

# 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: 06/14/2017

Time: 10:00 a.m.

Place: Bethel

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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:

### 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: *Aaron Poetter, ADF&G*
- 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](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 Poetter**  
**Working Group Coordinators**

# Informational Packet

## Orutsararmiut Native Council Inseason Harvest Monitoring Weekly Report

### Interview Activities from June 9 – June 12

Fish Camps Visited	Fish Camps Interviewed	Fishing Start Date (6/3)	Fishing Start Date (6/10)	Fishing Start Date (6/12)	Haven't Begun Fishing
25	24	1	4	9	10

ONC also conducted 109 surveys on Monday, June 12 from 2PM-1230AM at the Bethel Boat Harbor. USFWS will provide a summary of the data collected.

### Communities Represented at Fish Camps

Bethel, Nunapitchuk and Kasigluk

### Fishing Trip Summary for June 12

Drift Net	Average Soak Time (hours)	Average Chinook salmon catch	Average chum salmon catch	Average sockeye salmon catch
8	1.76	1	3	<1

All fish camps that were interviewed and fished on June 12 used 6 inch mesh size or less. All fishing occurred within the area just above Napaskiak upriver to Akiachak.

### Average CPUE (catch-per-unit-effort) for June 12

Species	Chinook salmon	Chum salmon	Sockeye salmon
Average CPUE (Catch Per Unit Effort)	1.42	3.64	0.89

### Summary of Comments

Two fish camps suggested the need for more restrictions for Chinook salmon. Four fish camps indicated there were too many restrictions on Chinook salmon harvest. One fish camp indicated, due to restrictions, it was becoming much harder to carry on their tradition and culture. One fish camp reported that high fuel costs restricted their ability to fish. Two fish camps also reported that chum salmon were arriving too early in the season. Overall, active fishing families reported fishing to be rather slow during the June 12 opener with low Chinook salmon catches.

## Informational Packet

<b>Total Catch for Lower Kuskokwim River Tagging</b>			
Date	Chinook	Chum	Sheefish
5/26/2017	1	0	3
5/27/2017	0	0	2
5/28/2017	1	0	0
5/29/2017	0	0	2
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	2
6/7/2017	13	1	0
6/8/2017	9	0	1
6/9/2017	4	0	1
6/10/2017	8	1	0
6/11/2017	9	1	0
6/12/2017	12	0	0
<b>Totals</b>	<b>71</b>	<b>3</b>	<b>11</b>

*Note- All fish were caught using 7.5" drift gillnets.*

## Informational Packet

# Kuskokwim River Salmon Assessment Update: 6/12/2017

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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).

**Table of Contents** (*Click to jump to section*):

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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:**

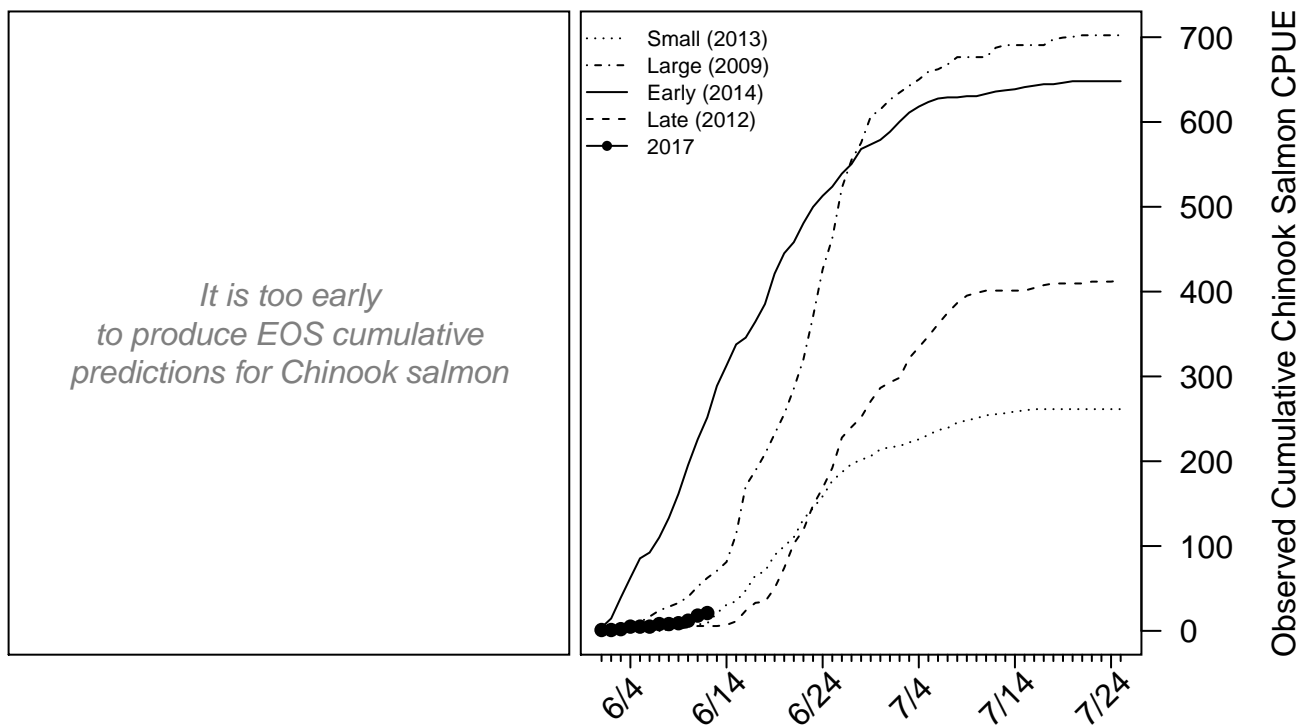
- **USFWS:** [https://www.fws.gov/refuge/yukon\\_delta/wildlife\\_and\\_habitat/dailyupdate.html](https://www.fws.gov/refuge/yukon_delta/wildlife_and_habitat/dailyupdate.html)
- **ADF&G:** [http://www.adfg.alaska.gov/index.cfm?adfg=cfnews\\_mobile.main](http://www.adfg.alaska.gov/index.cfm?adfg=cfnews_mobile.main)

