

## **Inriver Abundance of Chinook Salmon in the Kuskokwim River, 2002**

**Abstract:** A two-sample mark-recapture experiment was conducted for Chinook salmon *Oncorhynchus tshawytscho* in the Kuskokwim River and associated tributaries using radio telemetry techniques from June-August, 2002. An attempt was made to distribute radio tags over the entire run such that the radio-tagged fish were representative of the entire escapement with respect to size, run-timing, and capture location. Fish were sampled using drift gillnets and fishwheels. Chinook salmon that were radio-tagged constituted the marked sample for the first event. For the second event, fish were counted at four weirs on tributaries of the Kuskokwim River. Radio-tagged Chinook salmon that swam past the weirs and were recorded by stationary tracking stations constituted the recaptured marks. Two hundred twenty-eight fish were marked, 14,982 Chinook salmon ~450 mm were estimated to pass through the four weirs, and 33 radio-tagged fish passed through the weirs. The estimate of abundance for Chinook salmon ~ 450 mm for the Kuskokwim River upstream of the Aniak River was 100,733 fish (SE = 24,267). The majority of radio-tagged Chinook salmon entered the Aniak and Holitna rivers. Fifty percent of the fish bound for the Aniak, George, Holitna and Hoholitna rivers arrived at the tagging site approximately 8 -14 days later than those bound for the Kogruklu River and rivers upstream from McGrath.

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