

Thoms, Salmon Bay, and Luck Lakes Subsistence Sockeye Salmon Project: 2003 Annual Report and 2001-1002 Final Report

In 2001, 2002, and 2003, we examined Thoms, Salmon Bay, and Luck lakes—sockeye producing systems near the community of Wrangell, Alaska—to assess the status of these stocks relative to the size of the subsistence harvests and to develop baseline information on freshwater habitat. In 2003 we were unable to measure escapements into Thoms and Salmon Bay lakes because of weather and other problems. Nevertheless, during the study year, escapements were judged to be high, relative to our subsistence harvest measures. In Thoms Lake, the sockeye escapement estimate approximately doubled each year: 3,000 fish in 2001, 5,900 fish in 2002 and 11,200 fish in 2003. Similar to Thoms Lake, the estimated 2001 sockeye escapement in Salmon Bay Lake (20,000 fish) and Luck Lake (8,000 fish) almost doubled in 2002 (43,000 fish and 16,00 fish, respectively). Subsistence harvest was assessed by means by returned permits. Even allowing for a substantial undercount in the reported harvest, the subsistence harvest in these years did not seem large enough to appreciably affect future recruitment. With only three years of observation, any inference from the limnological measurements is only speculative. Even so, because we did not see zooplankton populations decline with increasing sockeye fry measures in all three lakes, we assume that the escapements during these years were below levels that produce maximum fry recruitment. We see no reason to think subsistence harvests pose much risk to sustainability in these systems in the near future.

Citation: Cartwright, M.A., K.S. Reppert, J.M. Conitz, B.A. Lewis and H.J. Geiger. 2006. Thoms, Salmon Bay, and Luck Lakes subsistence sockeye salmon project: 2003 annual report and 2001-2003 final report. Alaska Department of Fish and Games, Fishery Data Series No. 06-08, Anchorage.