Work Task C33: Comparative Survival of 500-mm Razorback Sucker Released in Reach 3

FY08 Estimates	FY08 Actual	Cumulative Accomplishment Through FY08	FY09 Approved Estimate	FY10 Proposed Estimate	FY11 Proposed Estimate	FY12 Proposed Estimate
$0	$0	$0	$75,000	$75,000	$175,000	$175,000

Contact: Jeff Lantow, (702) 293-8557, jlantow@usbr.gov

Start Date: FY09

Expected Duration: FY13

Long-term Goal: To maintain the effectiveness of the Fish Augmentation Program.

Conservation Measures: RASU3, RASU6.

Location: Mainstem river within Reach 3 and various off-channel fish grow-out ponds.

Purpose: To determine the relative survival of 500-mm TL RASU versus 300-mm TL RASU released into Reach 3.

Connections with Other Work Tasks (past and future): This work is related to current fish rearing work tasks B2 and B5, to fish research work tasks C12 and C13, post-development monitoring work task F5, and to any future work tasks for rearing RASU, as data collected from this study will help evaluate the effect that size of released fish has on survival and ulitmately upon conservation of the species.

Project Description: This study will evaluate the relative survival of 500-mm TL RASU versus 300-mm TL RASU released into the Lower Colorado River within Reach 3. Ongoing studies at Lake Mohave (C12) suggest that RASU being raised for brood stock development in that reservoir (Reach 2) should be held in captivity and reared to a total length of 500 mm prior to repatriation to assure survival. It has been suggested that the LCR MSCP should increase its target size for RASU being reared under the Fish Augmentation Program from 300 mm to 500 mm TL.

The primary cause for mortality in Lake Mohave is large striped bass, combined with a lack of cover. RASU in Lake Mead (Reach 1) have shown consistent, albeit low-level, recruitment for the past 20-plus years. Research (C13) suggests that cover is the key component allowing such survival and recruitment. Both predator loads and the amount of cover within Reach 3 differ from what is available in Reach 2. Before this management strategy is agreed to and applied to Reach 3, it is prudent to make paired releases of both 300-mm TL RASU and 500-mm TL RASU and compare the relative survival of the two size classes.

This work will be conducted over a 5-year period. During the first 2 years, focus will be on growing and tagging sufficient numbers and sizes of RASU and releasing them into the river system. The LCR MSCP is currently stocking RASU of 300 mm or greater total length into Reach 3. Subsets of these fish are being PIT tagged to provide research subjects for this study. This will continue for FY08 and FY09 (there are no study costs allocated for this work, as this rearing is already accounted for under work tasks B2 and B5). Under the Fish Augmentation Program, 300-mm TL RASU are credited to the program when stocked into off-channel habitats as well as into the river, proper. Funds from this study will be used to support harvest, tagging, and distribution of large RASU (500 mm or greater TL) harvested from these off-channel habitats.

Previous Activities: None specific to this work task. More than 20,000 RASU (>300 mm TL) have been PIT tagged and released into Reach 3 since October 2006, and all are potential research subjects for this study. The stockings have been distributed into the numerous access points within this reach, from Laughlin Lagoon to Bill Williams River NWR.

FY08 Accomplishments: Fish reared under work tasks B2 and B5 (9,000 RASU) were stocked into Reach 3, of which 6,400 were stocked into Beal Lake to initiate this study.

FY09 Activities: Proposed work for FY09 includes coordinating and scheduling the stocking and harvesting activities for the off-channel grow out ponds. This entails the harvest of large RASU (>500 mm TL) from off-channel habitats, and continued PIT tagging of RASU >300 mm TL that were released into Reach 3. The final design of field investigations for FY10-13 will also be completed. Impoundment nets will be developed and tested for recapture of RASU from off-channel grow out ponds. These nets are basically large rooms with multiple doors, allowing for long soak times without overstressing fish prior to harvest. These nets will be deployed and tested in Beal Lake and Davis Cove.

Proposed FY10 Activities: The activities listed in FY09 will be continued and monitoring of the Reach 3 population of RASU relative to differential survival will begin. Monitoring will be conducted using electro-fishing and trammel netting of known congregations of RASU.

Pertinent Reports: The study design is available upon request.