#### Kuskokwim River Salmon Management Working Group 1 (800) 315-6338 (MEET) Code: 58756# (KUSKO) ADES C. D. (1, 1) (955) 002 2422

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

# **Meeting Agenda**

Date: 07/11/2018

Time Called to Order:

Time: 10:00 a.m.

Chair: TBD

Place: Bethel

**QUORUM MET? Yes / No** 

### ROLL CALL TO ESTABLISH QUORUM:

Upriver Elder: Downriver Elder: Commercial Fisher: Lower River Subsistence: Middle River Subsistence: Upper River Subsistence: Headwaters Subsistence: 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. USFWS/KRITFC UPDATE: ADF&G MANAGEMENT ACTIONS UNDER CONSIDERATION: PEOPLE TO BE HEARD: CONTINUING BUSINESS:

- Subsistence Reports: Lowest River, OTNC 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 Project Update:
- 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:**

• Discussion of the FACA Group and future collaborative efforts.

### **NEW BUSINESS:**

### COMMENTS FROM WORKING GROUP MEMBERS:

NEXT MEETING DATE: \_\_\_\_\_ Time: \_\_\_\_\_ Place: \_\_\_\_\_

# 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. Jennifer Peeks Aaron Tiernan Working Group Coordinators

### Orutsararmiut Native Council (ONC) Inseason Harvest Monitoring Weekly Report July 11, 2018

### **Summary of Interview Activities**

ONC conducted surveys with 39 fish camps from Thursday, July 5 through Monday, July 9, 2018. Seven fish camps reported to be done fishing until silver salmon are here. Five fish camps commented on the restrictions, and one fish camp stated they felt they should have been done putting away fish in June and another fish camp wanted more openers while the Chinook salmon were running heavy, but stated it was a good year overall. Two fish camps said there were too many openers. Five fish camps talked about the arrival of the sockeye salmon, and mentioned they were a little small and have been using sockeye salmon for strips. Two fish camps are waiting for good weather to start fishing again and did not want to fish with this bad weather because fear that their fish might spoil. One fish camp claimed that all fish tastes the same once it is dried and smoked. One fish camp stated that they got their Chinook salmon from Quinhagak. Another fish camp says they are almost done with rebuilding their fish camp and are preparing to fish. Lastly, one fish camp respondent who recently traveled upriver told us they are very happy, especially about getting 20 Chinook salmon for strips.

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

To date, we've received ASL samples from 16 individuals in the Bethel area.

### **Harvest Summary**

We collected data from 36 unique fishing trips at fish camps from the July 5 fishing opener. Most fishing trips (n=35) occurred from Napaskiak to Akiachak.

Total Drift Nets	Mesh Size Range	Average Soak Time (hours)
27	4"-6"	1.7 hours

**Table 1.** Drift net, mesh size range and soak time reported from the July 5 fishing opener.

Total Set Nets	Mesh Size Range	Average Soak Time (hours)
9	4"-6"	7.8 hours

Table 2. Set net, mesh size range and soak time reported from the July 5 fishing opener.

Note: Two of the set nets had a soak time of 23 hours. Without those soak times included, the average set net soak time was 3.5 hours.

**Table 3.** Average number of salmon harvested by surveyed fish camps from the July 5 fishing opener.

Average Chinook	Average Chum	Average Sockeye	Average other
Salmon Harvest	Salmon Harvest	Salmon Harvest	harvest
1.3	14.1	22	1.2

# **Fishing Progress Data**

This past survey period, we asked fish camps the following question: "How close are you to achieving your Chinook salmon, chum salmon and sockeye salmon harvest goals?" 32 fish camps had responses for their Chinook salmon and sockeye salmon fishing progress and 31 fish camps had responses for their chum salmon fishing progress.

**Table 4.** Fishing progress by surveyed fish camps for Chinook salmon, chum salmon and sockeye salmon following the July 5 fishing opener.

Salmon Species	Not at all	Under Half	Halfway	Over Half	Goal Met
Chinook	25%	12.5%	15.6%	9.4%	37.5%
salmon	(n=8)	(n=4)	(n=5)	(n=3)	(n=12)
Chum	9.7%	0%	6.4%	9.7%	74.2%
salmon	(n=3)	(n=0)	(n=2)	(n=3)	(n=23)
Sockeye	9.4%	9.4%	15.6%	21.8%	43.8%
salmon	(n=3)	(n=3)	(n=5)	(n=7)	(n=14)





# Informational Packet Kuskokwim River Salmon Assessment Update<br/> 7/9/2018





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 Ben Staton (USFWS; benjamin\_staton@fws.gov) or Nick Smith (ADF&G; nick.smith@alaska.gov).

