

UPPER COLORADO RIVER ENDANGERED FISH RECOVERY PROGRAM

FY 2024-25 SCOPE OF WORK

PROJECT: 29a

Project Title

Operation and Maintenance of Ouray National Fish Hatchery - Grand Valley Unit

Bureau of Reclamation Agreement Number:

R20PG00024

Reclamation Agreement Term

Oct. 1, 2019 – Sep. 30, 2024

Note: Recovery Program FY24-25 scopes of work are drafted in May 2023. They often are revised before final Program approval and may subsequently be revised again in response to changing Program needs. Program participants also recognize the need and allow for some flexibility in scopes of work to accommodate new information (especially in nonnative fish management projects) and changing hydrological conditions.

Lead Agency:

U.S. Fish and Wildlife Service
Grand Junction Fish and Wildlife Conservation Office (GJ FWCO)
Ouray National Fish Hatchery – Grand Valley Unit (Ouray NFH-GVU)

Principal Investigator:

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Category:

- Ongoing project
- Ongoing-revised project
- Requested new project
- Unsolicited proposal

Expected Funding Source:

- Annual funds
- Capital funds
- Other [explain]

Relationship to RIPRAP:

From the Recovery Implementation Program Recovery Action Plan (RIPRAP) tables (draft dated February 22, 2023)

IV. Manage genetic integrity and augment or restore populations (stocking endangered fishes).

IV.A. Genetics Management

IV.A.4. Secure and manage the following species in hatcheries (according to the Genetics Management Plan)

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IV.A.4.a. Razorback sucker

IV.A.4.a. (2) Upper Colorado River

IV.A.4.b. Bonytail

IV.B. Conduct annual fish propagation activities

IV.B.2. Implement revised integrated stocking plan (Integrated Stocking Plan Revision Committee 2015)

IV.C. Operate and maintain facilities

IV.C.2. Ouray NFH: Grand Valley Unit

Four program documents are used to plan, implement, and coordinate genetics management and artificial propagation activities for endangered fishes at Ouray NFH-GVU. These are the Genetics Management Guidelines, Genetics Management Plan, Coordinated Hatchery Facility Plan (Facility Plan), and Integrated Stocking Plan.

Study Background/Rationale and Hypotheses:

This project is directly related to Section IV. Manage genetic integrity and augment or restore populations (stocking endangered fishes) of the 2023 RIPRAP document (UCREFRP 2023). One of seven elements in the Recovery Program is native fish stocking. The goal of this element is to produce sufficient captive-reared endangered fishes for conducting laboratory and field research and to develop brood stocks with genetic diversity similar to the wild stock used as founders (Williamson and Wydoski 1994). The need for captive-reared endangered fish and propagation facilities was first codified in Wydoski (1994).

Endangered fishes have been cultured and reared in the upper basin since 1987. Propagation began in the Grand Valley in 1991 with construction of Horsethief Refugia Ponds at Horsethief State Wildlife Area (HSPA). These six refugia ponds were constructed to develop and hold broodstock consisting of the last wild razorback suckers captured from the upper Colorado River. Production of razorback suckers began in 1996 when an intensive-rearing, water-reuse hatchery building (24-Road Hatchery) was built. The 24-Road Hatchery was expanded in 1998. During the 2000s, numerous constructed and leased grow-out ponds were used to rear razorback suckers large enough for stocking into the rivers of the upper basin. However, these ponds were not only geographically widespread, but also very disparate in terms of shape, size, and depth, ease of access, security, productivity, fish health/condition, and rates of return. From 2010-2017, all of these leases on these ponds were allowed to expire. The Recovery Program no longer maintains any leased ponds. Likewise, the six original refugia ponds constructed in 1991 at HSPA are no longer being used. A few “lease free” grow-out ponds (e.g., Beswick’s Pond and CDOT Pond on the Colorado River and Butch Craig Pond on the Gunnison River) are still utilized. The Horsethief Canyon Native Fish Facility (HCNFF) ponds, completed in 2012, replaced the older, less efficient, leased grow-out ponds. This facility located near Fruita, CO consists of 22 (6.2 total acres of) lined ponds has enabled Ouray NFH-GVU to better standardize production, rearing, and management of endangered fish.

To summarize, the Ouray NFH-GVU currently consists of several separate facilities, all of which are managed by hatchery staff to achieve the same goal. These include the 24-Road Hatchery building, the HCNFF ponds, and a few other “lease free” grow-out ponds. Ouray NFH-GVU is, organizationally, a subunit of the Grand Junction Fish and Wildlife Conservation Office (Grand Junction FWCO). Ouray NFH-GVU shares the same overall budget, accounting codes, and chain of supervision as that office.

