

# 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: 07/27/2022

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
- 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:

- Sonar Operation – Jamin Crow

### 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,**  
**Savannah Hollingworth**  
**Working Group Coordinator**

# Kuskokwim River Salmon Assessment Update

## 7/25/2022

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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 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](mailto:spencer_rearden@fws.gov)) or Sean Larson (ADF&G; [sean.larson@alaska.gov](mailto: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>

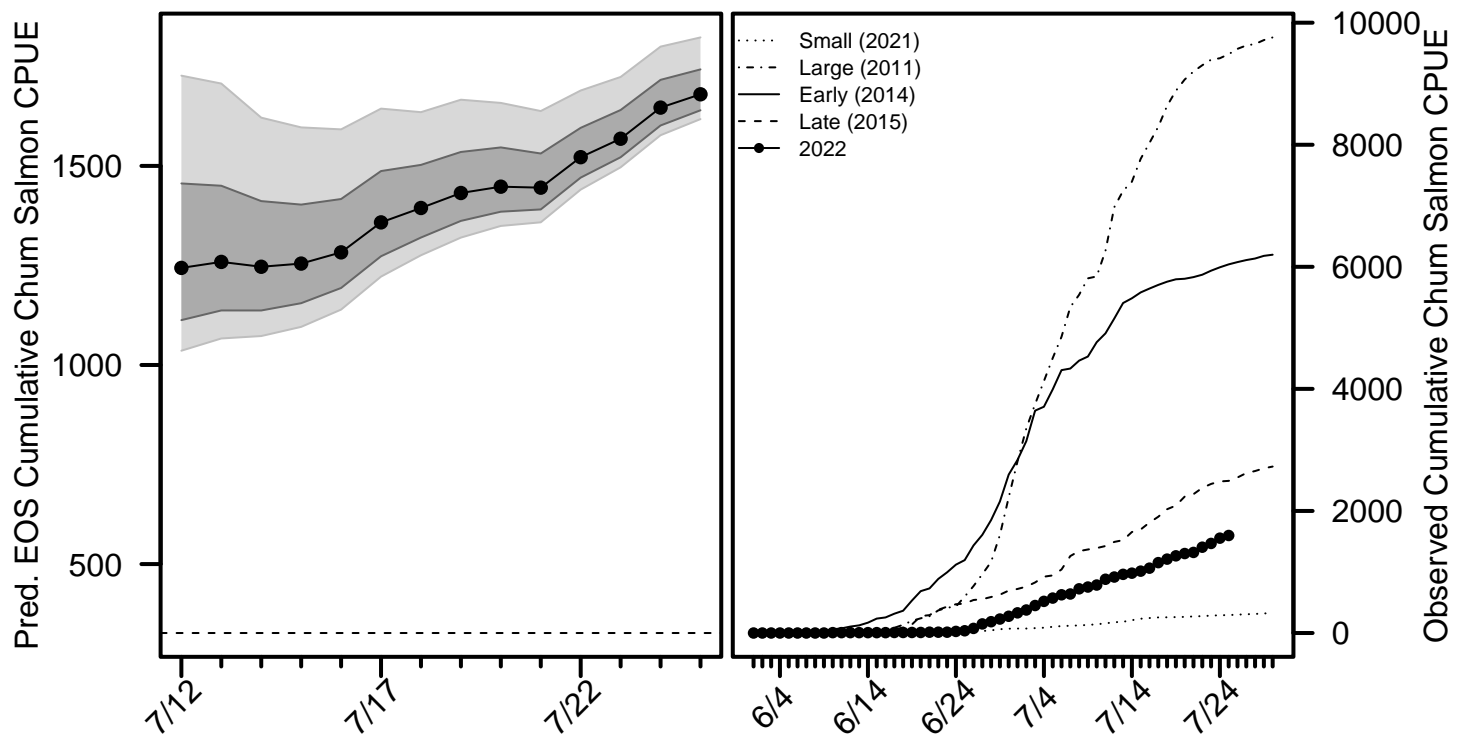
For the most up-to-date information regarding fishing opportunities please visit:

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

## Chum Salmon BTF Summary (7/25)

- The BTF daily CPUE was **44**.
- The BTF cumulative CPUE is now **1,598**.
- **14%** years since 2008 fell below this cumulative CPUE on this date.
- **95%** of the run is complete based on historical average run timing.
- **92% - 98%** of the run is complete based on the central 50% of all historical run timing scenarios.
- **1% - 4%** of the run is expected to pass Bethel in the next 5 days.
- Over the last 3 days, chum salmon made up **89%** of the BTF catches, compared to **57%** 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 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.



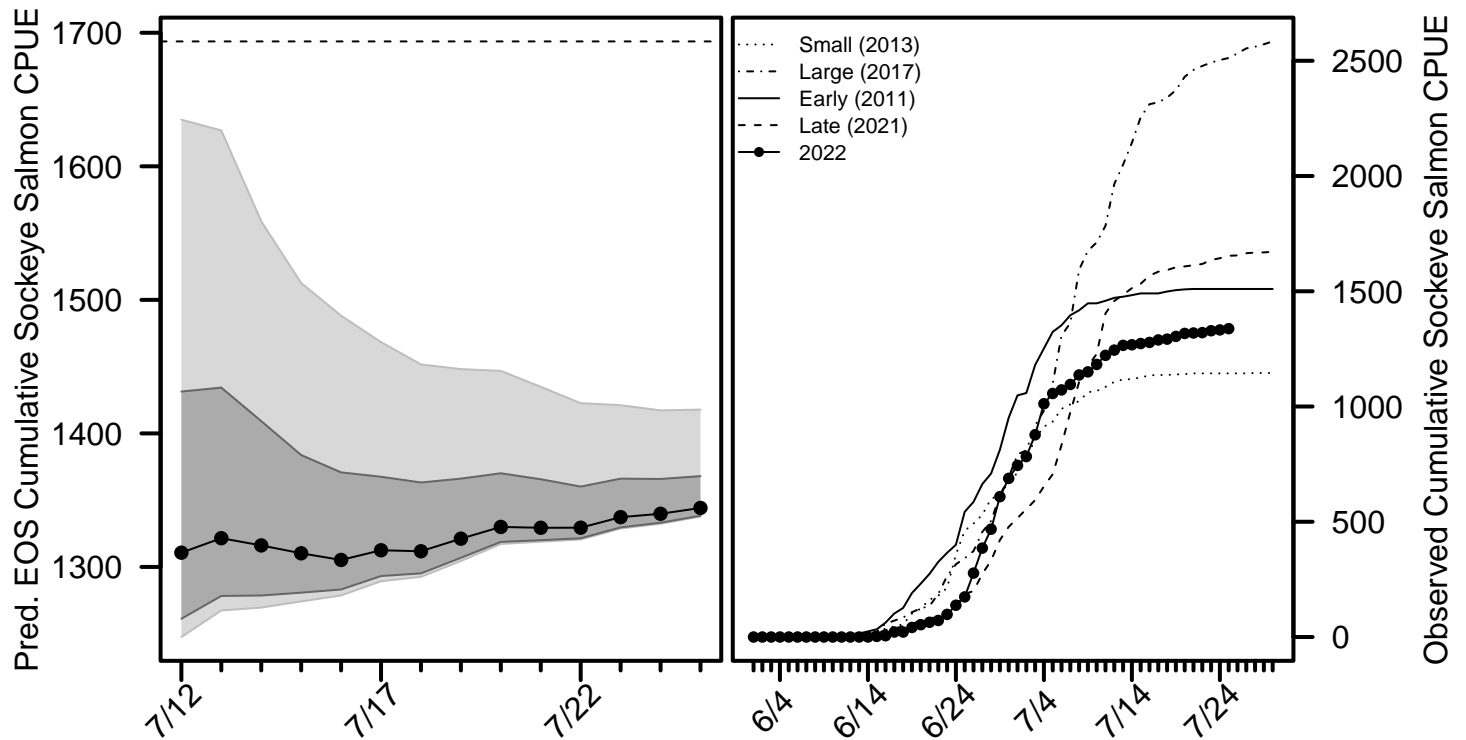
For more detailed information, see the [chum salmon appendix](#) at the end of this document.

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## Sockeye Salmon BTF Summary (7/25)

- The BTF daily CPUE was **5**.
- The BTF cumulative CPUE is now **1,338**.
- **29%** years since 2008 fell below this cumulative CPUE on this date.
- **99%** of the run is complete based on historical average run timing.
- **98% - 100%** of the run is complete based on the central 50% of all historical run timing scenarios.
- **0% - 1%** of the run is expected to pass Bethel in the next 5 days.
- Over the last 3 days, sockeye salmon made up **8%** of the BTF catches, compared to **5%** 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 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.



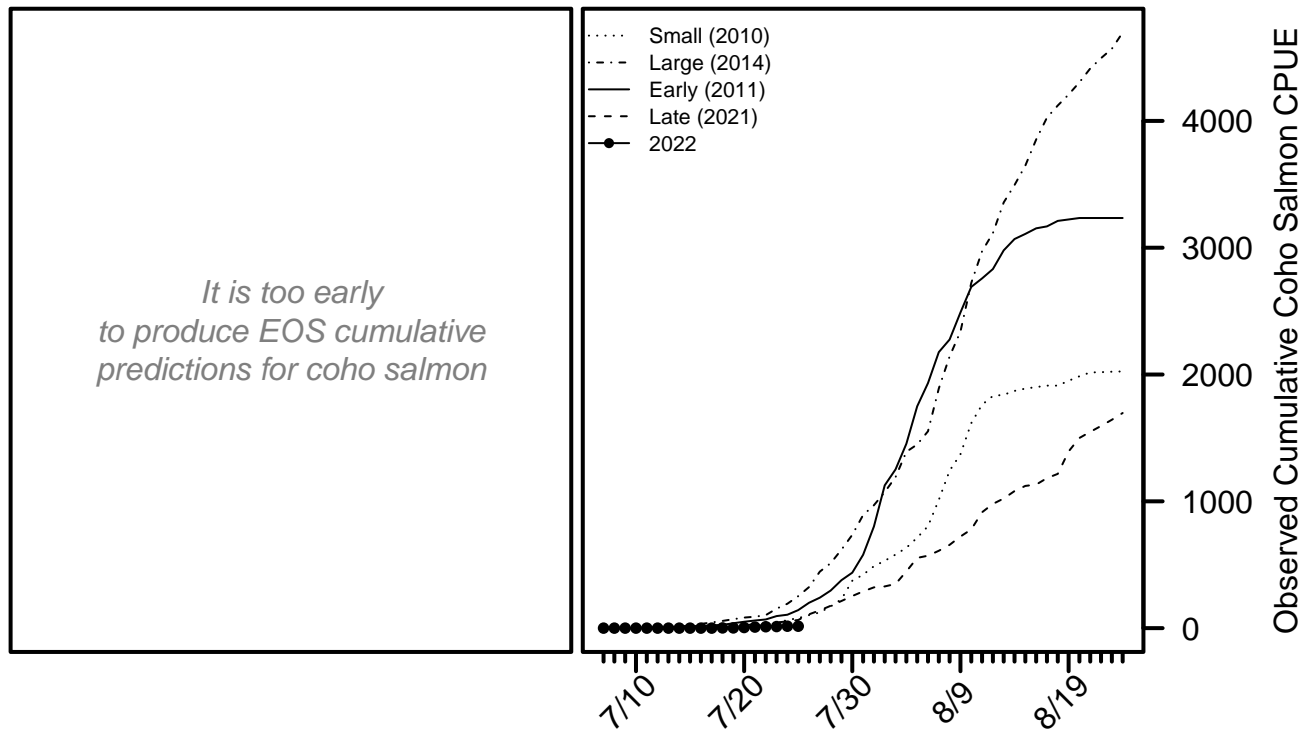
For more detailed information, see the [sockeye salmon appendix](#) at the end of this document.

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## Coho Salmon BTF Summary (7/25)

- The BTF daily CPUE was **0**.
- The BTF cumulative CPUE is now **15**.
- **0%** years since 2008 fell below this cumulative CPUE on this date.
- **3%** of the run is complete based on historical average run timing.
- **1% - 7%** of the run is complete based the central 50% of all historical run timing scenarios.
- **4% - 13%** of the run is expected to pass Bethel in the next 5 days.
- Over the last 3 days, coho salmon made up **2%** of the BTF catches, compared to **36%** on average.

**Coho 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.

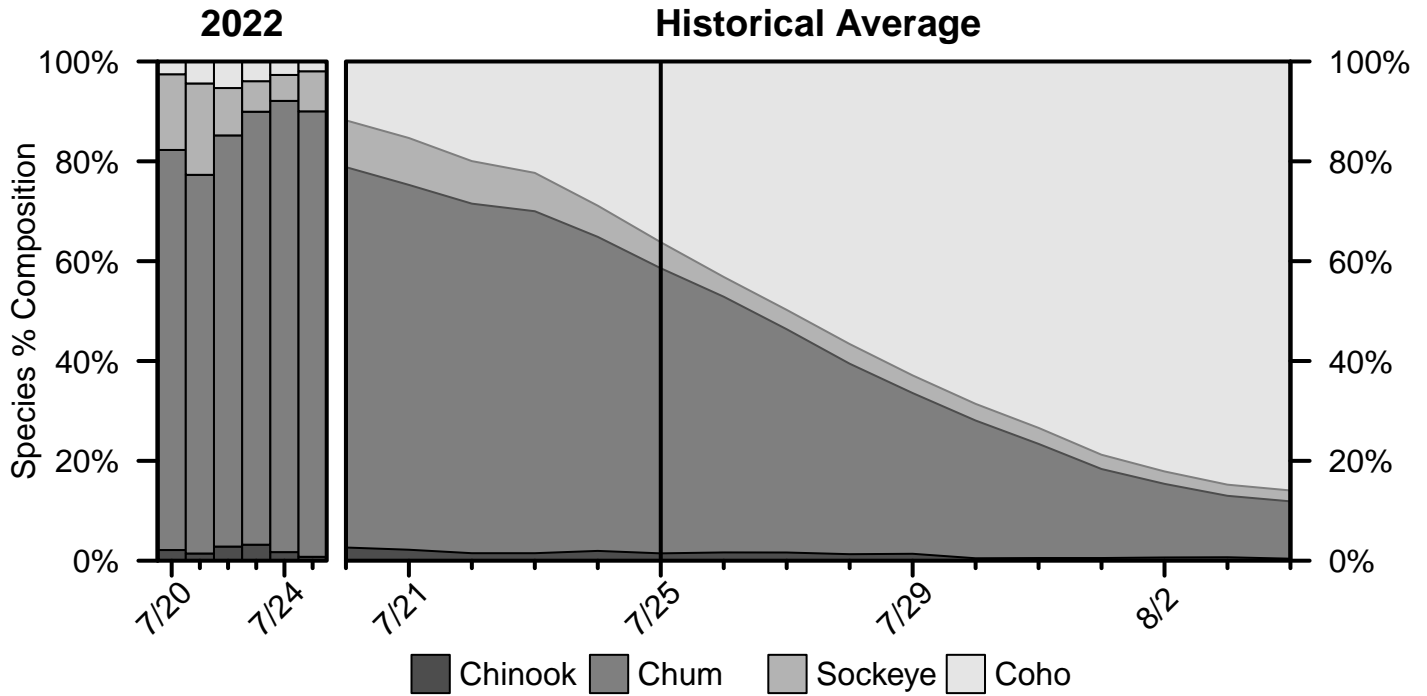


For more detailed information, see the [coho salmon appendix](#) at the end of this document.

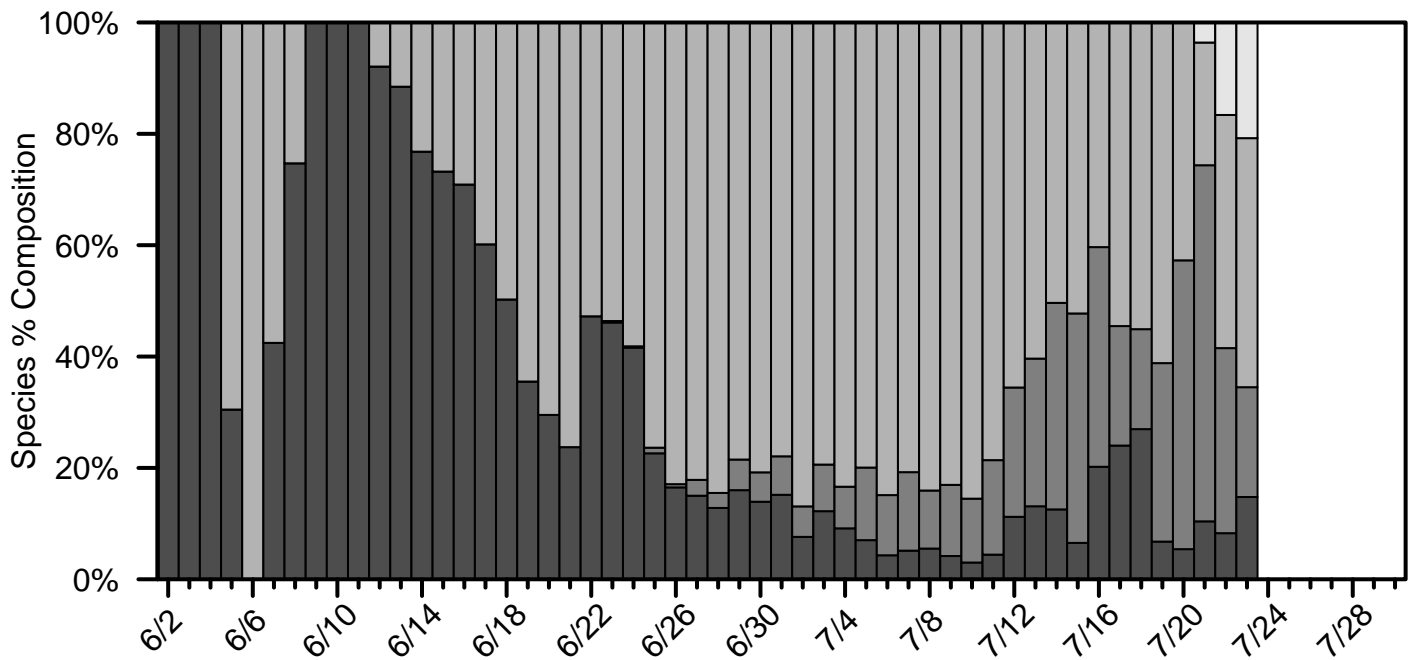
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# Percent Composition by Salmon Species

**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.



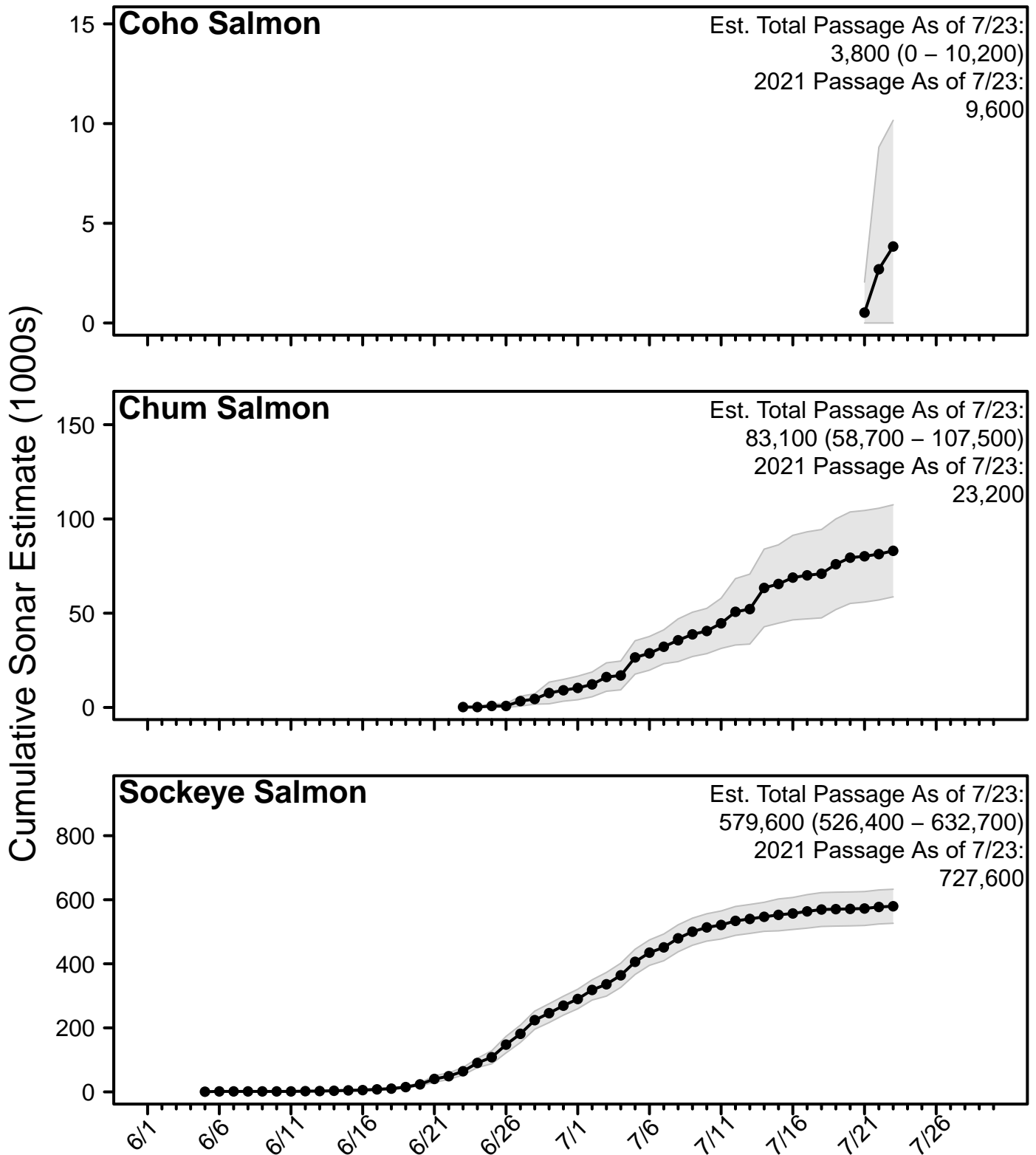
**Species Composition Figure 2.** Species percent composition from the sonar estimates from 2022 (salmon species only, excluding pink salmon). The composition presented on each day represents the average composition over the past 3 days.



