

Work Task B6: Lake Mead Fish Hatchery

FY14 Estimate	FY14 Actual Obligations	Cumulative Expenditures Through FY14	FY15 Approved Estimate	FY16 Proposed Estimate	FY17 Proposed Estimate	FY18 Proposed Estimate
\$125,000	\$135,579.70	\$579,513.29	\$255,000	\$240,000	\$200,000	\$200,000

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Start Date: FY05

Expected Duration: FY55

Long-Term Goal: Fish augmentation

Conservation Measures: BONY3, BONY4, RASU3, RASU4, RASU5, RASU7, RASU8, and FLSU2

Location: Reach 1, Lake Mead, Boulder City, Nevada

Purpose: To support Lake Mead razorback sucker studies and contribute bonytail and razorback sucker to the LCR MSCP Fish Augmentation Program

Connections with Other Work Tasks (Past and Future): Activities at the Lake Mead Fish Hatchery contribute to other LCR MSCP Work Tasks, including B11, C13, C39, C41, C49, C53, C57, C61, and D8.

Project Description: The Lake Mead Fish Hatchery is managed and operated by the NDOW. Reclamation and the NDOW are cooperatively rearing both bonytail and razorback sucker at this facility in support of the LCR MSCP Fish Augmentation Program. Bonytail for this work task are produced and supplied by the SNARRC, and razorback sucker are wild caught individuals from Lakes Mead and Mohave. Funds from this work task are provided for the salaries, equipment, feed, and chemicals necessary to rear these fish. Fish produced through this work task will be used to support research and augmentation in Reaches 1–5.

Previous Activities: In 2005, Reclamation assisted with the installation of a single 500-gallon fiberglass tank for the purpose of rearing razorback sucker collected from Lake Mead. Installation took place in the new native fish room and included plumbing for air and water delivery lines, standpipe and standpipe screen construction, and placement of a central drain line. The native fish room was completed in 2006, with the addition of twenty-five 10-gallon aquaria, four 240-gallon fiberglass troughs, and six 700-gallon fiberglass tanks. Since 2007, larval and fingerling razorback sucker, from Lakes Mead and Mohave

respectively, have been brought into the Lake Mead Fish Hatchery and reared in these tanks. Subsequently, these fish have been transferred to ponds at the Overton WMA for additional grow-out, used for research and monitoring projects in Lake Mead, and stocked into Lake Mohave. Additional rearing space was made available at the hatchery in 2012 in continued support of the LCR MSCP Fish Augmentation Program. This additional rearing capacity will be necessary in future years when the number of fish stocked annually into Reaches 3–5 is expected to increase. This additional space is also currently supporting flannelmouth sucker rearing for research projects occurring in Reach 3.

FY14 Accomplishments: During FY14, the Lake Mead Fish Hatchery continued rearing the approximately 3,400 razorback sucker and 50 flannelmouth sucker that were on station from previous years. The hatchery's razorback sucker stocks were also augmented in FY14 with an additional 100 razorback sucker larvae from Lake Mead and approximately 4,500 razorback sucker fingerlings from Lake Mohave. The Lake Mead Fish Hatchery also received approximately 56,000 fingerling bonytail during FY14, marking the first time that this species has been reared at the facility. Previously, only adult bonytail had been held on station for short durations. The majority of bonytail received in FY14 were donated by the Wahweap State Fish Hatchery (Utah Division of Wildlife), and while it is more fish than originally planned for, staff from the LCR MSCP and NDOW are taking advantage of having these fish for future augmentation and research needs. The additional funding expended in FY14 was in support of rearing this increased number of fish.

A number of small stockings also occurred during FY14 in support of ongoing LCR MSCP work task activities. These stockings have been organized by river reach and include their associated work tasks where applicable. A total of 28 razorback sucker were stocked into Reach 1 during FY14 in support of ongoing research. Ten of these fish were sonic-tagged adult razorback sucker, and 18 were sonic-tagged juvenile razorback sucker. These fish were released in order to investigate habitat use and seasonal movements of adult and immature razorback sucker in the Grand Canyon (C13) and Lake Mead (C57), respectively. The NDOW also stocked 250 Lake Mead razorback sucker into Honeybee Pond at the Overton WMA for additional grow-out. A total of 97 razorback sucker were harvested from Center Pond at the Overton WMA and stocked into Reach 2 during FY14. These fish were from the 2008–09 year class and had an average TL of 500 mm (range 431–586 mm). The Lake Mead Fish Hatchery also provided 749 bonytail that were stocked into Davis Cove in support of research continuing under Work Task C41. A total of 514 bonytail were stocked into Reach 3 during FY14. A portion of these bonytail were sonic tagged for the purpose of investigating post-stocking distribution and survival (C39). The Lake Mead Fish Hatchery also released 30 sonic-tagged, juvenile flannelmouth sucker into Reach 3 in support of other ongoing research (C53). The final stockings of FY14 occurred in Reach 4. A total of 60 sonic-tagged fish (30 bonytail and 30 razorback sucker) were released, with 15 fish of each species

being stocked above and below Headgate Dam. Subsequent monitoring of these fish was used to evaluate post-stocking distribution, habitat use, and survival (C49).

As described above, only minimal stockings of Lake Mohave razorback sucker occurred during FY14. A large portion of these fish were being reared to 500 mm and would require additional time for grow-out. These fish will be stocked into Lake Mohave beginning in FY15, and additional fish brought to the Lake Mead Fish Hatchery in subsequent years are anticipated to be used for Reach 3–5 stockings. Currently, over 47,000 native fish from multiple year classes remain on station. These fish will be stocked or made available for research purposes as needs are identified.

FY15 Activities: The NDOW will continue to operate the Lake Mead Fish Hatchery for bonytail, flannelmouth sucker, and razorback sucker production. Operations will include grow-out and stocking of native fish from the 2010–13 year classes, capture and rearing of up to 500 wild-caught razorback sucker larvae from Lake Mead, rearing of 5,000 additional fingerling Lake Mohave razorback sucker, and rearing of up to 100 juvenile flannelmouth sucker from Lake Mead and Reach 3 for research.

The NDOW will also continue to make improvements to the Lake Mead Fish Hatchery, including an electrical upgrade, which will enhance the ability to flow condition native fish prior to stocking. It is anticipated that the hatchery will begin pre-stocking and flow conditioning native fish. They will stock approximately 2,000 Lake Mohave razorback sucker toward annual fish augmentation goals in FY15. This flow conditioning work was initiated under Work Task C26 (closed), and these experimental alternative stocking trials will be conducted under Work Task C61.

Proposed FY16 Activities: Rearing and stocking of native fish from previous year classes will continue. Lake Mead Fish Hatchery stocks will be augmented with 2016 year class razorback sucker larvae from Lake Mead, and the NDOW will receive and rear up to 6,000 additional fingerling bonytail and razorback sucker from the SNARRC and Lake Mohave, respectively. Adult and subadult Lake Mead razorback sucker will also be delivered to the Overton WMA and additional off-channel grow-out sites as necessary. Bonytail stockings from Lake Mead Fish Hatchery are expected to begin in FY16.

Pertinent Reports: Annual administrative reports are available upon request.