# Informational Packet

## Chinook Salmon (6/12)

- The BTF daily CPUE was **3**.
- The BTF cumulative CPUE is **21**.
- **22%** years since 2008 fell below this cumulative CPUE.
- **13%** of the run is complete based on historical average run timing.
- **16%** of the run is complete based on a preliminary run timing forecast (official forecast will be available soon).
- Late run scenarios are considered highly unlikely at this time due to the preliminary timing forecast (1.4 days early).
- **15 - 22%** of the run is expected to pass in the next 5 days.
- Over the last 3 days, Chinook salmon made up **27%** of the BTF catches, compared to **53%** 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.



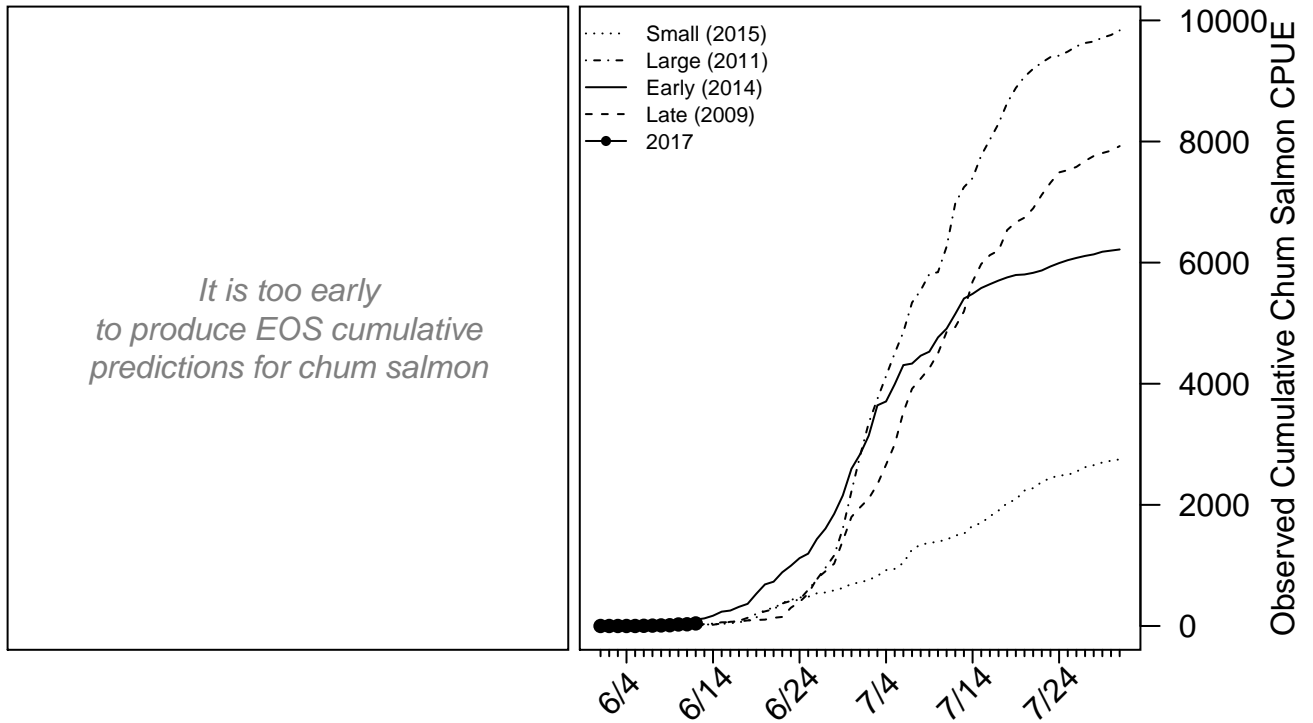
For more detailed information, see the Chinook salmon appendix at the end of this document.

# Informational Packet

## Chum Salmon (6/12)

- The BTF daily CPUE was **14**.
- The BTF cumulative CPUE is **42**.
- **89%** years since 2008 fell below this cumulative CPUE.
- **2%** of the run is complete based on historical average run timing.
- No run timing forecast is available for chum salmon.
- **2 - 4%** of the run is expected to pass in the next 5 days.
- Over the last 3 days, chum salmon made up **67%** of the BTF catches, compared to **28%** 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. The dashed horizontal line shows the EOS value from 2016. *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.



