

**Office of the Regional Environmental Coordinator
Office of Governmental and External Affairs
Marine Corps Installations West**



**Partnering for Compatible
Renewable Energy Development**

4 November 2009



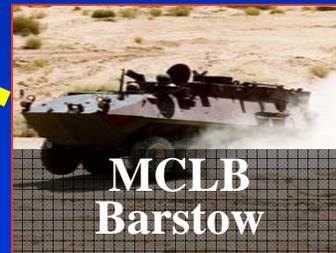
Forging the MAGTF: Installations - the 5th Element



**Air Warfare
Training**



**Recruiting &
Basic Training**



**Logistics,
Repair &
Maintenance**

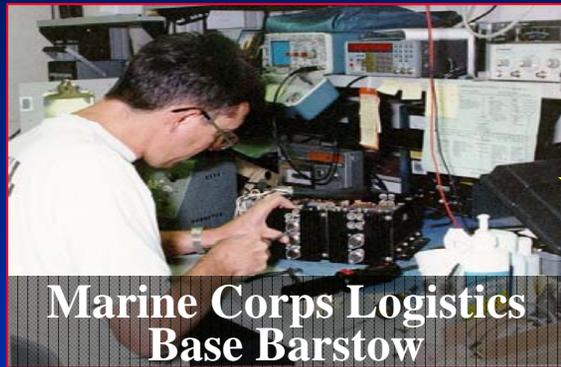


**Amphibious &
Land Warfare
Training**





Creating a Marine: The Western Links in the Chain



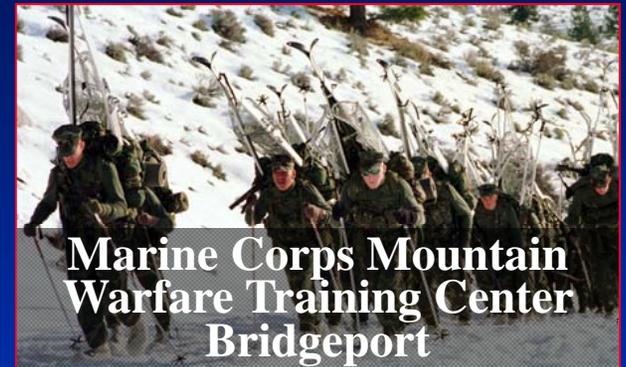
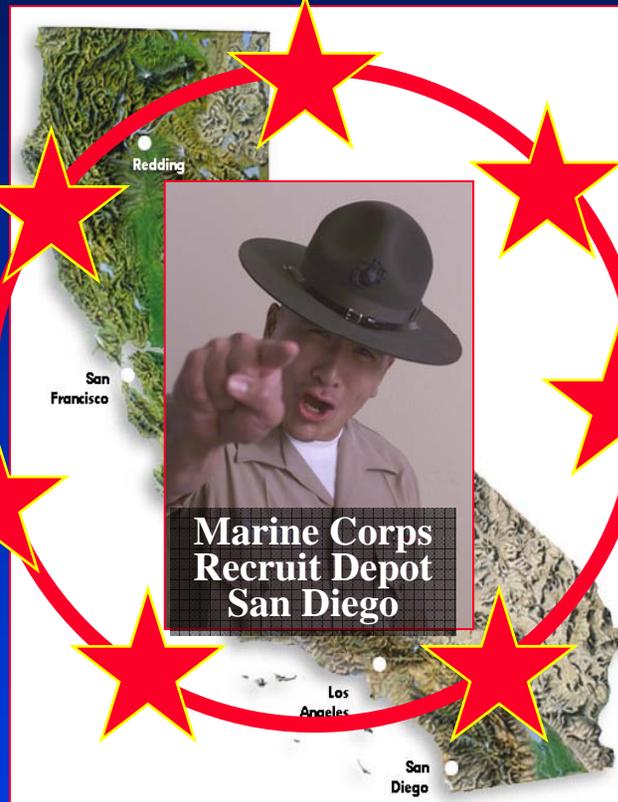
**Marine Corps Logistics
Base Barstow**



