

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Renovation of Northern Range streams to prevent ESA listing of Yellowstone cutthroat trout phases 1-4

Discipline: Natural Resources

Type of Project: Research

Funding Agency: National Park Service

Other Partners/Cooperators: Montana State University

Effective Dates: 6/1/2005 - 4/30/2009

Funding Amount: \$221,426

Investigators and Agency Representative:

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Project Abstract:

The Yellowstone cutthroat trout (YCT) is imperiled and listing under the Endangered Species Act (ESA) is imminent unless immediate action is taken. The goal of this project is to establish two, self-sustaining, genetically-pure YCT populations within Yellowstone National Park (YNP) in an effort to restore and prevent the ESA listing of this unique native subspecies. A recent range-wide status assessment indicated that YNP forms the core of the remaining habitat for YCT.

The proposed project will allow YNP biologists to partner with multiple government agencies as well as expert NGO's to renovate two watersheds in Yellowstone's Northern Range through removal of nonnative fish species and reintroduction of genetically-pure YCT. A rich archive of historical fisheries information exists for the Yellowstone River and its tributary streams.

This project will result in the use of this information, which is currently in hardcopy file format, for creation of Geographic Information System tools for understanding native and nonnative species distributions and any potential data gaps that may exist. Intensive field investigations will be conducted from tributary mouth to the uppermost extent of fish distribution on all Northern Range Streams within the historical range of YCT. Biologists will estimate species composition, abundances, and size structure of fish communities. Using information from the review of the historical data and literature, and from intensive field investigations, all of the Northern Range watersheds will be prioritized for their renovation and restoration potential. Factors to be considered will include watershed size, habitat availability, water temperature, pH, gradient, and presence of spring seeps or other wetland areas. In addition, fish species present, accessibility, and location of any existing barriers to upstream invasion by exotic fish will be considered. This project will result in the specific identification of two watersheds to be restored with native YCT.

In FY 06 and 07 additional tasks were added. Following the selection of watersheds for renovation, all information compiled as described above will be used to write an Environmental Assessment (or an EIS, depending on project extent and potential for impact). All the required planning, including state and federal chemical discharge permits, and environmental compliance with the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA), will be completed. Then biologists will initiate resource surveys of rare plants, amphibian species, geology/hydrology, and other resources to document extent of affected environment in watersheds to be restored to genetically pure Yellowstone cutthroat trout.

Outcomes with Completion Dates: All information produced by this project will be provided in electronic format to the Fisheries and Aquatic Sciences Section, Yellowstone Center for Resources. Final products will be in the form of a written report, M.S, Thesis and Ph.D. dissertation. Progress reports are due in December 2006, May 2007; May 2008, with the final report due by December 31, 2008.

Keywords: Yellowstone cutthroat trout, stream renovation, watershed prioritization,
Yellowstone National Park, Montana State University, ESA

For Administrative Use Only:

Date Annual Report Received:

Date Final Report Received:

Publications, etc. on file: