

Hetta Lake sockeye salmon (*Oncorhynchus nerka*) stock assessment project

Abstract: Hetta Lake sockeye salmon are an important subsistence resource for the people of Hydaburg. The Hetta Lake Sockeye Salmon Stock Assessment Project was initiated because of concerns about the apparent declines in sockeye salmon returning to Hetta Lake. The project evaluates sockeye salmon production at various life stages and assesses lake productivity. This annual report summarizes work conducted during the second year of the project, 2002. The mid-water trawl catch was 81% sockeye fry and 19% sticklebacks. The hydroacoustic survey estimated sockeye fry density at 0.45 fry per m² and the total lake estimate was 1.2 million sockeye fry. We were unable to estimate the adult returns because of the low number of sockeye spawners present in the study area (about 300 fish). The subsistence harvest was estimated to be 950 sockeye salmon. Hetta Lake had a seasonal mean zooplankton density of 11,700 plankters per m² and a seasonal mean weighted biomass of 46 mg per m². The seasonal mean euphotic zone depth was 10.2 m. This year's results provide the foundation for a multiple-year study to assess the health of the sockeye salmon stock in Hetta Lake and to set a range of escapement goals capable of sustaining this population for many generations.

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