

Work Task D5: Monitoring Avian Productivity and Survivorship

FY12 Estimates	FY12 Actual Obligations	Cumulative Expenditures Through FY12	FY13 Approved Estimate	FY14 Proposed Estimate	FY15 Proposed Estimate	FY16 Proposed Estimate
\$250,000	\$253,792.34	\$2,036,148.17	\$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 Unit #1, Cibola Valley Conservation Area and Beal Lake Conservation Area.

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 are 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 the 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 from 2002 to 2011, and at the Havasu NWR site (HAVA) from 2005 to 2009. Fall migration banding was conducted at PRAT and CIBO from 2002 to 2005. Summer MAPS banding has been conducted at the CIBO site since 2002 and at the HAVA site from 2005 to 2008. 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. A site at the delta of the Colorado River (CRLM) at Lake Mead National Recreation Area was established in 2002 but abandoned the next year because of loss of habitat due to dropping water levels. 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 Conservation Area also on Havasu NWR and started operating in 2009. In 2011, a MAPS site at the Cibola Valley Conservation Area (CVCA), Phases 1 & 2, was added.

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. Winter banding was discontinued in 2011.

FY12 Accomplishments: During the summer, banding was conducted at 3 conservation areas using the MAPS protocol. 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 252 captures at the Cibola site, 194 total captures at the Beal site and 214 captures at the Cibola Valley site.

Three LCR MSCP listed species were captured and color banded. They were yellow warbler (three at CIBO, three at CVCA and two at the BERS), summer tanager (one at BERS), and Bell's vireo (three at BERS). One Bell's vireo was target netted and color banded at the Beal site during the MAPS season. One yellow warbler was recaptured at CVCA which was color banded earlier this year at CIBO. Two yellow warblers, two Bell's vireos, and one summer tanager were recaptured at BERS. Re-sightings of a Bell's vireo and a summer tanager were made at the Beal site during the MAPS season. Through re-sightings and recaptures at the Beal site, it was determined that the first pair of summer tanagers color banded in 2009 still were present in 2012. A single southwestern willow flycatcher was observed on a territory at the Beal site from June 15 to July 17; it did not nest. Two migrant willow flycatchers were banded at CIBO on June 5. A total of four migrant willow flycatchers were banded at CVCA on May 6 (2), and 14, and June 23. Migrant willow flycatchers were banded at BERS on May 17 and 24. A yellow-billed cuckoo was heard at the Cibola site on July 17; several were heard at the Cibola Valley site from July 11 thru July 26. At the Beal site, yellow-billed cuckoos were heard on July 12 and 27.

FY13 Activities: The MAPS banding stations will continue at all three sites during the 2013 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 FY14 Activities: Breeding season monitoring will continue in 2014. 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 and 2012 MAPS Summary Banding Report will be posted to the website.