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### Bethel Test Fishery Summaries

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### Species Composition Summaries

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- Page 7: In-Season Harvest Estimates
- Page 8: Chinook Salmon
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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 Fish 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:

 $\bullet \ http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakuskokwim.salmon\#fishcounts$ 

#### 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

# Informational Packet Chinook Salmon BTF Summary (7/9)

- The BTF daily CPUE was 4.
- The BTF cumulative CPUE is now **603**.
- 70% years since 2008 fell below this cumulative CPUE on this date.
- 93% of the run is complete based on historical average run timing.
- 89% 96% of the run is complete based the central 50% of all historical run timing scenarios.
- 2% 4% of the run is expected to pass Bethel in the next 5 days.
- Over the last 3 days, Chinook salmon made up 1% of the BTF catches, compared to 3% 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 2017. *Right*: The cumulative BTF CPUE from 2018 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** 

# Informational Packet Chum Salmon BTF Summary (7/9)

- The BTF daily CPUE was 667.
- The BTF cumulative CPUE is now **3,937**.
- 40% years since 2008 fell below this cumulative CPUE on this date.
- 68% of the run is complete based on historical average run timing.
- 56% 78% of the run is complete based the central 50% of all historical run timing scenarios.
- 9% 15% of the run is expected to pass Bethel in the next 5 days.
- Over the last 3 days, chum salmon made up 81% of the BTF catches, compared to 74% on average.

**Chum 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 2017. *Right*: The cumulative BTF CPUE from 2018 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** 

# Informational Packet Sockeye Salmon BTF Summary (7/9)

- The BTF daily CPUE was 77.
- The BTF cumulative CPUE is now 1,349.
- 60% years since 2008 fell below this cumulative CPUE on this date.
- 94% of the run is complete based on historical average run timing.
- 84% 98% of the run is complete based the central 50% of all historical run timing scenarios.
- 1% 9% of the run is expected to pass Bethel in the next 5 days.
- Over the last 3 days, sockeye salmon made up 18% of the BTF catches, compared to 23% on average.

**Sockeye 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 2017. *Right*: The cumulative BTF CPUE from 2018 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.

# **Informational Packet** Percent Composition by Salmon Species

**Percent Composition Figure 1.** Species percent composition in the BTF from 2018 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 2018 (salmon species only, excluding pink salmon). The composition presented on each day represents the average composition over the past 3 days.



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# Sonar Passage Estimates

Sonar Figure 1. Cumulative estimates of salmon passage from the 2018 sonar operation through the last complete reporting day. Grey bands show the 95% confidence intervals on each complete reporting day. Sonar operations are back in full operation. The sonar made partial counts between 6/21 and 6/29.



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### **Informational Packet** 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.

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).

#### **Spatial Coverage:**

- The 6/6 estimate was for a set net only opportunity and covers the main stem between Tuntutuliak and Akiak.
- The 6/12 and 6/16 estimates cover the main stem between Tuntutuliak and Akiak and between Kalskag and Aniak.
- The 6/24, 6/29, and 7/5 estimates cover the main stem between Tuntutuliak and Akiak.

Harvest Table 1. Estimated total Chinook salmon harvest within the YDNWR.

Date	Daily Harvest	Cumulative Harvest	Daily CV	Cumulative CV
6/6	100	100	0.21	0.21
6/12	$5,\!340$	$5,\!440$	0.09	0.09
6/16	5,710	11,150	0.09	0.06
6/24	6,100	17,250	0.07	0.05
6/29	3,160	20,410	0.11	0.04
7/5	1,020	$21,\!430$	0.11	0.04

Harvest Table 2. Estimated Chinook salmon harvested downstream of the BTF.

Date	Daily Harvest	Cumulative Harvest	Daily CV	Cumulative CV
6/6	30	30	0.29	0.29
6/12	3,210	$3,\!240$	0.1	0.1
6/16	$3,\!530$	6,770	0.11	0.07
6/24	3,700	$10,\!470$	0.08	0.06
6/29	$1,\!890$	12,360	0.11	0.05
7/5	750	$13,\!110$	0.11	0.05

Harvest Table 3. Estimated total chum salmon harvest within the YDNWR.

