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# Amargosa Vole Recovery Team

Case Study by Chris Otahal, Wildlife Biologist, Barstow Field Office

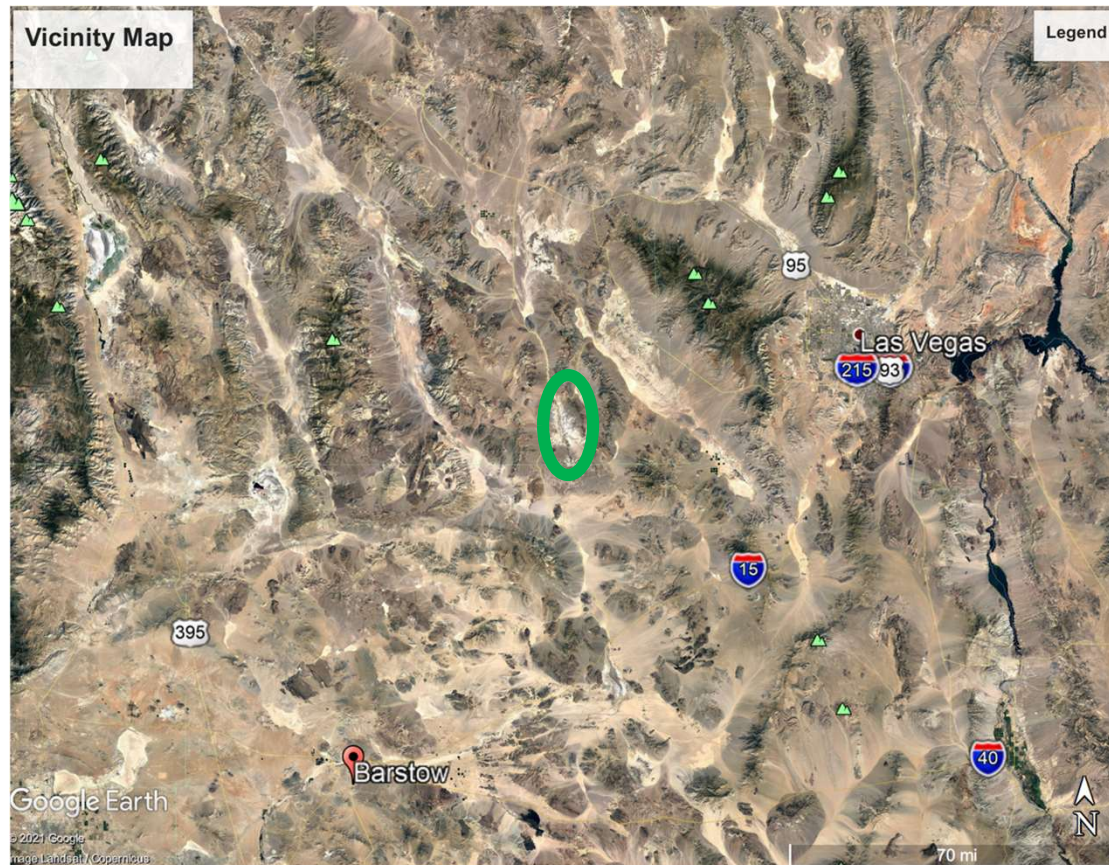


Endemic Bullrush Specialist



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# Where are the Voles?





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# Where are the Voles?



