

## FISH POPULATIONS OF AN ALASKA VOLCANIC LAKE

David A. Manski, National Park Service, Aniakchak National Monument and Preserve, P.O. Box 7, King Salmon, Ak 99613

Barbara Mahoney, U.S. Fish & Wildlife Service, Fisheries Assistance Office, P.O. Box 277, King Salmon, Ak 99613

Gary Sonnevil, U.S. Fish & Wildlife Service, Fisheries Assistance Office, P.O. Box 277, King Salmon, Ak 99613

Aniakchak Caldera is a 9.5 km wide and 762 m deep, ash-filled volcano on the Alaska Peninsula within Aniakchak National Monument and Preserve. Volcanically active, Aniakchak last erupted in 1931. Surprise Lake (275 ha) is the major water resource and occupies four percent of the Caldera floor. This fishery survey was part of a broader study to obtain baseline data on existing conditions and learn more about recovery of the Caldera aquatic ecosystem following the eruption. Lake characteristics included mean depth 13.7 m, maximum depth 19.7 m, and shoreline development 1.3. Cold and warm water springs are present along the shoreline and tributary streams. Preliminary water quality data were: conductivity - 43 to 901 uS/cm; dissolved oxygen concentration - 2.5 to 13.4 mg/l; pH - 5.25 to 7.9; and temperature 2.4° to 19.4° C. Backpack electroshocker, gill nets, hook and line and minnow traps were used to collect fishes. Dolly Varden (Salvelinus malma) and sockeye salmon (Oncorhynchus nerka) were the only fish found. The absence of species such as sticklebacks (Gasterosteidae) or sculpins (Cottidae) may indicate that recolonization by non-anadromous residents, has not yet occurred following the last eruption.

FISH POPULATIONS OF AN ALASKA VOLCANIC LAKE - - Manski, David A., National Park Service, Aniakchak National Monument and Preserve, P.O. Box 7, King Salmon, Ak 99613; Mahoney, Barbara and Gary Sonnevil, U.S. Fish & Wildlife Service, Fisheries Assistance Office, P.O. Box 277, King Salmon, Ak 99613. Surprise Lake (Aniakchak National Monument and Preserve) was surveyed to describe existing populations and learn more about recovery of this aquatic system following the most recent eruption in 1931. Dolly Varden (Salvelinus malma) and sockeye salmon (Oncorhynchus nerka) were the only fish found. The absence of non-anadromous species may indicate that recolonization of the lake has not yet occurred.