

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Lake McDonald Fishery Study, Continuation of MSU 66

Type of Project: Research

Funding Agency: National Park Service

Other Partners/Cooperators: Montana State University, University of Montana

Effective Dates: 6/1/2004 - 12/30/2005

Funding Amount: \$38,300

Investigators and Agency Representative:

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Project Abstract:

The indigenous fishery of Lake McDonald in Glacier National Park has been radically altered by a succession of habitat disturbances and ecological manipulations dating from the early 1900's. Park managers are particularly concerned about the welfare of the bull trout, a native char recently placed under the protection of the Endangered Species Act (ESA) as a Threatened species. The native westslope cutthroat trout, a "Species of Special Concern" in Montana, is also imperiled in the lake. Field surveys and angler censuses carried out during the past 70 years have documented declines of both species' in Lake McDonald, mainly due to the entry of lake trout into the basin. Four other nonnative species are also present in the system. The movements, spatial relationships, and habitat utilization of lake trout and the native species, especially bull trout, are poorly understood. A comprehensive assessment of damage to aquatic and riparian habitats in the Lake McDonald basin has not been made. Information about the condition of historic spawning habitats is also lacking.

This project addresses many of these information gaps. Basic life history and biological data will be collected for the various species of fish inhabiting Lake McDonald. Lake trout that were surgically implanted with acoustic transmitters in 2003 and 2004 will continue to be tracked throughout Lake McDonald in 2004. Fish metrics will be measured and other types of data (i.e., food preferences, age and growth, etc.) will be obtained for lake trout. This information will form the basis for the student's MS Thesis and contribute to the development of a strategic plan to be developed by the NPS for management of native and nonnative fish in Lake McDonald. Findings will also be applicable to several other lakes on the west side of the park that are similarly impaired. Information gained from this work will also benefit other mountain Natural Area parks in the western U. S. that are dealing with introduced and invasive fish issues.

This task agreement is part of a three-year collaborative effort among park staff, University of Montana and Montana State University researchers and funded by NPS-NRPP.

Outcomes with Completion Dates:

List of Products:

Investigators Annual Reports 2003:

1. Habitat Use and Movement By Lake Trout In Lake McDonald, Glacier National Park, Andrew M. Dux. (submitted in partial fulfillment of the requirements of the study)
2. Investigating Water Quality In Lake McDonald, Progress Report James A. Craft and Jack A. Stanford, Flathead Lake Biological Station, University of Montana

Investigators Annual Reports 2004 - due by December 2004

Investigators Final Report due FALL 2005

Keywords: fisheries, lake trout, bull trout, Lake McDonald, Glacier National Park, Montana State University, non-native fishes

For Administrative Use Only:

Date Annual Report Received:

Date Final Report Received:
Publications, etc. on file: