Work Task C56: Characterization of Lake Mohave Backwaters to Evaluate Factors Influencing Spawning Success

FY12 Estimate	FY12 Actual Obligations	Cumulative Expenditures Through FY12	FY13 Approved Estimate	FY14 Proposed Estimate	FY15 Proposed Estimate	FY16 Proposed Estimate
$0	$0	$0	$265,000	$100,000	$100,000	$0

Contact: Andrea Finnegan, (702) 293-8203, afinnegan@usbr.gov

Start Date: FY13

Expected Duration: FY15

Long-term Goal: To help inform future design and management of created backwater habitats.

Conservation Measures: RASU3, RASU6, BONY3, BONY5.

Location: Lake Mohave, Reach 2.

Purpose: Characterize Lake Mohave backwater rearing ponds, to include but not limited to Arizona Juvenile (AJ), Dandy, and Yuma where stocked juvenile RASU have been observed to spawn at different rates in order to determine which factors are most influential in promoting spawning and subsequent survival of RASU larvae.

Connections with Other Work Tasks (past and future): Genetic and Demographic Studies to Guide Conservation Management of RASU and BONY in Off-Channel Habitats (C40).

Project Description: Disconnected backwater ponds on Lake Mohave are used for rearing RASU in support of the fish augmentation program. Sub-adult fish are currently PIT tagged at 300 mm TL, fin clipped for genetics, and stocked into these ponds during winter or spring. The ponds are harvested in the fall, as the backwaters are drawn down with the seasonally declining water level of Lake Mohave.

Over the past two years, genetic analyses of larvae that were spawned from stocked RASU in AJ and Dandy showed differences in reproductive success. In AJ, a minimum 52% of the stocked fish contributed to the larvae sampled, while in Dandy a minimum of 33% contributed in 2010. In 2011, only larvae were captured from AJ, a minimum of 68% of the adults contributed to the larvae sampled.

This project will provide a detailed characterization of selected Lake Mohave backwaters to determine which factors are most influential towards successful RASU spawning and

subsequent larval survival. The research will begin with a narrow focus on AJ and Dandy, two ponds with different spawning success, at Lake Mohave but may be expanded to include other backwaters or other known RASU spawning areas.

Previous Activities: N/A

FY12 Accomplishments: This is a new start in FY13.

FY13 Activities: Complete larval sampling at AJ, Dandy, and Yuma backwaters on Lake Mohave AZ/NV on a bi-weekly basis to obtain accurate catch per unit effort data. Develop a study plan to examine the physical habitat, physicochemical parameters, and predation dynamics of backwater habitats.

Proposed FY14 Activities: Examine the physical habitat, physicochemical parameters, and predation dynamics on AJ, Dandy, and Yuma backwaters.

Pertinent Reports: N/A