

RECOVERY PROGRAM
FY 2018-2019 SCOPE OF WORK for:
Operations and Maintenance at Mumma

Recovery Program Project Number: **29d**

Federal Agreement Assistance Number 08-FG-40-2747

Lead Agency: Colorado Parks and Wildlife
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Date Last Modified: 4/24/2017 9:26:00 PM

Category:

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

Expected Funding Source:

- Annual funds
 Capital funds
 Other [*explain*]

I. Title of Proposal:

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

II. 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 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 in the Colorado River from Palisade to Loma.

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

III. Study Background/Rationale and Hypotheses:

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 Recovery Program as an alternative resource for meeting Colorado River endangered fish production needs. The Mumma facility provides up to seven lined ponds, two large 20 ft. diameter circular tanks and a 216 sq. ft. trailer for fish grow-out and fish tagging purposes.

In past years Mumma has been identified to annually produce 5,400 Bonytail (BYT) at 200 mm total length (TL) and to receive Humpback and Roundtail chubs to investigate culture techniques and potential. In 2017 Mumma's production goal is to produce 5,400 Bonytail at an increased size of 250 mm TL. It is assumed therefore the number and size of fish requested will remain at current levels through 2018-19, although acknowledged increasing demand for additional production may change this situation.

IV. Study Goals, Objectives, End Product(s):

Goal: To provide Bonytail in numbers and sizes sufficient to help meet the annual stocking plan of the Upper Colorado River Recovery Program (UCRRP) for BYT in the Upper Basin of the Colorado River drainage (UCRP 2015). To receive and rear Humpback and Roundtail chubs removed from the Yampa River for approximately one year.

Objectives:

To receive early life stage progeny of Bonytail from the Southwest Native Aquatic Resources and Recovery Center, NM and the Wahweap State Fish Hatchery, UT.

To grow-out these fish in numbers, sizes, and time frames necessary to help meet the annual stocking requirements for these fish species in Colorado Rivers.

To individually tag these fish with a Passive Integrated Transponder purchased by the USFWS.

To transport these fish from Mumma as necessary and assist in the stocking of these fish in designated river reaches in Colorado.

To transport, treat, and take in young-of-year *Gila* species from the Yampa River to determine survival and culture techniques.

End Product:

- Production of Colorado River endangered fish species required to help meet revised stocking plan objectives for designated rivers/river reaches in Colorado.
- Maintaining (via culture) Gila spp. brought in from Yampa River.
- An annual report detailing numbers of fish received, propagated, transported off station and maintained on station; propagation, fish marking and disease treatment actions taken.

V. Study Area:

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

VI. Study Methods/Approach:

Mumma currently has approximately 41,000 Bonytail on unit. Mumma has made available four 0.10 surface acre lined-ponds, three 0.03 surface acre lined-ponds, two 20' diameter circular tanks and a 216 sq. ft. trailer for the propagation and PIT tagging of any feasible combination, number and size of the fish species requested by the Recovery Program.

NOTE: During the summer of 2017 CPW Mumma will construct new “*Isolation and Fish-Staging Buildings*” to facilitate the ease and biosecurity of receiving Bonytail from other hatchery sources as well as the handling, conditioning and PIT tagging of Bonytail prior to release. Both facilities are anticipated to be fully functional by fall 2017.

Depending on the requirements for maintaining separate family lots and the flexibility of marking polycultured 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 the unit as larvae, fry, or fingerling-size fish will be grown using accepted culture techniques and expected annual mortality rates to produce a desired number and size of fish product for Program stocking purposes. These products will be transported to stocking or transfer locations as planned. Assistance will be provided in preparing the fish for release and distribution in targeted river reaches if requested and budgeted by the Recovery Program.

VII. Task Description and Schedule:

Task 1: Raise Bonytail to produce 5,400 to 250 mm average total length fish by July through August, 2018.

Task 2: Produce same numbers and sizes by July through August in each year, 2019-2022.

Deliverables, Due Dates, and Budget by Fiscal Year:

Deliverables/Due Dates: 5,400 Bonytail at 250 mm average total length by July through August, 2018.

Budget, 2018:

Mumma total	% of total for BYT	Source of info (CPW use)	Cost to produce BYT
Labor & Benefits			
\$331,519.00	7.9	PPSW, Mumma permanent staff	\$26,190.00
\$119,675.00	7.9	TPSW, Mumma seasonal staff	\$9,454.32
		subtotal	\$35,644.32
Feed			
13,140 lbs.	\$1.17/lb.	Bozeman Razorback Diet	\$15,373.80
Utilities			
\$57,393.00	39	240 gpm for BYT / 610 gpm total	\$22,383.27
Chemicals (Discharge chlorine & Salt)			
\$11,812.00	39	240 gpm for BYT / 610 gpm total	\$4,606.68
Equipment maintenance/repair			
\$8,000.00	41	% surface area pond space for BYT	\$3,280.00
Building/pond maint.			
\$11,000.00		annual average	\$2,500.00
Stocking/vehicle use/maintenance			
\$8,137.00	30	State Fleet - F550 Lease	\$2,441.10
Travel/training/phone			
	variable	Fed. Per Diem - M&IE & Lodging Rates	\$683.83
		TOTAL	\$86,913.00

Deliverables/Due Dates: 5,400 Bonytail at 250 mm average total length by July through August, 2019.

NOTE: For 2019 - 2022, assume overall budget categories to increase by 2.0% annually.