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# 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](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	26,620	0.06	0.05
6/29	580	27,200	0.19	0.05
6/30	970	28,170	0.11	0.05
7/3	660	28,830	0.15	0.04
7/9	480	29,310	0.15	0.04

**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
6/29	270	1,440	0.22	0.1
6/30	180	1,620	0.26	0.09
7/3	300	1,920	0.22	0.08
7/9	1,730	3,650	0.12	0.07

**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	0.07
6/29	2,660	18,680	0.16	0.07
6/30	1,270	19,950	0.23	0.07
7/3	1,160	21,110	0.27	0.06
7/9	3,730	24,840	0.09	0.06

## Chinook Salmon Appendix

\*\*\* The BTF daily CPUE was **0** (cumulative: **492**).

\*\*\* The table below shows cumulative CPUE from the BTF from 2022 and in previous years.

Date	2022	2021	2020	2019	2018	5-Yr Avg.	2008 - 2021 Avg.
<b>7/22</b>	490	527	478	836	650	570	555
<b>7/23</b>	492	528	480	841	652	572	557
<b>7/24</b>	492	530	480	843	652	574	558
<b>7/25</b>	<b>492</b>	<b>530</b>	<b>480</b>	<b>843</b>	<b>652</b>	<b>574</b>	<b>558</b>
<b>EOS</b>		532	487	848	667	582	566

\*\*\* If the run ended on 7/25, 50% of the run would have passed BTF on **6/24**, which is **1 day later** than average.

\*\*\* The ATF ended operations on 7/12 with an EOS cumulative CPUE value of 1,277 for Chinook salmon, which was below the 2015-2021 average EOS cumulative CPUE of 2,609.

\*\*\* The cumulative Chinook salmon passage (95% CI) at the sonar, as of **7/23**, is **140,700 (113,800 - 167,600)** fish.

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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.
<b>7/22</b>	1,406	277	1,203	4,734	7,393	3,986	5,191
<b>7/23</b>	1,468	285	1,206	4,918	7,449	4,054	5,279
<b>7/24</b>	1,554	290	1,228	4,987	7,517	4,099	5,344
<b>7/25</b>	<b>1,598</b>	<b>294</b>	<b>1,250</b>	<b>5,097</b>	<b>7,581</b>	<b>4,154</b>	<b>5,394</b>
<b>7/26</b>		301	1,284	5,302	7,722	4,235	5,458
<b>7/27</b>		307	1,302	5,475	7,824	4,300	5,509
<b>7/28</b>		312	1,314	5,565	7,888	4,338	5,548
<b>EOS</b>		327	1,442	6,427	8,212	4,639	5,832

**Chum Salmon Table A2.** Percent of run complete according to various historical run timing scenarios from the BTF.

Timing	Midpoint	7/25 Cumulative %
<b>Earliest</b>	6/23	100%
<b>Early 10%</b>	7/1	99%
<b>Early 25%</b>	7/3	97%
<b>Median</b>	7/6	95%
<b>Late 25%</b>	7/8	92%
<b>Late 10%</b>	7/11	88%
<b>Latest</b>	7/15	82%

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The ATF ended operations on 7/12 with an EOS cumulative CPUE value of 940 for chum salmon, which was below the 2015-2021 average EOS cumulative CPUE of 5,134.

## Sockeye Salmon Appendix

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

Date	2022	2021	2020	2019	2018	5-Yr Avg.	2008 - 2021 Avg.
<b>7/22</b>	1,320	1,618	995	2,427	1,950	1,893	1,658
<b>7/23</b>	1,329	1,636	999	2,453	1,987	1,913	1,670
<b>7/24</b>	1,332	1,643	1,002	2,462	2,010	1,924	1,676
<b>7/25</b>	<b>1,338</b>	<b>1,654</b>	<b>1,006</b>	<b>2,462</b>	<b>2,030</b>	<b>1,933</b>	<b>1,683</b>
<b>7/26</b>		1,656	1,017	2,468	2,057	1,946	1,691
<b>7/27</b>		1,665	1,026	2,483	2,072	1,960	1,699
<b>7/28</b>		1,668	1,030	2,508	2,088	1,971	1,706
<b>EOS</b>		1,694	1,060	2,685	2,275	2,080	1,773

**Sockeye Salmon Table A2.** Percent of run complete according to various historical run timing scenarios from the BTF.

Timing	Midpoint	7/25 Cumulative %
<b>Earliest</b>	6/22	100%
<b>Early 10%</b>	6/24	100%
<b>Early 25%</b>	6/27	100%
<b>Median</b>	6/29	99%
<b>Late 25%</b>	7/2	98%
<b>Late 10%</b>	7/6	94%
<b>Latest</b>	7/10	88%

The ATF ended operations on 7/12 with an EOS cumulative CPUE value of 129 for sockeye salmon, which was below the 2017-2020 average EOS cumulative CPUE of 159.

## Coho Salmon Appendix

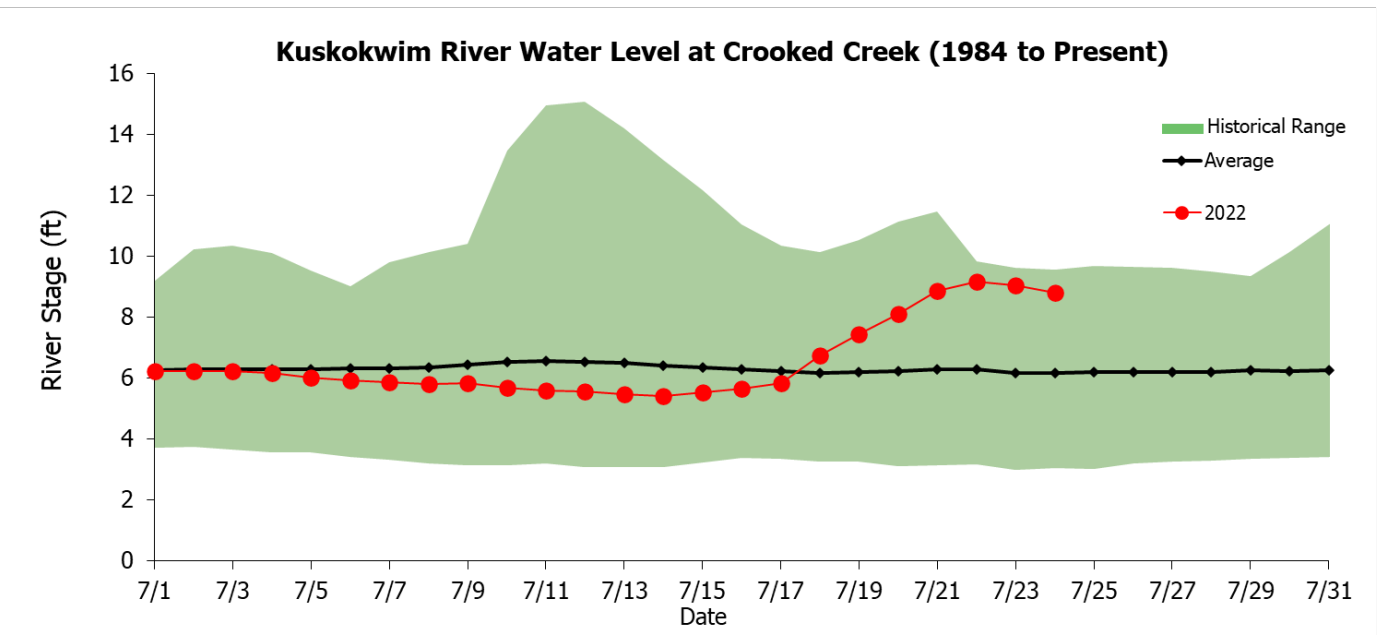
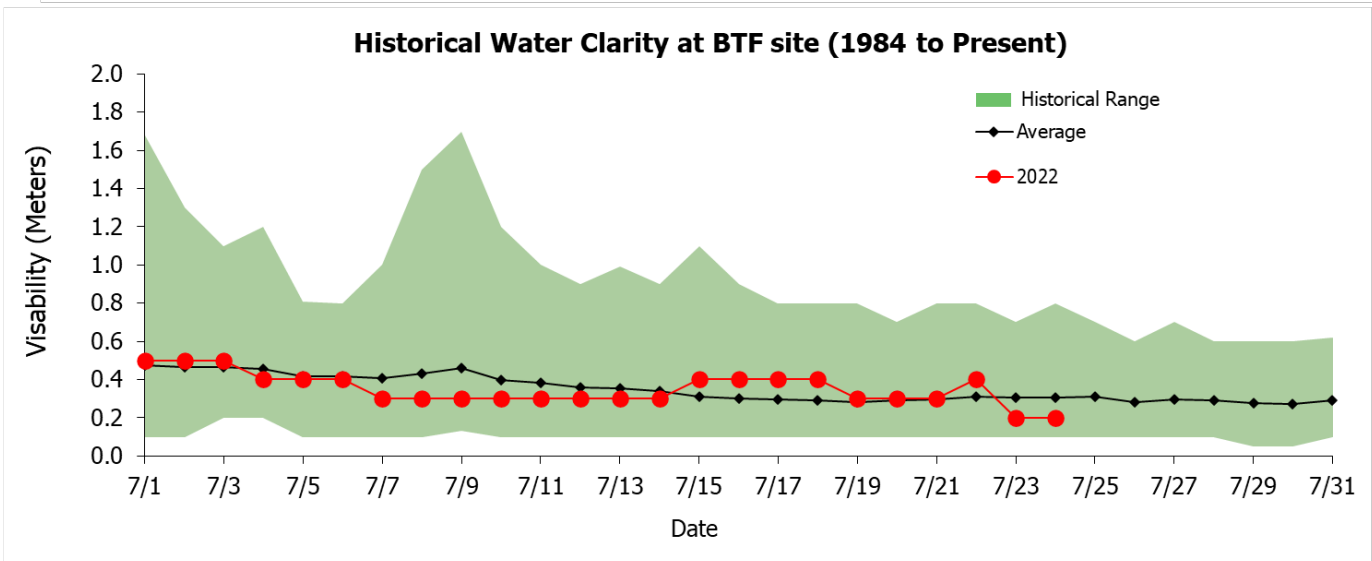
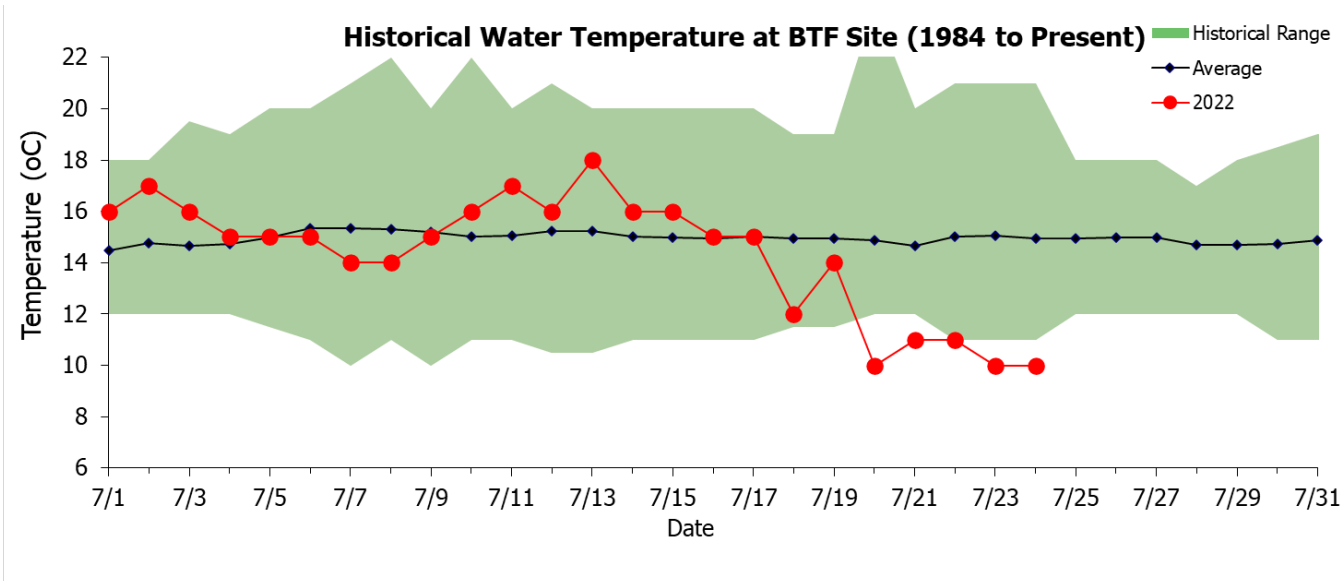
Coho Salmon Table A1. Cumulative CPUE from the BTF.

Date	2022	2021	2020	2019	2018	5-Yr Avg.	2008 - 2021 Avg.
<b>7/22</b>	11	31	5	31	2	20	77
<b>7/23</b>	12	44	5	40	5	27	102
<b>7/24</b>	15	53	12	50	19	38	129
<b>7/25</b>	<b>15</b>	<b>64</b>	<b>26</b>	<b>57</b>	<b>22</b>	<b>53</b>	<b>160</b>
<b>7/26</b>		109	49	84	30	78	204
<b>7/27</b>		140	70	116	40	100	248
<b>7/28</b>		176	77	131	64	123	308
<b>EOS</b>		1,696	1,822	1,801	901	1,893	2,923

Coho Salmon Table A2. Percent of run complete according to various historical run timing scenarios from the BTF.

Timing	Midpoint	7/25 Cumulative %
<b>Earliest</b>	7/29	19%
<b>Early 10%</b>	8/4	12%
<b>Early 25%</b>	8/6	7%
<b>Median</b>	8/8	3%
<b>Late 25%</b>	8/11	1%
<b>Late 10%</b>	8/13	<1%
<b>Latest</b>	8/15	<1%

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<b>George River Weir - Chinook Salmon (7/26/2022 7:45:23 PM).....</b>	<b>3</b>
<b>Kogruklu River Weir - Chinook Salmon (7/26/2022 7:45:23 PM).....</b>	<b>4</b>
<b>Takotna River Weir - Chinook Salmon (7/26/2022 7:45:24 PM).....</b>	<b>5</b>
<b>Salmon River (Pitka Fork) Weir - Chinook Salmon (7/26/2022 7:45:24 PM).....</b>	<b>6</b>
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<b>Salmon River (Aniak) Weir - Chum Salmon (7/26/2022 7:45:25 PM).....</b>	<b>8</b>
<b>George River Weir - Chum Salmon (7/26/2022 7:45:26 PM).....</b>	<b>9</b>
<b>Kogruklu River Weir - Chum Salmon (7/26/2022 7:45:26 PM).....</b>	<b>10</b>
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<b>Escapement Project Map (7/26/2022 7:45:29 PM).....</b>	<b>16</b>

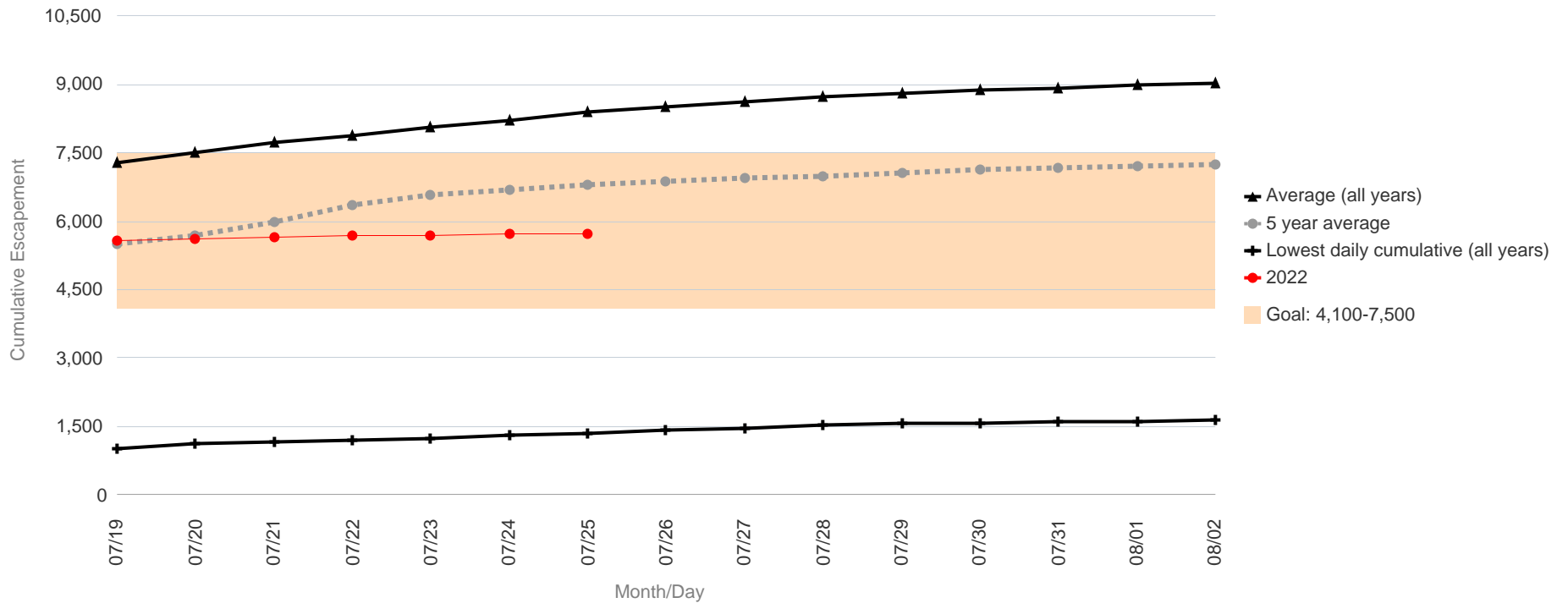
### Kwethluk River Salmon Monitoring Project Cumulative Daily Passage of Chinook Salmon

