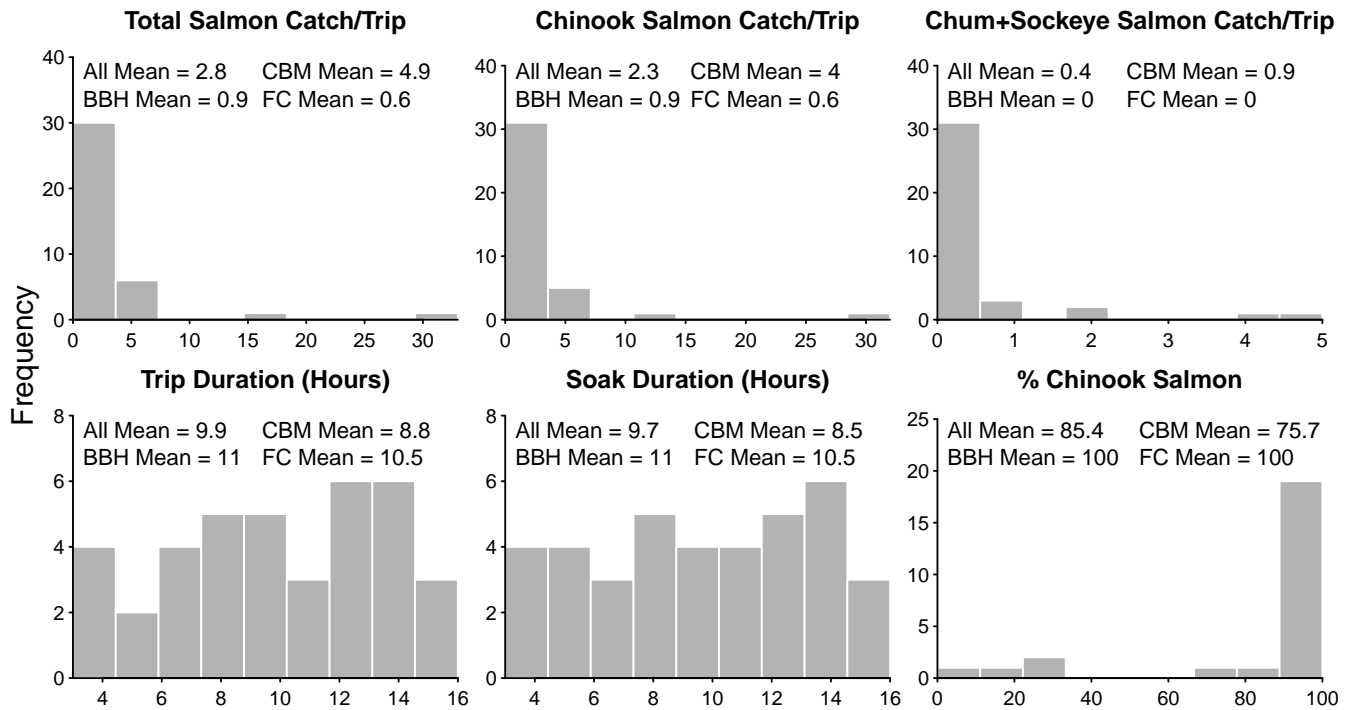
Harvest Estimates

- An estimated total of **380 (150 – 710)** salmon were harvested.
 - An estimated total of **310 (110 – 650)** Chinook salmon were harvested.
 - An estimated total of **20 (0 – 50)** chum salmon were harvested.
 - An estimated total of **50 (10 – 100)** sockeye salmon were harvested.

TABLE 3. Summary of relevant quantities by river stratum (area) for set nets. Numbers in parentheses are 95% confidence intervals.

Stratum	Interviews	Effort Est.	Estimated Harvest			
			Chinook	Chum	Sockeye	Total
Tuntutuliak ↔ Johnson R.	0	1	0 (0 – 10)	0 (0 – 0)	0 (0 – 0)	0 (0 – 10)
Johnson R. ↔ Napaskiak	16	20	70 (20 – 140)	0 (0 – 10)	10 (0 – 20)	80 (30 – 160)
Napaskiak ↔ Akiachak	21	52	180 (60 – 370)	10 (0 – 30)	30 (10 – 60)	220 (90 – 400)
Akiachak ↔ Akiak	1	18	60 (20 – 130)	0 (0 – 10)	10 (0 – 20)	70 (30 – 140)
All	38	91	310 (110 – 650)	20 (0 – 50)	50 (10 – 100)	380 (150 – 710)

FIGURE 1. Distributions of relevant quantities from all completed trips using set nets. The mean quantity by primary data source is shown in the top right; BBH = Bethel Boat Harbor (ONC), CBM = Other Villages (BSFA/KRITFC), FC = Bethel Area Fish Camps (ONC).



2021 - KUSKOKWIM NON-SPAWNING TRIBUTARY CREEL SURVEY

datasheet

Please record these to the best of your ability. Use a '-' for any value that is unknown or declined, use 0 for values of 0.

