

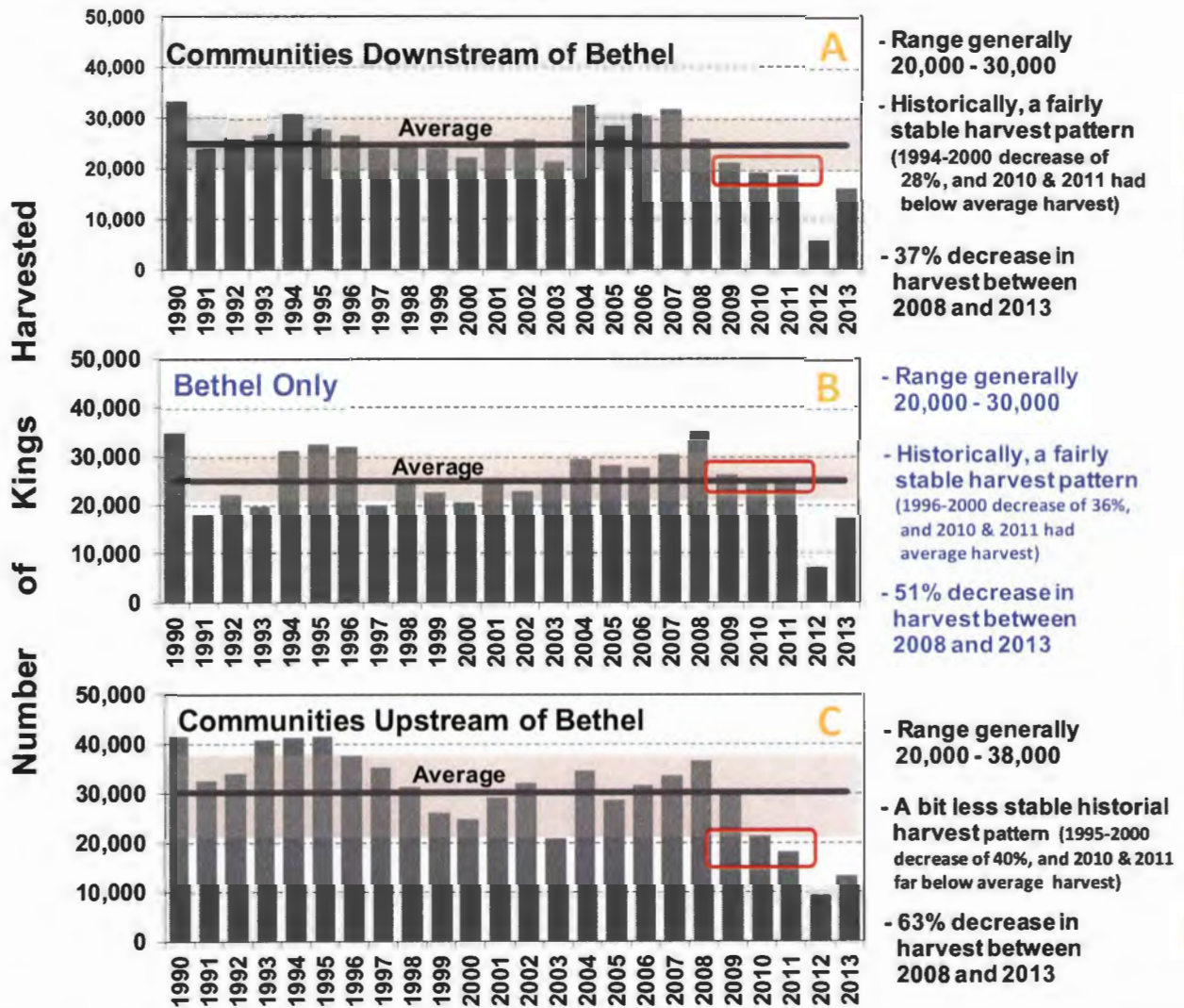
Alaska Board of Fisheries

Stony-Holitna Advisory Committee Teleconference

December ____, 2014

- I. Issue: need for better assurances in providing adequate king salmon *subsistence harvest opportunity* in middle and upper Kuskokwim River communities.

Subsistence Harvest of King Salmon in the Kuskokwim River



Residents in Bethel are taking an increasing percentage of the annual harvest, which can mask shortfalls elsewhere.



