ABSTRACT

The purpose of this project was to use fishwheels and two-sample mark-recapture methods for long-term monitoring of Chinook salmon *Oncorhynchus tshawytscha* escapement on the Copper River. This report summarizes results from the 2008 field season, the eighth year since the project's inception. The main objective in 2008 was to estimate the inriver abundance of Chinook salmon returning to the Copper River such that the estimate was within 25% of the true escapement 95% of the time. For the first sample event, up to three live-capture fishwheels were operated at Baird Canyon for a total of 4,266 h from 19 May to 4 August. During this period, 4,807 adult Chinook salmon were marked. For the second sample event, up to two fishwheels were operated at Canyon Creek near the lower end of Wood Canyon for 3,966 h from 20 May to 19 August. A total of 3,952 Chinook salmon were examined, of which 342 were marked.

Using a temporally stratified Darroch estimator, the estimated abundance of Chinook salmon measuring 500 mm FL or greater that migrated upstream of Baird Canyon from 19 May to 19 August was 41,343 (SE = 2,166). The median travel time of Chinook salmon marked at Baird Canyon and recaptured at Canyon Creek (91 km upstream) was 10.9 d. Funding for this study by the Fisheries Resource Monitoring Program (FRMP) has been approved through 2009. This highly successful and long-term monitoring program has made the Native Village of Eyak (NVE) an integral part of Copper River salmon research.

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