Interview Date <small>(date)</small>	Interviewer Initials <small>(initials)</small>	Site ID <small>(Kialik Paillek Johnson Gweek)</small>	Tide stage? <small>(flood / high / ebb / low)</small>	Time of sampled daylight high tide <small>(Time: HH:MM)</small>	Time of sampled daylight low tide <small>(Time: HH:MM)</small>
MM / DD	Initials	Site ID	Tide stage	HH : MM	HH : MM

Number of fishers pass 1	Number of fishers pass 2	Number of fishers pass 3	Number of fishers pass 4	Notes about these numbers?
# FISHERS (BOATS)	# FISHERS (BOATS)	# FISHERS (BOATS)	# FISHERS (BOATS)	

ID#	Interview Time	Fisher's home community	Boat Registration	Time spent fishing today?	CATCH			
	<small>(HH:MM)</small>	<small>(community name)</small>	<small>(if you can see)</small>	<small>(HH:MM)</small>	CHINOOK <small>(amount)</small>	CHUM <small>(amount)</small>	SOCKEYE <small>(amount)</small>	OTHER <small>(amount)</small>
1	MM / DD	COMMUNITY NAME	REGISTRATION NUMBER	## HOURS	#CHIN	#CHUM	#SOCK	#OTHER
2	MM / DD	COMMUNITY NAME	REGISTRATION NUMBER	## HOURS	#CHIN	#CHUM	#SOCK	#OTHER
3	MM / DD	COMMUNITY NAME	REGISTRATION NUMBER	## HOURS	#CHIN	#CHUM	#SOCK	#OTHER
4	MM / DD	COMMUNITY NAME	REGISTRATION NUMBER	## HOURS	#CHIN	#CHUM	#SOCK	#OTHER
5	MM / DD	COMMUNITY NAME	REGISTRATION NUMBER	## HOURS	#CHIN	#CHUM	#SOCK	#OTHER
6	MM / DD	COMMUNITY NAME	REGISTRATION NUMBER	## HOURS	#CHIN	#CHUM	#SOCK	#OTHER
7	MM / DD	COMMUNITY NAME	REGISTRATION NUMBER	## HOURS	#CHIN	#CHUM	#SOCK	#OTHER
8	MM / DD	COMMUNITY NAME	REGISTRATION NUMBER	## HOURS	#CHIN	#CHUM	#SOCK	#OTHER
9	MM / DD	COMMUNITY NAME	REGISTRATION NUMBER	## HOURS	#CHIN	#CHUM	#SOCK	#OTHER
10	MM / DD	COMMUNITY NAME	REGISTRATION NUMBER	## HOURS	#CHIN	#CHUM	#SOCK	#OTHER
11	MM / DD	COMMUNITY NAME	REGISTRATION NUMBER	## HOURS	#CHIN	#CHUM	#SOCK	#OTHER
12	MM / DD	COMMUNITY NAME	REGISTRATION NUMBER	## HOURS	#CHIN	#CHUM	#SOCK	#OTHER
13	MM / DD	COMMUNITY NAME	REGISTRATION NUMBER	## HOURS	#CHIN	#CHUM	#SOCK	#OTHER
14	MM / DD	COMMUNITY NAME	REGISTRATION NUMBER	## HOURS	#CHIN	#CHUM	#SOCK	#OTHER
15	MM / DD	COMMUNITY NAME	REGISTRATION NUMBER	## HOURS	#CHIN	#CHUM	#SOCK	#OTHER
16	MM / DD	COMMUNITY NAME	REGISTRATION NUMBER	## HOURS	#CHIN	#CHUM	#SOCK	#OTHER



Alaska Department of Fish and Game

Kuskokwim River Subsistence King Salmon Permit 2021

What is the permit for?

- The permit gives households an opportunity to harvest a total of 10 king salmon when fishing is closed upriver of Aniak. The permit is free and completely voluntary. Households are not required to get a permit. Anyone interested in fishing for kings during a closure must have a permit. You do not need to have a permit when fishing is open, and you do not need a permit to fish for any other species of fish when using selective gear. You must have the permit on your person, in your personal gear, or in your boat if you plan to fish for kings during a closure.

Who is eligible for the permit?

- All Alaska residents.

When and where can I get a permit?

- Permits will be available at various vendors in Kuskokwim River communities. A list of permit vendors is located at the end of this document.

When can I use the permit?

- You can use the permit starting at 12:01 am on June 12, 2021. Alaska Department of Fish and Game announced permit fishing opening in Emergency Order #3-S-WR-03-21 on June 3, 2021.

Where on the river can I use the permit?

- In the Kuskokwim River drainage from the Yukon Delta National Wildlife Refuge boundary near the mouth of the Aniak River upriver to the headwaters of the Kuskokwim River.

Can I use the permit to fish on the refuge below the mouth of the Aniak River or in the Aniak River drainage?

- No.

What kind of gear can I use?

- The permit is subject to gear restrictions, but unless otherwise stated by emergency order, the following gear is allowed to be used under this permit: drift gillnets, set gillnets, dip nets, rod and reel, fish wheel, and beach seine.

Do I need a permit to fish all summer?

- No. The permit is intended to be used only when king salmon fishing is closed in waters above the refuge boundary at the mouth of the Aniak River and upriver to the Kuskokwim's headwaters. If king salmon fishing is open, you do not need to have a permit.

I caught my 10 kings with the permit. Can I reuse it?

- No. The permit allows a household to harvest a maximum of 10 kings. Once the permit has been fulfilled, it can no longer be used.



Alaska Department of Fish and Game

Our village has a community fish wheel. How will the permit work if we get our fish from a fish wheel?

- The fish wheel can be used during closures as long as people collecting kings from the wheel have a permit. Record your harvests of up to 10 kings on your permit.

Can I keep other kinds of fish besides kings that I catch while I'm using the permit?

- Yes.

There are several fishers living in my household, including myself. Can we all get permits?

- No, but all of the names of fishers living in your household can be listed on the same permit. In other words, a household can have a permit that has several names listed on it as long as all of the names listed on the permit are people who all reside in the same household. Permits are issued to interested households on a per-household basis and not on an individual basis. Each household is eligible to receive 1 permit only regardless if multiple fishers all reside in the same household.

I usually fish for several households and they all want some kings. Can I catch some kings for them?

- Yes. You can continue to fish for other households and take advantage of this opportunity to get them some kings. If so, the households that you fish for must each have a permit and a member(s) of that household must have the permit on their person and be present with you on the boat during the fishing.

What if the people who I fish for are physically incapable of accompanying me on my boat during the fishing?

- The person fishing for a household that cannot fish for themselves would need to be in possession of not only their own household's permit but also the permit that belongs to the household they're fishing for.

What do I do with the permit after I've caught my ten kings?

- Record your household's fishing information on the permit and mail the permit to ADFG by 10/31/2021. Even if your household was issued a permit and didn't fish or didn't catch any kings, you still must fill it out and mail it in. The permit doesn't require any postage to mail it.

I've got more questions. How do I get more information?

- Alaska Department of Fish and Game:
 - **BETHEL: (907) 543-2433**
 - **ANCHORAGE: (907) 267-2353**
 - **EMAIL: chris.mcdevitt@alaska.gov**

**Alaska Department of Fish and Game
Kuskokwim River King Salmon Subsistence Fishing Permit, 2021
List of Vendors**

State of Alaska residents may obtain a free Kuskokwim River king salmon subsistence fishing permit for their households from the contacts below:

Permits and more information available from the following ADF&G staff:

Anchorage: ADF&G Subsistence (907) 267-2353, dfg.sub.permits@alaska.gov, 333 Raspberry Road, Anchorage,

Bethel: AK 99518

McGrath: Nick Smith, (907) 543-2433, nick.smith@alaska.gov, 570 4th Ave., Bethel, AK 99559

Jon Barton, (907) 524-3323, jonathon.barton@alaska.gov, 1 Airport Way, McGrath AK 99627

Kuskokwim River Community Vendors:

<i>Community</i>	<i>Organization</i>	<i>Contact Name</i>	<i>Phone</i>	<i>Email</i>
Upper& Lower Kalskag	Upper Kalskag TC	Bonnie Persson	(907) 471-2207	kalskagtribal@yahoo.com
Aniak	Aniak TC	Laura Simeon	(907) 675-4349	aniaktribe88@yahoo.com
Napaimute/Aniak	Native Village of Napaimute	Dan Gillikin	(907) 545-0564	dangillikin@gmail.com
Chuathbaluk	Chuathbaluk TC	Phillip Phillips	(907) 467-4313	ctc.phillipphillips@gmail.com
Crooked Creek/Georgetown	Crooked Creek TC/Thomas Trading Post	Janine Stewman	(907) 240-2346	crookedcreektraditionalcouncil@gmail.com
Red Devil		Rebecca Willmarth	(907) 447-3249	wilmarth@me.com
Sleetmute	Sleetmute TC	Stephen Alexie	(907) 449-4220	
Stony River	Stony River TC	Mary Willis	(907) 537-3258	stony.river@yahoo.com
Nikolai	City of Nikolai	Winchel Ticknor	(907) 293-2113	tg_twds@outlook.com





Alaska Department of Fish & Game 2021
Kuskokwim Subsistence King Salmon Fishery Permit
 ALASKA RESIDENTS ONLY

Permit #

Last Name

First Name Initial

Mailing Address

City

State Zip Code

One Permit per Household

Total Household Members ▶

King Salmon Limit ▶ **10**

Name of Household Members:

The total annual household permit limit for king salmon caught during closures is 10 king salmon per household permit. This permit may not be used during preseason closures. **Fishing during a subsistence salmon opening does NOT require a permit.**

Please sign on reverse →



RETURN THIS PORTION BY OCTOBER 31, 2021

Alaska Department of Fish & Game 2021
Kuskokwim Subsistence King Salmon Fishery Permit
 ALASKA RESIDENTS ONLY

Permit #

Last Name

First Name Initial

Total Household Members ▶

Name of Household Members:

King Salmon Limit ▶ **10**

FISHING SEASONS AND DAILY FISHING PERIODS:

This permit allows for king salmon fishing and harvest of **no more than 10 king salmon total** in the waters above Aniak during times of conservation closures. This permit may **NOT** be used during preseason closures.

