

## Work Task C62: Lowland Leopard Frog and Colorado River Toad Habitat and Ecology Study

FY16 Estimate	FY16 Actual Obligations	Cumulative Expenditures Through FY16	FY17 Approved Estimate	FY18 Proposed Estimate	FY19 Proposed Estimate	FY20 Proposed Estimate
\$150,000	\$147,788.13	\$417,310.00	\$25,000	\$0	\$0	\$0

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

**Start Date:** FY14

**Expected Duration:** FY17

**Long-Term Goal:** To gather data on the ecology and habitat of the lowland leopard frog (*Rana yavapaiensis* = *Lithobates yavapaiensis*) and Colorado River toad (*Bufo alvarius* = *Incilius alvarius*) to evaluate the feasibility of implementing a pilot introduction into unoccupied habitat

**Conservation Measures:** CRT01, CRT02, CRT03, LLFR1, LLFR2, and LLFR3

**Location:** LCR MSCP planning area and the Bill Williams River, Agua Fria River, and Verde River watersheds

**Purpose:** The purpose of this work task is to document lowland leopard frog and Colorado River toad habitat characteristics and measurable ecological factors that may limit each species' distribution. This will inform future decisions on the feasibility of establishing lowland leopard frogs and Colorado River toads in an unoccupied habitat.

**Connections with Other Work Tasks (Past and Future):** Preliminary data collected under Work Task D12 will be expanded upon in this study.

**Project Description:** Surveys for lowland leopard frogs and Colorado River toads in the past have located very few populations in the LCR MSCP planning area, and habitat requirements are not well documented. Surveys for both species will be conducted to find breeding areas and document egg mass locations and measurable habitat parameters at breeding sites. Habitat parameters may include the presence of non-native predators, minimum and maximum water depth and temperature, substrate type (e.g., gravel and sand), water temperature, pH, turbidity, stream discharge, and vegetation composition. As the Bill Williams

River is the only known occupied area for either species within the LCR MSCP planning area, other similar river systems may be surveyed so the sample size will be statistically robust to support research findings.

**Previous Activities:** Field work began in July 2014 to locate occupied breeding habitat for the Colorado River toad within the Bill Williams River, Agua Fria River, and Verde River watersheds. Breeding was confirmed in all three watersheds, with the majority occurring at Adobe Dam in the Agua Fria River watershed. Lowland leopard frog surveys began in FY15 along the Bill Williams River and the Big Sandy River within the Bill Williams River watershed and historical locations along the Agua Fria and Verde Rivers. Sufficient lowland leopard frog egg masses and breeding habitat data were collected in FY15, so further egg mass searches for this species were not required. Egg masses for Colorado River toad were found in FY14 but not in FY15.

**FY16 Accomplishments:** Monitoring for the Colorado River toad was completed in fall 2016, with no additional egg masses found; therefore, Colorado River toad breeding habitat was characterized for the FY16 annual report with data from 19 egg masses detected in FY14.

**FY17 Activities:** Data analyses and the final report will be completed in June. The work task will close in September.

**Proposed FY18 Activities:** This work task was closed in FY17.

**Pertinent Reports:** The *Ecology and Breeding Habitat of Colorado River Toads – 2015 Annual Report* will be posted on the LCR MSCP Web site upon completion.