



THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

**Department of
Fish and Game**

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MEMORANDUM

TO: Members, Alaska Board of Fisheries DATE: September 29, 2025

FROM: Forrest R. Bowers, Acting Director *FRB* SUBJECT: Arctic-Yukon-
Division of Commercial Fisheries Kuskokwim
Stock of Concern
Israel Payton, Director *IP* Recommendations
Division of Sport Fish

This memorandum summarizes the results of the stock of concern evaluation for Arctic-Yukon-Kuskokwim (AYK) Region salmon stocks for the 2025 Board of Fisheries (board) regulatory cycle. The *Policy for the Management of Sustainable Salmon Fisheries* (SSFP; 5 AAC 39.222) directs the Alaska Department of Fish and Game (department) to report to the board on the status of salmon stocks and identify any stocks that present a concern related to yield, management, or conservation during regular board meetings.

Stock of concern status has been evaluated by the department since 2000 and designations were determined by the board as warranted, based on recommendations by the department. In September 2000, the board designated nine AYK Region salmon stocks as stocks of concern, at either the management or the yield concern level. In 2004, two stocks were removed from designation, and one stock was added (a total of eight stocks designated). In 2007, four stocks were removed from designation (a total of four stocks designated). In 2016, one stock was removed from designation (a total of three stocks designated). In 2019, one stock was removed from designation (a total of two stocks designated). Since 2019, two king salmon stocks (Norton Sound Subdistricts 5 and 6, and Yukon River) continue to be designated as stocks of yield concern. Management plans and associated regulations were developed and adopted based on action plans for all current stocks of concern.

The 2025 stock of concern evaluation included a review of 26 salmon stock units in the AYK Region to determine if any meet the criteria for recommendation to be listed, maintained, or discontinued as stocks of concern during the upcoming regulatory cycle. Results of AYK Region salmon stock unit escapement goals, harvest or 'yield'¹, and harvestable surpluses over the most

¹ 5 AAC 39.222(41) defines yield as the number or weight of salmon harvested in a particular year or season from a stock. The term yield is used throughout this memo when referencing a Stock of Yield Concern designation, and the term harvest is used otherwise.

recent 5 years (2020–2024) were evaluated against the stock of concern definitions and criteria established in SSFP. Existing escapement goals were used to evaluate stock of concern, and proposed changes in escapement goals will not affect stock of concern recommendations contained in this memo. Preliminary data from 2025 were not used in this analysis because fisheries and run assessments are ongoing throughout the region; however, preliminary information did provide relevant context about future run abundance trends.

After completing the evaluation, the department is recommending one new stock of concern and a change to an existing stock of concern designation. Further information on status of AYK Region salmon stocks, regulatory history, and management plans will be addressed in written and oral reports for the AYK board meeting in November 2025. The following information summarizes the evaluation and recommendations for existing AYK Region stocks of concern.

King Salmon

King salmon in Norton Sound Subdistricts 5 (Shaktoolik) and 6 (Unalakleet) and in the Yukon River have been designated as stocks of yield concern since January 2004. These designations were based on low harvests compared to historical harvests. These stocks were addressed through action plans at prior board meetings; therefore, a management plan already exists. Data considered in this analysis were the most recent 5 years (2020–2024) of escapement, harvest, and/or harvestable surplus compared to recent historical information from 2010–2019.

Norton Sound Subdistricts 5 (Shaktoolik) and 6 (Unalakleet)

Subdistricts 5 and 6 have been managed as a single stock unit to achieve escapement goals and provide harvest of king salmon. Past studies have shown adult salmon bound for the Shaktoolik and Unalakleet rivers intermingle in nearshore marine waters and are harvested in both subdistricts.

The current North River tower-based sustainable escapement goal range of 1,200–2,600 king salmon, established in 2005, was achieved only once in the most recent five years (2020–2024; Table 1). Harvests over this same timeframe fell within the historical range in all years except for 2024, when the lowest recorded harvest occurred (Table 2). However, harvests have shown a steady decline over these last five years, due to a combination of decreasing abundance and conservative management actions. **As a result, the department is recommending maintaining the current stock of yield concern designation for Norton Sound Subdistrict 5 & 6 king salmon.**

Yukon River

Conservative management actions have been taken over the last five years to achieve the largest possible escapements given extremely poor run sizes of Yukon River king salmon. Those actions resulted in harvests at or below historical levels. Annual harvests have been below 2,000 fish since 2020 (Table 3), with most of those fish being harvested incidentally during non-salmon fishing opportunities. Even with such small harvests, no Yukon River drainage king salmon escapement goals were achieved from 2020–2024 (Table 4). If harvest had been reduced to zero during this timeframe, escapement goals would still not have been achieved. **As a result, the department is recommending a change in designation from stock of yield concern to stock of management concern for Yukon River king salmon.**

Yukon River Fall Chum Salmon

Beginning in the late 1990s, Yukon River fall chum salmon experienced a period of low returns resulting in a stock of yield concern designation in 2000. An action plan and associated regulatory changes were adopted over the next two board cycles. Returns improved into the mid-2000s, and the stock of concern designation was discontinued during the 2006 board cycle.