***A permit is NOT required during Subsistence Salmon fishing openings.**

Did you use this permit to Subsistence fish for Kings during a closure in 2021?

YES NO

Please report other species you harvested while fishing for king salmon:							
DATE	KING	RED	PINK	CHUM	COHO	OTHER	TOTAL

This permit is for the Kuskokwim River upstream of Aniak as defined in 5 AAC 7.365. This permit may **NOT** be used during preseason closures. You must have this permit with you while fishing for king (Chinook) salmon during in season closures. This permit does not contain complete regulations pertaining to the Kuskokwim subsistence salmon fishery. The complete regulations in the Alaska Administrative Code are filed with the Lieutenant Governor. Copies of complete regulations are available at local Fish and Game offices.



**Upper portion to be retained by issuing officer and returned to:
 Division of Subsistence, Alaska Department of Fish and Game
 333 Raspberry Road
 Anchorage, AK 99518**

I have read and understand the permit requirements on this card and agree to return the permit below to Alaska Department of Fish and Game by October 31, 2021.

Permit Holder Signature

Date

Issuing Officer Signature

5 AAC 01.280 has been updated on line:

http://www.legis.state.ak.us/basis/folioproxy.asp?url=http://www.jnu01.legis.state.ak.us/cgi-bin/folioisa.dll/aac/query=*/doc/{t20909}?

(Fish may be taken for subsistence purposes without a subsistence fishing permit, except as otherwise provided in this section.)

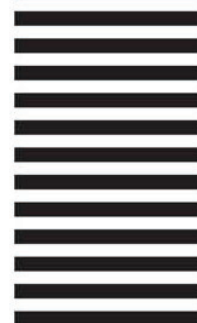
(1) Starting in the 2018 fishing season, during times when the commissioner determines it is necessary for the conservation of king salmon, the commissioner may, by emergency order, require that in the Kuskokwim River drainage, upstream of a line between ADF&G regulatory markers at the Yukon Delta National Wildlife Refuge Boundary near Aniak, king salmon may be taken only under the authority of a subsistence fishing permit with the following conditions:

- (A) annual limit of 10 king salmon;
- (B) fishing under the permit may not commence until the subsistence king salmon fishery opens after June 11 as described in 5 AAC [07.365](#);
- (C) the commissioner may, by emergency order, implement one or more of the gear limitations specified in 5 AAC [01.270\(n\)](#) (1) for fishing under the permit;
- (D) permit holders must complete and return permits, including daily records of king salmon harvested, each year by October 31;
- (E) once the annual limit is reached, additional king salmon may not be taken except in compliance with all applicable regulations and emergency orders;
- (F) only one permit may be issued to a household each year;

Each subsistence fisherman must plainly and legibly inscribe his first initial, last name, and address on a keg or buoy attached to a gillnet.



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



BUSINESS REPLY MAIL
 FIRST-CLASS MAIL PERMIT NO. 37 ANCHORAGE AK
 POSTAGE WILL BE PAID BY ADDRESSEE

DIVISION OF SUBSISTENCE
 DEPARTMENT OF FISH AND GAME
 STATE OF ALASKA
 333 RASPBERRY RD
 ANCHORAGE AK 99518-9981



Kuskokwim River Salmon Assessment Update

6/7/2021



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 Spencer Rearden (USFWS; spencer_rearden@fws.gov) or Sean Larson (ADF&G; sean.larson@alaska.gov). Major credit for the development of this data packet belongs to Benjamin Staton.

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Bethel Test Fishery Summaries

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Species Composition Summaries

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- Page 5: [Percent Composition](#)

Appendices

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- Page 7: [In-Season Harvest Estimates](#)
- Page 8: [Chinook Salmon](#)
- Page 9: [Chum Salmon](#)

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 Fisheries 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:

- <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakuskokwim.salmon#fishcounts>

