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### **TATLAWIKSUK RIVER SALMON STUDIES, 2010**

by  
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### **ABSTRACT**

The Tatlawiksuk River is a major tributary of the Kuskokwim River and produces Chinook salmon *Oncorhynchus tshawytscha*, chum salmon *O. keta*, and coho salmon *O. kisutch*, which contribute to subsistence and commercial salmon fisheries of the Kuskokwim River. The Tatlawiksuk River weir has operated since 1998 to estimate the return and age-sex-length compositions of salmon escapements, monitor environmental variables, and facilitate other Kuskokwim Area fisheries projects. In 2010, a resistance board weir was operated from 17 June to 17 September to estimate escapements of 3 species of Pacific salmon. Chinook escapement (562 fish) was below the historical median, chum escapement (36,701 fish) was above the historical median, and coho salmon escapement (3,520 fish) was below the historical median. Samples were collected from fish caught in a live trap and used to describe the age and sex structure of the Chinook, chum, and coho salmon escapements. Age and sex sampling in 2010 indicated the Chinook salmon escapement consisted of 43.2% age-1.3, 29.4% age-1.2, 23.3% age-1.4, 2.0% age-1.5, 1.1% age-2.4, and 1.0% age 1.1 fish with 39.4% female fish overall. The chum salmon escapement consisted of 82.7% age-0.3, 8.9% age-0.2, 7.9% age- 0.4, and 0.5% age-0.5 fish. The coho salmon escapement consisted of 90.4% age-2.1, 5.0% age-3.1, and 4.6% age- 1.1 fish.

The Tatlawiksuk River weir is one of several components which form an integrated array of escapement monitoring projects in the Kuskokwim Area. This array of projects provides a means to monitor and assess escapement trends that must be considered in harvest management.

**Key words** Chinook salmon, *Oncorhynchus tshawytscha*, chum salmon, *Oncorhynchus keta*, coho salmon, *Oncorhynchus kisutch*, longnose suckers, *Catostomus catostomus*, escapement, age-sex-length, ASL, Tatlawiksuk River, Kuskokwim River, resistance board weir, radiotelemetry, mark-recapture, stock specific run timing, upper Kuskokwim.

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