

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: 07/6/2022

Time: 10:00 a.m.–12:00 p.m.

Place: ADF&G Office, Bethel, AK

Time Called to Order:

Chair:

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:
- 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,
Savannah Hollingworth
Working Group Coordinator



**Orutsararmiut Native Council (ONC) Inseason Harvest Monitoring Weekly Report
July 6, 2022**

Comments from the June 29th/30th set net opportunity:

One fisher expressed that managers should take the same management approach for the next fishing season. Seven fishers commented upon the fishing opportunity: four wanting more openers, specifically earlier in the season and using drift gillnets; one fisher wanted the set net opportunity to be longer and earlier in the season; and one wanted the net length regulation to be longer (100 ft was preferred) and that this opener was better than the previous drift opportunities. One said that not many chum salmon were running up the river compared to previous abundant years and one said there is an abundance of red salmon this year. Two commented upon management: one saying that the river should be continually open and that families only take what they need, and one had wished that managers didn't let the King salmon pass.

Table 1. Average fish harvest, net length, and mesh size range surveyed at the Bethel area fish camps and Bethel boat harbor from the 6/29-30 fishing 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 Boat Harbor	17	4	4	33	<1	27-75 ft.	4-6
Bethel Fish Camps	28	4	2	38	<1	25-90 ft.	4-6

Table 2. Fishing progress data from Bethel area fish camps from 6/29-6/30 visits.

Progress	Not at all	Under half	Halfway	Over Half	Goal Met
King Salmon	0%	20%	40%	20%	20%
Chum Salmon	80%	20%	0%	0%	0%
Sockeye Salmon	0%	20%	20%	0%	60%





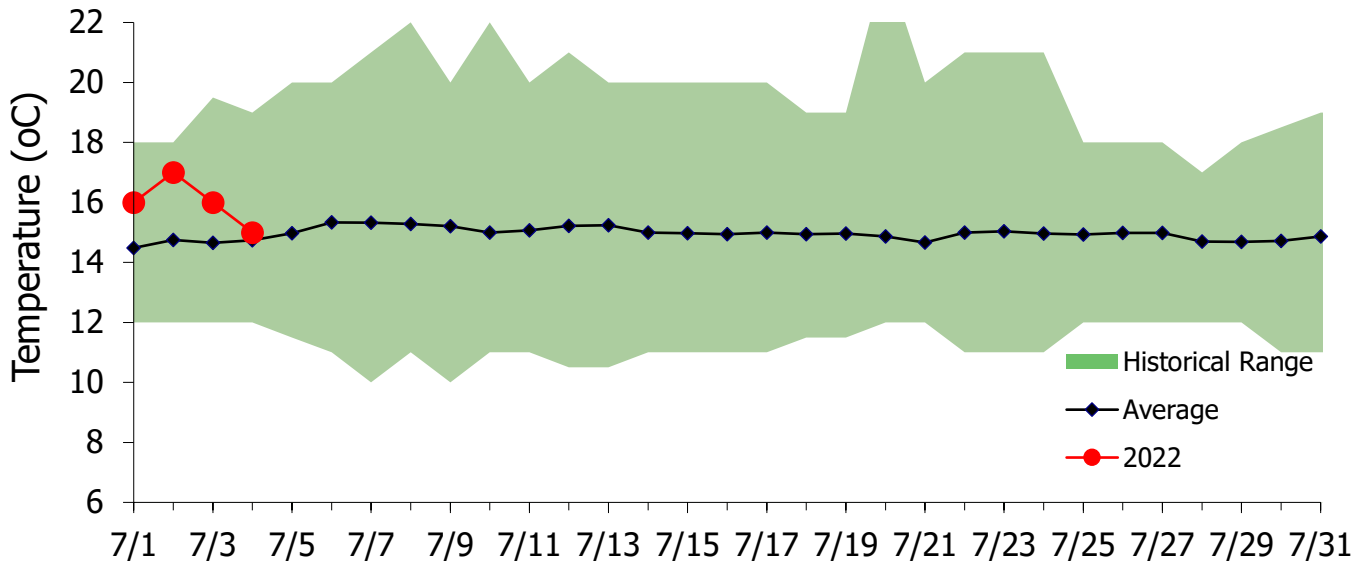
Fish Distribution

From June 28th through July 4th, ONC Fisheries crew delivered 85 Chinook salmon and 27 red salmon to Bethel area elders, widowed, and disabled. As of June 27th, ONC Fisheries is only delivering Chinook salmon. Other fish caught by the Bethel Test Fishery will be available at the community fish bin.

