



MEMORANDUM

TO: Members
Alaska Board of Fisheries

DATE: September 28, 2020

FROM: Sam Rabung, Director *SR*
Division of Commercial Fisheries

SUBJECT: Prince William Sound
Management Area
Stock of Concern
Recommendations

and

Dave Rutz, Director *DR*
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 2020–2021 board regulatory cycle. The evaluation was performed by the escapement goal review committee (committee) and included input from regional and area management staff from both fishery divisions.

There are 29 escapement goals in the PWS Management Area. Salmon escapements are primarily assessed by aerial surveys of representative stream reaches; however, escapement for one stock is assessed using sonar, one with mark-recapture techniques, and two with weirs. Currently, there are no stocks of concern in the PWS Management Area (Table 1). During the 2020 escapement goal review process all king, chum, coho, pink, and sockeye salmon stocks in the PWS Management Area were examined for potential stock of concern status. Because of recent patterns of escapement, the committee specifically reviewed and considered Northern District chum salmon as a potential stock of concern. No other stocks in the PWS Management Area present a concern related to yield, management, or conservation for the 2020–2021 board regulatory cycle.

Northern District chum salmon

The current escapement goal for Northern District chum salmon is a lower bound sustainable escapement goal of 28,000 chum salmon, which is assessed using peak aerial counts of 19 streams in the Northern District. The Northern District chum salmon stock was discussed as a potential stock of concern because the goal for this stock has not been achieved in 3 of the 5 most recent years (2015–2019; Table 1). However, the goal was met in 7 of the past 10 years and the 2015 and 2017 escapements of 41,253 and 33,437, respectively were above the lower bound escapement goal. Because no PWS Management Area stocks exhibited a chronic inability to achieve their escapement goal, including Northern District chum salmon, the department recommends no stocks of concern be established.

Table 1.—Prince William Sound/Copper River king, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2010 to 2019.

System	Current Escapement Goal		Type	Initial Year	Escapement									
	Lower	Upper			2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
KING SALMON														
<i>Prince William Sound</i>														
Copper River	24,000		LB SEG	2003	16,746	27,936	27,846	29,013	20,689	26,751	12,430	33,644	42,678	35,138
CHUM SALMON														
<i>Prince William Sound</i> ^{a,b}														
Eastern District	79,000		LB SEG	2018	140,940	237,372	94,986	146,349	90,445	104,437	116,685	76,836	109,598	56,846
Northern District	28,000		LB SEG	2018	58,029	63,876	23,273	40,475	27,385	41,253	10,410	33,437	18,407	11,690
Coghill District	10,000		LB SEG	2018	84,752	19,614	13,896	14,086	9,491	14,929	976	13,210	13,617	3,437
Northwestern District	7,000		LB SEG	2018	34,131	11,951	9,360	4,995	5,041	7,060	3,954	7,118	15,563	3,258
Southeastern District	11,000		LB SEG	2018	80,927	107,857	28,374	33,678	29,362	44,095	13,919	26,330	10,164	19,451
COHO SALMON														
<i>Prince William Sound</i>														
Copper River Delta	32,000	67,000	SEG	2003	40,377	38,145	36,735	34,630	44,040	42,065	76,200	43,760	53,800	36,420
Bering River	13,000	33,000	SEG	2003	21,311	18,890	15,605	18,820	26,475	15,550	26,150	30,650	26,525	10,015
PINK SALMON														
<i>Prince William Sound</i> ^{a,c}														
Eastern District (even year)	203,000	328,000	SEG	2018			268,432		250,381		594,778		309,325	
Eastern District (odd year)	346,000	863,000	SEG	2018				1,266,630		1,440,254		557,545		445,075
Northern District (even year)	96,000	127,000	SEG	2018			91,187		95,134		133,460		111,174	
Northern District (odd year)	111,000	208,000	SEG	2018				299,054		708,920		395,437		195,169
Coghill District (even year)	37,000	110,000	SEG	2018			170,752		60,921		63,986		70,881	
Coghill District (odd year)	54,000	233,000	SEG	2018				625,991		775,488		181,153		153,129
Northwestern District (even year)	52,000	93,000	SEG	2018			114,518		66,350		168,272		111,194	
Northwestern District (odd year)	64,000	144,000	SEG	2018				201,836		438,944		250,989		91,267
Eshamy District (even year)	1,000	4,000	SEG	2018			1,052		12,167		NA ^u		16,594	
Eshamy District (odd year)	5,000	31,000	SEG	2018				12,145		68,988		2,836		1,402
Southwestern District (even year)	62,000	105,000	SEG	2018			79,774		73,104		NA ^u		81,100	
Southwestern District (odd year)	112,000	231,000	SEG	2018				337,952		644,158		172,930		33,340
Montague District (even year)	36,000	72,000	SEG	2018			70,695		23,136		NA ^u		135,208	
Montague District (odd year)	143,000	330,000	SEG	2018				365,807		559,994		205,252		25,385
Southeastern District (even year)	88,000	153,000	SEG	2018			213,071		141,845		107,769		293,275	
Southeastern District (odd year)	286,000	515,000	SEG	2018				1,137,736		1,529,543		372,960		290,452
SOCKEYE SALMON														
<i>Prince William Sound</i>														
Upper Copper River	360,000	750,000	SEG	2012	502,445	607,140	954,010	860,253	864,169	930,145	513,143	460,295	495,779	719,526
Copper River Delta	55,000	130,000	SEG	2003	83,905	72,367	66,850	75,705	64,205	66,665	51,550	56,950	58,470	61,825
Bering River	15,000	33,000	SEG	2012	4,367	28,530	18,290	23,900	14,885	22,705	16,390	19,115	13,300	17,630
Coghill Lake	20,000	60,000	SEG	2012	24,312	102,359	74,978	17,231	21,836	13,684	8,708	50,462	62,295	32,247
Eshamy Lake ^e	13,000	28,000	BEG	2009	16,291	24,129	NA	NA	NA	NA	NA	NA	NA	NA

Notes: NA = data not available; NC = no count; NS = no survey; LB SEG = lower-bound SEG.

Bold highlights indicate changes due to harvest updates since the previous escapement goal review cycle; gray shadings were below the lower bound of the escapement goal.

^a All PWS chum and pink salmon goals were revised in 2017 using a different index approach than previously used. Escapement values presented here use the new index based on a reduced set of survey streams. Values prior to 2018 should not be read relative to the previous goal.

^b No estimates for chum salmon escapements are included for the Unakwik, Eshamy, Southwestern, or Montague districts because there are no escapement goals for those districts.

^c The estimates for pink salmon (odd year) do not include Unakwik District escapements, due to absence of an escapement goal and an average escapement estimate of a few thousand fish.

^d Fewer than 3 surveys were flown for almost all the index streams in the Eshamy, Southwestern, and Montague districts in 2016, so they were not used in calculating the area under the curve index.

^e Eshamy River weir was not operated in 2012-2019. A pilot project to assess the use of video for monitoring in 2013-2016 did not provide a comparable total escapement estimate.