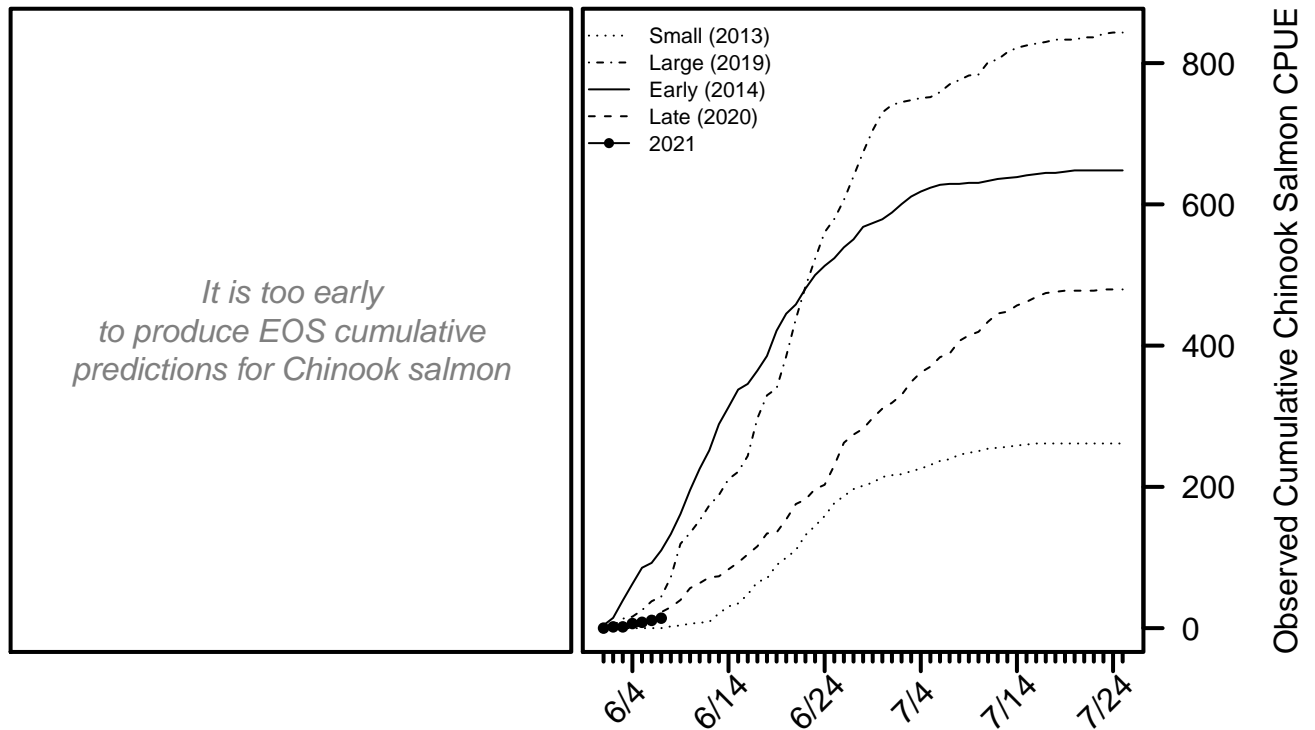
For the most up-to-date information regarding fishing opportunities please visit:

- **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 (6/7)

- The BTF daily CPUE was **3**.
- The BTF cumulative CPUE is now **14**.
- **38%** years since 2008 fell below this cumulative CPUE on this date.
- **3%** of the run is complete based on historical average run timing.
- **1% - 7%** of the run is complete based the central 50% of all historical run timing scenarios.
- **6% - 13%** of the run is expected to pass Bethel in the next 5 days.
- Over the last 3 days, Chinook salmon made up **100%** of the BTF catches, compared to **62%** on average.

Chinook Salmon Figure 1. *Left:* will show predicted cumulative EOS BTF CPUE according to various run timing scenarios when enough data have been collected. *Right:* The cumulative BTF CPUE from 2021 plotted along with four previous years intended to represent a range of early/late and small/large index values.



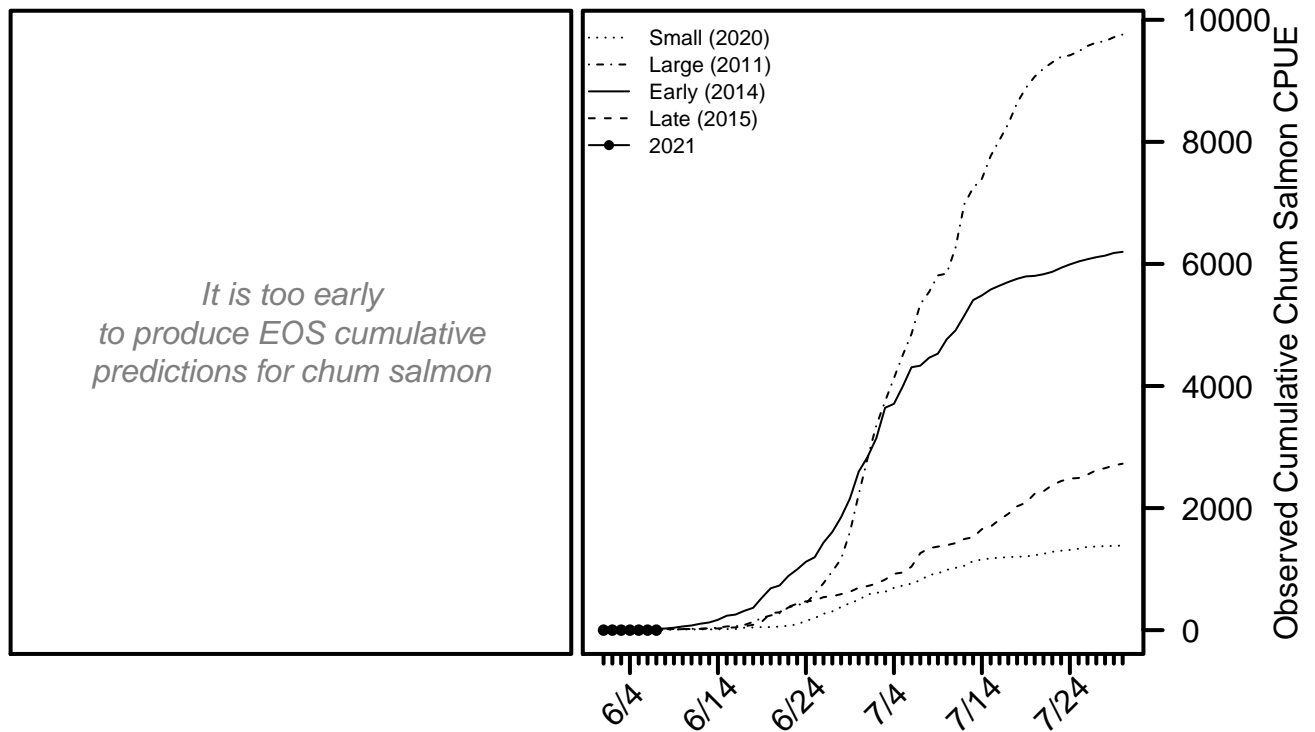
For more detailed information, see the [Chinook salmon appendix](#) at the end of this document.

