

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

FY16 Estimates	FY16 Actual Obligations	Cumulative Expenditures Through FY16	FY17 Approved Estimate	FY18 Proposed Estimate	FY19 Proposed Estimate	FY20 Proposed Estimate
\$750,000	\$688,770.88	\$6,189,007.22	\$650,000	\$50,000	\$50,000	\$50,000

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**Start Date:** FY06

**Expected Duration:** FY55

**Long-Term Goal:** System-wide and post-development monitoring for yellow-billed cuckoos (*Coccyzus americanus occident*) (FY06–17) and system-wide monitoring for yellow-billed cuckoos (FY18–55)

**Conservation Measures:** MRM1 and MRM2 (YBCU)

**Location:** Protocol level surveys are conducted in suitable habitat within the LCR MSCP planning area

**Purpose:** To conduct surveys to monitor existing yellow-billed cuckoo populations along the lower Colorado River 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 (*Empidonax traillii extimus*) and yellow-billed cuckoos have been measured. Monitoring of yellow-billed cuckoos will be split into separate work tasks beginning in FY18, with system-wide monitoring continuing under Work Task D7 and post-development monitoring conducted under Work Task F10.

**Project Description:** Yellow-billed cuckoos use cottonwood-willow (*Populus fremontii-Salix gooddingii*) 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-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 by 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 lower Colorado River. 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 this species. Confirmed breeding of yellow-billed cuckoos has been documented at the Palo Verde Ecological Reserve every year beginning in 2009, with nesting also confirmed at the Cibola Valley Conservation Area (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 (2010, 2011, and 2015). Nesting activity has been documented late into September at the *Salix gooddingii*. In FY16, the level of effort and scope of the project were 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-willow habitat at least 2 years old.

**FY16 Accomplishments:** Surveys were conducted at all LCR MSCP conservation areas with cottonwood-willow habitat. Some birds previously fitted with tracking equipment were captured, the equipment removed, and the data downloaded. System-wide areas were not monitored in FY16, as nesting continued to occur primarily on LCR MSCP conservation areas. Followup visits to determine breeding status were conducted at conservation areas where breeding has yet to be documented. Birds banded in previous years were resighted incidentally to these activities. The monitoring objectives were reviewed in light of the results from FY07 to FY16, and changes were made to focus the monitoring on informing habitat creation and management and on monitoring yellow-billed cuckoo occupancy at conservation areas.

A total of 56 confirmed breeding territories and 46 nests and an additional 18 probable and 53 possible breeding territories were detected in FY16. There were 50 confirmed breeding territories and 41 nests at the Palo Verde Ecological Reserve (Phases 4–7), 1 confirmed territory and 1 nest at the Cibola Valley Conservation Area (Phase 1), and 5 confirmed territories and 4 nests at Cibola NWR Unit #1 (Crane Roost). Newly planted areas surveyed for the first time in 2016 included the upper Hippy Fire site at Cibola NWR Unit #1 and the Laguna Division Conservation Area. The breeding status was “possible” at both sites due to detection frequency and timing, but breeding was not confirmed.

In FY16, three of seven yellow-billed cuckoos captured and fitted with Global Positioning System (GPS) tags in FY15 were recaptured. An additional 38 new adults, 4 juveniles, and 26 other previously banded adults were captured during mist netting. Of the three recaptured birds fitted with GPS tags in FY15, two still wore their harnesses with attached GPS tags, and their spatial data were

successfully retrieved. These data, combined with data from three other birds tracked over the previous year, support a fall migration route for this population following the west coasts of Mexico and Central America. The new data also lend support for wintering grounds for this population in the Gran Chaco region of northern Argentina and southern Bolivia.

**FY17 Activities:** Call-playback surveys will be conducted at conservation areas planted with cottonwood-willow habitat 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 may be resighted, and nests may be found incidentally to these activities. A 10-year monitoring plan will be developed.

**Proposed FY18 Activities:** Call-playback surveys will be conducted at several system-wide sites along the lower Colorado River where yellow-billed-cuckoos have previously been detected breeding to determine if they are still present. Birds banded in previous years may be resighted, and nests may be found incidentally to these activities.

**Pertinent Reports:** The *Yellow-billed Cuckoo Distribution, Abundance, and Habitat Use on the Lower Colorado River and Tributaries, 2014 Annual Report* and the *Yellow-billed Cuckoo Distribution, Abundance, and Habitat Use on the Lower Colorado River and Tributaries, 2015 Annual Report* have been posted on the LCR MSCP Web site as well as the summary report covering this work between 2008 and 2012. The annual report for 2016 will also be posted upon completion.