Escapement Goal Range: 4,100 to 7,500

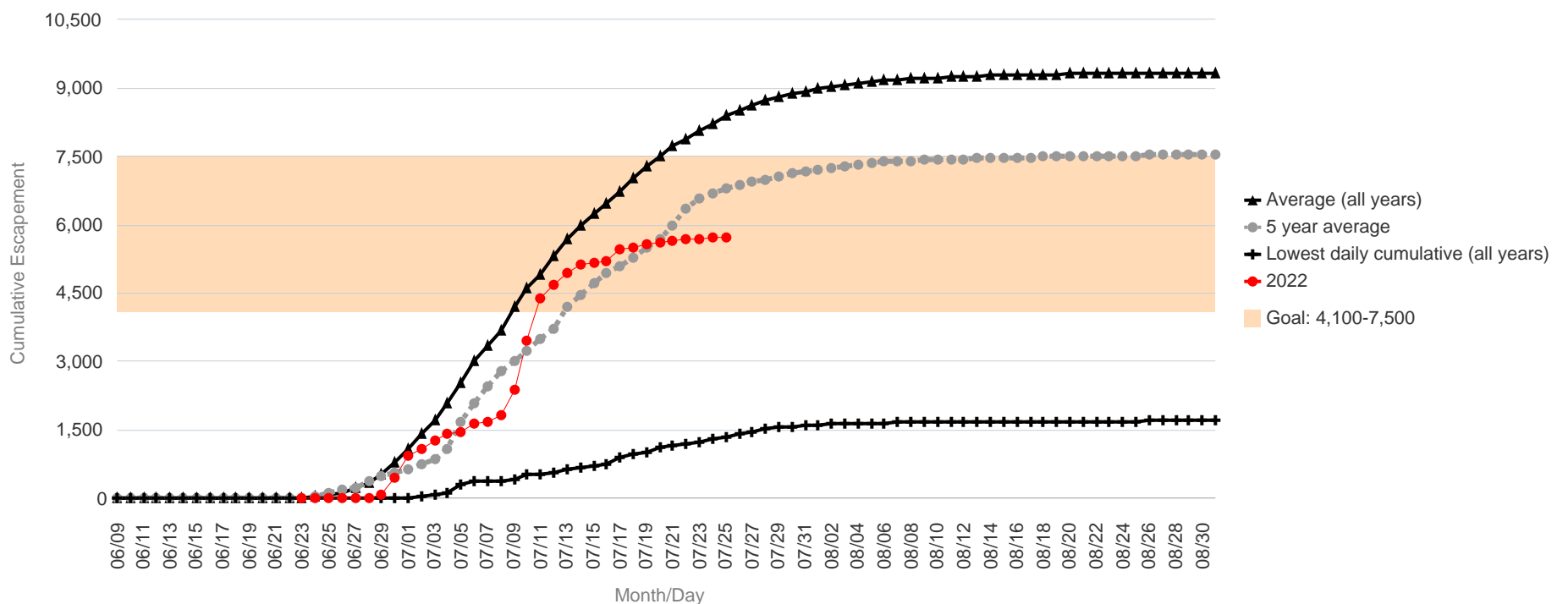
Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	2022
07/19	1,021	7,297	5,494	5,574
07/20	1,107	7,525	5,701	5,607
07/21	1,166	7,720	5,998	5,653
07/22	1,207	7,885	6,369	5,674
07/23	1,249	8,068	6,595	5,687
07/24	1,308	8,223	6,684	5,722
07/25	1,354	8,383	6,803	5,742
07/26	1,428	8,507	6,877	
07/27	1,472	8,635	6,948	
07/28	1,522	8,724	7,007	
07/29	1,552	8,811	7,071	
07/30	1,572	8,868	7,126	
07/31	1,594	8,937	7,176	
08/01	1,611	8,991	7,201	
08/02	1,629	9,041	7,241	

	Lowest Count	Average Count	5 Year Average
Season Total	1,716	9,334	7,540

#### Focused Two-Week Data View



#### Season Total Overview



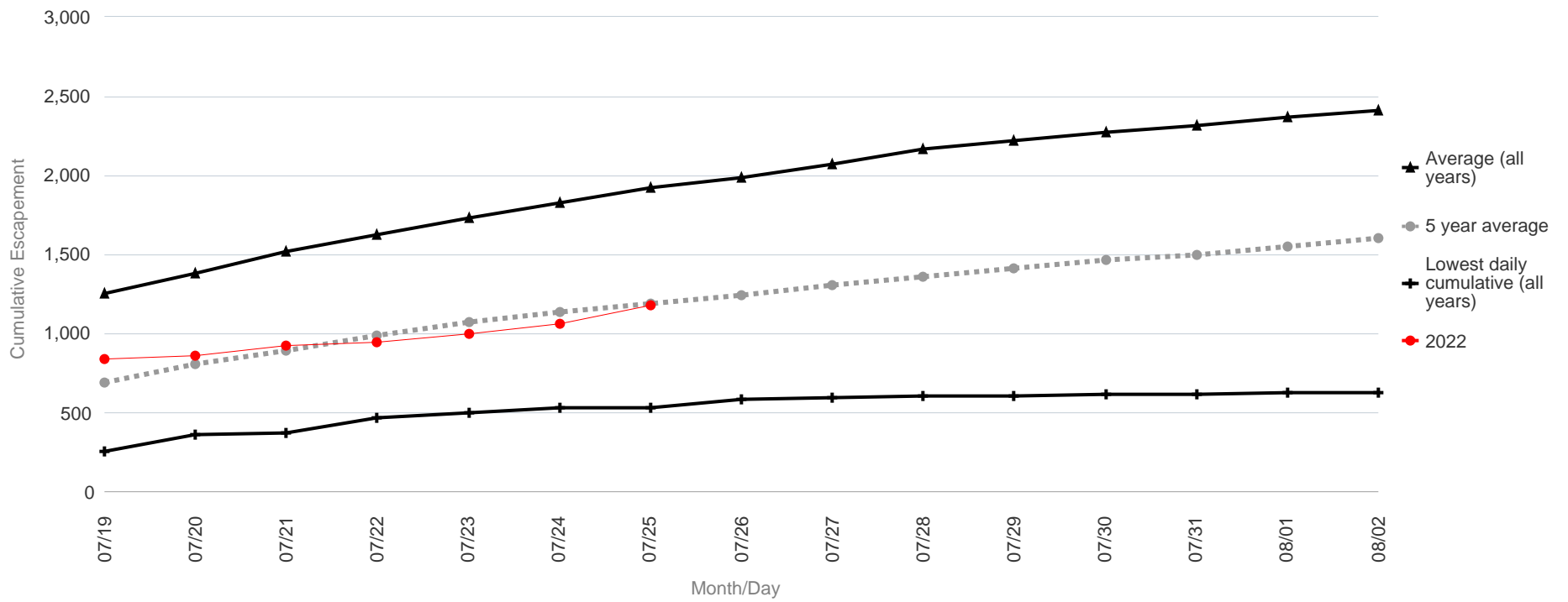


### Salmon River (Aniak) Salmon Monitoring Project Passage of Chinook Salmon

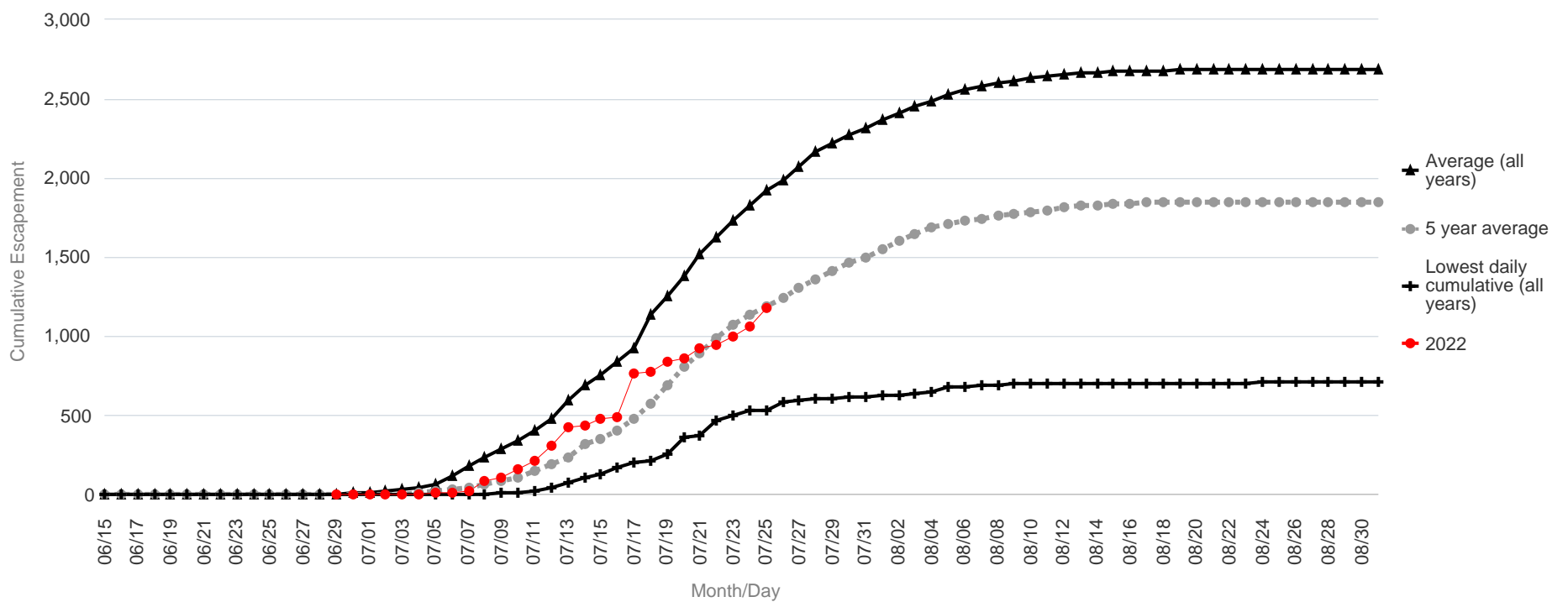
Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	2022
07/19	261	1,250	697	842
07/20	359	1,384	813	865
07/21	371	1,515	894	927
07/22	466	1,629	990	943
07/23	500	1,731	1,070	998
07/24	534	1,825	1,138	1,066
07/25	537	1,918	1,194	1,177
07/26	583	1,985	1,246	
07/27	600	2,067	1,305	
07/28	604	2,163	1,363	
07/29	611	2,220	1,409	
07/30	617	2,270	1,465	
07/31	622	2,319	1,503	
08/01	626	2,365	1,555	
08/02	631	2,408	1,600	

	Lowest Count	Average Count	5 Year Average
Season Total	711	2,686	1,849

#### Focused Two-Week Data View



#### Season Total Overview



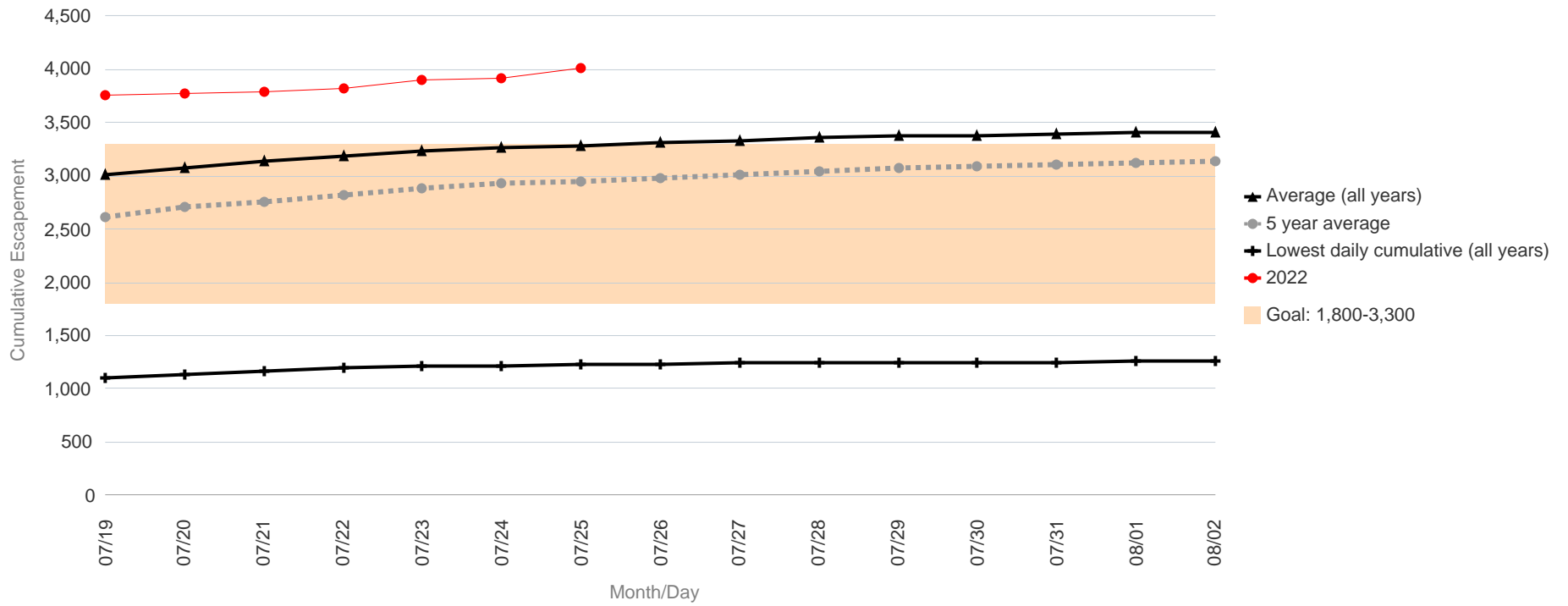
## George River Salmon Monitoring Project Cumulative Daily Passage of Chinook Salmon

Escapement Goal Range: 1,800 to 3,300

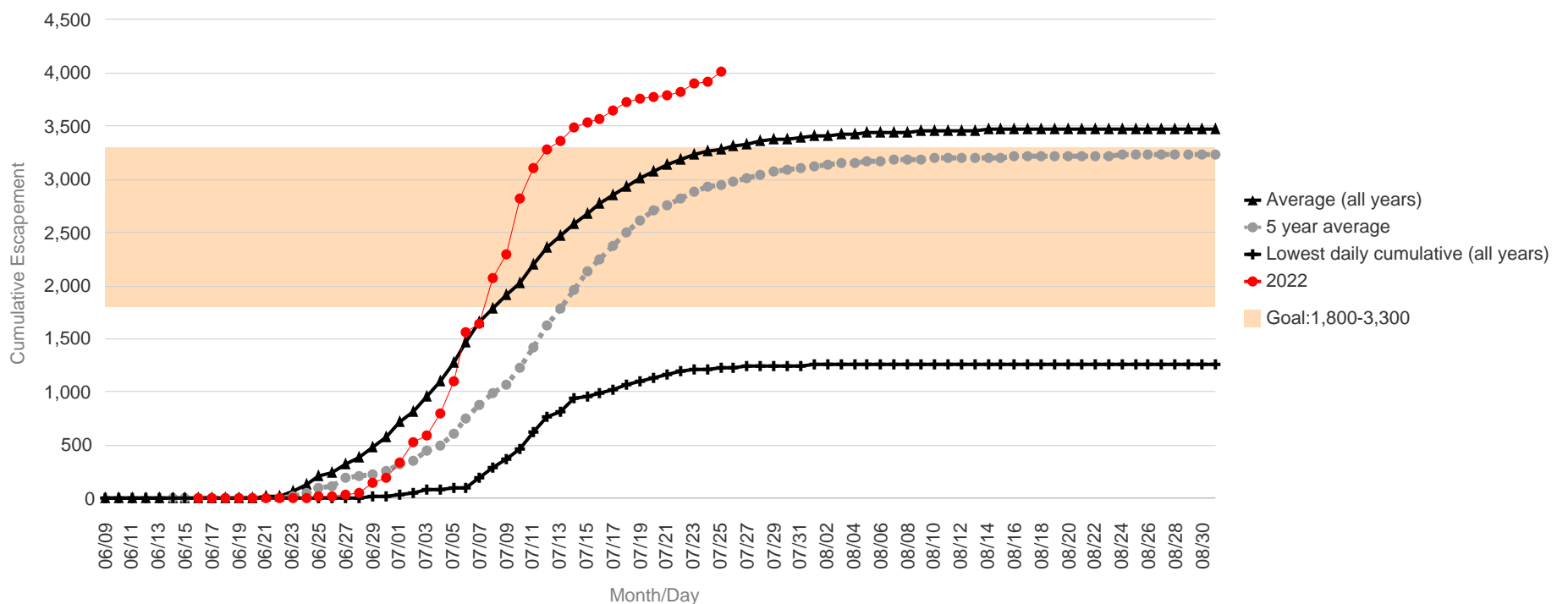
Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	2022
07/19	1,101	3,010	2,618	3,765
07/20	1,127	3,078	2,706	3,771
07/21	1,168	3,141	2,762	3,796
07/22	1,189	3,181	2,826	3,825
07/23	1,205	3,228	2,884	3,908
07/24	1,215	3,258	2,928	3,924
07/25	1,226	3,286	2,951	4,010
07/26	1,235	3,310	2,981	
07/27	1,239	3,333	3,013	
07/28	1,247	3,355	3,047	
07/29	1,248	3,371	3,070	
07/30	1,250	3,383	3,097	
07/31	1,251	3,395	3,114	
08/01	1,254	3,405	3,125	
08/02	1,255	3,415	3,140	

	Lowest Count	Average Count	5 Year Average
Season Total	1,267	3,480	3,231

### Focused Two-Week Data View



### Season Total Overview



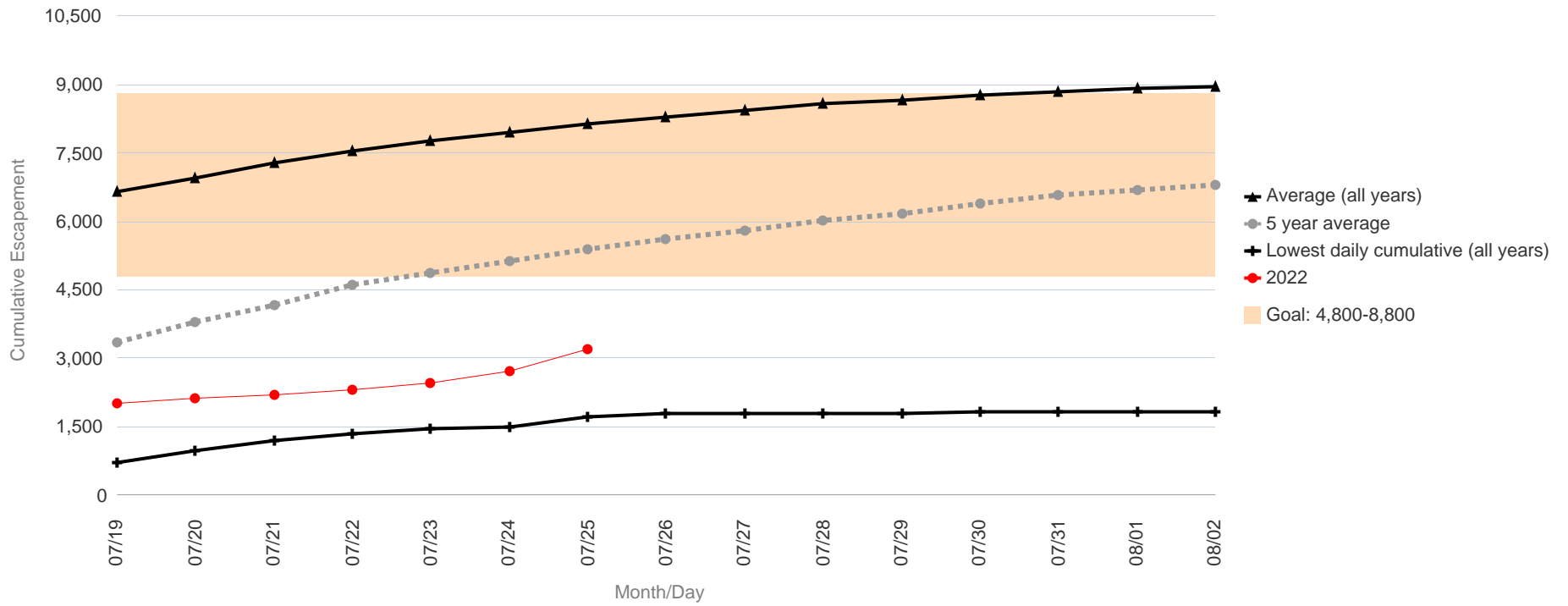
## Kogrukluk River Salmon Monitoring Project Cumulative Daily Passage of Chinook Salmon

