

# Kuskokwim River Salmon Management Working Group

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

## Meeting Agenda

Date: 06/23/2017

Time: 1:00 p.m.

Place: Bethel

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

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

### INTRODUCTIONS:

### INVOCATION:

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

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

**ADF&G MANAGEMENT ACTIONS UNDER CONSIDERATION:** *To be discussed after Overview of Kuskokwim River assessment projects.*

### PEOPLE TO BE HEARD:

### CONTINUING BUSINESS:

- ~~Subsistence Reports: Lowest River, ONC Inseason Subsistence Report, Lower River, Middle River, Upper River, Headwaters.~~
- Overview of Kuskokwim River salmon run assessment/ discussion of ADF&G considerations:
  - a. Test Fisheries (Bethel and Aniak):
  - b. Sonar/Weirs/Mark-Recapture/Aerial Surveys/Other:
- ~~Commercial Catch Report: N/A~~
- ~~Processor Report:~~
- ~~Sport Fish Report:~~
- ~~Intercept Fishery Report:~~
- ~~Weather Forecast:~~

### U.S. FISH & WILDLIFE/ KRITFC MANAGEMENT ACTIONS UNDER CONSIDERATION:

### ADF&G MANAGEMENT ACTIONS UNDER CONSIDERATION:

### MOTIONS FOR DISCUSSION AND ACTION:

### 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](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.**  
**Jennifer Peeks**  
**Aaron Tiernan**  
**Working Group Coordinators**

## Informational Packet

<b>Total Catch for Lower Kuskokwim River Tagging</b>			
Date	Chinook	Sockeye	Chum
5/26/2017	1	0	0
5/27/2017	0	0	0
5/28/2017	1	0	0
5/29/2017	0	0	0
5/30/2017	0	0	0
5/31/2017	0	0	0
6/1/2017	1	0	0
6/2/2017	1	0	0
6/3/2017	1	0	0
6/4/2017	1	0	0
6/5/2017	7	0	0
6/6/2017	3	0	0
6/7/2017	13	0	1
6/8/2017	9	0	0
6/9/2017	4	0	0
6/10/2017	8	0	1
6/11/2017	9	0	1
6/12/2017	12	0	0
6/13/2017	5	0	0
6/14/2017	15	1	0
6/15/2017	9	0	0
6/16/2017	9	1	0
6/17/2017	16	1	0
6/18/2017	20	0	3
6/19/2017	24	2	3
6/20/2017	28	0	8
6/21/2017	18	1	9
<b>Totals</b>	<b>215</b>	<b>6</b>	<b>26</b>

## Informational Packet

# Kuskokwim River Salmon Assessment Update: 6/21/2017

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This document presents the key assessment information considered by managers in-season. The production of this document is a collaborative effort between the ADF&G and USFWS. **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 Zachary Liller (ADF&G; zachary.liller@alaska.gov).

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**Abbreviations:**

- BTF: Bethel Test Fishery
- ATF: Aniak Test Fishery
- CPUE: Catch-per-unit-effort
- EOS: End-of-Season

