

Work Task F2: Avian Use of Conservation Areas

FY15 Estimate	FY15 Actual Obligations	Cumulative Expenditures Through FY15	FY16 Approved Estimate	FY17 Proposed Estimate	FY18 Proposed Estimate	FY19 Proposed Estimate
\$220,000	\$134,175.16	\$1,647,971.06	\$220,000	\$350,000	\$350,000	\$350,000

Contact: Beth Sabin, (702) 293-8435, lsabin@usbr.gov

Start Date: FY05

Expected Duration: FY55

Long-Term Goal: Conduct pre- and post-development monitoring for avian species at habitat conservation areas

Conservation Measures: MRM1 and MRM2 (ELOW, GIFL, GIWO, VEFL, BEVI, YWAR, and SUTA)

Location: Beal Lake Conservation Area (BLCA), Havasu National Wildlife Refuge, Arizona; Cibola Valley Conservation Area (CVCA), Arizona; the Cibola National Wildlife Refuge Unit #1 Conservation Area (Cibola NWR Unit #1), Cibola National Wildlife Refuge, Cibola, Arizona; Hunters Hole, Arizona; Laguna Division Conservation Area (LDCA), Arizona; Mohave Valley Conservation Area and Yuma East Wetlands, Arizona; Palo Verde Ecological Reserve (PVER), California; and the Pretty Water Conservation Area, California

Purpose: To monitor Arizona Bell's vireo, elf owl, gilded flicker, Gila woodpecker, Sonoran yellow warbler, vermilion flycatcher, and western summer tanager use of habitat conservation areas

Connections with Other Work Tasks (Past and Future): Pre- and post-development avian monitoring will be conducted at habitat conservation areas listed in Conservation Area Development and Management (Section E). In addition, information obtained from this work task may be used to provide data for avian system monitoring by using the same protocols established in system monitoring (D6).

Project Description: The creation of riparian habitat will benefit LCR MSCP covered avian species (Arizona Bell's vireo, elf owl, Gila woodpecker, gilded flicker, Sonoran yellow warbler, vermilion flycatcher, and western summer tanager). Conservation areas will be monitored for bird activity using the double sampling area search method, which involves intensive and rapid area searches.

Data gathered will be used to document the presence of covered species at the conservation areas to inform habitat management and the creation of future habitat conservation areas.

Previous Activities: Pre- and post-development monitoring for avian covered species has been conducted at habitat conservation areas since FY05. Avian pre-development monitoring was conducted at the CVCA, Cibola NWR Unit #1, the Imperial Ponds Conservation Area, Hart Mine Marsh, the PVER, the Pretty Water Conservation Area, and the LDCA. Post-development monitoring for avian covered species was conducted at the BLCA, Cibola NWR Unit #1, the CVCA, the PVER, and Yuma East Wetlands. The double sampling rapid and intensive area search survey protocol has been used since 2008 for pre- and post-development monitoring. From FY08 to FY10, all plots were surveyed using intensive area search surveys due to the small acreage of habitat in the conservation areas. In FY11 and FY12, all plots were surveyed with rapid area search protocols, and a subset of those plots was surveyed using intensive area search protocols. In FY13, three additional plots were established at Yuma East Wetlands and were surveyed with intensive area search surveys. In FY14, the plots were randomly selected because existing habitat at the habitat conservation areas exceeded the amount of habitat that could be covered within 80 area search plots for the first time. Each year, avian use was evaluated at each conservation area and compared among conservation areas.

FY15 Accomplishments: Avian post-development monitoring was conducted at existing habitat conservation areas in FY15. The following conservation areas were surveyed: the BLCA, Cibola NWR Unit #1, the CVCA, the PVER, Yuma East Wetlands, and Hunters Hole. Eighty plots on the conservation areas were surveyed using the double sampling protocol. Rapid area search surveys were conducted on all plots, and intensive area search surveys were conducted on a random subsample of four of those plots. In FY15, the plots were randomly selected because existing habitat at the habitat conservation areas exceeded the amount of habitat that could be covered within 80 area search plots.

LCR MSCP covered bird species and other territorial breeding birds were documented at each conservation area:

- BLCA – There were 121 pairs of territorial breeding birds comprising 18 species detected. These included 13 pairs of Sonoran yellow warblers, 20 pairs of Arizona Bell’s vireos, and 4 pairs of summer tanagers.
- Cibola NWR Unit #1 – There were 213 pairs of territorial breeding birds comprising 22 species detected. These included four pairs of Arizona Bell’s vireos and two pairs of Sonoran yellow warblers.

- CVCA – There were 261 pairs of territorial breeding birds comprising 22 species detected. This included one pair of summer tanagers.
- PVER – There were 565 pairs of territorial breeding birds comprising 25 species detected. These included seven pairs of Sonoran yellow warblers and one pair of Gila woodpeckers.
- Yuma East Wetlands – There were 190 pairs of territorial breeding birds comprising 29 species detected. These included one pair of Gila woodpeckers, one pair of summer tanagers, and one pair of Sonoran yellow warblers.
- Hunters Hole – There were nine pairs of territorial breeding birds comprising nine species detected. No LCR MSCP covered species were detected breeding here.

All the habitat conservation areas had numerous pairs of non-territorial breeders as well. Many species of migrants and non-breeders were detected at all habitat conservation areas.

Avian pre-development monitoring was conducted at the Mohave Valley Conservation Area. Fifteen species were detected; none were LCR MSCP covered species.

FY16 Activities: Avian post-development monitoring will be conducted at conservation areas, including the BLCA, Cibola NWR Unit #1, the CVCA, Hunters Hole, the LDCA, the PVER, and Yuma East Wetlands. Surveys will be conducted using the double sampling method. Eighty plots will be randomly selected from all possible plots within the habitat conservation areas. All plots will be surveyed with rapid surveys, and a subset of eight plots will be randomly selected to be surveyed with intensive surveys.

An evaluation of the study design for post-development (F2) and avian monitoring system wide (D6) will be conducted. The results of this evaluation may be incorporated into future protocols, and a 10-year monitoring plan will be developed.

Proposed FY17 Activities: Avian post-development monitoring for LCR MSCP covered species will be conducted at conservation areas supporting riparian vegetation, including the BLCA, Cibola NWR Unit #1, the CVCA, Hunters Hole, the Pretty Water Conservation Area, the LDCA, the PVER, and Yuma East Wetlands. The protocols will be updated, as needed, following the evaluation in FY16.

The project budget increases in FY17. Pre-construction surveys at Planet Ranch will require additional funds. Surveys conducted under Work Task D6 will be shifted to Work Task F2 to more accurately track efforts at conservation areas.

Pertinent Reports: The report titled *Lower Colorado River Riparian Bird Surveys, 2013* is posted on the LCR MSCP Web site.