Escapement Goal Range: 4,800 to 8,800

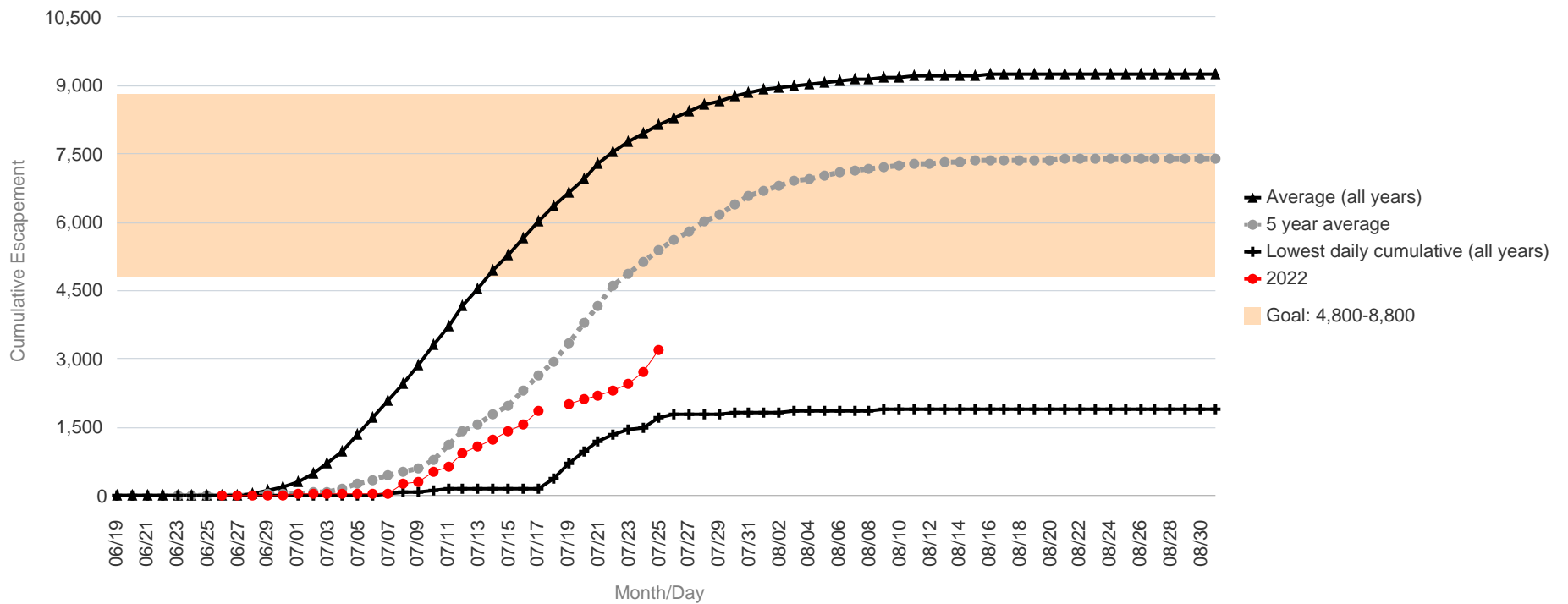
Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	2022
07/19	703	6,663	3,359	2,005
07/20	967	6,957	3,788	2,129
07/21	1,192	7,279	4,176	2,186
07/22	1,354	7,539	4,605	2,322
07/23	1,467	7,750	4,878	2,450
07/24	1,507	7,942	5,139	2,700
07/25	1,705	8,139	5,393	3,205
07/26	1,775	8,298	5,626	
07/27	1,794	8,438	5,808	
07/28	1,800	8,567	6,013	
07/29	1,801	8,673	6,162	
07/30	1,812	8,769	6,395	
07/31	1,824	8,845	6,565	
08/01	1,834	8,907	6,705	
08/02	1,838	8,960	6,787	

	Lowest Count	Average Count	5 Year Average
Season Total	1,919	9,270	7,401

### Focused Two-Week Data View



### Season Total Overview

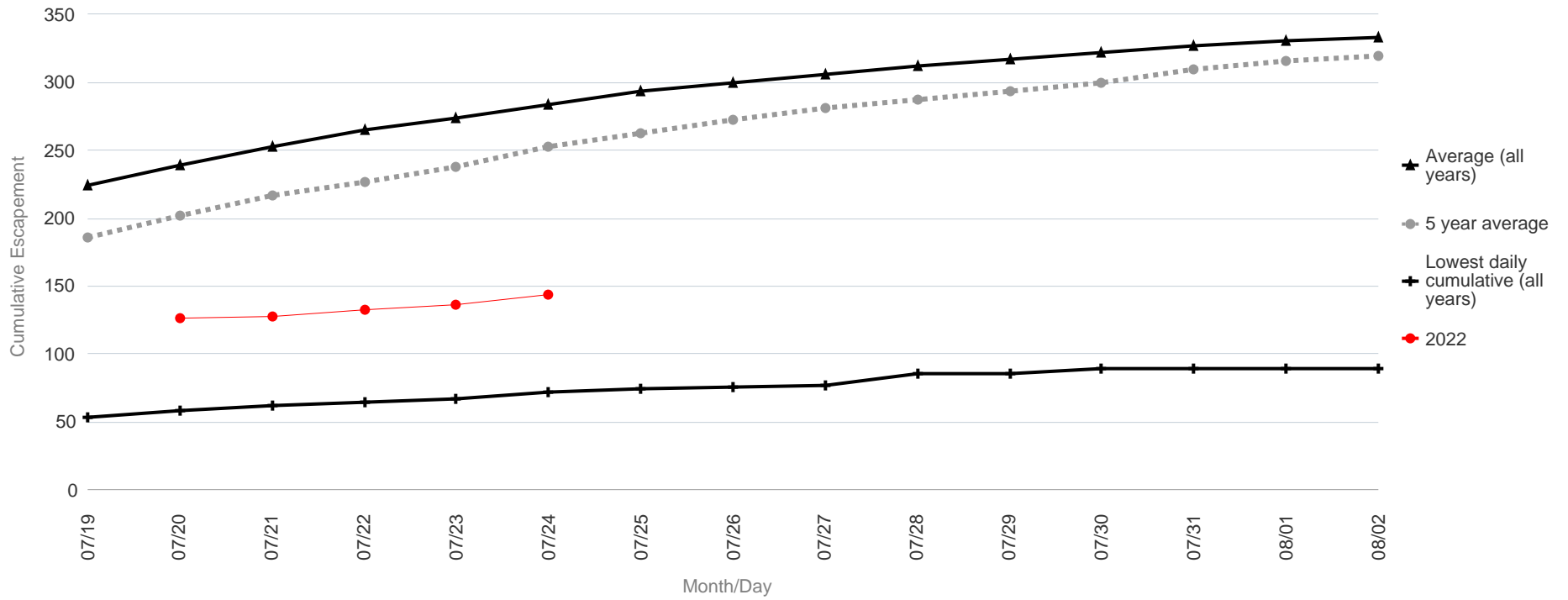


### Takotna River Salmon Monitoring Project Passage of Chinook Salmon

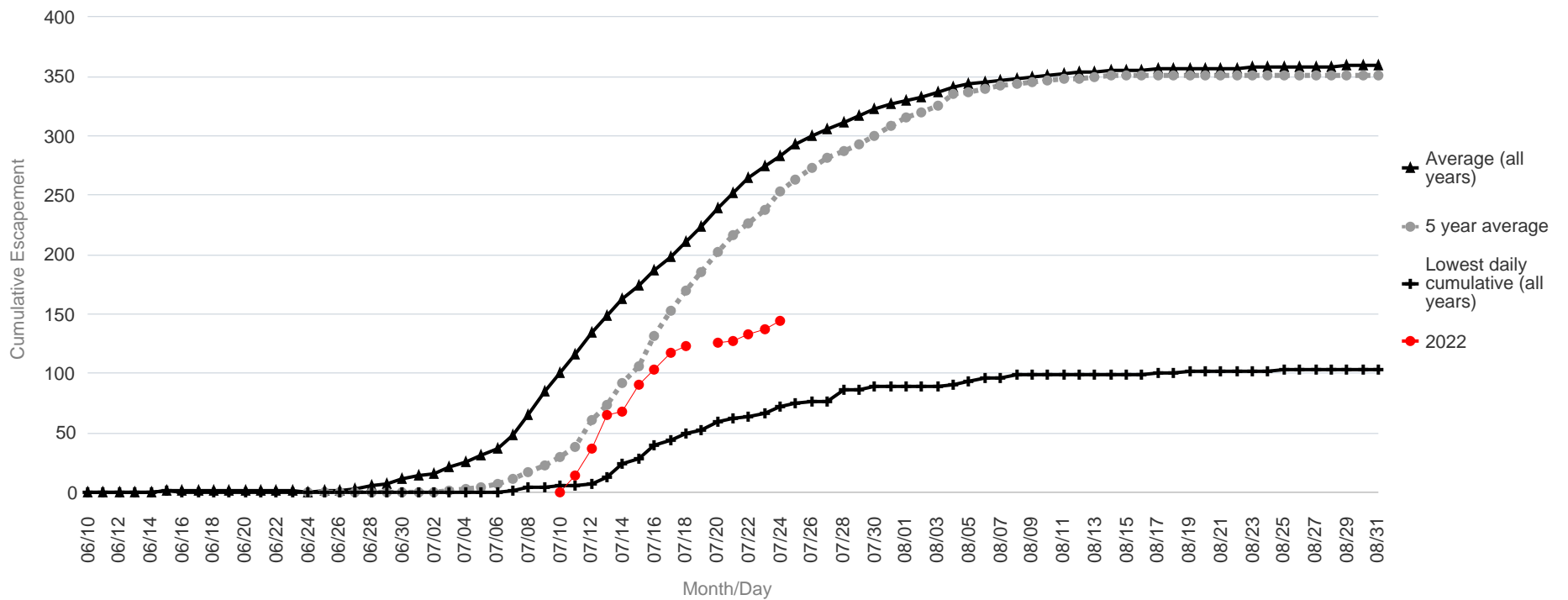
Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	2022
07/19	53	224	186	
07/20	59	239	202	126
07/21	62	253	217	128
07/22	64	265	227	133
07/23	67	274	238	137
07/24	72	284	253	144
07/25	75	294	263	
07/26	76	300	273	
07/27	77	306	281	
07/28	86	312	287	
07/29	86	317	294	
07/30	89	322	300	
07/31	89	327	309	
08/01	89	330	316	
08/02	89	333	320	

	Lowest Count	Average Count	5 Year Average
Season Total	104	360	351

#### Focused Two-Week Data View



#### Season Total Overview

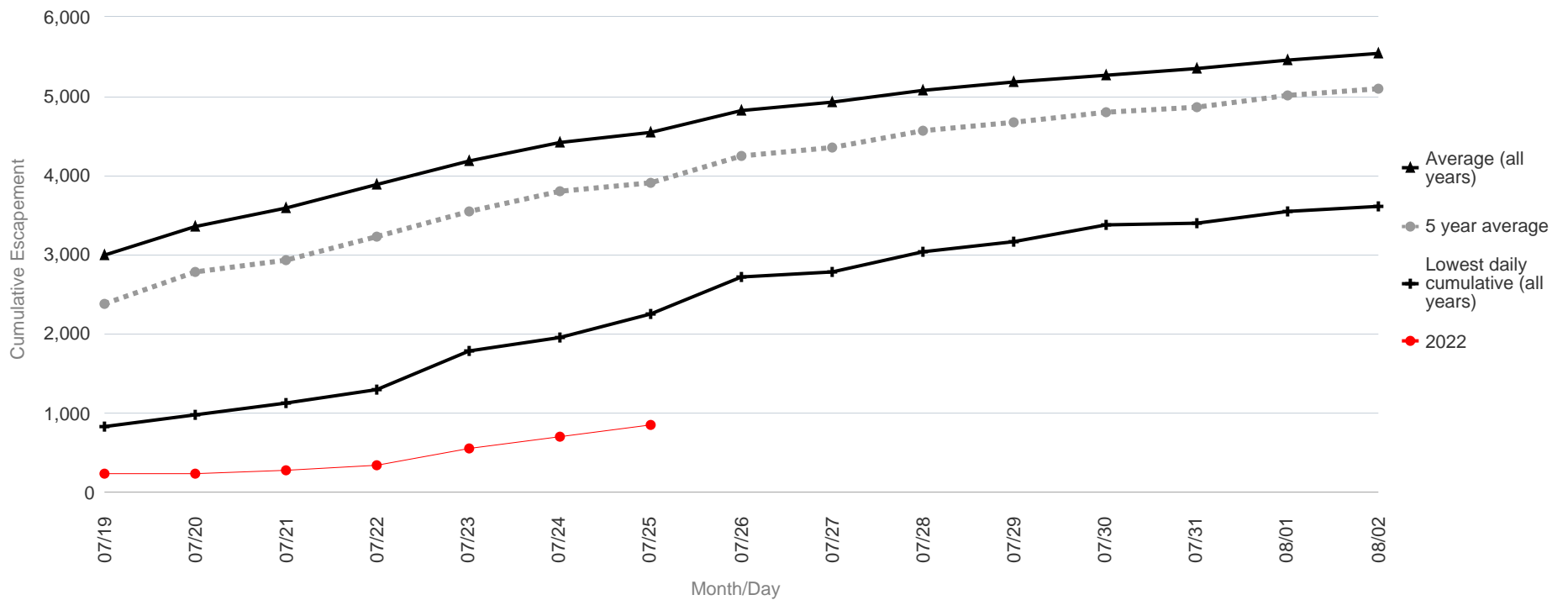


### Salmon River (Pitka Fork) Salmon Monitoring Project Passage of Chinook Salmon

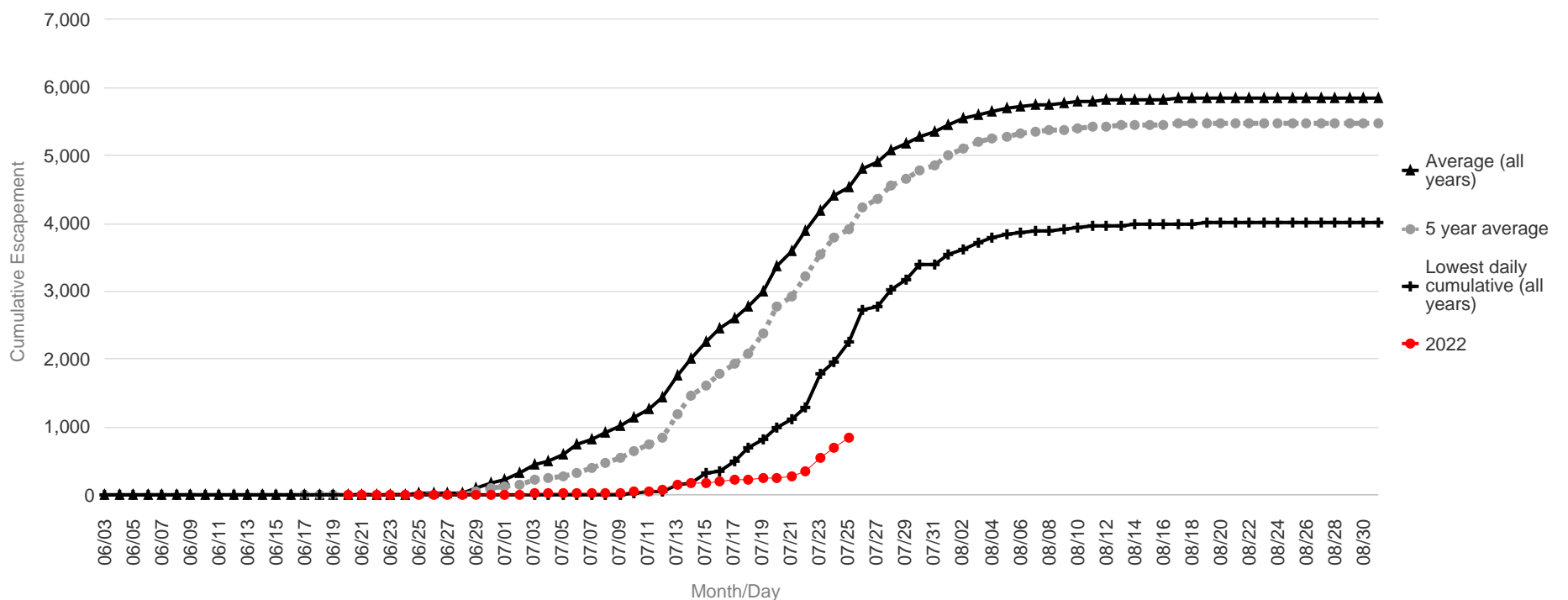
Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	2022
07/19	824	3,006	2,380	245
07/20	983	3,364	2,783	245
07/21	1,120	3,596	2,931	277
07/22	1,291	3,895	3,226	340
07/23	1,789	4,188	3,545	554
07/24	1,962	4,419	3,793	696
07/25	2,253	4,538	3,912	857
07/26	2,716	4,817	4,248	
07/27	2,786	4,917	4,358	
07/28	3,032	5,072	4,556	
07/29	3,175	5,178	4,667	
07/30	3,387	5,277	4,790	
07/31	3,402	5,347	4,868	
08/01	3,546	5,461	5,003	
08/02	3,614	5,540	5,102	

	Lowest Count	5 Year Average	Average Count
Season Total	4,014	5,474	5,846

#### Focused Two-Week Data View



#### Season Total Overview

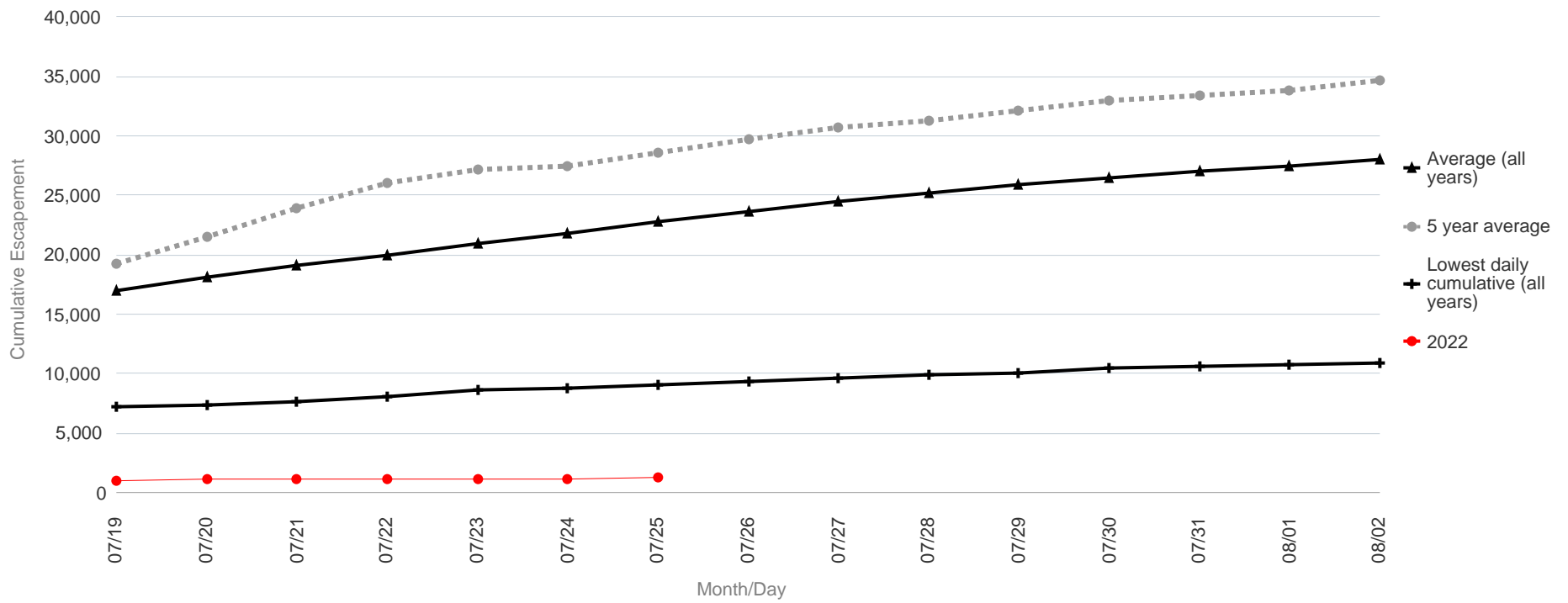


### Kwethluk River Salmon Monitoring Project Cumulative Daily Passage of Chum Salmon

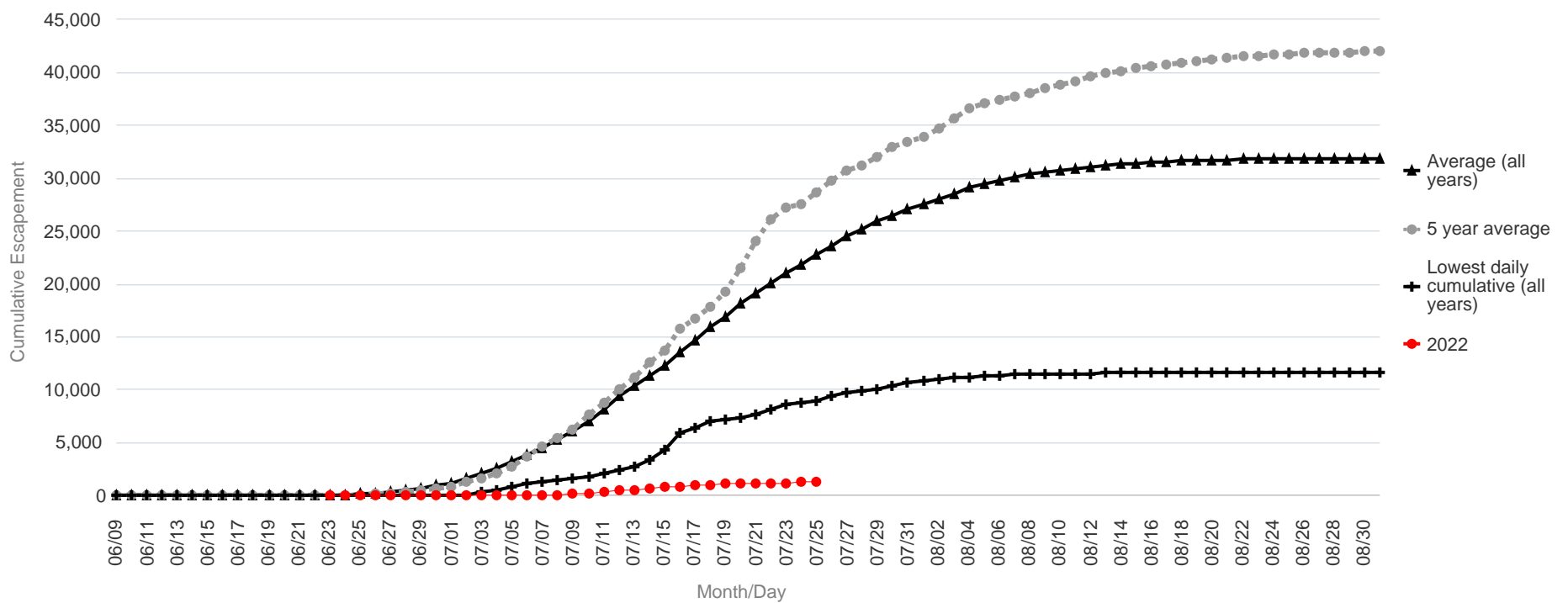
Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	2022
07/19	7,245	16,961	19,303	1,088
07/20	7,418	18,100	21,562	1,139
07/21	7,701	19,109	23,993	1,164
07/22	8,122	20,024	26,075	1,176
07/23	8,590	21,015	27,219	1,196
07/24	8,807	21,838	27,499	1,228
07/25	9,015	22,767	28,653	1,259
07/26	9,346	23,618	29,719	
07/27	9,711	24,472	30,685	
07/28	9,928	25,167	31,277	
07/29	10,129	25,900	32,083	
07/30	10,426	26,501	33,026	
07/31	10,674	27,026	33,438	
08/01	10,829	27,521	33,883	
08/02	10,972	28,093	34,751	

