



THE STATE  
of **ALASKA**  
GOVERNOR MIKE DUNLEAVY

## Department of Fish and Game

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# MEMORANDUM

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Date: July 21, 2025

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Subject: Chena and Salcha Rivers  
Chinook Escapement  
Summary, 2024

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This memo reports the estimates of Chinook and chum salmon escapement for the Chena and Salcha Rivers during the 2024 season. Salmon escapements for these rivers are estimated using standard counting tower methodology, sonar enumeration, and a hierarchical run-timing model. Detailed methodology is covered in Matter and Tyers 2019 and a full fisheries data series (FDS) report including 2024 will be published in 2026.

### *Chena River Escapement, 2024*

The 2024 Chena River counting tower ran from 26 June- 28 July. River conditions were fair until 5 July when a high-water event precluded visual and sonar counts until 22 July. Visual counts resumed on 23 July, but another flood event ended the tower season early on 28 July. Carcass surveys were conducted were for age, sex, and length samples on 1-2 Aug and 12-13 Aug.

The biological escapement goal (BEG) range for Chinook salmon on the Chena River is 3,300-5,700. The final escapement estimate was 397 (SE = 1,309) Chinook salmon indicating that the Chena River did not meet the lower bound of the escapement goal for the 6<sup>th</sup> year in a row. The first Chinook salmon was counted on 28 June. The 2024 midpoint of the run (where 50% of the run has passed the tower) occurred on run day 22, whereas the 5-year average (2018-2023,

excluding 2020) midpoint was day 21. The incomplete, partial estimate of chum salmon was 395 (SE = 424). Chum salmon counts are considered incomplete and partial because the tower does not stay in operation for the full chum salmon run and we have no information about what portion of the run passes during the counting tower operations.

During the carcass surveys, only 18 Chinook salmon and 0 chum salmon were sampled. To estimate age compositions with the desired level of precision, a minimum of 417 samples is required assuming 15% of scales are unreadable. As such, age, sex, or length compositions for the 2024 Chinook salmon run were not estimated.

#### *Salcha River Escapement, 2024*

The 2024 Salcha River counting tower from 28 June through 28 July. There was a high-water event that lasted from 6-16 July. Visual counts resumed on 17 July but the season wrapped early on 28 July due to a large and lasting flood event. Carcass surveys were conducted on 8-9 Aug and 13-15 Aug.

The BEG range for Chinook salmon on the Salcha River is 3,300 – 6,500. The final estimate of escapement was 1,525 (SE = 331) Chinook salmon, indicating that the Salcha River didn't make the lower bound of escapement for the 2<sup>nd</sup> year in a row. The first fish arrived on 5 July. The 2024 midpoint of the run occurred on run day 11, whereas the 5-year average (2018-2023, excluding 2020) midpoint was day 26. The incomplete, partial estimate of chum salmon was 1238 (SE = 1,630).

During the carcass surveys, 45 Chinook salmon and 15 chum salmon were sampled. To estimate age compositions with the desired level of precision, a minimum of 417 samples is required assuming a 15% data loss. As such, we did not estimate age, sex, or length compositions for the 2024 Chinook salmon run.

Both Chena and Salcha Rivers experienced decreased visibility for an extended period during the beginning of the runs. Those data gaps were estimated using mostly sonar on the Salcha River and a hierarchical run timing model on the Chena River due to sonar failure. As such, error estimates are high around each estimate and should be considered during interpretation. ADF&G is confident that the escapement goal was not met in 2024 for neither the Chena River nor the Salcha River.

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Table 1. Daily estimates of Chena River Chinook and chum salmon escapement in 2024. Shaded cells denote days where a high-water event precluded visual counts and the hierarchical run-timing model was used to estimate daily escapement.

