

UPPER COLORADO RIVER ENDANGERED FISH RECOVERY PROGRAM

FY 2024-25 SCOPE OF WORK

PROJECT: **29d**

Project Title: Operation and Maintenance of the J. W. Mumma Native Aquatic Species Restoration Facility

Bureau of Reclamation Agreement Number: 08-FG-40-2747

Reclamation Agreement Term: N/A – Funded by Colorado Parks and Wildlife

Lead Agency: Colorado Parks and Wildlife

Principal Investigator:

Theodore J. Smith, Hatchery Superintendent Technician V
Colorado Parks and Wildlife

J. W. Mumma Native Aquatic Species Restoration Facility Address

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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:

General:

IV. Manage genetic integrity and augment or restore populations

IV.C. Operate and maintain facilities.

IV.C.4. Mumma

Green River Action Plan: Yampa and Little Snake Rivers:

IV.A. Yampa River in Dinosaur National Monument

IV.A.1. Augment or restore populations as needed.

IV.A.1.a. Develop State stocking plan for Bonytail chub in the Yampa River

IV.A.1.a. (1) Implement stocking plan.

Colorado River: Main stem:

IV.A.5. Develop State stocking plan for Bonytail chub in the Colorado River from Palisade to Loma.

IV.A.5.b. Implement Bonytail State stocking plan.

Study Background/Rationale and Hypotheses:

Background:

Since 2001, the J. W. Mumma Native Aquatic Species Restoration Facility (Mumma) located in Alamosa, Colorado and operated by Colorado Parks and Wildlife (CPW) is offered to the Upper Colorado River Endangered Fish Recovery Program (UCREFRP) as an alternative resource for meeting Colorado River endangered fish production needs.

Mumma currently provides the following physical and human resources for the propagation of bonytail:

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- Six (6) polyethylene (PE) lined-ponds for production and grow-out;
- Four (4) 12 ft. diameter circular tanks for staging;
- One (1) 1,440 sq. ft. Fish Staging Building for PIT tagging, flow-training and disease treatment(s) prior to stocking into designated river reaches in Colorado (**See rationale below**);
- One (1) 1,440 sq. ft. Isolation & Quarantine Building to facilitate the ease and enhanced biosecurity of receiving from other hatchery sources;
- Five (5) permanent and three (3) seasonal staff for production, grow-out and stocking.

Rationale:

Each year Mumma implants approximately 5,750 bonytail with passive integrated transponders (PIT tags) to assist state and federal biologists in the collection of growth, recruitment, and survival and migration data. Of those bonytail, 5,000 are stocked to meet the UCREFRP targets, while the other 750 are stocked into Salt Creek for the state of Colorado. Bonytail also receive chemotherapeutic treatment(s) to defend against potential fish pathogens and are exposed to increased flow in circular tanks prior to stocking to promote and enhance their survival in the resource following release. The construction of a permanent state-of-the-art 1,440 sq. ft. Fish Staging Building helps Mumma facilitate the ease, efficiency and safety of handling bonytail thereby significantly reducing the amount of fish-stress on bonytail prior to release into selected Colorado waters.

Hypotheses:

In 2024-25, Mumma's production goal is to produce 5,000 bonytail at an average size ≥ 250 mm TL to meet guidelines described in the Revised Integrated Stocking Plan for Razorback Sucker and Bonytail Chub (Integrated Stocking Plan Revision Committee 2015). Therefore, it is assumed the number and size of bonytail requested will remain at current levels throughout 2024-25, although acknowledged increasing demand for additional production and smaller sized fish may change this situation.

Study Goals, Objectives, End Product(s):

Goals:

- To provide bonytail in numbers and sizes sufficient to help meet the annual stocking plan of the Upper Colorado River Endangered Fish Recovery Program (UCREFRP) for bonytail in the Upper Basin of the Colorado River drainage (Integrated Stocking Plan Revision Committee 2015).

