

# Enhancing the Persistence of Narrow Endemic Plant Species:

*research to inform adaptive management*

San Diego Zoo Beckman Center  
November 21, 2013



# *Charismatic Megaflora?*



Pacific pocket mouse



Debra Shier

“Aw, how cute!”

Orcutt's  
spine-flower



J. Snapp-Cook

“*That's* Endangered??”





Pacific pocket mouse



Debra Shier

“Aw, how cute!”

Orcutt's spine-flower

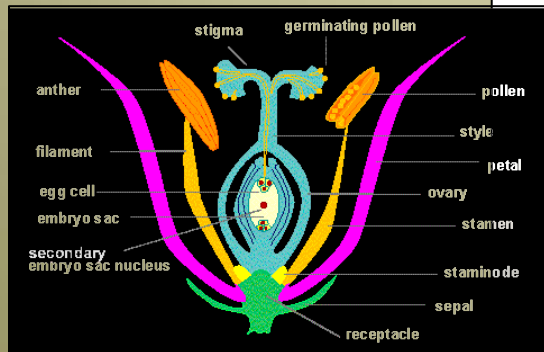


M. Cloud-Hughes

“Whatever.....”

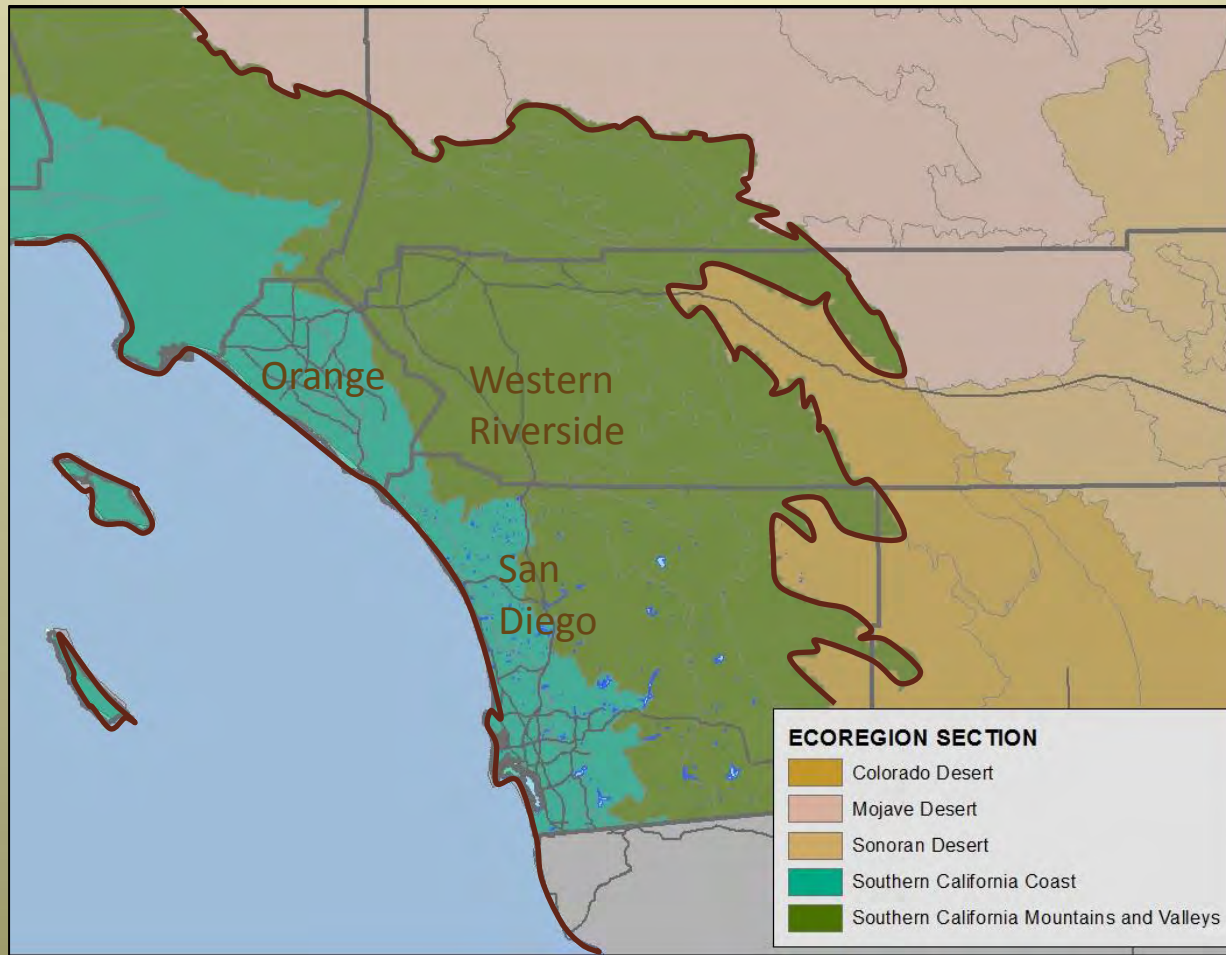


# Priorities?



# *South Coast Ecoregion NCCPs*

A pilot program that has become a model for the rest of the state.

