

## Work Task B8: Fish Tagging Equipment

FY05 Estimate	FY05 Actual	Cumulative Accomplishment Through FY05	FY06 Approved Estimate	FY07 Proposed Estimate	FY08 Proposed Estimate	FY09 Proposed Estimate
\$75,000	\$88,700	\$143,462	\$45,000	\$75,000	\$75,000	\$75,000

**Contact:** Tom Burke, (702) 293-8711

**Start Date:** FY04 **Expected Duration:** FY16 decision point

**Long-Term Goal:** Acquire and maintain supply of fish tagging materials and equipment for marking fish to be released for research and for augmentation stockings.

**Conservation Measures:** RASU3, RASU4, RASU5, RASU6, BONY3, BONY4, and BONY5

**Location:** n/a

**Purpose:** Fish released into the lower Colorado River by the LCR MSCP will be marked for identification purposes in order to assess survival and distribution.

**Connections with Other Work Tasks (past and future):** This work task was previously listed in FY04 Work Tasks as PIT Tag (A2). Activities described herein are related to all Work Tasks which result in fish stocking for augmentation, fish research, and fish monitoring. Work Task C23 is evaluating new PIT tag technology and results may influence future purchases.

**Project Description:** The LCR MSCP will rear and stock over 1.2 million native fish into the lower Colorado River over the 50-year term of program. Reclamation currently plans to mark these fish in order to assess distribution and survival, and to provide for effective research and monitoring. This information is required for decision making under the adaptive management program.

Current marking techniques include PIT tagging, wire-tagging, fin-clipping, radio tagging, and sonic tagging. Funds associated with this Work Task provide for both the tagging materials and for the detection equipment needed during monitoring and research. Costs are expected to be highest during the first 10 to 15 years of the LCR MSCP, and decrease in later years as research actions transition to routine monitoring actions.

Under conservation measure RASU3, LCR MSCP will implement an experimental augmentation of 24,000 subadult RASU each year for 5 years (120,000 total) and conduct intensive follow-up monitoring. Under conservation measure BONY3, LCR MSCP will implement an experimental augmentation of 8,000 subadult BONY annually in the Parker-Imperial river reach (Reaches 4 and 5) for 5 consecutive years within the 50-year program (40,000 total augmentation) and conduct intensive follow-up monitoring. Reclamation plans to conduct these two actions simultaneously during FY11-FY16; expects to PIT tag all of these fish; and plans to radio tag or sonic tag a subset of these fish. Following completion of this work, Reclamation will evaluate

monitoring results through the adaptive management process, and assess the need for continuation of tagging of RASU and BONY released through augmentation stockings. This decision is expected to be made in FY17.

**Previous Activities:** Fish released into the lower Colorado River have been tagged with 400 kHz PIT tags (Lake Mead and Lake Mohave – Reaches 1 and 2), 125 kHz PIT tags (Davis Dam to Parker Dam – Reach 3), and wire tags (Davis Dam to Imperial Dam, Reaches 3, 4, and 5). Recaptured fishes below Parker Dam have been retagged with 125 kHz PIT tags. In addition, both radio tags and sonic tags have been implanted in fish used for research on Lakes Mead, Mohave and Havasu. Fin clipping and spaghetti tags (or Floy tags) have been used for short-term survival studies in some rearing and grow-out ponds.

**FY05 Accomplishments:** Twenty thousand (20,000) PIT tags were purchased during FY05 at a cost of \$70,000. A total of 19,332 BONY and RASU were tagged and released. In addition, six FS-2001ISO transceivers (scanners), one 11” circular antenna, and one 24” square antenna were purchased during the year at a cost of \$18,700.

**FY06 Activities:** A decision was made within the Native Fish Work Group to begin use of the newest PIT tag technology. This requires a change from the old 400 kHz and 125 kHz frequency tags to the new 132.5 kHz frequency tags. These new tags have a significantly greater detection range. The 132.5 kHz PIT tags, tagging needles, and new tag readers will be purchased in quantity sufficient to mark RASU and BONY utilized in the LCR MSCP program.

**Proposed FY07 Activities:** Acquire tags, tagging equipment, and tag detection equipment sufficient to mark and monitor RASU and BONY released through the LCR MSCP Fish Augmentation Program. The FY07 cost estimate reflects an increase due to the cost of equipment and new equipment/technology.