

# Natural and Cultural Resources

Marine Air Ground Task Force Training  
Command

Marine Corps Air Ground Combat Center  
Twentynine Palms, California

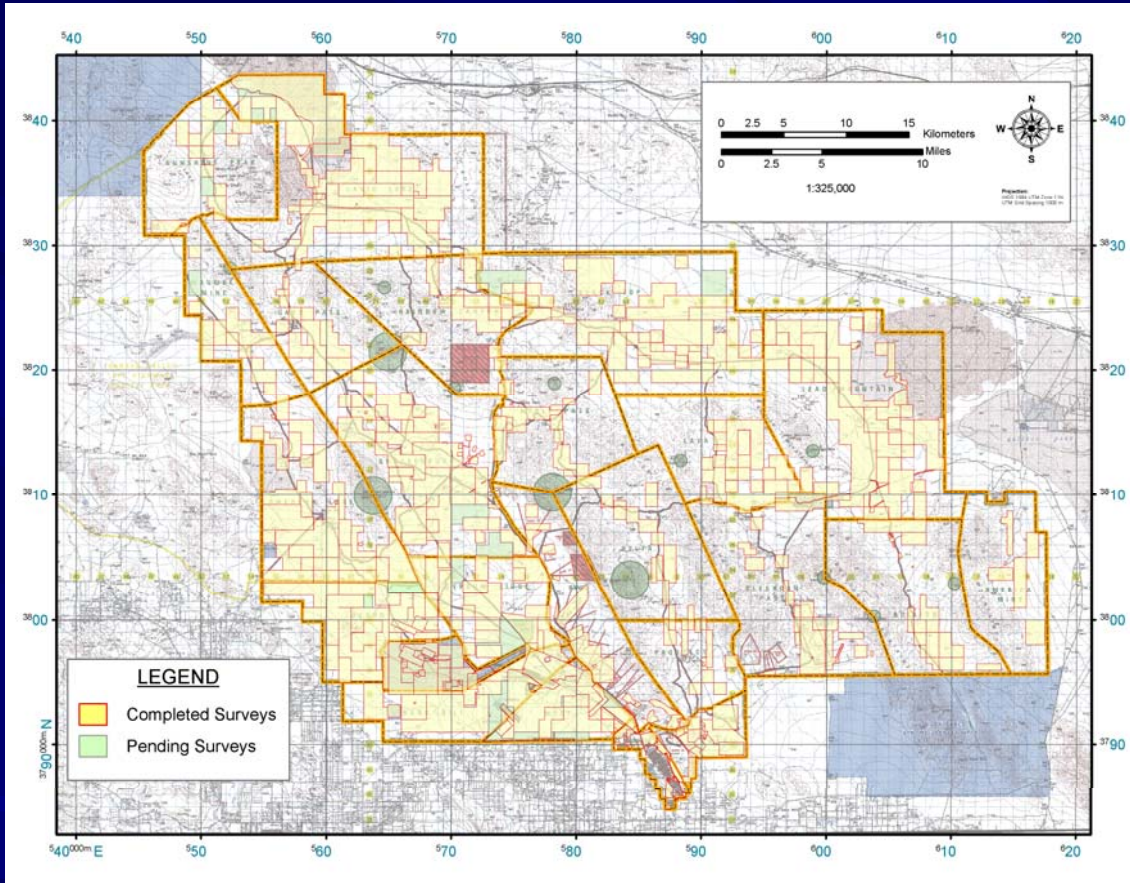
Presented by:  
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Natural and Cultural Resources Officer

