

Work Task B1: Lake Mohave Razorback Sucker Larvae Collections

FY07 Estimates	FY07 Actual	Cumulative Accomplishment Through FY07	FY08 Approved Estimate	FY09 Proposed Estimate	FY10 Proposed Estimate	FY11 Proposed Estimate
\$200,000	\$237,020	\$661,234	\$200,000	\$200,000	\$200,000	\$200,000

Contact: Tom Burke, (702) 293-8310, tburke@lc.usbr.gov

Start Date: FY04

Expected Duration: FY55

Long-term Goal: Fish augmentation.

Conservation Measures: RASU3, RASU5, and RASU8.

Location: Reach 2, Lake Mohave, AZ/NV.

Purpose: Develop the razorback sucker (RASU) brood stock in Lake Mohave, maintain the brood stock, and harvest offspring for rearing as needed to accomplish the LCR MSCP Fish Augmentation Program.

Connections with Other Work Tasks (past and future): Work tasks B2, B4, B5, B6, and B7 are related to this work task, as the RASU to be reared under these work tasks originate from Lake Mohave.

Project Description: The RASU brood stock in Lake Mohave represent the remaining genomes for RASU and provide a level of genetic diversity found nowhere else in the world. This project captures wild-born RASU larvae from Lake Mohave, and delivers them to Willow Beach NFH for initial rearing. Work includes helicopter surveys every two weeks to locate spawning groups, night-time larvae collection, and maintaining the boat fleet and field station at Cottonwood Cove. These larvae are captured one at a time, making this a labor-intensive program. Hence, most expenditures are for salary, travel, and fuel.

Work normally commences in January and extends into April. Equipment is delivered to and staged at Cottonwood Cove where a field station is established. The lake's shoreline is surveyed by helicopter, and locations of spawning aggregations of RASU 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 boat are captured by net and are counted. Crews return to the field station, label buckets of larvae, record their capture success and location, place batteries back on chargers, clean and stow other gear, and place air stones in buckets to maintain adequate oxygen levels. The next morning the larvae are transferred to Willow Beach NFH by either boat or

vehicle, where they are logged in as to date received, number collected, and location. This work is repeated four to six nights per week through mid to late April.

Previous Activities: This work is part of a program started by the Native Fish Work Group (NFWG) in 1989 to rebuild the adult stock of RASU in Lake Mohave so that these fish could be used as brood fish for RASU recovery. A portion of the larvae collected are used to sustain brood stock and the remaining larvae are reared for release into reaches 3-5 to accomplish augmentation goals of the program.

FY07 Accomplishments: High survival for RASU larvae captured in 2005 and 2006, combined with concerns regarding quagga mussel investment, resulted in a target of only 20,000 larvae being required for 2007. RASU larvae for Bubbling Ponds SFH, which normally come from this venture, will be supplied by Dexter NFH due to quagga mussel issues. Twenty thousand five hundred sixty-eight (20,568) wild larvae were collected from four areas. Contribution of larvae from each zone by month of capture is presented in Table 1.

Table 1. Larval RASU Collected from Lake Mohave, 2007

	January	February	March	April	May	Total
N. Nine Mile	0	790	4,197	0	0	4,987
Tequila	0	3,760	2,250	0	0	6,010
Yuma	0	4,625	3,250	0	0	7,875
AOP	0	0	373	1,323	0	1,696
Total	0	9,175	10,070	1,323	0	20,568

The most significant event of this past season was the discovery of RASU larvae at 28 new sites above Owl Point. This information expands our knowledge concerning both habitat use and spawning behavior above Owl Point. In addition, locating new spawning sites affords us the opportunity to further secure the genetic diversity of the adult population.

FY08 Activities: A target of 30,000 larvae was established at the Lake Mohave Native Fish Work Group meeting. These will be delivered to Willow Beach NFH for rearing. Presence/absence surveys above Owl Point will lead to a continuation of this work in FY08. A survey will be conducted in the lower-most portion of Lake Mohave to search for additional new spawning sites.

Proposed FY09 Activities: RASU larval collections will continue. Target levels for FY09 through FY14 are 50,000 larvae annually to produce fish for accelerated species research as required in the HCP (See conservation measures RASU3.1 and RASU6).

Pertinent Reports: The *2007 Fish Augmentation Summary* is in preparation and will be posted to the LCR MSCP Web site.