

Memorandum

To: Committee of the Whole

From: Duncan Fields

Date: January 12, 2016

Re: Proposed Revisions to Karluk Escapement Goals

1. **Have the prior escapement goals been given enough time?**

The early and late run Karluk sockeye escapement goals were reduced substantially in 2005 with the early run goal raised slightly in 2008. The 9 years of returns under the existing escapement goals is less than two life cycles. In addition, the minimum escapement goals for the early run was not achieved for 4 years during the time sequence and the late run upper end escapement goals were exceeded in two out of the 9 years.

Consequently, given that 6 out of the 9 years either had too low escapement or too high escapement, the assessment of current escapement goals is not adequate. The new escapement goal recommendations are more about changing models than an assessment of the customary "spawner-recruit" ratio assessment. Had the lower early run escapement goals been met and late run escapement been limited to the upper end escapement goal, we might have the basis for change.

Please note: prior over-escapement of the late Karluk run during the 1999-2005 time frame clearly impacted future runs. The magnitude of the Department's recommendation to increase the upper end late run escapement goal by 120,000 or 32% creates the most risk for "crashing" the Karluk system.

Recommendation: Give the current escapement goals 3 more years.

2. **Is the new conceptual basis for re-evaluating the early and late run Karluk escapement goals adequately vetted?**

Current recommendations for changes to Karluk's early and late run escapement goals are based on a systemic "carrying capacity" analysis. Prior escapement goals were based, primarily, on the assessment of spawner-recruit ratios. This is a significant departure from past assessments to determine escapement goals that looked independently at the early run and the late run. Whether or not the new approach for Karluk escapement goal assessment is the better approach remains to be seen. Nevertheless, it's important to recognize that the underlying conceptual approach for assessing Karluk escapement goals has changed.

Recommendation: Look at three more years of data regarding Karluk early and late run returns using both the old model for escapement goal recommendations as well as the new conceptual basis for recommending escapement goals.

3. **What are the fishing opportunity and allocative implications that would result if the new, recommended, escapement goals are established?**

The increase of the early run minimum escapement goal by 40,000 sockeye will substantially change the escapement curve for the early run, especially at the lower end of the curve. This is likely to result in a postponement by 1-3 days of the opening of the Kodiak commercial fishing season. Changing the start date of the season will reduce fishing opportunities for all Kodiak fishermen but is also likely to result in a re-allocation of Karluk bound sockeye from set-netters to seine fishermen. Kodiak set-net fishermen catch a higher percentage Karluk bound sockeye during the first 3-5 days of the season.

Once the minimum early run escapement goal is met, the "early run" escapement is assessed through July 15th. However, the N.W. district management plan requires the closure of that area on July 9th or 10th. If the Karluk early run escapement goals are being met, the purse seine fleet is allowed to continue to harvest sockeye in the inner Karluk area for the period of 5-6 days to "mop up" the early run which is designated as all fish passing the weir in Karluk prior to July 15. It is inconsistent to make inseason management decisions based on a defined early and late run while recommending changes to Karluk escapement goals based a "holistic" carrying capacity assessment of the Karluk system with limited assessment of the early and late run components. If the system is looked at holistically, sockeye in excess of an "early run" escapement goal need not be harvested prior to July 15th but would be combined with the total escapement for "the system".

Changes to the "late run" upper end escapement goal poses a "risk" of crashing the Karluk system and also has allocative implications. The proposed increase in the "late run" escapement goal is 120,000 additional fish or a possible 32% increase in fish in the system. Prior years of escapements in this range may indicate that the cumulative total upper end escapement goals are at or above carrying capacity. Why push the Karluk system with additional fish when you also increase the risk of a systemic crash?

Regarding allocation, under the current escapement goals seine fishermen are allowed into the inner Karluk area when it is likely the upper range of the "late run" escapement goal will be obtained. Once seine vessels move to fish in the inner and outer Karluk areas, they are no long impacting set-gillnet fisheries. However, with the goal increased by 120,000 fish, it is likely that the seine fleet will have less fishing time in the inner Karluk area and will compete with set-gillnet fishermen for a longer period of time.

Fishing opportunity must be balanced with the Constitutional Imperative to manage our resources for sustained yield. No one has asserted that leaving the current escapement goals in place will threaten the sustained yield of the Karluk run.

Recommendation: Given the extent of lost harvest opportunity, possible reallocation of Karluk sockeye between gear groups, over taxing the Karluk system and the disconnect between the Karluk management plan and the methodology used for escapement goal recommendations, it's better to wait to make changes to the Karluk escapement goals.