# Marine Corps Air Ground Combat Center



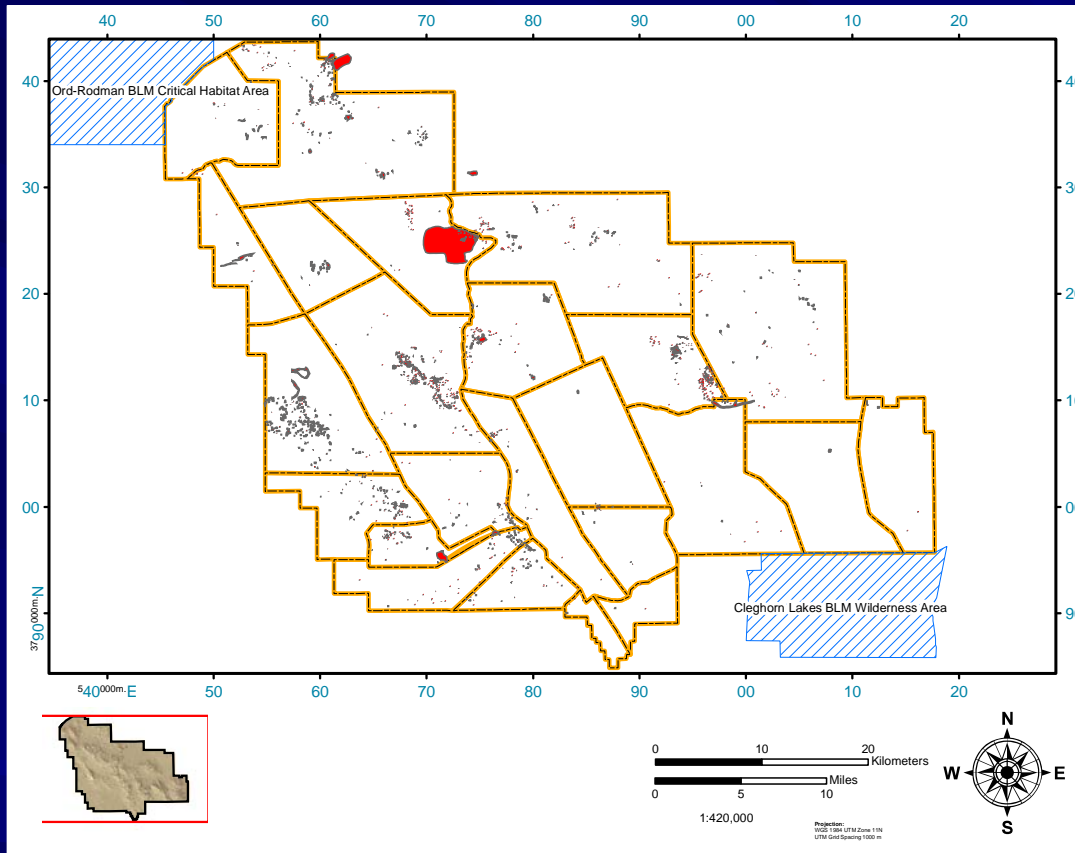
- Located in the southern Mojave Desert
- Almost 600,000 acres in size
- Largest live-fire Marine Corps base in the world
- Mission is to train combat ready Marines
- Divided into 23 Training Areas

# Cultural Resources



- 235,509 acres of the base had been inventoried for cultural resources or approximately 40% of base
- 92.5% of maneuverable lands have been surveyed
- ICRMP goal is to complete inventory of remaining 7.5% by 2011

# Cultural Resources



- There are 1701 archeological sites recorded for the base.
- These include historic mining sites, prehistoric quarries, rock art locations, lithic scatters, segregated reduction locations, and campsites.
- To date, 473 have been evaluated for eligibility for listing in the National Register of Historic Places (NRHP).
- Only one site has been officially listed in the NRHP, and that is Foxtrot Petroglyph Site.

















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## **OFF LIMITS**

**By order of the Commanding General**

**The Foxtrot Petroglyph Site is listed on the National Register of Historic Places.**

**Serious civil, criminal and non-judicial penalties may result from disturbance.**

**This area is strictly protected and is off limits to all personnel at all times.**

**Reference: Combat Center Order 5000.1B**

# Biological Surveys conducted on the MCAGCC

**Mohave Ground Squirrel**  
*Spermophilus mohavensis*



**Burrowing Owl**  
*Athene cunicularia*



**Mojave Fringe-toed Lizard**  
*Uma scoparia*



**Common Chuckwalla**  
*Sauromalus obesus*





# Mohave Ground Squirrel

## *Spermophilus mohavensis*



- Surveys started May 12, 2008
- Emerson Lake and Maumee Mine RTA's surveyed for possible MGS.
- These two areas were chosen based on habitat analysis and habitat modeling by the contractor.
- DNA tissue samples collected from Round-tailed Ground Squirrels and possible Mohave Ground Squirrel to conclude if they are MGS, RTGS, or Hybrids.