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Chum Salmon BTF Summary (6/7)

- The BTF daily CPUE was **0**.
- The BTF cumulative CPUE is now **0**.
- **0%** years since 2008 fell below this cumulative CPUE on this date.
- **<1%** of the run is complete based on historical average run timing.
- **<1%** - **<1%** of the run is complete based the central 50% of all historical run timing scenarios.
- **0%** - **1%** of the run is expected to pass Bethel in the next 5 days.
- Over the last 3 days, chum salmon made up **0%** of the BTF catches, compared to **31%** on average.

Chum Salmon Figure 1. *Left:* will show predicted cumulative EOS BTF CPUE according to various run timing scenarios when enough data have been collected. *Right:* The cumulative BTF CPUE from 2021 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.

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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.

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

Date	2021 BTF	BTF Median	BTF Lower 10%	BTF Upper 10%	2021 ATF
6/4	0	0	0	1.24	–
6/5	0	0	0	1.64	–
6/6	0	0.26	0	4.39	–
6/7	0	0	0	1.95	–
6/8		0.18	0	1.57	
6/9		0.49	0	3.45	
6/10		0.74	0	3.23	

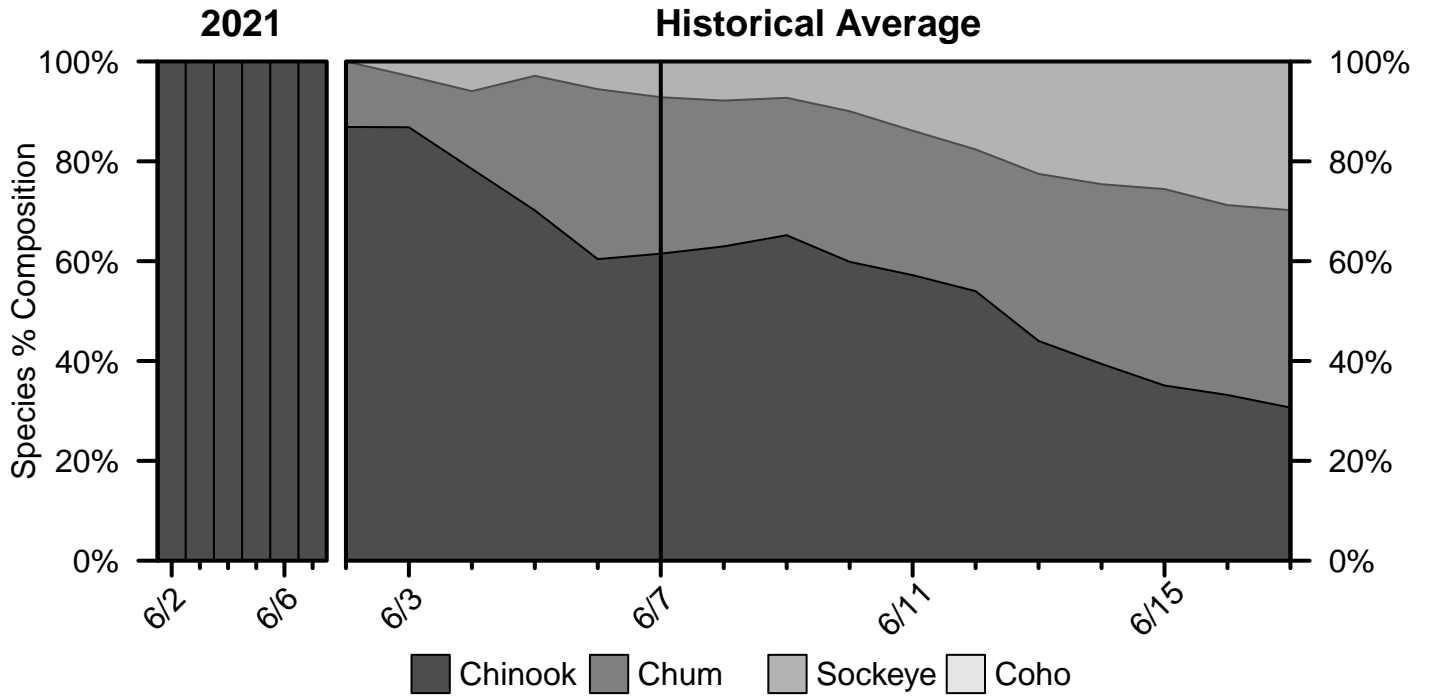
Ratio Table 2. The percent of previous years in which a given species ratio was exceeded at least once before a certain day in the BTF.

