

Work Task F3: Small Mammal Colonization of Conservation Areas

FY11 Estimate	FY11 Actual Obligations	Cumulative Expenditures Through FY11	FY12 Approved Estimate	FY13 Proposed Estimate	FY14 Proposed Estimate	FY15 Proposed Estimate
\$60,000	\$53,952.06	\$255,071.98	\$55,000	\$55,000	\$55,000	\$55,000

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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 aide 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 animals from the genus *Sigmodon* have been captured at each site. 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. No cotton rat species has been captured at Pratt Agricultural since 2005. 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 very close to the Palo Verde Ecological Reserve during a different study. In 2009 and 2010 surveys detected cotton rats at the Cibola NWR Unit #1 and the bench population near PVER.

FY11 Accomplishments: Surveys were conducted at PVER, CVCA, Cibola NWR Unit #1, and pre-development surveys were conducted at the Laguna Division Conservation Area. Cotton rats were captured within all four areas.

FY12 Activities: Presence/absence live trapping surveys will continue as part of the post-development monitoring efforts at LCR MSCP habitat creation sites. In the fall of 2011, a grassy area was discovered within the Beal Lake Conservation Area. Thirty traps were set during a single night of trapping which produced three cotton rats. This is the first time since 2006 that cotton rats have been found at the site. Previously, no grassy areas large enough to support a population were found within the habitat creation area.

Proposed FY13 Activities: Post-development monitoring activities will continue for small mammals at habitat creation sites and adjacent areas.

Pertinent Reports: A summary of mammal trapping results at LCR MSCP restoration sites 2010 will be posted on the LCR MSCP website. The population monitoring protocol is available upon request.