

## 22330-2007-039 Rio Ruidoso Creek Habitat Restoration

**State(s):** New Mexico

**Managing Agency/Organization:** U.S. Fish and Wildlife Service

**Type of Organization:** Federal Government

**Project Status:** Completed

**Project type:** WNTI Project

**Project action(s):** Watershed, In-stream and riparian habitat

**Trout species benefitted:** Rio Grande Cutthroat

**Population:** Rio Ruidoso Creek

Rio Grande cutthroat trout is believed to have occupied Rio Ruidoso watershed for time immemorial. Identifying and protecting native trout populations on tribal lands from encroachment and hybridization of nonnative salmonids, and habitat degradation decreases potential listing under ESA and affecting the economic development on tribal lands.

### The problem:

Habitat degradation and introduction of nonnative salmonids have reduced the distribution of Rio Grande cutthroat trout populations. Suspected pure populations of cutthroat trout populations are often confined to headwater streams but their genetic purity remains unknown.

### The objective:

The objective of this proposal is to restore 16.0 miles of stream for Rio Grande cutthroat trout to the Middle Fork of Rio Ruidoso and monitor population dynamics over a three year duration.

### The method:

Inventory South Fork, Middle Fork, and North Fork to assess fish community, fish habitat, and develop management actions. Potentially transport cutthroat trout to MTFH, and test for genetic purity. If necessary, eradicate nonnative and hybrid salmonids with piscicide and introduce Rio Grande cutthroat trout. Monitor population over a three year period.

### Additional information:

On the Middle Fork of the Rio Ruidoso, a waterfall barrier exists but modifications must be done to protect and secure a population of Rio Grande cutthroat trout from nonnative salmonid encroachment. Mescalero Apache Tribe plans to expand their conservation efforts to restore native cutthroat trout within the entire drainage. The genetic purity and population size of trout above the fish barrier has yet to be determined. In addition, the suitability of habitat to sustain a viable population must be determined. This stream reach occurs entirely within Mescalero Apache Indian Reservation boundaries. Mescalero Apache Tribe has collaborated with New Mexico State University to evaluate fish movement distribution. Approximately 300 fish have been tagged and follow up surveys are scheduled for the next year. NEPA compliance is being developed by Mescalero Apache Natural Resources Department and tribal council has endorsed the project but the approval of a tribal resolution is pending. Intra-Service Section 7 and pesticide use application have not been completed. However fire restrictions have prevented further work from being completed. This project satisfies WNTI's goal of funding and implementing collaborative restoration efforts.

### FY2012 Update:

Assisted with Mescalero Apache Tribe and NMSU with habitat assessment and stream surveys. A total of 7 100-meter sites were surveyed; 2 on South Fork, 2 Middle Fork, and 2 North Fork. Approximately 300 to 500 rainbow trout, brook trout, and brown trout were collected. No tagged trout were recaptured. Site location for a barrier was selected below Middle/South forks and usage of rotenone was discussed with partners to 17 miles of stream.

### **Objectives:**

- Improve habitat in Rio Ruidoso
- Restore declining fish and other aquatic resource populations before they require listing under the Endangered Species Act.

### **Partners:**

- Mescalero Apache tribe, Southwest Tribal Fisheries

### **Measures:**

- miles of habitat restored

### **Funding Source(s):**

- National Fish Habitat Action Plan

**Project cost:** \$80,000.00

**Start Date:** 07/01/2011 **Completion Date:** 10/30/2013

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