

Work Task D7: Yellow-billed Cuckoo Presence/ Absence Surveys

FY15 Estimates	FY15 Actual Obligations	Cumulative Expenditures Through FY15	FY16 Approved Estimate	FY17 Proposed Estimate	FY18 Proposed Estimate	FY19 Proposed Estimate
\$750,000	\$832,589.27	\$5,328,636.18	\$750,000	\$650,000	\$650,000	\$650,000

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Start Date: FY06

Expected Duration: FY55

Long-Term Goal: System-wide and post-development monitoring for yellow-billed cuckoos

Conservation Measures: MRM1 and MRM2 (YBCU)

Location: Protocol level surveys are conducted in suitable habitat within the LCR MSCP boundary

Purpose: To conduct surveys to monitor existing yellow-billed cuckoo populations along the lower Colorado River (LCR) from the Grand Canyon to the Southerly International Boundary with Mexico and monitor long-term trends

Connections with Other Work Tasks (Past and Future): Under Work Task C37 (closed), the hydrologic conditions preferred by southwestern willow flycatchers and yellow-billed cuckoos have been measured.

Project Description: Yellow-billed cuckoos use cottonwood-willow habitat and may act as an umbrella species for other covered avian species that use these habitats. A standardized survey protocol (issued by the U.S. Fish and Wildlife Service on April 22, 2015) will be used to determine the presence of yellow-billed cuckoos at conservation areas consisting of cottonwood and willow habitat at least 2 years old.

Previous Activities: Yellow-billed cuckoo life history and monitoring studies began in FY06. Prior to the creation of riparian habitats under the LCR MSCP, the only large breeding population of yellow-billed cuckoos was on the Bill Williams River National Wildlife Refuge, with a few scattered pairs elsewhere along the LCR. The wide-ranging behavior and lack of strict territory boundaries of yellow-billed cuckoos precludes the confirmation of nesting with surveys alone. Instead, criteria (timing, location, and persistence of all detected yellow-billed cuckoos)

defining “possible,” “probable,” and “confirmed” nesting have been developed based on survey results and observed behaviors of cuckoos. Confirmed breeding of yellow-billed cuckoos has been documented at the Palo Verde Ecological Reserve (PVER) every year beginning in 2009, with nesting also confirmed at the Cibola Valley Conservation Area (CVCA) (2008–14), the Cibola National Wildlife Refuge Unit #1 Conservation Area (Cibola NWR Unit #1) (2010–12, 2014, and 2015), and at the Beal Lake Conservation Area (BLCA) (2010, 2011 and 2015). Nesting activity has been documented late into September at the PVER. The total number of yellow-billed cuckoos banded between FY08 and FY14 was 284 (134 adults and 150 young).

FY15 Accomplishments: Work in FY15 included surveys at 37 sites along the LCR and the Bill Williams River, nest monitoring, banding of young and adults, telemetry, and migration tracking with a Global Positioning System (GPS).

A total of 48 confirmed breeding territories and an additional 21 probable and 33 possible breeding territories were detected in FY15. Forty-six territories were confirmed at LCR MSCP conservation areas, 1 at the BLCA, 41 at the PVER (Phases 2–7), and 4 at Cibola NWR Unit #1 (Crane Roost). There were two confirmed territories on the system-wide plots, both at the Bill Williams River National Wildlife Refuge. A total of 39 nests were monitored: 1 at the BLCA, 33 at the PVER, 3 at Cibola NWR Unit #1, and 2 on system-wide plots. Using the Mayfield method, nest success was estimated to be 42 percent, with at least 43 successfully fledged young produced.

Forty-five adult yellow-billed cuckoos were captured in FY15, including 32 newly banded and 13 that were banded in previous years. An additional 39 young were banded from 20 nests. Thirteen banded adults were recaptured, including the oldest known yellow-billed cuckoo. It is an eight-year-old male banded as a chick in 2008 at CVCA Phase 01. It was recaptured at Cibola NWR Unit #1 (Crane Roost), and successfully nested in FY15. This male yellow-billed cuckoo had not been observed since FY08. Three of seven birds fitted with GPS units in FY14 were also recaptured, and another seven birds were fitted with GPS units in FY15. Another two previously banded birds were re-sighted, including two at BLCA: one male was captured in 2012 at the CVCA, approximately 152 kilometers (94.5 miles) from the BLCA, and a female was banded in 2014 at Cibola NWR Unit #1 approximately 157.5 kilometers (97.5 miles) from the BLCA.

The project budget exceeded the FY15 estimate. The development, testing, and deployment of mobile electronic field forms and a new database required more effort than was anticipated, and additional funds were required to purchase GPS equipment and software.

FY16 Activities: For FY16, the level of effort and scope of the project have been reduced. Intensive nest monitoring and capture and banding of birds to

document activities of specific individuals will no longer be conducted, as successful breeding and nesting have been documented within LCR MSCP created habitats, and birds have continued to use the habitats for multiple years. Call-playback surveys will be conducted only at conservation areas with cottonwood and willow at least 2 years old. The Laguna Division Conservation Area will be surveyed for the first time. System-wide areas will not be monitored in FY16, as nesting continues to occur primarily on LCR MSCP conservation areas. Followup surveys to detect breeding will be conducted at conservation areas where breeding has yet to be documented. Additional followup visits will be conducted to locate birds fitted with GPS devices during FY15; if found, the birds will be captured and the data downloaded and analyzed. Birds banded in previous years will be re-sighted incidentally to these activities.

Proposed FY17 Activities: Call-playback surveys will be conducted at conservation areas planted with cottonwood and willow at least 2 years old. Followup surveys to detect breeding will be conducted at conservation areas where breeding has yet to be documented. Birds banded in previous years will be re-sighted incidentally to these activities. The monitoring objectives will be reviewed in light of the results from FY07 to FY16, and changes will be made, if necessary, to focus the monitoring methods to inform habitat creation and management and to monitor yellow-billed cuckoo occupancy at conservation areas. The results of this evaluation may be incorporated into future protocols, and a 10-year monitoring plan will be developed.

Pertinent Reports: The *Yellow-billed Cuckoo Distribution, Abundance, and Habitat Use on the Lower Colorado River and Tributaries, 2014 Annual Report* has been posted on the Web site as well as a summary report covering this work between 2008 and 2012. The annual report for 2015 will also be posted upon completion.