

Nushagak-Mulchatna King Salmon Management Plan (3 proposals)

PROPOSAL 11

5 AAC 06.361. Nushagak-Mulchatna River King Salmon Management Plan and 5 AAC 67.022. Special provisions for season, bag, possession, and size limits, and methods and means in the Bristol Bay Area.

Make numerous amendments to the Nushagak-Mulchatna King Salmon Management Plan, as follows:

As part of a larger comprehensive solution to issues facing management of the king salmon fisheries in the Nushagak drainage, the committee recommends the following regulatory changes. The list below includes eight regulatory action items with consensus among the Nushagak King Salmon Committee, of about 15 considered. Actions listed below, in draft regulatory format, would fall under the Nushagak-Mulchatna River King Salmon Management Plan (5 AAC 06.361), except where noted under #6 which would fall under sport fishing Special Provisions (5 AAC 67.022).

1. Define specific management objectives for the Plan by adding the language below to, or following, section (a) of the Plan:

The department shall manage the Nushagak fisheries for the following management objectives:

- 1) **Provide consistent sport fishing opportunity within and among seasons. This includes a level of inriver abundance as a given year's run timing allows, and a predictably open season.**
 - 2) **Provide a directed commercial king salmon fishery when surplus is available.**
 - 3) **Provide for an uninterrupted commercial sockeye salmon fishery (i.e., minimize disruptions to the sockeye salmon fishery).**
 - 4) **Provide for reasonable opportunity for subsistence harvest of king salmon.**
 - 5) **The subsistence fishery is the last fishery to be closed.**
 - 6) **Achieve escapement goals for all species in the district.**
 - 7) **Maintain a representation of age classes in the escapement similar to the run.**
2. Manage large sockeye runs so that escapements fall in the upper portion of the escapement goal range, which would reduce incidental catch of king salmon, by adding new provisions to section (b) as follows:

(X) Consistent with 5 AAC 06.367 Nushagak District Commercial Set and Drift Gillnet Sockeye Salmon Fisheries Management and Allocation Plan, the department in an attempt to conserve king salmon shall manage for sockeye escapements in the Nushagak District to fall within the

(1) lower half of the escapement goal range when the Wood River sockeye salmon run is 8 million or less and/or the Nushagak sockeye salmon run is 4 million or less, or the

(2) upper half of the escapement goal range when the Wood River sockeye salmon run is greater than 8 million and/or the Nushagak sockeye salmon run is greater than 4 million based on the preseason forecast and in-season assessment of run size.

(X) On or after June 25, the department shall consider when evaluating total run of sockeye salmon to the Nushagak District all possible data sources including but not limited to: pre-season forecast, Port Moller test fishery indices and stock and age composition, total C+E to date, age composition of C&E and district test fishing.

3. Use a Nushagak District Test Fishery to assess relative abundance of sockeye and king salmon by adding the following new provision to (b):

(X) From June 1 through June 30 the department in an attempt to conserve king salmon shall conduct a drift gillnet test fishery to assess the abundance of sockeye and king salmon prior to opening by emergency order a fishing period directed at sockeye salmon.

4. Modify the Wood River trigger and establish a Nushagak River trigger by adding the following new provisions to (b) and repealing (e)(1):

(X) close, by emergency order, the sockeye salmon commercial fishery in the Nushagak District until the projected sockeye salmon escapement past the Wood River tower exceeds 100,000 within the next 12 hours if the forecasted Wood River sockeye run is 8 million or less. If the Wood River sockeye run is forecasted to be more than 8 million the fishery shall close by emergency order until the projected sockeye salmon escapement past the Wood River tower exceeds 300,000 within the next 12 hours.

(X) (1) independent of whether the Wood River tower count exceeds 100,000 or 300,000, open, by emergency order, the sockeye salmon commercial fishery in the Nushagak District when the sockeye salmon escapement past the Nushagak River sonar counter exceeds XXXXXX when the forecasted Nushagak River sockeye run is XXXXXXXX. If the Nushagak River sockeye run is forecasted to be more than XXXXXXXX, the fishery shall open by emergency order when the projected sockeye salmon escapement past the Nushagak River sonar exceeds XXXXXXXX.

e) If the spawning escapement of king salmon in the Nushagak River is projected to be less than 55,000 fish, the commissioner

[(1) shall close, by emergency order, the sockeye salmon commercial fishery in the Nushagak District until the projected sockeye salmon escapement into the Wood River exceeds 100,000 fish;]

5. Provide a directed commercial fishery for king salmon when surplus clearly exists by modifying section (c) as follows:

(c) If the total inriver king salmon return in the Nushagak River is projected to exceed 95,000 fish,

(1) the guideline harvest level described in (b)(1)(C) of this section does not apply[.], and (X) the department will consider a directed commercial king salmon fishery.

6. Modify the annual limit for king salmon by modifying 5 AAC 67.022 and section (c) of the Plan as follows:

5 AAC 67.022. Special provisions for season, bag, possession, and size limits, and methods and means in the Bristol Bay Area.