**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:**

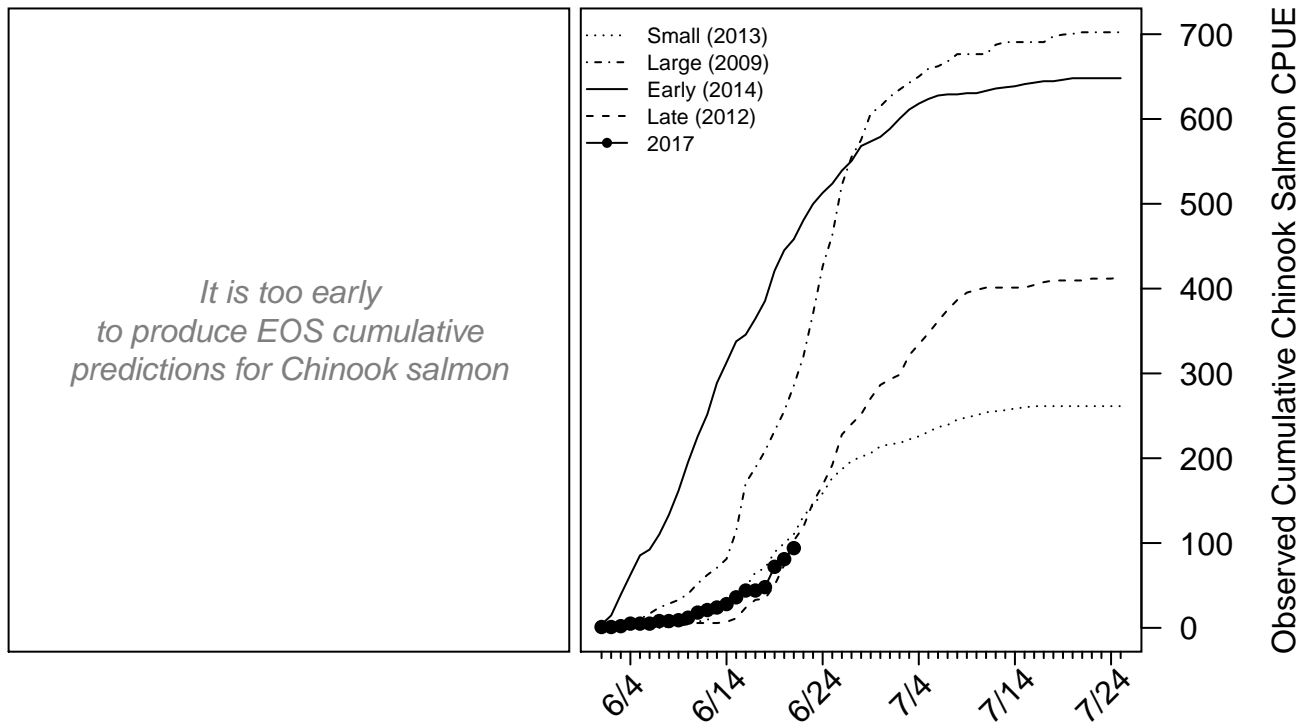
- **USFWS:** [https://www.fws.gov/refuge/yukon\\_delta/wildlife\\_and\\_habitat/dailyupdate.html](https://www.fws.gov/refuge/yukon_delta/wildlife_and_habitat/dailyupdate.html)
- **ADF&G:** [http://www.adfg.alaska.gov/index.cfm?adfg=cfnews\\_mobile.main](http://www.adfg.alaska.gov/index.cfm?adfg=cfnews_mobile.main)

# Informational Packet

## Chinook Salmon (6/21)

- The BTF daily CPUE was **13**.
- The BTF cumulative CPUE is **94**.
- **0** year since 2008 (**0%**) fell below this cumulative CPUE.
- **43%** of the run is complete based on historical average run timing.
- **48%** of the run is complete based on a slightly early-to-average official run timing forecast.
- Late run scenarios are considered highly unlikely at this time due to the timing forecast.
- **21%** of the run is expected to pass in the next 5 days.
- Over the last 3 days, Chinook salmon made up **17%** of the BTF catches, compared to **17%** 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 2017 plotted along with four previous years intended to represent a range of early/late and small/large index values.



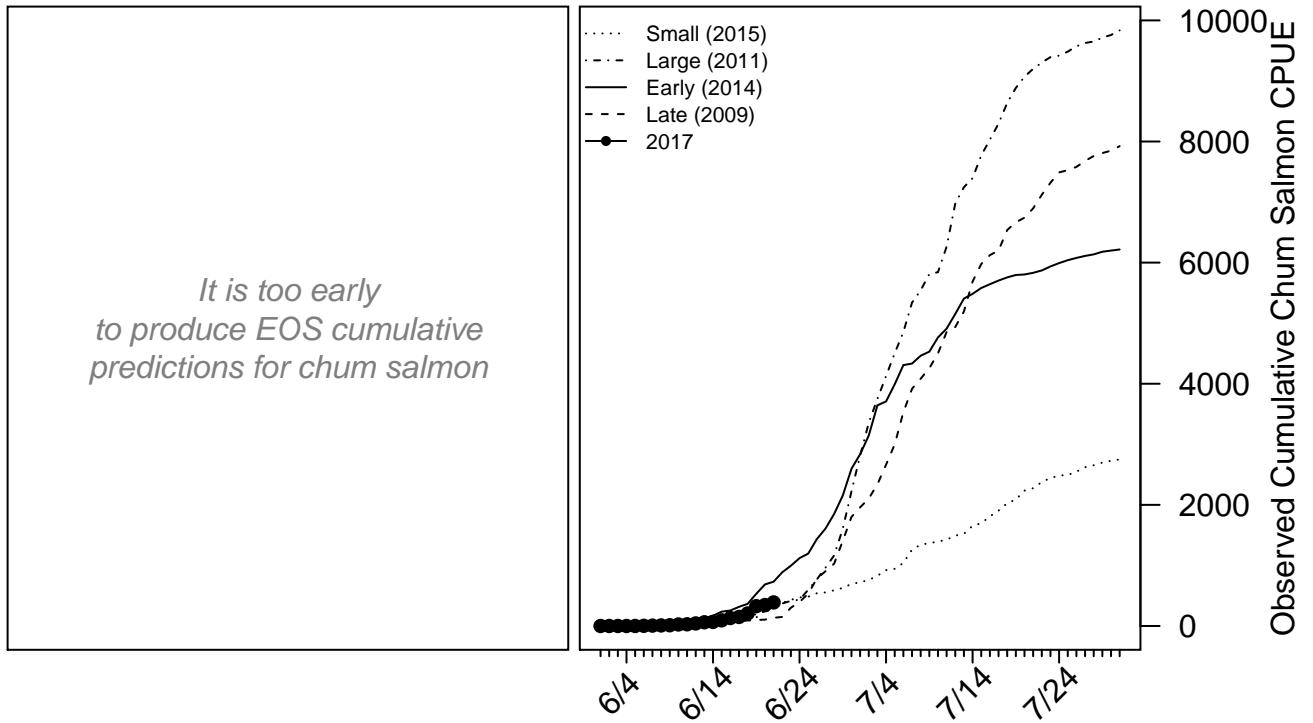
For more detailed information, see the Chinook salmon appendix at the end of this document.

# Informational Packet

## Chum Salmon (6/21)

- The BTF daily CPUE was **43**.
- The BTF cumulative CPUE is **389**.
- **7** years since 2008 (**78%**) fell below this cumulative CPUE.
- **9%** of the run is complete based on historical average run timing.
- No run timing forecast is available for chum salmon.
- **7 - 12%** of the run is expected to pass in the next 5 days.
- Over the last 3 days, chum salmon made up **65%** of the BTF catches, compared to **49%** on average.

**Chum 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 2017 plotted along with four years intended to represent a range of early/late and small/large index values.



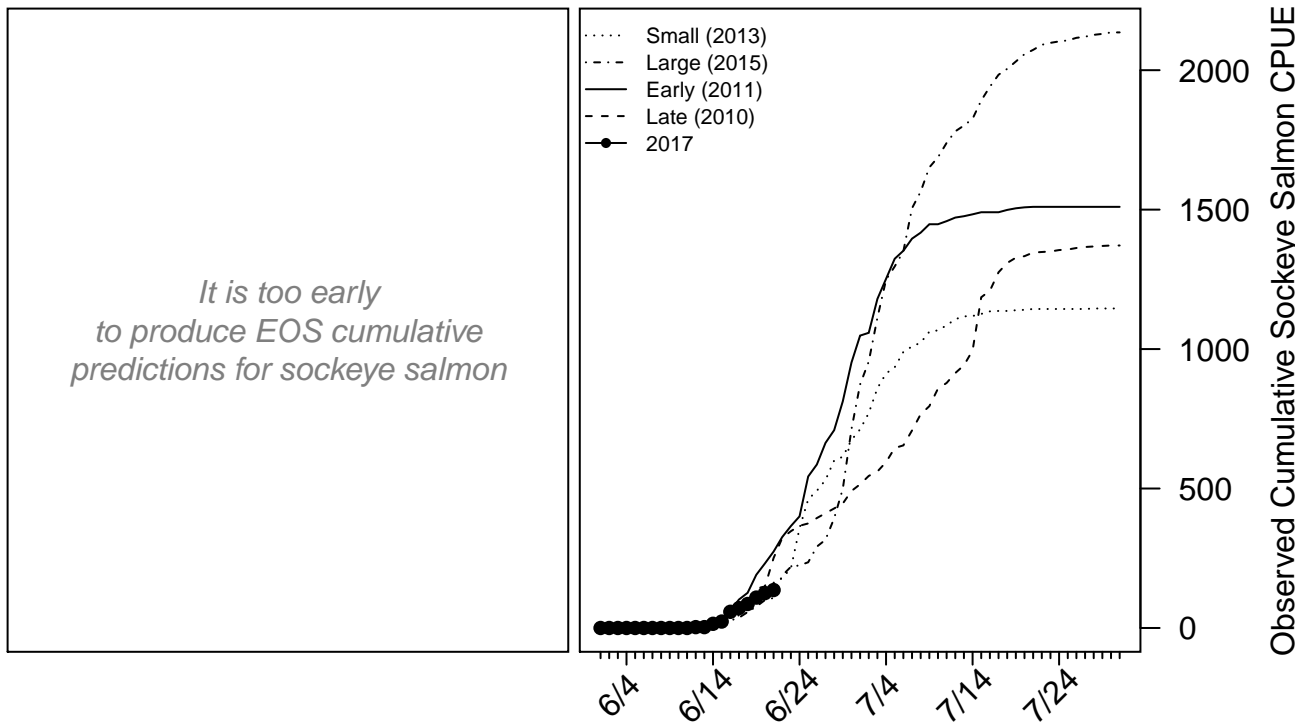
For more detailed information, see the chum salmon appendix at the end of this document.