Date	Daily Harvest	Cumulative Harvest	Daily CV	Cumulative CV
6/12	1,830	1,830	0.16	0.16
6/16	2,800	4,630	0.1	0.09
6/24	8,890	13,520	0.07	0.05
6/29	18,260	31,770	0.11	0.07
7/5	12,500	44,270	0.09	0.05

Harvest Table 3. Estimated total sockeye salmon harvest within the YDNWR.

Date	Daily Harvest	Cumulative Harvest	Daily CV	Cumulative CV
6/12	250	250	0.21	0.21
6/16	450	700	0.19	0.14
6/24	$3,\!660$	4,360	0.08	0.07
6/29	7,530	$11,\!890$	0.11	0.07
7/5	11,280	$23,\!170$	0.09	0.06

# **Informational Packet** Chinook Salmon Appendix

Date	2018	2017	2016	2015	2014	5-Yr Avg.	2008 - 2017 Avg.
7/6	587	289	578	504	628	447	474
7'/7	594	296	596	513	629	455	482
7'/8	599	304	601	518	629	459	488
7/9	603	311	610	<b>523</b>	630	<b>464</b>	493
7/10		312	624	527	630	469	497
7/11		321	634	535	633	476	502
7/12		328	637	537	636	479	506
EOS		374	687	625	650	519	538

Chinook Salmon Table A1. Cumulative CPUE from the BTF.

Chinook Salmon Table A2. Cumulative CPUE from the ATF.

Date	2018	2017	2016	2015
7/6	629	5,604	2,479	2,585
7/7	661	5,766	2,522	$2,\!681$
7/8	725	$5,\!908$	2,556	2,705
7/9	<b>760</b>	$6,\!143$	$2,\!575$	2,761
7/10		$6,\!308$	$2,\!575$	2,816
7/11		$6,\!387$	$2,\!591$	$2,\!841$
7/12		$6,\!437$	$2,\!649$	2,885
EOS		6,508	2,729	2,916

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

Timing	Midpoint	7/9 Cumulative $%$
Earliest	6/14	99%
Early 10%	6/17	97%
Early $25\%$	6/21	96%
Median	6/22	93%
Late $25\%$	6/24	89%
Late 10%	6/27	85%
Latest	7/3	81%

# Chum Salmon Appendix

Date	2018	2017	2016	2015	2014	5-Yr Avg.	2008 - 2017 Avg.
7/6	2,627	3,346	1,290	1,041	4,307	2,542	3,139
7/7	2,747	$3,\!691$	$1,\!410$	1,261	4,333	2,768	$3,\!407$
7/8	$3,\!270$	4,088	$1,\!618$	$1,\!342$	$4,\!463$	2,967	$3,\!620$
7/9	$3,\!937$	$4,\!597$	1,733	1,368	$4,\!530$	$3,\!206$	3,861
7/10		4,942	$1,\!892$	$1,\!392$	4,765	$3,\!445$	4,078
7/11		$5,\!187$	2,111	$1,\!425$	4,910	$3,\!599$	$4,\!299$
7/12		$5,\!443$	$2,\!155$	$1,\!492$	$5,\!153$	3,759	$4,\!493$
EOS		6,785	$3,\!894$	$2,\!943$	$6,\!343$	$5,\!135$	6,525

Chum Salmon Table A1. Cumulative CPUE from the BTF.

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

Date	2018	2017	2016	2015
7/6	4,603	$6,\!499$	2,937	2,048
7/7	5,066	$7,\!323$	$3,\!333$	2,316
7/8	$5,\!493$	$7,\!832$	$3,\!392$	2,388
7/9	6,098	$8,\!256$	$3,\!603$	2,706
7/10		$9,\!240$	$3,\!844$	$3,\!400$
7/11		$10,\!130$	$3,\!971$	4,333
7/12		10,746	4,229	$5,\!241$
EOS		$11,\!588$	$5,\!304$	$5,\!669$

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

Timing	Midpoint	7/9 Cumulative $%$
Earliest	6/23	92%
Early 10%	7/1	85%
Early $25\%$	7/2	78%
Median	7/5	68%
Late $25\%$	7/7	57%
Late 10%	7/11	46%
Latest	7/14	35%

