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: **06/26/2020** **Time**: **4:00 p.m.** Place: **Teleconference**

Time Called to Order: Chair: Barbara Carlson

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

Processor:
Member at Large:
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
- 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:
- Commercial Catch Report: N/A
- Processor Report: N/A
- Sport Fish Report:
- 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:

- Meeting attendance and vacant seats

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.

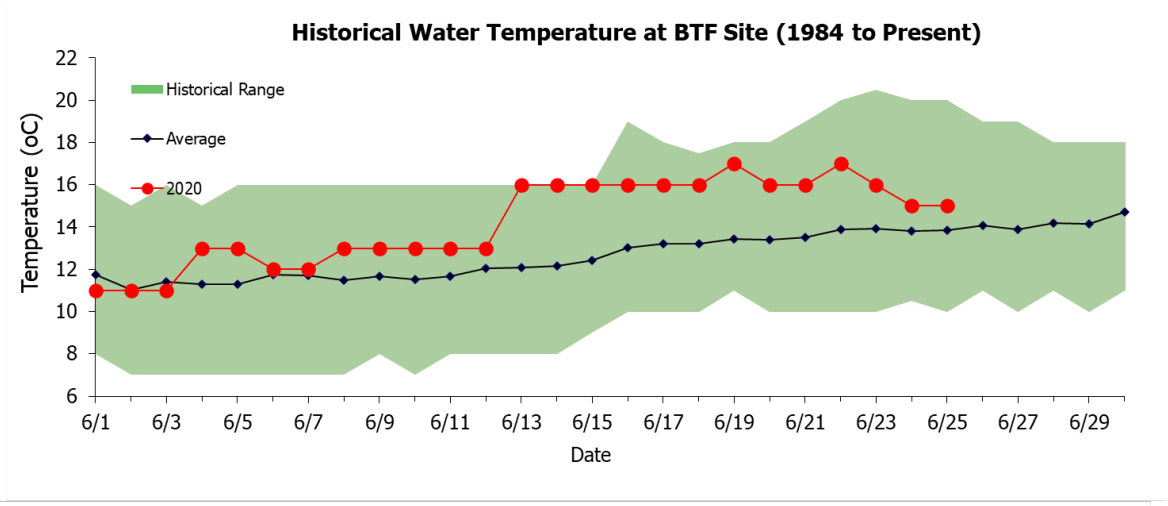
Misuse of Packet information can contribute to misunderstandings that can **cause harm to salmon users** and potentially **damage salmon resources**.

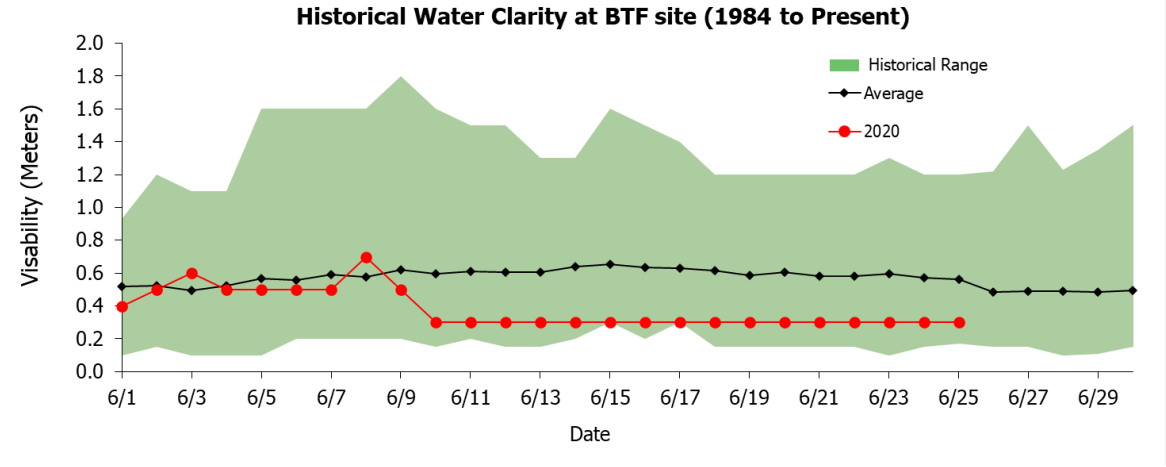
Ask Questions: ADF&G staff will be happy to answer biology and management questions. Please call **1-855-933-2433** to reach ADF&G Kuskokwim Area staff.

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=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,
Lily Reichard
Working Group Coordinator





Crooked Creek water gauge is out of operation.