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The first young razorback suckers produced at what is now known as Ouray NFH-GVU were stocked into the Gunnison River in 1995. Many more razorback suckers have been stocked into the Gunnison and Colorado rivers since then. Ouray NFH-GVU annually maintains a broodstock of 500-1,000 adult razorback sucker, which includes offspring from several distinct year-classes (usually 4-5 at any given time). Fish from younger year-classes continue to be added to the captive broodstock as they mature and older more senescent fish are rotated out of the broodstock and stocked back into the river. Accurate records of lineages are maintained for all fish to ensure that the maximum amount of original genetic material is maintained in the broodstock. Spawning is controlled to ensure that equal numbers of offspring (eventually encompassing several generations) from the original, wild broodstock will be stocked into the river system over the duration of the propagation program. Razorback sucker at Ouray NFH-GVU are held and reared as both broodstock fish and production fish for stocking into the rivers of the upper Colorado River basin.

In May 2013, bonytail were first brought to Ouray NFH-GVU from Colorado Parks and Wildlife's J.W. Mumma Native Aquatic Species Restoration Facility (NASRF). These fish were received by NASRF as larval fish from the U.S. Fish and Wildlife's Southwestern Native Aquatic Resources & Recovery Center (SNARRC) before being transferred to the Ouray NFH facility. The Ouray NFH-GVU now receives bonytail directly from the USFWS-SNARRC facility as larval fish each spring. Bonytail at Ouray NFH-GVU are held and reared as strictly production fish for stocking into the rivers of the upper Colorado River basin. There are no bonytail broodstock located on station at Ouray NFH-GVU.

Study Goals and Objectives:

Goal: To operate a genetically sound captive propagation and production program for high priority endangered fish species for the Upper Colorado River Endangered Fish Recovery Program (UCREFRP) in accordance with the Revised Integrated Stocking Plan for Razorback Sucker and Bonytail (UCREFRP 2015).

Objective: Operate and maintain propagation facilities that are needed to hold, rear, or produce captive-reared endangered fishes for the UCREFRP in accordance with the Annual Propagation Operation Plan.

End Product: Maintenance of endangered fish in refugia to prevent extinction; development and maintenance of a genetically sound razorback sucker broodstock for production of young fish; production of captive-reared razorback sucker and bonytail for stocking to stabilize or enhance wild stocks, as well as priority laboratory and/or field experiments.

Study Area:

Upper Colorado River Basin; Ouray NFH-GVU propagation facilities are located in and around Grand Junction and Fruita, CO. Stocking locations for the UCREFRP currently include the Colorado River from Rifle, CO downstream to Loma, CO and the Gunnison River from Delta, CO downstream to Grand Junction, CO.

Study Methods/Approach:

Conduct all tasks associated with the operation and maintenance of Ouray NFH-GVU facilities in accordance with appropriate genetics management guidelines and plans (Williamson and Wydoski 1994; Czapla 1999), the annual propagation plan, and the latest version of the Revised Integrated Stocking Plan for Razorback Sucker and Bonytail (UCREFRP 2015).

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Task Description, Deliverables and Schedule:

All tasks are performed annually:

1. Develop and maintain captive broodstock for razorback sucker
2. Spawn razorback sucker broodstock and produce family lots for culture at either the HCNFF ponds or the 24-Road Hatchery building
3. Intensively rear razorback sucker and bonytail.
4. Stock 200 mm razorback sucker into grow-out ponds in spring.
5. Maintain water level, water quality, and productivity in HCNFF ponds and other off-site grow-out ponds (Beswick's Pond, CDOT Pond, and Butch Craig Pond).
6. Operate and maintain Ouray NFH-GVU facilities to:
 - a. Hold, produce, and rear razorback sucker as broodstock and production fish
 - b. Hold and rear bonytail as production fish
 - c. Hold and rear humpback chub brought in from the wild in refugia
7. Harvest, PIT tag, and stock target numbers of endangered fish annually for the UCREFRP:
 - a. 6,000 razorback sucker (mean = 350 mm TL) into the Gunnison and Colorado rivers (approximately 3,000 in each river)
 - b. 10,000 bonytail with stocking locations to be determined by hatchery and state managers along with the UCREFRP office as time of stocking approaches. The previous requirement to meet a mean lot size of 250 mm TL was removed by the Biology Committee, due to concerns regarding sex ratios (i.e., stocking only fish \geq 250 mm TL was artificially selecting for predominantly female fish).