Date	Chinook Salmon		Chum Salmon		Methodology
	Daily Escapement	Daily SE	Daily Escapement	Daily SE	
6/26	0	3	0	0	Visual
6/27	0	2	0	0	Visual
6/28	14	2	0	0	Visual
6/29	0	0	0	0	Visual
6/30	0	0	0	0	Visual
7/1	0	12	0	0	Visual
7/2	0	0	0	0	Visual
7/3	0	0	0	0	Visual
7/4	0	0	0	0	Running Avg
7/5	0	0	0	0	Visual
7/6	1	0	0	0	Hierarchical Mod
7/7	2	0	0	0	Hierarchical Mod
7/8	2	0	0	0	Hierarchical Mod
7/9	3	8	0	0	Hierarchical Mod
7/10	4	15	0	1	Hierarchical Mod
7/11	6	15	0	1	Hierarchical Mod
7/12	7	32	0	1	Hierarchical Mod
7/13	9	31	1	1	Hierarchical Mod
7/14	11	86	1	1	Hierarchical Mod
7/15	14	68	1	1	Hierarchical Mod
7/16	16	159	1	1	Hierarchical Mod
7/17	18	217	2	1	Hierarchical Mod
7/18	21	271	2	2	Hierarchical Mod
7/19	21	298	3	2	Hierarchical Mod
7/20	22	203	4	2	Hierarchical Mod
7/21	23	189	5	2	Hierarchical Mod
7/22	22	372	7	3	Hierarchical Mod
7/23	30	117	15	4	Visual
7/24	6	100	6	2	Visual
7/25	18	74	6	2	Visual
7/26	18	12	14	4	Visual
7/27	24	4	42	6	Visual
7/28	27	5	23	5	Visual
7/29	11	8	25	5	Hierarchical Mod
7/30	10	10	28	5	Hierarchical Mod

7/31	9	11	31	6	Hierarchical Mod
8/1	7	31	33	6	Hierarchical Mod
8/2	7	26	35	6	Hierarchical Mod
8/3	6	33	36	6	Hierarchical Mod
8/4	5	22	36	6	Hierarchical Mod
8/5	4	26	36	6	Hierarchical Mod
	397	1309	395	424	

Table 2. Daily estimates of Salcha River Chinook and chum salmon escapement in 2024. Shaded cells denote days where a high-water event precluded visual counts and other methods were used to estimate daily passage.

Date	Chinook Salmon		Chum Salmon		Methodology
	Daily Escapement	Daily SE	Daily Escapement	Daily SE	
6/28	0	0	0	0	Visual
6/29	0	0	0	0	Visual
6/30	0	0	0	0	Visual
7/1	0	0	0	0	Visual
7/2	0	0	9	3	Visual
7/3	0	0	0	0	Visual
7/4	0	0	3	2	Visual
7/5	3	3	3	2	Visual
7/6	99	24	0	0	Sonar
7/7	42	9	0	0	Sonar
7/8	36	8	0	0	Sonar
7/9	41	9	0	0	Sonar
7/10	69	14	0	0	Sonar
7/11	0	0	21	5	Visual
7/12	111	28	0	0	Sonar
7/13	84	9	9	3	Running Avg
7/14	123	11	3	2	Running Avg
7/15	140	24	5	2	Sonar
7/16	117	14	5	2	Sonar
7/17	57	19	0	0	Visual
7/18	32	7	10	3	Visual
7/19	9	7	9	3	Visual
7/20	85	6	64	8	Visual
7/21	45	11	47	7	Visual
7/22	109	14	45	7	Visual
7/23	39	8	105	10	Visual
7/24	60	25	102	10	Visual
7/25	45	14	81	9	Visual
7/26	36	8	81	9	Visual
7/27	36	10	51	7	Visual
7/28	6	4	21	5	Visual
7/29	20	133	73	9	Hierarchical Mod
7/30	16	91	75	9	Hierarchical Mod
7/31	15	125	73	9	Hierarchical Mod
8/1	13	91	74	9	Hierarchical Mod
8/2	12	67	72	8	Hierarchical Mod
8/3	10	71	71	8	Hierarchical Mod
8/4	9	71	66	8	Hierarchical Mod