	Lowest Count	Average Count	5 Year Average
Season Total	11,691	31,977	42,166

#### Focused Two-Week Data View



#### Season Total Overview

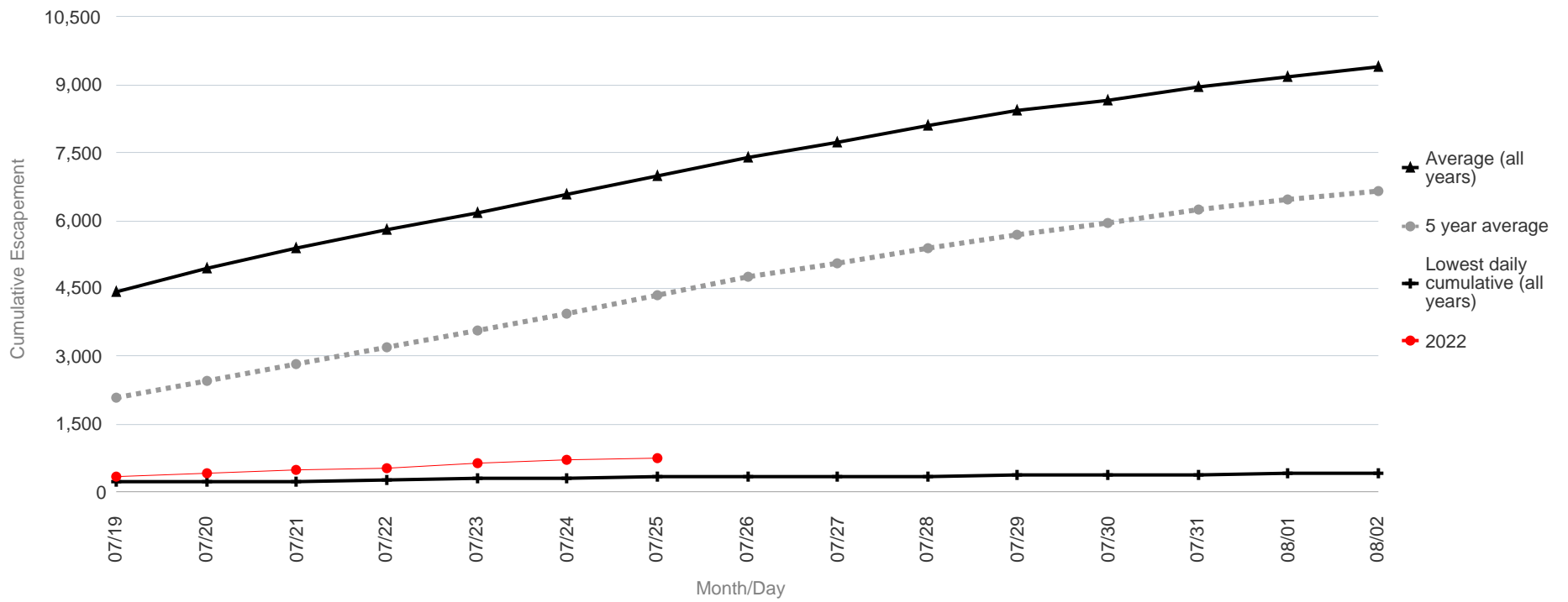


### Salmon River (Aniak) Salmon Monitoring Project Passage of Chum Salmon

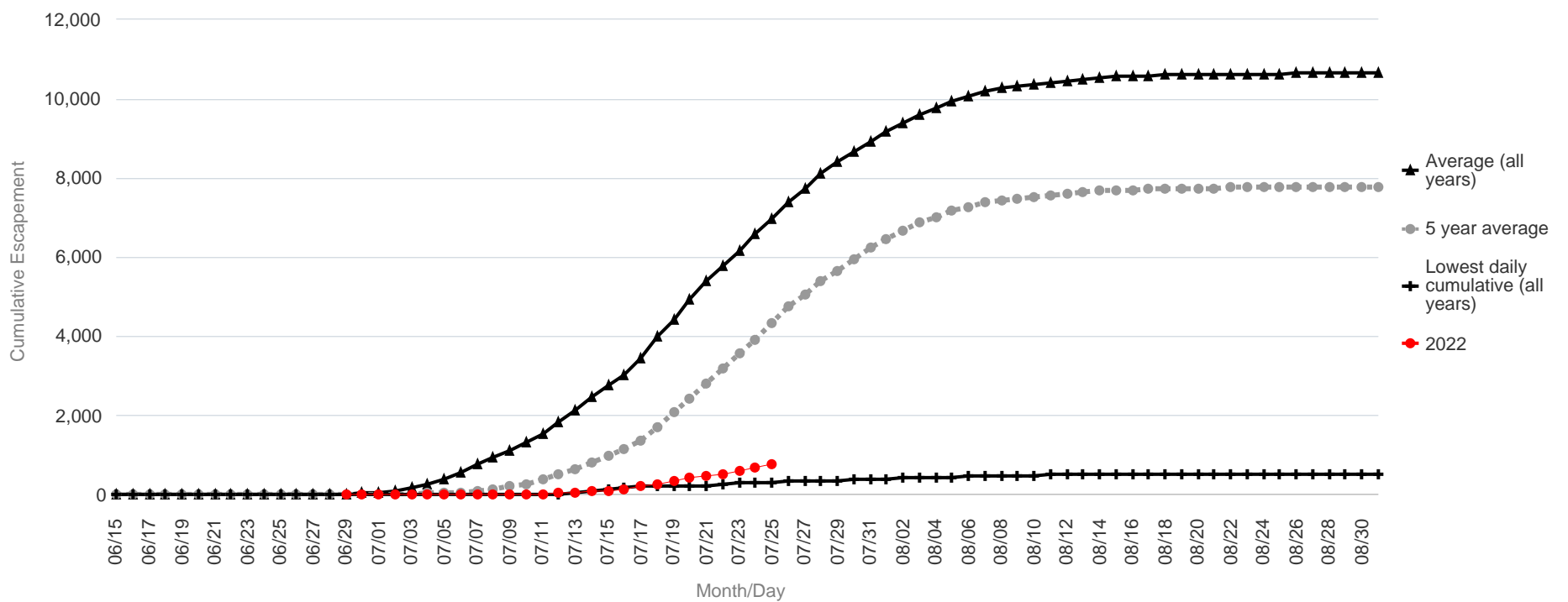
Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	2022
07/19	218	4,442	2,088	358
07/20	225	4,935	2,444	412
07/21	239	5,386	2,820	484
07/22	269	5,787	3,200	516
07/23	287	6,177	3,565	621
07/24	308	6,590	3,931	695
07/25	323	6,971	4,341	767
07/26	338	7,412	4,773	
07/27	352	7,744	5,051	
07/28	357	8,114	5,387	
07/29	365	8,420	5,671	
07/30	379	8,673	5,965	
07/31	391	8,941	6,255	
08/01	402	9,177	6,476	
08/02	414	9,403	6,673	

	Lowest Count	Average Count	5 Year Average
Season Total	537	10,643	7,764

#### Focused Two-Week Data View



#### Season Total Overview

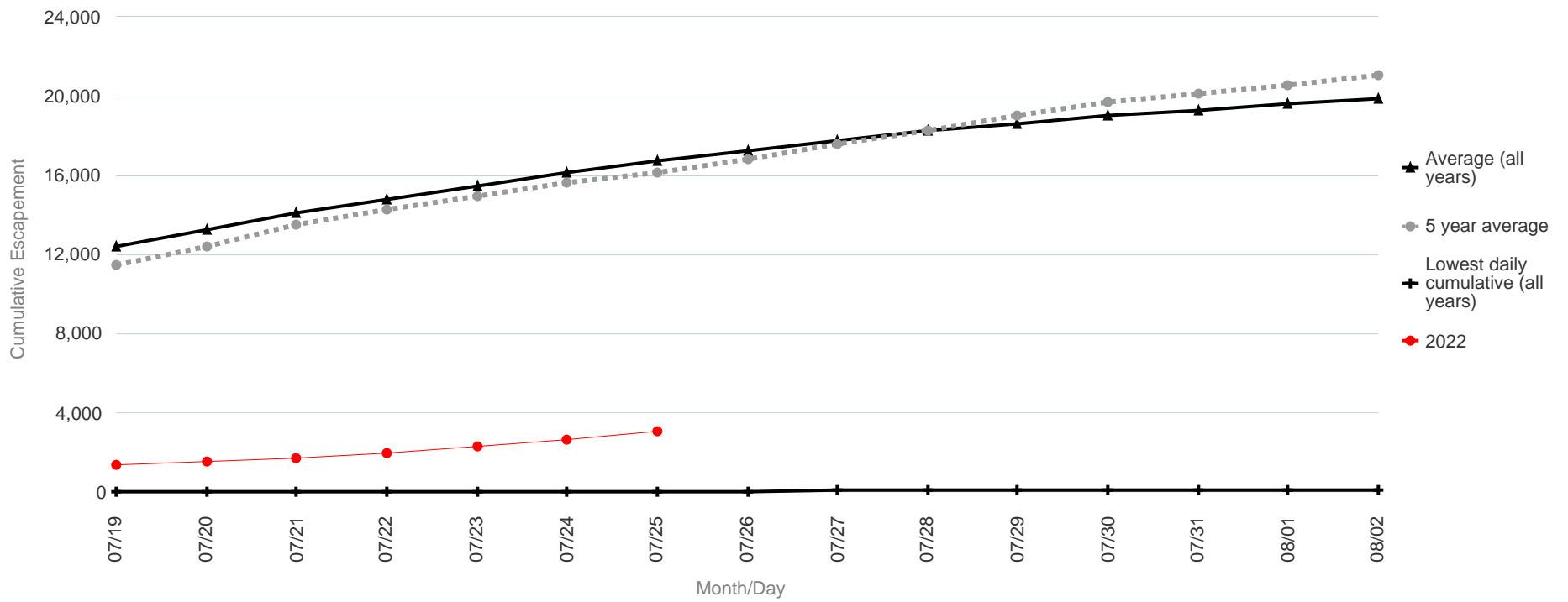


### George River Salmon Monitoring Project Cumulative Daily Passage of Chum Salmon

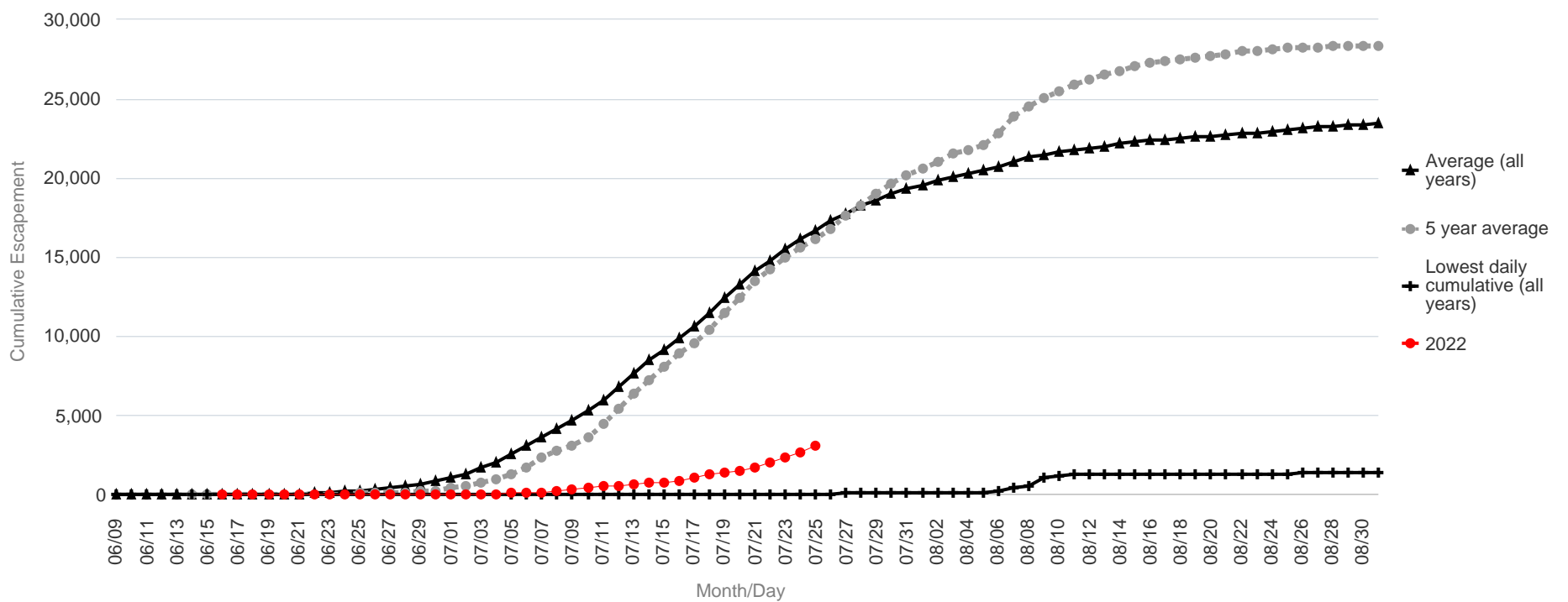
Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	2022
07/19	2	12,442	11,476	1,409
07/20	4	13,287	12,403	1,557
07/21	12	14,147	13,482	1,704
07/22	13	14,797	14,279	1,985
07/23	23	15,467	14,994	2,311
07/24	28	16,109	15,650	2,636
07/25	39	16,716	16,162	3,050
07/26	58	17,282	16,820	
07/27	80	17,791	17,583	
07/28	80	18,223	18,252	
07/29	80	18,631	18,990	
07/30	80	18,993	19,667	
07/31	80	19,306	20,157	
08/01	80	19,583	20,584	
08/02	80	19,843	21,029	

	Lowest Count	Average Count	5 Year Average
Season Total	1,371	24,007	28,454

#### Focused Two-Week Data View



#### Season Total Overview





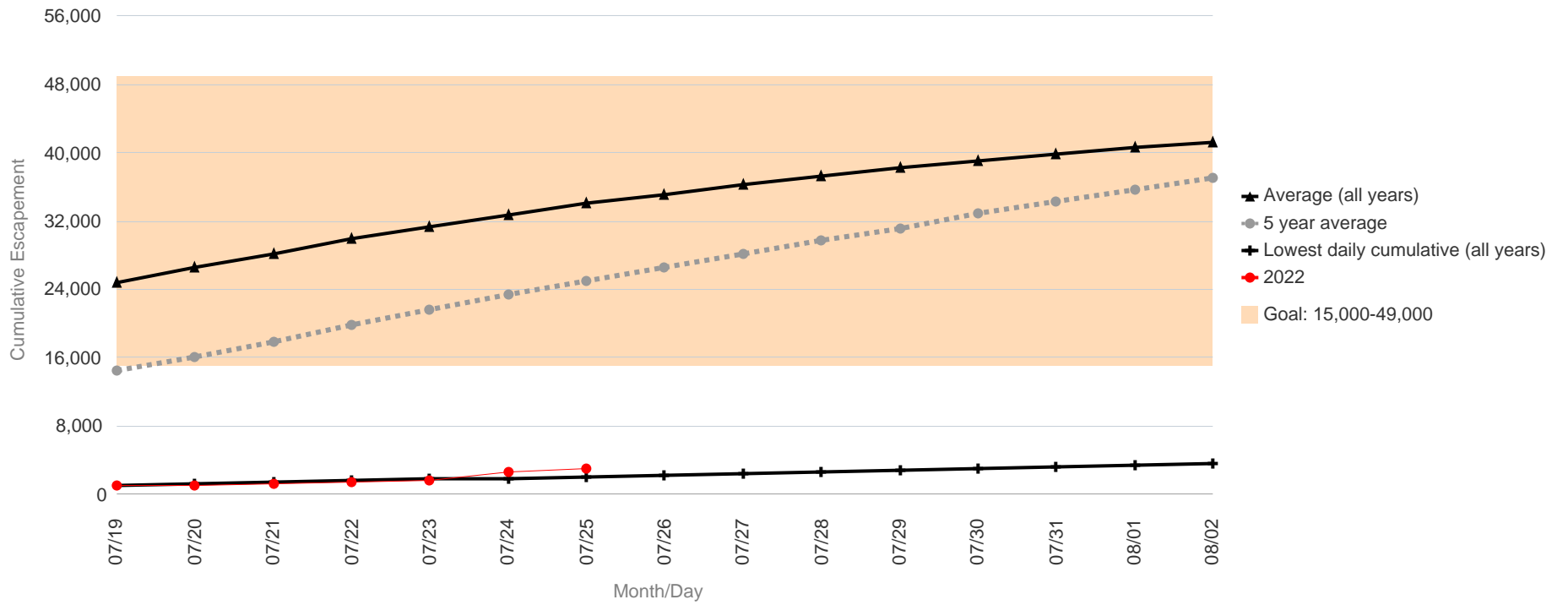
## Kogrukluk River Salmon Monitoring Project Cumulative Daily Passage of Chum Salmon

