

Work Task D12: Lowland Leopard Frog and Colorado River Toad Surveys

FY12 Estimate	FY12 Actual Obligations	Cumulative Expenditures Through FY12	FY13 Approved Estimate	FY14 Proposed Estimate	FY15 Proposed Estimate	FY16 Proposed Estimate
\$150,000	\$238,443.61	\$188,324.93	\$125,000	\$25,000	\$25,000	\$25,000

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Start Date: FY10

Expected Duration: FY17

Long-term Goal: Determine the extant populations of the lowland leopard frog and Colorado River toad along the LCR, and understand their habitat requirements.

Conservation Measures: LLFR1, CRT01.

Location: Within reaches 3-7 of the LCR MSCP boundary and the Bill Williams River.

Purpose: To better define distribution, habitat requirements, and factors limiting the distribution of the lowland leopard frog and Colorado River toad using a system-wide monitoring approach.

Connections with Other Work Tasks (past and future): Populations that were found during the previous 3 years will be monitored as part of a more detailed habitat analysis (work task C62) that will help determine the feasibility of establishing populations of either species in unoccupied habitat.

Project Description: A system-wide survey for these two species will be conducted along the LCR and the Bill Williams River. It is unknown if any extant populations exist for either species along the LCR. The lowland leopard frog has been observed on the Bill Williams River and surveys will help determine the stability of this population. If it is decided to attempt to establish this species by reintroduction along the mainstem LCR, the Bill Williams River population would be the most likely source. Habitat characteristics will also be gathered in conjunction with surveys where presence of either species is confirmed.

Previous Activities: In FY11, 139 locations were surveyed with only six Colorado River toads being found within Planet Ranch. No lowland leopard frogs were found in the first year, and neither species was detected along the mainstem LCR.

FY12 Accomplishments: Funds were pre-obligated for work expected in FY13; thus, FY13 obligations should decrease. The second year of the project was completed with

184 locations visited. Topock Gorge and the Bill Williams River were the main focus for this year's surveys, though locations were visited throughout reaches 3-7. A robust population of lowland leopard frogs was discovered along the Bill Williams River, just east of Planet Ranch. Frogs were found through all survey periods and breeding was confirmed. Colorado River toads were also found just east of Planet Ranch, mainly in the sandy uplands adjacent to the Bill Williams River. A preliminary habitat analysis was conducted at 21 leopard frog locations and 13 toad locations. Additional non-use habitat data was collected to compare with occupied habitat. Leopard frog habitat was found to contain shallow slow moving water with some emergent vegetation and little to no non-native predators. Colorado River toad habitat was mainly upland sandy desert habitat with a low density of shrubs such as creosote. Some toads were found near water in areas similar to leopard frog habitat. Also, Mexican garter snakes (a candidate for federal listing) were found in the same area of the Bill Williams River. They preferentially prey on amphibians, including the lowland leopard frog. Neither species of amphibian were detected on the mainstem LCR for the second year in a row.

FY13 Activities: The third year of the project will begin and an annual report will be completed based on data collected during the first two years. An additional field crew may be added this year to increase the chance of finding either species. A new technique known as eDNA will be tested. It consists of taking water samples and analyzing them for the presence of DNA of target species within the water column.

Proposed FY14 Activities: A final report for the first 3 years of the project will be completed. The eDNA technique may be utilized to continue monitoring the mainstem LCR and lower Bill Williams River for presence of either species.

Pertinent Reports: Annual reports for FY11 and FY12 will be posted on the website.