After over ten years of relatively good Yukon River fall chum salmon returns, production crashed unexpectedly in 2020 resulting in record low run abundances. Conservative management actions have been taken over the last five years to achieve the largest possible escapements given extremely poor run sizes of fall chum salmon. These actions have resulted in record low harvests levels. Annual harvests have been below 7,000 fish since 2020 (Table 5), compared to the 2010–2019 historical range of 74,000–578,000. Even with such small harvests, the Yukon River drainage fall chum salmon escapement goal of 300,000–600,000 was not achieved in any year from 2020–2024 (Table 6). If harvest had been reduced to zero during this timeframe, the drainagewide escapement goal would still not have been achieved. **As a result, the department is recommending designating Yukon River fall chum salmon as a stock of management concern.**

Stock of Concern Recommendations

In summary, the department is recommending the following stock of concern designations:

- Maintain Norton Sound Subdistrict 5 (Shaktoolik) and Subdistrict 6 (Unalakleet) king salmon as stock of yield concern;
- Revise designation of Yukon River king salmon from a stock of yield concern to a stock of management concern;
- Designate Yukon River fall chum salmon as a stock of management concern

All other AYK Region stocks did not meet the criteria for stock of concern designation during this evaluation cycle. Although some stocks within the AYK Region experienced significant declines over the most recent 5 years, they did not meet the stock of concern criteria established in regulations. In particular, Yukon River summer chum and coho salmon harvest fell below historical ranges in all of the most recent 5 years. However, for both species, total run size in a subset of years was large enough to provide for additional harvest had opportunity not been restricted by necessary measures to conserve comigrating Chinook and fall chum salmon. Because of this it is difficult to determine what the additional harvest of summer chum and coho salmon could have been. Therefore, we are not recommending stock of yield concern designation for either Yukon River summer chum or coho salmon.

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Table 1.– King salmon escapement estimates for Norton Sound Subdistricts 5 and 6, 2000–2024.

Year	Subdistrict 5	Subdistrict 6	
	Shaktoolik River Tower	North River Tower	Unalakleet River Weir
1996	ND	1,059	ND
1997	ND	3,051	ND
1998	ND	2,093	ND
1999	ND	1,513	ND
2000	ND	1,057	ND
2001	ND	1,126	ND
2002	ND	1,532	ND
2003	ND	1,410	ND
2004	ND	1,104	ND
2005	ND	1,041	ND
2006	ND	853	ND
2007	ND	1,962	ND
2008	ND	946	ND
2009	ND	2,766	ND
2010	ND	1,386	1,031
2011	ND	883	1,078
2012	ND	972	812
2013	ND	585	941
2014	2,034	2,241	1,128
2015	654	1,944	2,789
2016	354	520	455
2017	1,272	1,044	2,968
2018	1,035	2,583	3,359
2019	2,688	3,315	6,641
2020	927	1,068	–
2021	933	924	499
2022	975	1,338	119
2023	759	552	–
2024	390	462	320
5-Year Avg (2020-2024)	797	869	313
Escapement Goal	1,200-2,600 SEG		

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Table 2.— Commercial, subsistence, and sport king salmon harvests for Norton Sound Subdistricts 5 and 6, 2000–2024.

