

Work Task C24: Avian Species Habitat Requirements

FY14 Estimates	FY14 Actual Obligations	Cumulative Expenditures Through FY14	FY15 Approved Estimate	FY16 Proposed Estimate	FY17 Proposed Estimate	FY18 Proposed Estimate
\$300,000	\$414,350.46	\$1,367,449.53	\$310,000	\$270,000	\$270,000	\$270,000

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Start Date: FY08

Expected Duration: FY18

Long-Term Goal: Define habitat requirements for covered avian species

Conservation Measures: MRM1 and MRM2 (CLRA, LEBI, BLRA, SWFL, YBCU, ELOW, GIFL, GIWO, VEFL, BEVI, YWAR, and SUTA)

Location: LCR MSCP project area; Bill Williams River; IPCA, Arizona; other river systems in Arizona

Purpose: The purpose of this work task is to evaluate the habitat requirements of covered marsh and riparian bird species, including Yuma clapper rail, least bittern, California black rail, southwestern willow flycatcher, yellow-billed cuckoo, elf owl, gilded flicker, Gila woodpecker, vermilion flycatcher, Arizona Bell's vireo, Sonoran yellow warbler, and summer tanager. Conservation measures within the HCP call for research to better identify habitat requirements (MRM1) and to manage habitat of covered bird species (MRM2). The research under this work task fulfills those goals. Conservation measures to create habitat exist for each of the above species; knowledge of their habitat requirements will assist in habitat creation.

Connections with Other Work Tasks (Past and Future): Information gained from this work task will be used to conduct pre- and post-monitoring at conservation areas in Conservation Area Development and Management (Section E) that target covered bird species and system-wide monitoring of avian species (D2, D3 [closed], D5, D6, D7, and F2).

Project Description: A requirement under the LCR MSCP is the creation of a minimum of 512 acres of marsh habitat for three covered marsh bird species. All 512 marsh acres should provide habitat for the Yuma clapper rail and western least bittern, while 130 acres will provide habitat for the California black rail. The HCP requires the creation of a minimum of 5,940 acres of cottonwood-willow habitat and 1,320 acres of honey mesquite habitat for nine covered riparian obligate bird species. Studies will be conducted to evaluate the habitat

requirements of covered bird species: Yuma clapper rail, western least bittern, California black rail, Sonoran yellow warbler, Arizona Bell's vireo, summer tanager, Gila woodpecker, vermilion flycatcher, gilded flicker, and elf owl. Habitat characteristics for the southwestern willow flycatcher (D2) and yellow-billed cuckoo (D7) are covered under separate work tasks.

Previous Activities:

Yellow-billed cuckoo. A Geographic Information System (GIS)-based model of yellow-billed cuckoo breeding habitat was developed.

Summer tanager, Gila woodpecker, Sonoran yellow warbler, and Arizona Bell's vireo: From FY08 to FY10, habitat data were collected and summarized. More detailed habitat characterizations addressing microclimate for the Sonoran yellow warbler, Gila woodpecker, Arizona Bell's vireo, and the summer tanager were conducted from FY11 to FY13.

Restoration of managed marsh units to benefit black rail and other marsh birds: In 2009, vegetation surveys were conducted, water depth data were monitored at wells, and biweekly marsh bird surveys were conducted throughout the breeding season at the Imperial National Wildlife Refuge (Imperial NWR) in Fields 16 and 18. The locations of all black rails, clapper rails, and least bitterns were mapped in both fields. Black rails were first detected in Fields 16 and 18 in April and July 2009. Yuma clapper rails were consistently detected in Field 16 throughout the summer, with a high of 21 birds. In Field 18, clapper rails were also detected in 2009. In 2011, a final report was prepared, giving recommendations on the creation of marshes for both clapper and black rails. Further research on marsh bird habitat requirements will be conducted under Work Tasks C60 and C66.

Elf owl: A study was initiated to refine survey methods for elf owls in dense habitat and record general habitat characteristics in occupied riparian habitat. The elf owl's responsiveness to call playback at short distances (50–250 m) in obstructed habitat was tested, their use of riparian habitat was recorded, and, on a broad scale, the type of riparian habitat elf owls are using was documented.

FY14 Accomplishments:

Summer tanager, Gila woodpecker, Sonoran yellow warbler, and Arizona Bell's vireo: In FY14, habitat data were collected for the Sonoran yellow warbler, Arizona Bell's vireo, summer tanager, and the Gila woodpecker. Ten use and 10 non-use sites were surveyed per species. The characteristics measured included overstory trees, the shrub and intermediate layer, canopy closure and gaps, total vegetation volume, the herbaceous layer, and microclimate.

Elf owl: Study objectives were refined, and a draft study plan and schedule was prepared.

Additional project expenditures were required in FY14 to obligate funding for FY15 elf owl study activities, including finalization of the study plan, initial development of the MEFFs, and the FY15 site selection surveys.

FY15 Activities:

Summer tanager, Gila woodpecker, Sonoran yellow warbler, and Arizona Bell's vireo: 2011–14 habitat data will be delivered and quality checked. The study report will be prepared and reviewed.

Elf owl: The study plan for the project will be finalized and peer reviewed. Site selection surveys will be conducted at numerous study areas in western and eastern Arizona to determine which ones contain elf owl populations. Study areas will be prepared (flagging, trail clearing, and permits) for the full-scale study. MEFF and database development and testing will be initiated, and queries and reports will be identified.

Marsh birds: Further research on marsh bird habitat requirements will be conducted under other Work Tasks C60 and C66.

Proposed FY16 Activities:

Elf owl: The MEFFS and database will be completed. The first year of data collection will begin at study areas identified in FY15. Elf owl territories will be documented if located during surveys. Responsiveness trials will be conducted on confirmed territories.

Pertinent Reports: The reports titled *Restoration of Managed Marsh Units to Benefit California Black Rails and Other Marsh Birds: An Adaptive Management Approach* and *Development of a GIS-based Model of Yellow-billed Cuckoo Breeding Habitat within the LCR MSCP Area, San Pedro River and Verde River, AZ* are available on the LCR MSCP Web site.