# Sockeye Salmon Appendix Informational Packet

Date	2018	2017	2016	2015	2014	5-Yr Avg.	2008 - 2017 Avg.
7/6	$1,\!057$	1,308	932	$1,\!351$	1,160	1,148	$1,\!125$
7/7	$1,\!195$	1,363	$1,\!142$	1,505	$1,\!181$	$1,\!240$	$1,\!199$
7/8	$1,\!272$	$1,\!593$	1,206	1,565	$1,\!220$	1,321	1,254
7/9	$1,\!349$	$1,\!676$	$1,\!242$	$1,\!651$	$1,\!250$	$1,\!376$	$1,\!302$
7/10		1,712	$1,\!417$	$1,\!688$	1,264	$1,\!430$	$1,\!349$
7/11		1,784	$1,\!470$	1,739	$1,\!280$	$1,\!472$	$1,\!385$
7/12		$1,\!966$	$1,\!548$	1,781	1,282	1,537	$1,\!427$
EOS		$2,\!690$	2,463	$2,\!157$	$1,\!367$	1,965	1,711

Sockeye Salmon Table A1. Cumulative CPUE from the BTF.

Sockeye Salmon Table A2. Cumulative CPUE from the ATF.

Date	2018	2017	2016	2015
7/6	60	268	171	584
7/7	60	268	248	669
7/8	68	286	248	742
7/9	68	<b>286</b>	<b>265</b>	948
7/10		304	326	1,020
7/11		366	326	1,107
7/12		374	358	1,221
EOS		393	405	1,245

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

Timing	Midpoint	7/9 Cumulative $%$
Earliest	6/22	100%
Early $10\%$	6/24	100%
Early $25\%$	6/25	98%
Median	6/29	94%
Late $25\%$	7/1	84%
Late 10%	7/5	72%
Latest	7/10	54%

# Supplemental Kuskokwim River Salmon Escapement Data

Salmon escapement projects are located upriver from where the majority of salmon harvest occurs. Therefore, escapement data provide limited information about the status of salmon runs in season. Data from escapement projects are primarily used post season to assess escapement goals and trends.

Daily escapement information can be viewed online at the ADF&G Kuskokwim Management Area Fish Counts webpage. This can be accessed through the following link: <u>http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakuskokwim.salmon#fishcounts</u>

### Kwethluk River Salmon Monitoring Project Cumulative Daily Passage of Chinook Salmon

Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	10 year average	Highest daily cumulative (all years)	2018
07/03	81	1,661	873	560	9,951	
07/04	135	2,044	1,131	752	11,804	
07/05	292	2,441	1,378	967	12,700	
07/06	360	2,871	1,534	1,098	13,621	
07/07	361	3,172	1,681	1,292	13,960	
07/08	372	3,498	1,829	1,436	14,968	
07/09	405	3,978	1,937	1,563	17,294	16
07/10	522	4,374	2,043	1,683	19,489	
07/11	526	4,679	2,219	1,876	20,436	
07/12	557	5,080	2,437	2,104	21,479	
07/13	638	5,448	2,701	2,302	22,122	
07/14	668	5,727	2,965	2,509	22,774	
07/15	699	5,947	3,252	2,719	22,935	
07/16	763	6,136	3,428	2,895	22,978	
07/17	897	6,378	3,612	3,125	23,134	

### Escapement Goal Range: 4,100 to 7,500

 Lowest Count
 Average Count
 5 Year Average
 10 Year Average
 Highest Count

 Season Total
 1,669
 8,963
 5,584
 4,888
 28,605





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### George River Salmon Monitoring Project Cumulative Daily Passage of Chinook Salmon

Escapement Goal	Range:	1,800 to	o 3,300
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Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	10 year average	Highest daily cumulative (all years)	2018
07/03	11	1,049	393	278	5,728	213
07/04	12	1,197	484	356	6,075	287
07/05	14	1,384	704	540	6,296	327
07/06	18	1,585	829	654	6,590	401
07/07	31	1,782	1,020	821	6,683	576
07/08	81	1,922	1,113	897	6,717	729
07/09	89	2,044	1,207	979	6,754	907
07/10	102	2,138	1,309	1,068	6,783	
07/11	112	2,308	1,463	1,193	6,816	
07/12	153	2,463	1,573	1,312	7,061	
07/13	384	2,567	1,649	1,458	7,092	
07/14	541	2,653	1,755	1,568	7,103	
07/15	788	2,735	1,834	1,655	7,168	
07/16	910	2,806	1,906	1,725	7,174	
07/17	1,042	2,873	1,950	1,797	7,196	

