

Tuluksak River Salmon Run Timing and Abundance. Study No. 10-307, Annual 2010

Abstract

The Kenai Fish and Wildlife Field Office, assisted by the Tuluksak Native Community, monitored the escapement of the five species of Pacific salmon returning to the Tuluksak River, a tributary to the lower Kuskokwim River. From June 27 to September 7, 2010, a resistance board weir was utilized to collect abundance, run timing, age, sex, and length data from returning adult salmon. In conjunction with the weir, an underwater video system was affixed and utilized to collect abundance from July 19 to September 7, 2010. The addition of video methods proved successful in the enumeration and speciation of migrating fish. These data support in-season and post-season management of the commercial and subsistence fisheries that occur on the Yukon Delta National Wildlife Refuge and the Kuskokwim River. In 2010, an estimated 13,042 chum salmon *Oncorhynchus keta*, 201 Chinook salmon *O. tshawytscha*, 437 sockeye salmon *O. nerka*, 95 pink salmon *O. gorbuscha*, and 1,526 coho salmon *O. kisutch* passed through the Tuluksak River weir. Peak weekly passage occurred July 11–17 for chum, July 18–24 for Chinook and sockeye salmon, July 11–17 and 25–31 for pink salmon, and August 22–28 for coho salmon. Age, sex, and length data were collected for chum, Chinook, and sockeye salmon. Dominant ages were 0.3 for chum, 1.2 for male and 1.4 for female Chinook, and 1.3 for sockeye salmon. Over all percentage for female salmon were chum 30%, Chinook 26%, sockeye 67%, and coho 56%. Sex for coho salmon was evaluated from video footage. Mean lengths varied between male and female salmon for each species sampled. The estimated Chinook salmon escapement during 2010 was the lowest on record and below the escapement goal range of 1,000–2,100 for the fourth successive year. The poor returns since 2007 indicate that Chinook salmon in the Tuluksak River are still a stock of yield concern and may require specific management actions.

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