PROPOSAL 99

5 AAC 21.359. Kenai River Late-Run King Salmon Management Plan.

Make numerous changes to the *Kenai River Late-Run King Salmon Management Plan* as follows:

5 AAC 21.359. Kenai River Late-Run King Salmon Management Plan. (a) The purposes of this management plan are to ensure an adequate escapement of late-run king salmon into the Kenai River system and to provide management guidelines to the department. The department shall manage the late-run Kenai River king salmon stocks primarily for sport and guided sport uses in order to provide the sport and guided sport fishermen with a reasonable opportunity to harvest these salmon resources over the entire run, as measured by the frequency of inriver restrictions. [THE PROVISIONS OF THIS MANAGEMENT PLAN ARE IN EFFECT FROM JUNE 20 THROUGH AUGUST 15.]

(b) The department shall manage the late run of Kenai River king salmon to achieve a **sustainable** [N OPTIMAL] escapement goal of 15,000 -- 30,000 king salmon [75 CM MID EYE TO TAIL FORK AND LONGER AS DESCRIBED IN THIS SECTION.]

(c) In the sport fishery,

(1) if the optimal escapement goal is projected to be exceeded, the commissioner may, by emergency order, extend the sport fishing season up to seven days during the first week of August;

(2) from July 1 through July 31, a person may not use more than one single hook in the Kenai River downstream from an ADF&G regulatory marker located at the outlet of Skilak Lake;

(3) that portion of the Kenai River downstream from an ADF&G regulatory marker located at the outlet of Skilak Lake is open to unguided sport fishing from a nonmotorized vessel on Mondays in July; for purposes of this paragraph, a nonmotorized vessel is one that does not have a motor on board.

(d) **From July 17 through July 27 if the in season** [IF THE] projected late-run king salmon escapement is less than 15,000 king salmon [75 CM MID EYE TO TAIL FORK AND LONGER], the department shall

(1) close the sport fisheries in the Kenai River and in the salt waters of Cook Inlet north of the latitude of Bluff Point to the taking of king salmon;

(2) close the commercial drift gillnet fishery in the Central District within one mile of the Kenai Peninsula shoreline north of the Kenai River and within one and one-half miles of the Kenai Peninsula shoreline south of the Kenai River; and

(3) close the commercial set gillnet fishery in the Upper Subdistrict of the Central District.

(e) **From July 1 through July 31, if the projected inriver run of late-run king salmon is less than 22,500 fish, in** [IN] order to achieve the **sustainable** [OPTIMAL] escapement goal and

provide reasonable harvest opportunity, the commissioner may, by emergency order, establish fishing seasons as follows:

(1) in the Kenai River sport fishery,

(A) the use of bait is prohibited;

(B) the use of bait is prohibited and retention of king salmon 34 inches or greater in length as defined in 5 AAC 75.995(a) is prohibited; or

(C) the use of bait and retention of king salmon are prohibited;

(2) in the Kenai River personal use fishery, if the use of bait is prohibited in the Kenai River sport fishery under (1) of this subsection, the retention of king salmon is prohibited in the personal use fishery;

(3) in the Upper Subdistrict set gillnet commercial fishery, notwithstanding the provisions of 5 AAC 21.360(c)(1)(B), (2)(B), and (3)(B), based on the abundance of sockeye salmon returning to the Kenai and Kasilof Rivers,

(A) if the use of bait is prohibited in the Kenai River sport fishery under (1)(A) of this subsection, commercial fishing periods are open for no more than 48 hours per week, with a 36-hour continuous closure per week beginning between 7:00 p.m. Thursday and 7:00 a.m. Friday;

(B) if the use of bait and the retention of king salmon greater than 34 inches in length as defined in 5 AAC 75.995(a) are prohibited in the Kenai River sport fishery under (1)(B) of this subsection, commercial fishing periods are open for no more than 36 hours per week, with a 36-hour continuous closure per week beginning between 7:00 p.m. Thursday and 7:00 a.m. Friday;