Objectives:

- To receive early life stage progeny of bonytail from the Southwest Native Aquatic Resources and Recovery Center, NM and/or the Wahweap State Fish Hatchery, UT.
- To grow bonytail out in numbers, sizes, and periods necessary to help meet the annual stocking requirements for these fish species in Colorado Rivers.
- To individually tag bonytail with PIT tags purchased by the USFWS.
- To physically condition bonytail by exposure to increased flow rates in four (4) large 12 ft. diameter tanks prior to stocking to enhance post-stocking survival.
- To transport and stock bonytail from Mumma as necessary and assist in the stocking of fish in designated river reaches in Colorado.
- To conduct Health Condition Profiling (HCP) on 20 bonytail per lot prior to stocking if time and resources allow.
- To continue to maximize bonytail production while ensuring a safe and ethical culture

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environment.

End Product:

- Production of Colorado River endangered fish species required to help meet revised stocking plan objectives for designated rivers/river reaches in Colorado.
- Provide an annual report detailing numbers of fish received, propagated, transported off station and maintained on station, as well as propagation efforts, fish marking and disease treatment actions taken.

Study Area:

The J. W. Mumma Native Aquatic Species Restoration Facility (Mumma) located at 6655 County Road 106 South in Alamosa, Colorado.

Study Methods/Approach:

- Mumma currently has approximately 34,000 bonytail on unit.
- Mumma provides four (4) 0.10 surface acre PE lined-ponds for the production and grow-out of bonytail, two (2) 0.03 surface acre PE lined-ponds for the production and grow-out of bonytail, and four (4) 12' diameter circular tanks for the staging of bonytail prior to stocking into designated river reaches in Colorado.
- In 2018, CPW Mumma completed the construction of a permanent state-of-the-art 1,440 sq. ft. **Isolation & Quarantine Building** to facilitate the ease and enhanced biosecurity of receiving bonytail from other hatchery sources.
- In 2020, Mumma completed the construction of a permanent state-of-the-art 1,440 sq. ft. **Fish Staging Building** for the PIT tagging, disease treatment(s) and flow training of any feasible combination, number and size of the fish species requested by the Recovery Program prior to stocking into designated river reaches in Colorado.
- Depending on the requirements for maintaining separate family lots and the flexibility of marking polyculture fish from multiple lots and different species, production capability of Mumma will vary with annual Recovery Program objectives, expectations and funding.
- Endangered fish received at Mumma as larvae, fry, or fingerling-size fish are reared using industry accepted culture techniques and anticipated normal annual mortality rates to produce the desired number and size of fish product for Recovery Program stocking purposes.
- Transport of fish product to stocking or transfer locations is pre-planned and communicated with UCREFRP.
- Mumma continues to maximize its bonytail production while ensuring a safe and ethical culture environment for its native aquatic species at risk

Task Description, Deliverables and Schedule:

Description:

Task 1: Grow-out, harvest, PIT tag, and stock target numbers of bonytail by July through August of each year (2024-2028): 5,000 bonytail at a mean length ≥ 250 mm TL into the Yampa and Colorado rivers. Stocking locations to be determined by CPW, Mumma and UCREFRP.

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Deliverables and Schedule:

FY 2024 Deliverables/Due Dates: Stock 5,000 bonytail ≥ 250 mm average total length July through August 2024. PIT tag data finalized and entered into STReAMS database; HCP report finalized and submitted to PDO; Annual report finalized and submitted to PDO by November 2024.

See attached Grants Cost Estimating Tool Spreadsheet (Non-federal).

FY 2025 Deliverables/Due Dates: Stock 5,000 bonytail ≥ 250 mm average total length July through August 2025. PIT tag data finalized and entered into STReAMS database; HCP report finalized and submitted to PDO; Annual report finalized and submitted to PDO by November 2025.

See attached Grants Cost Estimating Tool Spreadsheet (Non-federal).

FY 2026 Deliverables/Due Dates: Stock 5,000 bonytail ≥ 250 mm average total length July through August 2026. PIT tag data finalized and submitted to STReAMS database; HCP report finalized and submitted to PDO; Annual report finalized and submitted to PDO by November 2026.