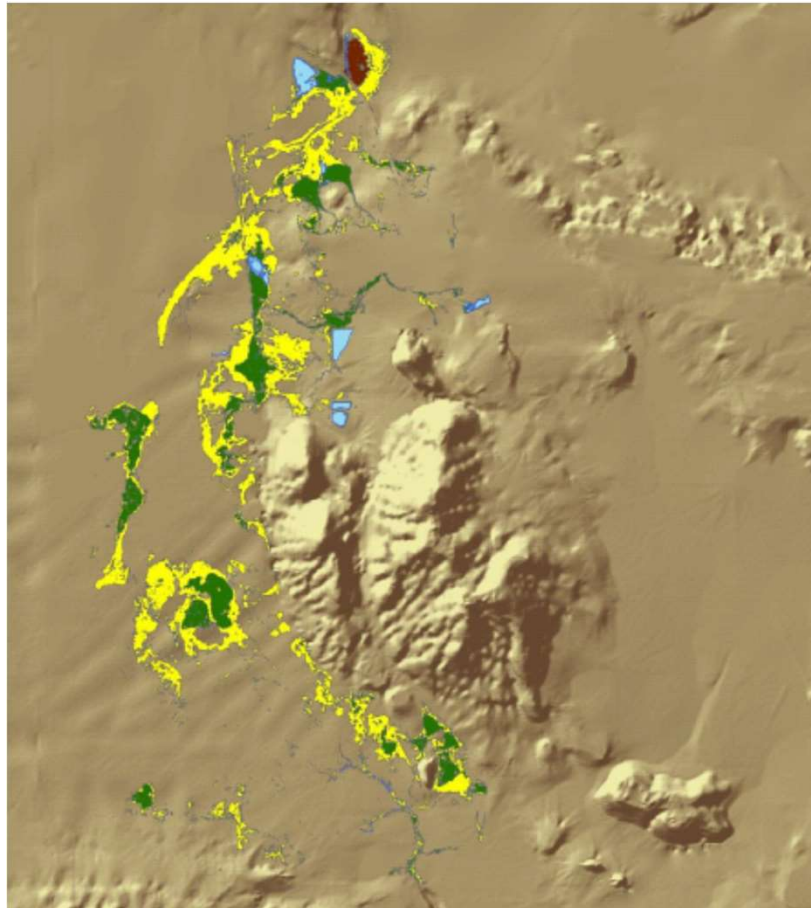


## Demographics 2012

1997 Amargosa Vole  
Recovery Plan: the estimated  
habitat for this species  
consisted of no more than  
500 acres and the population  
of voles was unknown at that  
time

2012 Surveys ...  
High Risk of Extinction

- 1 Year = 10%
- 5 Year = 82%
- 20 Year = 97%



- 2012 Conditions:
- a) Suitable habitat around 75 acres
  - b) Dispersed 55 habitat patches
  - c) Only one (maybe 3) source populations
  - d) Extremely low numbers - estimate of 75 in January 2012
  - e) 80-90% in one marsh < 5 acres Borehole Marsh



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# Amargosa Vole Team Established

Established in 2013 in response to findings

The purpose of the Amargosa Vole Team (AVT) is to function as a work group to provide a collaborative forum for BLM, Fish and Wildlife Service (FWS), the California Department of Fish and Wildlife (CDFW), researchers and private landowners to plan, coordinate, and implement actions that would prevent the extinction of the vole and ultimately result in its recovery or down-listing.

Chaired by BLM



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# Partners

**Amargosa Conservancy:** Advocacy, Outreach, Volunteers

**UC Davis:** Basic Biology, Demographic Studies, Research

**UC Berkeley:** Genetics

**Inyo County Road Department:** In-kind-Work

**California Fish and Wildlife Service:** Permitting, Demographic Studies, Funding

**U. S. Fish and Wildlife Service:** Consultation, Funding

**U. S. Geological Survey:** Statistical Analyses

**BLM – Field Office, District Office, State Office, Head Quarters Office:** Funding

**Individuals from the Public:** Conservation Projects, Local by-in and Support





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# Funding

**General Operating Budget from Field Office**

**Cooperative Ecosystem Studies Unit (CESU) Program**

**National Conservation System (NCS) Science Research Program**

**Targeted Funding from BLM Washington Office - National Threatened and Endangered Species Program**

**Targeted Funding from BLM State Office – State Threatened and Endangered Species Program**

**Traditional Section 6 Grants - U.S. Fish and Wildlife Service**

**State Emergency Drought Funds – California Fish and Wildlife**

**Fund Raising Events**



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# Capacity Building

Relatively modest input of operating budget funds >>>> Leverage to fund much larger program

Partners pursue funding with BLM support

Access funds not available to BLM

Partners are boots on the ground - Partners administer funds and do the work

**It takes a  
village!**







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# Recovery Action 1 – Establish Captive Colony



Original Goals (2013):  
Emergency Refugia  
Increase Number of  
Individuals – Release to  
Wild