# Informational Packet

## Sockeye Salmon (6/21)

- The BTF daily CPUE was **11**.
- The BTF cumulative CPUE is **136**.
- **4** years since 2008 (**44%**) fell below this cumulative CPUE.
- **16%** of the run is complete based on historical average run timing.
- No run timing forecast is available for sockeye salmon.
- **16 - 26%** of the run is expected to pass in the next 5 days.
- Over the last 3 days, sockeye salmon made up **18%** of the BTF catches, compared to **34%** on average.

**Sockeye 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 2017 plotted along with four years intended to represent a range of early/late and small/large index values.



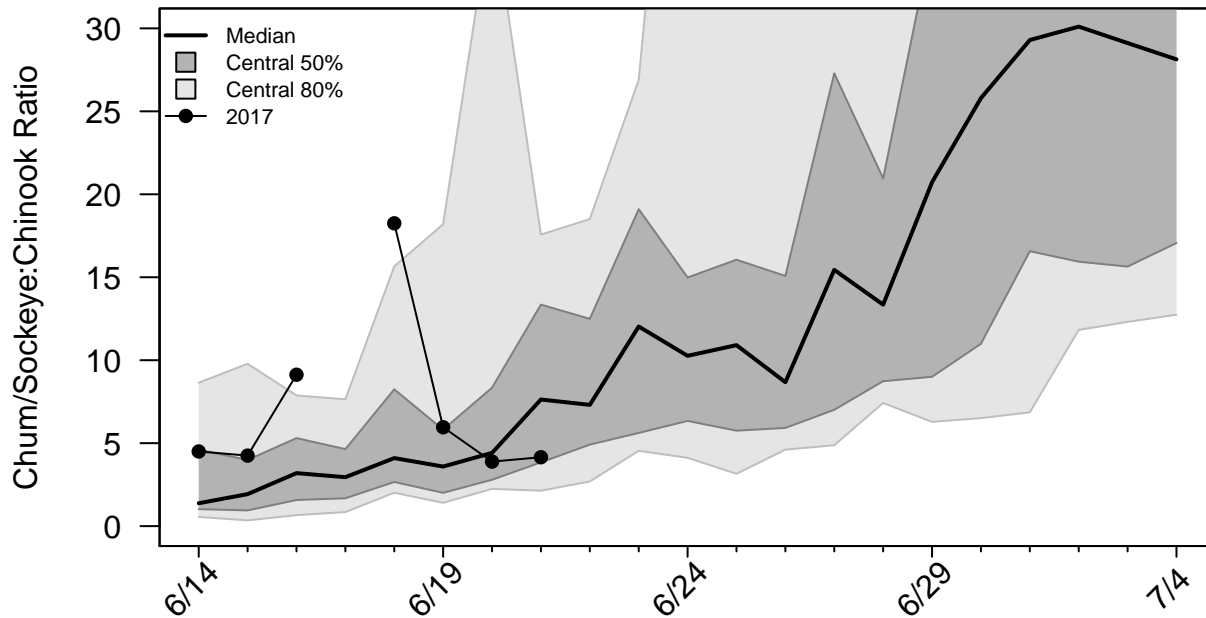
For more detailed information, see the sockeye salmon appendix at the end of this document.

# Informational Packet

## 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. A value of zero indicates Chinook salmon were counted, but not chum or sockeye salmon. A missing value on a day the project operated indicates no Chinook salmon were counted.

**Ratio Figure 1.** Time series of the species ratio with historical quantiles shown as grey regions and the ratio time series for 2017 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 sonar project and ATF.

Date	2017 BTF	BTF Median	BTF Lower 10%	BTF Upper 10%	2017 Sonar	2017 ATF
6/18	18.25	4.1	2.01	15.65	19.35	0.21
6/19	5.96	3.59	1.41	18.2	5.75	0.23
6/20	3.89	4.41	2.24	37.44	40.43	0.43
6/21	<b>4.15</b>	<b>7.63</b>	<b>2.14</b>	<b>17.57</b>		<b>0.83</b>
6/22		7.31	2.69	18.51		
6/23		12.03	4.54	26.9		
6/24		10.26	4.12	58.04		

**Ratio Table 2.** The probability that a given species ratio will be exceeded by a certain day in the BTF (calculated based on all previous years: 1984 - 2016).

