

## Work Task B8: Fish Tagging Equipment

FY06 Estimates	FY06 Actual	Cumulative Accomplishment Through FY06	FY07 Approved Estimate	FY08 Proposed Estimate	FY09 Proposed Estimate	FY10 Proposed Estimate
\$45,000	\$50,870	\$194,332	\$75,000	\$75,000	\$75,000	\$75,000

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**Start Date:** FY04

**Expected Duration:** FY19 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 are related to all work tasks that 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 more than 1.2 million native fish into the lower Colorado River over the 50-year term of the 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 will

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 through augmentation stockings. This decision is expected to be made in FY19 after observations and analysis have been completed.

**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 fish 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.

**FY06 Accomplishments:** A decision was made within the NFWG to begin use of the newest PIT-tag technology. This requires a change from the old 400-kHz and 125-kHz tags to the new 134.2-kHz frequency tags. These new tags have a greater detection range than the previously used tags (12 inches versus 2 inches away from fish) and will allow for testing and deployment of remote listening stations within spawning areas.

Sufficient numbers of the new PIT tags, tag readers, and antennae were purchased to mark fish during the year. A total of 29,061 RASU and 8,111 BONY were PIT tagged and released to the lower Colorado River during 2006.

**FY07 Activities:** Additional PIT tags, tagging equipment, and tag readers will be purchased as needed to mark fish for monitoring and research.

**Proposed FY08 Activities:** PIT tags, tagging equipment, and tag readers will be purchased as needed to mark fish for monitoring and research.

**Pertinent Reports:** N/A