

## Work Task F1: Habitat Monitoring

FY06 Estimates	FY06 Actual	Cumulative Accomplishment Through FY06	FY07 Approved Estimate	FY08 Proposed Estimate	FY09 Proposed Estimate	FY10 Proposed Estimate
\$250,000	\$138,256	\$375,470	\$275,000	\$325,000	\$350,000	\$390,000

**Contact:** John Swett, (702) 293-8574, jswett@lc.usbr.gov

**Start Date:** FY05

**Expected Duration:** FY55

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

**Conservation Measures:** MRM2, CLRA1, WIFL1, WRBA2, WYBA3, CRCR2, YHCR2, LEBI1, BLRA1, YBCU1, ELOW1, GIFL1, GIWO1, VEFL1, BEVI1, YWAR1, SUTA1, and MNSW2

**Location:** Beal Lake, Havasu NWR, Arizona; CRIT 9, Ahakhav Tribal Preserve, Arizona; PVER, California; CVCA, Arizona; Cibola Nature Trail, Cibola NWR, Cibola, Arizona; Imperial Ponds, Imperial NWR; Arizona

**Purpose:** Habitat creation projects will be monitored for initial survivorship and successional changes over time to determine if habitat acreage goals are met. To evaluate habitat, a monitoring plan will be written prior to project implementation, pre-development monitoring may occur (if necessary), and post-development monitoring will occur through the LCR MSCP time period. These data will be used to manage the habitat creation sites and to plan future projects through the adaptive management process. As each demonstration or habitat creation site is established, Reclamation will monitor initial survivorship for 2 years. Monitoring successional changes will occur on a periodic basis over time, with the interval dependent on the age of each stand.

**Connections with Other Work Tasks (past and future):** Post-development habitat monitoring is being conducted at habitat creation sites detailed in Section E.

**Project Description:** To implement the adaptive management program, habitat creation projects must be monitored to determine whether necessary habitat components have been provided to qualify as habitat as described in the LCR MSCP. Monitoring the biotic components (vegetation) and abiotic components (e.g., soil moisture) will provide data to incorporate into future restoration efforts. Prior to the development of each proposed restoration site, monitoring plans will be written in conjunction with restoration plan development, and pre-development monitoring will be conducted, when necessary, to document baseline conditions to evaluate change in site conditions.

Vegetation will be monitored using two protocols. Immediately after development, each habitat creation site will be monitored to determine survivorship at the newly restored sites and to determine if all necessary habitat components have been provided. After 2 years, successional changes within stands will be monitored as each habitat creation site matures. Changes in habitat quality over time, in conjunction with covered species monitoring, will guide the management of each habitat creation site.

**Previous Activities:** Habitat restoration demonstration sites were monitored using established protocols, including Beal Lake, Cibola Nature Trail, and Pratt Restoration. Survival and growth rates were recorded at each site. Survival and growth rates were dependent on a number of factors, including planting technique. Results were summarized and evaluated for each restoration site.

**FY06 Accomplishments:** Monitoring plans were written for habitat creation projects listed in Section E, including CVCA, PVER, Imperial Ponds, Beal Lake, and 'Ahakhav Tribal Preserve. Pre-development habitat monitoring at planned habitat creation sites was not necessary in 2006. Habitat restoration demonstration sites were monitored using established protocols, including 'Ahakhav Tribal Preserve, Beal Lake, and Cibola Nature Trail. Post-development monitoring of restoration sites was conducted at CVCA and PVER. Specific data for each habitat creation site are reported in Section E of this report.

Habitat monitoring occurs mainly after the onset of dormancy in September/October. In 2006, habitat monitoring was delayed until late October due to other project needs. These staff costs will be reflected in FY07.

**FY07 Activities:** Pre-development monitoring will be conducted at habitat creation sites identified in Section E, when necessary. Post-development monitoring will be conducted at existing restoration sites, including Beal Lake, Cibola Nature Trail, Imperial Ponds, CVCA, and PVER. Monitoring plans will be created for new habitat creation sites.

**Proposed FY08 Activities:** Pre-development monitoring will be conducted at habitat creation sites identified in Section E, when necessary. Post-development monitoring will be conducted at existing restoration sites. Monitoring plans will be created for new projects.

**Pertinent Reports:** The monitoring plans are included in the restoration development plans and will be available for CVCA, PVER, Beal Lake, and 'Ahakav Tribal Preserve. Annual reports for Beal Lake, CRIT 9, CVCA, PVER will be posted on the LCR MSCP Web site.