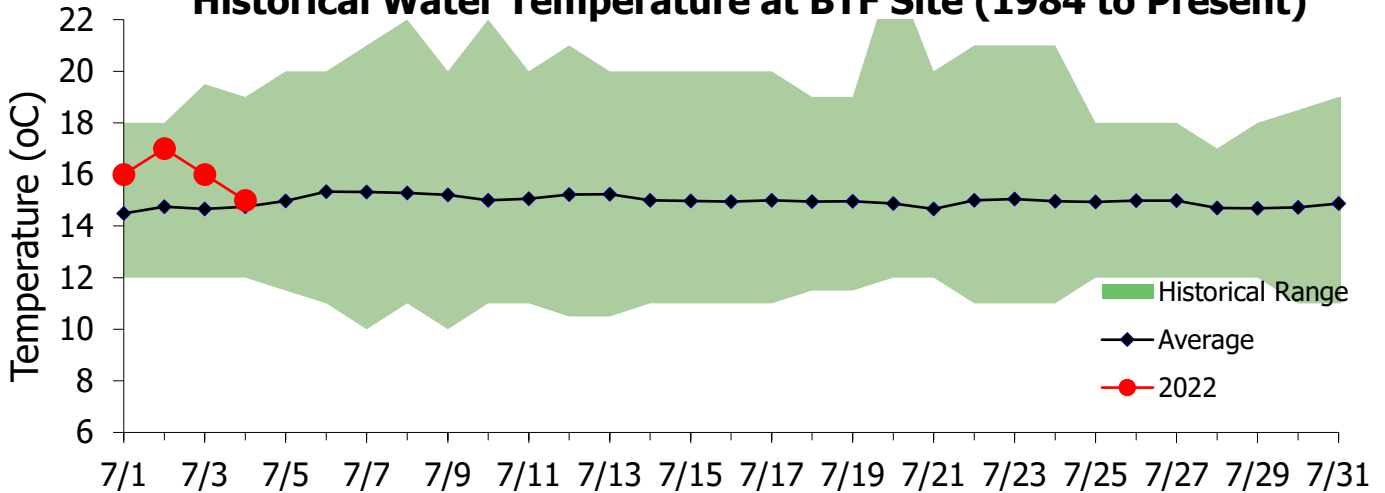
Final ONC Report & Survey Effort:

ONC will provide its last KRSMWG report on July 13th and will shift its efforts to host its annual Science & Culture Camp from July 19th through the 21st. ONC will work with ADF&G, YDNWR, and KRITFC to coordinate harvest surveys if any fishing openers are scheduled during this period. Quyana!

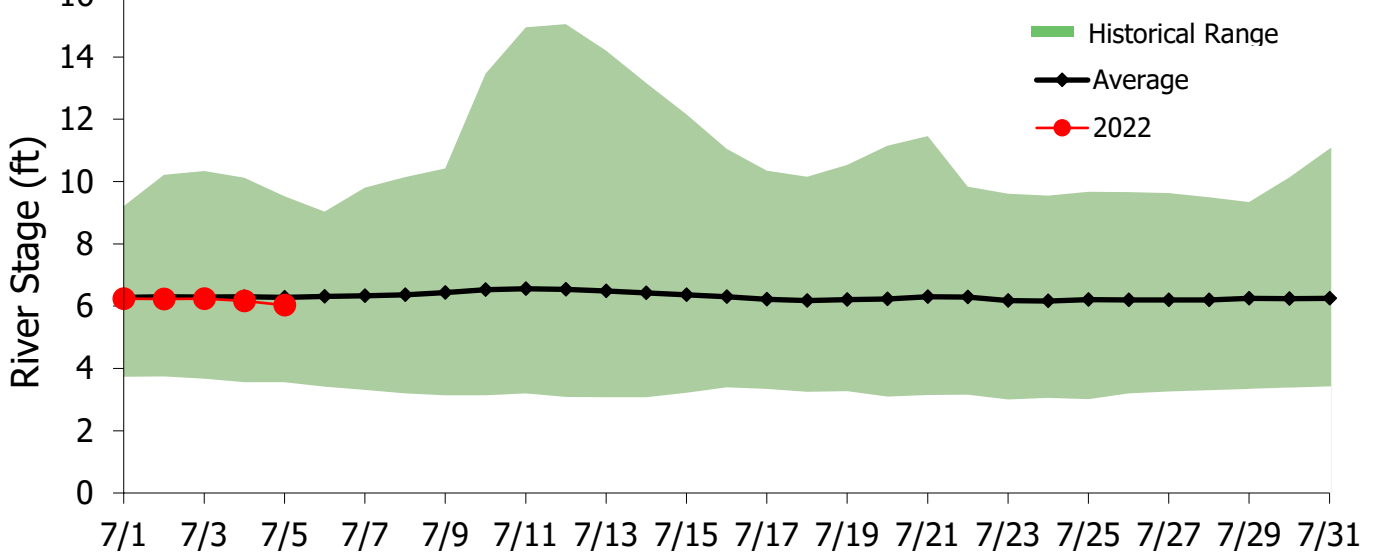
Historical Water Temperature at BTF Site (1984 to



Historical Water Temperature at BTF Site (1984 to Present)



Kuskokwim River Water Level at Crooked Creek (1984 to



Kuskokwim River Salmon Assessment Update

7/4/2022



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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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
- ONC: Orutsaramiut 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>