8/5	8	81	60	8	Hierarchical Mod
	1525	331	1238	1630	

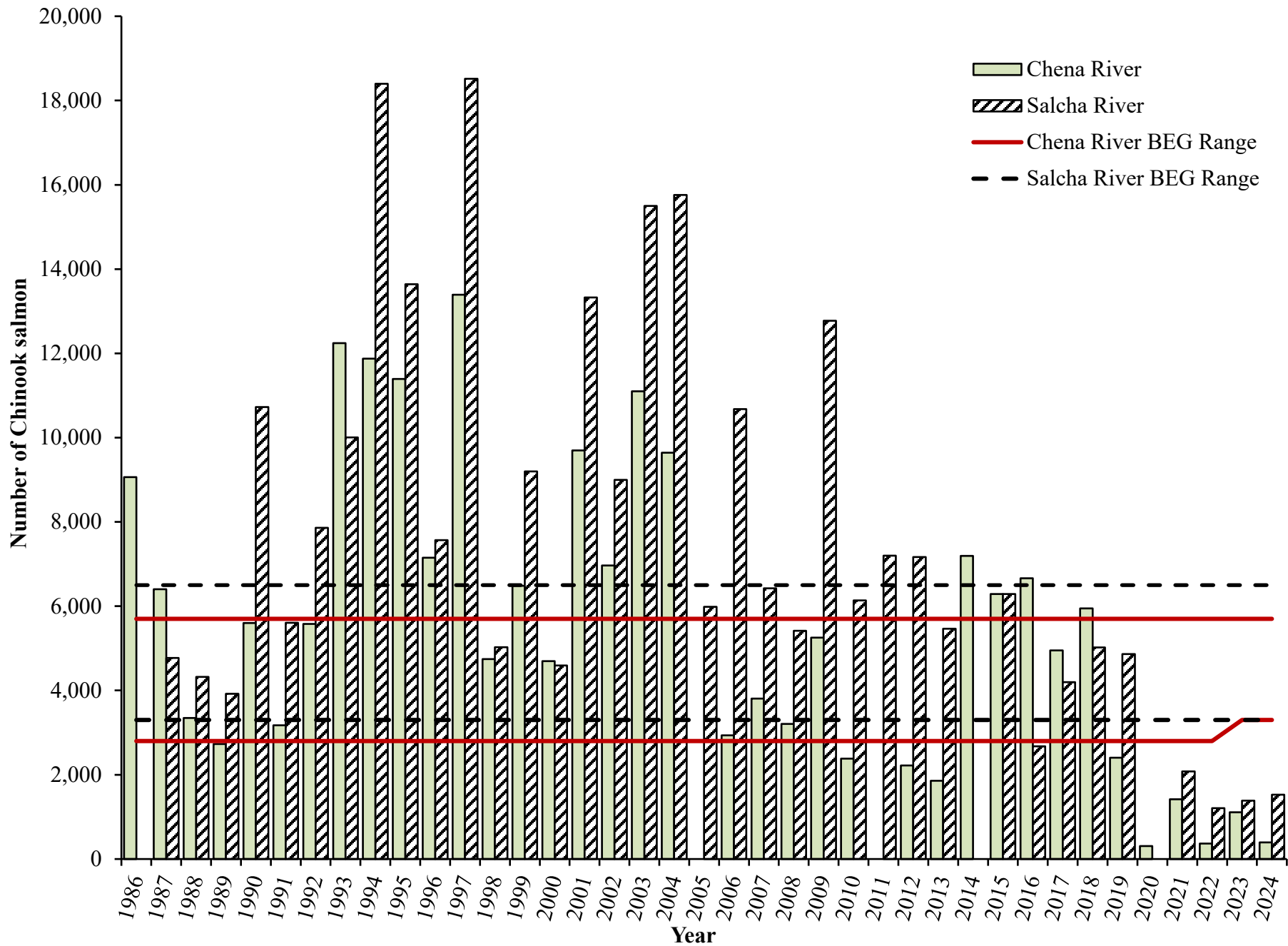


Figure 1. Estimates of Chinook Salmon escapement for the Chena and Salcha Rivers including the upper and lower bounds of the biological escapement goal.