Year	Shaktoolik (5)		Unalakleet (6)			Combined Totals		Total
	Commercial	Subsistence	Commercial	Subsistence	Sport	Commercial	Subsistence	Combined Harvest
2000	160	440 ^a	582	2,429 ^a	345	742	2,869	3,956
2001	90	936 ^a	116	2,810 ^a	250	206	3,746	4,202
2002	1	1,230 ^a	4	2,367 ^a	544	5	3,597	4,146
2003	2	881 ^a	10	2,585 ^a	97	12	3,466	3,575
2004	0	943 ^b	0	2,829 ^b	356	0	3,772	4,128
2005	50	807 ^b	101	2,193 ^b	216	151	3,000	3,367
2006	0	382 ^b	11	2,537 ^b	394	11	2,919	3,324
2007	5	515 ^b	13	1,665 ^b	147	18	2,180	2,345
2008	6	422 ^b	65	1,402 ^b	580	71	1,824	2,475
2009	4	417 ^b	80	1,892 ^b	248	84	2,309	2,641
2010	4	327 ^b	124	1,257 ^b	61	128	1,584	1,773
2011	45	235 ^b	124	607 ^b	53	169	842	1,064
2012	25	214 ^b	157	808 ^b	0	182	1,022	1,204
2013	6	136 ^b	131	468 ^b	0	137	604	741
2014	16	158 ^b	70	442 ^b	0	86	600	686
2015	49	178 ^b	384	1,139 ^b	0	433	1,317	1,750
2016	23	290 ^b	101	837 ^b	78	124	1,127	1,329
2017	52	177 ^b	327	496 ^b	16	379	673	1,068
2018	27	162 ^b	281	676 ^b	19	308	838	1,165
2019	19	317 ^b	1,035	1,459 ^b	155	1,054	1,776	2,985
2020	318	^c	491	1,778 ^b	0	809	1,778	2,587
2021	238	^c	6	1,479 ^b	0	244	1,479	1,723
2022	10	215	16	465 ^b	0	26	680	706
2023	1	213	11	489 ^b	0	12	702	714
2024 ^d	2	78	7	55 ^b	^e	9	133	142
5-Year Avg (2020–2024)	114	169	106	853	0	220	954	1,174

^a Subsistence harvests were estimated from Division of Subsistence surveys.

^b Subsistence harvests were estimated from Division of Commercial Fisheries surveys.

^c Subsistence harvest surveys were not conducted due to the COVID-19 pandemic.

^d Data are preliminary.

^e Data not yet available.

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Table 3.— Alaska harvest of Yukon River king salmon, 2000–2024.

Year	Commercial		Commercial Related ^a	Total Commercial		Subsistence ^b	Personal Use	Test Fish Sales ^c	Sport Fish ^d	Total
2000	8,518		0	8,518		36,404	75	597	276	45,870
2001	0	^e	0	0	^e	55,819	122	0	679	56,620
2002	24,128		0	24,128		43,742	126	528	486	69,010
2003	40,438		0	40,438		56,959	204	680	2,252	100,533
2004	56,151		0	56,151		55,713	201	792	1,513	114,370
2005	32,029		0	32,029		53,409	138	310	483	86,369
2006	45,829		0	45,829		48,593	89	817	739	96,067
2007	33,634		0	33,634		55,174	136	849	960	90,753
2008	4,641	^{e,f}	0	4,641	^{e,f}	45,186	126	0	409	50,362
2009	316	^{e,f}	0	316	^{e,f}	33,805	127	0	863	35,111
2010	9,897	^{e,f}	0	9,897	^{e,f}	44,559	162	0	474	55,092
2011	82	^{e,f}	0	82	^{e,f}	40,980	88	0	474	41,624
2012	0	^e	0	0	^e	30,415	71	0	345	30,831
2013	0	^e	0	0	^e	12,533	42	0	166	12,741
2014	0	^e	0	0	^e	3,286	1	0	0	3,287
2015	0	^e	0	0	^e	7,577	5	0	13	7,595
2016	0	^e	0	0	^e	21,627	57	0	20	21,704
2017	168	^{e,f}	0	168	^{e,f}	38,036	125	0	18	38,347
2018	0	^e	0	0	^e	31,812	201	0	200	32,213
2019	3,110	^{e,f}	0	3,110	^{e,f}	48,379	244	0	38	51,771
2020	0	^e	0	0	^e	21,531	112	0	49	21,692
2021	0	^e	0	0	^e	1,995	0	0	0	1,995
2022	0	^e	0	0	^e	1,827	0	0	0	1,827
2023	0	^e	0	0	^e	1,630	0	0	0	1,630
2024	0	^g	0	0	^e	1,875	0	0	0	1,875
5-Year Avg. (2020–2024)	0		0	0		5,772	22	0	10	5,804

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Table 3.– Page 2 of 2.

^a Refers to production of salmon roe, including carcasses from subsistence-caught fish. These data are only available since 1990.

^b Includes harvest from the Coastal District and test fishery harvest that were utilized for subsistence. In 2009, 2011, and 2012, subsistence includes fish commercially caught, but not sold.

^c Includes only test fishery fish that were sold commercially.

^d Sport fish harvest for the Alaskan portion of the Yukon River drainage. Most of this harvest is believed to be taken within the Tanana River drainage.

^e No directed king salmon commercial fishery was conducted.

^f King salmon sold commercially were incidentally caught in chum directed commercial fishery.



