

**COLORADO RIVER RECOVERY PROGRAM
FY 2014 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): 09/30/2014
Reporting period end date: 09/30/2014
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. Currently there are 12 fish species and one amphibian specie 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.

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 2014 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

- A grand total of **5,441 BYT** were successfully stocked by Mumma FY 2014.
- A new hatchery record in fish length was set with the PIT tagging of a 495 millimeters total length (mm TL) Bonytail chub [year class 2010 (YC10')] on July 15, 2014. Tag No. 3DD.003BA1773B released into the Yampa River #1 at Deerlodge Park.
- **On July 31, 2014** Mumma stocked 3,034 BYT into the Yampa River #1 at Deerlodge Park. The fish averaged 327.8 mm TL. Discharge was 516 cubic feet per second (cfs), measured at the Deerlodge gauge.
- **On August 21, 2014** Mumma stocked 2,407 BYT into the Colorado River #2 at Debeque Canyon. The fish averaged 314.5 mm TL. Discharge was 3,030 cfs at Cameo gauge.
- The receiving water temperature for the Yampa River fish plant was 22.5 degrees Celsius with a pH of 7.9. The receiving water temperature for the Colorado River fish plant was 19.6 degrees Celsius with a pH of 8.1.
- Hatchery rearing water temperature prior to stocking was between 16.6 and 17.6 degrees Celsius. Hatchery pH prior to stocking was between 7.8 and 8.3.
- All fish were flow trained in two 20 feet diameter circular tanks for approximately 3 weeks prior to stocking.
- Sixty (60) BYT were tested for VHSV and other pathogens of concern in 2014 in compliance with CPW's regulatory annual fish health inspection. No viruses were detected.
- All BYT receive anti-Platyhelminthes treatments prior to stocking.
- **On October 29, 2014** Mumma plans to import 24,660 BYT, averaging 65.58 mm TL and 2.40 grams per fish from the Wahweap State Fish Hatchery in Utah. These fish will stock into 3 of Mumma's smaller 0.03 surface acre lined-impoundments.
- Mumma currently has 6 impoundments (three 0.10 surface acre lined-ponds and three 0.03 surface acre lined-ponds) available to the recovery of this specie.

- **Fish stocked** from Mumma as of August 21, 2014

<u>Species</u>	<u>YC</u>	<u>Fish No.</u>	<u>Fish/lb.</u>	<u>Date Stocked</u>	<u>Destination</u>
BYT	2010	3,034	1.865/lb.	07/31/2014	Yampa River #1
BYT	2010	<u>2,407</u>	3.027/lb.	08/21/2014	Colorado River #2

5,441 Total BYT stocked for calendar year 2014

- **Fish remaining** on unit as of October 21, 2014

<u>Species</u>	<u>Year Class</u>	<u>Fish No.</u>	<u>Impoundment</u>
BYT	2008	120	POND 3
BYT	2010	4,093	POND 1
BYT	2010	1,609	POND 3
BYT	2012	3,427	POND 2
BYT	2012	3,816	POND 3
BYT	2012	<u>2,965</u>	POND B3

16,030 Total BYT currently on unit at Mumma

VIII. Additional noteworthy observations: When BYT were collected from the ponds for PIT tagging, approximately 500 were smaller than 250mm at approximately 8.4% of total number handled. These fish were returned to the grow-out ponds to grow for another season.

IX. Recommendations:

1. 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 chub 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.
2. To achieve Mumma's objective as stated in the 2014 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 2015.
3. To continue with anti-Platyhelminthes treatments of BYT prior to all spring and summer stockings and to inspect for LMBv and other pathogens of concern at Mumma annually.
4. To continue with PIT-tagging BYT at Mumma prior to all stockings.
5. 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.
6. To continue to culture larger BYT (minimum of 250 mm average TL) FY 2015 to promote and enhance survival of BYT in the resource.
7. 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.
8. 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.

For projects where more than one agency/entity receives funds from the Bureau of Reclamation, append one PPR from each agency/entity. Otherwise, delete.

ANNUAL PERFORMANCE PROGRESS REPORT (PPR)

BUREAU OF RECLAMATION AGREEMENT NUMBER: _____

UPPER COLORADO RIVER RECOVERY PROGRAM PROJECT NUMBER: _____

Project Title:

Principal Investigator: *[Name, mail and e-mail addresses, phone number]*

Project/Grant Period: Start date (Mo/Day/Yr):
 End date: (Mo/Day/Yr):
 Reporting period end date (Mo/Day/Yr):
 Is this the final report? Yes _____ No _____

Performance: *Briefly describe the tasks accomplished and any tasks not met. One paragraph is sufficient.*