**Marine Corps Base
Camp Pendleton**



**Marine Corps Air
Station Miramar**



**Marine Corps Mountain
Warfare Training Center
Bridgeport**



**Marine Air Ground Task
Force Training Center 29
Palms**



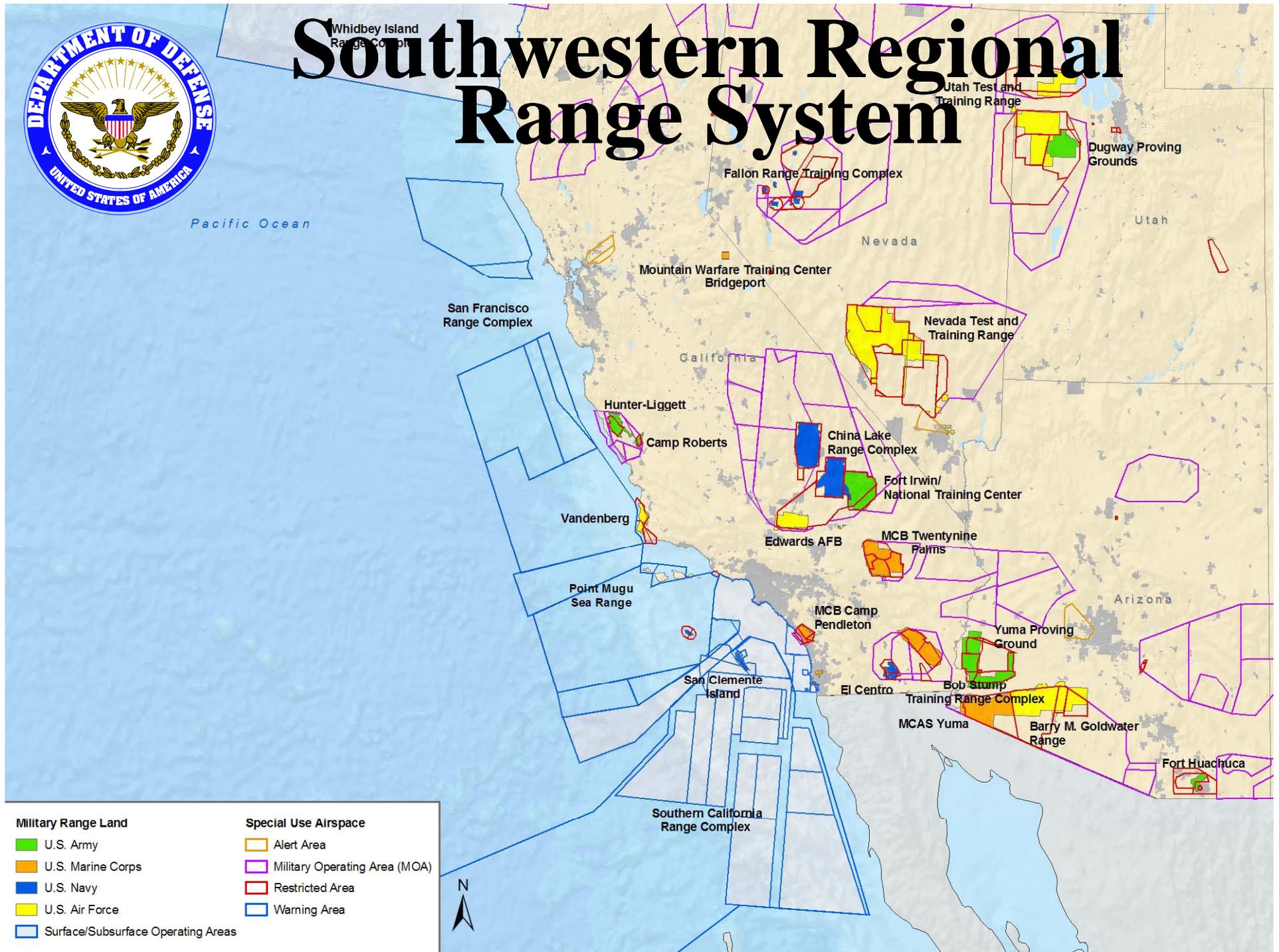
**Marine Corps Air Station
Camp Pendleton**



