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TAKOTNA RIVER SALMON STUDIES, 2010

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ABSTRACT

The Takotna River, a tributary of the Kuskokwim River, produces Chinook *Oncorhynchus tshawytscha*, chum *O. keta*, and coho salmon *O. kisutch* that contribute to subsistence and commercial salmon fisheries downstream of its confluence with the mainstem. A weir has been operated annually on the Takotna River since 2000, and is part of an array of projects used to monitor salmon escapement in the Kuskokwim River drainage. Salmon were enumerated by species as they migrated through the weir to determine daily and annual escapements. Samples were collected to estimate the age, sex, and length composition of escapements using a live trap.

Total escapements of 178 Chinook, 4,062 chum, 8 sockeye *O. nerka,* and 3,217 coho salmon were determined for the target operational period 24 June to 20 September, 2010. Chinook and chum salmon escapements were below their historical medians, while coho salmon escapement was near its historical median. Age, sex, and length composition was not estimated for the Chinook salmon escapement due to suspected sampling bias. The age composition of the chum salmon escapement was estimated to be 80% age-0.3, 10% age-0.2, 10% age-0.4, and less than 1% age-0.5, with 55% female overall. The age composition of the coho salmon escapement was estimated to be 93% age-2.1, 5% age-1.1, and 2% age-3.1, with 54% female overall.

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