

Tatlawiksuk River Salmon Studies, 2005

The Tatlawiksuk River is a tributary of the Kuskokwim River, and produces Chinook salmon *Oncorhynchus tshawytscha*, chum salmon *O. keta*, and coho salmon *O. kisutch* that contribute to intensive subsistence and commercial salmon fisheries downstream of its confluence. The Tatlawiksuk River weir is one of several projects operated in the Kuskokwim Area that form an integrated geographic array of escapement monitoring projects. Collectively, and in accordance with the State of Alaska's Policy for the Management of Sustainable Salmon Fisheries (5 AAC 39.222), this array of projects is a tool to ensure appropriate geographic and temporal distribution of spawners, and provide a means to assess trends in escapement that should be monitored and considered in harvest management decisions. Towards this end, Tatlawiksuk River weir has been operated annually since 1998 to determine daily and total salmon escapements for the target operational period of 15 June through 20 September; to estimate age, sex, and length compositions of Chinook, chum, and coho salmon escapement; to monitor environmental variables that influence salmon productivity; and to provide part of an integrated platform in support of other Kuskokwim Area fisheries projects.

In 2005, a resistance board weir was successfully operated on the Tatlawiksuk River from 15 June through 23 September, with one inoperable period from 10 to 19 September. Escapements for the target operational period included 2,918 Chinook, 55,720 chum, 7,495 coho, and 77 sockeye salmon *O. nerka*. Formal escapement goals do not exist for the Tatlawiksuk River; however, Chinook and chum salmon escapements were higher than in previous years, and the coho salmon escapement was below average. Age, sex, and length (ASL) samples were taken from 13.2% of the Chinook escapement, 1.9% of the chum escapement, and 6.4% of the coho escapement. The Chinook sample composition included 49.5% age-1.3 fish, 35.6% age-1.4 fish, 13.4% age-1.2 fish, and 42.6% females. The chum salmon escapement was comprised of 89.4% age-0.3 fish, 5.4% age-0.4 fish, 5.2% age-0.2 fish, and 58.1% females. The coho salmon escapement was comprised of 89.7% age-2.1 fish, 5.9% age-3.1 fish, 4.4% age-1.1 fish, and 48.2% females. In addition to enumerating escapement and estimating ASL composition, the weir served as a platform for several other projects including *Inriver Abundance of Chinook Salmon in the Kuskokwim River* (FIS 02-015), *Kuskokwim River Sockeye Salmon Radiotelemetry Feasibility Study*, *Kuskokwim River Salmon Mark-Recapture Project* (FIS 04-308), and *Genetic diversity of Chinook salmon from the Kuskokwim River* (FIS 01-070). The objectives relating to these projects were fully achieved in 2005.

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