**Marine Corps Air Station
Yuma**



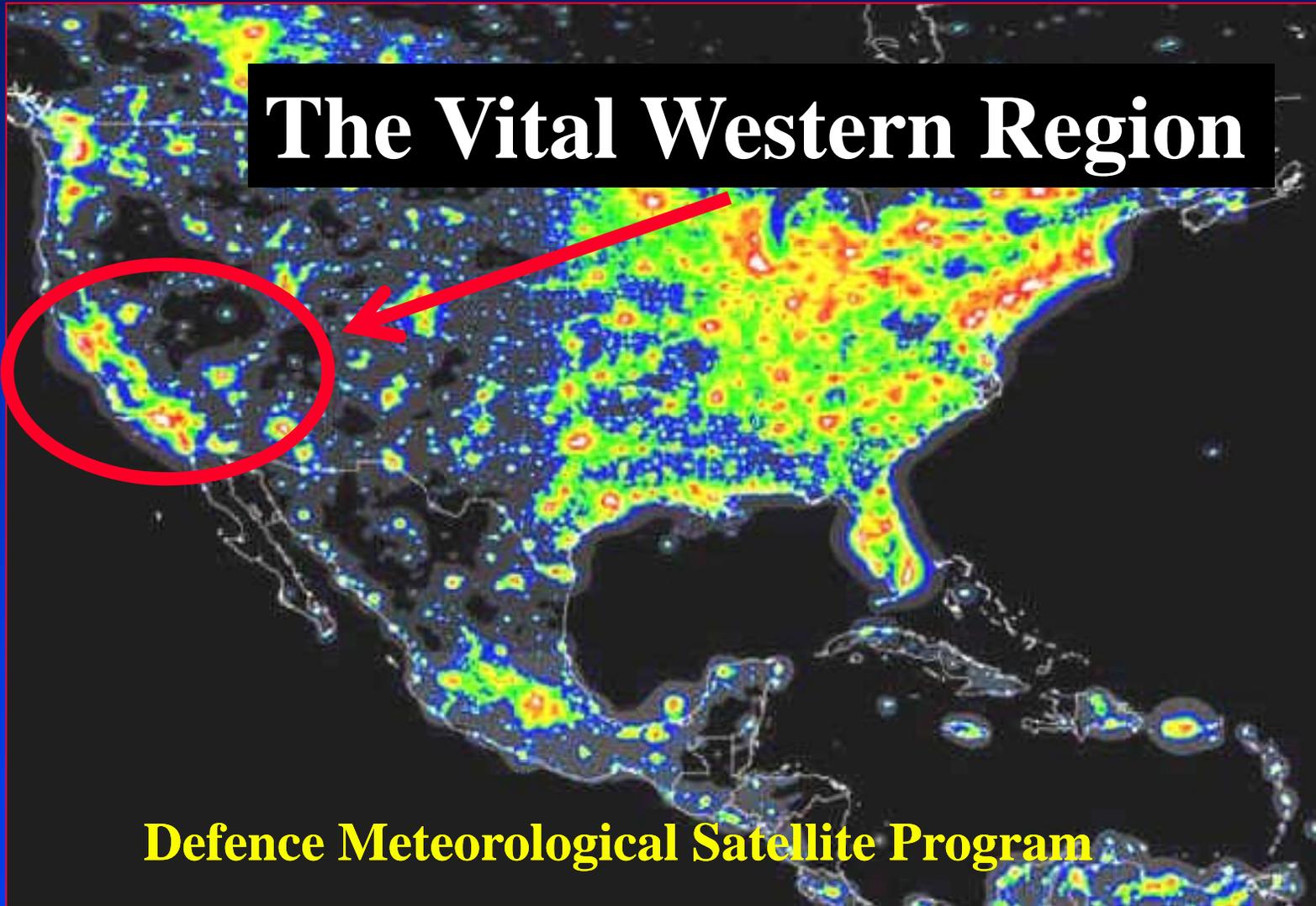
Southwestern Regional Range System





Urban Development

The Vital Western Region



Defence Meteorological Satellite Program

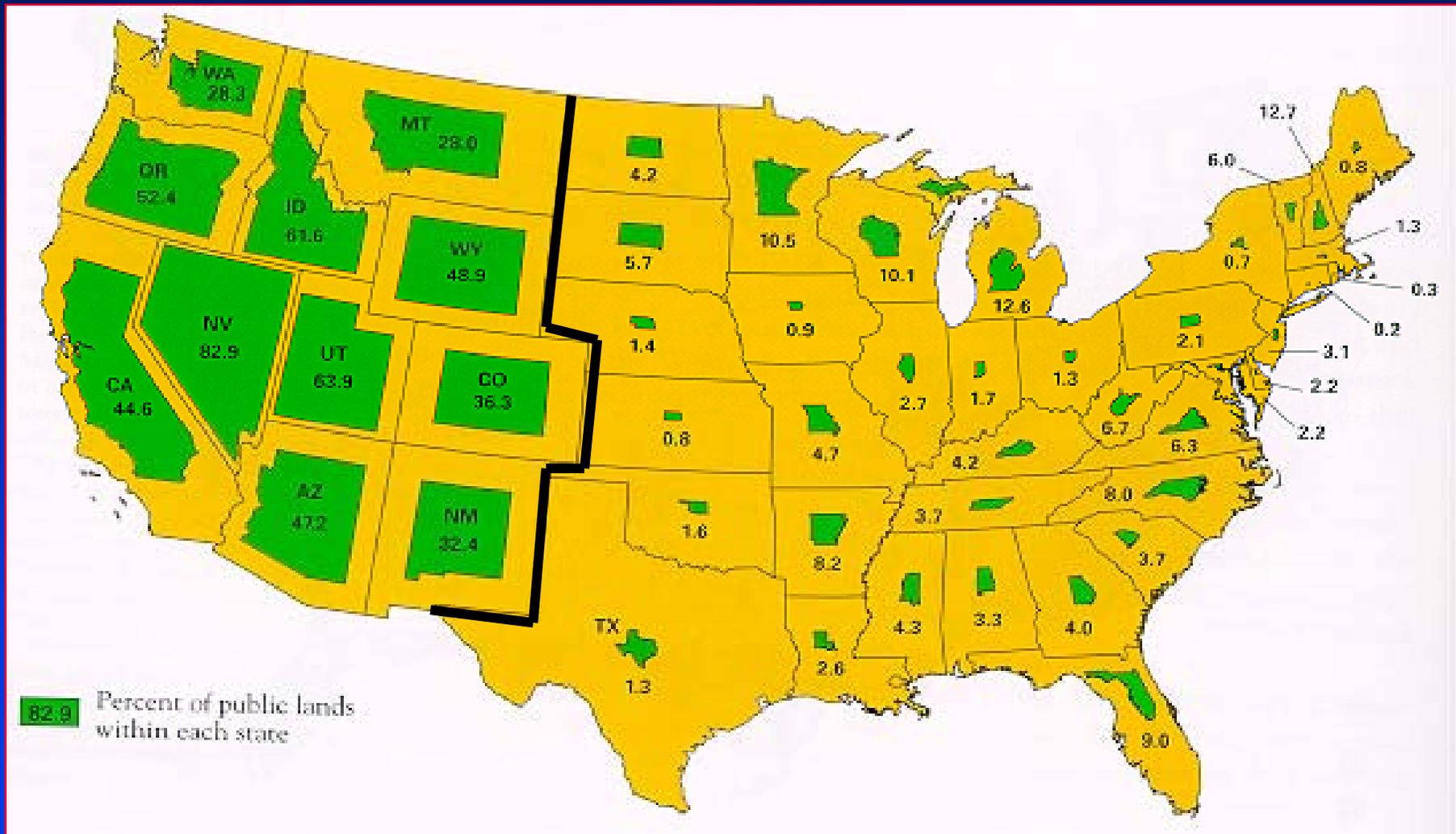


White Space

- ◆ **The 3 dimensional space that connects geographically fixed USMC assets (bases, ranges, stations, other training and operating areas, including research, testing, development and evaluation (RTD & E).**



Public Lands in the “New West”



*Atlas of the New West, Portrait of a Changing Region, 1997



How Public Lands Contribute to Readiness: Hawaii to California to Afghanistan



1 Oct 2004: 3rd Battalion, 3rd Marines (3/3) (Hawaii) conducts operational training in the Humboldt-Toiyabe National Forest, Sierra Nevada Mountains, USMC Mountain Warfare Training Center, Bridgeport, CA



