PROPOSAL 159 - 5 AAC 57.120. General provisions for seasons, bag, possession, annual, and size limits, and methods and means for the Kenai river Drainage Area. and 5 AAC 57.121. Special provisions for seasons, bag, possession, and size limits, and methods and means for the Lower Section of the Kenai River Drainage Area. Extend the time that the slot limit for Kenai River king salmon is in effect, as follows:

5 AAC 57.120. General provisions for seasons, bag, possession, annual, and size limits, and methods and means for the Kenai River Drainage Area

(a) Unless otherwise specified in 5 AAC 57.121 - 5 AAC 57.123 or by an emergency order issued under AS 16.05.060 , the following are the general seasons, bag, possession, annual, and size limits, and methods and means that apply to sport fishing for finfish in the Kenai River Drainage Area:

(1) salmon may be landed only with the aid of a landing net or by hand;

(2) king salmon 20 inches or greater in length, as follows:

(A) may be taken only from January 1 - July 31, in the Kenai River from its mouth upstream to an ADF&G regulatory marker located at the outlet of Skilak Lake, with a bag and possession limit of one fish, as follows:

(i) from January 1 - June 30, from its mouth upstream to an ADF&G regulatory marker located at the outlet of Skilak Lake, and from July 1 - July **31** [14], from an ADF&G regulatory marker located approximately 300 yards downstream from the mouth of the Slikok Creek upstream to an ADF&G regulatory marker located at the outlet of Skilak Lake, only king salmon that are less than 42 inches in length or 55 inches or greater in length may be retained;

5 AAC 57.121. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the Lower Section of the Kenai River Drainage Area

Unless otherwise specified by an emergency order issued under AS 16.05.060 , the following are the special provisions and localized exceptions to the general seasons, bag, possession, and size limits, and methods and means set out in 5 AAC 57.120 and 5 AAC 75 for the Lower Section of the Kenai River Drainage Area:

(1) sport fishing gear restrictions:

(A) from January 1 - June 30, in the Kenai River, and from July 1 - July **31** [14], in the Kenai River from an ADF&G regulatory marker located approximately 300 yards downstream from the mouth of Slikok Creek upstream to an ADF&G regulatory marker located at the outlet of Skilak

What is the issue you would like the board to address and why? Early-run Chinook Salmon that transit through lower Kenai River sport fisheries prior to July 1 are subject to management under conservative regulations which include a protective slot limit and no-bait restrictions. These conservative regulations continue through July 14 upstream of Slikok Creek but revert to general late-run regulations from July 15–July 31 which eliminates the slot limit and allows the use of bait. However, many early-run Chinook Salmon are still in unrestricted areas of the main-stem Kenai River after July 15. Changes to the regulations are necessary to prevent adverse effects to the composition and run-timing of this group of early-run Chinook Salmon.

Chinook Salmon abundance in the Kenai River and throughout Alaska has been decreasing since around 2007. Some stocks are also exhibiting declining trends in size and age, including Kenai River Chinook Salmon that spawn on the Kenai National Wildlife Refuge, either in tributary streams (Funny River escapement analyzed by Boersma and Gates 2016) or the main-stem Kenai River (late-run commercial harvest analyzed in Lewis et al. 2015). Several mechanisms have been identified as potential drivers of these trends (e.g., size-selective harvest, competitive interactions, and changing environmental conditions), but the evidence is not conclusive for a specific cause (Lewis et al. 2015).

Conservative regulations have been adopted by the Alaska Board of Fisheries (BOF) to protect early-run Chinook Salmon in the Kenai River, including a protective slot limit and the use of single, unbaited hooks. Recent research by the Alaska Department of Fish and Game (Department; Reimer 2013) indicates a considerable number of early-run Chinook Salmon may not receive the full protections intended by these regulations. For example, a large proportion of early-run main-stem spawning fish located above Slikok Creek after July 15 in 2010-2013 (range 29% to 71%) were in "unrestricted" areas of the river that are normally open to sport fishing (Appendix B5 in Reimer 2013). Sport fishing regulations for Kenai River Chinook Salmon from July 15-July 31 allow the use of bait and do not have a protective slot limit. Different harvest opportunities and likely different harvest rates for these fish could lead to changes in composition and shifts in run timing for early-run Chinook Salmon. This proposal seeks to conserve the unique large size early-run king salmon in the Kenai River as identified in the State of Alaska's Kenai River and Kasilof River Early-run King Salmon Conservation Management Plan (5 AAC 56.070) by extending the protective slot limit and no-bait restrictions for most early-run Chinook Salmon throughout their residency in the main-stem Kenai River.
The Department reported that disproportionate harvest for early-run king salmon occurred in the past, mainly early in the season during years of restrictions to the fishery (McKinley et al. 2002). Harvest rates were disproportionately higher in May and early June compared to later in June in years when the fishery was restricted to catch-and-release or trophy fishing (McKinley et al. 2002; Figure 24). McKinley et al. (2002) recognized that disproportionate harvest of early-run Chinook Salmon in May or June could have biological impacts such as shifts in run-timing and thus recommended managing the in-river Chinook Salmon sport fishery to avoid disproportionately harvesting either early or late arriving fish.

The effect of this proposal will be to extend early-run regulations through July 31 upstream of the Slikok Creek closure area, including a protective slot limit and single hook/no bait restrictions. This would reduce the harvest of both early- and late-run Chinook Salmon by an unknown amount and likely reduce the harvest fish between 42 and 55 inches by an unknown amount.

One of the principles of the Alaska Sustainable Salmon Policy is that "*salmon escapement should be managed in a manner to maintain genetic and phenotypic characteristics of the stock by assuring appropriate geographic and temporal distribution of spawners as well as consideration of range, sex ratio, and other population attributes.*" This principle is consistent with tenets of the U. S. Fish and Wildlife Service's policy on Biological Integrity, Diversity, and Environmental Health (601 FW 3) which directs the Service to maintain biological integrity on national wildlife refuges, defined as "*Biotic composition, structure, and functioning at genetic, organism, and*

community levels comparable with historic conditions…" Managing the main-stem Kenai River below Skilak Lake to avoid differential harvest of Chinook Salmon will address the needs of both policies and both agencies, and promotes conservation of the overall Kenai River Chinook Salmon stock complex. Maintaining life history diversity and biocomplexity is important not only for the long-term sustainability of the overall stock, but also for the overall sustainability of the fisheries that exploit the stock (Hilborn et al. 2003).

This proposal promotes resource conservation by extending protections for early-run Chinook Salmon during their freshwater residency in the main-stem Kenai River above Slikok Creek while providing for fishery participation and opportunity. A separate time-and-area closure proposal has been submitted to provide protections for Chinook Salmon on their spawning grounds below Skilak Lake.

References:

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