# Common Chuckwalla

## *Sauromalus obesus*

- Project is to determine chuckwalla population status and densities on the lava flows found throughout MCAGCC
- Surveys started in March 2008
- Survey areas are in Lava, Lead Mountain, and Lavic Lake.



# Burrowing Owl

## *Athene cunicularia*



- Project was to determine relative abundance and density of burrowing owls on MCAGCC.
- Surveys started in 2004 and were completed Fall 2005
- 7 owl territories were found in the 2004 season and 4 owl territories were found during the 2005 season.
- We found that desert tortoise density, elevation and slope to be key elements for owls at MCAGCC.

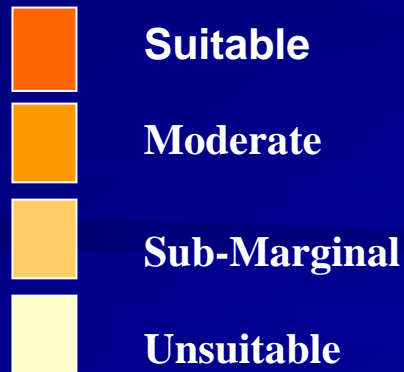
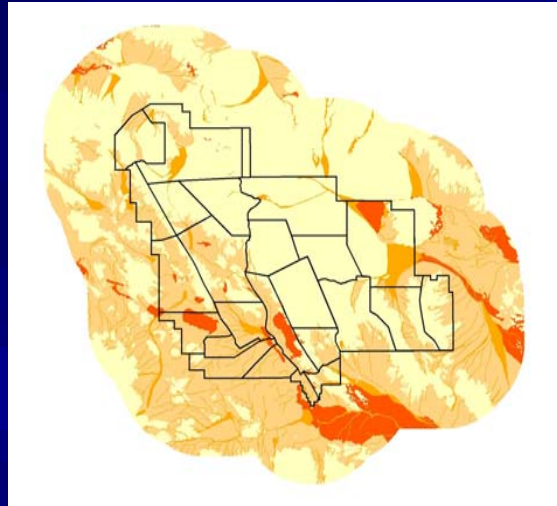
# Mojave Fringe-toed Lizard

