Work Task C45: Ecology and Habitat Use of Stocked Razorback Sucker in Reach 3

FY14 Estimate	FY14 Actual Obligations	Cumulative Expenditures Through FY14	FY15 Approved Estimate	FY16 Proposed Estimate	FY17 Proposed Estimate	FY18 Proposed Estimate
$200,000	$145,520.50	$698,298.83	$0	$0	$0	$0

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Start Date: FY11

Expected Duration: FY14

Long-Term Goal: To assess survival and habitat use of stocked razorback sucker

Conservation Measures: RASU6

Location: Reach 3 from Davis to Parker Dam

Purpose: To assess the ecology and distribution of habitats available to stocked razorback sucker in Reach 3 and evaluate the overall effectiveness of the LCR MSCP Fish Augmentation Program

Connections with Other Work Tasks (Past and Future): This work task is related to Work Tasks C33 (closed), D8, and G3. Due to the overlap in scope and intent of this work task with Work Tasks C39 and C49, these work tasks will be merged into a single work task in FY15: Work Task C64 (Post-Stocking Movement, Distribution, and Habitat use of Razorback Sucker and Bonytail). This combination of work tasks will allow sharing of overlapping resources, which is expected to increase efficiency in implementation and reporting, and it may also reduce overall expenditures. Activities under Work Task C64 will be detailed by river reach, and the budget estimates will reflect the effort needed to complete this work.

Project Description: Approximately 6,000 razorback sucker per year are reared and released into Reach 3 under the LCR MSCP Fish Augmentation Program, and roughly 30,000 more razorback sucker were stocked prior to the LCR MSCP. We regularly contact several hundred of these fish each year through annual surveys and associated work tasks. 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 razorback sucker. In the winter and spring, fish are located at known spawning areas near Needles, California, and Laughlin, Nevada. During the summer and

fall, stocked fish are found throughout the main channels and in numerous off-channel lakes and ponds within Topock Gorge. During this 5-year study, the availability of physical, chemical, and biological fish habitats within Reach 3 will be evaluated to help identify habitat limitations to survival and will allow assessment of possible habitat saturation.

Previous Activities: A group of select backwaters (Park Moabi, Pulpit Rock, Sand Dunes, Blankenship, Castle Rock, Clear Bay, and two small unnamed backwaters) were used to study razorback sucker habitat use in Reach 3. Razorback sucker use of these backwaters was quantified through catch per unit effort (CPUE) data of fish captured with trammel nets. Park Moabi had the highest catch rate (106 fish per 1,000 square meters [m^2]). The remaining backwaters had catch rates less that 8 fish per 1,000 m^2. The catch rates from 2012 were calculated for all species and compared to data collected prior to 2005. The results were similar, with the exception of increases in redear, bluegill, yellow bullhead, and smallmouth bass, to a lesser degree. Limnological data continued to be collected and will be compared once several years of data have been obtained. Water chemistry and the zooplankton, phytoplankton, and macroinvertebrate communities within the backwaters were sampled quarterly. Aquatic plant communities were sampled monthly during their growing season.

Beginning in February 2013, remote PIT tag scanners were used to quantify razorback sucker usage of the backwaters on a monthly basis. The scanning CPUE mirrored that of the trammel netting results, and razorback sucker in Park Moabi continue to be contacted at significantly higher rates. Park Moabi had an estimated 138 fish per 1,000 m^2 of trammel net compared to 0–14 fish per 1,000 m^2 in the other seven backwaters. All eight backwaters were stocked with razorback sucker at a rate of 20 fish per acre in February and March 2013. Results indicate most of these fish left the backwaters fairly quickly after their release. Scanners deployed at the mouths of some of the backwaters showed 35–70% of stocked fish leaving within a day. Additionally, very little movement among backwaters was detected; only 13 of the 3,018 (0.4%) fish were detected in a backwater other than the one they were stocked into. Monitoring for all limnological and peripheral ecological variables continued at frequencies similar to previous years.

FY14 Accomplishments: Razorback sucker were once again stocked into the select backwaters and monitored via trammel nets and PIT tag scanners. Scanning results were similar to previous years. The peripheral data that has continued to be collected suggest that available cover in backwaters is the primary characteristic for determining razorback sucker use; this includes turbidity and/or vegetation type. Not all of the FY14 funds were expended due to fewer equipment repairs/replacement and shared labor costs with other projects in the area.

This work will continue in FY15 under Work Task C64. The results for these investigations conducted in FY15 and future years will also be reported under Work Task C64.

FY15 Activities: This work task was closed in FY14.

Proposed FY16 Activities: This work task was closed in FY14.

Pertinent Reports: A report summarizing the results of this work task through 2012 titled *Ecology and Habitat use of Stocked Razorback Suckers in the Colorado River between Davis and Parker Dams (Reach 3 of the LCR-MSCP)* is completed and will be posted on the LCR MSCP Web site. A 2013 report is being prepared and will be posted on the Web site upon completion.