**Escapement Goal Range: 15,000 to 49,000**

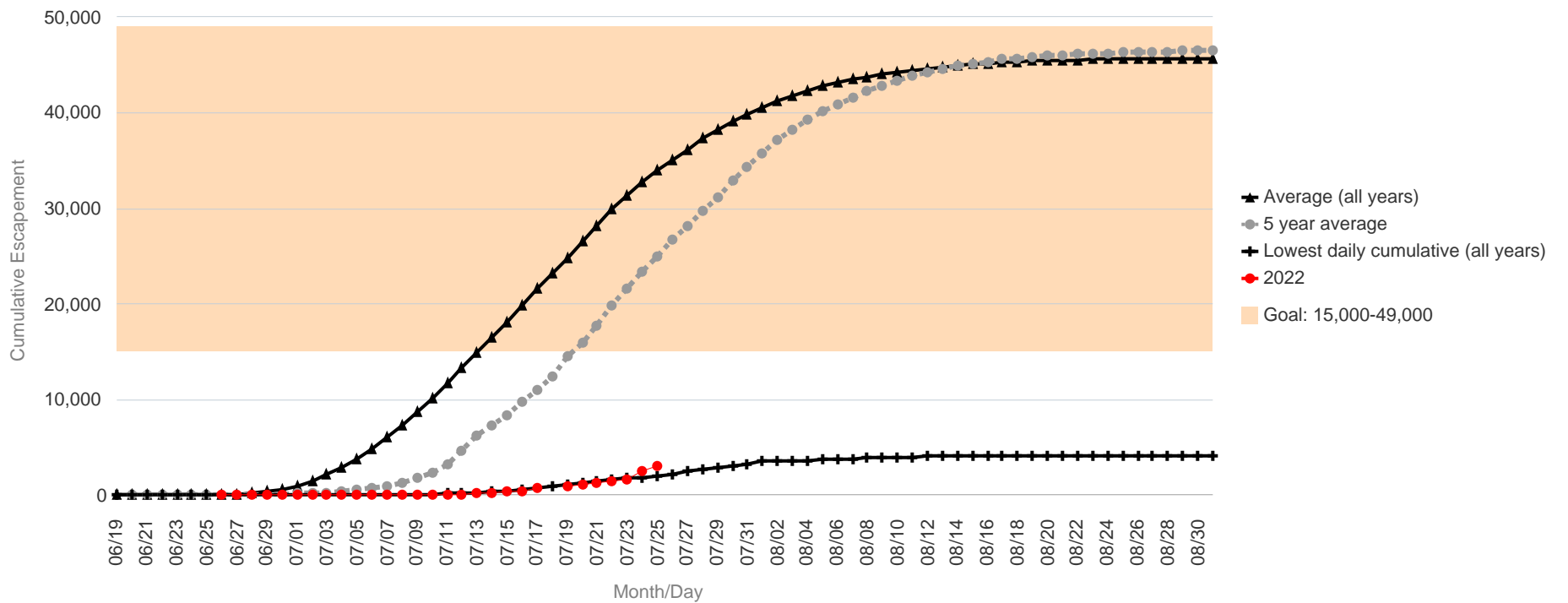
Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	2022
07/19	1,090	24,868	14,498	953
07/20	1,240	26,511	16,036	1,094
07/21	1,424	28,230	17,789	1,221
07/22	1,563	29,857	19,862	1,366
07/23	1,740	31,348	21,570	1,570
07/24	1,861	32,758	23,336	2,571
07/25	2,017	34,012	25,044	2,990
07/26	2,203	35,119	26,655	
07/27	2,437	36,186	28,122	
07/28	2,708	37,293	29,676	
07/29	2,889	38,224	31,201	
07/30	3,103	39,069	32,855	
07/31	3,289	39,840	34,375	
08/01	3,495	40,552	35,784	
08/02	3,528	41,202	37,114	

	Lowest Count	Average Count	5 Year Average
Season Total	4,153	45,763	46,599

### Focused Two-Week Data View



### Season Total Overview

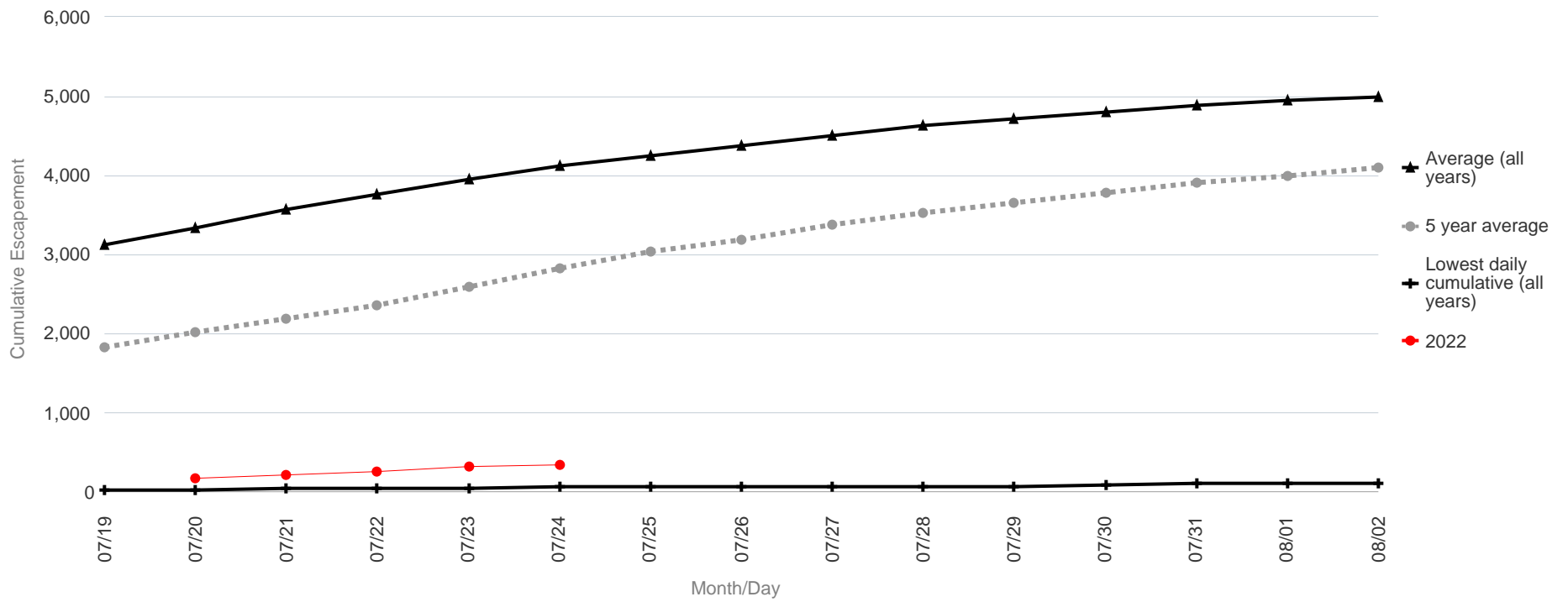


### Takotna River Salmon Monitoring Project Passage of Chum Salmon

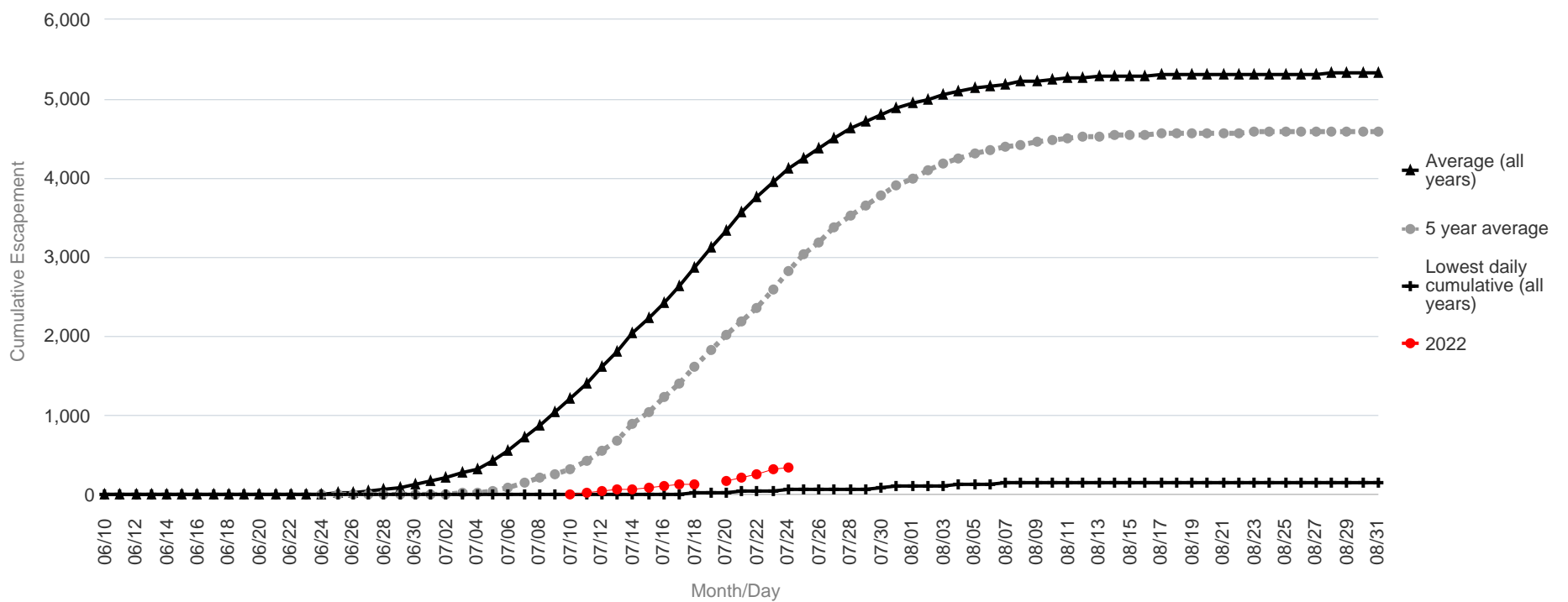
Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	2022
07/19	20	3,121	1,834	
07/20	34	3,342	2,011	178
07/21	37	3,568	2,192	215
07/22	44	3,756	2,353	253
07/23	51	3,944	2,601	314
07/24	57	4,111	2,826	352
07/25	64	4,255	3,036	
07/26	67	4,386	3,196	
07/27	71	4,505	3,373	
07/28	72	4,621	3,516	
07/29	75	4,717	3,659	
07/30	87	4,799	3,780	
07/31	105	4,878	3,901	
08/01	119	4,938	3,999	
08/02	120	4,993	4,089	

	Lowest Count	Average Count	5 Year Average
Season Total	151	5,324	4,583

#### Focused Two-Week Data View



#### Season Total Overview

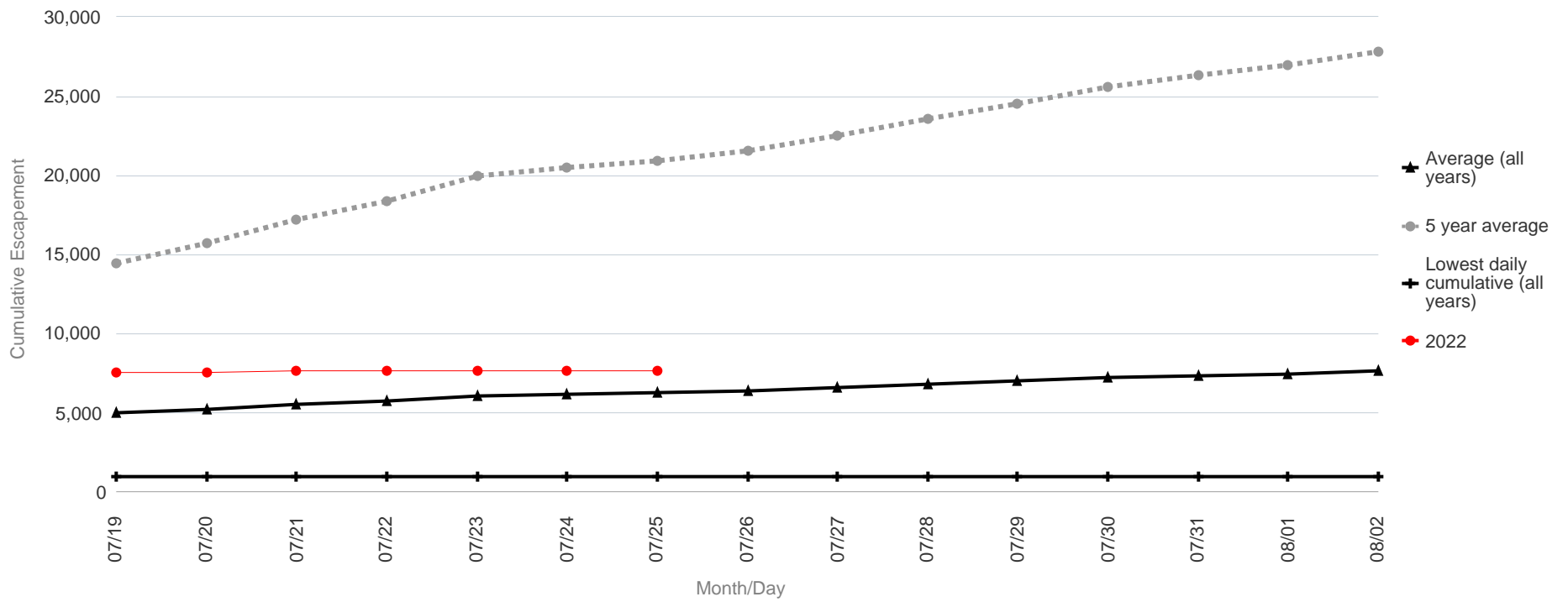


### Kwethluk River Salmon Monitoring Project Cumulative Daily Passage of Sockeye Salmon

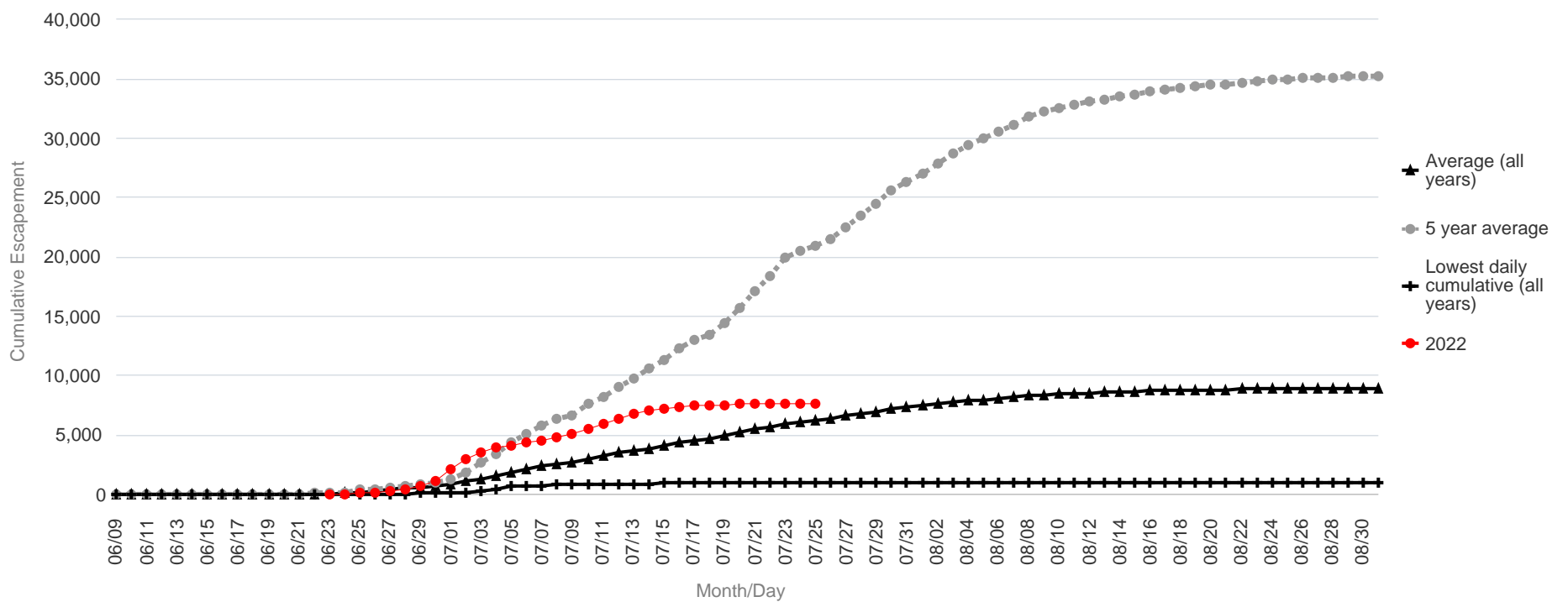
Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	2022
07/19	980	4,962	14,434	7,577
07/20	980	5,216	15,737	7,600
07/21	983	5,494	17,160	7,631
07/22	985	5,733	18,422	7,639
07/23	985	6,018	19,929	7,654
07/24	987	6,160	20,509	7,654
07/25	988	6,283	20,974	7,672
07/26	989	6,413	21,581	
07/27	993	6,616	22,557	
07/28	993	6,808	23,542	
07/29	994	7,001	24,562	
07/30	994	7,197	25,606	
07/31	999	7,343	26,364	
08/01	1,002	7,467	27,023	
08/02	1,003	7,619	27,852	

	Lowest Count	Average Count	5 Year Average
Season Total	1,049	9,040	35,509

#### Focused Two-Week Data View



#### Season Total Overview

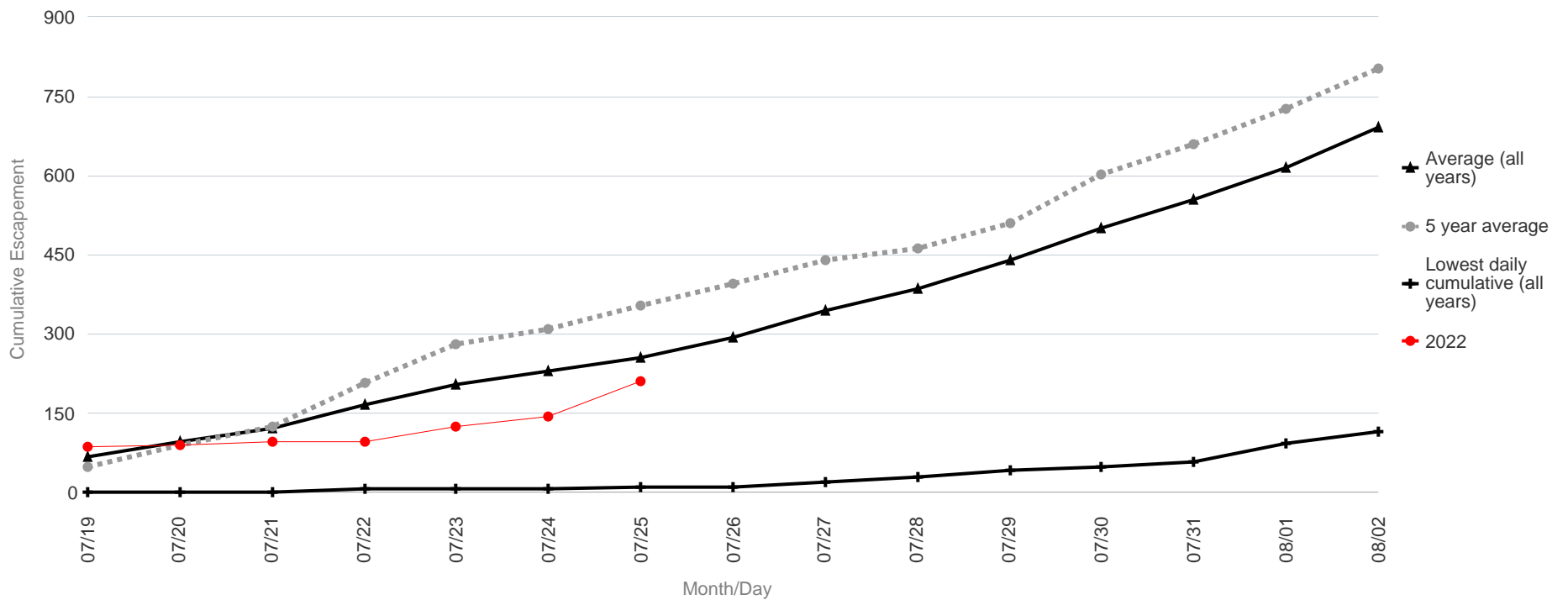


### Salmon River (Aniak) Salmon Monitoring Project Passage of Sockeye Salmon

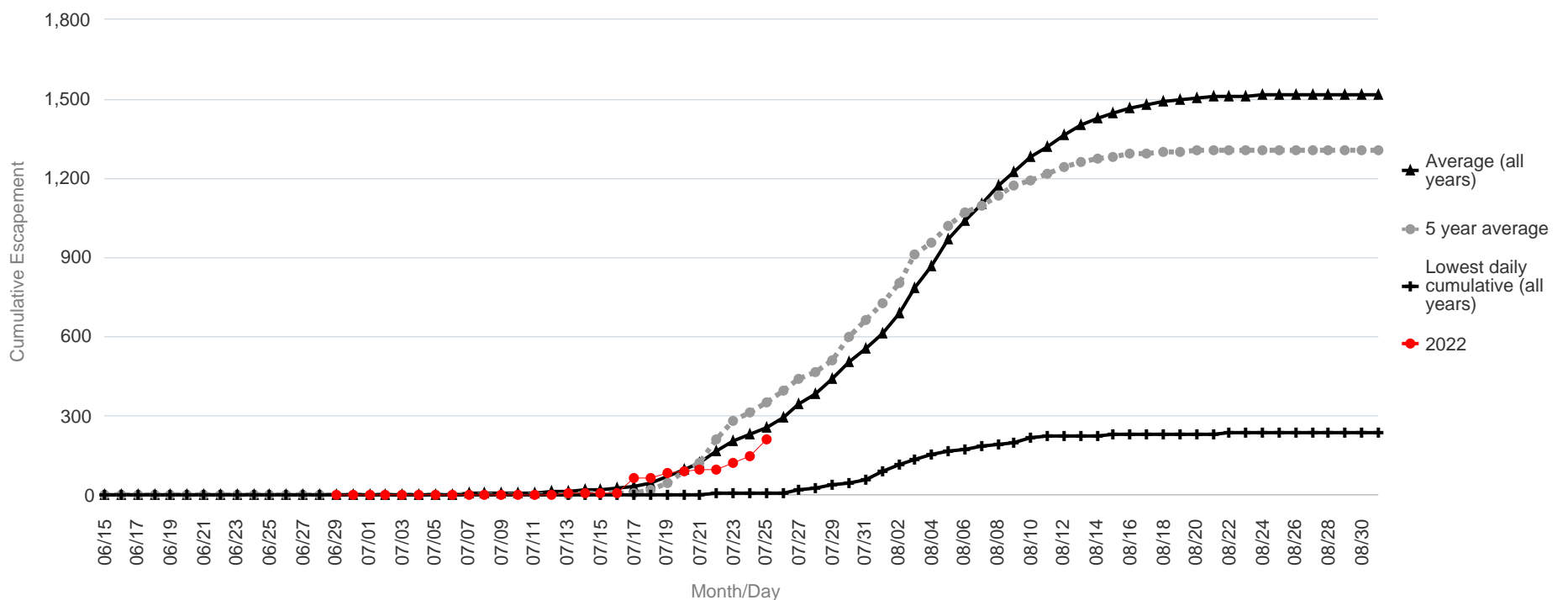
Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	2022
07/19	0	68	48	86
07/20	1	96	90	89
07/21	2	122	124	96
07/22	6	167	208	97
07/23	7	203	280	125
07/24	8	229	311	145
07/25	9	255	354	212
07/26	10	293	397	
07/27	20	345	440	
07/28	28	386	464	
07/29	41	439	510	
07/30	47	501	602	
07/31	57	556	661	
08/01	93	614	726	
08/02	114	690	803	