Kuskokwim River Salmon Assessment Update
6/25/2020

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 Gary Decossas (USFWS; gary_decossas@fws.gov) or Sean Larson (ADF&G; sean.larson@alaska.gov). Major credit for the development of this data packet belongs to Ben Staton.

Table of Contents:

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

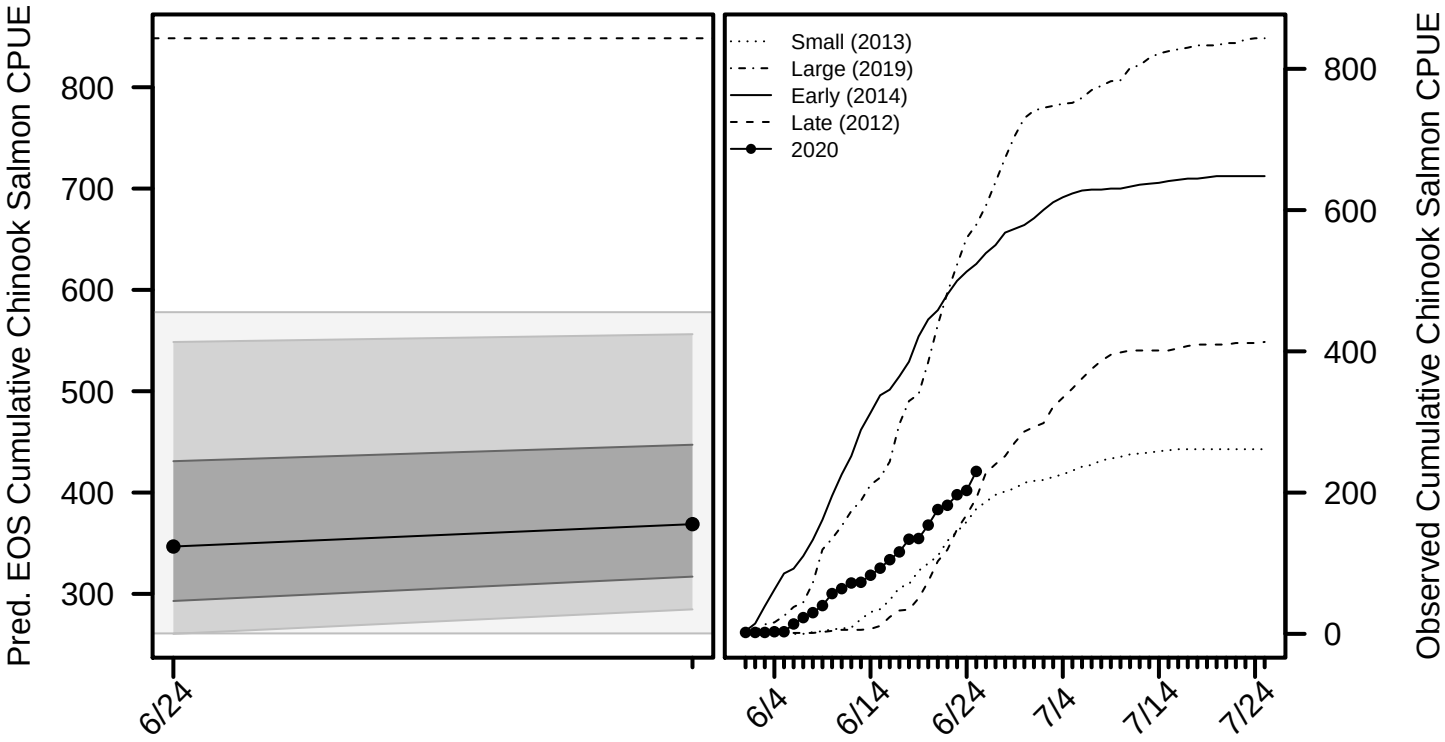
For the most up-to-date information regarding fishing opportunities please visit:

- **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 (6/25)

- The BTF daily CPUE was **27**.
- The BTF cumulative CPUE is now **230**.
- **25%** years since 2008 fell below this cumulative CPUE on this date.
- **62%** of the run is complete based on historical average run timing.
- **51% - 72%** of the run is complete based the central 50% of all historical run timing scenarios.
- **13% - 19%** of the run is expected to pass Bethel in the next 5 days.
- Over the last 3 days, Chinook salmon made up **64%** of the BTF catches, compared to **11%** 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 grey box shows the range of EOS values from 2010 - 2013, which indexed run sizes past Bethel ranging from 60,000 to 82,000. The dashed horizontal line shows the EOS value from 2019. *Right*: The cumulative BTF CPUE from 2020 plotted along with four previous years intended to represent a range of early/late and small/large index values.



