

## Work Task D5: Monitoring Avian Productivity and Survivorship

FY06 Estimates	FY06 Actual	Cumulative Accomplishment Through FY06	FY07 Approved Estimate	FY08 Proposed Estimate	FY09 Proposed Estimate	FY10 Proposed Estimate
\$300,000	\$245,205	\$539,050	\$300,000	\$300,000	\$300,000	\$300,000

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**Start Date:** FY05

**Expected Duration:** FY55

**Long-term Goal:** System monitoring for avian covered species by conducting intensive monitoring of habitat creation sites and sites that typify current conditions along the LCR.

**Conservation Measures:** MRM1 and MRM2.

**Location:** Cibola NWR and Havasu NWR.

**Purpose:** To collect data on avian species demographics, physical condition, species composition and diversity, and site persistence at existing and created habitat sites for the system monitoring program.

**Connections with Other Work Tasks (past and future):** Data from this work task is used in conjunction with data collected from the system-wide bird monitoring program (D6) to monitor overall bird use of the LCR. Data collected at MAPS stations located at habitat creation sites may also be used for post-development monitoring.

**Project Description:** This project intensively monitors habitat creation sites and sites that represent habitat typically found along the LCR for avian use. Banding collects more detailed information about actual use patterns and demographics of avian species collected. This site-specific data can be used to characterize habitats and, along with less intensive, widespread monitoring methods, is used to monitor habitat use, population trends, and demographics of avian species along the LCR.

The MAPS program monitors avian populations, using a standardized protocol, throughout the United States, Canada, and Mexico. Long-term population trend data is collected by conducting intensive banding throughout the breeding season. Data collected are analyzed by the Institute for Bird Populations (IBP), and long-term population trends are determined on a regional and continental level. Population trends can be more readily determined by using a national database as larger databases have increased statistical power that can not be economically duplicated at a site specific level.

In 2002, prior to LCR MSCP implementation, Reclamation established a MAPS station at the Cibola Nature Trail Demonstration site on Cibola NWR. In 2005, an additional MAPS station was established on Havasu NWR, near South Dike, in mixed cottonwood-saltcedar habitats. These sites provide data from different reaches of the LCR and from different habitat types to allow comparisons between habitat creation sites and other areas more typically found along the LCR. The IBP recommends conducting MAPS stations a minimum of five years to acquire site specific data. The MAPS station located at the Cibola Nature Trail site will be run through at least 2007. The Havasu MAPS station will continue through at least 2009. After five years, each site will be evaluated and a decision will be made to continue, discontinue, or move each MAPS site.

Data on fall migration and winter use are also being recorded at the Cibola Nature Trail site, Havasu NWR site, and the Pratt restoration site, using an adapted MAPS protocol similar to protocols from migration banding projects throughout the west and the MOSI protocol used in Mesoamerica. Data from these surveys will help define habitat use by birds during the non-breeding season.

**Previous Activities:** Winter banding was conducted from 2002 through 2005 at the Pratt restoration site, at the Cibola Nature Trail site since 2002, and at the Havasu NWR site since 2005. Summer MAPS banding has been conducted at the Cibola NWR site since 2002 and at Havasu NWR since 2005. In addition, a MAPS station was run for 5 years on Colorado River Indian Tribe lands, near Headgate Rock Dam (2000-04), in mixed native and non-native habitat.

**FY06 Accomplishments:** During the winter, banding was conducted at all three sites, for 2 days per month, from October to February. Banding was conducted for 6 hours a day, using twelve 12-meter nets at each site. During the summer, banding was conducted at Cibola Nature Trail and Havasu NWR using the MAPS protocol. Banding was conducted once every 10-day period, at each site, for a total of 10 days of banding. Banding was conducted for 5 hours a day, beginning one half-hour before sunrise. For the winter banding period, there were 368 captures at the Cibola site, 187 captures at the Havasu site, and 159 captures at the Pratt site. During the breeding season, there were a total of 254 captures at Cibola and 174 captures at Havasu. At the Cibola site, ash-throated flycatcher and house finch were the most commonly captured species. At the Havasu site, Bewick's wren, yellow-breasted chat, and Lucy's warbler were the most commonly captured species. Four LCR MSCP covered species were captured, including Gila woodpecker (1 at Cibola), summer tanager (1 at Havasu), willow flycatcher (1 unknown sub-species at Cibola), and yellow warbler (8 at Cibola and 6 at Havasu).

**FY07 Activities:** Winter banding will be continued in 2007 at the Cibola Nature Trail and Havasu NWR sites. The MAPS banding stations will be continued at both sites during the 2007 breeding season.

**Proposed FY08 Activities:** Intensive winter and breeding season monitoring will continue in 2008. Information obtained will be used for the system monitoring program and to inform habitat creation projects listed in Section E.

**Pertinent Reports:** *Operation of Two Monitoring Avian Productivity and Survivorship (MAPS) Stations Along the LCR, 2006, and Operation of Two Winter Banding Stations along the LCR, 2005-6* will be posted to the LCR MSCP Web site.