

Work Task C31: Razorback Sucker Genetic Diversity Assessment

FY09 Estimates	FY09 Actual	Cumulative Accomplishment Through FY09	FY10 Approved Estimate	FY11 Proposed Estimate	FY12 Proposed Estimate	FY13 Proposed Estimate
\$125,000	\$103,693.22	\$103,693.22	\$125,000	\$125,000	\$125,000	\$125,000

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Start Date: FY09

Expected Duration: FY15

Long-term Goal: Maintain genetic quality of RASU utilized in the LCR MSCP.

Conservation Measures: RASU2, RASU3, RASU5, RASU6

Location: Arizona State University, Tempe, Arizona

Purpose: To maintain a sound genetic management program for RASU within the LCR MSCP.

Connections with Other Work Tasks (past and future): This work is related to larval RASU collections (B1) and to management of fish habitat restoration sites (for example, E14). Fin clips were collected from RASU captured during the Age Characterization Study (C29).

Project Description: This study will monitor genetic structure of RASU communities in reservoirs, river reaches, and off-channel habitats within the LCR and characterize the various RASU stocks relative to the founder population from Lake Mohave.

Larval fish from each stock will be captured, preserved, and delivered to ASU's genetics research laboratory for analyses. Results will be used to determine the genetic health of these communities, to assess effectiveness of the Fish Augmentation Program, to continue monitoring of the Lake Mohave repatriation effort, and to provide guidance on management of RASU populations developing in newly constructed floodplain habitats within the LCR MSCP area.

Previous Activities: Genetic evaluation of the Lake Mohave Razorback Sucker Repatriation Program, funded by Reclamation prior to the LCR MSCP, was completed in 2008. These studies resulted in genetic characterization of the Lake Mohave RASU population, including the larval fish being used by the LCR MSCP Fish Augmentation

Program. This base of information will be the reference point against which the genetic diversity of all future RASU populations will be measured.

FY09 Accomplishments: Analyses of larval fish samples collected in 2009 showed that genetic variation among and within larval samples of razorback sucker on Lake Mohave continues to be passed to the adult repatriate population, indicating that the Native Fish Work Group program is functioning as originally designed.

FY10 Activities: Reclamation will continue to assess razorback sucker genetics for the LCR through analyses of RASU fin clips and larvae collected from all spawning areas, reservoirs, river reaches, and off-channel habitats within the LCR MSCP area.

Proposed FY11 Activities: Collection of larval RASU, fin clips, and muscle plugs will continue from all spawning areas within the LCR MSCP area.

Pertinent Reports: The study plan for Razorback Sucker Genetic Diversity Assessment is available upon request. The 2009 interim report, *Razorbacker Sucker Genetic Divesity Assessment*, is posted to the LCR MSCP Web site.