

To: Alaska Board of Fisheries / Upper Cook Inlet meeting 2024

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Re: Kasilof Section sockeye harvest vs. Kenai River late run kings >75cm
in length. RC for the record letter.

Submitted via email 2/26/2024

Board Chair and members,

The best available information by the Department's within Commercial Fisheries Division, M. Willette, P. Shields, and E. Volk response clearly states the *Kintama* report was severely limited and speculative at best. In fact, the sampled study consisted of only 7 large king of Kenai River origin out of a dozen while the acoustic-tracking array was several miles offshore and well outside of the ESSN fishery but within the Drift opened Areas. Tidal influence on setnet fisheries net depth was disregarded across numerous variables.

However, other studies show that with only 2 knots of tidal influence - the net depth is decreased by half. Cook Inlet has a tidal effect of 12 knots per tide and reduces the net depth by over 75%. Note: Kintama Research, David Welch, website shows a simulated model on net depth affect in Cook Inlet along North K-beach that shows 29 mesh depth nets fish DEEPER in the water column than 45 mesh depth nets! Slack-tide represents only approx. 30 minutes per tide per opening.

By comparison, The Drift net fishery "drifts" the gear in the tide and less affected by net depth affects but catch ratio on Kenai large kings is also relatively low while fishing deeper and with 45 mesh depth gear.

The *Bethe vs. Sockeye* study on net depth shows no difference on Chinook harvest for 28 mesh nets vs. 45 mesh depth nets along the Kenai Section in stat area 244-32 (North K-Beach). However, a significant reduction in Sockeye harvest by 3-fold using 29 mesh depth nets vs. 45 mesh depth nets. Remarkably, the Kenai River Late-run king salmon management Plan (e) (3) (G) (i) and (ii) mandates gear reductions and mesh depth-net reduction based on speculation and conjecture – full stop.

The actual hung depth of a 45 mesh net would approximate 12 – 13.5 feet of depth depending on the commercial hanging ratio preference on 5 inch web. Hung net table ratio's on gear are available world-wide and studied for decades. The Board should not be burdened with false or misleading information on gear.

Kasilof Stat Area 244-21 and 244-22 in the Kasilof Section is approx. 28 nm in length and represents 240 permit holders that operate in these two stat areas and represent the majority of permit holders along the east side by Area. By comparison, North K. Beach is only 3 nm in length with 58 permit holders.

The over-all social-economic consequences to the commercial fishing community has been devastating over available sockeye yield continuously and needlessly foregone; the coupled lost yield on production for the two major sockeye systems in Cook Inlet (Kasilof River sockeye salmon and Kenai River late-run sockeye). Kasilof River sockeye salmon and the chronic inability to maintain sockeye escapements within the bounds of the BEG; i.e. a management concern. The Department has over four decades of spawner-recruitment data; including production loss return years due to over escapement years and causal yield loss - less than replacement, mere replacement years. In the last years alone over 1,000,000 sockeye salmon escaped in 2022 and again in 2023. All prior boards' intent and objectives written into the Kasilof River sockeye salmon management Plan regulations are negated thru the Kenai River Late-run king salmon management Plan (e) (3) (G) (i) and (ii); including the complete dismissal of the direction to the Department to manage and distribute escapements within the Kasilof sockeye BEG goal range (140k – 320k). Conflicts in regulation shall be addressed by the Board and Department and outlined within the Sustainable Salmon Fisheries Policy. The Department, Commissioner, and Board are charged to maintain all salmon stocks – there is no carve out in the constitution or Commissioner's duties that king salmon supersede all other salmon stock management plans and totally dismiss sockeye salmon escapement goals in regulation for decades – period.

5AAC.21.363. Upper Cook Inlet Salmon Management Plan (a) (6) states: consistent with 5 AAC.39.220 (b), it is the intent of the board that, in the absence of a specific management plan, where there are known conservation problems, the burden of conservation shall, to the extent practicable, be shared among all user groups in close proportion to their respective harvest on the stock of concern.

Note: There was a specific management plan in place for decades on Kenai River king salmon – there was NO ABSENCE OF A SPECIFIC MANAGEMENT PLAN IN 2012 Emphasis added]. Conservation was included in all prior Kenai River king salmon management plans.