Budget Summary:

FY Year	GJFWCO, ONFH-GVU	3% Overhead *
2024	\$588,665.47	\$17,659.96
2025	\$600,438.79	\$18,013.16
2026	\$612,447.55	\$18,373.43
2027	\$624,696.52	\$18,740.90
2028	\$637,190.44	\$19,115.71
Total	\$3,063,438.77	\$91,903.16

*Overhead is paid to the USFWS Headquarters and/or Region 6 offices, not GJFWCO

Reviewers:

Ouray NFH-GVU and Upper Colorado River Endangered Fish Recovery Program staff.

References:

- Czapla, T.E. 1999. Genetics Management Plan. Upper Colorado River Endangered Fish Recovery Program, Denver, Colorado.
- Upper Colorado River Endangered Fish Recovery Program - Integrated Stocking Plan Revision Committee. 2015. Revised Integrated Stocking Plan. Upper Colorado River Endangered Fish Recovery Program, Denver, Colorado.
- Upper Colorado River Endangered Fish Recovery Program – Recovery Implementation Program Recovery Action Plan. Draft dated 22 February 2023. Upper Colorado River Endangered Fish Recovery Program, Denver, Colorado.

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- Williamson, J. H., and R. S. Wydoski. 1994. Genetics management guidelines. Recovery implementation program for endangered fish species in the upper Colorado River basin. U. S. Department of the Interior, Fish and Wildlife Service, Region 6, Denver, Colorado.
- Wydoski, R. S. 1994. Coordinated hatchery facility plan: need for captive-reared endangered fish and propagation facilities. Recovery implementation program for endangered fish species in the upper Colorado River basin. U. S. Department of the Interior, Fish and Wildlife Service, Region 6, Denver, Colorado.

SUMMARY OF PROPOSED COSTS

Name of Servicing Agency:	U.S.F.W.S. Grand Junction Fish and Wildlife Conservation Office
Project Name:	29a O&M of Ouray National Fish Hatchery - Grand Valley Unit

	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		TOTAL						
	10/1/2023		9/30/2024		10/1/2025		10/1/2026		10/1/2027								
	Through	Through	Through	Through	Through	Through	Through	Through	Through								
Enter the BEGINNING dates for each year ----->	9/29/2024		9/30/2025		9/30/2026		9/30/2027		9/29/2028								
Enter the ENDING dates for each year ----->	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		TOTAL						
DIRECT LABOR AND FRINGE BENEFIT COSTS:																	
Direct Labor - Hourly	\$	302,438.23	\$	308,486.99	\$	314,656.73	\$	320,949.87	\$	327,368.87	\$	1,573,900.69					
Fringe Benefits - Hourly	\$	136,611.09	\$	139,343.31	\$	142,130.18	\$	144,972.78	\$	147,872.24	\$	710,929.61					
Subtotal of Direct Labor & Fringe Benefits:	\$	439,049.32	\$	447,830.31	\$	456,786.91	\$	465,922.65	\$	475,241.11	\$	2,284,830.30					
OTHER DIRECT COSTS:																	
Materials and Supplies	\$	149,616.15	\$	152,608.48	\$	155,660.64	\$	158,773.87	\$	161,949.33	\$	778,608.47					
Travel Costs	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-					
Equipment	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-					
Contractors	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-					
Subtotal of Other Direct Costs:	\$	149,616.15	\$	152,608.48	\$	155,660.64	\$	158,773.87	\$	161,949.33	\$	778,608.47					
INDIRECT/OVERHEAD COSTS:																	
Subtotal of Labor and Other Direct Costs:	\$	588,665.47	\$	600,438.79	\$	612,447.55	\$	624,696.52	\$	637,190.44	\$	3,063,438.77					
Total dollars exempt from indirect/overhead base:	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-					
<Enter Description of Indirect/OH Cost #1>	3.00%	\$	17,659.96	3.00%	\$	18,013.16	3.00%	\$	18,373.43	3.00%	\$	18,740.90	3.00%	\$	19,115.71	\$	91,903.16
Total dollars exempt from indirect/overhead base:	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-					
<Enter Description of Indirect/OH Cost #2>	3.00%	\$	-	0.00%	\$	-	0.00%	\$	-	0.00%	\$	-	0.00%	\$	-	\$	-
Subtotal of Indirect/Overhead Costs:	\$	17,659.96	\$	18,013.16	\$	18,373.43	\$	18,740.90	\$	19,115.71	\$	91,903.16					
		YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		TOTAL					
GRAND TOTAL:	\$	606,325.44	\$	618,451.95	\$	630,820.98	\$	643,437.42	\$	656,306.15	\$	3,155,341.94					