

Work Task C36: Elf Owl Detectability Study

FY09 Estimates	FY09 Actual	Cumulative Accomplishment Through FY09	FY10 Approved Estimate	FY11 Proposed Estimate	FY12 Proposed Estimate	FY13 Proposed Estimate
\$0	\$0	\$0	\$50,000	\$50,000	\$ 50,000	\$0

Contact: Beth Sabin, (702) 293-8435, lsabin@usbr.gov

Start Date: FY09

Expected Duration: FY12

Long-term Goal: To determine modifications needed to the current tape-playback presence/absence elf owl survey protocol and to develop a long-term elf owl monitoring plan for the LCR MSCP.

Conservation Measures: MRM1 (ELOW)

Location: Bill Williams River

Purpose: To conduct a detectability study on a known population of elf owls that breed in riparian habitat.

Connections with Other Work Tasks (past and future): This study will be used to modify the survey protocol used for system-wide (D6) and post-development (F2) presence/absence elf owl surveys. This study will also be used to develop a long-term elf owl monitoring plan for the LCR MSCP.

Project Description: Data to support the current tape-playback presence/absence elf owl survey protocol are lacking. A detectability study will be conducted on a known population of elf owls that breed in riparian habitat along the Bill Williams River. If the population is not large enough, then other populations away from the LCR region, but within other desert riparian areas in the Southwest may be studied.

The objectives of this study are to 1) systematically test how varying the parameters of call-playback surveys (distance to owl, time of night, decibel level of call playback, habituation, duration of call playback) affects the response type and response time of elf owls in known locations, 2) recommend survey protocols that optimize detectability, and recommend the number of seasonal surveys and amount of long-term survey effort required for effective population monitoring, and 3) quantify the likelihood of detection if the recommended methods are implemented. Data from this study may be used to modify the existing elf owl presence/absence survey protocol.

Previous Activities: None

FY09 Accomplishments: Elf owl protocol evaluation began in FY09 during system monitoring activities initiated under D6.

FY10 Activities: A study plan was completed in January 2010. The study will begin in early March and take place at the Bill Williams River National Wildlife Refuge.

The goals of this study are to quantitatively determine the detectability of elf owls using standard call-playback methods, and to identify the survey parameters that produce the best results. To accomplish this, a minimum of 12 elf owls will be radio-tagged to determine their location with a relatively high degree of precision. Call-playback surveys will be conducted using a variety of different protocol parameters, and responses will be recorded. During the first season, data will be collected and analyzed for distance to bird, time period of survey, and playback volume. The first field season will provide data on detectability under several different permutations of survey design. Data will be analyzed and an annual report will be written.

Proposed FY11 Activities: The study will continue for a second year with field work beginning in March. The second season will be devoted to fine tuning of the protocol, and confirming conclusions from the first season's findings. Data will be analyzed and a final two-year project report will be submitted to Reclamation. This report will include suggested changes to the current protocol.

Pertinent Reports: The study design is available upon request.