

Work Task F3: Small Mammal Colonization of Conservation Areas

FY13 Estimate	FY13 Actual Obligations	Cumulative Expenditures Through FY13	FY14 Approved Estimate	FY15 Proposed Estimate	FY16 Proposed Estimate	FY17 Proposed Estimate
\$55,000	\$39,625.36	\$316,222.38	\$60,000	\$55,000	\$60,000	\$60,000

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Start Date: FY05

Expected Duration: FY55

Long-term Goal: Conduct pre- and post-development monitoring for small mammal species.

Conservation Measures: YHCR1, CRCR1, DPMO1, MRM2 (DPMO, CRCR, YHCR).

Location: Beal Lake, Havasu NWR; PVER, California; CVCA, Cibola Nature Trail, Laguna Division Conservation Area.

Purpose: Monitor small mammal populations within habitat creation sites. Data will be used in the adaptive management process to guide the design of future habitat creation projects targeting covered small mammal species.

Connections with Other Work Tasks (past and future): Post-development small mammal monitoring will be conducted at habitat creation sites listed in Section E. In addition, information obtained from this work task, in conjunction with C27 and D10, will be used to define habitat requirements for future habitat creation projects. Data from C27 and D10 will aid in design of population monitoring protocol.

Project Description: Presence/absence surveys will be conducted in restoration demonstration and habitat creation sites to determine small mammal occurrence. These efforts will be focused on detecting the presence of Yuma hispid cotton rats and Colorado River cotton rats at these sites. Once presence is established at a restoration site, population monitoring will be conducted with a protocol developed under C27 and data collected under D10.

Previous Activities: In previous years, small mammal surveys have been conducted at the Cibola NWR Unit #1 and at the Pratt Agricultural site. Several cotton rats have been captured at each site (Yuma hispid at Pratt and Colorado River cotton rat at Cibola). At the Pratt Agricultural site, Yuma hispid cotton rats were captured in dense *Baccharis* spp., and at the Cibola NWR Unit #1, Colorado River cotton rats were captured in dense Johnsongrass. Presence/absence live trapping surveys were conducted at several habitat creation sites during FY06, but only one Colorado River cotton rat was captured at the

Beal Lake Riparian Restoration site. In 2007, cotton rats were found at the Cibola NWR Unit #1, Imperial NWR, and at a reference site between Laguna Dam and Mittry Lake north of Yuma, Arizona. In 2008, one cotton rat was captured during pre-development monitoring in adjacent habitat at the Imperial National Wildlife Refuge site. A new cotton rat population was found near Palo Verde Ecological Reserve. In 2009, 2010, and 2011 surveys detected cotton rats at the Cibola NWR Unit #1 and the bench population near PVER. In 2012, Colorado River cotton rats were found at Big Bend Conservation area, Beal, PVER, CVCA, and Cibola NWR Unit 1.

FY13 Accomplishments: Surveys were conducted at Beal, PVER, CVCA, Cibola NWR Unit #1, Big Bend Conservation Area, Yuma East Wetlands, and Hunter's Hole. Cotton rats were captured within all areas except Hunters Hole. Captures at Yuma East were the first captures of the Yuma hispid cotton rat within a LCR MSCP conservation area. Only one Colorado River cotton rat was found at Beal in FY13. Phases 2, 4, 5, and 6 were trapped at PVER and cotton rats were captured in phases 4, and 5. Phases 1, 2, 3, and 4 were trapped at CVCA and Colorado River cotton rats were captured at phases 1, 2, and 4.

FY14 Activities: Presence/absence live trapping surveys will continue as part of the post-development monitoring efforts at all habitat creation sites surveyed in 2013.

Proposed FY15 Activities: Presence/absence live trapping surveys will continue as part of the post-development monitoring efforts at all habitat creation sites surveyed in 2014.

Pertinent Reports: Annual reports will be posted on the LCR MSCP website.