	Lowest Count	Average Count	5 Year Average
Season Total	234	1,519	1,308

#### Focused Two-Week Data View



#### Season Total Overview



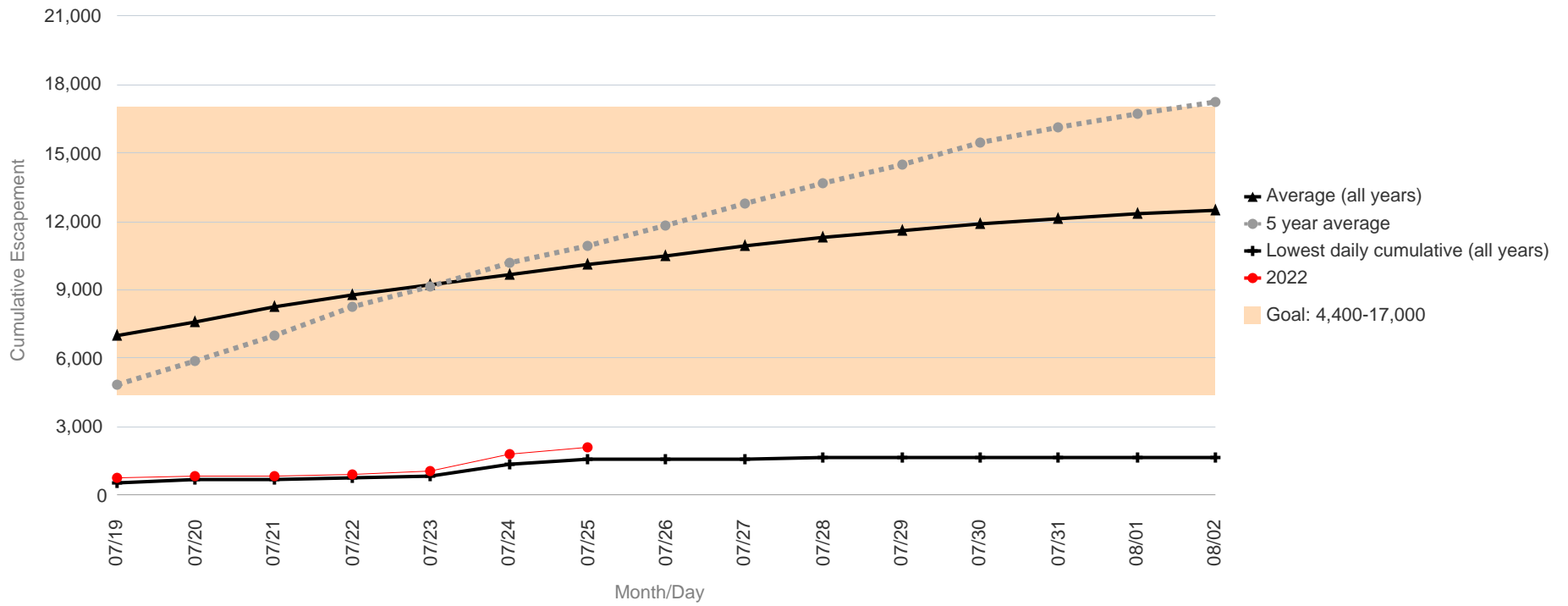
## Kogrukluk River Salmon Monitoring Project Cumulative Daily Passage of Sockeye Salmon

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

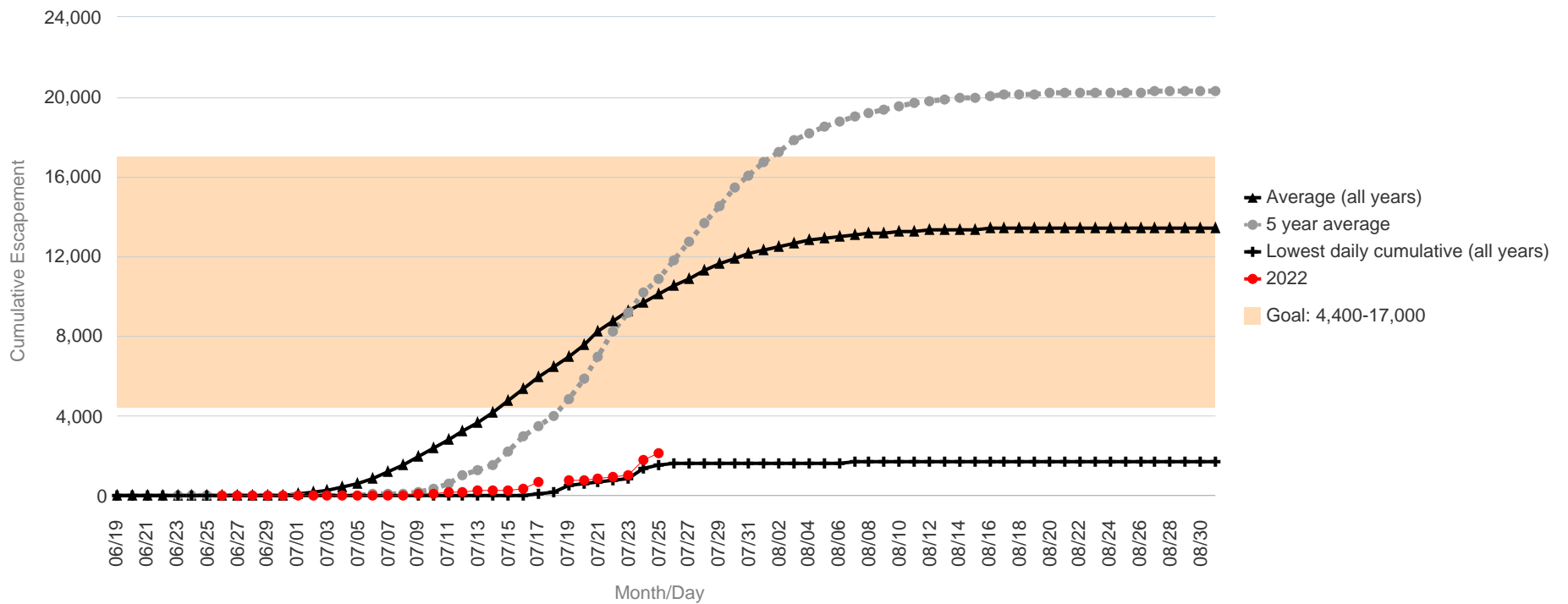
Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	2022
07/19	560	6,981	4,848	754
07/20	647	7,578	5,845	795
07/21	710	8,221	7,010	868
07/22	748	8,775	8,263	912
07/23	862	9,237	9,181	1,058
07/24	1,336	9,671	10,166	1,768
07/25	1,585	10,084	10,919	2,105
07/26	1,600	10,508	11,850	
07/27	1,608	10,916	12,767	
07/28	1,623	11,288	13,693	
07/29	1,634	11,621	14,532	
07/30	1,642	11,912	15,459	
07/31	1,649	12,137	16,099	
08/01	1,651	12,353	16,733	
08/02	1,658	12,515	17,247	

	Lowest Count	Average Count	5 Year Average
Season Total	1,676	13,471	20,323

### Focused Two-Week Data View



### Season Total Overview

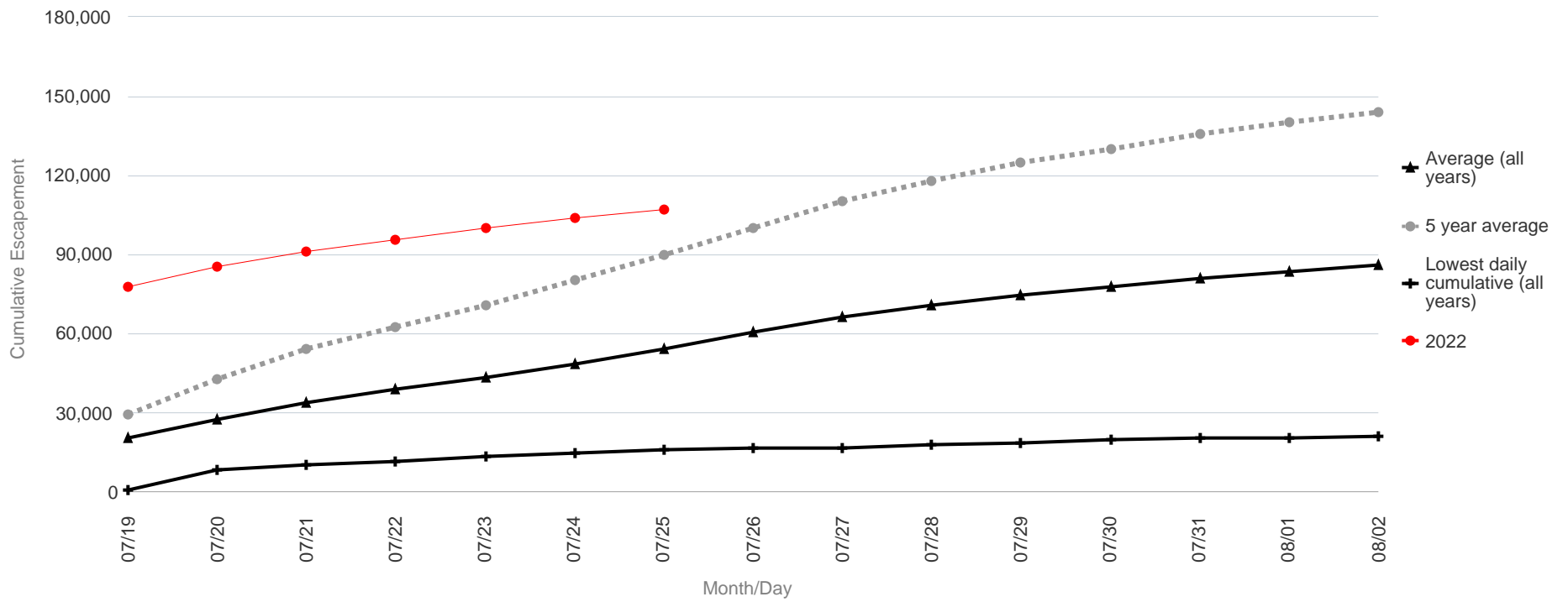


### Telaquana River Salmon Monitoring Project Passage of Sockeye Salmon

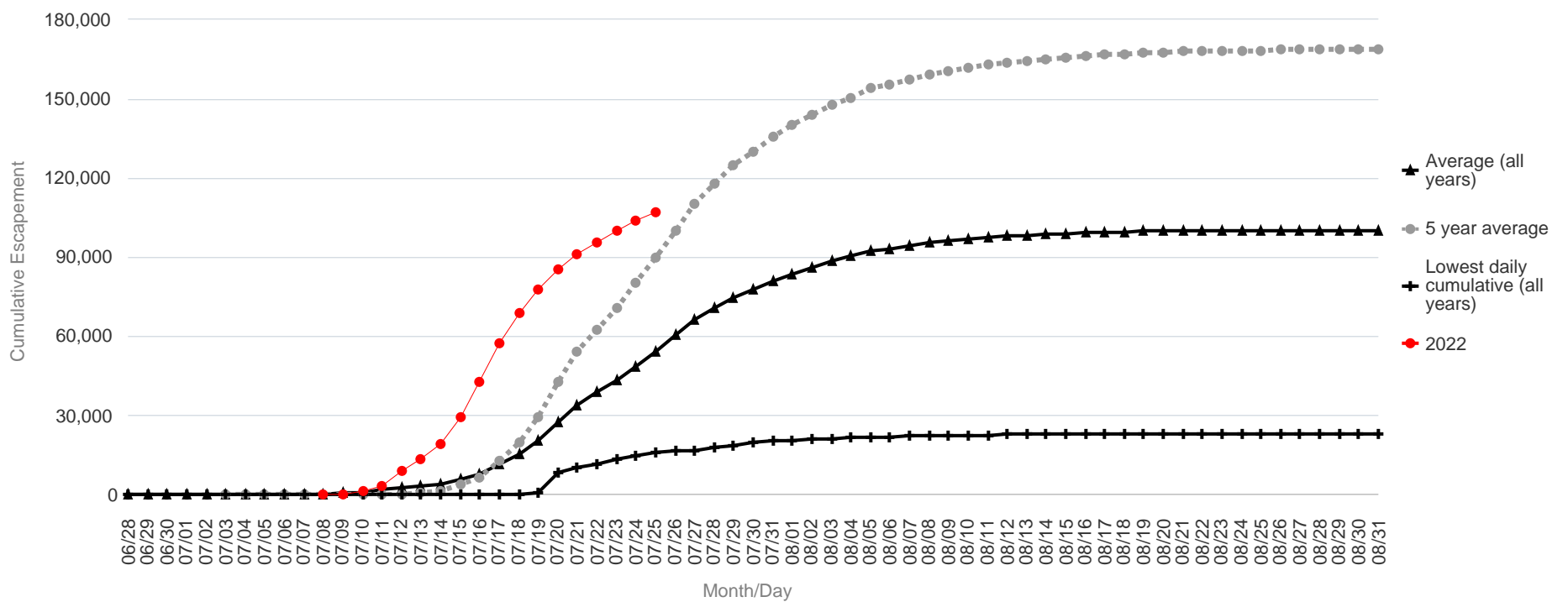
Date	Lowest daily cumulative (all years)	Average (all years)	5 year average	2022
07/19	695	20,574	29,335	77,694
07/20	8,623	27,558	42,551	85,712
07/21	10,234	34,024	54,228	91,084
07/22	11,467	38,757	62,297	95,676
07/23	13,293	43,335	70,508	99,853
07/24	14,622	48,759	80,122	104,005
07/25	15,784	54,479	90,065	107,015
07/26	16,443	60,328	100,050	
07/27	16,969	66,092	110,302	
07/28	17,964	70,483	117,825	
07/29	18,844	74,390	124,637	
07/30	19,887	77,573	129,768	
07/31	20,309	80,958	135,574	
08/01	20,778	83,753	140,014	
08/02	21,140	86,199	143,840	

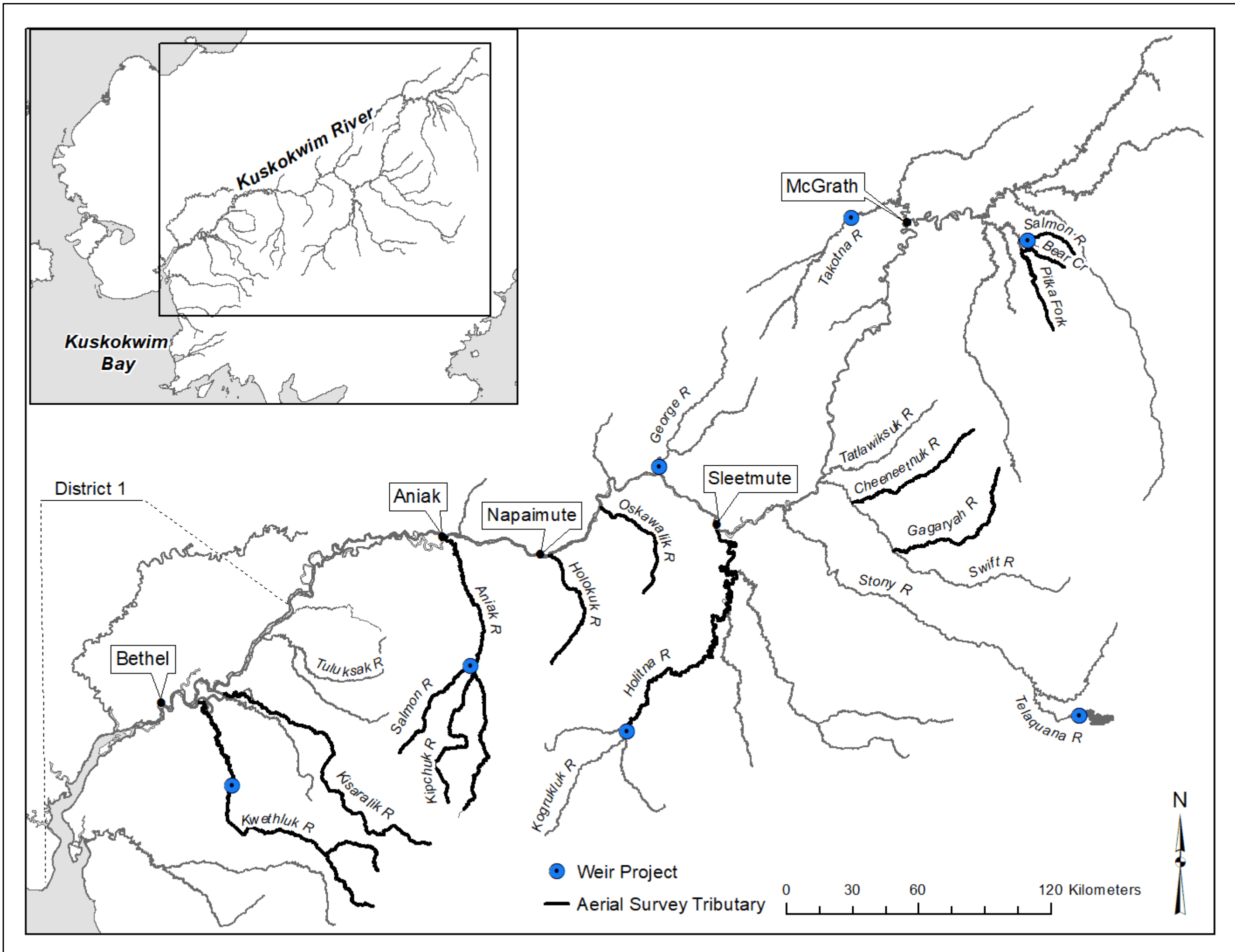
	Lowest Count	Average Count	5 Year Average
Season Total	23,007	100,280	168,520

