

I. Project title: **Operation and Maintenance of Grand Valley Endangered Fish Facility.**

II. Principal Investigator(s):

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III. Project Summary:

Captive rearing of endangered fish for the Upper Colorado River Basin began in the Grand Valley in 1992. The Horsethief Rearing Ponds were put into operation to secure propagation facilities with adequate equipment and personnel for captive propagation of endangered species for the Recovery Program in the upper Colorado River Basin. Additional propagation facilities were needed to expand propagation efforts, therefore in 1996 The 24 Road Hatchery was constructed inside of an existing warehouse (donated by the Bureau of Reclamation) at 1149 24 Road, Grand Junction, CO. The Hatchery was expanded in the winter of 1998-1999, and now contains two separate water re-use systems. In addition to the hatchery expansion, numerous ponds have been acquired and are used to grow razorback sucker for stocking into the Colorado, Gunnison, and San Juan Rivers.

Broodstock are held at Horsethief Ponds and spawned in spring. Larvae are taken to the 24-Road Hatchery and reared for about one year. After 1 year in the hatchery, fish are stocked into growout ponds where they are held for about 6 months. After additional growth in the ponds, fish are harvested and stocked into the Colorado and Gunnison rivers in accordance with approved stocking plans.

IV. Study Schedule: 2003 to end of Recovery Program

V. Relationship to RIPRAP: General Recovery Program Support Action Plan

IV.A. Genetic Management

IV.A.1. Augment razorback sucker

IV.A.4. Secure and manage genetic stocks in refugia

IV.C. Operate and maintain facilities

VI. Accomplishment of FY 2004 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

24 Road Facility

From late March through mid April, about 25,900 age-1 razorback suckers were stocked into various growout ponds in the Grand Valley from the 24-Rd facility. These fish represented young from 20 different paired matings. In addition, 15 fish from each lot were stocked into Bound's Pond for use as future brood stock. All fish stocked into Bound's Pond were PIT tagged so that individual lots will be identifiable when the fish are harvested for brood stock in future years. Fish in the remaining ponds were stocked as a mixture of fish from each lot. Fish from the different lots were stocked in equal numbers in each pond. These fish were not PIT tagged so that individuals from the different lots will not be identifiable at harvest time. In addition, about 3,000 age-1 razorback suckers were transported to rearing ponds used by the San Juan River Recovery Program near Farmington NM.

In April 2004, razorback broodstock held at Horsethief Rearing Ponds were spawned and the eggs were transferred to the 24 Road Hatchery. A total of 29 paired matings were made. Initial hatching success resulted in larvae from 28 lots (one small lot did not hatch). About 268,000 larvae were marked with tetracycline and stocked into the Butch Craig Pond, which had just been modified to connect with the Gunnison River. The fish were marked with tetracycline to allow them to be distinguished from wild larvae if they were captured in larval samples taken from the Gunnison River. However, the Gunnison River did not reach a sufficient level to connect with the pond.

Horsethief Ponds

About 350 adult brood stock are currently being held in Horsethief Ponds. These fish will be used for future spawning. Adults are stocked into the Colorado River after they have served their purpose and have contributed to future generations. Future brood stock from the 2000, 2001, 2002, and 2003 year classes are being held in Bound's pond and will be added as they mature. Fish from the 1998 year class in Lake Mojave are also being held in Bound's pond in preparation for future years.

Growout Ponds

In March, 463 age-2 razorback suckers were harvested from the grow-out ponds and stocked into the Colorado River. These fish were from ponds that could not be completely harvested in fall 2003, but were deep enough to overwinter fish. The harvesting was done in anticipation of stocking more fish in April.

In fall, about 7,827 age-1 razorback suckers were harvested from grow-out ponds and stocked into the Colorado (5,709), Green (1,569), and Gunnison (Butch Craig pond, 549) rivers. This was short of our production goals. Survival in the grow-out ponds ranged from very low to very high and is still being evaluated. Our target was to stock fish that were 12 inches (30 cm) long or greater. However, it was necessary to stock some fish smaller than 30 cm. Some smaller fish harvested from the CDOT were PIT tagged and stocked into the Butch Craig Pond rather than directly into the river. Length frequency of razorback suckers stocked in fall 2004 are provided in the Appendix. This allowed further growth until the pond connects with the river. Condition of harvested fish varied among ponds, but was generally much better than in 2003. Condition of fish harvested from the Peters ponds improved the most, primarily because the fish were fed regularly during 2004. Some of the fish were undoubtedly holdovers from previous years. All leased ponds required sampling with fyke nets which is less than 100% effective. We know that at least some of the leased ponds have holdovers which we will attempt to catch next spring. Some of these ponds are very deep and sampling with fyke nets is not effective under some conditions. Evaluation of management of those ponds will be done over winter, which may result in changes for future years.

- VII. Recommendations: Continue management and operation of facilities to serve as a primary refuge for endangered fishes of the Upper Colorado Basin.

- II Project Status: Project is ongoing and on track

- IX. FY Budget:
 - A. Funds Provided:374,000
 - B. Funds Expended:374,000
 - C. Difference:-0-
 - D. Percent of the FY 2004 work completed, and projected costs to complete
 - E. Recovery Program funds spent for publication charges:-0-

- X. Status of Data Submission: PIT tag numbers and data associated with stocked fish have been submitted to the data base.

- XI. Signed: Chuck McAda 11/8/04

APPENDIX:

