



Protection of Mainstem Spawning Early Run King Salmon

While changes in stock composition and population numbers of king salmon has been well documented throughout Alaska we maintain over exploitation and selective harvest over many generations has exacerbated these changes in the Early Run. Older age-classes show a pronounced decline in numbers. Reversing changes to "Fishery Induced Evolution" will take several generations to accomplish.

The solution:

- 1) **Minimize targeting of older age classes** in the recreational fishery: taking place only in limited situations if large surpluses are projected in-season.
- 2) **Increase protection to all individual stocks** that contribute to this population of fish.
- 3) **Minimize mortality of fish spawning or showing site fidelity** to spawning beds.

"AFC maintains **mainstem spawning fish have been provided less protection** than tributary spawning fish.

Several studies since the late 1970's have documented this mainstem spawning population, the importance of this population to the early run of fish and that spawning takes place throughout July with site fidelity to spawning areas beginning in late June.

Bendock and Alexandersdottir, 1992 noted that combined findings of this and previous studies indicated the importance of the three primary spawning component contributions of the early run as follows: Killey River 58%, Funny River 19% and **Mainstem 16%** with 7% other. He also noted that most Killey R and Funny R fish entered the lower Kenai during first half of early run with most mainstem fish entering during last half of early run. **The Middle River (Soldotna Bridge to Skilak Lake) was the most extensively used mainstem reach.** Spawning started in June and ended in August with **peak spawning in July**. Median spawning dates for early run mainstem fish was July 19.

Eskelin and Reimer 2017, noted similar results from 2010 – 2014 with an average of **19% spawning in the mainstem**. They found "Mainstem spawners began displaying **site fidelity to their eventual spawning area as early as mid to late June** although in most cases **site fidelity was first displayed in mid-July**" (the median date for all mainstem spawners for **both runs was August 18**).

Bendock, T. N. and M. Alexandersdottir. 1992. Mortality and movement behavior of hooked-and-released chinook salmon in the Kenai River recreational fishery, 1989-1991. Alaska Department of Fish and Game, Fishery Manuscript No. 92-2, Anchorage, Alaska, USA.

Lin, A., and A. M. Reimer. 2017. Migratory timing and distribution of Kenai River Chinook salmon using radio telemetry, 2014?2015. Alaska Department of Fish and Game, Fishery Data Series No. 17-03. Anchorage.