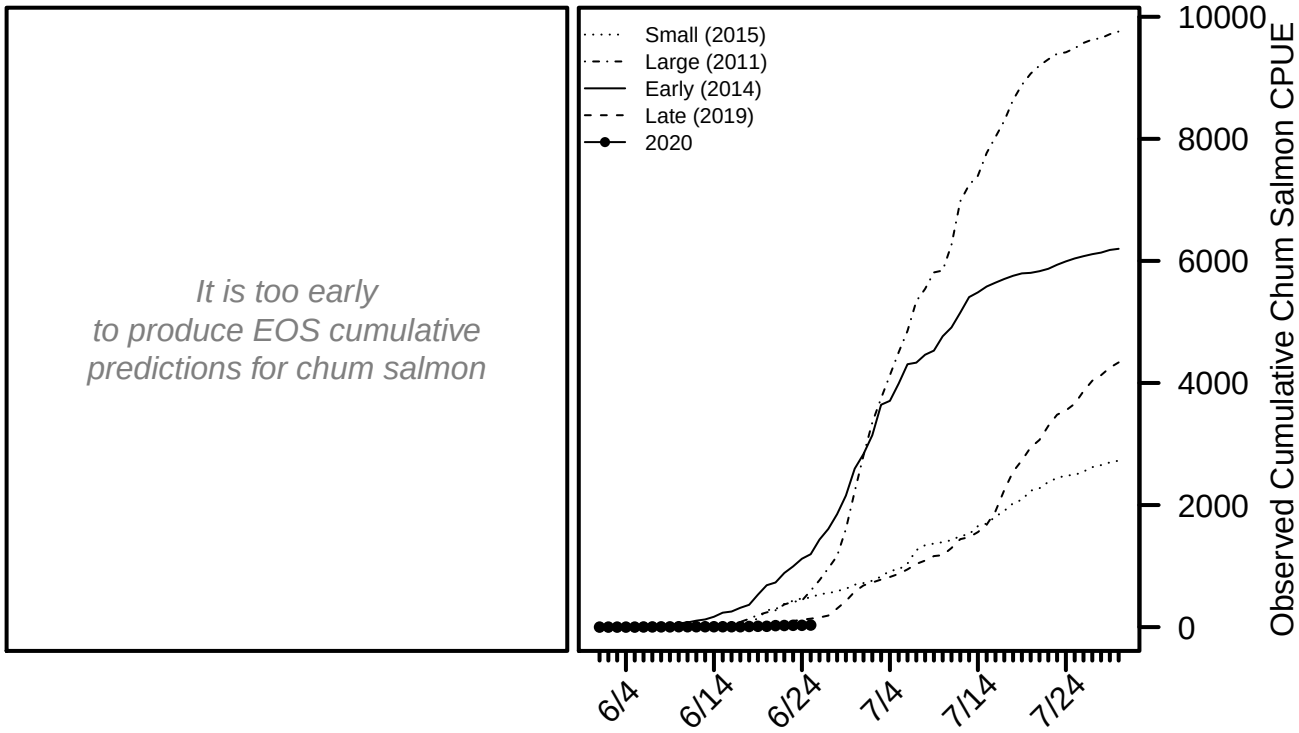
*For more detailed information, see the **Chinook salmon appendix** at the end of this document.*

Return to Table of Contents

Chum Salmon BTF Summary (6/25)

- The BTF daily CPUE was **4**.
- The BTF cumulative CPUE is now **33**.
- **0%** years since 2008 fell below this cumulative CPUE on this date.
- **16%** of the run is complete based on historical average run timing.
- **9% - 25%** of the run is complete based the central 50% of all historical run timing scenarios.
- **13% - 16%** of the run is expected to pass Bethel in the next 5 days.
- Over the last 3 days, chum salmon made up **9%** of the BTF catches, compared to **54%** 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 2020 plotted along with four previous years intended to represent a range of early/late and small/large index values.



