

Goodnews River salmon monitoring and assessment , 04-312 2006

Abstract; Salmon returning to the Goodnews River support subsistence, commercial, and sport fisheries each summer near the community of Goodnews Bay in Southwest Alaska (Burkey et al. 1999). Because the Goodnews River is the primary salmon spawning drainage in the area and provides an important subsistence fishery resource for residents of the communities of Goodnews Bay and Platinum, the Alaska Department of Fish and Game (ADF&G), in cooperation with the U.S. Fish and Wildlife Service (USFWS), operates a resistance board weir to enumerate five species of Pacific salmon and Dolly Varden *Salvelinus malma* returning to the Middle Fork Goodnews River. In 2006, a total of 4,559 Chinook salmon *Oncorhynchus tshawytscha*, 126,772 sockeye salmon *O. nerka*, 54,699 chum salmon *O. keta*, 18,432 pink salmon *O. gorbuscha*, 15,969 coho salmon *O. kisutch*, and 1,858 Dolly Varden *Salvelinus malma* were estimated as they passed through the weir from 26 June through 18 September. Chinook, sockeye, chum, and coho salmon sustainable escapement goals were either achieved or exceeded in 2006. Escapements for sockeye and chum salmon were record highs, Chinook salmon were above average, and coho salmon escapement was below average. A live trap was used to collect samples from Chinook, sockeye, chum, and coho salmon throughout their respective runs to estimate the age, sex, and length composition of each population. The sockeye salmon run was 42.9% male and 70.4% age-1.3 fish. The chum salmon run was 46.1% male and 69.7% age-0.3 fish. The coho salmon run was 52.2% male and 78.3% age-2.1 fish. Sex and length estimates were not made for Chinook salmon because insufficient samples were collected. Aerial surveys were conducted for the entire North Fork Goodnews River drainage and only partially for the Middle Fork Goodnews River in 2006 due to inclement weather. Sockeye salmon run abundance was estimated based on the recent 5-year average aerial survey proportions between Middle Fork and North Fork aerial survey estimates, while Chinook run abundance was estimated using 2006 partial aerial survey estimate proportions.

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