

## Work Task D5: Monitoring Avian Productivity and Survivorship

FY11 Estimate	FY11 Actual Obligations	Cumulative Expenditures Through FY11	FY12 Approved Estimate	FY13 Proposed Estimate	FY14 Proposed Estimate	FY15 Proposed Estimate
\$275,000	\$289,547.70	\$1,782,355.83	\$250,000	\$250,000	\$250,000	\$250,000

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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, MRM2 (WIFL, YBCU, ELOW, GIFL, GIWO, VEFL, BEVI, YWAR, SUTA).

**Location:** Cibola NWR, Cibola Valley Conservation Area and Havasu NWR.

**Purpose:** To collect intensive, site-specific data on avian species demographics, physical condition, species composition and diversity, and site persistence at existing and created habitat sites.

**Connections with Other Work Tasks (past and future):** Data from this work task are 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 (Monitoring Avian Production and Survivorship) 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 avian species use patterns and demographics. 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 cannot be economically duplicated at a site-specific level.

In 2002, prior to LCR MSCP implementation, Reclamation established a MAPS station (CIBO) at the Cibola Nature Trail Demonstration site on Cibola NWR. In 2005, an additional MAPS station (HAVA) was established on Havasu NWR, at New 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 5 years to acquire site-specific data. After 5 years, each site will be evaluated and a decision will be made to continue, discontinue, or move the MAPS station to a new location.

**Previous Activities:** Winter banding was conducted from 2002 through 2005 at the Pratt restoration site (PRAT) near Yuma, AZ, at the Cibola Nature Trail site since 2002, and at the Havasu NWR site (HAVA) from 2005 to 2009. Summer MAPS banding has been conducted at the CIBO site since 2002 and at HAVA site from 2005 to 2008. In addition, a MAPS station (HERO) was run for 5 years on Colorado River Indian Tribe lands, near Headgate Rock Dam (2000-2004), in mixed native and nonnative habitat. Color banding target species such as Bell's vireo, yellow warbler and summer tanager was initiated in August 2008 at the banding sites to monitor site persistence during the breeding and winter banding seasons.

In late September 2008, a fire occurred at the Havasu NWR site (HAVA) and burned a significant portion of it. This site (HAVA) was last used for winter banding in 2008-2009 and was abandoned as a MAPS site. A new MAPS site (BERS) was selected at the Beal Lake restoration site also on Havasu NWR and started operating in 2009.

Data on fall migration and winter use were also being recorded using an adapted MAPS protocol similar to protocols from migration banding projects throughout the West and the MOSI protocol that is used in Mesoamerica. Data from these surveys will help define habitat use by birds during the non-breeding season.

**FY11 Accomplishments:** During the summer, banding was conducted at 3 sites using the MAPS protocol. An additional MAPS site at the Cibola Valley Conservation Area (CVCA) was added in May. Banding was conducted for 5 hours a day, beginning 1 half-hour before sunrise. Banding was conducted once every 10-day period, at each site, for a total of 10 days of banding. During the breeding season, there were a total of 179 captures at the Cibola site, 181 total captures at the Beal site and 233 captures at the Cibola Valley site.

Three LCR MSCP listed species were captured, including yellow warbler (two captures at Cibola Valley, and nine captures at the Beal site), summer tanager (two each at the Cibola Valley and the Beal sites), and Bell's vireo (three captures at the Beal site). All of the yellow warblers, summer tanagers, and Bell's vireos were colored banded. Two Bell's vireos were target netted and color banded at the Beal site during the MAPS season. Resightings of yellow warblers, Bell's vireos, and summer tanagers were made at the Beal site during and after the MAPS season. Single willow flycatchers were heard calling at the Beal site on June 3, 19, and 23, as well as on July 30 and the Cibola Valley site on May 18 and 25 and on June 8. One migrant willow flycatcher was banded at the Cibola site on May 24. A yellow-billed cuckoo was heard at the Cibola site on July 12; several at the Cibola Valley site from June 8 thru August 3. At the

Beal site, yellow-billed cuckoos were heard or seen on June 16, and July 8, 14 and 28. Winter banding was discontinued.

**FY12 Activities:** The MAPS banding stations will be continued at all three sites during the 2012 breeding season. Color banding of LCR MSCP covered species will continue to be implemented to increase the effective recapture rate. A visual identification of a color-banded bird qualifies as a recapture for statistical purposes. Restoration sites such as PVER will be reviewed as potential banding stations.

**Proposed FY13 Activities:** Breeding season monitoring will continue in 2012. Information obtained will be used for the system monitoring program and to inform habitat creation projects listed in Section E.

**Pertinent Reports:** The 2011 MAPS Summary Banding Report will be posted to the website.