(g) In the Nushagak River drainage, excluding the Wood River drainage, and unless otherwise specified in [5 AAC 06.361](#) or [5 AAC 06.368](#), the following special provisions apply:

(1) the bag and possession limit for king salmon 20 inches or greater in length is two fish, of which only one fish may be 28 inches or greater in length; the annual limit for king salmon 20 inches or greater in length is four fish, **of which only one fish may be 28 inches or greater in length**; the bag and possession limit for king salmon less than 20 inches in length (jack salmon) is five fish; ...

5 AAC06.361 Nushagak-Mulchatna King Salmon Management Plan.

(c) If the total inriver king salmon return in the Nushagak River is projected to exceed 95,000 fish, **(1) the guideline harvest level described in (b)(1)(C) of this section does not apply[.], and (X) the commissioner may increase the annual limit for king salmon to 4 king salmon 20 inches or longer (no restriction to one fish over 28 inches).**

7. Avoid complete closures of the sport fishery when possible by modifying section (e) as follows:

(2) shall [close]**restrict to catch and release**, by emergency order, the sport fishery **for king salmon** in the Nushagak River [to the taking of salmon] and prohibit the use of bait for fishing for all species of fish until the end of the king salmon season specified in 5 AAC 67.020 and 5 AAC 67.022(g); and

8. Provide the department with flexibility to restrict but not close the subsistence fishery in low inriver run scenarios and standardize subsistence fishing schedule and area under a restricted scenario by modifying section (e) as follows:

(3) [shall]**may** establish, by emergency order, fishing periods during which [the time or area is reduced for the inriver king salmon subsistence fishery in the Nushagak River]**the subsistence fishery is restricted to 3 days per week in the Nushagak District; and the waters above the district including Dillingham beaches, Wood River up to Red Bluff, and the Nushagak River drainage.**

What is the issue you would like the board to address and why? The Nushagak River fisheries that harvest king salmon have been managed under the direction of the Nushagak-Mulchatna King Salmon Plan (5 AAC 06.361) since 1992. Salmon fishery dynamics changed notably over the life of the Plan. King salmon runs declined to some of the lowest levels recorded and sockeye runs to the Wood and Nushagak Rivers increased in magnitude to some of the highest levels recorded. Commercial fishing directed at king salmon has remained closed since 2014, and sport fishing regulations have become increasingly conservative. At the same time, substantial uncertainties have expanded over the ability of the sonar to estimate inriver run abundance.

Restrictions to the sport fishery due to low early season inriver passage of king salmon combined with sometimes intense fishing for sockeye in the Nushagak District in the mid-2010's led to calls to enact paired restrictions in the commercial and sport fishery in 2018 (Proposals 41 and 42, 2018

Bristol Bay Board meeting). The Board, in response to the proposals, removed several triggers in the Plan that affect the sport fishery. The Board also established a committee to develop a comprehensive solution to the Plan through RC 84 and a charge statement (2018-291-FB) and charged the committee with reporting back to the Board. At the 2018 Board meeting, the Bristol Bay Science and Research Institute (BBSRI) committed to supporting the committee's work through a stakeholder-led technical analysis of options the committee was expected to consider (RC 80).

The committee first met in Anchorage on October 21, 2019 (a meeting summary can be found on the Alaska Board of Fisheries website) and break-out groups met in December 2019 and February 2020. At the Upper Cook Inlet meeting in February 2020, the Board disbanded the formal committee but encouraged stakeholders on the committee to continue to work together in preparation for the next in-cycle Bristol Bay meeting. BBSRI reasserted its commitment to serving the committee and moving toward its original mission outlined in the charge statement: a comprehensive solution to the Plan. Committee makeup remained the same as selected by the Board initially in February 19, minus the two Board members. The committee met on a consensus basis 15 times from Fall 2019 through early April 2022; 9 times as a full committee and 6 partial committee meetings.

This regulatory proposal is one part of a larger, more comprehensive solution envisioned by the committee to address issues plaguing management of the Nushagak king salmon fisheries. Other components will include additional technical analyses, recommendations for improving stock assessment, and other non-regulatory actions or recommendations. As one example of a non-regulatory action, BBSRI has secured funding to field a district test boat program to better inform managers of sockeye and king salmon abundance in the Nushagak District and thereby reduce incidental harvest of king salmon and better target sockeye salmon in the district. A report will be made available in advance of the November 2022 Board meeting to summarize the committee process and work products and present the full scope of the comprehensive solution. Work products including the report will be posted on the BBSRI website as they become available.

