

Work Task D10: System Monitoring of Rodent Populations

FY09 Estimates	FY09 Actual	Cumulative Accomplishment Through FY09	FY10 Approved Estimate	FY11 Proposed Estimate	FY12 Proposed Estimate	FY13 Proposed Estimate
\$0	\$0	\$52,197.81	\$0	\$65,000	\$65,000	\$65,000

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Start Date: FY11 (re-opened from FY07 closed work task)

Expected Duration: FY55

Long-term Goal: System monitoring studies to document presence of possible source populations of LCR MSCP covered rodents along the LCR and at nearby historic localities.

Conservation Measures: AMM1, AMM6, MRM2, DPMO1, CRCR1, CRCR2, YHCR1, and YHCR2

Location: System-wide along the Lower Colorado River, including the Bill Williams and Gila tributaries and the nearby Imperial Valley.

Purpose: Implement systematic presence/absence sampling for system monitoring of LCR MSCP covered rodent species. This study is being conducted to determine the extent of the geographic range limits of the covered rodent species the Yuma hispid cotton rat, the Colorado River cotton rat, and the desert pocket mouse. Another goal of this study is to document all possible source populations of immigrants to restoration sites, to the extent practicable. The Yuma hispid cotton rat has been detected at several locations in Reach 6; however, a stable or even consistent population has yet to be identified, making habitat analysis difficult.

Connections with Other Work Tasks (past and future): Due to lack of information on genetics of the species and distributional locations, system monitoring was delayed until populations could be located utilizing species research under C27. System monitoring will begin in FY11 utilizing a long-term population monitoring protocol currently being designed under C27. System monitoring will be used in conjunction with post-development monitoring (F3) and small mammal research (C27) to determine habitat needs and likely source populations for covered rodent species. Data will be used in future habitat creation project design under Section E.

Project Description: This study is designed to determine the presence of the Colorado River cotton rat and the Yuma hispid cotton rat in an attempt to document all current and any newly established populations on or near the LCR. Reclamation is also interested in

the geographic limits of the desert pocket mouse and how future restoration activities may affect the habitat of this species.

Ecological niche models (ENM) for each of the species will be developed by Reclamation using historic collection data and museum locality information. Ground, boat, and aerial surveys for potential habitat followed by presence/absence trapping will be concentrated in the core predicted areas from the ENM. Surveys will also be conducted in the extreme edges of each species' range in an attempt to document the outer limits of their respective distributions. Particular attention will be given to the area surrounding the proposed barrier between the two cotton rat species, the Trigo Mountains and the Chocolate Mountains, to determine whether the species are in fact geographically isolated by this barrier. Potential site surveys will be based on the ENM, habitat availability in the area, and expert knowledge. Because cotton rat populations are known to experience extreme cycles, multiple sampling occasions across different years and seasons will be conducted before determining that a species is absent from a particular site.

Previous Activities: This is a new start in FY11.

FY09 Accomplishments: This is a new start in FY11.

FY10 Activities: This is a new start in FY11.

Proposed FY11 Activities: Work will be coordinated with state and federal resource agencies and other interested parties to implement system-wide rodent surveys for covered species. Emphasis will be on aerial and ground surveys for Yuma hispid cotton rat habitat from the Trigo and Chocolate mountains south to the Mexican border. Other surveys will include the Bill Williams River and Gila River tributaries for the Colorado River cotton rat and northern Lake Mead for the desert pocket mouse.

Pertinent Reports: Final reports for other rodent work tasks (C27 and F3) are available on the LCR MSCP Web site.