

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

II. Principal Investigator(s):

Thad Bingham, Fish Biologist (Lead)
Brian Scheer, Fish Biologist (Lead)
Ouray National Fish Hatchery, Grand Valley Unit
1149 24 Road
Grand Junction, Colorado 81505
(970) 245-9236
E-mail: thad_bingham@fws.gov
brian_scheer@fws.gov

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 the spring. Eggs are taken to the 24-Road Hatchery, hatched and reared for about one year. Excess fry were discarded. After 1 year in the hatchery, fish are stocked into grow-out ponds where they are held for about 6 months. After additional growth in the ponds, fish are harvested and stocked into the Colorado, Green and Gunnison Rivers in accordance with approved stocking plans. Additional fish are held in the 24-Road Hatchery until they reach about 300 mm total length and are then stocked directly into the upper basin rivers.

IV. Study Schedule: 2011 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 2011 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

Grand Valley Unit Intensive Culture Hatchery

Prior to spawning in April, 2011, about 21,000 age-1 razorback sucker were stocked into various grow-out ponds in the Grand Valley from the Grand Valley Unit. These fish represented young from 14 different paired matings. Fish 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 2011, 7,022 fish were held in the hatchery and reared to stocking size and then stocked directly into the Green River. These fish averaged 284mm total length (range, 184–396 mm).

In April 2011, razorback sucker broodstock held at Horsethief rearing ponds were spawned and the eggs were transferred to the Grand Valley Unit. 300,000+ excess fry were discarded. The hatchery is currently holding about 28,000 3–4 inch fish for stocking in 2012. These fish are from 14 individual paired matings. About 21,000 of these fish will be stocked into grow-out ponds next spring and the remainder will be held in the hatchery until stocking size and stocked directly into the Green, Gunnison, and Colorado rivers in late spring 2012.

Horsethief Ponds

About 425 adult broodstock are currently being held in Horsethief Ponds. These fish will be used for future spawning.

Grow-out Ponds

In fall 2011, 12,019 razorback suckers were harvested from grow-out ponds and stocked into the Colorado River near Rifle (4,250), the Colorado River near Grand Junction (4,438), and the Gunnison River (3,331). Of the 12, 019 stocked, 4, 116 were fish that were above and beyond our target stocking number. These additional fish averaged 227mm total length. The 14,895 fish stocked from the

hatchery and the grow-out ponds (not including the 4,116 additional) averaged 302mm total length. Survival in the grow-out ponds remained consistent with harvest rates from previous years, except Peter's Ponds. Harvest rates averaged 68% compared to previous years of 30%. Fish condition from Peter's Ponds was excellent. We contribute this result to the active treatment of Learnea.

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 the grow-out ponds is a continuous process. We implemented several management changes that increased production in some of our ponds. We are continuing to evaluate management options that will improve the survival and growth of razorback suckers in the grow-out ponds.

Due to high runoff, Feurborne and Beswick Ponds connected to the river. Harvest efforts undertaken at these ponds yielded no return. We strongly feel that most or all of these fish (3,000) could have made their way into the river on their own.

Leases for Morse, Brunett, Heuton and McGuire Ponds expired in FY2010. We renewed the lease on Morse pond for another 3 years. Other ponds available for FY2012 that are "freebies" include Elam, Feurborne, and Beswick Ponds.

Construction of the new native fish facility at Snook's Bottom began in October of 2011. Anticipated completion date is summer of 2012.

Stocking Summary

We stocked a total of 19,041 razorback suckers into the Colorado (8,688), Gunnison (3,331), and Green (7,022) rivers in 2011 with an overall average length of 285mm. The 14, 895 fish that meet our quota averaged 302mm total length. The additional fish harvested were from ponds with leases expiring.

- 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

