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

FY09 Estimates	FY09 Actual	Cumulative Accomplishment Through FY09	FY10 Approved Estimate	FY11 Proposed Estimate	FY12 Proposed Estimate	FY13 Proposed Estimate
$75,000	$205,229.84	$205,229.84	$75,000	$100,000	$100,000	$100,000

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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 (B2, B5), fish research (C12, C13), post-development monitoring (F5), and 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, on 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 predation by 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 five-year period. During the first two years, the 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. All of these fish are being PIT tagged to provide research subjects for this study. This will continue through FY13 (there are no study costs allocated for this work, as this rearing is already accounted for under 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 mainstem river. 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: More than 26,000 RASU (>300 mm TL) have been PIT tagged and released into Reach 3 since October 2006, and all are 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, as well as various off-channel habitats that are currently being managed by the USFWS.

FY09 Accomplishments: A total of 5,847 RASU (>300 mm TL) were PIT tagged and stocked into Reach 3. Numerous additional spawning groups of RASU were located throughout Reach 3. It is expected that surviving fish are best censused while spawning; therefore, identifying spawning sites increases chances for recontacting these fish during future surveys related to this work task. Large impoundment nets were purchased for test deployment at off-channel grow-out sites in 2010. Monitoring of growth of RASU in various off-channel habitats has continued.

An interagency agreement was initiated between the Reclamation and the USFWS to cover costs at off-channel habitats that the USFWS currently manages. These off-channel habitats are the source of 500-mm plus RASU that will be used to complete this work task. As end-of-year funds were available in FY09 and as there are administrative costs associated with annual agreements, funding transfers to the USFWS anticipated for FY10 and FY11 were included when the current IA was executed in August 2009.

FY10 Activities: Activities for this year include coordinating and scheduling stock assesment surveys, harvesting of 500-mm plus RASU, and restocking of off-channel grow-out ponds. We continued the PIT tagging of RASU greater than 300 mm TL that were released into Reach 3. The final design of field investigations for FY11-13 will also be completed. Impoundment nets have been deployed and tested in Beal Lake and other off-channel habits. Monitoring of the Reach 3 population of RASU relative to differential survival was initiated. Monitoring is conducted using electro-fishing and trammel netting of known congregations of RASU. A yearly report will be written to summarize the year’s efforts.

Proposed FY11 Activities: The activities listed in FY10 will be continued and expanded in order to maximize the number of RASU available as research subjects for this work task. Monitoring surveys will be increased in an effort to contact released RASU.

Pertinent Reports: The scope of work for the USFWS agreement is available upon request.