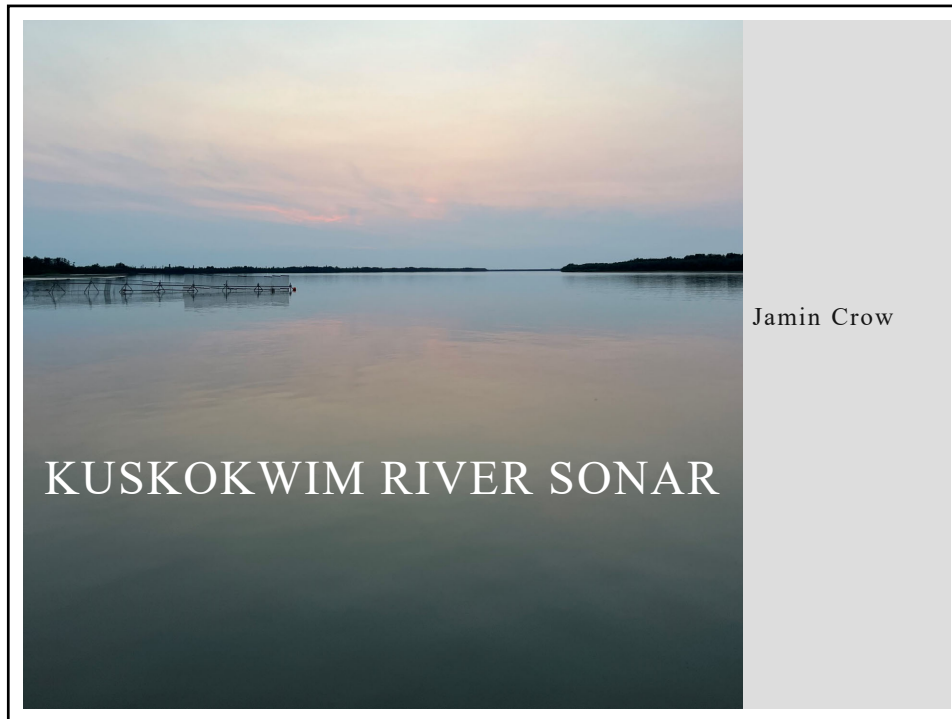
#### Focused Two-Week Data View



#### Season Total Overview




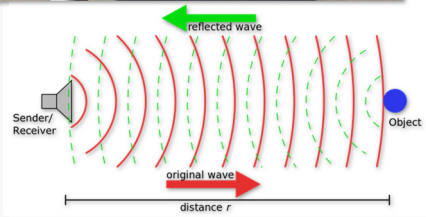




1

## HOW SONAR WORKS

- Sonar sends sound waves
- Sound waves reflect off high density objects
  - Fish
  - The bottom
  - Sticks
  - Boats
- The sonar receives reflected waves

2

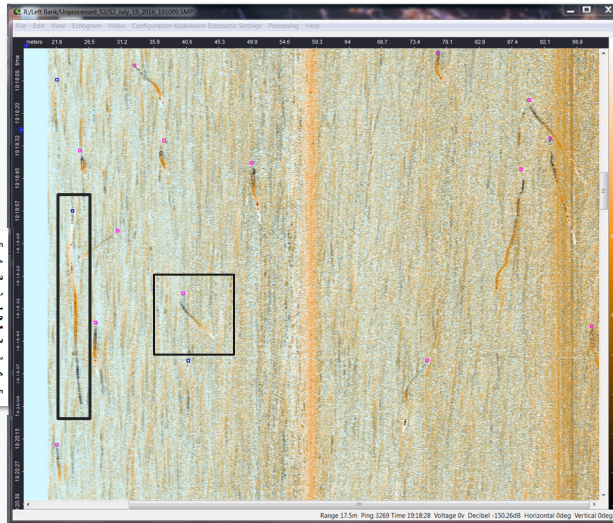
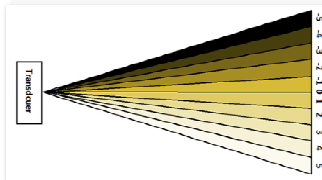
2



## HOW DO WE COUNT FISH?

### Direction

- Upriver
- Downriver

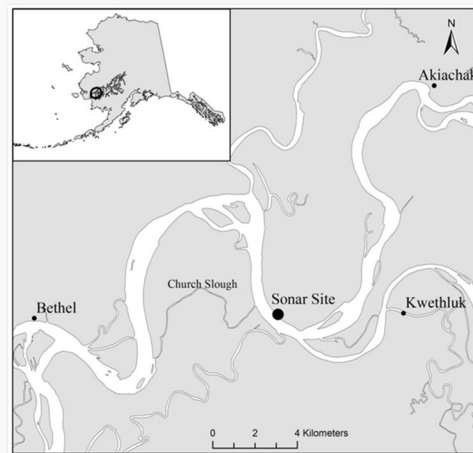


3

3

## SITE SELECTION METHODS PART I

- Satellite imagery
  - Single channel
  - Below tributaries
  - No sandbars
- Consistent between years
  - Avoid areas of quickly changing bottom



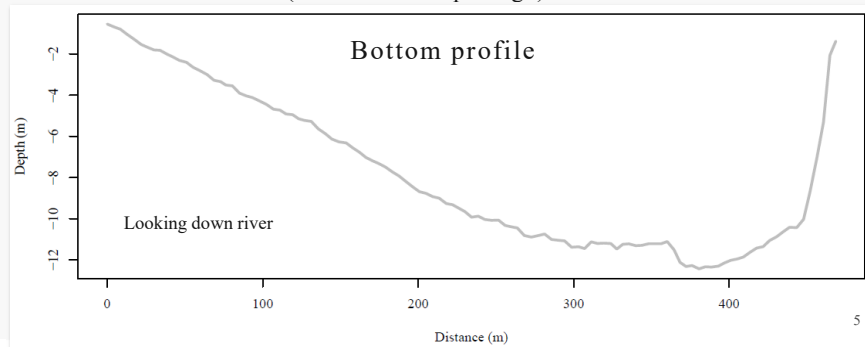
4

4

## SITE SELECTION METHODS PART II

- Bottom profiles
  - No hills
    - Reduces “shadows”
  - Asymmetrical (avoid even bowls)
    - Fish distribution (bank-oriented passage)

Bowl

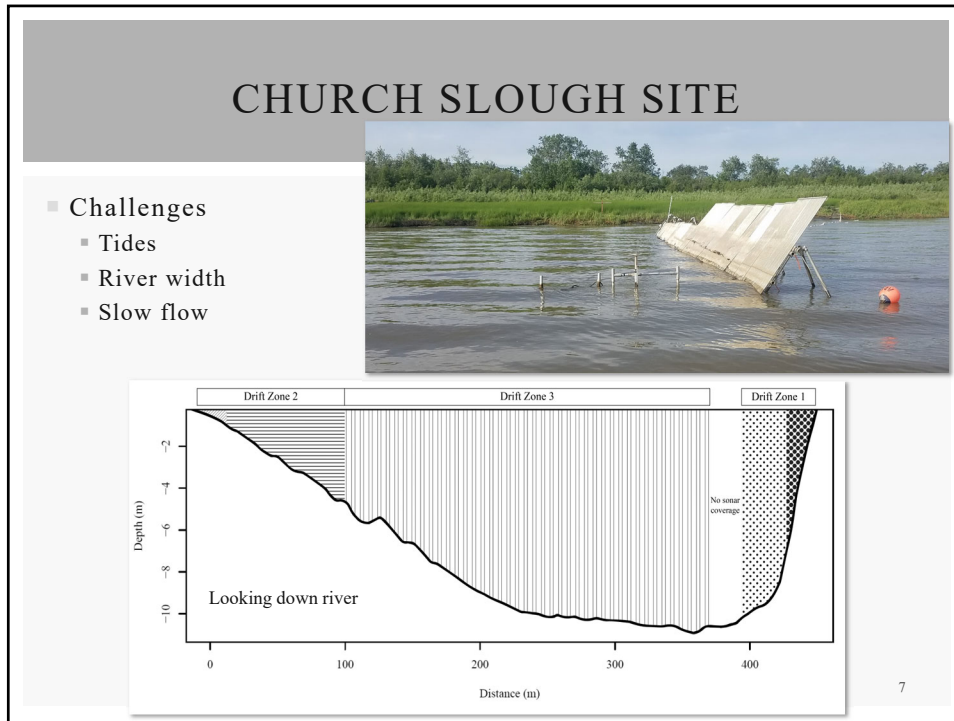


5

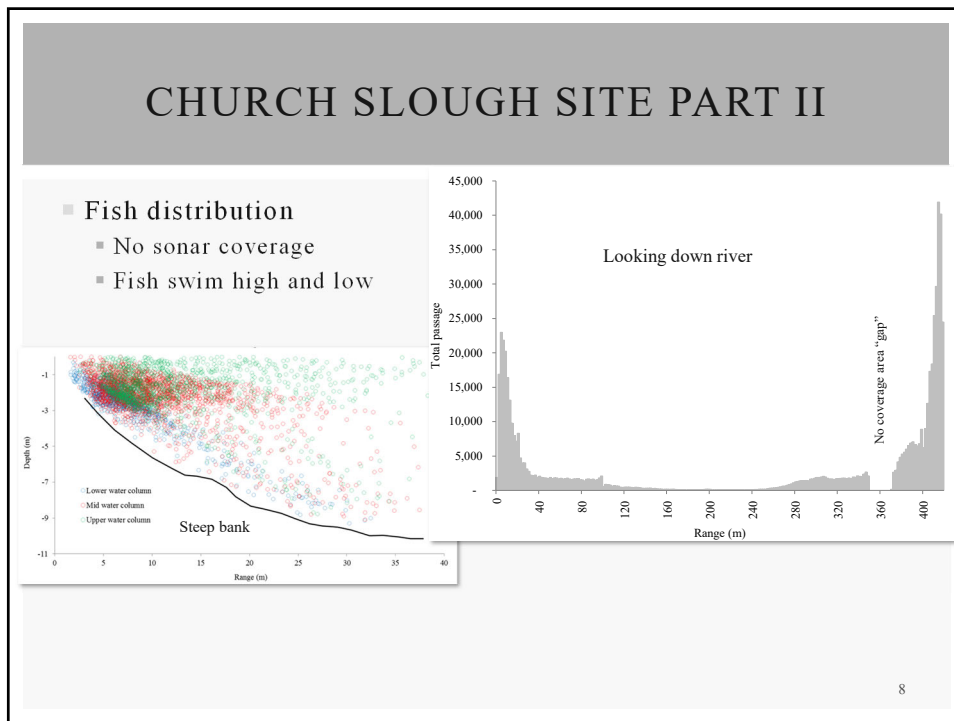
## SITE SURVEYS (2014 & 2015)

6

6



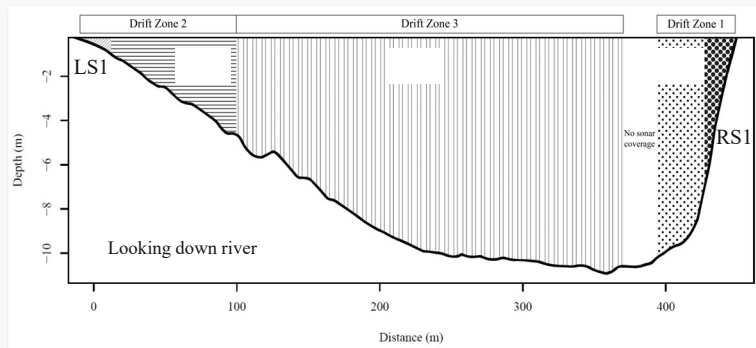
7



8

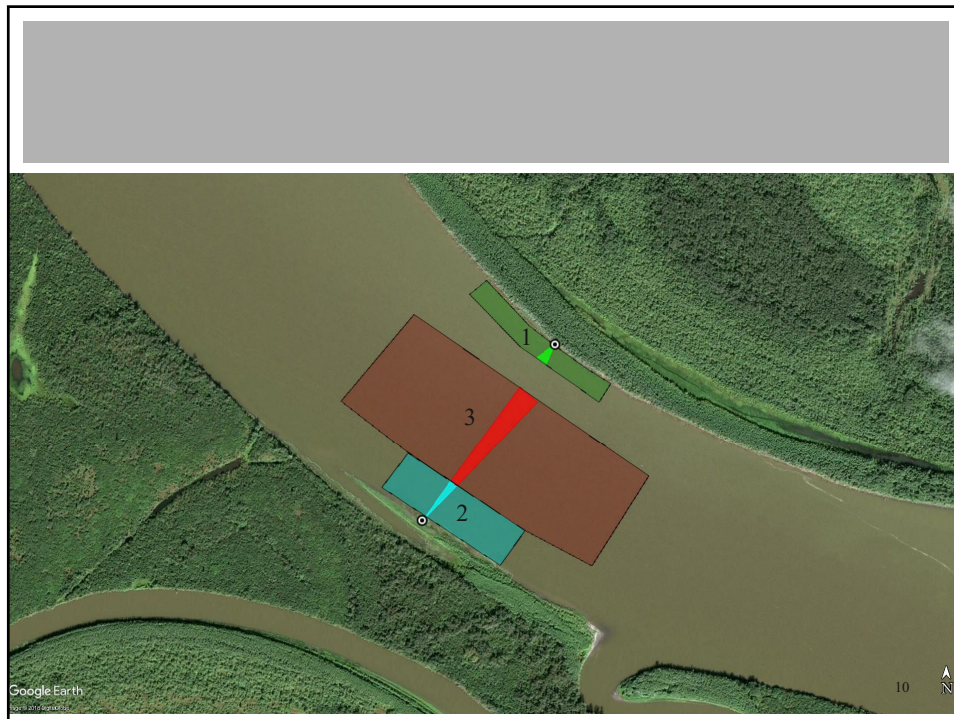
## FISH COUNTING

- 5 slices (horizontal ranges of sonar)
  - LS1, LS2, LS3, RS2, and RS1
- Counting 30-minute files
- Total daily passage by slice



9

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## DRIFT GILLNETS & FISH DELIVERY

- Mesh size
  - 2.75"
  - 4"
  - 5.25"
  - 6.5"
  - 7.5"
  - 8.5"
- Depth
  - ~13 feet
  - ~27 feet
- Fish drop-off



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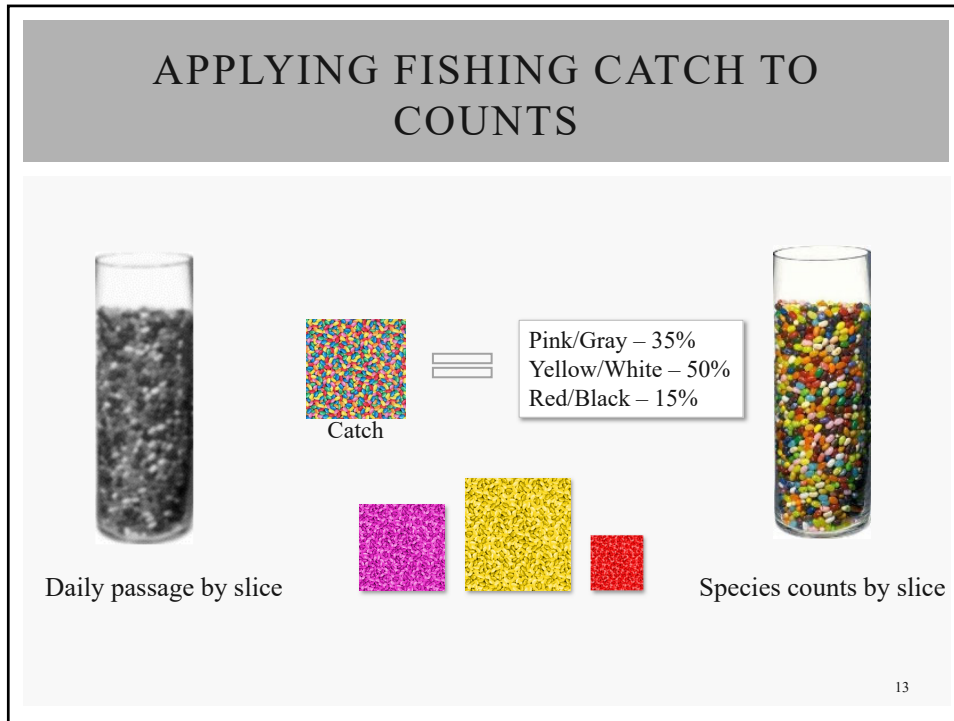
11

## SAMPLING FISH CAUGHT

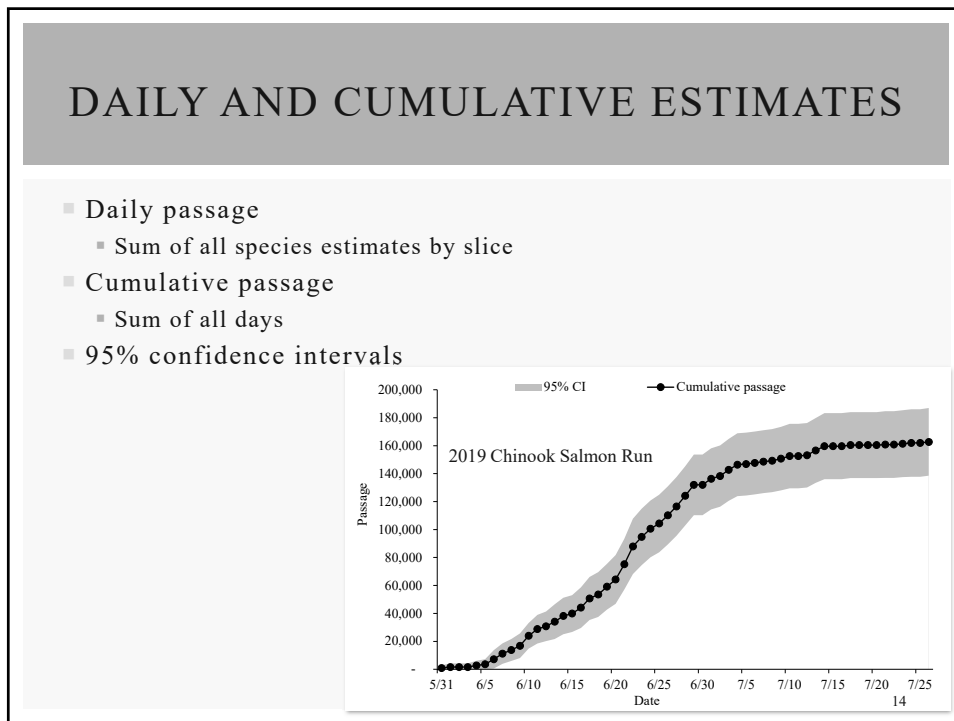
- Salmon and non salmon both have their length measured
- We only determine the sex of the Salmon
- Sockeye salmon sampled for genetics



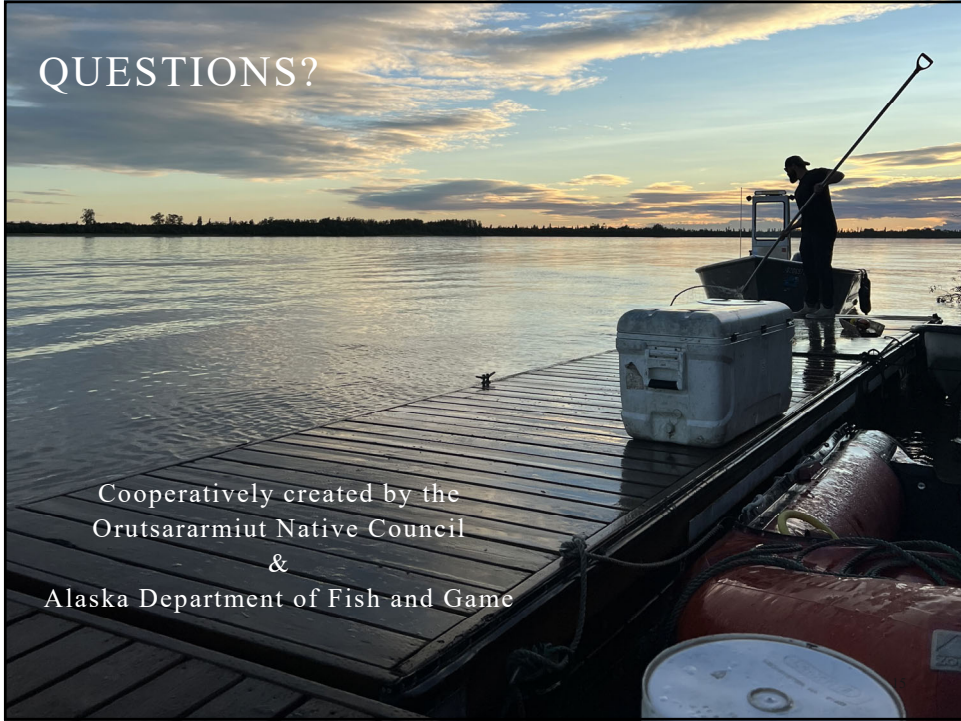
12



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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](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					
Sunday, July 24, 2022					
South Peninsula	Chinook	Sockeye	Coho	Pink	Chum
Post June Cold Bay*	23	2,861	140	6,187	5,831
Post June Thin Point Section	0	0	0	0	0
Post June Morzhovoi Bay to South Unimak	128	21,671	1,114	7,467	34,673
Post June Shumagin Islands	6,347	207,622	8,165	212,187	79,455
Southeastern District Mainland	7	14,080	2	5,908	392
Northwest Stepovak Section (7/1-7/25)	0	0	0	0	0
Dolgoi Island Area1	86	80,088	1,443	66,632	17,120
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
	<b>9,488</b>	<b>4,250,466</b>	<b>11,028</b>	<b>1,460,832</b>	<b>667,927</b>