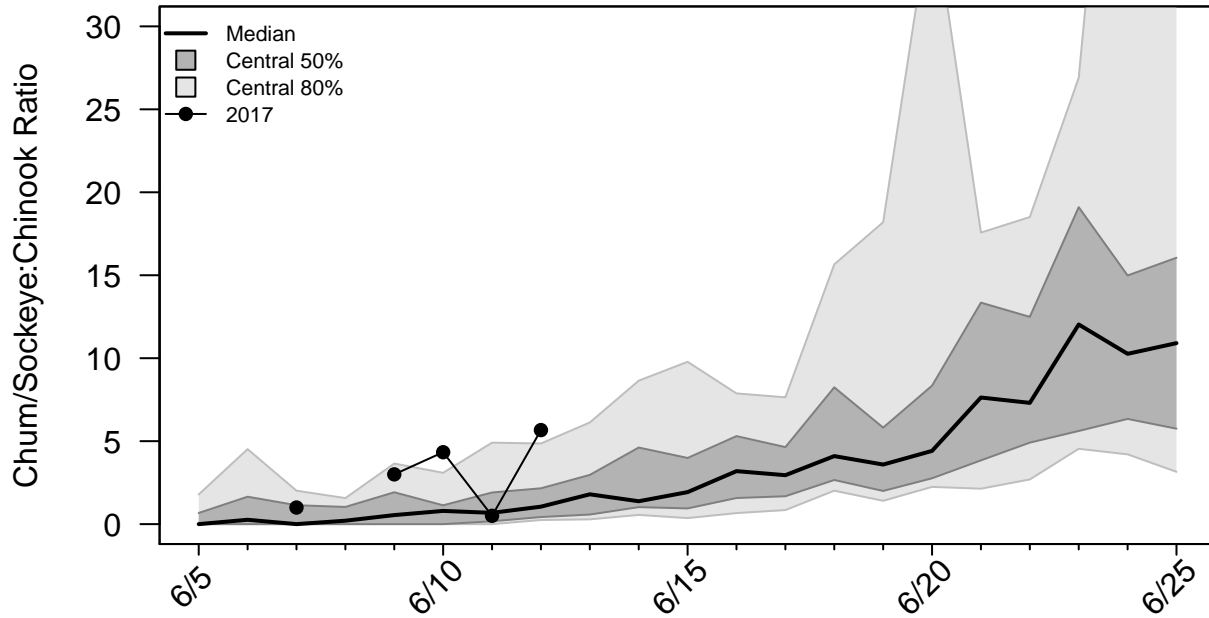
For more detailed information, see the chum salmon appendix at the end of this document.

# Informational Packet

## 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
6/9	3	0.54	0	3.65	0.15	0.69
6/10	4.33	0.8	0	3.09	0.57	0.25
6/11	0.5	0.68	0	4.91		1
6/12	<b>5.67</b>	<b>1.05</b>	<b>0.25</b>	<b>4.86</b>		<b>0.54</b>
6/13		1.8	0.29	6.13		
6/14		1.38	0.55	8.65		
6/15		1.93	0.36	9.78		

**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).

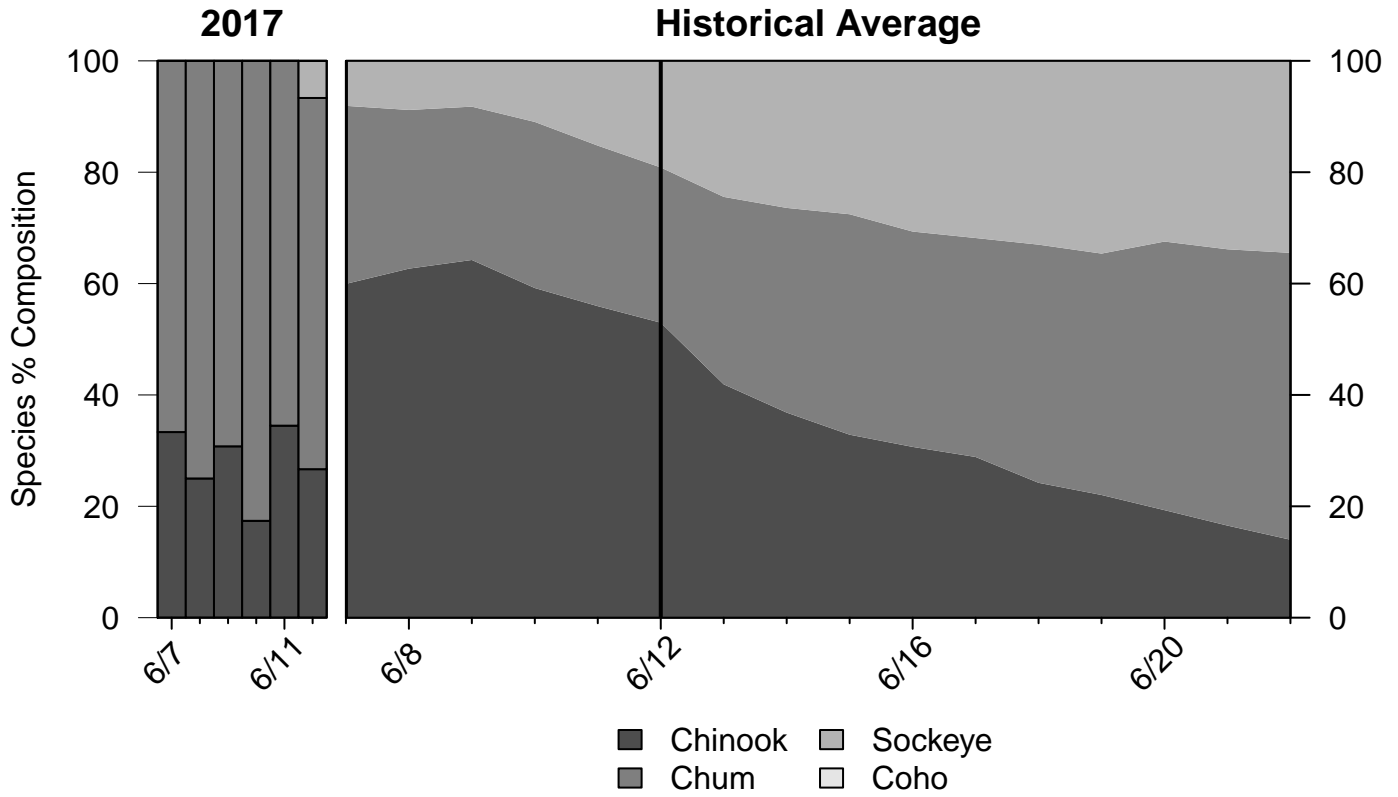
Date	Ratio > 1	Ratio > 3	Ratio > 5	Ratio > 10	Ratio > 20
6/9	0.7	0.3	0.09	0.03	0.03
6/10	0.73	0.36	0.12	0.03	0.03
6/11	0.79	0.45	0.18	0.03	0.03
6/12	<b>0.82</b>	<b>0.45</b>	<b>0.24</b>	<b>0.03</b>	<b>0.03</b>
6/13	0.88	0.52	0.33	0.06	0.03
6/14	0.91	0.67	0.42	0.09	0.03
6/15	0.94	0.76	0.48	0.18	0.03