PROPOSED BY: Nushagak-Mulchatna King Salmon Committee (HQ-F22-028)

PROPOSAL 12

5 AAC 06.361. Nushagak-Mulchatna King Salmon Management Plan.

Make several changes to the management plan to reduce commercial king salmon harvest and increase sockeye salmon harvest, as follows:

Require a 4.75" maximum mesh restriction until July 1st to mitigate chinook harvest which should prove to more effectively optimize sockeye:chinook catch ratios in multiple ways: a) chinook migrate deeper in the water column (4.75" vs. 5.125" is approximately 1 foot shallower), b) smaller mesh size decreases chances of catching chinook, c) catch efficiency of sockeye is higher with smaller mesh and less overall fishing time can be utilized for similar sockeye harvest and can increase time corridors for migrating chinook, d) July 1st follows historic and current patterns for when the majority of chinook have migrated into the Nushagak River, e) since two independent triggers are suggested to be used (Wood River or Nushagak River), projected escapement should

be increased from the current metric of ~14% of minimum biological escapement goal in the Wood River to 20% of minimum biological escapement goal for each river. This will reduce the sensitivity of the Wood River triggering event and likely provide more chinook migration time prior to a district opening. Although the Nushagak River escapement would have triggered an earlier opening in 2021, the use of a smaller mesh size earlier would have increased the sockeye harvest while still offering protection for chinook salmon.

Amend 5AAC 06.361(e)(1) to read: shall close, by emergency order, the sockeye salmon commercial fishery in the Nushagak District until the projected sockeye salmon escapement into the Wood River or the Nushagak River exceeds 20% of the minimum biological escapement goal and will restrict mesh size to not exceed 4.75” until July 1st or until chinook escapement is projected above 55,000 fish. This change will have an effective sunset date at the next Board cycle, to review data and overall effectiveness.

What is the issue you would like the board to address and why? Mitigating chinook harvest to better optimize sockeye:chinook harvest ratios during times where in-season chinook returns fall below the curve established for the minimum biological escapement goal or 55,000 chinook.

Ecological conditions for run size between the Nushagak River and the Wood River have changed greatly, where sockeye sizes have been smaller and the Nushagak River can now greatly exceed historic returns. Recently, we have seen that a Wood River projection for a minimum of 100,000 sockeye is not always the best trigger to initiate openings in the Nushagak District. This is especially true for years with high volumes of Nushagak River sockeye, where the high-end biological escapement goal can be reached prior to a 100,000 projected sockeye salmon escapement into the Wood River.

Salmon size has also decreased, and a large percent of fishermen have already transitioned to a smaller mesh size since 2018. This smaller mesh size is more efficient at harvesting sockeye while simultaneously decreasing chinook harvest. However, fishermen trends do exhibit a multi-year lag effect. In consideration of future conditions, if chinook numbers remain depressed, smaller mesh sizes should be considered as a tool for management.

We recognize that there is no perfect solution at this time, and data is severely limited and desperately needed concerning chinook in the Nushagak/Mulchatna River Drainage, including more accurate enumeration methods. In the interim of this data discrepancy, this proposal seeks to decrease overall chinook harvest. When better data is available, best management practices can then be implemented. However, this proposal works toward providing some chinook harvest mitigation by the commercial fleet..

PROPOSED BY: Nicholas Dowie, Michael Jackson, Frank Woods (HQ-F22-035)

PROPOSAL 13

5 AAC 06.361. Nushagak-Mulchatna King Salmon Management Plan.

Structure fishing periods in the Nushagak District so that pulses of king salmon, not subjected to commercial fishing pressure, may enter the Nushagak River, as follows:

The Department of Fish and Game will create opportunities for pulses of King salmon to enter the Nushagak River. From June 1 through July 10 this will be done by issuing commercial openings no earlier than 1 hour before the forecasted high tide at Clark's Point. The Department will close fishing at least 4 hours before the next scheduled high tide. This will allow for pulses of Kings to make it into the Nushagak River while still allowing for the commercial fleet and set users to access the resource and have economic opportunities. For example:

High tide at Clark's Point on June 28 is at 0600 and again at 1630 and then on June 29 at 0530.

An opener for both set and drift is announced for June 28 from 0500 (1 hour before high tide) to 1230 (4 hours before next high tide) 7 hours 30 minutes, and again from 1530 (1 hour prior to high tide) June 28 until 0130 (4 hours before next high tide) June 29, 10 hours of fishing.

The Department can allow for continuous fishing starting on July 11

What is the issue you would like the board to address and why? 5 AAC 06.361. Nushagak-Mulchatna King Salmon Management Plan with regards to King salmon states in Section (b)(2):

(b) The department shall manage the commercial and sport fisheries in the Nushagak District as follows:

(2)in order to maintain a natural representation of age classes in the escapement, the department shall attempt to schedule commercial openings to provide pulses of fish into the river that have not been subject to harvest by commercial gear;

The Department has not always followed through with this mandate while managing the sockeye commercial openers which has an unintended intercept of King salmon. To meet the requirement of the NMKSMP there must be meaningful breaks in commercial fishing that facilitate opportunity for Kings to move into the river thus meeting the requirement set forth in the plan. These breaks need to be realistic in timing as to when the most kings are pushing through the commercial district while still maximizing opportunity for the commercial fishers to harvest sockeye. The flood stage of an incoming high tide time is by far the best time to hold the commercial fishery to allow pulses of fish into the river that have not been subject to harvest by commercial gear.

PROPOSED BY: Brian Kraft

(EF-F22-060)
