



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

**Department of
Fish and Game**

DIVISIONS OF COMMERCIAL FISHERIES & SPORT FISH
Headquarters Office

1255 W. 8th Street
P.O. BOX 115526
Juneau, AK 99811-5526
Main: 907.465.4210
Fax: 907.465.2604

MEMORANDUM

TO: Members
Alaska Board of Fisheries

DATE: October 3, 2018

FROM: Forrest R. Bowers, Acting Director *FRB*
Division of Commercial Fisheries

SUBJECT: Bristol Bay
Management Area
Stock of Concern
Recommendations

Thomas Brookover, Director *TB*
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 (SOC) evaluation for the Bristol Bay Management Area (BBMA) salmon stocks for the 2018 board regulatory cycle. The evaluation includes input from headquarters, regional, and area management staff from both fishery divisions.

Currently there are 15 escapement goals in the BBMA. Counting towers are used to monitor the majority of sockeye salmon stocks in the BBMA. Sonar is used to assess Nushagak River sockeye, king, chum, coho, and pink salmon spawning escapements.

In this evaluation, Alagnak River king salmon was the only stock considered as a potential SOC. Aerial survey escapement indices from 2015 – 2018 did not meet the established escapement goal and were some of the lowest on record (Table 1). All other BBMA salmon stocks have met established goals in most or all recent years.

For Alagnak River king salmon, there are indications that aerial surveys conducted since 2015 may not index escapement similar to previous surveys used to develop the escapement goal. Other recent indicators of relative king salmon abundance in the Alagnak River (e.g., Statewide Harvest Survey estimates of catch, guide logbook data, personal communication with anglers and guide businesses) are on par with years when historical survey index counts were greater than 3,000 fish. The exact

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reason(s) for these differences are unknown, in part because surveys have been conducted in a different manner (i.e., two observers per survey and multiple surveys per year since 2015 but one observer single aerial surveys historically). The department currently lacks the information needed to understand the relationship between current aerial survey data and the existing escapement goal, as well as reported sport fishing data.

Because of the uncertainty that recent surveys index spawner abundance similar to historical surveys upon which the escapement goal was developed, the department is not recommending Alagnak River king salmon as a stock of concern. Therefore, we recommend that no stocks of concern be established for the BBMA.

Literature Cited

Munro, A.R., E.C. Volk. 2017. Summary of Pacific salmon escapement goals in Alaska, with a review of escapements from 2008 to 2016. Alaska Department of Fish and Game, Fisheries Manuscript Series No. 17-05, Anchorage.

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Table 1.– Bristol Bay Management Area king, sockeye, coho, and pink salmon escapement goals and escapements, from 2009 to 2018 (modified from Munro and Volk, 2017). Shaded cells indicate escapements below the escapement goal.

System	2018 Goal Range		Type	Initial Year	Escapement									
	Lower	Upper			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018 ^a
KING SALMON														
Nushagak River	55,000	120,000	SEG	2013	74,781	56,092	101,995	167,618	104,746	62,532	90,974	122,637 ^b	53,819 ^b	89,239 ^b
Alagnak River	2,700		lower-bound SEG	2007	1,957	NS	NS	NS	NS	NS	917	1,283	435	988
CHUM SALMON														
Nushagak River (through July 20)	200,000		lower-bound SEG	2013	438,481	273,914	248,278	360,768	602,300	493,821	288,929	419,810	415,488	735,628
COHO SALMON														
Nushagak River	60,000	120,000	SEG	2013	NS	NS	NS	329,946	207,222	478,198	NS	NS	NS	111,455
PINK SALMON														
Nushagak River (even years only)	165,000		lower-bound SEG	2013	NA	NS	NA	1,348,606	NA	2,281,831	NA	NS	NA	628,069
SOCKEYE SALMON														
Kvichak River ^c	2,000,000	10,000,000	SEG	2010	2,266,140	4,207,410	2,264,352	4,164,444	2,088,576	4,458,540	7,348,572	4,462,728	3,163,404	4,398,708
Alagnak River (tower)	320,000		lower-bound SEG	2007	970,818	1,187,730	883,794	NS	NS	NS	NS	NS	2,041,824	1,581,426
Alagnak River (aerial survey)	125,000		lower-bound SEG	2016	NA	NA	NA	337,940	429,784	78,637	2,263,000	696,400	629,200	374,900
Naknek River	800,000	2,000,000	SEG ^d	2015	1,169,466	1,463,928	1,177,074	900,312	938,160	1,474,428	1,920,954	1,691,910	1,899,972	2,221,152
Egegik River	800,000	2,000,000	SEG	2015	1,146,276	927,054	961,200	1,233,900	1,113,630	1,382,466	2,160,792	1,837,260	2,600,982	1,608,354
Ugashik River	500,000	1,400,000	SEG	2015	1,364,338	830,886	1,029,853	670,578	898,110	640,158	1,564,638	1,635,270	1,186,446	1,167,792
Wood River	700,000	1,800,000	SEG	2015	1,319,232	1,804,344	1,098,006	764,211	1,166,508	2,764,614	1,941,474	1,309,707	4,274,224	7,507,254
Igushik River	150,000	400,000	SEG	2015	514,188	518,040	421,380	193,326	387,666	340,590	651,172	469,230	578,700	769,272
Nushagak River	370,000	900,000	SEG	2015	484,149	468,696	428,191	432,438	894,148	618,477	796,684	680,513	2,852,306	1,247,460
	260,000	760,000	OEG ^e	2012										
Togiak River	120,000	270,000	SEG	2010	313,946	188,298	190,970	203,148	128,118	151,934	218,700	200,046	195,330	511,770

Note : NA = not applicable; NS = no survey.

^a Preliminary escapement estimates.

^b 2016-2018 escapement counts are preliminary. Final estimates of upstream harvest are not yet available.

^c Prior to 2010 Kvichak River had a pre-peak/peak-cycle escapement goal of 6–10 million sockeye and an off-peak escapement goal of 2–10 million fish. Between 2001 and 2009 only one year (2004) was classified as either a pre-peak or peak year.

^d Naknek River has an OEG of 800,000–2,000,000 sockeye salmon when the Naknek River Special Harvest Area (NRHSA) is open to fishing.

^e Nushagak River has an OEG of 260,000–760,000 sockeye salmon when the pre-season forecast for the Nushagak River is less than 1 million sockeye salmon and the ratio of Wood River to Nushagak River sockeye salmon is projected to be greater than 3 to 1.