# Informational Packet

## Species Composition

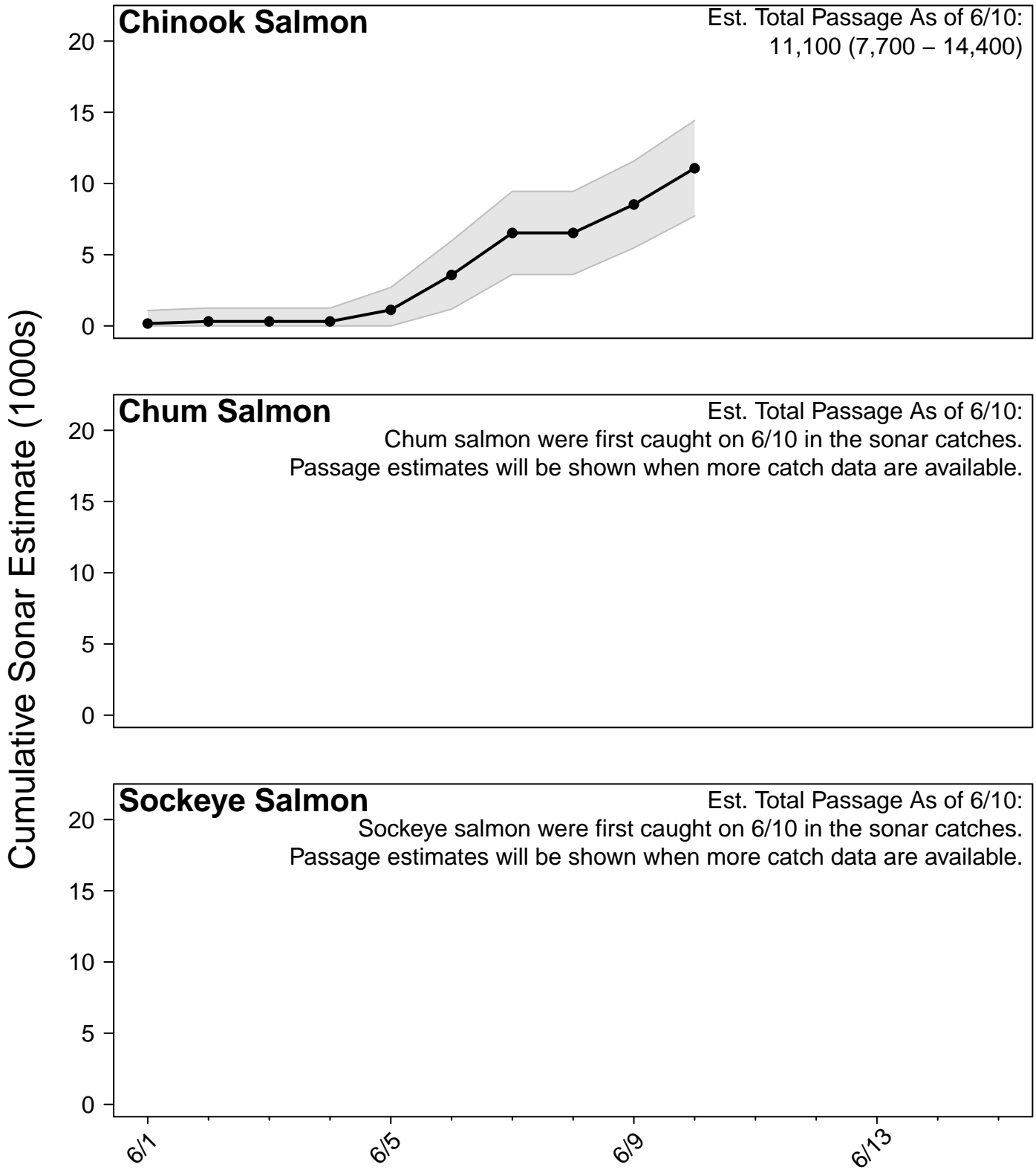
**Species Composition Figure 1.** Species percent composition in the BTF from 2017 and based on historical average. The composition presented on each day represents the average composition over the past 3 days.