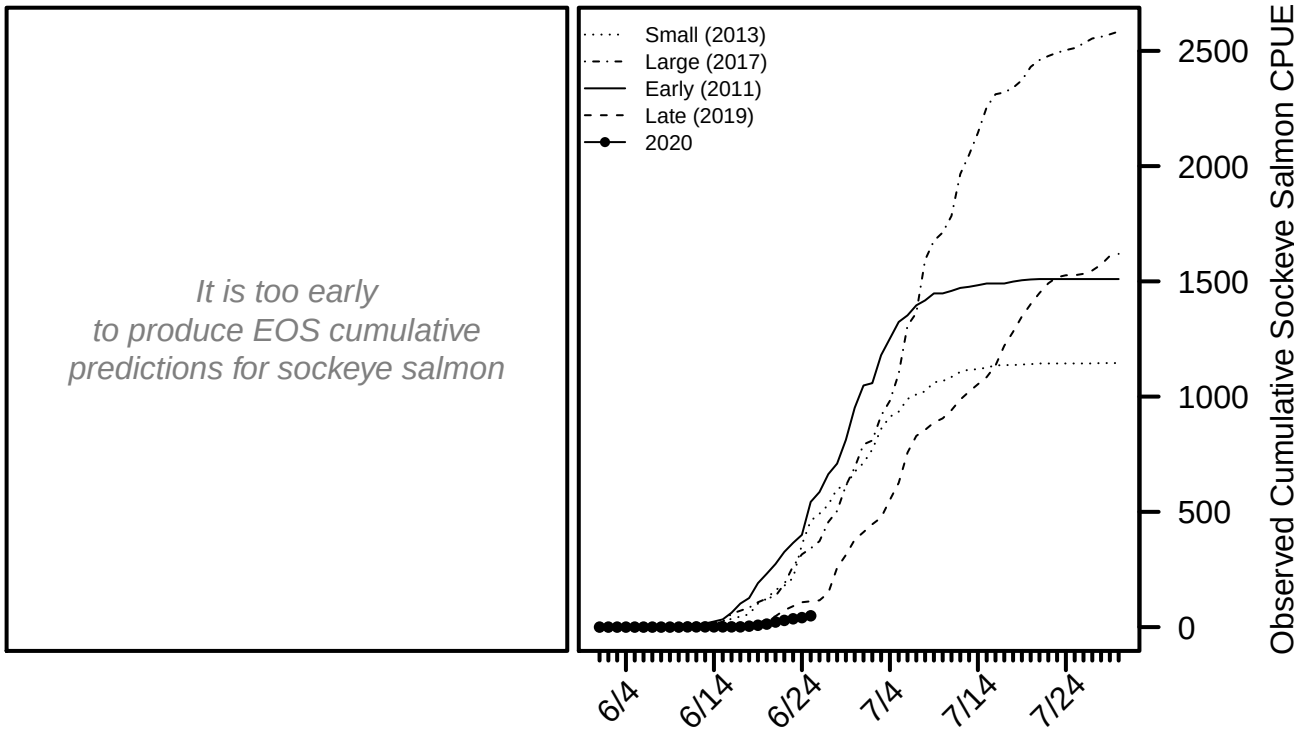
For more detailed information, see the ***chum salmon appendix*** *at the end of this document.*

Return to Table of Contents

Sockeye Salmon BTF Summary (6/25)

- The BTF daily CPUE was **8**.
- The BTF cumulative CPUE is now **49**.
- **0%** years since 2008 fell below this cumulative CPUE on this date.
- **32%** of the run is complete based on historical average run timing.
- **20% - 46%** of the run is complete based the central 50% of all historical run timing scenarios.
- **22% - 25%** of the run is expected to pass Bethel in the next 5 days.
- Over the last 3 days, sockeye salmon made up **27%** of the BTF catches, compared to **35%** on average.

Sockeye 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 2020 plotted along with four previous years intended to represent a range of early/late and small/large index values.



