

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

FY12 Estimate	FY12 Actual Obligations	Cumulative Expenditures Through FY12	FY13 Approved Estimate	FY14 Proposed Estimate	FY15 Proposed Estimate	FY16 Proposed Estimate
\$550,000	\$563,565.52	\$3,478,668.94	\$550,000	\$650,000	\$650,000	\$650,000

Contact: Barbara Raulston, (702) 293-8396, braulston@usbr.gov

Start Date: FY06

Expected Duration: FY55

Long-term Goal: Acquire yellow-billed cuckoo data as part of the system monitoring program.

Conservation Measures: MRM1, MRM2 (YBCU).

Location: General presence/absence surveys are conducted in approximately 55 sites of suitable habitat within the LCR MSCP project boundary.

Purpose: Conduct surveys to determine existing yellow-billed cuckoo (YBCU) populations along the 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): Work Task C37 measured the hydrologic conditions preferred by southwestern willow flycatcher and yellow-billed cuckoo. Data collected in this work task will be utilized in the YBCU modeling being conducted under C24.

Project Description: Yellow-billed cuckoo utilize cottonwood-willow habitat and may act as an umbrella species for other covered avian species that use these mature habitats. Existing YBCU populations and habitat are being determined along the LCR as systematic surveys are conducted over the project area. This work task assesses existing YBCU populations and evaluates required habitat characteristics. Data collected on vegetation characteristics of occupied sites are used to design habitat creation sites for YBCU and recommend future demographic studies necessary to understand more about the YBCU populations along the LCR.

Previous Activities: The YBCU life history and monitoring studies began in FY06. Prior to the creation of riparian habitat under the LCR MSCP, the only large breeding population of cuckoos was on the BWRNWR, with few scattered pairs elsewhere on the LCR. Within the past five years, in addition to the BWRNWR, multiple pairs of cuckoos have been confirmed breeding at PVER, CVCA, and 'Ahakhav Tribal Preserve, with

occasional pairs at HNWR, INWR and CNWR, in addition to detections at other sites on the LCR. Nesting has also been confirmed as late as September at some sites.

FY12 Accomplishments: In FY12, monitoring and research activities continued. Surveys were conducted system-wide and at all restoration sites. Activities included presence/absence surveys, vegetation monitoring, microclimate data collection, telemetry, nest searching, and monitoring and prey studies.

Call-playback surveys were conducted for yellow-billed cuckoos at sites within the LCR MSCP area in potentially suitable habitat. Surveys were conducted at 49 sites along the Muddy, Virgin, Bill Williams, Gila, and lower Colorado rivers, including LCR MSCP restoration sites that contained appropriate habitat. Cuckoos were detected 282 times during the breeding season, representing an 80 potential breeding pairs. Thirty confirmed breeding territories were located at the following sites: Bill Williams River NWR (1), Palo Verde Ecological Reserve (24), Cibola Valley Conservation Area (3), and the Cibola Crane Roost site at Cibola National Wildlife Refuge Unit #1(2). Twenty-eight nests were found and monitored.

Thirty-seven adults were captured, with 33 newly color-banded and 4 recaptured from previous years. Twenty-three young from 11 nests were also color-banded. Five new dispersal events were recorded, supporting continued evidence of high male site fidelity. Four adults all returned to their previous breeding sites (one at CVCA and three at PVER). A returning banded nestling also returned to her natal area (PVER). One female fitted with a geo-locator in 2011 (in order to monitor movement year-round) returned to the area where she was captured and was recaptured. Data are still being analyzed on her activities over the year. Twenty-eight adult cuckoos were radio-tracked, with 27 of these tracked for at least 2 days. Tracked birds had home ranges estimates of 28.4 acres. Microclimate monitoring indicated nest locations were more humid and had significantly cooler diurnal temperatures compared to available habitat, supporting results from previous years.

The current survey protocol was evaluated and suggests that changes to the timing of surveys during the peak period of reproduction would improve detection of cuckoos: there will now be three surveys in July, rather than two, with one survey in June and one in August. The wide-ranging behavior and lack of strict territory boundaries of cuckoos precludes the confirmation of nesting with surveys alone. Instead, criteria defining “possible”, “probable”, and “confirmed” nesting have been developed based on survey results combined with observed behaviors of cuckoos.

FY13 Activities: Activities in FY13 will involve the solicitation of a new contract to continue work similar to previous years, as 2012 was the final year for the project under the existing contract.

Proposed FY14 Activities: Work will continue as in previous years and include presence/absence surveys, nest monitoring, banding and habitat surveys.

Pertinent Reports: *Yellow-billed Cuckoo Distribution, Abundance, and Habitat Use on the Lower Colorado River and Tributaries, 2011 Annual Report* has been posted to the website and the 2012 report will be posted when final.