Lowest CountAverage Count5 Year Average10 Year AverageHighest CountSeason Total1,2923,4392,3832,3397,810



## Kogrukluk River Salmon Monitoring Project Cumulative Daily Passage of Chinook Salmon

Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	10 year average	Highest daily cumulative (all years)	2018
07/03	0	879	205	133	3,848	
07/04	1	1,188	248	164	4,588	
07/05	4	1,586	303	219	5,589	17
07/06	21	2,031	363	268	7,343	48
07/07	56	2,505	547	396	8,649	78
07/08	83	2,958	671	517	9,782	116
07/09	104	3,426	771	611	10,461	229
07/10	116	3,937	957	765	12,287	
07/11	167	4,373	1,263	1,033	13,084	
07/12	191	4,875	1,585	1,311	14,798	
07/13	484	5,287	1,804	1,603	15,562	
07/14	574	5,716	2,049	1,874	15,937	
07/15	618	6,079	2,277	2,105	16,183	
07/16	678	6,481	2,427	2,340	16,957	
07/17	739	6,843	2,597	2,574	17,646	

# Escapement Goal Range: 4,800 to 8,800

 Lowest Count
 Average Count
 5 Year Average
 10 Year Average
 Highest Count

 Season Total
 1,819
 10,135
 6,138
 6,946
 21,819





						(	Cumulative I	Daily Passa	age						
					Date	2015	2016	2017	2018						
					07/03 07/04	513 629	1,450 1,668	5 15	4	_					
					07/04	629	2,141	15	14	_					
					07/06	1,177	2,284	19	36						
					07/07	1,425	2,366	20	58						
					07/08	1,493	2,439	21	144 156	_					
					07/09 07/10	1,580 1,693	2,746 2,999	34 35	150	_					
					07/11	1,945	3,072	43		_					
					07/12	2,569	3,211	56							
					07/13 07/14	2,618	3,376	827		_					
					07/14	2,858 3,763	3,488 3,605	1,475 1,493		_					
					07/16	3,910	3,839	1,542							
					07/17	4,022	4,113	1,637							
							2045	2046	2047	1					
					Seas	on Total	2015 6,736	2016 6,326	2017 8,003	-					
					Ocus		0,700	0,020	0,000						
used Two	-Week Dat	a View													
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2,500					*******	RRRR .				*****					
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2,000 —		A R R R R					1								
2,000	BEEFERST STREET	14 H H H H							•••						
1,500		14 H H H H		*******			•••••		•••						
1,500		****	********	*****		•••••	•••••		•••						
1,500	***********	*****	********	*****			••••••		•••		/				
1,500 •••••	************		******	••••	•	•			•••		/				
1,500 •••••	•	·····•	****	0. Z0	80.	•				12	13	14	15	16	
1,500 ••••	07/04	02//02	02/00	07/07	07/08	• 60/L0	07/10	07/11		07/12	07/13	07/14	07/15	07/16	07/17
1,500 •••••	•	·····•	****	07/07	• 80/20	•		07/11		07/12	07/13	07/14	07/15	07/16	
1,500 •••••	•	·····•	****	07/07	07/08	•	01/10	07/11		07/12	07/13	07/14	07/15	07/16	
1,500 1,000 500 0 € 00 20	07/04	·····•	****	07/07	07/08	•	01/10	07/11		07/12	07/13	07/14	07/15	07/16	
1,500 ••••• 1,000 500 ••••• 0 8 8 8 500 ••••• 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	•	·····•	****	0//0	07/08	•	01/10	07/11		07/12	07/13	07/14	07/15	07/16	
1,500 ••••• 1,000 500 ••••• 0 8 8 500 ••••• 8 500 ••••• 8 500 ••••• 8 500 ••••• 8 500 •••••	07/04	·····•	****	07/07	07/08	•	01/10	07/11		07/12	07/13	07/14	07/15	07/16	
1,500 ••••• 1,000 500 ••••• 0 ••••• 0 •••••• 0 ••••••• 0 ••••••••	07/04	·····•	****	20/20	07/08	•	01/10	07/11		077/12	07/13	07/14	07/15	07/16	
1,500 ••••• 1,000 500 ••••• 0 ••••• 0 •••••• 0 ••••••• 0 ••••••••	07/04	·····•	****	• L0/L0	07/08	•	01/10	07/11						07/16	
1,500 ••••• 1,000 500 ••••• 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	07/04	·····•	****	20/20	0//08	<ul><li>€0/20</li></ul>	01/20 Month/E								
1,500 1,000 500 0	07/04	·····•	****	• L0/L0	01/08	<ul><li>€0/20</li></ul>	01/20 Month/E					07/14			
1,500 1,000 500 0  500 500 500 500 500 500 500 500	07/04	·····•	****	20/20	01/08	<ul><li>€0/20</li></ul>	01/20 Month/E								07/17
1,500 •••••	07/04	·····•	****	• LO/LO	07/08	<ul><li>€0/20</li></ul>	01/20 Month/E								07/17
1,500 ****** 1,000 500 ***** 0 ***** 0 ****** 0 **********	07/04	·····•	****	• L0/L0	0//08	<ul><li>€0/20</li></ul>	01/20 Month/E								07/17
1,000 500 0 800 0 0 800 7,500 6,000 4,500	07/04	·····•	****	• 10/20	07/08	<ul><li>€0/20</li></ul>	01/20 Month/E								07/17
1,500 <b>■</b> ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	07/04	·····•	****	20/20	• • • • • • • • • • • • • •	<ul><li>€0/20</li></ul>	01/10								07/17
1,500 <b>■</b> ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	07/04	·····•	****	L0/20	01/08	<ul><li>€0/20</li></ul>	01/20 Month/E								07/17
1,500 ****** 1,000 500 ***** 0 ***** 0 ****** 0 **********	07/04	·····•	****	20/20	• 80/20	<ul><li>€0/20</li></ul>	01/20 Month/E								07/17
1,500 ****** 1,000 500 ***** 0 ***** 0 ***** 0 ***** 0 ****** 0 ***** 0 ****** 0 ****** 0 ***** 0 ****** 0 ******** 0 ******** 0 ******** 0 **********	07/04	·····•	****	20/20	• 80/20	<ul><li>€0/20</li></ul>	01/20 Month/E								07/17