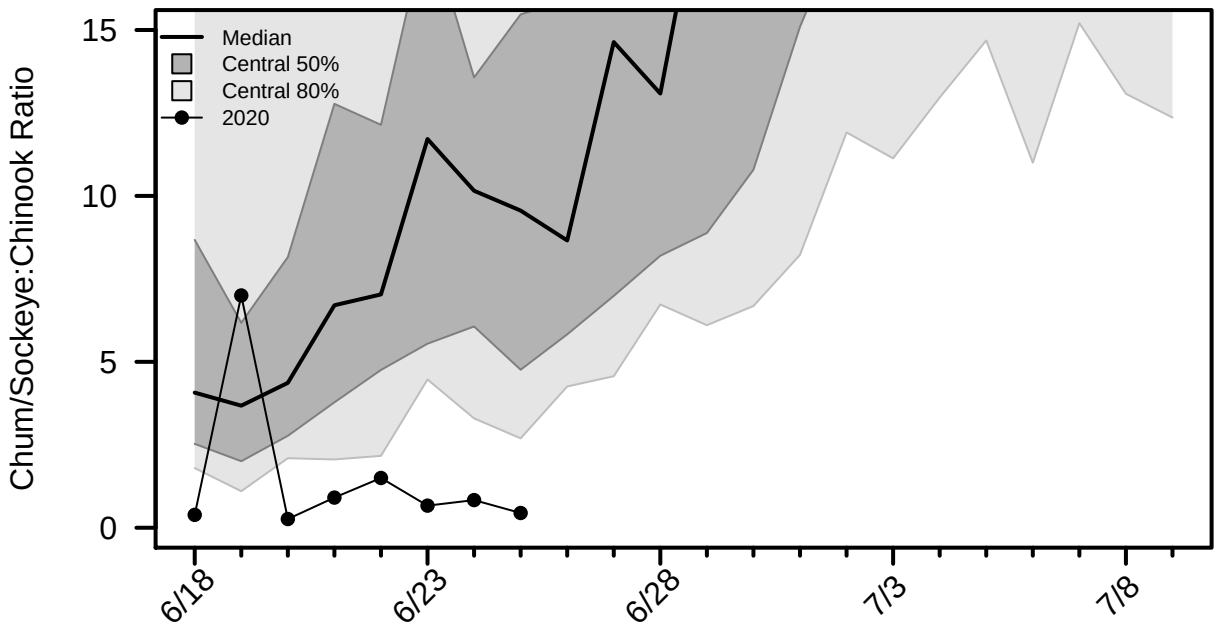
For more detailed information, see the ***sockeye salmon appendix*** *at the end of this document.*

Return to Table of Contents

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 2020 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	2020 BTF	BTF Median	BTF Lower 10%	BTF Upper 10%	2020 ATF
6/22	1.5	7.03	2.17	18.48	0.17
6/23	0.67	11.71	4.47	25.69	0.27
6/24	0.83	10.15	3.3	45.86	0.14
6/25	**0.44**	**9.56**	**2.69**	**44.49**	**0.46**
6/26		8.66	4.26	32.42	
6/27		14.64	4.57	47.59	
6/28		13.08	6.73	31.11	

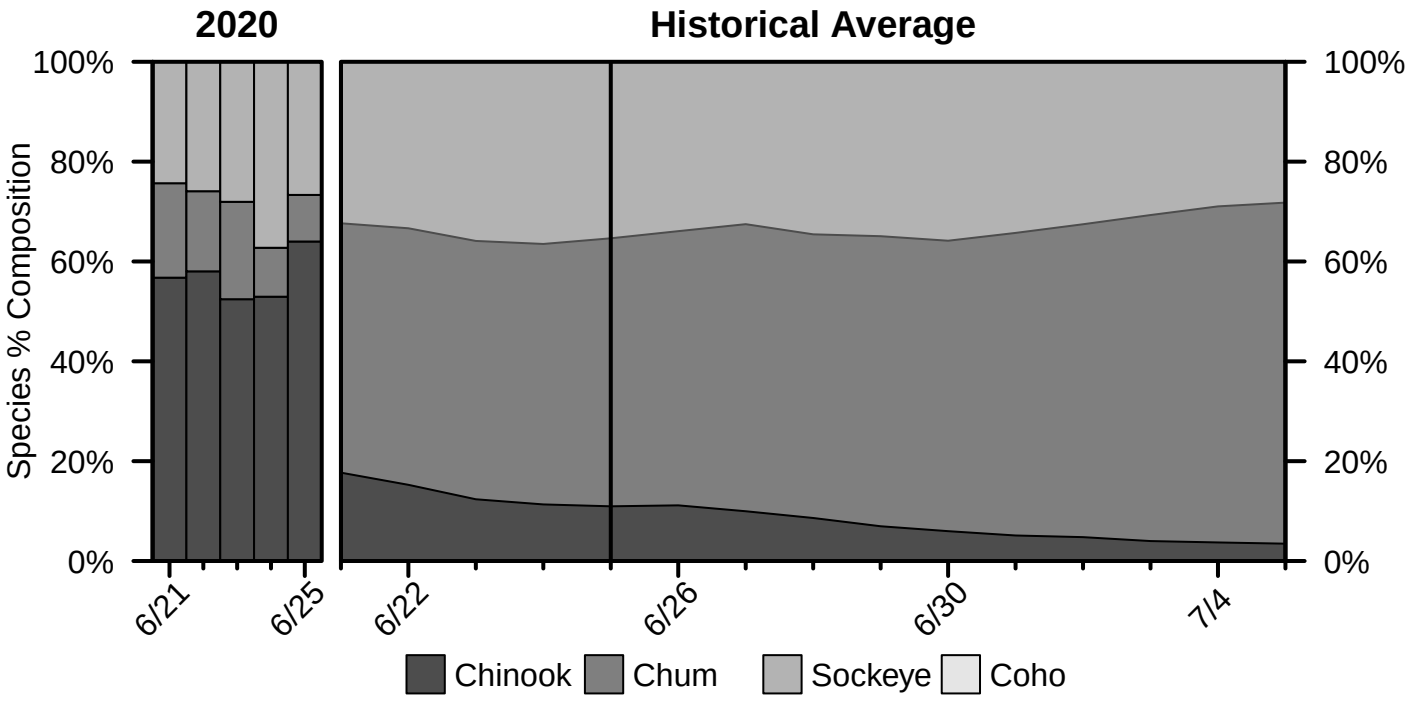
Ratio Table 2. The percent of previous years in which a given species ratio was exceeded at least once before a certain day in the BTF.