Date	Ratio > 1	Ratio > 3	Ratio > 5	Ratio > 10	Ratio > 20
6/4	16%	3%	3%	0%	0%
6/5	30%	8%	3%	0%	0%
6/6	43%	16%	8%	0%	0%
6/7	51%	19%	8%	0%	0%
6/8	57%	22%	8%	0%	0%
6/9	70%	27%	8%	3%	3%
6/10	73%	35%	11%	3%	3%

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Percent Composition by Salmon Species

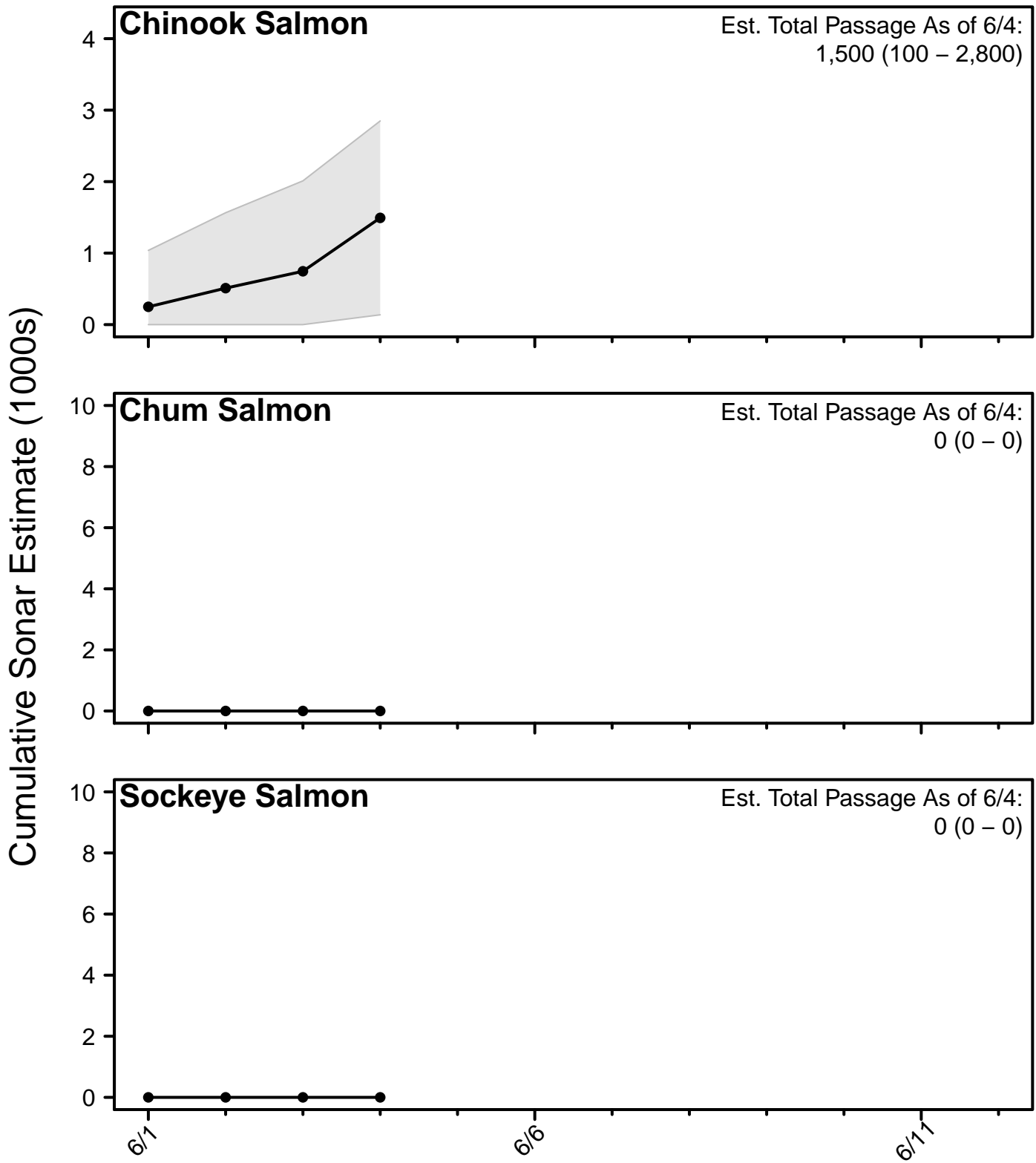
Percent Composition Figure 1. Species percent composition in the BTF from 2021 and based on the historical average. The composition presented on each day represents the average composition over the past 2 days.



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Sonar Passage Estimates

Sonar Figure 1. Cumulative estimates of salmon passage from the 2021 sonar operation through the last complete reporting day. Grey bands show the 95% confidence intervals on each complete reporting day.



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 KRITFC and ONC, with harvest data collected by community based harvest monitors and ONC.

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).

Harvest Table 1. Estimated total Chinook salmon harvest within the YDNWR, excluding the section between Akiak and Kalskag.

