

Work Task D5: Monitoring Avian Productivity and Survivorship

FY05 Estimate	FY05 Actual	Cumulative Accomplishment Through FY05	FY06 Approved Estimate	FY07 Proposed Estimate	FY08 Proposed Estimate	FY09 Proposed Estimate
\$300,000	\$293,845	\$293,845	\$300,000	\$300,000	\$300,000	\$300,000

Contact: John Swett, (702) 293-8574

Start Date: FY05 **Expected Duration:** FY55

Long-term Goal: System monitoring for avian covered species

Conservation Measures: MRM1 and MRM2

Location: Havasu NWR and Cibola NWR AZ.

Purpose: Monitor breeding bird long-term population trends and use of different habitat types along the LCR using the MAPS protocol.

Connections with other Work Tasks (past and future): This Work Task was previously included in the Draft FY05 Work Tasks as Monitoring Avian Production and Survivorship (MAPS) (D6). Data collected at MAPS stations located at habitat creation sites may also be used for post-development monitoring.

Project Description: The MAPS monitors avian populations, using a standardized protocol, throughout the U.S., 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, and long-term population trends are determined on a regional and continental level. These data may be used to help determine trend as part of the system monitoring program instituted for the LCR MSCP. In addition, site-specific information can be derived from MAPS data after five years of continuous data collection.

In 2002, prior to LCR MSCP implementation, Reclamation established a MAPS station at the Cibola Nature Trail Riparian Restoration Demonstration site on Cibola NWR. In 2005, an additional MAPS station was established on Havasu NWR, near South Dike, in mixed cottonwood and 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 MAPS station located at the Cibola Nature Trail site will be run through at least 2006. The Havasu MAPS station will continue through at least 2009.

Data on fall migration and winter use is also being recorded at the Cibola Nature Trail site and at the Pratt Restoration site, using an adapted MAPS protocol similar to migration banding projects conducted 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: The Cibola Nature Trail MAPS station began in 2002, prior to LCR MSCP implementation. In addition, a MAPS station was run for five years on Colorado River Indian Tribes lands, near Headgate Rock Dam (2000-2004), in mixed native and exotic habitat.

FY05 Accomplishments: The Cibola Nature Trail and Havasu MAPS sites were conducted in FY05. Thirty-nine species, including 25 potential resident breeders, were captured at the Cibola site between 3 May through 2 August 2005. Twenty-seven species, including 21 potential resident breeders, were captured at the Havasu site during this same time period. Area searches were conducted at both sites to record species not prone to being captured using mist netting techniques. Species diversity was slightly higher at the Havasu site due to the proximity of open water and marsh habitats. Capture rates varied between species at each site. Data were collected, entered into a database, and sent to the Institute for Bird Populations.

Fall migration banding was conducted on two restoration sites (Cibola Nature Trail and Pratt) to document bird use during migration, site persistence for resident birds, and bird condition during migration. Four two-day periods of constant mist-netting were conducted during August-September 2005. Twenty-seven species were captured at the Cibola site at a rate of 134 individuals per 100 net hours. Twenty-seven species were also captured at Pratt; however, only 38 individuals per 100 net hours were caught. Willow flycatchers (subspecies unknown) and Sonoran yellow warblers were captured at the Cibola and Pratt sites during fall migration.

Winter banding and area searches were accomplished on the two sites to document year-round use, site persistence, and bird condition at restoration sites. Twenty-four species were recorded using the Cibola site whereas 16 species were detected at Pratt.

FY06 Activities: Data collection is being accomplished at the Cibola and Havasu MAPS stations during the FY06 breeding season.

Proposed FY07 Activities: Continue collecting data at the Cibola and Havasu MAPS stations. Conduct fall migration banding and winter banding utilizing a revised MAPS protocol at the same sites as above. All data will be recorded and sent into the Institute for Bird Populations for regional and national trend analysis, and also will be analyzed by Reclamation biologists to determine trends at both restoration sites and along the LCR. In 2007-08, the MAPS program will be evaluated for effectiveness achieving system and post-development monitoring goals and objectives.

Pertinent Reports: *Operation of Two Monitoring Avian Productivity and Survivorship (MAPS) Stations on the LCR, 2005 Breeding Season* posted on the LCR MSCP website. *Winter Monitoring by Constant Effort Mist-Netting at the Nature Trail and Pratt Restoration Sites: Winter 2004-2005* posted on the LCR MSCP website. *Fall Migration Monitoring at the Cibola Nature Trail and Pratt Restoration Sites, 2004* posted on the LCR MSCP website.