Date	Ratio > 3	Ratio > 5	Ratio > 7	Ratio > 10	Ratio > 20
6/22	94%	94%	78%	64%	22%
6/23	97%	94%	83%	67%	33%
6/24	97%	94%	86%	75%	39%
6/25	**97%**	**97%**	**89%**	**83%**	**42%**
6/26	97%	97%	89%	86%	44%
6/27	97%	97%	92%	86%	56%
6/28	100%	100%	97%	89%	64%

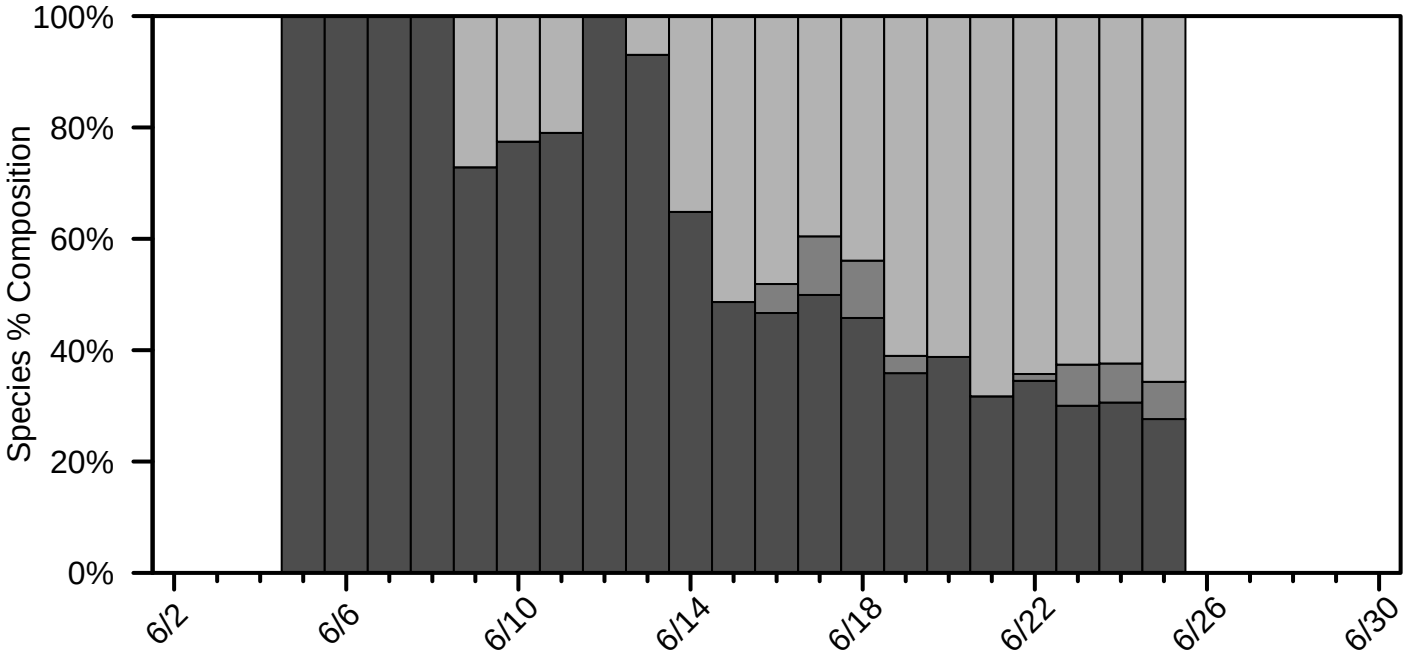
Return to Table of Contents

Percent Composition by Salmon Species

Percent Composition Figure 1. Species percent composition in the BTF from 2020 and based on the historical average. The composition presented on each day represents the average composition over the past 3 days.