(C) if the use of bait and the retention of king salmon prohibited in the Kenai River sport fishery under (1)(C) of this subsection, commercial fishing periods are open for no more than 24 hours per week, with a 36-hour continuous closure per week beginning between 7:00 p.m. Thursday and 7:00 a.m. Friday;

(D) if **in season** [PRESEASON] restrictions are issued for the late-run Kenai River king salmon sport fishery, then all Upper Subdistrict set gillnet fisheries **may be** [ARE] restricted;

(E) if restrictions for the late-run Kenai River king salmon sport fishery are in effect on July 31, then, beginning August 1, **if the projected escapement of king salmon into the Kenai is at least 16,500, but less than 22,500 fish, notwithstanding the provisions of 5 AAC 21.360(c)(1)(B), (2)(B), and (3)(B), the commissioner may open, by emergency order, the** Upper Subdistrict set gillnet commercial fishing periods [ARE OPEN] for no more than 36 hours per week; if the Kenai River late-run king salmon sport fishery is not restricted under the provisions of this section, or, after August 1, if the Kenai River late-run king salmon **SEG** [OEG] is achieved, the Upper Subdistrict set gillnet fishery will be managed under the provisions of 5 AAC 21.360, Kenai River Late-Run Sockeye Salmon Management Plan;

(F) Upper Subdistrict set gillnet commercial fishing periods that are limited under this section may be limited to fishing within 600 feet of the mean high tide mark and are exempt from hour and gear limitations identified under (e)(3)(A) - (E) of this section;

(G) if commercial fishing is limited under (e)(3) of this section, the operation of setnets operated by a CFEC permit holder shall be restricted to:

(i) up to four set gillnets that are each not more than 35 fathoms in length, 105 fathoms in aggregate length, and 29 meshes in depth, or two set gillnets that are each not more than 35 fathoms in length and 45 meshes in depth; set gillnets used that are not more than 29 meshes in depth must be identified at the end of the gillnet with an attached blue buoy that is not less than nine and one-half inches in diameter; or

(ii) up to two set gillnets that are each not more than 35 fathoms in length and 29 meshes in depth or one set gillnet that is not more than 35 fathoms in length and 45 meshes in depth; set gillnets used that are not more than 29 meshes in depth must be identified at the end of the gillnet with an attached blue buoy that is not less than nine and one-half inches in diameter.

(f) Repealed 6/8/2017;

(g) Repealed 6/8/2017;

(h) The provisions [OF (e)(3)(G)] of this section do not apply to provisions of the Kasilof River Salmon Management Plan contained in 5 AAC 21.365(f) that pertain to the Kasilof Special Harvest Area. [THE PROVISIONS OF (E)(3)(A) - (C) OF THIS SECTION APPLY TO PROVISIONS OF THE KASILOF RIVER SALMON MANAGEMENT PLAN CONTAINED IN 5 AAC 21.365(F) THAT PERTAIN TO THE KASILOF RIVER SPECIAL HARVEST AREA.]

(i) The department will, to the extent practicable, conduct habitat assessments on a schedule that conforms to the Board of Fisheries (board) triennial meeting cycle. If the assessments demonstrate a net loss of riparian habitat caused by noncommercial fishermen, the department is requested to report those findings to the board and submit proposals to the board for appropriate modification of this plan.

(j) The commissioner may depart from the provisions of the management plan under this section as provided in 5 AAC 21.363(e).

What is the issue you would like the board to address and why? The implementation of the 15,000 optimal escapement goal (OEG) for the Kenai River Late Run King (KRLRK) salmon Large King goal in 2020 was an abysmal failure.

A review of the Department's KRLRK mixture model data from 2013 to 2022 and considering only the large king component in the ten-year period, in only four out of the ten years, the 15,000 large king OEG would have been met. Of the six remaining years, in only one year would the 13,500 sustainable escapement goal (SEG) would have been achieved. In previous correspondence received through a Freedom Of Information Act (FOIA) request, the Department appeared to have

debated the low-bound OEG large king goal to be in the 11,600 range. If the fisheries managers had recommended that goal to the Alaska Board of Fisheries (BOF), only one year in ten would have missed the KRLRK Large King OEG (2014).

