

**COLORADO RIVER RECOVERY PROGRAM
FY 2015 ANNUAL PROJECT REPORT**

**RECOVERY PROGRAM
PROJECT NUMBER: 29d**

I. Project Title: J. W. Mumma Native Aquatic Species Restoration Facility
Operation and Maintenance - Colorado

II. Bureau of Reclamation Agreement Number(s): 08-FG-40-2747

Project/Grant Period: Start date (Mo/Day/Yr): 10/01/2007
End date: (Mo/Day/Yr): 09/30/2015
Reporting period end date: 09/30/2015
Is this the final report? Yes _____ No X

III. Principal Investigator(s):

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IV. Abstract:

The J. W. Mumma Native Aquatic Species Restoration Facility (Mumma), located in Alamosa, Colorado, was constructed in the year 2000 to facilitate the conservation of rare aquatic native species through captive propagation, genetic conservation, scientific research and public education and awareness. Currently there are 12 fish species and one amphibian species housed on the unit. Many are State Threatened, Endangered or Species at Risk and one, the Bonytail chub (BYT), is federally listed as Endangered and given full protection under the Endangered Species Act since 1980. Mumma currently produces BYT in numbers and sizes sufficient to meet the annual stocking plan of the Upper Colorado River Recovery Program (UCRRP) for BYT in the Upper Basin of the Colorado River drainage. The project is scheduled to end in 2017.

V. Study Schedule:

Initial Year: 2002
Final Year: 2017

VI. Relationship to RIPRAP:

General Recovery Program Support Action Plan

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.

VII. Accomplishment of FY 2015 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

- To date, a total of **4,968 BYT** were successfully stocked by Mumma FY 2015.
- Another **525 BYT** are to be stocked into washes where BYT have been observed in the Grand Junction, Colorado area on November 18, 2015.
- Thus a grand total of **5,493 BYT** were successfully stocked by Mumma FY 2015.
- **On August 11, 2015** Mumma stocked **2,713 BYT** into the Green River at Echo Park. The fish averaged 320.6245 mm Total Length (TL) with a maximum of 447 mm TL and a minimum of 234 mm TL.). Discharge was 2,030 cubic feet per second (cfs), measured at the Jensen, UT gauge.
- The receiving water temperature for the Green River fish stocking was 22.7 degrees Celsius with a pH of 8.8. Hatchery rearing temperature prior to stocking was 21.6 degrees Celsius and hatchery pH prior to stocking was 8.3.
- **On September 10, 2015** Mumma stocked **2,255 BYT** into the Colorado River #2 at Debeque Canyon. The fish averaged 320.6245 mm TL with a maximum of 470 mm TL and a minimum of 235 mm TL.). Discharge was 2,670 cfs measured at the Cameo, CO gauge.
- The receiving water temperature for the Colorado River #2 fish stocking was 21.5 degrees Celsius with a pH of 8.4. Hatchery rearing temperature prior to stocking was 18.2 degrees Celsius and hatchery pH prior to stocking was 7.9.
- All fish are flow trained in two 20 ft. diameter circular tanks for 1 to 3 weeks prior to stocking.
- Twenty seven (27) BYT were tested for VHSV, IHNV and other pathogens of concern in 2015 in compliance with Colorado Parks and Wildlife’s regulatory annual fish health inspection. No viruses or pathogens of concern were detected.
- All BYT receive anti-Platyhelminthes treatments prior to stocking.
- Mumma currently provides 4 impoundments (0.10 surface acre lined-ponds) to the recovery of this species.
- **Fish stocked** from Mumma as of November 6, 2015

<u>Species</u>	<u>YC</u>	<u>Fish No.</u>	<u>Fish/lb.</u>	<u>Date Stocked</u>	<u>Water Destination</u>
BYT	2012	2,713	1.85/lb.	08/11/2015	20519 Green River
BYT	Mix	<u>2,255</u>	1.50/lb.	09/10/2015	19617 Colorado River #2
4,968 Total BYT stocked for calendar year 2015					

- **Fish remaining** on unit as of October 6, 2015

<u>Species</u>	<u>Year Class</u>	<u>Fish No.</u>	<u>Impoundment</u>
BYT	Mixed: 2008, 10, 12	4,250	POND 3
BYT	2010	4,000	POND 1
BYT	2014	12,330	POND 2
BYT	2014	<u>12,330</u>	POND 4

32,910 Total BYT currently at Mumma

VIII. Additional noteworthy observations: When BYT were collected from the ponds for PIT tagging, approximately 300 were smaller than 250 mm TL at approximately 5.5% of total number handled. These fish were returned to a grow-out pond for additional growth. There were very few deformed fish (< 12) culled from the population in 2015.

IX. Recommendations:

- To continue to refine culture techniques and dietary requirements of BYT at Mumma to meet Colorado Parks and Wildlife’s obligation to produce Federally Endangered bonytail in numbers and sizes sufficient to meet the annual stocking plan of the Upper Colorado River Recovery Program for BYT in the Upper Basin of the Colorado River Drainage.
- To achieve Mumma’s objective as stated in the 2015 Revised Integrated Stocking Plan of the Upper Colorado River Endangered Fish Recovery Program by delivering 5,400 BYT at a minimum of 250 mm average TL by summer 2016.
- To continue with anti-Platyhelminthes treatments of BYT prior to all spring and summer stockings and to inspect for VHSV, IHNV and other pathogens of concern at Mumma annually.
- To continue with PIT tagging BYT at Mumma prior to all stockings.
- To have fish available to stock at warmer water temperatures with the knowledge that adequate temperature units are available to allow BYT to recover from handling and hauling stress prior to the onset of coldwater, winter conditions.
- To continue to culture larger BYT (minimum of 250 mm average TL) FY 2016 to promote and enhance survival of BYT in the resource.
- To continue to provide in-tank stream flow training and conditioning of BYT at Mumma to promote and enhance survival of BYT in the resource.
- To attempt to closely match receiving water temperature and pH with hatchery rearing water temperature and pH at time of stocking to promote and enhance survival of BYT in the resource.

X. Project Status: On track and ongoing.

XI. FY 2015 Budget Status:

- A. Funds Provided: \$81,900
- B. Funds Expended: \$81,900
- C. Difference: \$0.00
- D. Percent of the FY 2015 work completed, and projected costs to complete: 100%
- E. Recovery Program funds spent for publication charges: \$0.00

XII. Status of Data Submission (Where applicable): Not applicable

XIII. Signed: Ted Smith November 6, 2015
Principal Investigator Date