# Kogrukluk River Salmon Monitoring Project Cumulative Daily Passage of Chum Salmon

Data	Louiset deily sumulative (all users)	Average (all verse)	E voor ovorere	10	Llighaat daily augustative (all users)	2010
Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	10 year average	Highest daily cumulative (all years)	2018
07/03	4	2,535	552	407	15,917	
07/04	124	3,371	717	569	18,024	
07/05	234	4,478	1,035	887	22,060	23
07/06	405	5,716	1,431	1,252	29,780	211
07/07	747	6,991	1,922	1,750	36,192	474
07/08	893	8,413	2,372	2,349	43,627	918
07/09	1,368	9,925	3,228	3,246	49,581	1,333
07/10	1,659	11,598	4,470	4,432	56,718	
07/11	2,122	13,245	6,036	5,942	61,725	
07/12	2,492	14,985	8,040	7,741	68,339	
07/13	2,739	16,700	9,990	9,580	74,233	
07/14	3,063	18,440	11,444	11,080	79,261	
07/15	3,393	20,124	12,804	12,627	83,914	
07/16	3,804	22,001	14,177	14,614	89,805	
07/17	4,321	23,699	15,699	16,725	94,567	

Escapement Goal Range: 15,000 to 49,000

Lowest CountAverage Count5 Year Average10 Year AverageHighest CountSeason Total7,97548,15253,87960,300194,887





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## Kogrukluk River Salmon Monitoring Project Cumulative Daily Passage of Sockeye Salmon

			_			
Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	10 year average	Highest daily cumulative (all years)	2018
07/03	0	364	10	9	4,803	
07/04	0	522	18	15	5,427	
07/05	0	731	33	30	6,736	0
07/06	0	1,021	40	41	8,498	2
07/07	1	1,328	63	67	10,227	9
07/08	2	1,722	95	123	11,866	11
07/09	3	2,162	137	195	13,891	23
07/10	20	2,638	253	347	15,641	
07/11	37	3,085	480	639	16,389	
07/12	66	3,577	737	962	17,219	
07/13	118	4,038	968	1,268	18,040	
07/14	203	4,564	1,191	1,574	18,884	
07/15	295	5,126	1,660	2,053	21,504	
07/16	301	5,739	1,944	2,525	25,641	
07/17	329	6,307	2,182	2,993	28,331	

# Escapement Goal Range: 4,400 to 17,000

Lowest CountAverage Count5 Year Average10 Year AverageHighest CountSeason Total1,73213,10513,60715,07261,382