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Table 4.—Yukon River king salmon historical abundance estimates from mainstem sonar and selected tributaries, 2000–2024.

Year	Sonar		Ground Based Projects			Aerial Surveys ^a		
	Pilot	Eagle	Chena	Salcha	E.F. Andreafsky	W.F. Andreafsky	Anvik ^b	Nulato
2000	54,560	—	4,694	4,595	1,609	427	—	—
2001	121,089	—	9,696	13,328	1,148	565	1,420	1,884
2002	151,713	—	6,967	9,000	c, d	4,123	917	1,584
2003	318,088	—	11,100	c, d	15,500	4,336	—	—
2004	200,761	—	9,645	15,761	8,045	1,317	3,625	1,321
2005	259,015	81,528	—	c	5,988	2,239	1,492	2,410
2006	228,763	73,691	2,936	10,679	6,463	824	—	1,292
2007	170,246	41,697	3,806	6,425	4,504	976	—	2,583
2008	175,046	38,097	3,208	2,731	c	4,242	—	922
2009	177,796	69,957	5,253	12,774	3,004	1,678	832	2,260
2010	145,088	35,074	2,382	6,135	2,413	858	965	711
2011	148,797	51,271	—	c	—	c, e	5,213	1,173
2012	127,555	34,747	2,220	7,165	2,517	—	722	1,374
2013	136,805	30,725	1,859	5,465	1,998	1,090	941	1,118
2014	163,895	63,482	7,192	—	c	5,949	1,695	1,051
2015	146,859	84,015	6,294	6,288	5,474	1,356	2,487	1,564
2016	176,898	72,329	6,665	2,675	f	2,676	—	—
2017	263,014	73,313	5,235	4,195	2,970	942	1,101	943
2018	161,831	57,893	5,947	5,021	4,114	455	1,109	870
2019	219,624	45,560	2,404	4,863	5,111	904	1,432	1,141
2020	162,252	33,550	—	c	—	508	675	862
2021	124,845	31,796	1,416	2,081	1,418	—	—	—
2022	44,581	12,025	367	1,243	—	—	179	60
2023	58,529	14,752	1,109	1,384	—	310	186	537
2024	64,198	24,183	—	c	719	—	101	594
5-Year Avg (2020–2024)	90,881	23,261	964	1,357	1,418	306	409	536
Escapement Goals		42,500-55,000 (IMEG)	3,300-5,700 (BEG)	3,300-6,500 (BEG)	2,100-4,900 (SEG)	640-1,600 (SEG)	1,100-1,700 (SEG)	940-1,900 (SEG)

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Table 4.—Page 2 of 2.

Note: En Dash (–) indicates no data or value could not be calculated.

^a Only surveys that were complete and had a rating higher than fair are included.

^b Standardized for escapement goal review to include mainstem between sonar and McDonald creek. Also includes Beaver, Swift and Otter creeks.

^c Incomplete count, project was not operated or was inoperable for a large portion of the season due to water conditions.

^d Estimate includes an expansion for missed counting days based on average run timing.

^e Aerial survey indicated escapement of at least 3,500 king salmon.

^f This is a minimum count due to high water conditions, based on inriver carcass sampling the lower end of the escapement goal was met at a minimum.



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Table 5.— U.S. (Alaska) harvest of Yukon River fall chum salmon, 2000–2024.

Year	Subsistence ^a	Commercial ^b	Commercial related ^c	Personal use	Test fish sales ^d	Yukon Area total
2000	19,395			1	0	19,396
2001	35,703			10	0	35,713
2002	19,674			3	0	19,677
2003	56,930	10,996	0	394	0	68,320
2004	62,526	4,110	0	230	0	66,866
2005	91,534	180,249	0	133	87	272,003
2006	84,002	174,542	0	333	0	258,877
2007	101,221	90,677	0	173	0	192,071
2008	89,357	119,265	0	181	0	208,803
2009	66,119	25,876	0	78	0	92,073
2010	68,645	2,550	0	3,209	0	74,404
2011	80,202	238,979	0	347	0	319,528
2012	99,309	289,692	0	410	166	389,577
2013	113,384	238,051	0	383	121	351,939
2014	92,529	115,599	0	278	30	208,436
2015	86,600	191,470	0	80	50	278,200
2016	84,617	465,511	0	283	668	551,079
2017	86,139	489,702	0	626	1,246	577,713
2018	69,207	387,788	0	505	907	458,407
2019	63,732	268,360	0	408	275	332,775
2020	5,728			37	0	5,765
2021	705 ^f			0 ^f	0	705
2022	2,778 ^f			0 ^f	0	2,778
2023	6,990 ^f			0 ^f	0	6,990
2024	3,618 ^f			0 ^f	0	3,618
5 yr. Avg. (2020–2024)	3,964			7	0	3,971

^a Includes test fish harvest and commercial retained fish (not sold) that were utilized for subsistence. Coastal District harvest is included. Beginning 2017 includes harvest from the Coastal District communities of Scammon Bay and Hooper Bay even though not all stocks are bound for the Yukon River.