Date	Daily Harvest	Cumulative Harvest	Daily CV	Cumulative CV
6/2	30	30	0.23	0.23
6/5	310	340	0.47	0.43

Harvest Table 2. Estimated total chum salmon harvest within the YDNWR, excluding the section between Akiak and Kalskag.

Date	Daily Harvest	Cumulative Harvest	Daily CV	Cumulative CV
6/2	0	0	0	0
6/5	20	20	0.65	0.65

Harvest Table 3. Estimated total sockeye salmon harvest within the YDNWR, excluding the section between Akiak and Kalskag.

Date	Daily Harvest	Cumulative Harvest	Daily CV	Cumulative CV
6/2	0	0	0	0
6/5	50	50	0.44	0.44

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Chinook Salmon Appendix

Chinook Salmon Table A1. Cumulative CPUE from the BTF.

Date	2021	2020	2019	2018	2017	5-Yr Avg.	2008 - 2020 Avg.
6/4	6	3	16	11	5	15	14
6/5	8	3	25	13	5	20	19
6/6	11	14	38	13	5	26	25
6/7	14	23	45	21	8	35	33
6/8		30	72	21	8	44	41
6/9		40	119	29	9	62	53
6/10		57	135	38	12	73	63
EOS		487	848	667	374	613	568

Chinook Salmon Table A2. Cumulative CPUE from the ATF.

Date	2021	2020	2019	2018	2017
6/4	0	0	0	8	8
6/5	0	0	15	8	8
6/6	0	0	21	8	24
6/7	0	0	21	16	40
6/8		0	27	16	48
6/9		0	27	23	71
6/10		0	33	23	100
EOS		1,874	1,691	820	6,508

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

Timing	Midpoint	6/7 Cumulative %
Earliest	6/14	17%
Early 10%	6/18	11%
Early 25%	6/21	7%
Median	6/22	3%
Late 25%	6/25	1%
Late 10%	6/26	<1%
Latest	7/3	<1%

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Chum Salmon Appendix

Chum Salmon Table A1. Cumulative CPUE from the BTF.

Date	2021	2020	2019	2018	2017	5-Yr Avg.	2008 - 2020 Avg.
6/4	0	8	0	7	0	3	3
6/5	0	8	0	7	0	3	3
6/6	0	12	0	7	3	5	4
6/7	0	12	0	10	5	6	6
6/8		12	0	17	8	10	9
6/9		12	0	20	11	12	12
6/10		12	11	22	24	17	17
EOS		1,442	6,427	8,212	6,785	5,352	6,256

Chum Salmon Table A2. Cumulative CPUE from the ATF.

Date	2021	2020	2019	2018	2017
6/4	0	0	0	0	0
6/5	0	0	0	8	8
6/6	0	0	0	8	8
6/7	0	0	0	8	8
6/8		0	0	8	8
6/9		0	0	8	24
6/10		0	0	8	31
EOS		2,611	1,051	10,277	11,588

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

Timing	Midpoint	6/7 Cumulative %
Earliest	6/23	1%
Early 10%	7/1	<1%
Early 25%	7/3	<1%
Median	7/6	<1%
Late 25%	7/8	<1%
Late 10%	7/11	<1%
Latest	7/15	<1%

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Bering Sea Bycatch Update

Bycatch updated through June 3, 2021

- King salmon bycatch to date: **10,689** (all stocks)
- Non-king salmon bycatch to date: **354** (all stocks)

Important: Kuskokwim River fish are a small component of the total bycatch.

Background Information

- Bycatch occurs in the Bering Sea and Aleutian Island (BSAI) groundfish fishery, which is managed by the National Marine Fisheries Service and is one of the most extensively monitored fisheries in the U.S.
- The 2011–2020¹ average king bycatch of all stocks is ~23,000
- The impact of bycatch on adult Kuskokwim River King salmon runs is small compared to other sources of mortality and does not explain the magnitude of declines we have observed on the Kuskokwim River.

We think this is true because:

- The Kuskokwim River is only one of many stocks that make up the total bycatch (other stocks range from California, Alaska, to Russia)
- The Kuskokwim River is one part of the Western Alaska stock group², which makes up about 45%–70% of the total annual bycatch.
- Most of the bycatch is made up of juvenile fish, many of which would not have survived to adulthood due to natural mortality³.
- Of the fish that would have survived in they had not been caught, only subset of them would have returned this year because salmon spend a varying amount of time in ocean.

Helpful Links

Bycatch numbers are reported by the National Marine Fisheries Service, available at: <https://alaskafisheries.noaa.gov/fisheries-catch-landings?tid=286>

Bycatch updates are reported by the North Pacific Fisheries Management Council, available at: <https://www.npfmc.org/bsai-salmon-bycatch/>

¹ 2011–2020 is the recent 10-year average. In 2011, amendments to Fishery Management Plans were enacted to reduce King salmon bycatch in the BSAI Pollock fishery.

² The Western Alaska group includes Bristol Bay, Kuskokwim, Yukon, and Norton Sound stocks.

³ It is estimated that about 90% of all salmon that enter the marine environment die of natural causes.