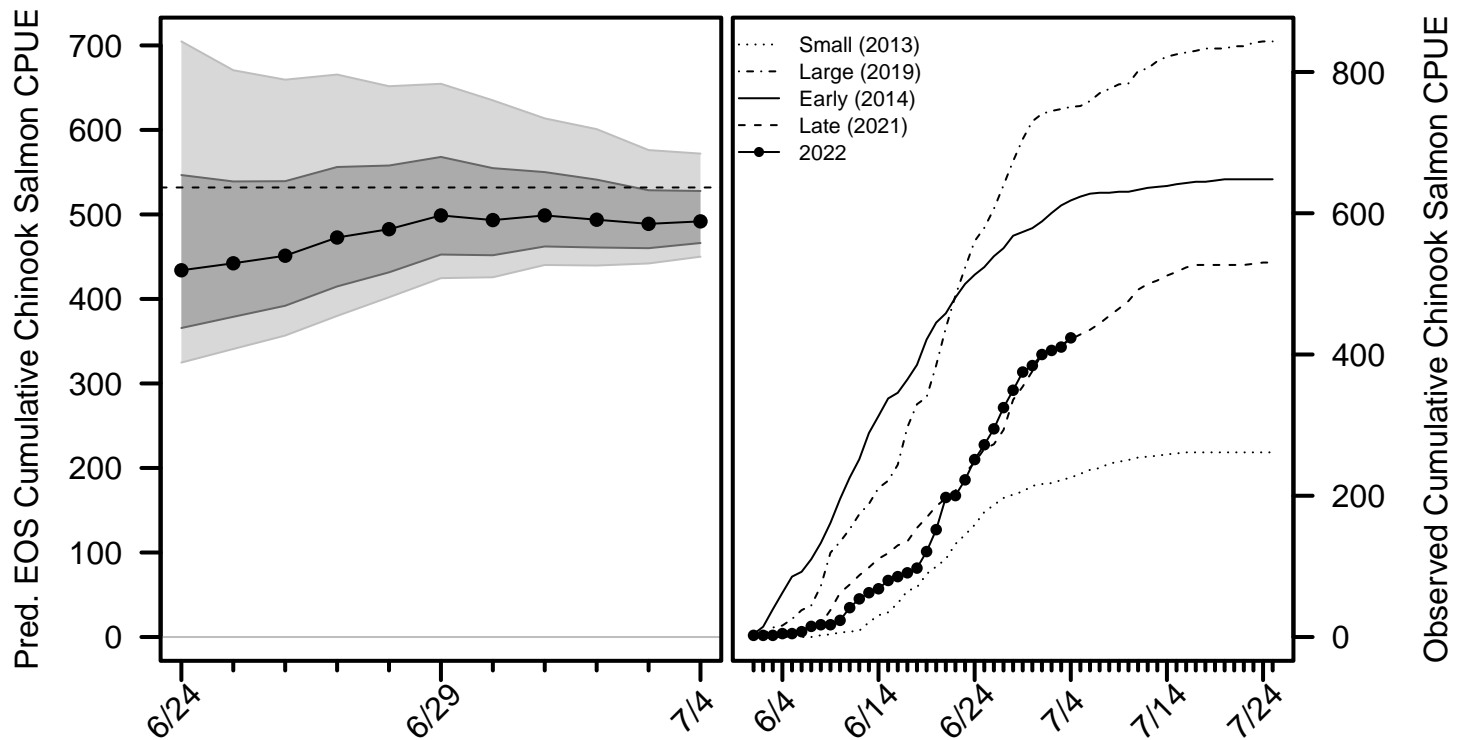
For the most up-to-date information regarding fishing opportunities please visit:

- 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 (7/4)

- The BTF daily CPUE was **13**.
- The BTF cumulative CPUE is now **424**.
- **43%** years since 2008 fell below this cumulative CPUE on this date.
- **86%** of the run is complete based on historical average run timing.
- **80% - 91%** of the run is complete based on the central 50% of all historical run timing scenarios.
- **4% - 8%** 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 2021. *Right:* The cumulative BTF CPUE from 2022 plotted along with four previous years intended to represent a range of early/late and small/large index values.



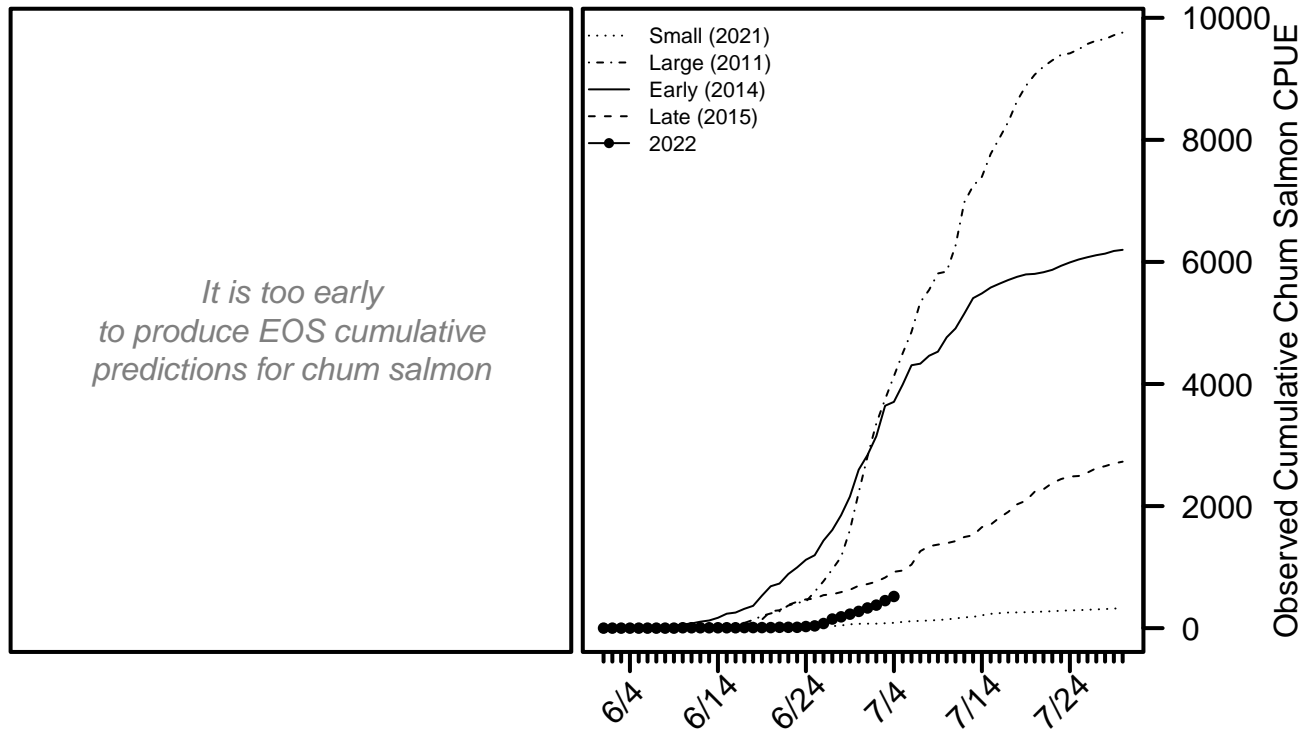
For more detailed information, see the [Chinook salmon appendix](#) at the end of this document.

