

I. Project Title: **Propagation Facilities in the Grand Valley (Ouray National Fish Hatchery - Grand Valley Unit) for Captive Rearing of Endangered Fishes for the Upper Colorado River Basin.**

II. Bureau of Reclamation Agreement Number(s): R15PG00083

Project/Grant Period: Start date (Mo/Day/Yr): 10/1/2014
End date: (Mo/Day/Yr): 9/30/2019
Reporting period end date: 9/30/2017
Is this the final report? Yes _____ No X

III. Principal Investigator(s): Thad Bingham, Fish Biologist (Lead)
Mike Gross, Biological Technician
Dale Ryden, Project Leader
Brian Scheer, Fish Biologist (Lead)
Ouray National Fish Hatchery, Grand Valley Unit
1149 24 Road
Grand Junction, Colorado 81505
Phone: (970) 245-9236
Email: thad_bingham@fws.gov
brian_scheer@fws.gov
michael_gross@fws.gov
dale_ryden@fws.gov

IV. Abstract:

Ouray National Fish Hatchery - Grand Valley Unit (Ouray NFH-GVU) consists of several facilities near Grand Junction, CO. These facilities include the Horsethief Canyon Native Fish Facility (HCNFF), the 24 Road Hatchery building, and several other scattered groups of grow-out ponds.

Ouray NFH-GVU produces and rears razorback sucker (annual stocking target = 6,000 fish \geq 350 mm TL) for stocking into the Colorado and Gunnison rivers. In addition, Ouray NFH-GVU also rears bonytail obtained as larvae from the USFWS's Southwest Native Aquatic Resources and Recovery Center (SNARRC) in Dexter, NM (annual stocking target = 10,000 fish \geq 250 mm TL), for stocking into the Colorado River. All stocking of these two endangered fishes are in accordance with the approved Integrated Stocking Plan (ISP).

Wild humpback chub from the Black Rocks area of the Colorado River continue to be held at the HCNFF ponds as a refugia population.

V. Study Schedule: 1996 to end of Recovery Program

VI. 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

VII. Accomplishment of FY 2017 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

Razorback Sucker

In early April to mid-May 2017, about 5,236 age-1 razorback sucker were stocked into the grow-out ponds at HCNFF. These fish represented young from 13 different paired matings of broodstock performed in April 2016. Ponds were stocked with a mixture of fish from several different family lots. Equal numbers from each represented family lot were stocked into a total of six ponds. These fish were PIT tagged prior to being stocked into grow-out ponds to help reduce stress later in the year when they would be harvested for stocking. An additional 6,285 razorback sucker were held at the 24 road hatchery until June 2016 due to the unavailability of grow-out ponds. In June 2016, after stocking 2016 bonytail from HCNFF, the 6,285 razorback sucker held at the 24 road hatchery were stocked into five ponds at HCNFF for further grow-out.

In April 2017, razorback sucker broodstock held at HCNFF were spawned and the eggs were transferred to the 24 Road Hatchery building. Hatching rates for razorback sucker eggs were excellent, with approximately 88% of all eggs successfully hatching into fry. The hatchery is currently holding 12,000 135 mm TL razorback sucker.

In 2017, a total of 7,420 razorback sucker were harvested and stocked. These fish were stocked at multiple locations – 2,314 were stocked from HCNFF into the Colorado River near Rifle, 227 were stocked from CDOT Pond into the Colorado River near DeBeque, 2,755 were stocked from HCNFF into the Colorado River in Grand Junction, and 21 were stocked from Beswick's Pond into the Colorado River in Grand Junction. In the Gunnison River, 2,079 were stocked from HCNFF near Delta and 14 more were stocked from Butch Craig Pond into the Gunnison River at Whitewater, CO. The 7,420 razorback sucker stocked in 2017 represented 123.67% of our annual target number (n = 6,000).

Our three "lease-free" grow-out ponds (CDOT, Beswick's, and Butch Craig ponds) will continue to be used as necessary in future years to provide redundancy and as we continue to evaluate management options to improve the survival and growth of razorback suckers for augmentation.

Bonytail

In spring 2016 approximately 14,000 larval bonytail were received from SNARRC. These fish were stocked into grow-out ponds at HCNFF. In November 2016, these bonytail were harvested from HCNFF and brought into the 24 Road Hatchery to overwinter. In early to mid-April 2017, these bonytail were transferred to HCNFF to maximize growth until being stocked in summer 2017. In 2017, a total of 10,501 bonytail were harvested and stocked. All of these fish were stocked between Palisade and Fruita (i.e., near Grand Junction), CO in the Colorado River. The 10,501 bonytail stocked in 2017 represented 105.01% of our annual target number (n = 10,000).

