

## Project Summary

### Rocky Mountains Cooperative Ecosystem Studies Unit

**Project Title:** Assessment of cutthroat survival and growth in irrigation ditches off the Gros Ventre River and population connections to the Snake River, Grand Teton National Park

**Type of Project:** Research  
**Discipline:** Natural Resources  
**Funding Agency:** National Park Service  
**Other Partners/Cooperators:** University of Montana  
**Effective Dates:** 7/1/2007 - 6/1/2009  
**Funding Amount:** \$22,500 (FY08 - \$14,500; FY07-\$8,000)

**Investigators and Agency Representative:**

NPS Contact: John Wullschleger, Fisheries Program Leader, NRPC Water Resources Division, 1201 Oakridge Drive, Suite 250, Fort Collins, CO 80525; 970-225-3572; john\_wullschleger@nps.gov

Investigator: Dr. Lisa Eby, Assistant Professor, Wildlife Biology Program, College of Forestry and Conservation, University of Montana, Missoula, MT 59812; 406-243-5984; [lisa.eby@umontana.edu](mailto:lisa.eby@umontana.edu)

**Project Abstract:**

The cutthroat trout *Oncorhynchus clarki* is the only native trout in Wyoming. The Yellowstone cutthroat trout (*Oncorhynchus clarkii bouvieri*) is designated as a "species of special concern" or "sensitive species" by a number of agencies and conservation groups. Although the Yellowstone cutthroat trout has recently avoided federal listing because of robust headwater populations (USFWS 2006), they face continued threats across their range. The fine-spotted Snake River native trout is a morphologically divergent ecotype of the Yellowstone subspecies, although it is not genetically distinguishable (Novak et al. 2005). The Gros Ventre and Snake River in the Grand Teton National Park is the last remaining habitat for the fine-spotted Snake River cutthroat trout. Principal threats to the Gros Ventre native trout include both water diversions (loss of water and fish into irrigation ditches) and hybridization.

**Objectives of this research include:**

- 1: Examine the individual growth and survival in irrigation ditches
- 2: Examine the connection between the Gros Ventre cutthroat and mainstem Snake River cutthroat groups to determine whether the Gros Ventre is leaking rainbow alleles into the main Snake River population.

**Outcomes with Completion Dates:**

Summer 2007: Initial field sampling - initial sampling of ditches (marking fish in focal ditches), collect fin clips  
Fall 2007: Field sampling - resampling of ditches (recapture of fish to estimate growth), collect fin clips  
Winter/Spring 2008: Compilation and analyses of data, lab analyses of genetic samples  
Spring/Summer 2008: Field sampling - resampling of ditches (recapture of fish) to estimate overwinter survival, and analyses of genetics data.  
December 2008: Final report delivered to the GTNP, WASO-WRD, and RM-CESU.

**Keywords:** fish populations, cutthroat, irrigation ditches, genetics, Gros Ventre River, Grand Teton NP, University of Montana