



Briefing Statement

Date: May 20, 2010

Title: Mohave Ground Squirrel Research Strategy

Issue: Mohave Ground squirrel research needed to inform development of conservation strategy and Desert Renewable Energy Conservation Plan.

Background/Discussion

Detecting Mohave ground squirrels (MGS) and monitoring population trends is challenging due to extreme distributional heterogeneity within an extensive geographic range and limited annual activity. Yet, presence and trend data are critical for assessing population status and developing effective conservation strategies. In addition to the difficulty in determining the MGS population status, there is a general uncertainty of the animals range, distribution, and specific habitat requirements. MGS is listed as endangered under the California Endangered Species Act and is petitioned for listing under the federal Endangered Species Act. The U.S. Fish and Wildlife Service (FWS) published a positive 90-finding April 27. FWS request any additional information about the squirrel by June 28.

Research Strategy Update

At the last meeting, DMG approved a research strategy for MGS that involved three components:

1. A workshop to identify the most effective, efficient strategies for detecting presence and monitoring population trends of MGS. Participants for the proposed workshop will include individuals with expertise in MGS biology, the Mojave Desert ecosystem, detection and monitoring methodology for secretive rodents, and statistical design and analysis. The goal is to use facilitated discussions to develop biologically and statistically rigorous protocols for detecting the presence of MGS and monitoring annual population trends.

This item remains unfunded and unscheduled. Due to workload, CDFG has not had resources to devote to anything beyond preliminary planning. A potential funding source has been identified and a preliminary budget is being put together.

2. Development of a peer reviewed, published habitat suitability model for MGS. A regional assessment of MGS potential habitat would provide an opportunity to develop surveying and management plans and likely provide insights into the habitat requirements and habitat connectivity of the MGS. A habitat suitability model will help inform conservation,

mitigation, and alternative energy planning. By developing a habitat suitability model with supporting documentation and data layers, the information can be made accessible to all interested parties and updated to as new data are available.

The USGS proposal to develop a habitat suitability model was funded by the California Energy Commission (CEC) Public Interest Energy Research (PIER) program. The USGS proposal, submitted by Drs. Todd Esque and Ken Nussear, will utilize many of the same data and techniques used to develop the habitat suitability for desert tortoise. In addition, the MGS habitat suitability model will have a landscape genetics component that will help elucidate corridors between core populations.

3. Collection of randomized presence absence data throughout and beyond the currently accepted MGS range. Much of the MGS presence-absence data is from project clearances and is not randomized. Additional monitoring will make model development more robust and will provide more information on range and habitat requirements.

A proposal to purchase thirty game cameras has been developed in consultation with Dr. Dave Delany. These cameras would make up ten camera grids that could easily be moved among randomized points throughout the historic range of MGS providing presence-absence data. The cost for the project is estimated at \$70k, which would include all necessary hardware, training and oversight by Dr. Delany, and staff time to maintain and move the cameras. A probable funding source has been identified but actual funding remains elusive.

Don Mitchell, of Ecorp Consulting, has also assembled a volunteer trapping effort in which fourteen transects were trapped.

All new survey data will feed into the USGS modeling effort to create a more statistically robust model.

Contacts

Russell Scofield, DOI Coordinator	russell_scofield@ca.blm.gov	760-365-0955
Bronwyn Hogan, CDFG HQ	bhogan@dfg.ca.gov	916-445-0726