# 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>6/9</b>	9	114	76	162	4	84	64
<b>6/10</b>	12	126	89	195	6	97	75
<b>6/11</b>	18	144	104	226	8	110	84
<b>6/12</b>	<b>21</b>	<b>165</b>	<b>117</b>	<b>252</b>	<b>9</b>	<b>125</b>	<b>97</b>
<b>6/13</b>		176	132	289	21	138	109
<b>6/14</b>		196	144	313	31	153	129
<b>6/15</b>		218	164	338	35	72	54
<b>EOS</b>		681	625	650	261	527	556

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

Date	2017	2016	2015
<b>6/9</b>	71	466	115
<b>6/10</b>	101	589	149
<b>6/11</b>	131	659	186
<b>6/12</b>	<b>186</b>	<b>724</b>	<b>256</b>
<b>6/13</b>		731	293
<b>6/14</b>		867	382
<b>6/15</b>		971	449
<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 6/12 Cumulative %	Forecasted Midpoint	Forecasted 6/12 Cumulative %
<b>Earliest</b>	6/15	36%	6/15	37%
<b>Early 10%</b>	6/18	24%	6/17	29%
<b>Early 25%</b>	6/21	20%	6/19	22%
<b>Median</b>	6/23	13%	6/21	16%
<b>Late 25%</b>	6/24	9%	6/23	11%
<b>Late 10%</b>	6/26	8%	6/25	7%
<b>Latest</b>	7/3	1%	6/27	4%

# 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>6/9</b>	12	16	18	39	0	21	17
<b>6/10</b>	25	19	18	60	0	25	20
<b>6/11</b>	28	22	18	76	0	31	25
<b>6/12</b>	<b>42</b>	<b>22</b>	<b>21</b>	<b>105</b>	<b>0</b>	<b>39</b>	<b>31</b>
<b>6/13</b>		25	24	125	4	52	41
<b>6/14</b>		36	26	169	4	71	61
<b>6/15</b>		44	35	236	14	15	12
<b>EOS</b>		4,001	2,945	6,343	5,708	5,178	6,508

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

Date	2017	2016	2015
<b>6/9</b>	24	19	17
<b>6/10</b>	31	19	25
<b>6/11</b>	61	19	40
<b>6/12</b>	<b>91</b>	<b>27</b>	<b>40</b>
<b>6/13</b>		27	49
<b>6/14</b>		49	66
<b>6/15</b>		72	66
<b>EOS</b>		5,304	5,669

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

Timing	Midpoint	6/12 Cumulative %
<b>Earliest</b>	6/24	8%
<b>Early 10%</b>	7/1	4%
<b>Early 25%</b>	7/3	3%
<b>Median</b>	7/6	2%
<b>Late 25%</b>	7/7	1%
<b>Late 10%</b>	7/10	1%
<b>Latest</b>	7/12	0%

## Informational Packet



1800 NE 44<sup>th</sup> St. #200, Renton WA. 98056  
Ph. 425-254-1544  
Fax 425-255-1251

June 12, 2017

Dear Working group

Pacific Harvest Seafood will be withdrawing from the working group effective immediately. Due to unforeseen circumstances, the availability of the processing ship F.V. Akutan, owned by our colleague Klawock Oceanside, is now uncertain. They continue to work diligently to have their boat available to be on the Kuskokwim for the coho season, but that is yet to be determined. Klawock Oceanside may very well request to be added to the working group as "Processor" if they are able to.

I wish to sincerely thank the working group for their consideration and support and we truly hope that the fishers of the Kuskokwim region are able to enjoy a commercial salmon fishery this season.

Any questions you might have may be directed to Larry and Mary Lang, the owners of the F.V. Akutan at [lang.mary@comcast.net](mailto:lang.mary@comcast.net)

Sincerely

Jim Gonzalez  
President  
Pacific Harvest Seafood  
1800 NE 44<sup>th</sup> St. # 200  
Renton WA 98056  
425-254-1544



## Informational Packet

# Harvest Estimates: 6/12/2017 Subsistence Opportunity

*Prepared by USFWS*

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This document presents harvest and effort estimates as well as fisher-trip information for the subsistence salmon fishery opportunity on the Kuskokwim River that occurred on June 12, 2017 within the Yukon Delta National Wildlife Refuge (YDNWR) boundaries. The production of these estimates was a highly collaborative effort between the U.S. Fish and Wildlife Service (USFWS), the Orutsararmuit Native Council (ONC), and the Kuskokwim River Inter-tribal Fisheries Commission (KRITFC) in cooperation with the Bering Sea Fisherman's Association (BSFA). **These estimates encompass the portion of the YDNWR between and including the villages of Tuntutuliak and Akiak.** Harvest and effort estimation was conducted by USFWS staff using the same methods as in 2016, as described in Staton and Coggins (2016). Please contact Ben Staton (benjamin\_staton@fws.gov) for a copy of that report, or if you have any questions regarding these estimates.

## Opportunity Details

The YDNWR federal inseason manager, with authority delegated by the Federal Subsistence Board and in consultation with the KRITFC, announced a subsistence fishing opportunity for Chinook salmon within the YDNWR waters for federally-qualified subsistence users. The opportunity was 12 hours in duration, starting at 12:00PM June 12 and ending at 11:59PM June 12.

## Data Sources

- A total of **191** fisher interviews were used in this analysis.
  - **94** fisher interviews collected by ONC from the Bethel boat harbor were used.
  - **8** fisher interviews collected by ONC from Bethel area fish camps were used.
  - **44** fisher interviews collected by KRITFC/BSFA community-based monitoring efforts were used.
  - **45** fisher interviews collected by USFWS law enforcement officers were used.
- **187** interviews were from drift boat fishers.
- **4** interviews were from set net fishers.
- USFWS flew **3** aerial surveys to count drift boats and set nets.

## Effort Estimates

- A total of **523** drift boat trips were estimated to have occurred during the opportunity.
- During aerial survey flights between Tuntutuliak and Akiak, we observed:
  - **375** drift boats between 1:00PM and 2:30PM,
  - **367** drift boats between 6:00PM and 7:30PM, and
  - **253** between 8:00PM and 9:30PM.
- Of the drift boats counted on the second flight, we estimated that **64%** of them were also counted during the first flight.
- Of the drift boats counted on the third flight, we estimated that **94%** of them were also counted during the second flight.
- **0** drift boat trips were estimated to have begun and ended during times that were not flown.
- We observed **61** set nets fishing during the opportunity.

## Harvest Estimates

- An estimated total of **5,510 (4,430 - 6,720)** salmon were harvested.
  - An estimated total of **2,360 (1,880 - 2,890)** Chinook salmon were harvested.
  - An estimated total of **2,370 (1,670 - 3,240)** chum salmon were harvested.
  - An estimated total of **780 (530 - 1,070)** sockeye salmon were harvested.
- Harvest by set nets accounted for an estimated **200 (80 - 320)** total salmon (**81%** Chinook salmon, **19%** chum salmon, and **0%** sockeye salmon).

# Informational Packet

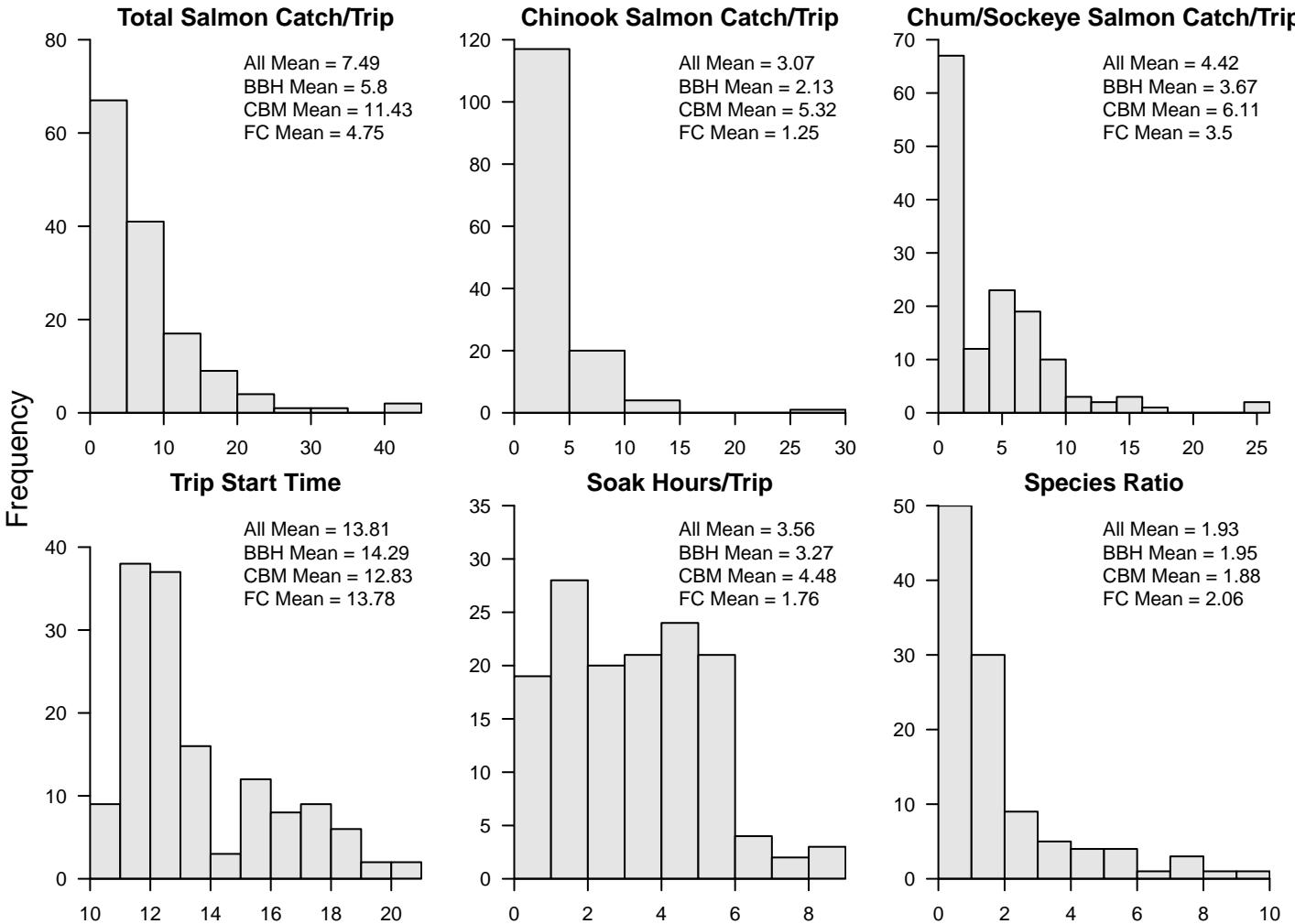
**Table 1.** Breakdown of relevant quantities by river stratum (area).

Stratum	Interviews	Max Drift Count	Set Net Count	Est. Drift Trips	Chinook Harvest	Chum Harvest	Sockeye Harvest
Tunt-Johnson	25	145	5	177	1,250	1,080	470
Johnson-Napaskiak	63	114	16	137	410	500	130
Napaskiak-Akaichak	96	114	28	165	380	590	100
Akiachak-Akiak	7	29	12	43	310	200	70
<b>Total</b>	<b>191</b>	<b>402</b>	<b>61</b>	<b>523</b>	<b>2,350</b>	<b>2,370</b>	<b>770</b>

**Table 2.** Specific quantities for the decision framework used by the USFWS and KRITFC. *Salmon/boat* is total salmon harvest per drift boat and *Ratio* is the chum/sockeye:Chinook salmon ratio. Quantities were calculated using the harvest estimates for each species and the number of estimated number of boat trips, *not* the raw interview values.