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Chum Salmon BTF Summary (7/4)

- The BTF daily CPUE was **68**.
- The BTF cumulative CPUE is now **518**.
- **14%** years since 2008 fell below this cumulative CPUE on this date.
- **46%** of the run is complete based on historical average run timing.
- **35% - 58%** of the run is complete based on the central 50% of all historical run timing scenarios.
- **17% - 18%** of the run is expected to pass Bethel in the next 5 days.
- Over the last 3 days, chum salmon made up **39%** of the BTF catches, compared to **65%** 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 2022 plotted along with four previous years intended to represent a range of early/late and small/large index values.



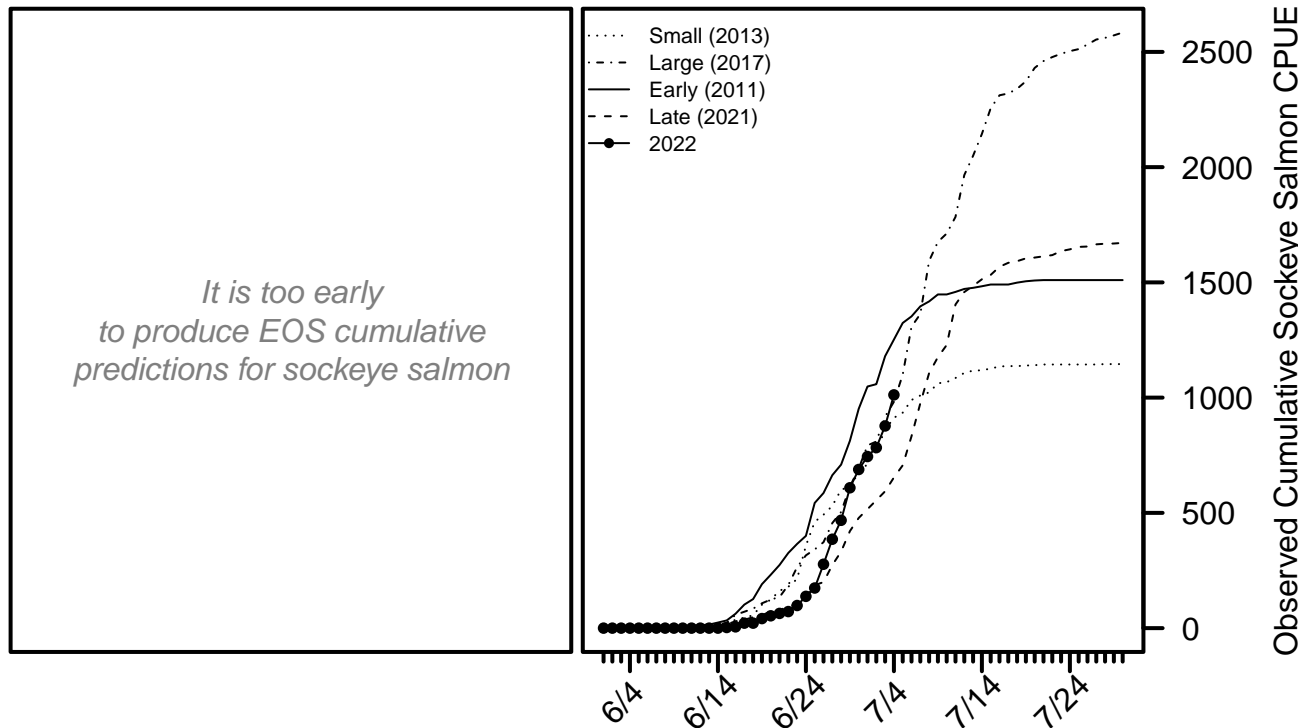
For more detailed information, see the [chum salmon appendix](#) at the end of this document.

