

Work Task F2: Avian Use of Conservation Areas

FY14 Estimate	FY14 Actual Obligations	Cumulative Expenditures Through FY14	FY15 Approved Estimate	FY16 Proposed Estimate	FY17 Proposed Estimate	FY18 Proposed Estimate
\$220,000	\$197,840.80	\$1,398,308.36	\$220,000	\$220,000	\$220,000	\$220,000

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Start Date: FY05

Expected Duration: FY55

Long-Term Goal: Conduct pre- and post-development monitoring for avian species

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

Location: BLCA, Havasu NWR, Arizona; CVCA, Arizona; Cibola NWR Unit #1, Cibola NWR, Cibola, Arizona; Hunters Hole, Arizona; LDCA, Arizona; MVCA and Yuma East Wetlands, Arizona; PVER, California; and PWCA, California

Purpose: The purpose of this work task is 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 to provide data for the adaptive management process and to develop management guidelines for created habitat conservation areas. Pre-development data will be collected on areas that will be converted to more favorable habitat so a comparison of bird use between existing low-quality habitat and newly created high-quality habitat can be made.

Connections with Other Work Tasks (Past and Future): Post- and pre-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 the system monitoring program (D6).

Project Description: Creation of riparian habitat will benefit LCR MSCP covered avian species (Arizona Bell's vireo, elf owl, gilded flicker, Gila woodpecker, 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 and guide the design of future riparian habitat conservation areas to provide covered species habitat.

Previous Activities: Pre- and post-development monitoring for avian covered species has been conducted at habitat conservation areas since FY05. Post-development monitoring for avian covered species was conducted at the BLCA, Cibola NWR Unit #1, CVCA, PVER, and Yuma East Wetlands. Avian pre-development monitoring was conducted at the CVCA, Cibola NWR Unit #1, IPCA, Hart Mine Marsh, PVER, PWCA, and LDCA. 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. Each year, avian use was evaluated at each conservation area and compared among conservation areas.

FY14 Accomplishments: Avian post-development monitoring was conducted at existing habitat conservation areas in FY14. The following conservation areas were surveyed: (1) the BLCA, (2) Cibola NWR Unit #1, (3) the CVCA, (4) the PVER, (5) Yuma East Wetlands, and (6) 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 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.

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

- BLCA – There were 102 pairs of territorial breeding birds comprising 17 species detected. These included 8 pairs of Sonoran yellow warbler, 13 pairs of Arizona Bell’s vireo, and 2 pairs of summer tanager.
- Cibola NWR Unit #1 – There were 192 pairs of territorial breeding birds comprising 28 species detected. These included four pairs of Arizona Bell’s vireo and one Sonoran yellow warbler pair.
- CVCA – There were 237 pairs of territorial breeding birds comprising 18 species detected. No LCR MSCP covered species were detected breeding here.

- PVER – There were 410 pairs of territorial breeding birds comprising 25 species detected. These included five pairs of Sonoran yellow warbler.
- Yuma East Wetlands – There were 223 pairs of territorial breeding birds comprising 26 species detected. No LCR MSCP species were detected breeding here.
- Hunters Hole – A few pairs of territorial birds were detected at Hunters Hole. 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.

FY15 Activities: Avian post-development monitoring will be conducted at conservation areas, including the BLCA, Cibola NWR Unit #1, the CVCA, Hunters Hole, the PVER, and Yuma East Wetlands. Surveys will be conducted using 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 four plots will be randomly selected to be surveyed with intensive surveys. Avian pre-development monitoring will be conducted at the MVCA.

Proposed FY16 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 PVER, and Yuma East Wetlands. The LDCA and PWCA may be added if the vegetation is mature enough to provide habitat.

The project will be evaluated, and the results of this evaluation may be incorporated into future protocols.

Pertinent Reports: The report titled *Lower Colorado River Riparian Bird Surveys, 2012* is posted on the LCR MSCP Web site.