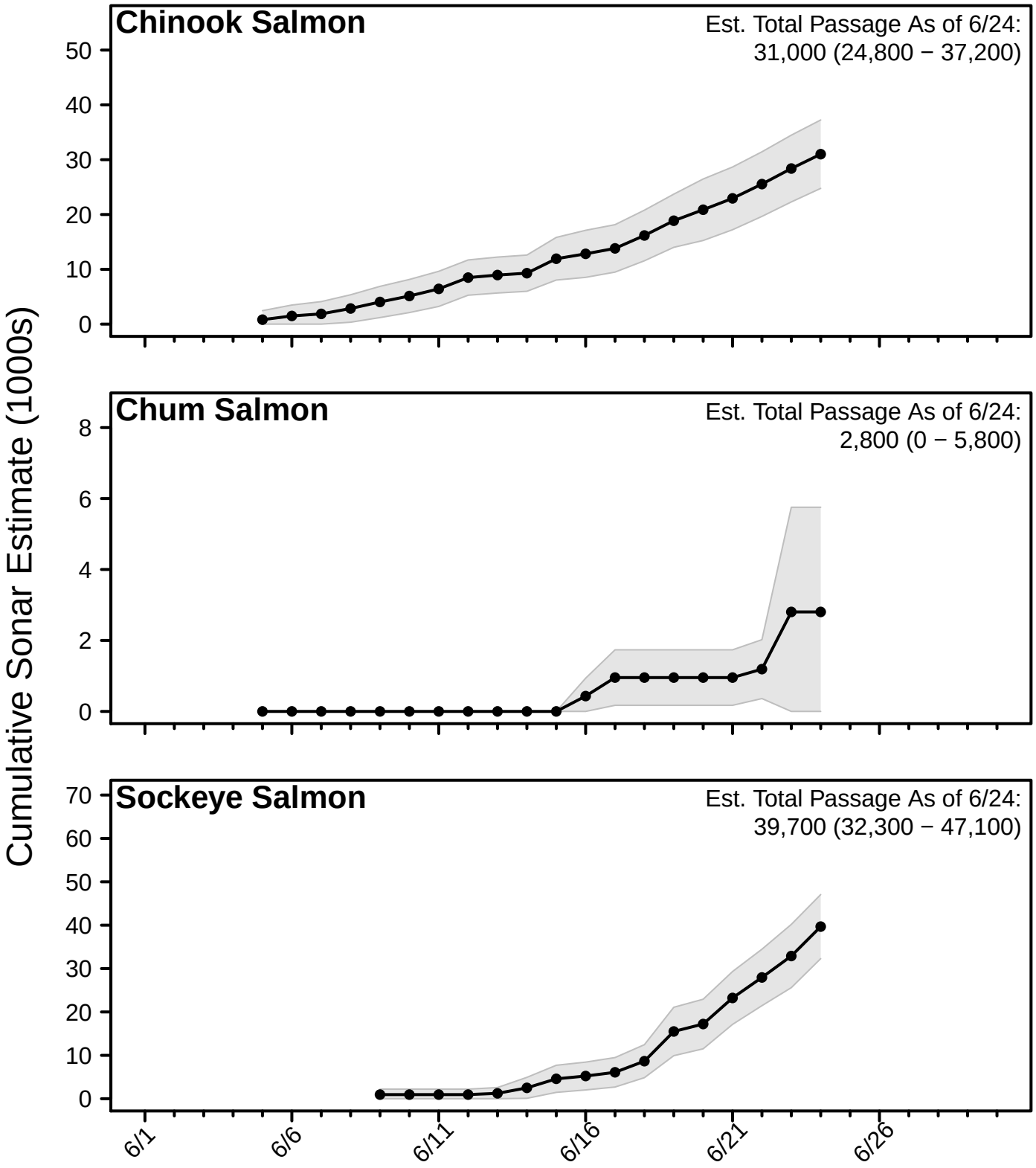
Species Composition Figure 2. Species percent composition from the sonar estimates from 2020 (salmon species only, excluding pink salmon). The composition presented on each day represents the average composition over the past 3 days.



Return to Table of Contents

Sonar Passage Estimates

Sonar Figure 1. Cumulative estimates of salmon passage from the 2020 sonar operation through the last complete reporting day. Grey bands show the 95% confidence intervals on each complete reporting day.



Return to Table of Contents

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).