First of all, prior Kenai late-run king salmon management plans existed and incorporated conservation and integrated all size and age class king goals. Second, the latest rendition of the Kenai late-run king plan “paired restrictions under a Large king OEG goal range” has a directed in-river king sport fishery closing the directed sockeye salmon fishery with incidental harvest on king salmon along the eastside set gillnet fishery. The no bait provision in a directed sport fishery occurs throughout Alaska. Nowhere else in Alaska does the board or Department impose a large fish goal or burden under a no bait provision to restrict commercial fishery harvest on time by less than half allowed in regulation or closures; place another 66% to 100% reduction on sockeye harvest by mandated gear reductions; place another 95% reduction on a commercial fishery area waters under a sport no bait provision. The term “fair and equitable”* now requires a notation in the Sustainable Salmon Fisheries Policy (SSFP); except for Cook Inlet*. Tens of millions of economic benefit on loss occurs annually on Sockeye salmon from a Di Minimis incidental harvest of Large Kenai late-run king salmon; especially in the Kasilof Section of the Upper Sub-district in Cook Inlet.

In 2021, the Kasilof Section had 12 openings on area waters out to 1.5 nm offshore and 4 within “600 foot” and included the 2/3 reduction in gear mandate and hours per week restrictions. However, the harvest rate on Kenai late-run large king salmon can be calculated as well as the sockeye harvest levels impacted. The Department estimated the number of Kenai River late-run large king salmon thru July 20th @ 187 fish. The Kasilof Section proportion was estimated from previous year's average thru July 8th (early strata) and late strata thru July 20th. **The pooled proportion estimate of 85 out of 187**

Kenai large kings per 1886 deliveries represents four one-hundreds of 1 Kenai large per delivery. This represents 6 or 7 Kenai large in regularly opened waters per opening with 36,000 sockeye harvests. 600 foot opening have 2,600 ave. sockeye harvest levels coupled with 0-4 large Kenai late-run kings. Over the last years; during 2017, 2018, and 2019 openings in the regular opened waters which included the majority of hours utilized 3 nets per permit and the exploitation rate per Net was one one-hundreds of 1 Kenai large king salmon per net. In other words for every 100 nets an estimated 1 Kenai large king salmon was harvested along with 36,000 or higher levels of sockeye salmon utilized (harvested). The half mile sockeye harvest levels are 16,000 to 187,000 sockeye (Ref: FDS10-93.pdf / FMS10-01.pdf) and the exploitation rate on Kenai late-run large approximates 4-6 kings. In other words it takes 6 to 14 opened 600 foot openings to harvest the same estimated sockeye harvest level during 1 announced half-mile opening in the Kasilof Section. The germane point being, the 600' openings do nothing to manage and distribute sockeye escapement into the Kasilof River or utilize the resources available in the Kasilof Section and again - hold the majority of set gillnet permits along the eastside (63%). The fishing community of Kasilof hold the 3rd highest per capita / permits in this state and rely on commercial fishing.

Run timing is earlier on Kasilof sockeye stocks - mid-point July 14th, Kenai late-run sockeye midpoint July 23rd, and Kenai River large late-run king salmon mid-point July 30th over the last three years. Historically, 86% - 93% of kings harvested along the Kasilof Section are small, predominately males, and would never be counted at river mile 14 Aris Sonar station on the Kenai – period.

The SSFP definition of “salmon stock” includes genetic, phenotypic, life history...in the same geographic area and is “managed as a unit.” However, Kenai late-run king salmon are not managed as a unit contrary to defined “salmon population and salmon stock” which includes spawning population (all age classes).

Genetic data on Kenai River late-run king salmon has been ongoing since 2010 and includes genetic harvest sampling by statistical area along the “eastside” and by Section (Kasilof / Kenai –East Forelands Sections) harvest rates on both small and large Kenai king salmon and stratified by time and area openings; however, the length composition on Kenai late-run king estimates are only “within 30% of true value 90% of the time” (See FDS21-11, Eastside Set gillnet Chinook harvest composition in Upper Cook Inlet, Alaska, 2020 by Anthony Eskelin and Andrew Barclay). Tables within this report and earlier reports estimate Kasilof “early and late stratum” as well as Kenai Section (late stratum) on Kenai large late-run harvest levels.

