

Work Task C35: Western Red Bat and Western Yellow Bat Roosting Characteristics Study

FY11 Estimate	FY11 Actual Obligations	Cumulative Expenditures Through FY11	FY12 Approved Estimate	FY13 Proposed Estimate	FY14 Proposed Estimate	FY15 Proposed Estimate
\$150,000	\$146,076.28	\$21,849.74	\$175,000	\$150,000	\$0	\$0

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Start Date: FY10

Expected Duration: FY13

Long-term Goal: To determine roosting characteristics for the western red bat and western yellow bat.

Conservation Measures: MRM1 (WRBA, WYBA).

Location: Within the LCR MSCP project boundary, Bill Williams River NWR, and other riparian areas where western red bats and/or western yellow bats are known to occur.

Purpose: To better define roosting characteristics for the two species using radio telemetry.

Connections with Other Work Tasks (past and future): Work tasks D9 and F4 determine the distribution of each species and determine areas in which to capture the target species.

Project Description: Radio transmitters will be attached to both western red bats and western yellow bats. These bats will then be tracked to their roosting sites (in trees) during the day to pinpoint their roosting locations. Vegetation measurements will be collected at both known roost sites as well as random non-use sites to determine whether these bat species have specific roosting characteristics. These data will be used to design habitat creation projects for these species.

Previous Activities: Preliminary mist-netting was conducted to determine likely areas where red and yellow bats could be captured both on the LCR and elsewhere. Equipment was purchased for the project.

FY11 Accomplishments: This was the first year of the project. One western red bat was captured and tracked at the 'Ahakhav Tribal Preserve (AKTP) and another was captured and tracked at the Palo Verde Ecological Reserve (PVER) during the cold season (February-March). During the warm season (May-July), six red bats were captured across three sites: PVER, Cibola Valley Conservation Area (CVCA), and the San Pedro River Preserve. Red bats were most often found roosting in Fremont cottonwoods, but other trees that were used included coyote willow, Athel tamarisk, and Mexican fan palm. Most red bats captured within habitat creation areas were

tracked back to roosting locations within those areas. Preliminary analysis shows a possible roosting preference based on patch scale characteristics rather than specific tree characteristics.

A total of nine western yellow bats were captured (all during the warm season) across five sites: a re-vegetation area at Havasu NWR, AKTP, PVER, CVCA, and Cienega Park, Tucson, Arizona. All yellow bats except one were tracked back to Mexican fan palms. A single yellow bat captured at Havasu NWR that was released on a cottonwood near the capture site was found in the same location the next day and was never found on any subsequent visits. Preliminary analysis shows that yellow bats may have a tree specific roosting preference that is highly correlated with palm trees with large skirts of dead fronds.

FY12 Activities: The project will continue in 2012 at all the same sites as 2011 except for Cienega Park. Two additional sites will be added on the Santa Cruz River in order to increase the likelihood of capturing enough individuals to track from each species. Vegetation data will again be collected and analyzed. Additional analyses will be conducted to determine if the sample size is high enough for statistically robust data for roosting characteristics and management recommendations. A preliminary analysis from the first year shows that a third year may be warranted.

Proposed FY13 Activities: The project will continue by capturing and tracking more bats to roosting locations and vegetation analysis will be conducted to increase statistical robustness. Information on roosting requirements and management recommendations for habitat creation areas will be presented in a final report.

Pertinent Reports: The study plan and FY11 annual report are available upon request.