If you consider the 'all king goal' which has been in place for decades, the picture changes considerably. Reviewing the regulations that were in place for 2017, the total king goal with all considerations in place was 15,000 – 30, 000 with a point goal of 22,500 and another late season goal of 16,500 as a minimum projected in season point goal to allow for late season opportunities for sockeye harvests based on abundance.

From data received through the Department (RC106 /2022) on the mixture modeling, considering all king sizes and numbers, assessed at the Adaptive Resolution Imaging Sonar (ARIS) site, downstream netting program and other data indicators, not one year in ten would the late run 'all king' escapements have not been met. The lowest estimate of escapements was in (2014) 16,871. The highest (2014) 28,918. It would be good to note that in (2022) 20,712 of 'all kings' were enumerated.

There is a tremendous amount of uncertainty in the relatively new method of establishing a large king escapement goal model, considering that the calculations used to determine the viability of using a static number on size does little to allow for changes of the overall salmon do to environmental, predator or harvest/catch pressures. The KRLRK ARIS counter at River mile 13.7 attempts to filter out all kings under 75 cm Mean Eye Tail Fork (METF). Other areas of the State where a length is used to create a discreet model, they might use 66 cm.

The problem is that the current plan does not take into consideration the current peer reviewed science that proves that salmon all over Alaska and the Pacific Ocean are shrinking. Age classes that were once well dispersed over years of returns are now showing lower numbers of mature ages. The adaptation for any reason would suggest that while not returning at historical numbers of larger kings that more kings are returning in younger age classes and lower numbers within that older age classes. This may be an adaptable trait to avoid extinction. This type of adaptability is built into other species of salmon. Pink salmon adjust their fecundity depending on the density of the population on a returning year to a given spawning zone. This also allows them the ability to adapt to new areas to spawn and acquire diversity.

A recent Canadian Journal of Fisheries and Aquatic Sciences article released in February of 2023 stated; "decreased size and age is a classic pattern of fisheries-induced evolution". In an article of Nature Communications (Article number 4155 – 2020) evaluating using 60 years of salmon data from Alaska and using 12.5 million fish and commenting on a University of Washington School of Fisheries Report, "Chinook salmon exhibited the greatest magnitude decline, averaging an 8.0% decline in body decline". This data was collected from 1990 to 2010 and before. It should be noted that on one graph in this set of studies, a 10% decline in average body size was attributable to central Alaskan regional stocks. We can support these statements upon request and will submit supporting information prior to the Upper Cook Inlet Regulatory meeting (2024).

Please review the suggested changes for 5 AAC 21.539 KRLRK Salmon Management Plan. Using the management plans from 2013 and 2017 improves the uncertain aspects in using large kings as

the basis for escapement goals. Corrections to the goal are very difficult considering the limited amount of data from 2018. The Department has a very difficult time in determining large king changes in such a short interval and remains reliant on the decades of historical data on returning Kenai River kings to complete their modeling. For the system to rely solely on the current assumptions affects the confidence in managing the resource sustainably and the fisheries in a multitude of aspects.

Clearly, the 'all king goal' is easily understood by many and has many data sets and past experiences with managing for this type of goal. Creating stability reduces contentiousness and would reduce a cycle of disruption of the management of the resource and stakeholder's who are dependent on sustainable returns and a reasonable opportunity to access this fishery or alternative species. We are not suggesting a change in utilizing the ARIS system only that it not be the exclusive 'tool' in the 'tool bag' to manage with. Consider the inconsistencies in size and proportion of the king salmon runs that 'new' science has challenged us to understand. Stabilizing resource management to better adapt to changes we have yet to fully understand.

Our changes to this plan have been tried and tested and have been shown to work. Many restrictions in place for all users have not been fully comprehended because of the mandate to manage for a large king goal. We do know that to continue using this system without incorporating flexibility and corrections will result in continued catastrophic (Disaster Relief) results with the potential to injure the long-term economy of the community and the State.

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