

## **Department of Fish and Game**

Divisions of Sport Fish and Commercial Fisheries

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## MEMORANDUM

TO: Members

Alaska Board of Fisheries

DATE:

September 27, 2024

FROM:

Forrest R. Bowers, Acting Director

Division of Commercial Fisheries

SUBJECT:

Prince William Sound

and Upper

Copper/Upper Susitna Management Area Salmon Stock of

Concern

Recommendations

and

Israel Payton, Director Division of Sport Fish

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 Alaska Board of Fisheries (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.

This memorandum summarizes the results of the stock of concern evaluation for Prince William Sound (PWS) salmon stocks for the 2024–2025 board regulatory cycle. The evaluation was performed by the escapement goal review committee (committee) and included input from headquarters, regional, and area management staff from both fishery divisions.

The department recommends no PWS or Copper River stocks be designated a stock of concern for the 2024–2025 board regulatory cycle. There are 29 escapement goals in the PWS Management Area. Pink and chum salmon escapements are assessed by aerial surveys; two PWS sockeye salmon stocks are assessed using weirs and Copper River stocks (king, sockeye, and coho salmon) are assessed using sonar, aerial surveys and a mark/recapture estimate. Currently, there are no stocks of concern in the PWS Management Area (Table 1). During the 2023 escapement goal review process, all king, chum, coho, pink, and sockeye salmon stocks in the PWS Management Area were evaluated for potential stock of concern status. Eastern, Northern, Coghill, and Northwestern District chum salmon aggregate district goals were identified because of recent patterns in escapement. No other stocks in the PWS Management Area were identified for stock of concern status.

Four chum salmon aggregate district goals (Eastern, Northern, Coghill, and Northwestern) were reviewed as potential stocks of concern. These four stocks all failed to meet their respective SEGs three to five times over the past five years (Table 1). However, the review committee determined that the escapement estimates were often biased low due to problems with the aerial survey assessment. These problems included: high abundances of pink salmon in streams obscuring chum salmon and making accurate counts impossible, too few surveys being conducted during the peak of chum salmon instream abundance, and varying observer efficiency among biologists throughout the years. These problems all lead to incomplete or biased counts. and will be discussed in more detail within the written and oral escapement goal reports at the Prince William Sound and Copper River board meeting

Based on this review, the department recommends that no Prince William Sound or Copper River stock be designated a stock of concern. Staff will provide a presentation of this review process and stock of concern recommendations at the Prince William Sound and Copper River board meeting in December 2024.

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Table 1.-Prince William Sound/Copper River king, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2014 to 2023.

-	2024 Goa	l Range		Initial	Escapement									
System	Lower	Upper	Type	Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
KING SALMON		• •	• •											
Prince William Sound														
Copper River	21,000	31,000	SEG	2022	20,709	26,764	12,485	33,655	42,202	35,145	21,587	18,431	32,006	40,102 <sup>a</sup>
CHUM SALMON														
Prince William Sound														
Eastern District	79,000		LB SEG	2018	90,445	104,437	116,685	76,836	109,598	56,846	103,849	58,965	64,365	157,274
Northern District	28,000		LB SEG	2018	27,385	41,253	10,410	33,437	18,407	11,690	23,542	20,404	26,014	55,482
Coghill District	10,000		LB SEG	2018	9,491	14,929	976	13,210	13,617	3,437	8,998	2,395	8,629	6,250
Northwestern District	7,000		LB SEG	2018	5,041	7,060	3,954	7,118	15,563	3,258	7,405	6,979	13,372	738 <sup>b</sup>
Southeastern District	11,000		LB SEG	2018	29,362	44,095	13,919	26,330	10,164	19,451	26,909	46,391	12,944	7,791
COHO SALMON														
Prince William Sound														
Copper River Delta	32,000	50,000	SEG	2022	44,040	42,065	76,200	43,760	53,800	36,420	36,445	45,485	30,340	44,440
Bering River	13,000	25,000	SEG	2022	26,475	15,550	26,150	30,650	26,525	10,015	25,825	19,450	4,685	20,950
PINK SALMON														
Prince William Sound														
Eastern District (even year)	203,000	328,000	SEG	2018	250,381		594,778		309,325		206,152		353,187	
Eastern District (odd year)	346,000	863,000	SEG	2018		1,440,254	,	557,545	,	445,075	,	729,369	,	650,740
Northern District (even year)	96,000	127,000	SEG	2018	95,134	, -, -	134,460	,-	111,174	-,	105,226	,	161,748	,-
Northern District (odd year)	111,000	208,000	SEG	2018	,	708,920	Ź	395,437	Í	195,169		464,350		299,845
Coghill District (even year)	37,000	110,000	SEG	2018	60,921		63,986		70,881		88,401		73,971	
Coghill District (odd year)	54,000	233,000	SEG	2018		775,488		181,153		153,129		300,227		169,737
Northwestern District (even year)	52,000	93,000	SEG	2018	66,350		168,272		111,194		77,828		292,892	
Northwestern District (odd year)	64,000	144,000	SEG	2018		438,944		250,989		91,267		368,406		312,060
Eshamy District (even year)	1,000	4,000	SEG	2018	12,167		NA		16,594		7,250		14,937	
Eshamy District (odd year)	5,000	31,000	SEG	2018		68,988		2,836		1,402		17,925		12,756
Southwestern District (even year)	62,000	105,000	SEG	2018	73,104		NA		81,100		64,470		200,057	
Southwestern District (odd year)	112,000	231,000	SEG	2018		644,158		172,930		33,340		339,920		134,089
Montague District (even year)	36,000	72,000	SEG	2018	23,136		NA		135,208		84,238		143,917	
Montague District (odd year)	143,000	330,000	SEG	2018		559,994		205,252		25,385		242,151		177,472
Southeastern District (even year)	88,000	153,000	SEG	2018	141,845		107,769		293,275		138,330		137,692	
Southeastern District (odd year)	286,000	515,000	SEG	2018		1,529,543		372,960		290,452		544,906		183,087
SOCKEYE SALMON														
Prince William Sound														
Upper Copper River	360,000	750,000	SEG	2012	864,958	930,061	513,546	465,539	478,701	721,033	362,445	511,274	521,313	694,007
Copper River Delta	55,000	130,000	SEG	2003	64,205	66,665	51,550	56,950	58,470	61,825	55,620	87,075	55,075	65,775
Bering River	15,000	24,000	SEG	2022	15,385	22,705	16,390	19,115	13,300	17,630	15,795	13,774	7,095	19,125
Coghill Lake	20,000	75,000	SEG	2022	21,836	13,684	8,708	50,462	62,295	32,247	53,901	101,083	34,092 <sup>b</sup>	64,212
Eshamy Lake <sup>c</sup>	13,000	28,000	BEG	2009	NS	NS	NS	NS	NS	NS	NS	7,001 <sup>b</sup>	19,325	11,194

Notes: BEG = biological escapement goal; SEG = sustainable escapement goal; LB SEG = lower-bound SEG; NA = data not available; NS = no survey. Shaded cells indicate spawning escapement was below the lower-bound of the escapement goal in place at the time.

<sup>&</sup>lt;sup>a</sup> Preliminary data.

<sup>&</sup>lt;sup>b</sup> Incomplete survey or weir count.

<sup>&</sup>lt;sup>c</sup> Eshamy River weir was not operated in 2012-2020. A pilot project to assess the use of video for monitoring starting in 2013 has not provided a comparable total escapement estimate, but did provide a minimum estimate of sockeye salmon.