

Klawock Lake Subsistence Sockeye Salmon Project 2004 Annual Report

In 2004, we estimated 12,400 sockeye salmon escaped fisheries to enter Klawock Lake and potentially breed. We are surprised by the striking stability in this system over the four years we have studied it. In that time we observed three sockeye escapements within 5% of 13,000 fish and one escapement estimate of 21,000 in 2003. Our estimate of subsistence harvest in 2004 (4,500 sockeye salmon) was the lowest value in our four-year series of subsistence harvest estimates for Klawock Inlet. The 2004 estimate contrasts with two estimates of 6,000 fish harvested in 2002 and 2003, and the largest estimate of 6,400 sockeye salmon harvested in 2001. Once again, the subsistence fishery removed fish only from the early part of the sockeye run. When the fishery closed on 31 July in 2004, the sockeye escapement count at the Klawock River weir was 600 fish - less than 5% of the entire escapement into the lake. We used open-population mark-recapture studies to estimate the number of sockeye spawners in each of the three main inlet spawning streams. The sum of spawning population estimates for all three streams totaled 11,000 fish -surprisingly similar to the overall escapement estimate of 12,400. Although this open-population approach was not very precise (CV=23%), and probably similarly inaccurate as an estimate of total escapement, we think that it could be further developed to provide continued monitoring of Klawock sockeye stock at a fraction of the cost of the existing studies. The fact that the sum of the estimates of spawning population size in these three streams was so close to the whole-lake escapement estimate suggests that there were few, if any, lake-spawning sockeye salmon in this system in 2004.

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