Area	Quantity	Mean	Lower 95%	Upper 95%
Below Johnson R.	Salmon/Boat	16	10	22
Above Johnson R.	Salmon/Boat	7	6	9
Below Johnson R.	Ratio	1.3	0.8	1.7
Above Johnson R.	Ratio	1.7	1.3	2.1

**Figure 1.** Distribution of relevant quantities from all collected drift boat interviews, excluding those conducted by USFWS law enforcement officers. BBH = Bethel boat harbor, CBM = community-based monitoring, FC = Bethel area fish camps.



# Informational Packet

## Appendix A: Bethel Boat Harbor Interview Information Detailed Summaries

*Information is for drift nets only*

### Column Meanings

- **Area:** The area of the river the trip occurred in
- **N:** The number of interviews with fishing reported in each area
- **Min:** the minimum value among all interviews conducted in each area
- **25%:** the value that 25% of the interview values fell below in each area
- **Mean:** the mean value among all interviews conducted in each area
- **75%:** the value that 75% of the interview values fell below in each area
- **Max:** the maximum value among all interviews conducted in each area

**Table A1.** Summary of catch rates for Chinook salmon by area (units are catch per 150 feet of net soaked for 1 hour).

Area	N	Min	25%	Mean	75%	Max
<b>Tunt. - Johnson R.</b>	8	0.2	0.3	0.9	0.8	3
<b>Johnson R. - Napaskiak</b>	25	0	0.2	1.3	1.5	6
<b>Napaskiak - Akiachak</b>	57	0	0	0.5	0.8	2.5
<b>All</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>0.7</b>	<b>1</b>	<b>6</b>

**Table A2.** Summary of catch per trip for Chinook salmon by area.

Area	N	Min	25%	Mean	75%	Max
<b>Tunt. - Johnson R.</b>	8	1	1	4	6	8
<b>Johnson R. - Napaskiak</b>	25	0	1	3	5	10
<b>Napaskiak - Akiachak</b>	57	0	0	1	2	7
<b>All</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>10</b>

**Table A3.** Summary of catch rates for chum/sockeye salmon by area (units are catch per 150 feet of net soaked for 1 hour).

Area	N	Min	25%	Mean	75%	Max
<b>Tunt. - Johnson R.</b>	8	0.2	0.5	1.8	1.9	6.6
<b>Johnson R. - Napaskiak</b>	25	0	0	1.4	1.6	10
<b>Napaskiak - Akiachak</b>	57	0	0	1.3	2	6
<b>All</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>1.3</b>	<b>2</b>	<b>10</b>

**Table A4.** Summary of catch per trip for chum/sockeye salmon by area.

Area	N	Min	25%	Mean	75%	Max
<b>Tunt. - Johnson R.</b>	8	1	4	7	8	18
<b>Johnson R. - Napaskiak</b>	25	0	0	4	8	15
<b>Napaskiak - Akiachak</b>	57	0	0	3	5	15
<b>All</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>6</b>	<b>18</b>

**Table A5.** Summary of species ratios (chum/sockeye:Chinook salmon) by area.

Area	N	Min	25%	Mean	75%	Max
<b>Tunt. - Johnson R.</b>	8	0.2	1	2.3	3.2	6
<b>Johnson R. - Napaskiak</b>	25	0	0	1.7	2	9
<b>Napaskiak - Akiachak</b>	57	0	0.6	2	2.4	10
<b>All</b>	<b>90</b>	<b>0</b>	<b>0.3</b>	<b>1.9</b>	<b>2.2</b>	<b>10</b>



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**Table A6.** Summary of soak hours (the number of hours the net was actively fishing) by area.

Area	N	Min	25%	Mean	75%	Max
<b>Tunt. - Johnson R.</b>	8	1.5	2.8	4.2	5.2	6
<b>Johnson R. - Napaskiak</b>	25	0.5	1.3	3.2	6	6
<b>Napaskiak - Akiachak</b>	57	0.3	1.7	3.2	4.5	8.8
<b>All</b>	<b>90</b>	<b>0.3</b>	<b>1.7</b>	<b>3.3</b>	<b>5</b>	<b>8.8</b>

**Table A7.** Summary of trip start time by area.

Area	Min	25%	Mean	75%	Max
<b>Tunt. - Johnson R.</b>	10:00am	10:56am	12:34pm	1:45pm	4:45pm
<b>Johnson R. - Napaskiak</b>	10:00am	12:00pm	1:12pm	2:00pm	7:00pm
<b>Napaskiak - Akiachak</b>	10:00am	12:00pm	3:01pm	6:00pm	9:00pm
<b>All</b>	<b>10:00am</b>	<b>12:00pm</b>	<b>2:17pm</b>	<b>4:30pm</b>	<b>9:00pm</b>

**Table A8.** Summary of trip end time by area.

Area	Min	25%	Mean	75%	Max
<b>Tunt-Johnson</b>	3:48pm	7:40pm	8:24pm	9:24pm	11:30pm
<b>Johnson-Napaskiak</b>	3:37pm	5:19pm	7:52pm	10:02pm	11:00pm
<b>Napaskiak-Akiachak</b>	2:14pm	6:49pm	8:09pm	9:50pm	11:50pm
<b>All</b>	<b>2:14pm</b>	<b>6:32pm</b>	<b>8:05pm</b>	<b>9:58pm</b>	<b>11:50pm</b>

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## Appendix B: Community-Based Monitoring Interview Information Detailed Summaries

*Information is for drift nets only*

### Column Meanings

- **Area:** The village the interview occurred in
- **N:** The number of interviews conducted in each village
- **Min:** the minimum value among all interviews conducted in each village
- **25%:** the value that 25% of the interview values fell below in each village
- **Mean:** the mean value among all interviews conducted in each village
- **75%:** the value that 75% of the interview values fell below in each village
- **Max:** the maximum value among all interviews conducted in each village

**Table B1.** Summary of catch rates for Chinook salmon by village (units are catch per 150 feet of net soaked for 1 hour).