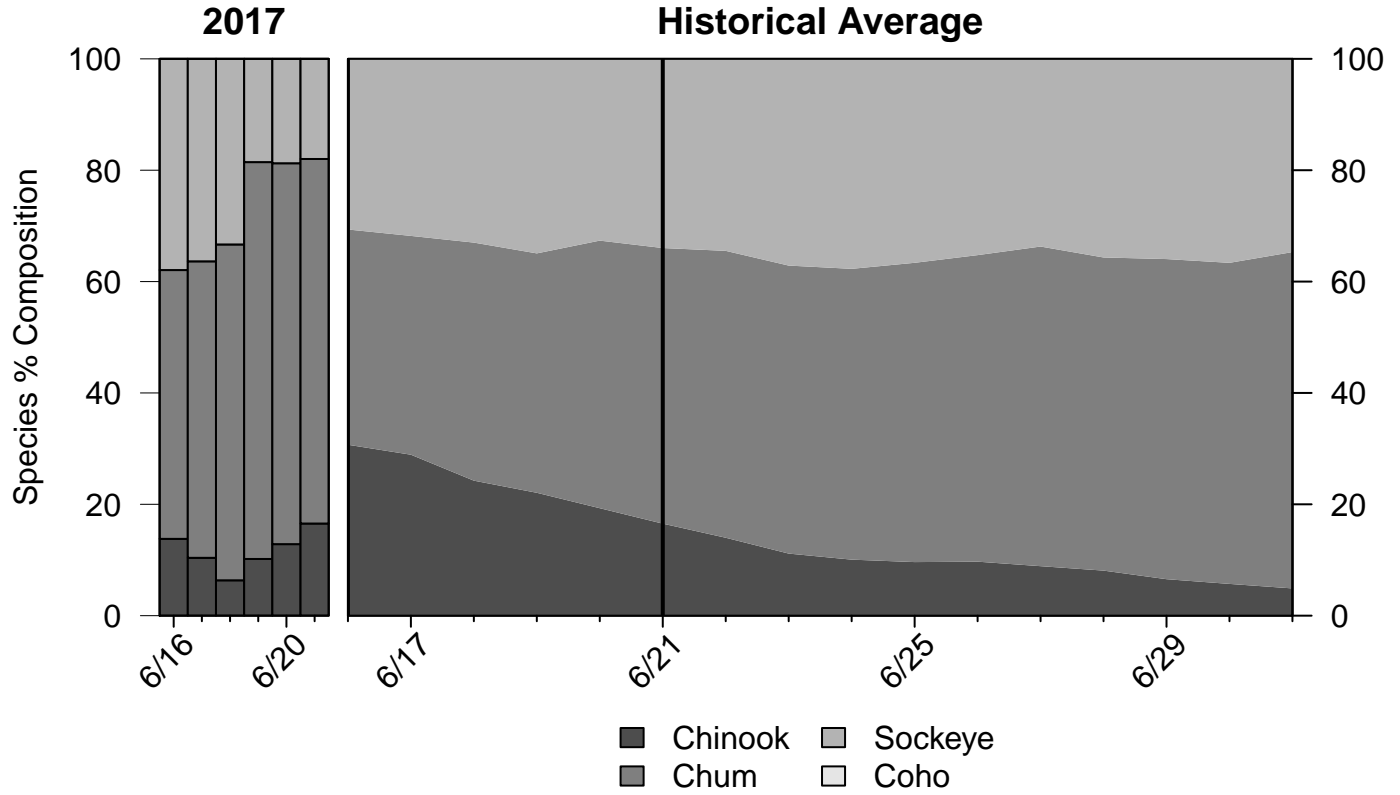
Date	Ratio > 1	Ratio > 3	Ratio > 5	Ratio > 10	Ratio > 20
6/18	0.97	0.85	0.61	0.36	0.12
6/19	0.97	0.88	0.7	0.39	0.15
6/20	1	0.91	0.76	0.48	0.24
6/21	<b>1</b>	<b>0.94</b>	<b>0.91</b>	<b>0.61</b>	<b>0.24</b>
6/22	1	0.97	0.97	0.67	0.24
6/23	1	1	0.97	0.7	0.36
6/24	1	1	0.97	0.79	0.42