^b Includes fish sold in the round and estimated numbers of female salmon commercially harvested for production of salmon roe. Beginning in 1999 commercial harvest may include some commercial related harvest.

^c Includes an estimate of number of salmon harvested for the commercial production of salmon roe and the carcasses used for subsistence. In prior reports subsistence plus commercial related harvests are noted as subsistence "use".

^d Test fish sales is the number of salmon sold by ADF&G test fisheries.

^e Commercial fishery was not conducted.

^f Data are preliminary.

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Table 6.– Fall chum salmon passage estimates or escapement estimates for selected spawning areas in the Yukon River drainage, 2000–2024.

Year	Yukon River Drainagewide Escapement	^a	Toklat River population estimates surveys	^b	Delta River population estimates surveys	^c	Teedriinjik (Chandalar River) sonar	^d	Sheenjek River sonar	^e	Fishing Branch River weir	Mainstem Canadian Yukon River escapement estimate	^f
2000	220,900		8,911		3,001		71,048		30,084		5,057 ^g	53,742	
2001	327,400		6,007		8,103		112,664		53,932		21,737	33,851	
2002	398,200		28,519		11,992		94,472		31,642		13,636	98,695	
2003	713,300		21,492		22,582		221,343		44,047		29,713	142,683	
2004	576,800		35,480		25,073		169,848		37,878		20,417	154,080	
2005	1,906,000		17,779	^g	28,132		526,838		485,886		119,058	437,733	
2006	945,000		–		14,055		254,778		175,620		30,954	220,898	
2007	956,500		–		18,610		243,805		69,184		32,150	236,987	
2008	639,900		–		23,055		178,278		50,348		19,086 ^g	167,898	
2009	507,900		–		13,492		–		54,126		25,828	93,626	
2010	507,400		–		17,993		167,532		24,669		15,414	117,789	
2011	919,300		–		23,639		298,223		97,976		13,087 ^g	205,566	
2012	691,400		–		9,377		205,791		104,701		22,399	137,662	
2013	854,600		9,161	ⁱ	31,955		252,710		–		25,376 ^h	200,262	
2014	739,400		–		32,480		221,421		–		7,304 ^h	156,796	
2015	542,350		8,422	ⁱ	33,401		164,486		–		8,351 ^g	108,658	
2016	833,700		16,885	ⁱ	21,913		295,023		–		29,397	145,267	
2017	1,723,000		–		48,783		509,115		–		48,524	401,585	
2018	653,200		19,141	ⁱ	39,641		170,356		–		10,151	154,126	
2019	521,250		–		51,748		116,323		–		18,171	99,738	
2020	183,200		1,330	ⁱ	9,854		–		–		4,795	23,512	
2021	93,285		–		1,613		21,162		–		2,413	23,170	
2022	170,800		7,360	ⁱ	5,670		69,333		13,957		2,934	22,034	
2023	287,900		–		13,366		136,551		15,958		11,528	22,090	
2024	161,100		1,779	ⁱ	16,880		58,457		14,319		5,933	16,174	
Lower Goal	300,000	^j			7,000	^j	85,000	^j			22,000 ^k	70,000 ^k	
Upper Goal	600,000				20,000		234,000				49,000	104,000	

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Note: En dash (–) indicate no data.

^a The estimated number of salmon which returned are based upon annual age composition observed in lower Yukon test nets each year, weighted by test fish catch per unit effort.

^b Various methods to derive population estimates based on ground and aerial surveys applied to stream life curves.

^c Population estimates generated from replicate foot surveys using area under the curve or peak survey counts.

^d Sonar estimates include counts extrapolated after conclusion of project through October 9 (1995–present).

^e Sonar estimates include counts extrapolated after conclusion of project through October 9 (2000, 2003, and 2005–present).

^f Mark-recapture estimate minus Canadian mainstem harvest (1980-2005), and Eagle sonar (2006-Present) expanded to October 18 minus U.S. and Canadian harvest upstream from the sonar site.

^g Minimal estimates.

^h Project was not operated estimate based on other methods.

ⁱ Aerial survey data not developed into population estimates.

^j Sustainable Escapement Goal (SEG).

^k Interim Management Escapement Goal (IMEG).