Note: The Kenai Section (North Kalifonsky beach 244-32 / Salamantof Beach 244-41 / East-Forelands 244-42 harvest levels per opening on Kenai large king salmon are double than that in the Kasilof Section. Kenai Section has less permits operating / 140 permits and harvest twice the numbers of Kenai late-run large king salmon than in the Kasilof Section.

After July 15th North K. Beach sockeye harvests are comprised mainly of Kenai late-run sockeye during 600' openings and advocate /speculate the use of 29 mesh gear in order to fish under the guise of Kasilof sockeye abundance. **The Kasilof Section bears twice the burden than the Kenai Section in this king plan– day in and day out; year after year, net per net as represented in the large fish stock composition Eskelin / Barclay reports and the last several years of ADF&G harvest data. By**

comparison, in 2019 Eskelin / Barclay report (table 6) - the Kasilof Early stratum period of June 27th – July 4th shows the harvest composition on Large Kenai mainstem king salmon of only .05% with all the gear in the water fishing normal hours per week in regulation. Compared to Kenai Section @ .30% Kenai stock composition harvest levels on Kenai River large mainstem fish after July 8th.

Finally, I offer the following regarding the Kenai River late-run OEG large king goal. The Board nor the public received the yield difference on maximum sustained yield loss when deliberating to increase the goal under an OEG as required under the SSFP nor the consequences on yield affects upon Kasilof BEG established goal range or the Kenai late-run sockeye salmon SEG in-river goal range.

ADFG Escapement Goal Review Committee comprised of Sport and Commercial Fisheries Research experts during the review in 2017 when the goal range was changed to a large fish goal of 13,500 – 27,000. One page states management similar to the status goal as a range equals 10,950 – 21,900. Another page states “recent large fish mixture estimates” would be equivalent to 10,050 – 20,100 range. Commercial Fisheries Division panel experts recommended a range of 12,500 – 23,500 with 80% / 80% MSY profile in this range

Recent Kenai River large late-run returns have been estimated at 15,000 fish. The commercial set gillnet exploitation rate in 2021 was .01% of the return (186 fish) for the entire eastside and caused millions of sockeye salmon to go unharvested along the eastside since 2020 and during the past 5 years. The new large fish OEG Kenai king goal range was upped by several thousands of fish. The large fish goal range is stated as 1.3, 1.4, and 1.5 Kenai River age composition over 75.4 cm mid-eye tail fork length / a fork length (FL snout to tail fork) of 83.1 cm / total length of 33.3 inches. However, over the last 3 years the number of age 5 (1.3) Kenai late-run king salmon have been 50% under 75 cm and not counted by sonar. In addition, 10% of 1.4 (6-year old kings) are under the 75 cm Aris threshold - resulting in individual Aris Length measurements (cm) for these age compositions to be placed under “small” kings that are not be counted by ASL data from a limited netting program sampled data and again NOT counted by Aris sonar. For example an age 5 (1.3) king salmon 32.5 inches in length are tossed out. Hundreds or thousands of “large kings” are tossed in the “do not count file” and Kenai sockeye salmon rarely, if ever, exceed 29 inches in total length. Perhaps Sport Fish Division can explain the difference in “biological productivity” for a king salmon 32 inches FL or 32.5 inches in FL length vs. 32.71 inches by measured fork length? The aforementioned is directly related to escapement goals and recent published scientific published report submitted by Gale Vick. The *Nature Communications* Article titled *Recent declines in salmon body size impact ecosystems and fisheries* shows significant decline in Chinook length at returning ages. Figure 1 and Figure 2 indicate in Upper Cook Inlet a 9% decline in length for Chinook salmon which compares to the AYK regions @10%. Sockeye salmon length declines in Upper Cook Inlet approximate a 25% decline. The explanations are presented in the article and based on millions of age/sex/length data since 2010 in Alaska Regions.

Respectfully submitted,

Jeff Beaudoin,

