

Work Task C57: Sonic Telemetry of Lake Mead Juvenile Razorback Suckers

FY11 Estimate	FY11 Actual Obligations	Cumulative Expenditures Through FY11	FY12 Approved Estimate	FY13 Proposed Estimate	FY14 Proposed Estimate	FY15 Proposed Estimate
\$0	\$0	\$0	\$0	\$250,000	\$250,000	\$250,000

Contact: Jim Stolberg, (702) 293-8206, jstolberg@usbr.gov

Start Date: FY13

Expected Duration: FY15

Long-term Goal: Support razorback sucker (RASU) conservation.

Conservation Measures: RASU 6.

Location: Reach 1, Lake Mead, Arizona/Nevada.

Purpose: Investigate habitat use of immature RASU and determine conditions that allow for natural recruitment of Lake Mead RASU.

Connections with Other Work Tasks (past and future): This work task is related to the Lake Mead Razorback Sucker Study (C13) and Razorback Sucker and Bonytail Stock Assessment (D8).

Project Description: From 1996 to 2011, 95 sonic-tagged adult RASU have aided researchers in locating spawning populations of RASU in Lake Mead and understanding the habitat use and spawning preferences of the adult population. Trammel-netting efforts during this time also provided valuable information on Lake Mead RASU demographics and included the capture of over 100 juvenile/subadult RASU. To date only limited effort has been expended trying to capture this young life stage, which is an important element in understanding why RASU recruitment is occurring in Lake Mead.

This project will investigate the habitat use of immature razorback sucker by implanting wild caught juvenile/subadult RASU with sonic tags and monitoring their movements. A variety of sampling techniques will also be used in conjunction with tracking efforts to sample specifically for juvenile RASU throughout the year. In addition to these activities, efforts will also be made to identify the physicochemical environment of any identified recruiting habitat.

Previous Activities: This study builds upon work conducted on the Lake Mead adult RASU population (C13 and D8).

FY11 Accomplishments: New start in FY13.

FY12 Activities: New start in FY13.

Proposed FY13 Activities: During the first year of this study considerable effort will be focused on capturing wild juvenile RASU from know spawning locations in Lake Mead. It is anticipated that this effort will be labor intensive due to the relative infrequency of capture for this life stage. Following their capture, juvenile RASU will be implanted with various models of sonic telemetry tags. The tag models used will be dependent upon the size of the fish captured. Sonic tagged fish will be continually tracked from the time of capture through the summer months.

In addition to tracking wild juvenile fish, a small group of hatchery reared juvenile RASU will also be implanted with sonic tags and tracked. All tracking efforts will be accompanied by a variety of sampling methods and will include the use of trammel nets, minnow traps, hoop nets, seines, fyke nets, and electrofishing. Locations of sonic-tagged fish or other juvenile RASU caught during sampling will be used to identify recruitment habitat. Physicochemical conditions including water quality parameters, substrate types, and vegetation, will then be recorded at these sites to characterize the preferred habitat of this RASU life stage. Information gathered from this study will provide resource managers with recommendations for enhancing juvenile RASU habitat.

Pertinent Reports: N/A