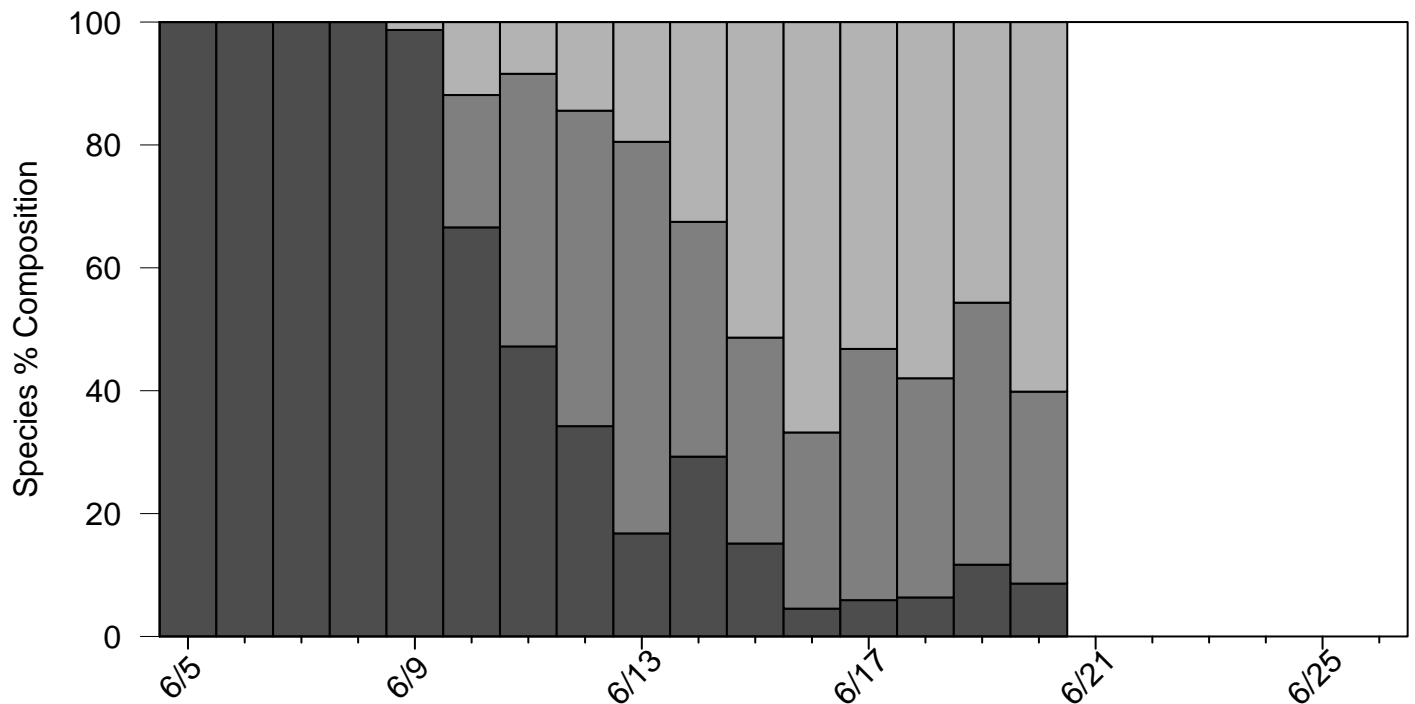
# Informational Packet

## Species Composition

**Species Composition Figure 1.** Species percent composition in the BTF from 2017 and based on historical average. The composition presented on each day represents the average composition over the past 3 days.