*Uma scoparia*

## Cal-GAP Analysis



## MCAGCC LIZLAND Analysis



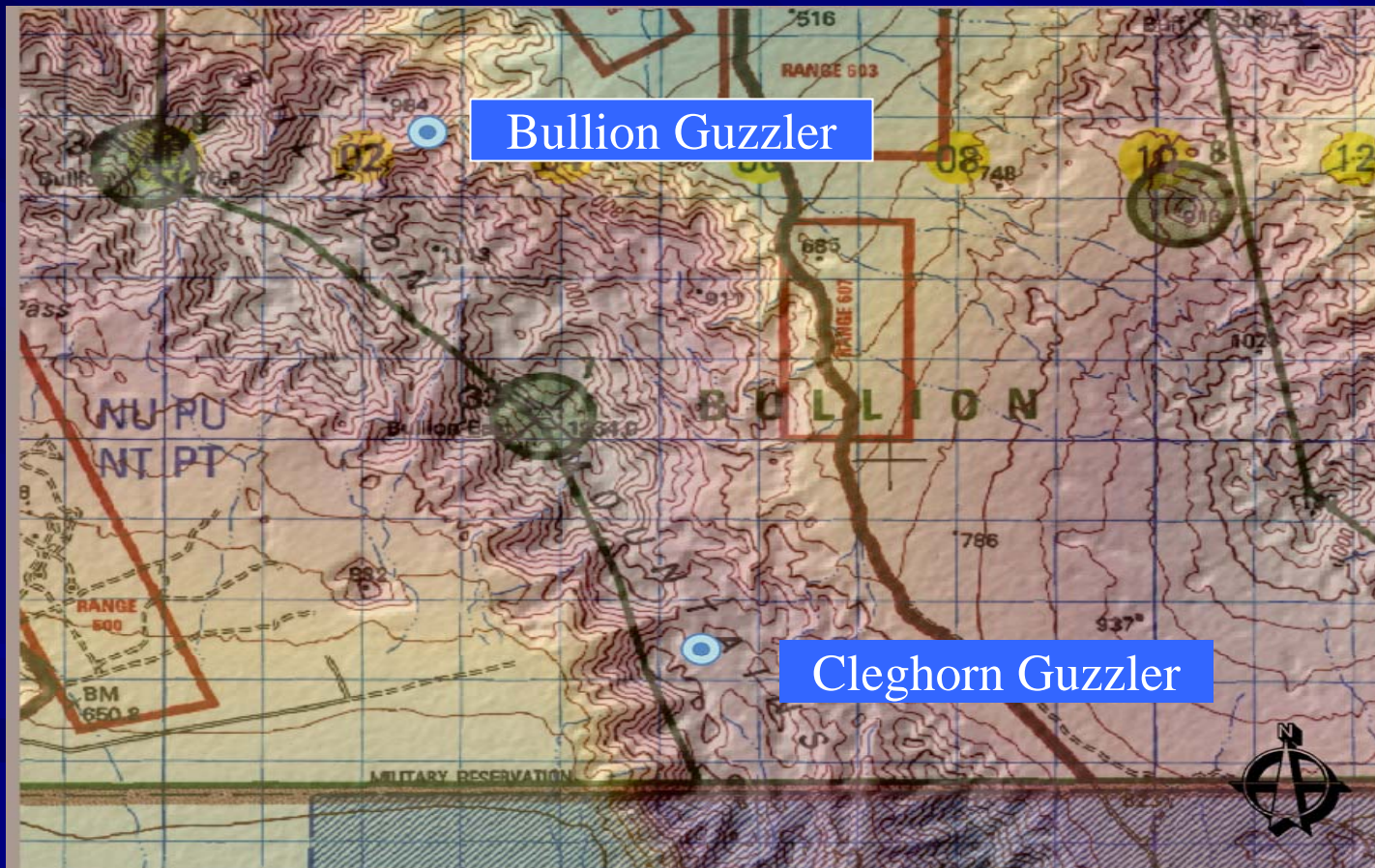
# Nelson's Desert Bighorn Sheep Monitoring on MCAGCC



In 1991, USMC and CDFG reintroduced Nelson's Bighorn Sheep into the Bullion Mts to repopulate their historic range

Technology used to support and monitor sheep: Guzzlers, Cameras, & Satellite Sensors

# Bullion Mountains



# Cleghorn Guzzler

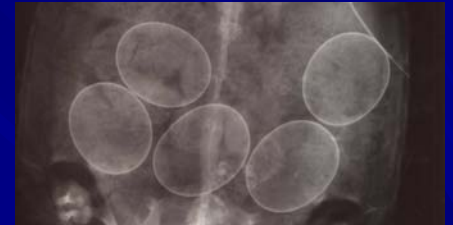


# Bullion Guzzler



# HEAD STARTING TORTOISES

- TRACRS: Tortoise Research and Captive Rearing Site
- Opened May 2006
  - 2006 cohort >100 individuals
  - 2007 cohort 40 individuals (drought)
  - 2008 nesting period - NOW
- Construction & Research
  - UCLA – Nagy, Hillard





# TORTOISE MONITORING

- Demographic Plots
  - ‘permanent plots’
- Health Assessments
- $G_0$  Focal Animal Monitoring
  - supports LDS: 2007 & 2008
- CA MOUT Facility
  - clearance & monitoring



# EDUCATION & OUTREACH

- **Basewide Biological Opinion**

- **Briefings**

  - ~30,000 Marines/yr

  - ~Contractors



- **Outreach**

  - Earth Day
  - Science Day
  - Boy Scouts
  - Kiwanis
  - VIPs, Journalists
  - Observation Post



# Old Granddad and Honey



## Old Granddad and Lance Corporal Kyle





Yes!! Shade



afternoon power nap



The End