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Sockeye Salmon BTF Summary (7/4)

- The BTF daily CPUE was **135**.
- The BTF cumulative CPUE is now **1,012**.
- **57%** years since 2008 fell below this cumulative CPUE on this date.
- **74%** of the run is complete based on historical average run timing.
- **59% - 87%** of the run is complete based on the central 50% of all historical run timing scenarios.
- **11% - 21%** of the run is expected to pass Bethel in the next 5 days.
- Over the last 3 days, sockeye salmon made up **56%** of the BTF catches, compared to **31%** 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 2022 plotted along with four previous years intended to represent a range of early/late and small/large index values.



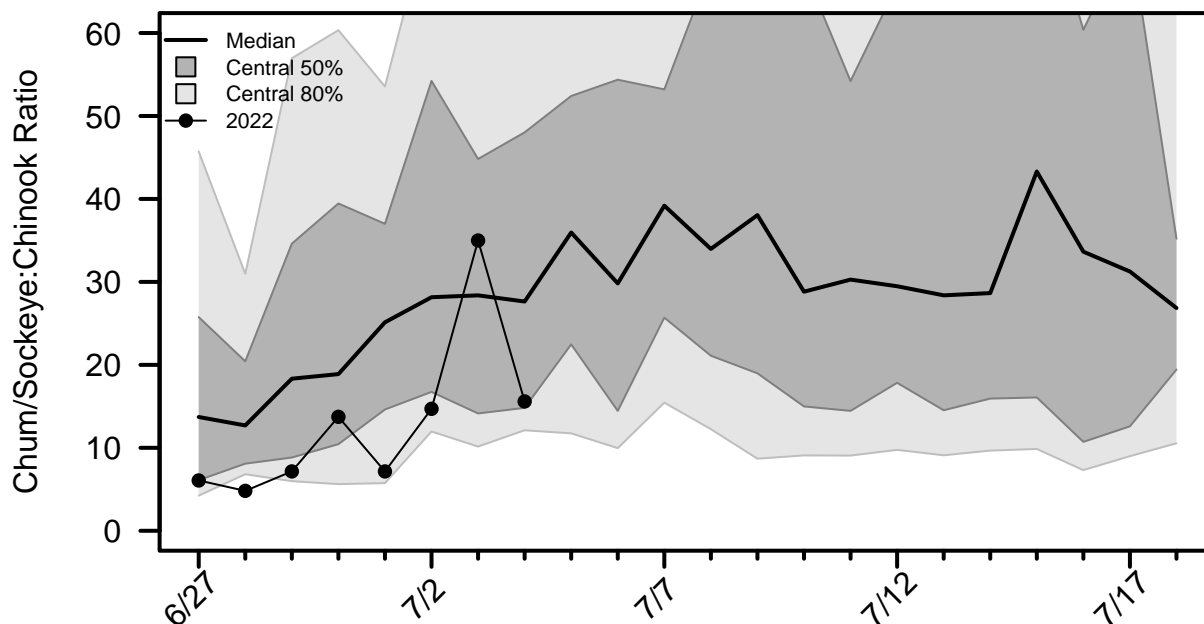
For more detailed information, see the [sockeye salmon appendix](#) at the end of this document.

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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.

Species Ratio Figure 1. Time series of the species ratio with historical quantiles shown as grey regions and the ratio time series for 2022 shown with points connected by lines.



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

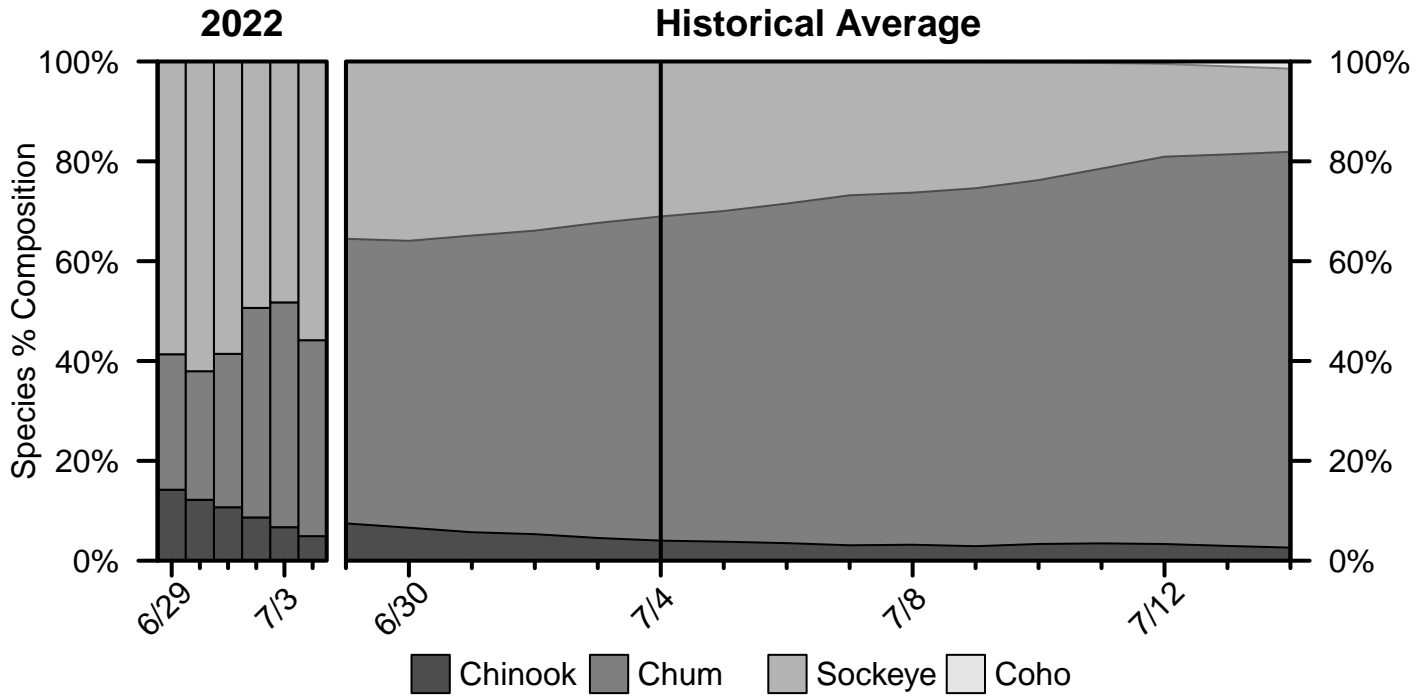
Date	2022 BTF	BTF Median	BTF Lower 10%	BTF Upper 10%	2022 ATF
7/1	7.15	25.13	5.75	53.55	2
7/2	14.7	28.15	11.97	75.14	0.47
7/3	34.99	28.38	10.15	71.66	1.95
7/4	15.59	27.64	12.12	85.66	–
7/5		35.95	11.74	77.09	
7/6		29.82	9.96	112.5	
7/7		39.19	15.45	99.63	