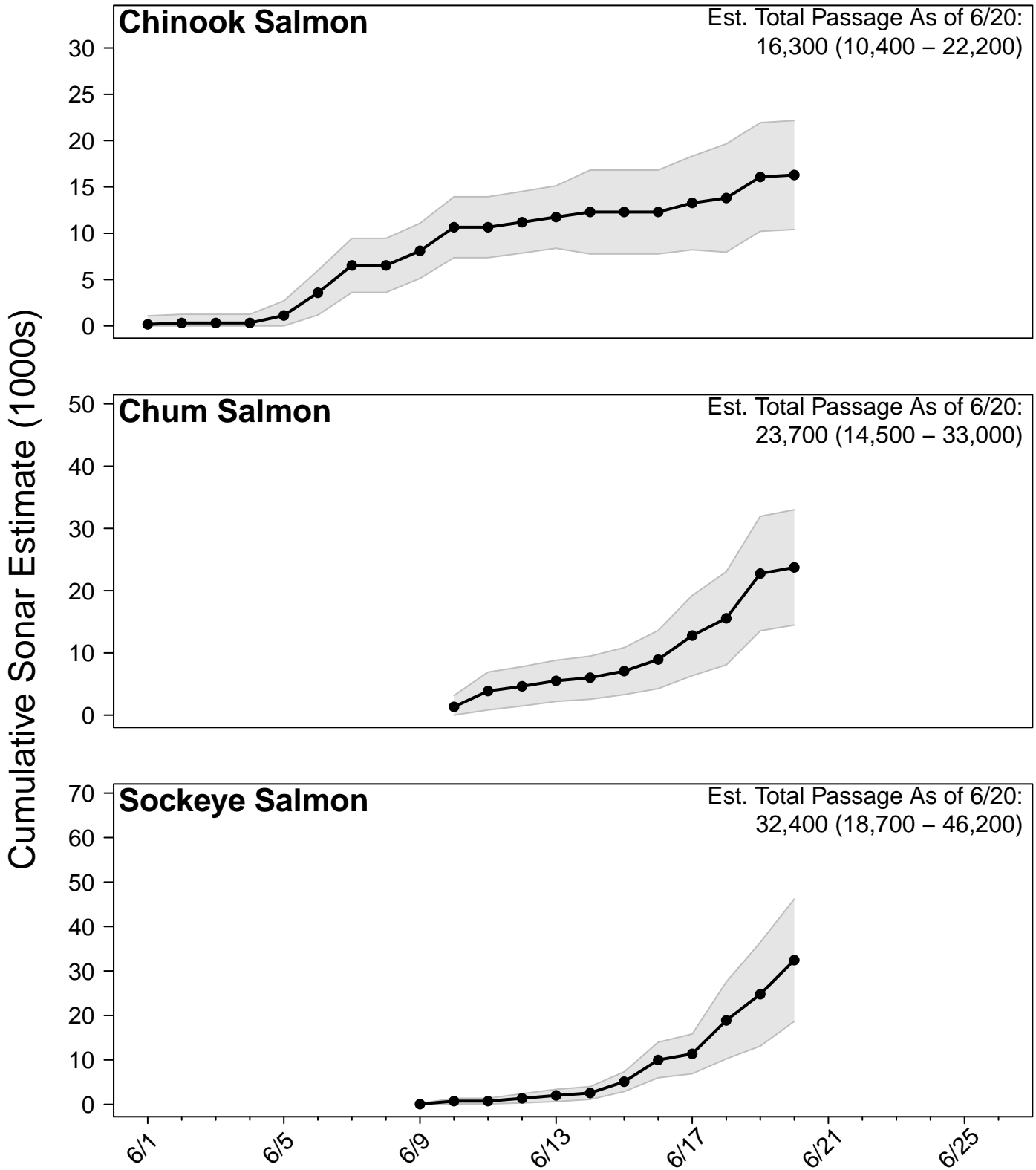
**Species Composition Figure 2.** Species percent composition from the sonar estimates from 2017 (salmon species only, excluding pinks). The composition presented on each day represents the average composition over the past 3 days.



# Informational Packet

## Sonar

**Sonar Figure 1.** Cumulative estimates of salmon passage from the 2017 sonar operation through the last complete reporting day. Grey bands show the 95% confidence intervals on each complete reporting day. The sonar project began partial operations on June 1 and full operations on June 3.



# Informational Packet

## Chinook Salmon Appendix

**Chinook Salmon Table A1.** Cumulative CPUE from the BTF.

Date	2017	2016	2015	2014	2013	5-Yr Avg.	2008 - 2016 Avg.
<b>6/18</b>	48	266	238	385	70	199	189
<b>6/19</b>	72	278	259	421	89	219	212
<b>6/20</b>	81	304	271	445	100	239	233
<b>6/21</b>	<b>94</b>	<b>318</b>	<b>296</b>	<b>458</b>	<b>110</b>	<b>257</b>	<b>256</b>
<b>6/22</b>		340	321	481	132	279	281
<b>6/23</b>		357	336	500	145	297	305
<b>6/24</b>		378	345	513	159	313	325
<b>EOS</b>		687	625	650	261	528	557

**Chinook Salmon Table A2.** Cumulative CPUE from the ATF.

Date	2017	2016	2015
<b>6/18</b>	726	1,189	806
<b>6/19</b>	792	1,304	1,020
<b>6/20</b>	906	1,334	1,138
<b>6/21</b>	<b>1,081</b>	<b>1,386</b>	<b>1,311</b>
<b>6/22</b>		1,403	1,496
<b>6/23</b>		1,435	1,619
<b>6/24</b>		1,470	1,716
<b>EOS</b>		2,729	2,916

**Chinook Salmon Table A3.** Percent of run complete according to various historical run timing scenarios and the preliminary 2017 run timing forecast (with forecast uncertainty).

