

Work Task F1: Habitat Monitoring

FY08 Estimates	FY08 Actual	Cumulative Accomplishment Through FY08	FY09 Approved Estimate	FY10 Proposed Estimate	FY11 Proposed Estimate	FY12 Proposed Estimate
\$325,000	\$305,647.09	\$967,301.09	\$350,000	\$350,000	\$425,000	\$425,000

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Start Date: FY05

Expected Duration: FY55

Long-term Goal: Post-development monitoring.

Conservation Measures: MRM2 (CLRA, WIFL, WRBA, WYBA, CRCR, YHCR, LEBI, BLRA, YBCU, ELOW, GIFL, GIWO, VEFL, BEVI, YWAR, SUTA, MNSW)

Location: Beal Lake, Havasu NWR, AZ; 'Ahakhav Tribal Preserve, AZ; PVER, CA; CVCA, AZ; Cibola Unit #1, Cibola NWR, Cibola, AZ; Imperial Ponds, Imperial NWR, AZ.

Purpose: Monitor habitat creation to determine whether necessary habitat components have been provided to qualify as habitat as described in the LCR MSCP. Monitor the biotic components (vegetation) and abiotic components (e.g., soil moisture) to provide data to incorporate into future habitat creation efforts.

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: Habitat creation projects will be monitored for 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) to document baseline conditions to evaluate change in site conditions. Post-development monitoring will occur through the LCR MSCP time period, and the data will be used to manage the habitat creation sites and to plan future projects through the adaptive management process. Monitoring successional changes will occur on a periodic basis over time, with the interval dependent on the age of each stand.

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 demonstration site. Monitoring plans were written for habitat creation projects including CVCA, PVER, Imperial Ponds, Beal Lake, and 'Ahakhav Tribal Preserve. Post development vegetation monitoring was conducted at Beal Lake, Cibola Nature Trail, CVCA, and PVER in 2007.

FY08 Accomplishments: Vegetation monitoring protocols have been tested through the first 2 years of the LCR MSCP implementation. A final protocol was developed and implemented in 2008 and was conducted at Beal Lake, 'Ahakhav Tribal Preserve, Cibola NWR Unit #1, CVCA, and PVER. The protocol includes measurements for overstory trees, shrub and intermediate trees, ground cover, crown closure, and total vegetation volume. In 2008, 196 vegetation monitoring plots were established and measured. The plots were randomly stratified by habitat type including cottonwood, willow, cottonwood/willow mix, and mesquite. Data were compiled by habitat type and by phase. A vegetation report was generated and will be placed on the LCR MSCP website.

FY09 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, 'Ahakhav, and PVER. Monitoring plans will be created for new habitat creation sites.

Proposed FY10 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 are available for CVCA, PVER, Beal Lake, Cibola Unit #1, and 'Ahakhav Tribal Preserve. Annual reports for Beal Lake, 'Ahakhav Tribal Preserve, Cibola Unit #1, CVCA, and PVER will be posted on the LCR MSCP Web site.