

## Work Task F5: Post-Development Monitoring of Fish Restoration Sites

FY07 Estimates	FY07 Actual	Cumulative Accomplishment Through FY07	FY08 Approved Estimate	FY09 Proposed Estimate	FY10 Proposed Estimate	FY11 Proposed Estimate
\$65,000	\$41,574	\$41,574	\$130,000	\$150,000	\$180,000	\$200,000

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

**Start Date:** FY07

**Expected Duration:** FY55

**Long-term Goal:** Post-development monitoring.

**Conservation Measures:** RASU6 and BONY5.

**Location:** Reaches 3-6, backwater habitats developed and stocked with RASU and BONY, NV, AZ, and CA.

**Purpose:** Monitor fish use of habitat creation sites to provide data for the adaptive management process and develop management guidelines for created backwater habitats.

**Connections with Other Work Tasks (past and future):** All backwaters created in Section E.

**Project Description:** This work will monitor the fish and fish habitat at restoration sites. It is anticipated that fish restoration sites will play various roles for conservation of target fish species throughout the term of the LCR MSCP. Some habitats will be able to develop self-sustaining populations, others may become overpopulated requiring harvest or thinning, and some will require continuous population augmentation. Most isolated fish habitats will require some stock rotation to maintain genetic diversity through time. Basic surveys of the fish population and the physical and chemical habitat developed or restored will be required. Fish monitoring will include trapping (hoop, fyke, and minnow traps), trammel netting, electro-fishing, larvae light trapping, and ocular surveys (including scuba and snorkeling where necessary and practical). Water quality assessment will require annual measurements of temperature, oxygen, pH, and conductivity (salinity), as well as periodic monitoring of chemical makeup, including electro-ions and selenium.

**Previous Activities:** N/A.

**FY07 Accomplishments:** An interagency meeting was held at Bill Williams River NWR to scope monitoring parameters for native fish backwater habitats. The USFWS developed a draft fishery management plan for Beal Lake. Physical and chemical habitat at Beal Lake was monitored, and electro-fishing and netting surveys were conducted. RASU were contacted along with threadfin shad, largemouth bass, and common carp. No BONY were captured. RASU

captured exceeded 500 mm TL, showing that Beal Lake may be a source for rearing RASU to adult size for research use elsewhere in the project area.

Native fish habitats at Imperial Ponds were completed and a research and monitoring plan was approved. An interagency coordination team has been established. Four ponds are to be stocked in FY08. Arizona State University was awarded a research grant to assess the development of this fishery (C25).

**FY08 Activities:** Post-development monitoring of Beal Lake similar to FY07 monitoring will be continued. RASU and BONY will be stocked and monitored. Roughfish biomass will be reduced through quarterly netting and shocking operations. Sportfish will be salvaged and stocked into Topock Marsh.

Increased monitoring of the Imperial Ponds will be continued to include physical and chemical conditions in the ponds and surveys of the fish populations. Netting and electrofishing will not be used during summer, when water temperatures are too stressful on the fish. Larvae light trapping will be conducted monthly from February to May to assess reproduction and recruitment. If needed, funds will be utilized for nonnative fish removal.

Staff will participate in fishery surveys of other native fish sanctuary habitats in the lower river floodplain to gather information on developing fisheries.

**Proposed FY09 Activities:** Native fish restoration sites will continue to be monitored for physical, chemical, and biological conditions.

**Pertinent Reports:** N/A.