Timing	Historical Midpoint	Historical 6/21 Cumulative %	Forecasted Midpoint	Forecasted 6/21 Cumulative %
<b>Earliest</b>	6/15	77%	6/16	74%
<b>Early 10%</b>	6/18	62%	6/18	65%
<b>Early 25%</b>	6/21	49%	6/19	57%
<b>Median</b>	6/23	43%	6/21	48%
<b>Late 25%</b>	6/24	35%	6/23	39%
<b>Late 10%</b>	6/26	27%	6/25	31%
<b>Latest</b>	7/3	5%	6/27	23%

# Informational Packet

## Chum Salmon Appendix

**Chum Salmon Table A1.** Cumulative CPUE from the BTF.

Date	2017	2016	2015	2014	2013	5-Yr Avg.	2008 - 2016 Avg.
<b>6/18</b>	207	58	87	365	69	127	149
<b>6/19</b>	327	61	140	532	115	189	210
<b>6/20</b>	346	120	277	686	139	279	276
<b>6/21</b>	<b>389</b>	<b>209</b>	<b>293</b>	<b>731</b>	<b>235</b>	<b>371</b>	<b>358</b>
<b>6/22</b>		239	381	886	313	474	457
<b>6/23</b>		283	431	994	511	585	558
<b>6/24</b>		353	471	1,120	669	682	649
<b>EOS</b>		3,894	2,943	6,343	5,708	5,156	6,496

**Chum Salmon Table A2.** Cumulative CPUE from the ATF.

Date	2017	2016	2015
<b>6/18</b>	206	113	115
<b>6/19</b>	222	137	124
<b>6/20</b>	271	153	155
<b>6/21</b>	<b>417</b>	<b>196</b>	<b>162</b>
<b>6/22</b>		221	179
<b>6/23</b>		229	240
<b>6/24</b>		307	390
<b>EOS</b>		5,304	5,669

**Chum Salmon Table A3.** Percent of run complete according to various historical run timing scenarios.

Timing	Midpoint	6/21 Cumulative %
<b>Earliest</b>	6/24	34%
<b>Early 10%</b>	7/1	16%
<b>Early 25%</b>	7/3	12%
<b>Median</b>	7/6	9%
<b>Late 25%</b>	7/7	6%
<b>Late 10%</b>	7/10	4%
<b>Latest</b>	7/12	2%

# Informational Packet

## Sockeye Salmon Appendix

**Sockeye Salmon Table A1.** Cumulative CPUE from the BTF.

Date	2017	2016	2015	2014	2013	5-Yr Avg.	2008 - 2016 Avg.
<b>6/18</b>	86	18	57	126	56	54	67
<b>6/19</b>	109	39	77	142	102	78	100
<b>6/20</b>	125	55	100	188	123	102	123
<b>6/21</b>	<b>136</b>	<b>57</b>	<b>108</b>	<b>193</b>	<b>162</b>	<b>121</b>	<b>156</b>
<b>6/22</b>		63	188	239	179	153	202
<b>6/23</b>		103	219	262	213	189	248
<b>6/24</b>		120	225	271	358	234	295
<b>EOS</b>		2,463	2,157	1,367	1,146	1,661	1,603

**Sockeye Salmon Table A2.** Cumulative CPUE from the ATF.

Date	2017	2016	2015
<b>6/18</b>	7	0	0
<b>6/19</b>	7	0	0
<b>6/20</b>	7	0	0
<b>6/21</b>	<b>7</b>	<b>0</b>	<b>0</b>
<b>6/22</b>		0	0
<b>6/23</b>		0	0
<b>6/24</b>		0	0
<b>EOS</b>		405	1,245

**Sockeye Salmon Table A3.** Percent of run complete according to various historical run timing scenarios.

Timing	Midpoint	6/21 Cumulative %
<b>Earliest</b>	6/23	42%
<b>Early 10%</b>	6/24	34%
<b>Early 25%</b>	6/26	26%
<b>Median</b>	6/28	16%
<b>Late 25%</b>	6/30	10%
<b>Late 10%</b>	7/3	6%
<b>Latest</b>	7/11	4%