

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

FY14 Estimate	FY14 Actual Obligations	Cumulative Expenditures Through FY14	FY15 Approved Estimate	FY16 Proposed Estimate	FY17 Proposed Estimate	FY18 Proposed Estimate
\$200,000	\$192,514.27	\$40,205.32	\$180,000	\$180,000	\$25,000	\$0

Contact: Allen Calvert, (702) 293-8311, acalvert@usbr.gov

Start Date: FY14

Expected Duration: FY17

Long-Term Goal: To gather data on the ecology and habitat of the lowland leopard frog and Colorado River toad to evaluate the feasibility of implementing a pilot introduction into unoccupied habitat

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

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

Purpose: 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 frog and Colorado River toad in 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 the lowland leopard frog and Colorado River toad 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. Presence of the lowland leopard frog and Colorado River toad, their breeding sites, egg mass locations and measurable habitat parameters at their breeding sites will be documented, including 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: This is a new start in FY15.

FY14 Accomplishments: Field work began in July to locate occupied breeding habitat for the Colorado River toad at study sites within the watershed of Bill Williams River and also along the Aqua Fria and Verde River watersheds, as a sufficient sample size of sites was not available on the Bill Williams River. Breeding was confirmed in all three watersheds, with the majority occurring within one site (Adobe Dam) in the Agua Fria River watershed. Habitat data were collected where egg masses were discovered.

FY15 Activities: Monitoring continued for the Colorado River toad into the fall of 2014 and will resume at the start of the next breeding season in the summer of 2015. Starting in February, lowland leopard frog breeding sites along the Bill Williams River and its tributaries will be surveyed. Surveys may also be conducted within the Aqua Fria and Verde River watersheds if sample sizes along the Bill Williams River are too small.

When egg masses are discovered, they will be recorded, and the following habitat data will be collected: 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.

Proposed FY16 Activities: Field work will continue in the same manner as previous years, focusing on the different breeding seasons of each species. This will be the final year breeding/egg mass data will be collected for the Colorado River toad.

Pertinent Reports: The *Ecology and Breeding Habitat of Colorado River Toads 2014 Annual Report* will be posted on the LCR MSCP Web site upon completion.