Budget, 2019:

Mumma total	% of total for BYT	Source of info (CPW use)	Cost to produce BYT
Labor & Benefits			
\$331,519.00	7.9	PPSW, Mumma permanent staff	\$26,713.80
\$119,675.00	7.9	TPSW, Mumma seasonal staff	\$9,643.41
		subtotal	\$36,357.21
Feed			
13,140 lbs.	\$1.19/lb.	Bozeman Razorback Diet	\$15,636.60
Utilities			

\$57,393.00	39	240 gpm for BYT / 610 gpm total	\$22,830.93
Chemicals (Discharge chlorine & Salt)			
\$11,812.00	39	240 gpm for BYT / 610 gpm total	\$4,698.81
Equipment maintenance/repair			
\$8,000.00	41	% surface area pond space for BYT	\$3,345.60
Building/pond maint.			
\$11,000.00		annual average	\$2,500.00
Stocking/vehicle use/maintenance			
\$8,137.00	30	State Fleet - F550 Lease	\$2,489.92
Travel/training/phone			
	variable	Fed. Per Diem - M&IE & Lodging Rates	\$791.93
		TOTAL	\$88,651.00

Deliverables/Due Dates: 5,400 Bonytail at 250 mm average total length by July through August, 2020.

Budget, 2020:

Mumma total	% of total for BYT	Source of info (CPW use)	Cost to produce BYT
Labor & Benefits			
\$331,519.00	7.9	PPSW, Mumma permanent staff	\$27,248.08
\$119,675.00	7.9	TPSW, Mumma seasonal staff	\$9,836.28
		subtotal	\$37,084.36
Feed			
13,140 lbs.	\$1.21/lb.	Bozeman Razorback Diet	\$15,899.40
Utilities			
\$57,393.00	39	240 gpm for BYT / 610 gpm total	\$23,287.55
Chemicals (Discharge chlorine & Salt)			
\$11,812.00	39	240 gpm for BYT / 610 gpm total	\$4,792.79
Equipment maintenance/repair			
\$8,000.00	41	% surface area pond space for BYT	\$3,412.51
Building/pond maint.			
\$11,000.00		annual average	\$2,500.00
Stocking/vehicle use/maintenance			
\$8,137.00	30	State Fleet - F550 Lease	\$2,539.72
Travel/training/phone			
	variable	Fed. Per Diem - M&IE & Lodging Rates	\$907.67
		TOTAL	\$90,424.00

Deliverables/Due Dates: 5,400 Bonytail at 250 mm average total length by July through August, 2021.

Budget, 2021:

Mumma total	% of total for BYT	Source of info (CPW use)	Cost to produce BYT
Labor & Benefits			
\$331,519.00	7.9	PPSW, Mumma permanent staff	\$27,793.04
\$119,675.00	7.9	TPSW, Mumma seasonal staff	\$10,033.00
		subtotal	\$37,826.04
Feed			
13,140 lbs.	\$1.23/lb.	Bozeman Razorback Diet	\$16,162.20
Utilities			
\$57,393.00	39	240 gpm for BYT / 610 gpm total	\$23,753.30
Chemicals (Discharge chlorine & Salt)			
\$11,812.00	39	240 gpm for BYT / 610 gpm total	\$4,888.65
Equipment maintenance/repair			
\$8,000.00	41	% surface area pond space for BYT	\$3,480.76
Building/pond maint.			
\$11,000.00		annual average	\$2,500.00
Stocking/vehicle use/maintenance			
\$8,137.00	30	State Fleet - F550 Lease	\$2,590.51
Travel/training/phone			
	variable	Fed. Per Diem - M&IE & Lodging Rates	\$1030.54
		TOTAL	\$92,232.00

Deliverables/Due Dates: 5,400 Bonytail at 250 mm average total length by July through August, 2022.

Budget, 2022:

Mumma total	% of total for BYT	Source of info (CPW use)	Cost to produce BYT
Labor & Benefits			
\$331,519.00	7.9	PPSW, Mumma permanent staff	\$28,348.90
\$119,675.00	7.9	TPSW, Mumma seasonal staff	\$10,233.66
		subtotal	\$38,582.56
Feed			
13,140 lbs.	\$1.25/lb.	Bozeman Razorback Diet	\$16,425.00
Utilities			
\$57,393.00	39	240 gpm for BYT / 610 gpm total	\$24,228.37
Chemicals (Discharge chlorine & Salt)			
\$11,812.00	39	240 gpm for BYT / 610 gpm total	\$4,986.42
Equipment maintenance/repair			

\$8,000.00	41	% surface area pond space for BYT	\$3,550.37
Building/pond maint.		% surface area pond space for BYT	
\$11,000.00		annual average	\$2,500.00
Stocking/vehicle use/maintenance			
\$8,137.00	30	State Fleet - F550 Lease	\$2,642.32
Travel/training/phone	variable	Fed. Per Diem - M&IE & Lodging Rates	\$1,161.96
		TOTAL	\$94,077.00

XIII. Budget Summary:

For 2019 - 2022, assume overall budget to increase by 2.0% annually

FY-2018	\$86,913.00
FY-2019	\$88,651.00
FY-2020	\$90,424.00
FY-2021	\$92,232.00
<u>FY-2022</u>	<u>\$94,077.00</u>
Total:	\$452,297.00

IX. Reviewers:

Colorado Parks and Wildlife and Hatchery and Recovery Program staff.

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X. References:

Upper Colorado River Endangered Fish Recovery Program, Integrated Stocking Plan Revision Committee. 2015. Revised integrated stocking plan for razorback sucker and bonytail. Upper Colorado River Endangered Fish Recovery Program, Denver, Colorado.