

2001

McDonald F-113-R-1  
3828  
Statewide  
# 72175

## PERFORMANCE REPORT

**STATE:** MONTANA  
**GRANT TITLE:** NATIVE FISH RESTORATION  
**GRANT NUMBER:** F-113 R-1  
**PROJECT NUMBER:** 3828  
**LOCATION:** MONTANA – Statewide  
**PERIOD COVERED:** July 1, 2000 through June 30, 2001  
**PROJECT PERSONNEL:** Ken McDonald, Special Projects Bureau Chief, Helena

### OBJECTIVE:

Funding from this project was used to support ongoing native fish restoration projects. During the project period, funds from this project were used to:

### RESULTS:

- Helped fund a contract with Montana State University to develop a protocol for monitoring trajectories of native salmonid populations using demographic parameters in a probabilistic framework. The objective of this protocol will be to develop a strategy for viable population maintenance in which mathematical methods are used for quantifying population trends of bull trout and westslope cutthroat trout. Populations status will be assessed by continually updating short-term (5-15 years) projections of population trajectories using monitoring data entered in appropriate stochastic demographic models. These predictions will then be examined for trends resulting in more accurate determination of population status. Such an approach is much more statistically and legally defensible than a traditional PVA prediction of long-term probability of extinction. Preliminary analysis results will be available in 2003.
- Contracted to monitor stream flow and Yellowstone cutthroat trout fry emigration in four Yellowstone River tributary streams where FWP has active water leases – Cedar Creek, Mill Creek, Mol Heron Creek, and Big Creek. Work accomplished included checking gauges in each stream and measuring flows to verify rating curve calibrations, installing and downloading thermographs near each gauge, and then monitoring flows at each site at least weekly during the summer. Each creek was monitored weekly to determine initiation of spawning. Once spawning was observed, daily monitoring continued for an additional week. After 25-30 days after spawning was first observed, fry traps were placed upstream of the stream mouth in the first suitable pool. Fry traps were set and checked every third day until fry were captured. Thereafter, traps were set and checked daily until out-migration was largely completed. The number of fry captured was recorded, as well as total lengths of a random subsample of 10 fry, water flow, and water temperature. Data collected from this work is being compiled in a summary report that will be used to better administer water leases.
- Funding was used to supplement crews completing survey and inventory of upper Missouri River tributaries for westslope cutthroat trout.

**BUDGET:** \$50,000