II. Possible Avenues to Provide Better Subsistence Harvest Opportunity Assurances to M-U Kuskokwim Communities :

A. *First step*, establish a “**Nested Amount Necessary for Subsistence (ANS)**” for kings upstream of Bethel.

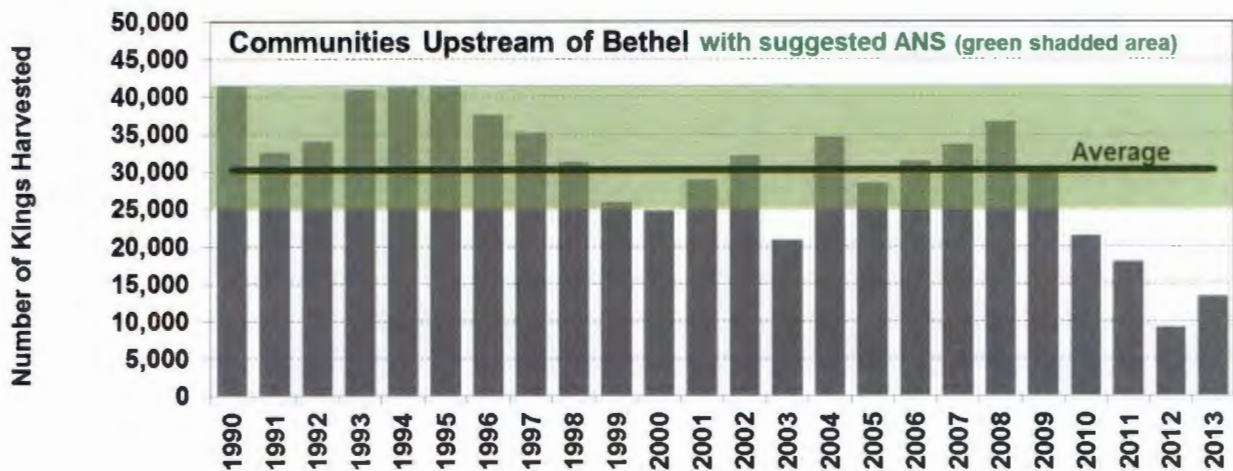
1. Definitions:

- a. An **Amount Necessary for Subsistence (ANS)** (AS 16.05.285(b)) requires the BOF to “determine the amount of harvestable portion of each fish stock with a customary and traditional use that is reasonably necessary for subsistence use. An ANS is NOT a guaranteed number of fish for subsistence harvest. It is a tool for evaluating subsistence regulations to determine if **reasonable opportunities** are being provided for subsistence use.
- b. **Reasonable Opportunity** is an opportunity that allows a subsistence user to participate in a fishery that provides a normally diligent participant with a reasonable expectation of success of taking of fish (AS 16.05.258(f)).
- c. An ANS is “**nested**” when it is part of a larger ANS. *It is “nested” within that larger ANS. A nested ANS for the upper Kuskokwim River would be part of the current ANS that covers the entire Kuskokwim River. The current ANS, for the entire Kuskokwim River is 67,200 to 109,800 king salmon. So, a nested ANS would be some fraction of that range specifically identified as “reasonable opportunity” for the middle-upper river.*

2. Why a nested ANS for Kuskokwim River communities upstream from Bethel?

- a. *Bethel is the point in the river where early season salmon passage is first assessed formally by ADF&G via the Bethel Test Fishery.*
- b. Provides a formal target for managers to aim for.
- c. Also provides a measurable outcome for evaluating the success of management actions.

Example:

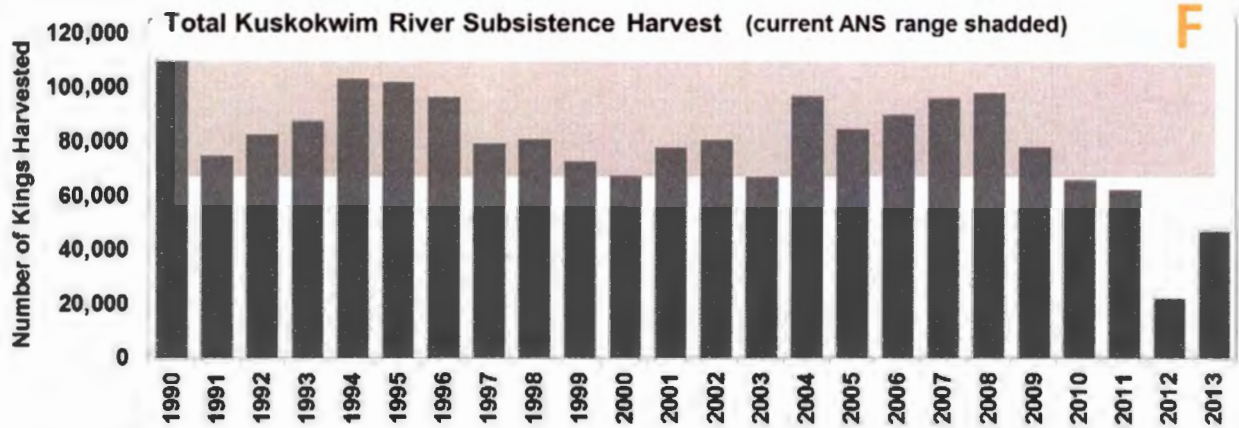


B. *Second step*, establish an **Inriver Run Goal** for Kuskokwim River king salmon.

- 1. ~~What is an Inriver Run Goal?~~ *An Inriver Run Goal is a specific management objective for salmon stocks that are subject to harvest upstream of a point where escapement is estimated; the inriver run goal is set in regulation by the BOF and is comprised of the escapement goal plus a specific allocation to inriver fisheries.*
- 2. Why? Provides a measurable guide to managers as to how many king salmon are needed to pass upstream of Bethel in order to provide an opportunity for subsistence harvest comparable to historical levels and in line with what is necessary to achieve the nested ANS.
- 3. How could an Inriver run goal be set? One approach is to use the historical average king salmon escapement +/- 30%, plus the nested ANS range. *May also want to add half of the average Bethel harvest too.*

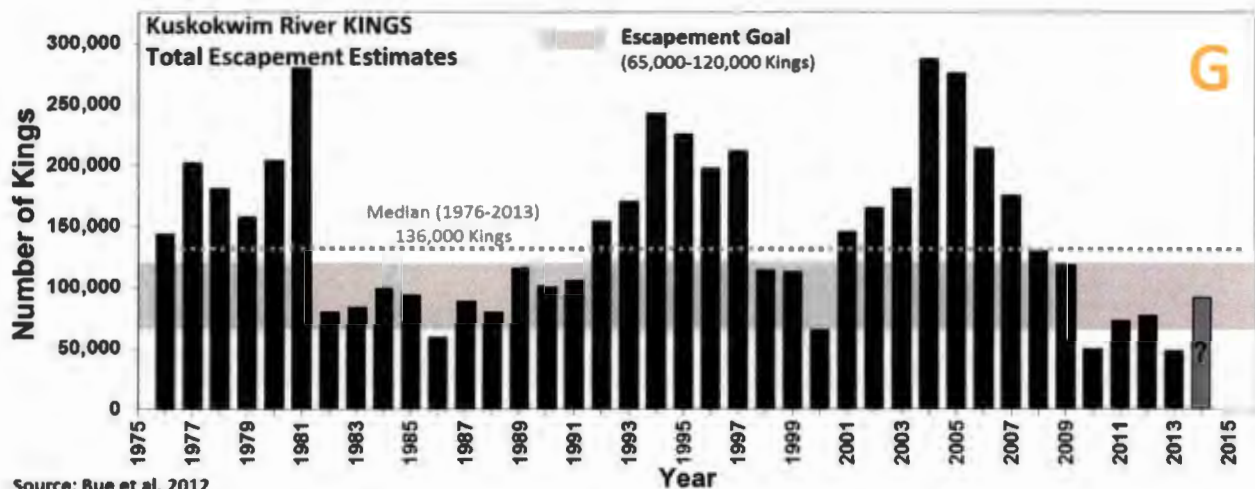
III. Additional Notes:

1. Current Amount Necessary for Subsistence (ANS) for king salmon is 67,200 to 109,800 fish for the entire Kuskokwim River drainage.



Graph F corrected 12/11/2014; changed lower end of ANS from 67,000 to 67,200.

- B. Subsistence harvest opportunity in communities upstream of Bethel is further at risk because of king salmon commercial harvest occurring in the lower river (District 1).
 1. Because of the new drainage wide king salmon escapement goal, there is a greater likelihood of increasing commercial king salmon harvest in the lower river, whether it is incidental or directed harvest.
 2. The new goal is 65,000 to 120,000 king salmon, which is well below the historical average escapement of 145,000 kings (median is 136,000).