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
6/3	180	180	54.02	54.02
6/6	570	730	20.48	12.49
6/9	670	1,420	14.74	9.03
6/12	3,090	4,540	11	7.2
6/15	5,080	9,640	10	5.95
6/18	8,160	17,820	6	4.14

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
6/3	0	0	0	0
6/6	90	90	26.16	15.18
6/9	60	150	40.55	10.98
6/12	460	640	21	12.67
6/15	790	1,430	13	8.44
6/18	2,040	3,450	10	5.46

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
6/3	0	0	0	0
6/6	20	20	52.22	86.5
6/9	30	60	61.24	43.21
6/12	90	150	22	17.92
6/15	610	770	13	9.75
6/18	2,060	2,770	12	6.08

Return to Table of Contents

Chinook Salmon Appendix

Chinook Salmon Table A1. Cumulative CPUE from the BTF.

Date	2020	2019	2018	2017	2016	5-Yr Avg.	2008 - 2019 Avg.
6/22	182	483	235	109	340	298	279
6/23	197	523	275	121	357	322	305
6/24	203	561	306	148	378	348	328
6/25	**230**	**579**	**354**	**161**	**400**	**368**	**348**
6/26		606	387	168	432	392	374
6/27		640	406	196	454	413	392
6/28		674	434	216	463	435	409
EOS		848	667	374	687	640	575

Chinook Salmon Table A2. Cumulative CPUE from the ATF.

Date	2020	2019	2018	2017	2016
6/22	285	953	172	1,244	1,403
6/23	311	973	172	1,481	1,435
6/24	357	1,023	180	1,645	1,470
6/25	**403**	**1,139**	**218**	**1,945**	**1,514**
6/26		1,181	245	2,165	1,564
6/27		1,321	280	2,500	1,657
6/28		1,359	330	3,012	1,763
EOS		1,691	820	6,508	2,729

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

Timing	Midpoint	6/25 Cumulative %
Earliest	6/13	87%
Early 10%	6/16	80%
Early 25%	6/20	73%
Median	6/21	62%
Late 25%	6/23	52%
Late 10%	6/26	42%
Latest	7/2	31%

Return to Table of Contents

Chum Salmon Appendix

Chum Salmon Table A1. Cumulative CPUE from the BTF.

Date	2020	2019	2018	2017	2016	5-Yr Avg.	2008 - 2019 Avg.
6/22	26	58	518	482	239	336	431
6/23	29	100	716	565	283	419	534
6/24	29	121	787	698	353	486	621
6/25	**33**	**138**	**878**	**760**	**393**	**530**	**716**
6/26		158	997	930	460	617	846
6/27		189	1,149	1,317	541	750	1,003
6/28		304	1,242	1,671	602	882	1,139
EOS		4,989	8,212	6,785	3,894	5,365	6,537

Chum Salmon Table A2. Cumulative CPUE from the ATF.

Date	2020	2019	2018	2017	2016
6/22	52	5	209	607	221
6/23	59	19	264	728	229
6/24	65	31	286	927	307
6/25	**86**	**88**	**401**	**1,214**	**456**
6/26		177	561	1,494	563
6/27		266	928	1,696	649
6/28		311	1,276	1,966	958
EOS		1,051	10,277	11,588	5,304

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

Timing	Midpoint	6/25 Cumulative %
Earliest	6/22	49%
Early 10%	6/30	36%
Early 25%	7/2	26%
Median	7/5	16%
Late 25%	7/7	9%
Late 10%	7/10	4%
Latest	7/17	2%

Return to Table of Contents

Sockeye Salmon Appendix

Sockeye Salmon Table A1. Cumulative CPUE from the BTF.

Date	2020	2019	2018	2017	2016	5-Yr Avg.	2008 - 2019 Avg.
6/22	29	73	46	187	63	111	177
6/23	36	91	72	265	103	150	221
6/24	41	108	91	316	120	172	264
6/25	**49**	**112**	**125**	**341**	**142**	**191**	**311**
6/26		116	184	373	236	240	358
6/27		148	204	456	279	281	403
6/28		257	216	504	291	332	456
EOS		1,749	2,275	2,690	2,463	2,267	1,761

Sockeye Salmon Table A2. Cumulative CPUE from the ATF.

Date	2020	2019	2018	2017	2016
6/22	0	0	0	58	0
6/23	0	0	0	67	0
6/24	0	0	0	67	0
6/25	**0**	**11**	**0**	**83**	**8**
6/26		22	0	83	8
6/27		22	0	92	8
6/28		22	8	118	26
EOS		33	75	393	405

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

Timing	Midpoint	6/25 Cumulative %
Earliest	6/21	71%
Early 10%	6/23	59%
Early 25%	6/26	46%
Median	6/28	32%
Late 25%	6/30	20%
Late 10%	7/6	12%
Latest	7/9	6%

Return to Table of Contents