In spring 2017 approximately 14,000 larval bonytail were received from SNARRC. These fish were stocked into two ponds at HCNFF. In October 2017, these bonytail were harvested from HCNFF and brought into the 24 Road Hatchery to overwinter. They will be stocked back into grow-out ponds at HCNFF in spring 2018, where they will be held until being stocked at various locations in the Colorado and Gunnison rivers.

Humpback Chub

Currently, 28 wild adult humpback chub that have been collected from the Black Rocks area of the Colorado River are being held as a refugia population at the HCNFF ponds. Eighteen of these were from 2014 and 2015 collection efforts at Black Rocks. In October 2017, another 10 humpback chub were collected from Black Rocks and brought into the HCNFF ponds. The plan is to bring in more 5-10 additional large juvenile or small adult humpback chub during fall 2018 sampling.

In spring 2017, the 18 adult humpback chub being held at HCNFF once again pulled off a volunteer spawning event. In September 2017, the humpback chub pond at HCNFF was drained and 1,132 age-0 humpback chub (mean TL = 79.8 mm; range = 58-96 mm) were harvested. Thirty of these fish were retained for I&E use in aquaria at the main hatchery building for Ouray NFH-GVU, the Children's Nature Center at Mesa Mall, and the John McConnell Math and Science Center of Western Colorado, all located in Grand Junction, CO. The other 1,102 age-0 humpback chub were transferred to David Ward of the USGS's Grand Canyon Research and Monitoring Center (GCMRC) to be used for various experimental purposes.

2017 Stocking Summary

A total of 7,427 razorback sucker (123.78% of the target stocking number) were stocked into the Colorado and Gunnison rivers in 2017 from the HCNFF, as well from three remotely-located grow-out ponds. The mean TL for all razorback sucker stocked in 2017 was 387 mm (target stocking size was 350 mm TL). Numbers of fish stocked in each location in 2017 were as follows:

<u>Location</u>	<u>Number Stocked</u>
Upper Colorado near Rifle (from HCNFF)	2,314
Upper Colorado near DeBeque (from CDOT Pond)	235
Colorado River in Grand Junction (from HCNFF)	2,766
Colorado River in Grand Junction (from Beswick's Pond)	21
Gunnison River near Delta (from HCNFF)	2,078
Gunnison River in Whitewater (from Butch Craig Pond)	<u>13</u>
2017 stocking totals for razorback sucker	7,427

A total of 10,501 bonytail (105.01% of the target stocking number) were stocked into the Colorado River in 2017 from the HCNFF. The mean TL for all bonytail stocked in 2017 was 250.01 mm (target stocking size was 250 mm TL). These fish were all stocked between Palisade and Fruita, CO:

<u>Location</u>	<u>Number Stocked</u>
Colorado River near Grand Junction (from HCNFF)	<u>10,501</u>
2017 stocking totals for bonytail	10,501

Note: Stocking data presented here has been updated & finalized, as of 30 January 2018 (i.e. after final submission of data sets to the STReAMS database). Data are reported to STReAMS under Projects 29a and 126a (fish sourced from ponds listed above).

VIII. Additional noteworthy observations: None

IX. Recommendations:

- 1) Continue management and operation of Ouray NFH – GUV facilities to serve as a primary refuge facility for endangered fishes of the Upper Colorado Basin.
- 2) Continue production, grow-out, and stocking of razorback sucker and bonytail (and other native, endangered fish species as appropriate) to meet stocking goals set forth in approved stocking plans by the Upper Colorado River Endangered Fish Recovery Program (UCREFRP).

X. Project Status: Project is on track and ongoing.

XI. FY 2017 Budget Status

- A. Funds Provided: \$560,810
 - a. \$517,810 to Ouray NFH-GUV
 - b. \$43,000 to Bureau of Reclamation (to pay gas, electricity, phone)
- B. Funds Expended: \$560,810
- C. Difference: \$0
- D. Percent of the FY 2017 work completed, and projected costs to complete: 100%
- E. Recovery Program funds spent for publication charges: \$0

XII. Status of Data Submission: All PIT tag data were submitted to the UCREFRP database manager in October 2017

XIII. Signed: Thad Bingham, Mike Gross, Dale Ryden & Brian Scheer 11/13/2017
Principal Investigator(s) Date