See attached Grants Cost Estimating Tool Spreadsheet (Non-federal).

FY 2027 Deliverables/Due Dates: Stock 5,000 bonytail ≥ 250 mm average total length July through August 2027. PIT tag data finalized and submitted to STReAMS database; HCP report finalized and submitted to PDO; Annual report finalized and submitted to PDO by November 2027.

See attached Grants Cost Estimating Tool Spreadsheet (Non-federal).

FY 2028 Deliverables/Due Dates: Stock 5,000 bonytail ≥ 250 mm average total length July through August 2028. PIT tag data finalized and submitted to STReAMS database; HCP report finalized and submitted to PDO; Annual report finalized and submitted to PDO by November 2028.

See attached Grants Cost Estimating Tool Spreadsheet (Non-federal).

Budget Summary:

FY Year	Colorado Funded
2024	\$99,691.56
2025	\$92,557.57
2026	\$102,474.24
2027	\$97,697.02
2028	\$111,277.64
Total	\$503,698.03

Reviewers:

Colorado Parks and Wildlife – Mumma Hatchery and Recovery Program staff.

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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.

SUMMARY OF PROPOSED COSTS

Name of Servicing Agency:	
Project Name:	

	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		TOTAL
	10/1/2024		10/1/2025		10/2/2026		10/2/2027		10/1/2028		
	Through		Through		Through		Through		Through		
Enter the BEGINNING dates for each year ----->	9/30/2025		10/1/2026		10/1/2027		9/30/2028		9/30/2029		
Enter the ENDING dates for each year ----->											
DIRECT LABOR AND FRINGE BENEFIT COSTS:	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		TOTAL
Direct Labor - Hourly	\$	32,366.49	\$	33,337.48	\$	34,337.61	\$	35,367.74	\$	36,428.77	\$ 171,838.08
Fringe Benefits - Hourly	\$	7,428.11	\$	7,880.48	\$	8,360.40	\$	8,869.55	\$	9,409.71	\$ 41,948.25
Subtotal of Direct Labor & Fringe Benefits:	\$	39,794.60	\$	41,217.96	\$	42,698.01	\$	44,237.29	\$	45,838.47	\$ 213,786.33
OTHER DIRECT COSTS:	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		TOTAL
Materials and Supplies	\$	47,465.27	\$	46,279.63	\$	47,205.23	\$	48,149.32	\$	51,377.93	\$ 240,477.38
Travel Costs	\$	1,707.00	\$	2,244.37	\$	2,311.70	\$	2,381.05	\$	2,452.48	\$ 11,096.61
Equipment	\$	10,724.69	\$	2,815.61	\$	10,259.30	\$	2,929.36	\$	11,608.75	\$ 38,337.71
Contractors	\$	-	\$	-	\$	-	\$	-	\$	-	\$ -
Subtotal of Other Direct Costs:	\$	59,896.96	\$	51,339.61	\$	59,776.23	\$	53,459.73	\$	65,439.16	\$ 289,911.69
INDIRECT/OVERHEAD COSTS:	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		TOTAL
Subtotal of Labor and Other Direct Costs:	\$	99,691.56	\$	92,557.57	\$	102,474.24	\$	97,697.02	\$	111,277.64	\$ 503,698.03
Total dollars exempt from indirect/overhead base:	\$	-	\$	-	\$	-	\$	-	\$	-	\$ -
<Enter Description of Indirect/OH Cost #1>	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	\$ -
Total dollars exempt from indirect/overhead base:	\$	-	\$	-	\$	-	\$	-	\$	-	\$ -
<Enter Description of Indirect/OH Cost #2>	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	\$ -
Subtotal of Indirect/Overhead Costs:	\$	-	\$	-	\$	-	\$	-	\$	-	\$ -
		YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	TOTAL
GRAND TOTAL:	\$	99,691.56	\$	92,557.57	\$	102,474.24	\$	97,697.02	\$	111,277.64	\$ 503,698.03