

## Work Task C13: Lake Mead Razorback Sucker Study

FY05 Estimate	FY05 Actual	Cumulative Accomplishment Through FY05	FY06 Approved Estimate	FY07 Proposed Estimate	FY08 Proposed Estimate	FY09 Proposed Estimate
\$198,000	\$98,000	\$98,000	\$350,000	\$300,000	\$100,000	\$100,000

**Contact:** Tom Burke, (702) 293-8711

**Start Date:** FY05 **Expected Duration:** FY09

**Long-Term Goal:** Determine conditions which allow for natural recruitment of razorback sucker.

**Conservation Measures:** RASU7

**Location:** Reach 1, Lake Mead, NV/AZ

**Purpose:** Assess RASU population and recruitment in Lake Mead.

**Connections with Other Work Tasks (past and future):** This Work Task was previously included in the Draft FY05 Work Tasks as Lake Mead Razorback Study (D7). Larvae collected during this effort are to be reared at Lake Mead Hatchery (B6) and Overton WMA (B11).

**Project Description:** The LCR MSCP will continue to fund and support the ongoing studies of RASU in Lake Mead that were implemented under the ISG/SIA BO. The focus areas of the studies are to:

1. Resolve any remaining questions about the location of populations of RASU in Lake Mead from the lower Grand Canyon area downstream to Hoover Dam.
2. Document use and availability of spawning areas at various water elevations.
3. Clarify substrate requirements for spawning.
4. Monitor potential nursery areas.
5. Continue aging of captured RASU.
6. Confirm recruitment events that may be tied to physical conditions in the lake.

These studies began in 1995 and were anticipated to be completed within a 5-10 year period. However, under RASU7, these studies may be followed by further research and monitoring within the adaptive management program of the LCR MSCP. Reclamation proposes that the current studies be completed in FY07, and then a reduced monitoring effort be initiated in FY08. However, this final decision on level of future monitoring activities has not been determined.

**Previous Activities:** SNWA began a monitoring program for RASU in Lake Mead in 1995, partnering with NDOW and Reclamation. Between 1995 and 2004, some 200 adult and 30 juvenile RASU were captured. Aging data showed that a low-level of recruitment has occurred

in at least 22 of the past 30 years. This remarkable recruitment has happened in the face of extensive non-native fish populations.

**FY05 Accomplishments:** In 2004, the spawning area at Las Vegas Wash (Blackbird Point) became exposed as the lake's surface elevation declined during the summer and fall. An investigation of the Las Vegas Bay spawning population began in January 2005 to determine if these fish established a new spawning at another location in Las Vegas Bay. However, the area was wetted by rising lake levels in the spring and these RASU returned to the original site and successfully spawned. RASU also spawned at the Echo Bay spawning area. A third spawning site was located in 2005 at Fish Island, near the mouth of the Virgin and Muddy Rivers.

A multi-agency staff representing all study partners participated in the capture of over 4,000 larvae during 2005. These RASU larvae are being reared at Lake Mead SFH (B6). Reclamation's helicopter was used to conduct aerial searches for spawning aggregations during March and April.

**FY06 Activities:** FY06 activities are similar to those for FY05. Monitoring of spawning sites was conducted during February, March and April; attempts were made to capture larvae once spawning began; trammel-netting and electro-fishing were conducted to capture juveniles and adults; radio-telemetry work will continue; and a long-term monitoring plan will be developed. Additionally, potential repatriation sites will be evaluated for future release of young fish currently being reared at Lake Mead Hatchery.

**Proposed FY07 Activities:** FY07 marks a decision point for the future level of effort for these studies. Plans for FY07 include completing a ten-year review of the study program and determining the need and funding for a long-term monitoring program. This review will then be evaluated to determine the need for and the level of future studies.

**Pertinent Report:** Annual report for 2005 will be posted to the LCR MSCP website. Study plan is available upon request.