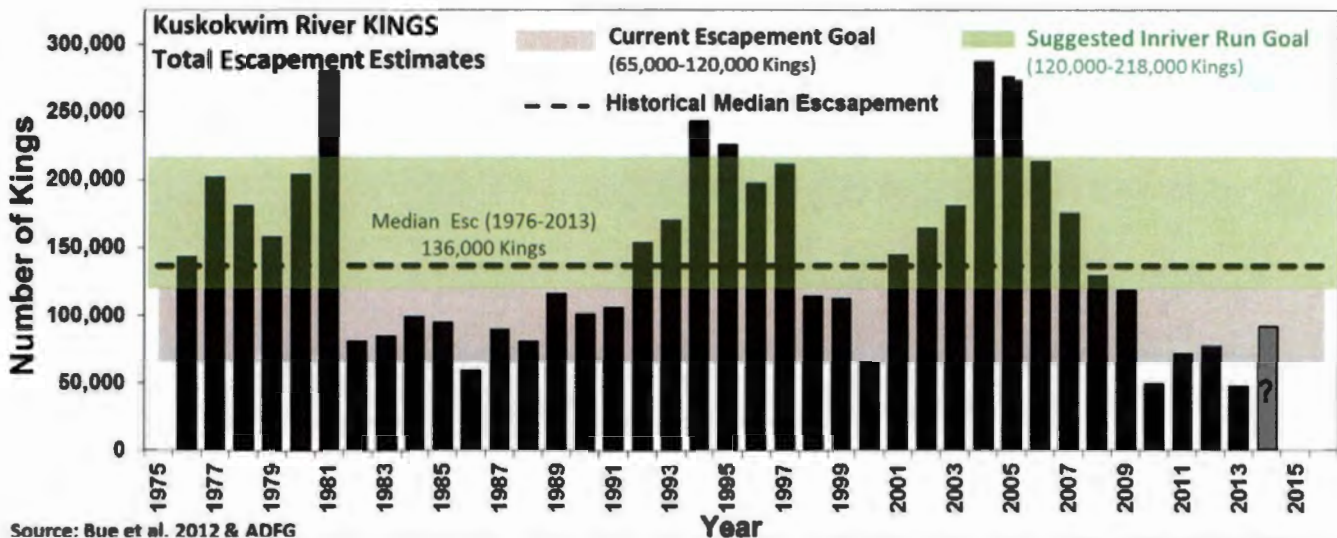
Source: Bue et al. 2012

3. If escapement is managed to within this new goal, as would happen if commercial king harvest is liberalized, then average abundance of king salmon passing upstream of Bethel will diminish from historical levels. This in turn will reduce the subsistence catch per hour (catch rate) upstream of Bethel; i.e., subsistence fishers will have to fish longer to get their normal harvest of kings.
4. Subsistence harvest in Bethel and communities downstream of Bethel, however, are likely to be minimally affected if there is an increase in commercial king catches because they have access to harvest early in the season before the date when management action typically occur and before the date when commercial fishing begins.
5. As a consequence, the current drainage wide ANS levels for the Kuskowkim River may be achieved, but the dominance of the Bethel and lower river harvest will mask underperformance in the middle and upper river if the drainage wide ANS is the only formal measure of performance.

C. Suggested Changes:

1. Establish an independent or nested king salmon ANS for communities upstream of Bethel.
 - a. Following conventions similar to those used by the BOF to revise the ANS in 2013, the ANS range for communities upstream of Bethel should be 25,000 to 41,500.
 - b. This excludes 2010-2013 when the drainage wide ANS was not achieved and it excludes the remaining lowest year (2003) and highest year (1995).

2. Establish an Inriver Run Goal of 120,000 to 218,000 kings, which is the historical median escapement +/- about 30%, plus the proposed ANS for communities upstream of Bethel.
 - a. This Inriver Run Goal differs from the standard definition of an Inriver Run Goal that just adds subsistence harvest on top of the escapement goal – and this difference will be a point of debate.
 - b. This Inriver Run Goal would result in a level of escapement that ranges from the upper end of the current escapement goal, to well above the current goal.
 - c. This Inriver Run Goal provides a level of subsistence harvest opportunity upstream of Bethel consistent with historical opportunity. The level of annual escapements that would result also provided decades of sustainable subsistence and commercial fisheries in the Kuskokwim River.



D. Who is affected:

1. Subsistence fishers in Bethel and communities downstream of Bethel
 - a. During years of low king salmon abundance, there will be a higher likelihood of fishing restrictions in order to pass sufficient numbers of king salmon upstream to allow for harvest opportunity in the middle-upper Kuskokwim River consistent with the proposed nested ANS. During periods of average king salmon abundance, the Bethel and lower river communities could require a delay in the opening of the king salmon subsistence fishing season in order to pass king salmon upstream.
2. Subsistence fishers in communities upstream of Bethel will be allowed subsistence harvest opportunity for king salmon consistent with historical opportunity.
3. Commercial fishers in District 1 (lower Kuskokwim River) will likely be precluded from establishing a directed king salmon commercial fishery, and the opening date of the directed chum salmon commercial fishery likely will continue to be set in a manner to minimize the incidental catch of king salmon.
4. Escapements will likely occur that are higher than the current drainage wide escapement goal and current tributary goals; however, they are likely to be consistent with the historical range of escapements that provided sustainable fisheries for decades.

