

I. Project Title: Wahweap Operation and Maintenance

II. Bureau of Reclamation Agreement Number: R14AP00007

Project/Grant Period: Start date (Mo/Day/Yr): 10/01/2015
End date: (Mo/Day/Yr): 9/30/2020
Reporting period end date: 9/30/2018
Is this the final report? Yes _____ No X

III. Principal Investigator(s):

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IV. Abstract:

Wahweap State Fish Hatchery, located in Big Water, Utah, rears bonytail (*Gila elegans*) for stocking in the Upper Colorado River Basin for the Upper Colorado River Endangered Fish Recovery Program. Wahweap also maintains a refuge population of razorback sucker brood stock for the Recovery Program.

V. Study Schedule: On going

VI. Relationship to RIPRAP:

General Recovery Program Support Action Plan

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| IV | Manage genetic integrity and augment or restore populations |
| IV.A. | Genetic management |
| IV.A.4. | Secure and manage genetic stocks in refugia |
| IV.A.4.a | Razorback sucker |
| IV.A.4 | Develop basin wide bonytail restoration plan and implement as approved |
| IV.C. | Operate and maintain facilities |

VII. Accomplishment of FY 2017 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

- Wahweap Hatchery Superintendent assisted the Recovery Program in staffing the information booth at the Colorado River Water Users Association Annual Conference and the Utah Water Users Conference. Wahweap Staff provided live bonytail for the display, took care of them for the duration of the meetings and assisted in outreach.

- Wahweap had a great year in bonytail reproduction and is currently holding 65,968 YOY 2017 for stocking and transfer during the fall of 2018. Some will be transferred to Mumma for grow-out and the rest will be stocking into Upper Lake Powell.

Wahweap PIT-tagged 10,364 fish in October 2017 and stocked them in April 2018. Fish came out of the winter months with a fat content of 3.2, a C-factor of 2,907 with a 48% male to 52% female sex ratio, and no deformities were observed in the sub sample. Fish averaged 262.2 mm in length and 156.7 g.

Colorado Fish Stocked/Transferred in FY-2018

| Stock Date | Contact Name | Lot # | River Name | Stocking/Transfer Location | # Stocked | Tagged |
|-------------------------------------|--------------|----------------------|------------|----------------------------|-----------|--------|
| 4/2/2018 | Zane Olsen | 110502CBBT-Dexter-01 | Green | Green River State Park | 3,446 | Yes |
| 4/3/2018 | Zane Olsen | 110502CBBT-Dexter-01 | Dolores | Rio Mesa | 3,427 | Yes |
| 4/4/2018 | Zane Olsen | 110502CBBT-Dexter-01 | Green | Mineral Bottom | 3,460 | Yes |
| Total Number of Adult Fish Stocked: | | | | | 10,333 | |

- All fish stocked, were treated for Asian tapeworm (*Bothriocephalus acheilognathi*) with Praziquantel @ 2.5 mg/L for a 24-hour static bath and no worms were observed during any treatments.
- Wahweap used 60 bonytail (YOY 2011) for the yearly Fish Health Inspection. Fish overall were in great shape. During this year’s inspection we observed no Asian tapeworm in any fish on station. Infection across the hatchery is very low or unseen and Wahweap is working closely with Wade Cavender (State of Utah Fish Pathologist) to eradicate this parasite from hatchery ponds. Until the eradication, Wahweap has been instructed to treat each individual pond as a different rearing unit. Wahweap will treat prophylactically, with Praziquantel all fish being stocked or transferred. Fish were given the Fish Health Approval number DWR18-050, DWR18-032, and DWR18-079.
- Wahweap Hatchery has conducted Health Condition Profiles (HCP) on all fish stocked or transferred in FY 2018 and they have been submitted to Wade Cavender (State of Utah Fish Pathologist).
- All PIT-tagged data for FY 2018 has been submitted.
- Wahweap was able to provide school tours to over 200 students this year from Arizona, Utah, and the Navajo Nation.
- Wahweap Hatchery did not receive any bonytail from the Dexter National Fish Hatchery during the spring of 2018.

- Wahweap pulled and repaired the Main Well during the winter/spring 2018.
- Wahweap staff worked throughout the year on maintenance of the facility and equipment.

Colorado River fish remaining on station in the fall of 2018:

| Species | Year class | Number | Average Size | # of Ponds |
|----------------------|------------|----------------|--------------|------------|
| Bonytail | 2010 | 4,358 | 250.58 | 1 |
| Bonytail | 2011 | 12,423 | 245.1 | 3 |
| Bonytail (ww) | 2014 | 14,103 | 223.48 | 3 |
| Bonytail (WW/Deter) | 2016 | 29,722 | 172.78 | 5 |
| Bonytail (ww) | 2017 | 35,752 | 70.66 | 1 |
| Bonytail (ww) | 2017 | 8,388 | 88.08 | 1 |
| Bonytail (ww) | 2017 | 21,828 | 101.68 | 1 |
| Razorback | Brood | 407 | 438.87 | 1 |
| Total Number: | | 126,981 | | |

VIII. Recommendations:

Continue rearing bonytail at Wahweap to meet the stocking needs of the Recovery Program. Maintain razorback back-up brood stock. Supply either species as requested by the Recovery Program. PIT-tag bonytail in the fall and stock in the spring. Work on the eradication of Asian tapeworm from the Wahweap Hatchery rearing facility. Evaluate some needed upgrades in facilities and fish culture equipment. Continue conducting HCP on all fish prior to stocking or transfer and we recommend that the Recovery Program coordinate annual collection and reporting of this data by all Program hatcheries.

IX. Project Status:

Ongoing fish culture, propagation, and development will continue at the Wahweap State Fish Hatchery.

X. FY 2017 Budget Status

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|--|-----------|
| A. Funds Provided: | \$238,094 |
| B. Funds Expended: | \$238,094 |
| C. Difference: | \$ 0.00 |
| D. Percent of the FY 2018 work completed: | 100% |
| E. Recovery Program funds spent for publication charges: | \$ 0.00 |

XI. Status of Data Submission (Where applicable): PIT-tag data will be submitted to database

manager after each stocking.

XII. Signed: Zane Olsen, Principal Investigator Date 9/18/2018