

U.S. Fish and Wildlife Service  
**Determination for Issuing a Single Source Financial Assistance Award**

**Instructions:** In accordance with Service policy 516 FW 6, *Issuing Discretionary Grant and Cooperative Agreement Awards without Competition*, complete this form to document the justification for issuing a single source grant or cooperative agreement award. This form must be signed by both a program representative and the employee with signature authority for the award to be issued (see 516 FW 3, *Signature Authority for Grant and Cooperative Agreement Awards*). The completed and signed form must be maintained in the official award file.

Recipient Name: University of California, Davis

Project Title: Captive Breeding and Translocation of the Endangered Amargosa Vole

Program Contact: Brian Croft

Select all criteria that apply (from 505 DM 2):

|                                     |                                                                                                                                                                                                                                                                                                    |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/>            | (1) Unsolicited Proposal: The proposed award is the result of an unsolicited application that represents a unique or innovative idea, method, or approach that is not the subject of a current or planned award, but is found to be advantageous to program objectives.                            |
| <input type="checkbox"/>            | (2) Continuation: The activity to be funded is necessary for the satisfactory completion of, or is a continuation of, an activity we are funding and holding a competition would have a significant adverse effect on continuing or completing the activity.                                       |
| <input type="checkbox"/>            | (3) Legislative Intent: The language in the applicable authorizing legislation or legislative history clearly indicates the intent of Congress to restrict the award to a particular recipient or purpose.                                                                                         |
| <input checked="" type="checkbox"/> | (4) Unique Qualifications: The applicant is uniquely qualified to perform the activity based on a variety of demonstrable factors such as location; property ownership; voluntary support capacity; cost-sharing ability, if applicable; technical expertise; or other such unique qualifications. |
| <input type="checkbox"/>            | (5) Emergencies: Because of a compelling and unusual urgency, or substantial danger to health or safety, there is not enough time to follow adequate competitive procedures.                                                                                                                       |

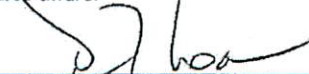
Explain below why competition for this award is not practical. As applicable, summarize the program legislative history, unique capabilities of the proposed recipient, and any cost-sharing contribution offered by the proposed recipient. Be brief and specific:

This project will fund trapping and monitoring of colony-released and native wild voles to determine population size, individual health, and genotype. Funding will also be used to implement a newly developed rad-seq single nucleotide polymorphism-based genetic analysis of all colony-released and captured voles, and to deploy and monitor 10 additional VHF radio collars on voles. University of California at Davis is uniquely qualified to perform the work in the agreement because they already maintain a captive colony and they have the knowledge needed to trap additional individuals as well as conduct monitoring and genetic analysis on all released and new voles. This project is contingent upon the availability of funds.

I have determined that this project meets the requirements for a single source award and recommend that it be awarded to the recipient named above.

  
JUN 09 2015  
\_\_\_\_\_  
Program Representative Sign and Date  
G. Mendel Stewart, Field Supervisor  
\_\_\_\_\_  
Printed Name of Program Representative

I, as the Service employee with signature authority for this award under 516 FW 3, have reviewed this program recommendation and find that it meets the requirements for a single source award.

  
6/17/15  
\_\_\_\_\_  
Authorized Signator Sign and Date  
Darrin Thome, Deputy ARD, ES, Region 8  
\_\_\_\_\_  
Printed Name of Signator

FWS 3-2452  
11/25/2013

*F15A500298*

## CAPTIVE BREEDING AND TRANSLOCATION OF THE ENDANGERED AMARGOSA VOLE

### Principal Investigator:

Janet Foley, DVM, PhD, School of Veterinary Medicine, University of California, Davis CA,  
jefoley@ucdavis.edu, 530-754-9740

### Project Objectives

The overall objectives of the project are:

- 1) To maintain a genetically diverse captive breeding colony of Amargosa voles (*Microtus californicus scirpensis*);
- 2) to determine how to successfully transport, release, and integrate colony voles into native habitat; and
- 3) to assess the impacts of these releases on the extant vole subpopulations.

The colony is located at UC Davis. It functions as: 1) an insurance colony in case of extirpation or extinction in the wild, and 2) a source from which to translocate voles to sites in the wild to augment existing subpopulations and establish subpopulations at historic sites in Shoshone and Tecopa (recovery task 54). Although basic facilities and support for the colony are already available, we seek funding to cover gaps in our knowledge and implementation of the survival of captive-reared voles released in the wild, and to assess the effect of these releases on the extant subpopulations. Funds would be used to trap and monitor colony-released and native wild voles to determine population size, individual health, and genotype (recovery task 22). Funding will also be used to implement a newly developed rad-seq single nucleotide polymorphism-based genetic analysis of all colony-released and captured voles, and to deploy and monitor 10 additional VHF radio-collars on voles (recovery tasks 23, 41, and 42).

Understanding how to maintain genetic diversity in the colony and how to integrate colony voles successfully into occupied and unoccupied native habitat is needed to recreate vole subpopulations in previously occupied habitat and shore up low subpopulations. Successful implementation of these actions will result in metapopulations of voles being restored, thus helping to preclude a high likelihood of extinction in less than 20 years and working toward recovery.

### Project Tasks

1. **Vole translocation:** During a 12-month period, 4 release events of Amargosa voles into native habitat will be performed and monitored by radio-telemetry and retrapping.
2. **Population trapping and monitoring:** Trapping will be conducted at release sites to identify recaptured voles and estimate population size and density, as well as individual animal health. Radio-telemetry will be performed for animals with collars to detect movement, establishment of home range, and survival.
3. **Genetic Analysis:** A rad-seq single nucleotide polymorphism method for assessing vole genotypes and population structure will be performed on all released and new voles in marshes where releases are occurring to infer population genetic characteristics of the subpopulation and integration by breeding of released animals.

4. **Data Analysis and Reporting:** A report will be prepared detailing the findings of the study. The report will include summary statistical analysis of the data, maps, interpretations of results assessing impacts of the release, and recommendations for releases as an ongoing tool for managing the species.

Project Timeline

July 2015- June 2016 – Releases into the wild

August 2015- June 2016- Trapping

Fall and Spring 2015 and 2016 – Genetic Analysis

Summer 2016 – Report preparation

September 1, 2016- Draft final report submitted to USFWS

December 1, 2016 - Final report submitted after incorporating comments from USFWS on draft final report

Budget Table

|                                                                         |  |                 |
|-------------------------------------------------------------------------|--|-----------------|
| Labor/benefits                                                          |  |                 |
| Junior specialist, 25% time, salary and benefits                        |  | \$11,000        |
| Field supplies (boots, bleach, bait, flagging, supplemental traps etc.) |  | \$3,000         |
| Supplies for genetic testing, field and laboratory                      |  | \$9,600         |
| Telemetry equipment (VHF collars and software, etc.)                    |  | \$3,160         |
| Travel for releases and monitoring                                      |  | \$8,130         |
| Overhead, 17.5%                                                         |  | \$6,111         |
| <b>TOTAL</b>                                                            |  | <b>\$41,001</b> |