Village	N	Min	25%	Mean	75%	Max
<b>Tuntutuliak</b>	10	0.4	0.7	1.1	1.2	3
<b>Napakiak</b>	8	0	0.4	0.8	1.3	2
<b>Napaskiak</b>	11	0	0.2	0.6	0.9	1.6
<b>Kwethluk</b>	7	0	0.3	1.3	1.4	5
<b>Akiak</b>	8	0.1	0.3	0.9	1.4	2.4
<b>All</b>	<b>44</b>	<b>0</b>	<b>0.3</b>	<b>0.9</b>	<b>1.3</b>	<b>5</b>

**Table B2.** Summary of catch per trip for Chinook salmon by village.

Village	N	Min	25%	Mean	75%	Max
<b>Tuntutuliak</b>	10	4	5	10	12	30
<b>Napakiak</b>	8	0	1	2	2	9
<b>Napaskiak</b>	11	0	0	3	6	6
<b>Kwethluk</b>	7	0	2	4	7	10
<b>Akiak</b>	8	1	2	6	7	15
<b>All</b>	<b>44</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Table B3.** Summary of catch rates for chum/sockeye salmon by village (units are catch per 150 feet of net soaked for 1 hour).

Village	N	Min	25%	Mean	75%	Max
<b>Tuntutuliak</b>	10	0	0	1	1	3
<b>Napakiak</b>	8	0	0	2	3	5
<b>Napaskiak</b>	11	0	1	2	2	7
<b>Kwethluk</b>	7	0	0	1	2	4
<b>Akiak</b>	8	0	1	1	1	1
<b>All</b>	<b>44</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>7</b>

**Table B4.** Summary of catch per trip for chum/sockeye salmon by village.

Village	N	Min	25%	Mean	75%	Max
<b>Tuntutuliak</b>	10	0	3	8	12	26
<b>Napakiak</b>	8	0	1	4	7	10
<b>Napaskiak</b>	11	1	2	7	9	26
<b>Kwethluk</b>	7	1	2	4	7	7
<b>Akiak</b>	8	1	4	5	6	11
<b>All</b>	<b>44</b>	<b>0</b>	<b>2</b>	<b>6</b>	<b>7</b>	<b>26</b>

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**Table B5.** Summary of species ratios by village.

Village	N	Min	25%	Mean	75%	Max
<b>Tuntutuliak</b>	10	0	0.4	0.9	1.4	2.1
<b>Napakiak</b>	8	0	1.1	3	4.8	8
<b>Napaskiak</b>	11	0.2	0.9	2	2.6	5
<b>Kwethluk</b>	7	0.3	0.6	1.7	1.5	6
<b>Akiak</b>	8	0.2	0.6	2.2	3	6
<b>All</b>	<b>44</b>	<b>0</b>	<b>0.5</b>	<b>1.9</b>	<b>2</b>	<b>8</b>

**Table B6.** Summary of soak time by village.

Village	N	Min	25%	Mean	75%	Max
<b>Tuntutuliak</b>	10	4	4	5	5	6
<b>Napakiak</b>	8	1	1	2	3	5
<b>Napaskiak</b>	11	2	3	4	4	6
<b>Kwethluk</b>	7	2	4	5	6	7
<b>Akiak</b>	8	4	6	7	8	9
<b>All</b>	<b>44</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>9</b>

**Table B7.** Summary of trip start time by village.

Village	Min	25%	Mean	75%	Max
<b>Tuntutuliak</b>	1:00pm	1:00pm	1:18pm	1:30pm	2:00pm
<b>Napakiak</b>	11:30am	12:00pm	12:39pm	1:00pm	3:30pm
<b>Napaskiak</b>	12:00pm	12:08pm	12:50pm	1:15pm	3:30pm
<b>Kwethluk</b>	12:00pm	12:00pm	12:51pm	12:45pm	4:30pm
<b>Akiak</b>	11:45am	12:00pm	12:22pm	12:30pm	1:45pm
<b>All</b>	<b>11:30am</b>	<b>12:00pm</b>	<b>12:50pm</b>	<b>1:08pm</b>	<b>4:30pm</b>

**Table B8.** Summary of trip end time by village.

Village	Min	25%	Mean	75%	Max
<b>Tuntutuliak</b>	5:00pm	6:08pm	6:35pm	7:00pm	8:00pm
<b>Napakiak</b>	1:00pm	3:57pm	5:19pm	7:19pm	7:30pm
<b>Napaskiak</b>	3:45pm	4:15pm	5:01pm	6:00pm	6:30pm
<b>Kwethluk</b>	4:30pm	6:38pm	8:25pm	10:22pm	11:38pm
<b>Akiak</b>	8:00pm	9:52pm	10:11pm	11:08pm	11:30pm
<b>All</b>	<b>1:00pm</b>	<b>4:56pm</b>	<b>6:55pm</b>	<b>8:11pm</b>	<b>11:38pm</b>

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**Figure B1.** Visual of the interviewed fishers' progress at meeting harvest goals for each three salmon species of interest. The height of the point/grey area is interpreted as the percent of interviewed fishers that have met at least the category on the horizontal axis. More grey on the left indicates fishers are close to meeting needs, less grey on left indicates fishers are far from meeting needs.