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.

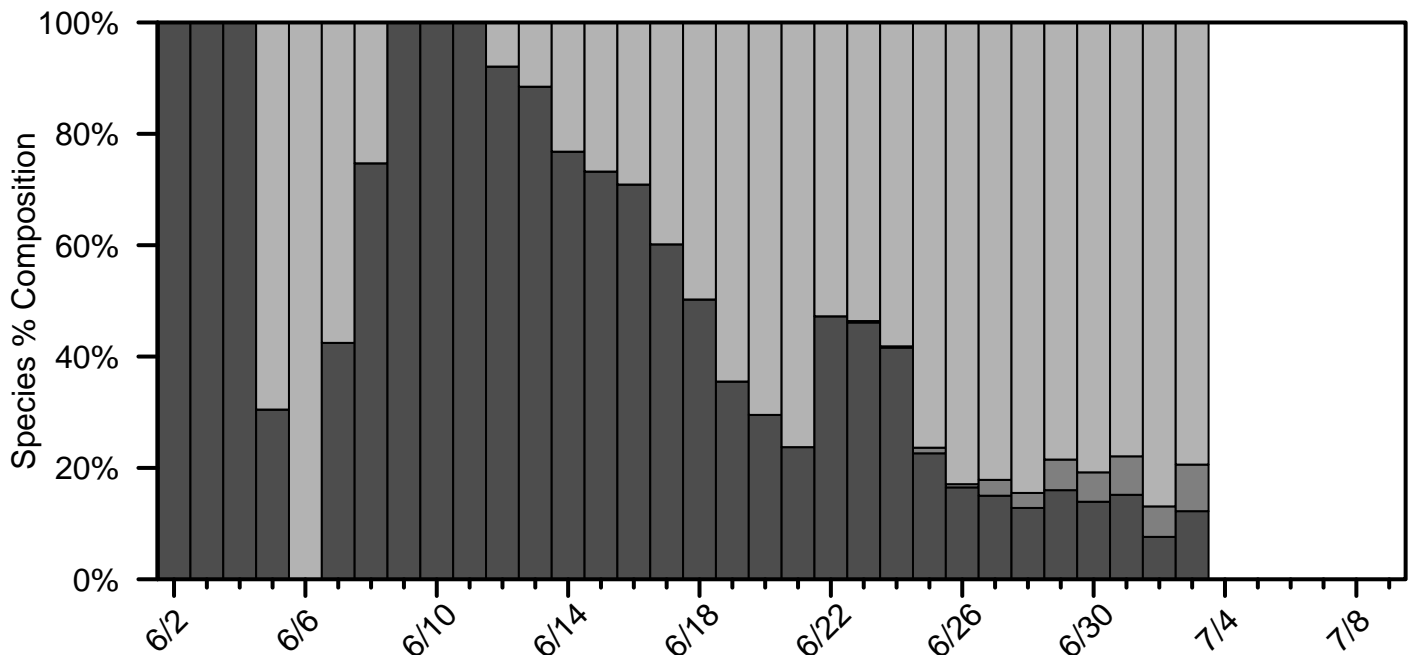
Date	Ratio > 1	Ratio > 3	Ratio > 5	Ratio > 10	Ratio > 20
7/1	100%	100%	100%	95%	82%
7/2	100%	100%	100%	100%	82%
7/3	100%	100%	100%	100%	84%
7/4	100%	100%	100%	100%	89%
7/5	100%	100%	100%	100%	95%
7/6	100%	100%	100%	100%	97%
7/7	100%	100%	100%	100%	97%

Percent Composition by Salmon Species

Percent Composition Figure 1. Species percent composition in the BTF from 2022 and based on the historical average. The composition presented on each day represents the average composition over the past 2 days.

