

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: 9/30/2017
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 for stocking in the Upper Colorado River Basin for the Upper Colorado River Recovery Program. Wahweap also maintains a refuge population of razorback sucker brood stock for the Upper Colorado River Recovery Program.

V. Study Schedule: On going

VI. Relationship to RIPRAP:

General Recovery Program Support Action Plan

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 and took care of them for the duration of the meetings and assisted in outreach.

- Wahweap had a great year in bonytail reproduction and was able to stock 33,454 fish into Lake Powell and transfer 20,387 fish to John W. Mumma Native Aquatic Species Restoration Facility. Fish were in great shape averaging 80.05 mm and 4.01g. Fish had an average fat content of 2.5, a C-factor of 2.051, and no deformities were observed in our sub sample.

Wahweap also PIT-tagged 11,046 fish in October 2016 and then stocked them in April 2017. Fish were also in great shape coming out of the winter months with a fat content of 3.9, a C-factor of 2,958 with a 45% male to 55% female sex ratio, and no deformities were observed in the sub sample. Fish averaged 254.7 mm in length and 136.2 g.

Wahweap also stocked the oldest lot (Lot # SKRZ-Brood) of razorback suckers. A total of 182 individuals we stocked in Farley Canyon in Upper Lake Powell. No HCP was conducted due to low numbers. We used 60 bonytail for surrogate to obtain a Fish Health Permit. They were assigned Health Approval # DWR16-027.

Colorado Fish Stocked/Transferred in FY-2017

Stock Date	Contact Name	Lot #	River Name	Stocking/Transfer Location	# Stocked	Tagged
10/20/2016	Zane Olsen	160502CBBTWW01	N/A	Lake Powell, Lone Rock Beach	16,921	NO
10/25/2016	Zane Olsen	160502CBBTWW01	N/A	Lake Powell, Hite Marina	16,533	NO
11/2/2016	Zane Olsen	160502CBBTWW01	N/A	Mumma	20,387	NO
Total Number Stocked:					53,841	

4/2/2017	Zane Olsen	110502CBBT-Dexter-01	Green	Leota Seven	2,187	Yes
4/2/2017	Zane Olsen	110502CBBT-Dexter-01	Green	Stirrup	4,370	Yes
4/5/2017	Zane Olsen	110502CBBT-Dexter-01	Green	Escalante Ranch	4,489	Yes
4/19/2017	Zane Olsen	SKRZ-Brood	N/A	Lake Powell, Farley Canyon	182	Yes
Total Number of Adult Fish Stocked:					11,228	

- All fish transferred or stocked, were treated for Asian Tape worm 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 (*Bothriocephalus acheilognathi*). Infection across the hatchery is very low 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 DWR17-053.

- Wahweap Hatchery has conducted Health Condition Profiles (HCP) on all fish stocked or transferred in FY 2017.
- All PIT-tagged data for FY 2017 has been submitted.
- Wahweap was able to provide school tours to over 500 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 2017.
- Wahweap pulled and repaired the Backup Well during the winter of 2016/2017.
- Wahweap staff worked throughout the year on maintenance of the facility and equipment.

Colorado River fish remaining on station in the fall of 2017:

Species	Year class	Number	Average Size	# of Ponds
Bonytail	2010	4,579	243.1	1
Bonytail	2011	21,156	245.1	6
Bonytail (ww)	2014	11,082	205.5	5
Bonytail (WW/Deter)	2016	27,477	175	4
Bonytail (ww)	2017	36185	70.66	1
Razorback	Brood	413	421.7	1
Total Number:		100,892		

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

A. Funds Provided:	\$233,426
B. Funds Expended:	\$233,426
C. Difference:	\$ 0.00
D. Percent of the FY 2017 work completed:	100%
E. Recovery Program funds spent for publication charges:	\$ 0.00

XI. Status of Data Submission: PIT-tag data was submitted to database manager after each stocking.

XII. Signed: Zane Olsen, Principal Investigator Date 10/23/2017