

## Work Task C45: Ecology and Habitat Use of Stocked RASU in Reach 3

FY11 Estimate	FY11 Actual Obligations	Cumulative Expenditures Through FY11	FY12 Approved Estimate	FY13 Proposed Estimate	FY14 Proposed Estimate	FY15 Proposed Estimate
\$170,000	\$175,342.41	\$125,969.16	\$200,000	\$200,000	\$200,000	\$200,000

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**Start Date:** FY11

**Expected Duration:** FY15

**Long-term Goal:** To assess survival and habitat use of stocked RASU.

**Conservation Measures:** RASU6.

**Location:** Reach 3 from Davis to Parker dams.

**Purpose:** To assess ecology and distribution of habitats available to stocked RASU in Reach 3, and to evaluate the overall effectiveness of the Fish Augmentation Program.

**Connections with Other Work Tasks (past and future):** Work is related to C33, D8, and G3.

**Project Description:** There have been more than 28,000 RASU reared and released into Reach 3 through the Fish Augmentation Program and roughly 30,000 more RASU stocked prior to the LCR MSCP. We regularly contact several hundred of these fish each year through annual surveys and associated work task. The contacted fish appear to be in excellent health with little to no signs of parasites or disease, and they demonstrate growth rates comparable to other populations of repatriated RASU. In winter and spring, fish are located at known spawning areas near Needles, California, and Laughlin, Nevada. During summer and fall, stocked fish are found throughout the main channels, and in numerous off-channel lakes and ponds within Topock Gorge. This five-year study will assess the availability of physical, chemical, and biological fish habitats within Reach 3 to help identify habitat limitations to survival and to allow assessment of possible habitat saturation.

**Previous Activities:** This effort will utilize the extant RASU distribution and stocking data accumulated over the first five years of the program.

**FY11 Accomplishments:** A group of backwaters (Park Moabi, Pulpit Rock, Sand Dunes, Blankenship, Castle Rock, Clear Bay, and two small unnamed backwaters) was established to study razorback sucker habitat use in Reach 3. Razorback sucker use of these backwaters was quantified through catch per unit effort data (CPUE) of fish captured with trammel nets and electrofishing. Water quality measurements for select backwaters were collected monthly.

Methods were developed to describe the zooplankton, macroinvertebrate, and plant communities within these backwaters. Geo-referenced depth data were collected for use in developing bathymetric maps of these backwaters.

**FY12 Activities:** Fish sampling will continue in the select group of backwaters to monitor razorback CPUE. Water quality and zooplankton data were collected on a monthly basis. Macroinvertebrate, plant community, phytoplankton, and water chemistry (nutrients) were collected on a quarterly basis.

**Proposed FY13 Activities:** FY12 activities will continue, including analyzing habitat and environmental data from previous years; additional sampling will be added if needed.

**Pertinent Reports:** The study design is available upon request and annual reports will be posted to the LCR MSCP website upon completion.