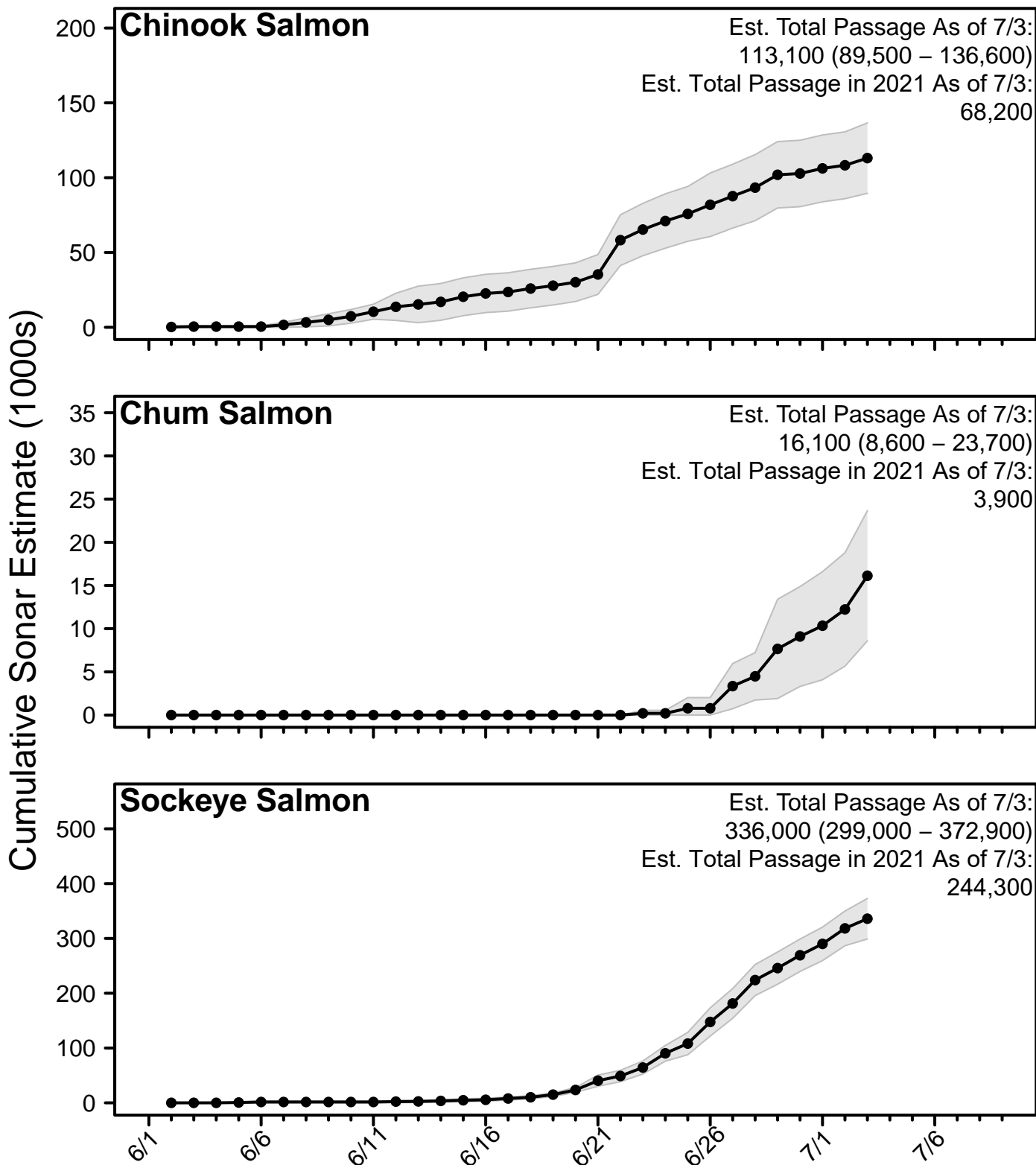


Species Composition Figure 2. Species percent composition from the sonar estimates from 2022 (salmon species only, excluding pink salmon). The composition presented on each day represents the average composition over the past 3 days.



Sonar Passage Estimates

Sonar Figure 1. Cumulative estimates of salmon passage from the 2022 sonar operation through the last complete reporting day. Grey bands show the 95% confidence intervals on each complete reporting day.



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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, ONC, and USFWS. 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 Aniak.

Date	Daily Harvest	Cumulative Harvest	Daily CV	Cumulative CV
6/1	30	30	0.76	0.76
6/4	80	110	0.28	0.29
6/8	120	230	0.24	0.19
6/12	4,700	4,930	0.14	0.13
6/16	7,680	12,610	0.09	0.08
6/22	14,000	26,610	0.06	0.05

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

Date	Daily Harvest	Cumulative Harvest	Daily CV	Cumulative CV
6/1	0	0	0	0
6/4	0	0	0	NA
6/8	0	0	0	NA
6/12	60	60	0.42	0.42
6/16	160	220	0.29	0.24
6/22	950	1,170	0.12	0.11

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

Date	Daily Harvest	Cumulative Harvest	Daily CV	Cumulative CV
6/1	0	0	0	0
6/4	0	0	0	NA
6/8	20	20	0.54	0.54
6/12	360	380	0.18	0.17
6/16	1,920	2,300	0.25	0.21
6/22	13,720	16,020	0.08	0.08

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Chinook Salmon Appendix

Chinook Salmon Table A1. Cumulative CPUE from the BTF.

