

UPPER COLORADO RIVER ENDANGERED FISH RECOVERY PROGRAM

FY 2022-23 SCOPE OF WORK

PROJECT: 29b

Project Title

Operation and Maintenance of Ouray National Fish Hatchery Randlett

Bureau of Reclamation Agreement Number:

Not applicable

Reclamation Agreement Term

Not applicable

Note: Recovery Program FY22-23 scopes of work are drafted in May 2021. 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

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: USFWS Annual Funds

Relationship to RIPRAP:

General Recovery Program Support Action Plan:

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

IV.A. Genetics Management

IV.A.4.a. Razorback sucker

IV.A.4.a.(1) Middle Green

IV.A.4.c. Humpback chub

IV.A.4.c.(5) Desolation/Gray Canyons

IV.B. Conduct annual fish propagation activities

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

IV.C. Operate and maintain facilities

IV.C.1. Ouray NFH: Randlett Unit

Study Background/Rationale and Hypotheses:

This project is directly related to Section 2.4 IV. Conserve Genetic Integrity and Augment or Restore Populations in the Recovery Program Recovery Action Plan (USFWS 2003). 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 augmentation and/or restoration stocking, 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).

Razorback sucker (RZ) have been propagated on the Ouray National Wildlife Refuge since 1987. The first facility was established by the Vernal Colorado River Fish Project on the Ouray National Wildlife Refuge and was limited to 3, 0.1 acre ponds, 3, 0.2 acre ponds and two steel buildings housing 14, 4' incubation and rearing troughs, 6, 4' circular tanks, 15, 3' circular tanks and 10, 8' circular tanks. Because of the success shown with the small facility, a decision was made by the U.S. Fish and Wildlife Service (USFWS) to construct a permanent facility using Stewardship, Drought Relief Funds, Recovery Funds and USFWS funds.

The permanent facility was completed in September of 1998 and consists of a hatchery building housing 30, 4' circular fiberglass tanks; 27, 8' circular fiberglass tanks; 24, 0.2 acre rearing ponds and 12, 0.5 acre brood (refugia)/rearing ponds. Since 1998 hatchery activities have included spawning, incubation, rearing, fish tagging, fish health, pond inventory, and stocking. Bonytail (BT) have been reared at the facility since 2002.

The hatchery currently overwinters RZ and BT in sufficient numbers to fulfill the annual production schedule of 6,000 RZ averaging 350 mm and 10,000 BT averaging 250 mm total length (Integrated Stocking Plan Revision Committee 2015).

Since the fall of 1998 through fall of 2019, the Ouray NFH- Randlett facility has stocked Green River razorback sucker to wetlands along the Green River and to the Green River in northeastern Utah. Broodstock from 25 individual mated pairs are being maintained. Accurate records of lineage for all fish are being maintained so genetic and stocking plans can be addressed. Spawning and stocking is coordinated with the UCREFRP-PDO, the current revised integrated stocking plan, and others within the recovery program.

Utilizing similar stocking locations as RZ and as directed by the Recovery Team, BT from Ouray NFH have been reared to 250 mm and stocked into the Green River and into back waters associated with the Green since 2013. Although bonytail are not spawned on station, swim-up larvae are produced at the Dexter National Fish Hatchery and Technological Center, Dexter, NM and shipped to ONFH-Randlett to be reared and stocked as requested.

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The hatchery also maintains genetic refugia for one population of humpback chubs (*Gila cypha*), from Desolation Canyon of the Green River.

Study Goals, Objectives, End Product(s):

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

Objective: Operate and maintain propagation facilities that are needed to hold, rear, and produce captive-reared endangered fishes for the Upper Colorado River Endangered Species Recovery Program in accordance with the Revised Integrated Stocking Plan. (2015).

End Product: Maintenance of endangered fish in refugia to prevent extinction; development of genetically sound broodstocks for production of young fish for stocking to stabilize or enhance wild stocks; production of captive-reared endangered fish for priority laboratory and field experiments.

Study Area:

Upper Colorado River Basin, Propagation facilities in Uintah Basin, Utah.

Study Methods/Approach:

Conduct all tasks associated with the operation and maintenance of the Ouray National Fish Hatchery in accordance with the Upper Colorado River Endangered Species Recovery Program.

Task Description, Deliverables and Schedule:

Tasks are all done annually:

1. Maintain captive razorback sucker broodstock.
2. Maintain genetic refugia of razorback sucker and humpback chub.
3. Spawn razorback sucker broodstock and produce family lots for stocking in the Green River in Utah.
4. Over winter pond-cultured YOY RZ and BT at the Ouray National Fish Hatchery.
5. Stock fry and overwintered RZ and BT into rearing ponds during spring.
6. Rear and stock 6,000 RZ averaging 350 mm TL to the Green River in Utah.
7. Captive rear *Gila* spp. as a refugia and/or broodstock.
8. Rear and stock 10,000 BT averaging 250 mm TL to the Green River according the 2015 Revised Integrated Stocking Plan.
9. PIT-tag all fish before release, tracking data to each fish lot.
10. Conduct Health Condition Profiles to assess health of stocked fish prior to stocking.

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As an experimental effort, Ouray Randlett has received Colorado pikeminnow larvae from SNARRC that have been identified as genetically inappropriate to stock in the Green or Colorado subbasins. Over the next several years, hatchery staff will use these fish to develop culture techniques specific to the species. All surviving fish will be distributed outside the basin as opportunities arise.

Deliverables and Due Dates by Fiscal Year:

FY-2022

Photos submitted to I & E committee: 28 February 2022

PIT-tag data finalized and submitted to database, HCP reports finalized and submitted to PDO, annual report finalized and submitted to PDO: November 2022

FY-2023

Field report article and photos submitted to I & E committee: 28 February 2023

PIT-tag data finalized and submitted to database, HCP reports finalized and submitted to PDO, annual report finalized and submitted to PDO: November 2023

FY-2024

Photos submitted to I & E committee: 28 February 2024

PIT-tag data finalized and submitted to database, HCP reports finalized and submitted to PDO, annual report finalized and submitted to PDO: November 2024

FY-2025

Photos submitted to I & E committee: 28 February 2025

PIT-tag data finalized and submitted to database, HCP reports finalized and submitted to PDO, annual report finalized and submitted to PDO: November 2025

FY-2026

Photos submitted to I & E committee: 28 February 2026

PIT-tag data finalized and submitted to database, HCP reports finalized and submitted to PDO, annual report finalized and submitted to PDO: November 2026

Budget Summary:

Please see Interagency Agreement Cost Estimating Tool Spreadsheet Budget Summary for more detailed information. Beyond the current budget; the BOR has allocated \$6,000 each year for reconditioning wells at the hatchery but since the BOR drilled 4 new wells, reconditioning of the older wells has not been necessary. In 2017, the BOR did not recondition any wells at Ouray NFH but provided labor and equipment to clean our water supply line from the wet well to the water treatment building. The plans are to have the BOR drill two new wells at the hatchery in 2021.

FY Year	<i>Randlett Hatchery</i>
2022	\$712,800
2023	\$712,800
2024	\$727,056
2025	\$741,595
2026	\$756,427

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FY Year	<i>Randlett Hatchery</i>
Total	\$3,650,678

Reviewers:

Various Service and Recovery Program staff.

References:

Integrated Stocking Plan Revision Committee. 2015. Revised Integrated Stocking Plan for Razorback Sucker and Bonytail. Upper Colorado River Endangered Fish Recovery Program, Denver, Colorado.

USFWS (U. S. Fish and Wildlife Service). 2003. 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.

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.