

I. Project Title: **Operation and Maintenance of Ouray National Fish Hatchery**

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III. Project Summary:

Ouray National Fish Hatchery (ONFH) was established in May 1996 as a fish refugia and technology development facility to assist in the recovery of the four endangered Colorado River fish: razorback sucker, Colorado pikeminnow, bonytail, and humpback chub. Currently, the hatcheries' primary focus is propagating the razorback sucker, but as of October 15, 2007, approximately 200 Gila species from the Yampa River have been brought into captivity at the Hatchery.

ONFH is located 57 kilometers (km) southwest of Vernal, Utah, on the Ouray National Wildlife Refuge. The facility consists of an 114,000 liter (l) indoor recirculating hatchery with 27 2.4 meter (m) circular fiberglass tanks, and 30 1.2 m circular fiberglass tanks. The isolation room consists of twelve 0.9 m² circular fiberglass tanks that can be run as single pass cold water tanks or run as a separate re-use system. There are also 24 810 m² surface area ponds covered by bird netting, and 12,2025 m² surface area ponds. The water source consists of seven shallow wells (15 m deep) located near the Green River approximately 0.8 km from the hatchery. The hatchery has its administrative office located in a fisheries complex shared with the Colorado River Fisheries Project, Utah Fish and Wildlife Management Assistance Office, and Jones Hole National Fish Hatchery in Vernal, Utah.

The basic operation plan for the facility is to operate a genetically sound captive propagation program to maintain approximately 500 captive razorback sucker broodstock and produce sufficient larvae needed for floodplain wetland studies and hatchery production. The production goal is to rear 14,895 300 + millimeter (mm) sub-adult razorback sucker to stock into the middle and lower Green River in Utah. This stocking goal was established by the Upper Colorado River Endangered Fish Recovery Program (Recovery Program).

IV. Study Schedule: 1996- Ongoing

V. Relationship to RIPRAP:

General Recovery Program Support Action Plan

IV. Manage genetic integrity and augment or restore populations.

IV.A. Genetics management.

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

IV.A.4.a. Razorback sucker.

IV.A.4.a.(1) Middle and Lower Green River.

IV.C. Operate and maintain facilities.

IV.C.1. Ouray National Fish Hatchery.

Green River Action Plan: Main Stem.

IV.A. Augment or restore populations as needed.

IV.A.1. Develop State stocking plan for the four endangered fishes in the Green River.

IV.A.1.c. Implement plan.

VI. Accomplishment of FY 2007 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

In April of 2007, ONFH spawned approximately 60 females and 60 male razorback sucker captive brood stock, on two different dates, resulting in 1,200,000 eggs but only 30,000 larvae were produced. The first spawn (4/18), produced all 30,000 larvae for production purposes for ONFH. The second spawn (4/30) was to produce additional larvae for production purposes, yet all of the eggs died or the larvae died directly after hatching. This was not an unexpected result as the broodstock have been pushed for four years in a row as discussed in the annual report for 2006. This was the first year of a plan to rest the broodstock, and an increase in egg production as well as hatching success should be seen in 2008 and 2009 as a result of the new broodstock rotation began in 2007. ONFH retained all 30,000 larvae and stocked them into ponds for grow out. In addition 50,000 larval razorbacks from the Grand Junction Propagation Facilities were transferred to ONFH for grow-out. These fish are now being reared to meet the Integrated Stocking Plan, of the Recovery Program, requiring 14,895 razorback suckers 300 + mm stocked into the middle and lower Green River yearly for six years.

ONFH had a record year for the second year in a row in 2007, producing and stocking 16,015 razorbacks for the recovery program. These fish averaged 298 mm in total length. Of this 16,015, 5,001 were stocked into the lower Green River, at Green River Utah, 7,749 were stocked into the middle Green River, at Randlett Utah, and 3,265 were stocked into the Stirrup Wetland (1,632 from the 2005 year class, and 1,633 from the 2006 year class). This was the second time in eleven years (1996 – 2007) that ONFH has met or exceeded the stocking quota for razorback suckers.

ONFH is currently maintaining approximately 500 (25 lots) genetically sound Green River razorback sucker brood stock and continues to rear over 25,000 2007 razorback

sucker to meet the Recovery Plan goal for 2008. In addition to these fish produced in 2007, we are holding approximately 3,000 fish produced in 2006 that did not make 300 mm this year, but should be 300 mm by spring of 2008, and will get stocked into the Green River.

The Recovery Program provided funds to purchase and build a new 4,536 liter fish hauling trailer for stocking fish at Green River , Utah. With this new trailer, only three stocking trips were necessary, to meet our obligation to the lower Green River. Thank you to the Recovery Program.

The ONFH staff conducted many tours of the facility for various groups and individuals in 2006. The hatchery also participated in the annual ONWR open house on 12 May. The public were able to see adult razorback brood stock, one year old razorbacks as well as razorback larvae. A total of 460 individuals toured the facilities in 2006.

VII. Recommendations:

Between 2003 and 2006, Ouray NFH had spawned all razorback sucker broodstock on station for four years running in an effort to provide the Recovery Program with larvae for entrainment and recruitment studies. As a result, hatching success has declined in each of the five years including 2007. In an effort to reduce the pressure on these fish to produce gametes every year, no excess larvae were produced in 2007, thus allowing most of the broodstock a rest from the stress of handling, spawning and hormone injections. Approximately 120 fish were used for spawning activities in 2007. In the fall, additional broodstock from Wahweap State Fish Hatchery will be transferred back to ONFH for inclusion into the existing broodstock. These are genetically identical to some of the existing broodstock but will help in reducing the dependence on so few fish already in use at ONFH. These new fish and some of the old broodstock will be used in 2008. With the addition of these fish, the broodstock will be put into a three year rotation (spawn one year, and rest for two). In the future, no more than half of the broodstock should be used in any given year to reduce the pressure on these fish. Better management of these broodstock should result in increased fecundity and hatching success.

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

VIII. Project Status: Project in ongoing and on track

IX. FY 2007 Budget Status

- A. Funds Provided: \$485,951
- B. Funds Expended: \$485,951
- C. Difference: \$0
- D. Percent of the FY 2007 work completed, and projected costs to complete: 100%
- E. Recovery Program funds spent for publication charges: \$0

X. Status of Data Submission: PIT tag data submitted by November 9, 2007.

XI. Signed: Michael Montagne 11/05/07