

ABSTRACT

In 2009, we conducted the ninth consecutive year of a project to monitor the subsistence harvest and escapement of sockeye salmon (*Oncorhynchus nerka*) at Falls Lake. Fish were counted and marked as they migrated into a trap at the top of a fish ladder at the outlet of the lake. Scale samples and length measurements were taken at the trap for analysis of age and length compositions. The sampling crew also conducted an on-site harvest survey of the subsistence fishery. The mark-recapture estimate of the sockeye salmon escapement for 2009 was 2,100 fish. The dominant brood year was 2004 (62.4% of the run) with about half the 2004 brood year spending one year in freshwater (age 1.3; 32.7% of the run). The estimated subsistence harvest of 1,350 sockeye salmon (based on interviews of fishermen on the grounds), was about 40% of the terminal run (subsistence harvest plus escapement). Monitoring of the sockeye salmon escapement and subsistence harvest provides the basic data needed to make informed management decisions in the Falls Lake subsistence fishery.

Key words: Sockeye salmon, *Oncorhynchus nerka*, subsistence, Falls Lake, escapement, mark-recapture, age composition, Southeast Alaska.

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