

I. Project title: **Propagation Facilities, in the Grand Valley** (24 Road Hatchery, Horsethief Ponds, and grow-out ponds), for Captive Rearing of Endangered Fishes for the Upper Colorado River Basin.

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 according to a genetic plan. 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 2003 RIPRAP:
General Recovery Program Support Action Plan (page 23)
IV.A.4. Secure and manage the following presumptive stocks in refugia
IV.A.4.a. Razorback sucker
IV.A.4.a.(2). Upper Colorado River
IV.C. Operate and maintain facilities (page 24)
IV.C.2. Grand Valley Endangered Fish Facilities
Green River Action Plan: Mainstem (page 27)
IV.A.1. Develop state stocking plan for the four endangered fishes in the Green River
IV.A.1.c. Implement plan
Colorado River Action Plan: Mainstem (page 35)
IV.A.3.b. Implement razorback sucker State stocking plan
IV.A.4.b. Implement Colorado pikeminnow State stocking plan
Colorado River Action Plan: Gunnison River (page 38)
IV.A.2.b. Implement Colorado pikeminnow State stocking plan
IV.A.3.b. Implement razorback sucker State stocking plan
- VI. Accomplishment of FY 2003 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

24 Road Facility

Prior to spawning in April, 2003, about 17,500 age-1 razorback suckers were stocked into various growout ponds in the Grand Valley from the 24-Rd facility. These fish represented young from 19 different paired matings. Included in this number were 285 fish (15 fish from each lot) stocked into Bound's Pond for use as future broodstock. 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 5,060 age-1 razorback suckers were transported to rearing ponds used by the San Juan River Recovery Program near Farmington NM in spring 2003.

In April 2003, razorback broodstock held at Horsethief Rearing Ponds were spawned and the eggs were transferred to the 24 Road Hatchery. A total of 26 paired matings were made. Initial hatching success resulted in larvae from 25 lots (one small lot did not hatch). About 300,000 larvae were transported to Ouray National Wildlife Refuge for use in Recovery Program floodplain studies. The hatchery is currently holding about 30,000 3-in long fish from 21 lots. These fish will be stocked into growout ponds next spring.

Colorado pikeminnow from Dexter NFH's 2002 year class were reared at the 24-Rd

facility. The fish were stocked in the Gunnison and Colorado rivers in fall 2003 (actually FY 2004)– Gunnison River near Delta 1,051 fish on October 17 and Colorado River upstream from DeBeque Canyon, 1,000 on November 10. Two of the fish stocked in the Gunnison River near Delta had already been recaptured in the Colorado River downstream from Loma by the end of October.

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. About 90 adults were stocked into the river last spring. Future brood stock from the 2000, 2001, and 2002 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

About 125 age-2 razorback suckers were harvested from the growout ponds in spring and stocked into the Colorado River.

In fall, about 7,722 age-1 razorback suckers were harvested from growout ponds and stocked into the Colorado (5,358) and Green (2,364) rivers. This was short of our production goals. Survival in the growout ponds ranged from very low to very high. Fish stocked were 12 inches long or greater. Condition of harvested fish varied greatly among ponds. 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. In several cases, large numbers (~100s) of razorbacks were observed in these ponds but were not collected. We had a large incidence of infection by *Learnea* sp in the Peters Ponds. Although the ponds were treated, ultimate survival of the razorbacks in the ponds was low. In addition, condition of the fish that were harvested was generally low even though fish in the ponds were routinely fed. Evaluation of management of the Peters 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. FY03 Budget:
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| A. Funds Provided: | \$ 340,000 |
| B. Funds Expended: | \$ 340,000 |
| C. Difference: | -0- |
- D. Percent of the FY 2003 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 Date: 11/14/03