

## Work Task C64: Post-Stocking Movement, Distribution, and Habitat use of RASU and BONY

FY13 Estimate	FY13 Actual Obligations	Cumulative Expenditures Through FY13	FY14 Approved Estimate	FY15 Proposed Estimate	FY16 Proposed Estimate	FY17 Proposed Estimate
\$0	\$0	\$0	\$0	\$700,000	\$700,000	\$760,000

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**Start Date:** FY15

**Expected Duration:** FY18

**Long-term Goal:** To maintain an effective fish augmentation program.

**Conservation Measures:** BONY3, BONY 4, BONY5, RASU3, RASU4, and RASU6.

**Location:** Reaches 2-5

**Purpose:** To provide information on movement, distribution, and habitat use of stocked RASU and BONY and to use this information to set up an appropriate monitoring network to suggest potential stocking locations and track post-stocking survival.

**Connections with Other Work Tasks (past and future):** This work task represents the merger of the of three previously funded work tasks: C39 (Post-Stocking Distribution and Survival of Bonytail in Reach 3), C45 (Ecology and Habitat Use of Stocked RASU in Reach 3), and C49 (Investigations of RASU and BONY Movements and Habitat Use Downstream of Parker Dam). The intent of this combination was capture these activities with similar purpose and scope into a consolidated, multi-reach effort for both BONY and RASU. This work is related to work tasks B2, B3, B4, and B6, all of which provide BONY and RASU for augmentation stocking and may also build on information gained in Reach 1 though work tasks C13 and C57. Information collected under this work task will add to the database used to complete D8. This work task has a past relationship to C8 and is expected to have future interactions with C61 or other work tasks that can use information and/or the monitoring network created under C64. Work task G3 will provide funding in FY14 to accomplish preliminary work in Reach 2 that will be covered by this work task in FY15.

**Project Description:** The activities covered under this work task both consolidate and build-on the work that has been undertaken and accomplished under C39, C45, and C49. This work task will formalize the approaches used to identify appropriate stocking locations throughout Reaches 2-5. It will accomplish this through pilot releases of tagged fish to identify dispersal and movement of individuals or groups of fish. This may also provide information on preliminary post-stocking habitat selection and use and survival. This information can then be used to: 1) establish a more appropriate monitoring network

in terms of where to locate remote sensing equipment or other sampling gear with higher probabilities for contacts, 2) indicate locations that may be better suited for stocking fish, and 3) possibly identify additional aggregations of native fish.

The networks that are established under this work task will also provide monitoring information on the effectiveness of different stocking treatments (conducted under C61) as well as longer term information on survival, habitat use, and movement of native fishes in these reaches. Eventually, these established long-term monitoring networks may be used for system-wide monitoring and would be covered through work task D8.

**Previous Activities:** Detailed accounts of work and accomplishments covered under C39, C45 and C49 have been reported under these work tasks and by their associated technical reports. They include the tracking and monitoring of stocked RASU and BONY in specific areas in Reaches 3 and 4. Post-stocking movement and habitat use have been documented and post-stocking survival estimates have been developed for RASU and/or BONY in these reaches.

**FY13 Accomplishments:** This is a new start in FY15.

**FY14 Activities:** This is a new start in FY15.

**Proposed FY15 Activities:** Proposed activities for this work task have been summarized by river reach. Budget estimates reflect the projected costs for FY15 from the combined work tasks C39, C45, and C49, plus the additional work described below for Reach 2, and Reaches 4 and 5.

**Reach 2:** Pilot releases of sonic-tagged BONY will occur in Lake Mohave. In FY15, BONY will be implanted with sonic tags and released at various locations in Lake Mohave. Tagged BONY will be intensively tracked after release to determine dispersal and movement patterns and to suggest survival rates. Number of tagged individuals, release locations, and long-term tracking will be determined from the study plan (developed in FY14 under G3) and will be dependent on fish availability (sizes and numbers). Data gathered from this effort will inform management for future stocking of BONY in Lake Mohave to meet program commitments. If funding and fish are sufficiently available, groups of RASU may also be released and tracked as part of this effort.

**Reach 3:** RASU will continue to be monitored via trammel nets and PIT tag scanners in established locations in Reach 3. Movements and habitat features will also continue to be recorded. Several more iterations of sonic telemetry and remote PIT scanning are expected to be continued on both BONY and RASU in Reach 3, adding to the knowledge of post-stocking survival and habitats use for these species in reservoir and riverine environments.

**Reach 4:** Additional stocking and monitoring of RASU and BONY will occur between Parker Dam and Palo Verde Dam. An added emphasis will be placed on areas identified by sonic tagged RASU and BONY.

A study plan will be developed and equipment purchases will be made in FY15 to prepare for pilot releases of RASU and BONY in Reach 4 below Palo Verde Dam in FY16. Previous surveys performed under D8 will also inform management on potential release locations in this portion of Reach 4.

**Reach 5:** A study plan will be developed and equipment purchases will be made in FY15 to prepare for pilot releases of RASU and BONY in Reach 5 in FY16. Previous surveys performed under D8 will also inform management on potential release locations in Reach 5.

**Pertinent Reports:** N/A