

Work Task B1: Lake Mohave Razorback Sucker Larvae Collections

FY14 Estimate	FY14 Actual Obligations	Cumulative Expenditures Through FY14	FY15 Approved Estimate	FY16 Proposed Estimate	FY17 Proposed Estimate	FY18 Proposed Estimate
\$200,000	\$193,518.74	\$1,952,354.80	\$200,000	\$200,000	\$215,000	\$215,000

Contact: Patricia Delrose, (702) 293-8202, pdelrose@usbr.gov

Start Date: FY04

Expected Duration: FY55

Long-Term Goal: Fish augmentation

Conservation Measures: RASU3, RASU5, and RASU8

Location: Reach 2, Lake Mohave, Arizona/Nevada

Purpose: To develop the razorback sucker broodstock in Lake Mohave, maintain the broodstock, and harvest offspring for rearing as needed for the LCR MSCP Fish Augmentation Program

Connections with Other Work Tasks (Past and Future): Work Tasks B2, B3, B4, B5, B6, and B7 are related to this work task, as the razorback sucker to be reared under these work tasks originate from Lake Mohave. Other research related to larvae collection, handling, and genetics include Work Tasks C30 (closed), C31, and C40.

Project Description: The razorback sucker broodstock in Lake Mohave provides a level of genetic diversity found nowhere else in the world. Under this project, wild-born razorback sucker larvae from Lake Mohave are captured and delivered to the Willow Beach NFH for initial rearing. The work involved under this work task includes surveys to locate spawning groups, nighttime larvae collection, and maintaining the boat fleet and field station at Cottonwood Cove. Larvae are captured one at a time, making this a labor-intensive program. Salaries, travel, and fuel represent the majority of the expenditures for this work task.

Work normally commences in January and extends into late April or early May. Equipment is delivered to and staged at Cottonwood Cove, where a field station is established. The lake's shoreline is surveyed, and locations of spawning aggregations of razorback sucker are recorded. Crews of two to four staff meet

at the field stations at sunset, gather batteries, lights, dip nets, and buckets, and set out by boat to the spawning areas. Razorback sucker larvae attracted to submerged lights suspended from the boats are captured by net and counted. The larvae are transferred to the Willow Beach NFH, by either boat or vehicle, where they are logged in by date received, number collected, and location. This work task is repeated three to four nights per week through mid-to-late April.

Previous Activities: This work task is part of a program started by the Lake Mohave Native Fish Work Group in 1989 to rebuild the adult stock of razorback sucker in Lake Mohave so that these fish could be used as brood fish for razorback sucker conservation and recovery. A portion of the larvae collected is used to sustain the broodstock, and the remaining larvae are reared for release into Reaches 3–5 to accomplish the augmentation goals of the program.

FY14 Accomplishments: Twenty eight thousand nine hundred and thirty-seven (28,937) wild larvae were collected from four areas. All larvae were delivered to the Willow Beach NFH for further grow-out. The Willow Beach NFH had a target goal of 25,000 larvae, so once they became fingerling size, the remaining 3,937 larvae were taken to the Lake Mead Fish Hatchery for further rearing. The contribution from each zone of Lake Mohave by month of capture is presented in table 1.

Table 1.—Larval Razorback Sucker Collected from Lake Mohave, 2014

Location	January	February	March	April	May	Total
Nine Mile	33	3,419	5,704	649	0	9,805
Tequila	0	5,694	3,600	199	0	9,493
Yuma	700	5,465	1,572	1,051	0	8,788
Above Owl Point	0	0	237	539	75	851
Total	733	14,578	11,113	2,438	75	28,937

Helicopter surveys along the shoreline were not conducted due the suspension of the Reclamation air program. The value of helicopter surveys was assessed, and alternate means of identifying spawning aggregations continue to be explored.

FY15 Activities: A target of 17,000 larvae was established for FY15 in coordination with the Lake Mohave Native Fish Work Group. This change in target number is part of a strategy to produce larger fish for Lake Mohave. These larvae will be delivered to the Willow Beach NFH for rearing, where 11,000 larvae will be kept on station for the stocking program, and the remaining 6,000 larvae will be taken to the Lake Mead Fish Hatchery.

The lower larval target number for FY15 is not expected to result in a reduced cost for this work task; the overall collection effort is expected to be similar. Ongoing research under Work Task C31 has helped to define larvae collection protocols. In order to represent high genetic diversity of razorback sucker larvae used for rearing, collection efforts will continue to be distributed both temporally across the spawning season and spatially among the known spawning areas on Lake Mohave.

Proposed FY16 Activities: Razorback sucker larvae collections will continue. The target level for FY16 is expected to be 15,000–20,000 larvae.

Pertinent Reports: A status report titled *Five-Year Summary of Razorback Sucker (*Xyrauchen texanus*) Larval Collections on Lake Mohave: 2010–2014* will be posted on the LCR MSCP Web site upon completion.