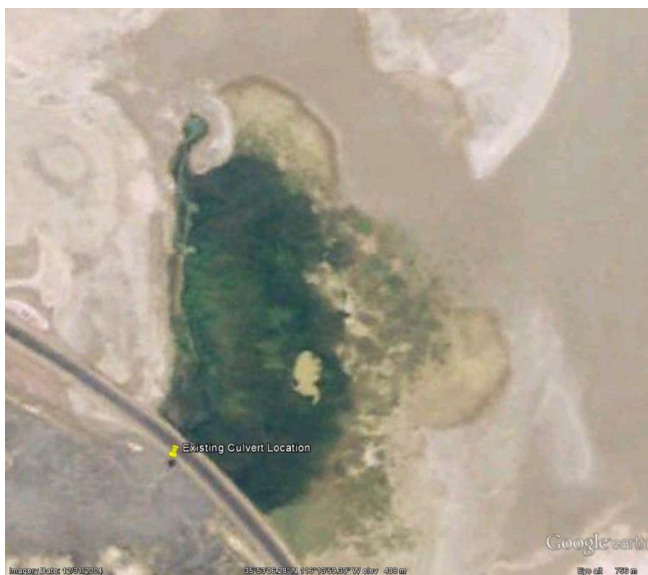
Current Situation: Considering closing facility

- a) Refugia No Longer Necessary
- b) Native Populations Increasing
- c) Habitat Improving
- d) Translocation More Effective
- e) Cost Savings



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## Recovery Action 2 – Stabilize Borehole Marsh



2005



2013



## Recovery Action 2 – Stabilize Borehole Marsh



2024





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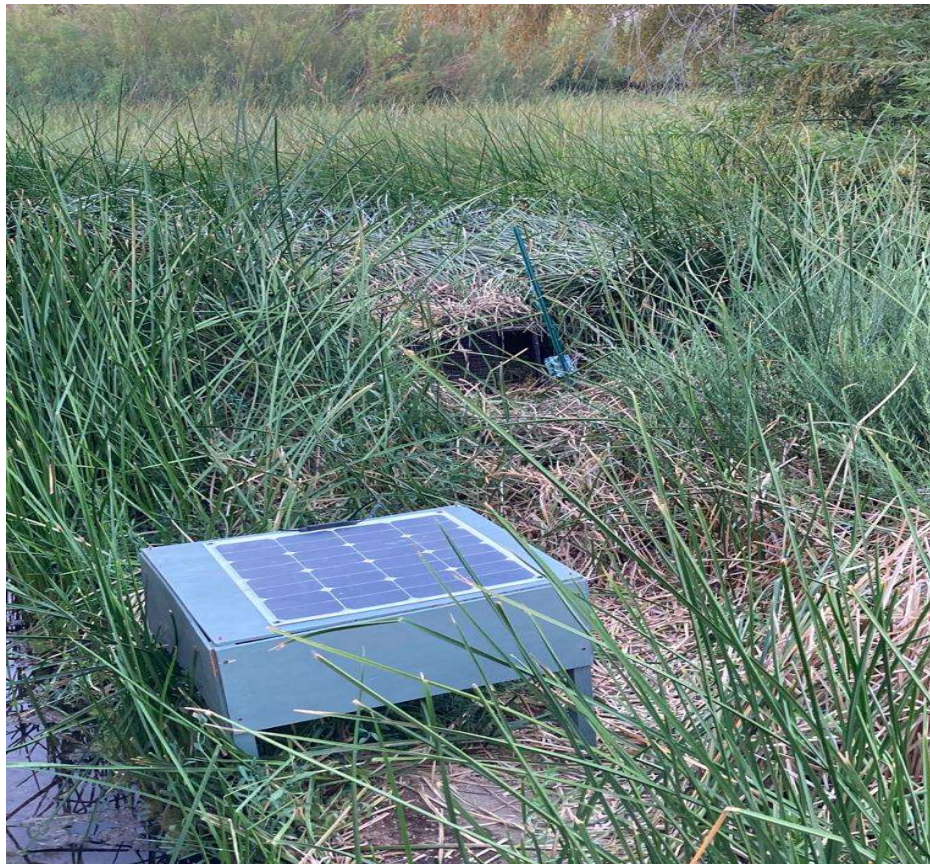
## Recovery Action 3 – Shoshone Refugia





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## Recovery Action 4 – Shoshone Refugia Release





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## Future Work



Mega-Marsh



Borehole Management



Range-wide Surveys



Water Rights



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## It's Working!

Most Endangered North American Mammal



Discussing Down-Listing

### **USFWS Recovery Champion 2020**

Martha Maciel, Acting Deputy Regional Director, USFWS, wrote in a congratulatory email, "The team's work is an excellent example of how Federal and State agencies, academic institutions, non-governmental organizations, and private partners can work together to conserve endangered species... Your exceptional work is helping to create the roadmap for long-term survival and recovery of this species."



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# Thank You For Your Attention

