

## ABSTRACT

A two-year radiotelemetry study of Aniak River rainbow trout was initiated in 2008 to collect information on seasonal movements and distribution in order to determine whether discrete geographic stocks exist within the drainage. From 5 to 12 August 2008, radio tags were surgically implanted into 125 rainbow trout  $\geq 420$  mm FL in four different areas within 134 river kilometers (rkm) of the Aniak River drainage. A total of 16 aerial tracking surveys have been flown to date, two of which were incomplete due to inclement weather. Preliminary results of the surveys indicate that 1) none of the tagged rainbow trout overwintered near the Doestock River, the primary location of the winter subsistence fishery; 2) none of the tagged rainbow trout overwintered in the Salmon River; 3) spawning in the Salmon River appeared to be limited to the lower two miles; 4) overwintering and spawning areas were intermittent in the Kipchuk River and in the Upper Aniak River; 5) within the confines of our tagging study area, overwintering and spawning areas were widespread in the Aniak River mainstem; 6) no tagged rainbow trout made extensive spawning migrations from overwintering areas; 7) spawning appeared to take place from late May-early June; and, 8) most rainbow trout appear to have exhibited summer and overwintering site fidelity between years. Four more aerial tracking surveys are scheduled for spring 2010.

**Citation:** Schwanke, C. J. and M. Thalhauser. 2010. Seasonal distribution of rainbow trout relative to sport and subsistence fisheries in the Aniak River. U.S. Fish and Wildlife Service, Office of Subsistence Management, Fisheries Resource Monitoring Program, Annual Report (Study No. 08-300). Alaska Department of Fish and Game, Division of Sport Fish, Fairbanks, Alaska.