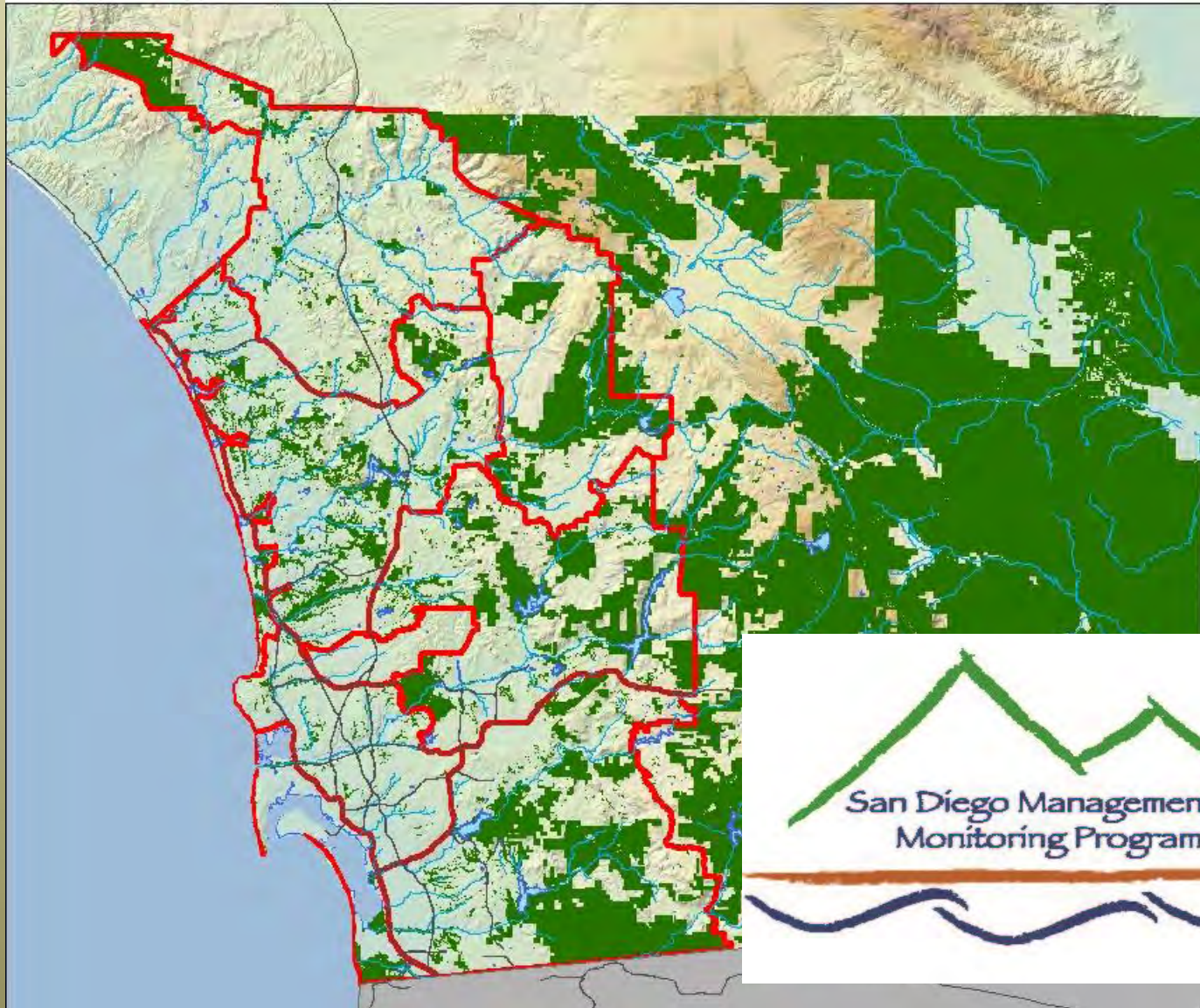


in planning, management, and monitoring.....





# *San Diego Management Units*



# Management Strategic Plan

Species Goals

Natural Communities Goals

## Management Units

MU-1  
Goals &  
Objectives

MU-2  
Goals &  
Objectives

MU-3  
Goals &  
Objectives

MU-4  
Goals &  
Objectives

Reserve 1

Reserve 2

Reserve 3



Reserve 4

Reserve 5

Reserve 6



# *Prioritizing Adaptive Management Actions for Endemic Plant Species— both regionally and between populations*

- Large fluctuations in population size
  - Year-to-year variation in annual precipitation
  - Invasive species
  - Size of the seed bank
- Fragmented landscape and geographic isolation
  - Refugia vs source populations
  - Loss of pollinators
- Small population sizes
  - Loss of genetic diversity
- Climate change and an altered fire regime



# Tools and Approaches for Making Informed Decisions on Management

- Tools for assessing threats and instituting management actions in urban reserves
- Role of research facilities in plant conservation
- LUNCH
- Population dynamics with respect to fire, precipitation, and climate change
- Incorporating habitat suitability modeling into an approach for identifying enhancement opportunities
- **Panel discussion**—*have your questions ready!*



# *Focus for Discussion Today*

- Framework of ideas, approaches, and management tools that transcend individual species and individual preserve boundaries.
- Restoring a trajectory of resilience, rather than focusing on a specific population target.
- Context for setting priorities, both at the regional level and population level.