Date	2022	2021	2020	2019	2018	5-Yr Avg.	2008 - 2021 Avg.
7/1	400	401	319	741	507	444	443
7/2	406	404	330	745	522	452	452
7/3	411	414	349	748	546	464	464
7/4	424	422	362	751	558	474	475
7/5		428	370	752	582	483	485
7/6		435	384	759	590	491	493
7/7		444	389	770	597	499	501
EOS		532	487	848	667	582	566

Chinook Salmon Table A2. Cumulative CPUE from the ATF.

Date	2022	2021	2020	2019	2018
7/1	798	1,000	924	1,510	445
7/2	926	1,084	1,000	1,553	491
7/3	1,027	1,121	1,142	1,586	522
7/4	1,027	1,256	1,223	1,628	530
7/5		1,396	1,299	1,691	570
7/6		1,551	1,353	1,691	629
7/7		1,630	1,463	1,691	661
EOS		1,891	1,874	1,691	820

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%	6/18	94%
Early 25%	6/21	91%
Median	6/22	86%
Late 25%	6/25	80%
Late 10%	6/26	74%
Latest	7/3	67%

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Chum Salmon Appendix

Chum Salmon Table A1. Cumulative CPUE from the BTF.

Date	2022	2021	2020	2019	2018	5-Yr Avg.	2008 - 2021 Avg.
7/1	330	73	307	1,280	1,758	1,174	1,637
7/2	377	73	379	1,369	1,990	1,277	1,828
7/3	451	80	443	1,458	2,144	1,374	2,033
7/4	518	87	495	1,536	2,380	1,469	2,217
7/5		102	584	1,636	2,578	1,586	2,418
7/6		113	612	1,780	2,627	1,696	2,608
7/7		119	628	1,940	2,746	1,825	2,821
EOS		327	1,442	6,427	8,212	4,639	5,832

Chum Salmon Table A2. Cumulative CPUE from the ATF.

Date	2022	2021	2020	2019	2018
7/1	53	26	481	550	2,092
7/2	89	26	574	593	2,656
7/3	283	34	628	634	3,129
7/4	304	52	808	778	3,445
7/5		89	961	1,051	3,958
7/6		129	1,140	1,051	4,603
7/7		160	1,304	1,051	5,066
EOS		267	2,611	1,051	10,277

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	68%
Early 25%	7/3	58%
Median	7/6	46%
Late 25%	7/8	35%
Late 10%	7/11	26%
Latest	7/15	17%

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Sockeye Salmon Appendix

Sockeye Salmon Table A1. Cumulative CPUE from the BTF.

Date	2022	2021	2020	2019	2018	5-Yr Avg.	2008 - 2021 Avg.
7/1	744	516	235	751	563	572	686
7/2	783	555	376	816	623	636	754
7/3	877	594	415	874	696	699	836
7/4	1,012	654	526	1,020	905	817	924
7/5		706	604	1,157	1,006	915	1,001
7/6		832	624	1,396	1,055	1,043	1,083
7/7		975	646	1,530	1,193	1,141	1,167
EOS		1,694	1,060	2,685	2,275	2,080	1,773

Sockeye Salmon Table A2. Cumulative CPUE from the ATF.

Date	2022	2021	2020	2019	2018
7/1	72	58	48	22	42
7/2	96	84	72	22	52
7/3	96	84	78	22	60
7/4	96	102	83	22	60
7/5		135	83	33	60
7/6		189	88	33	60
7/7		220	94	33	60
EOS		241	209	33	75

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%	6/27	87%
Median	6/29	75%
Late 25%	7/2	60%
Late 10%	7/6	45%
Latest	7/10	29%

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Alaska Peninsula Inseason Commercial Harvest Estimates

<https://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareaakpeninsula.salmonharvestsummary>

Map: https://www.adfg.alaska.gov/static-f/fishing/pdfs/commercial/akpeninsula_stat_map.pdf

ESTIMATED SALMON CATCH TO DATE BY GEOGRAPHIC AREA / FISHERY, WITHIN THE ALASKA PENINSULA MANAGEMENT AREA

Friday, July 1, 2022

South Peninsula	Chinook	Sockeye	Coho	Pink	Chum
Post June Cold Bay	0	0	0	0	0
Post June Thin Point Section	0	0	0	0	0
Post June Morzhovoi Bay to South Unimak	0	0	0	0	0
Post June Shumagin Islands	0	0	0	0	0
Southeastern District Mainland	0	0	0	0	0
Northwest Stepovak Section (7/1-7/25)	0	0	0	0	0
Dolgoi Island Area1	14	25,276	0	82	894
Dolgoi Island Area2	0	0	0	0	0
June Shumagin Islands	1,294	843,228	6	123,356	172,279
June South Unimak	1,603	3,080,916	158	1,039,095	358,177
	2,911	3,949,420	164	1,162,533	531,350