2 January 05: 3/3 conducts ops in the Hindu Kush Mountains, Korangal Valley, Afghanistan

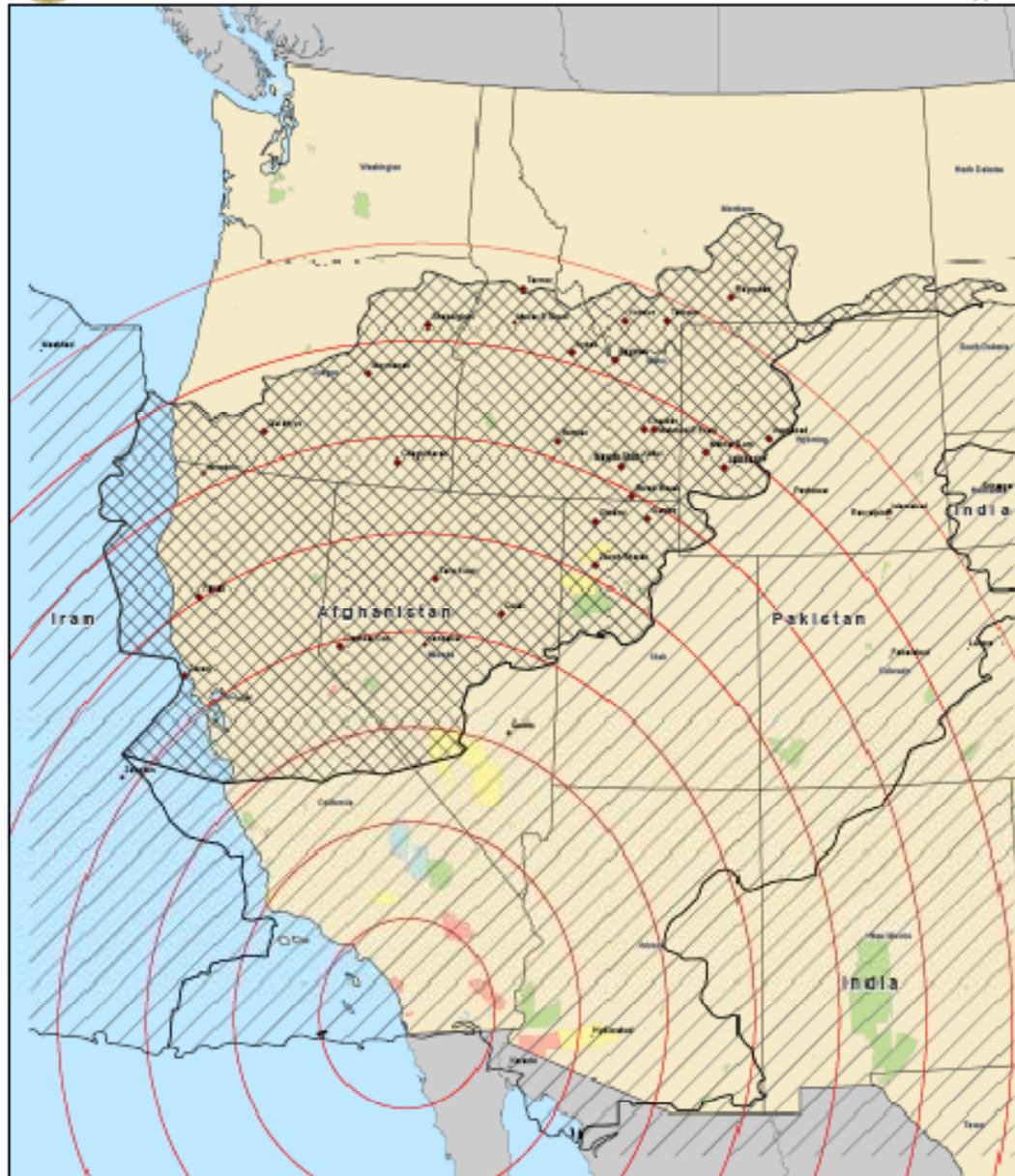


Army CH-47 Chinook helicopter supports 3/3 Marines in the Korangal Valley

“...The enemy we fight has lived in the snow and harsh weather of the Hindu Kush all of his life.... if we didn't prepare for the terrain, altitude and weather before getting here - then he might have a chance to get away from us...”
CPL Mattingly 3/3



Afghanistan Relational Map





We Must *“Train As We Fight”*

EX DESERT SCIMITAR 2001, 2002: 1st Marine Division crossing the Colorado River



200 Miles across CA to AZ

592 Vehicles

2700 Marines

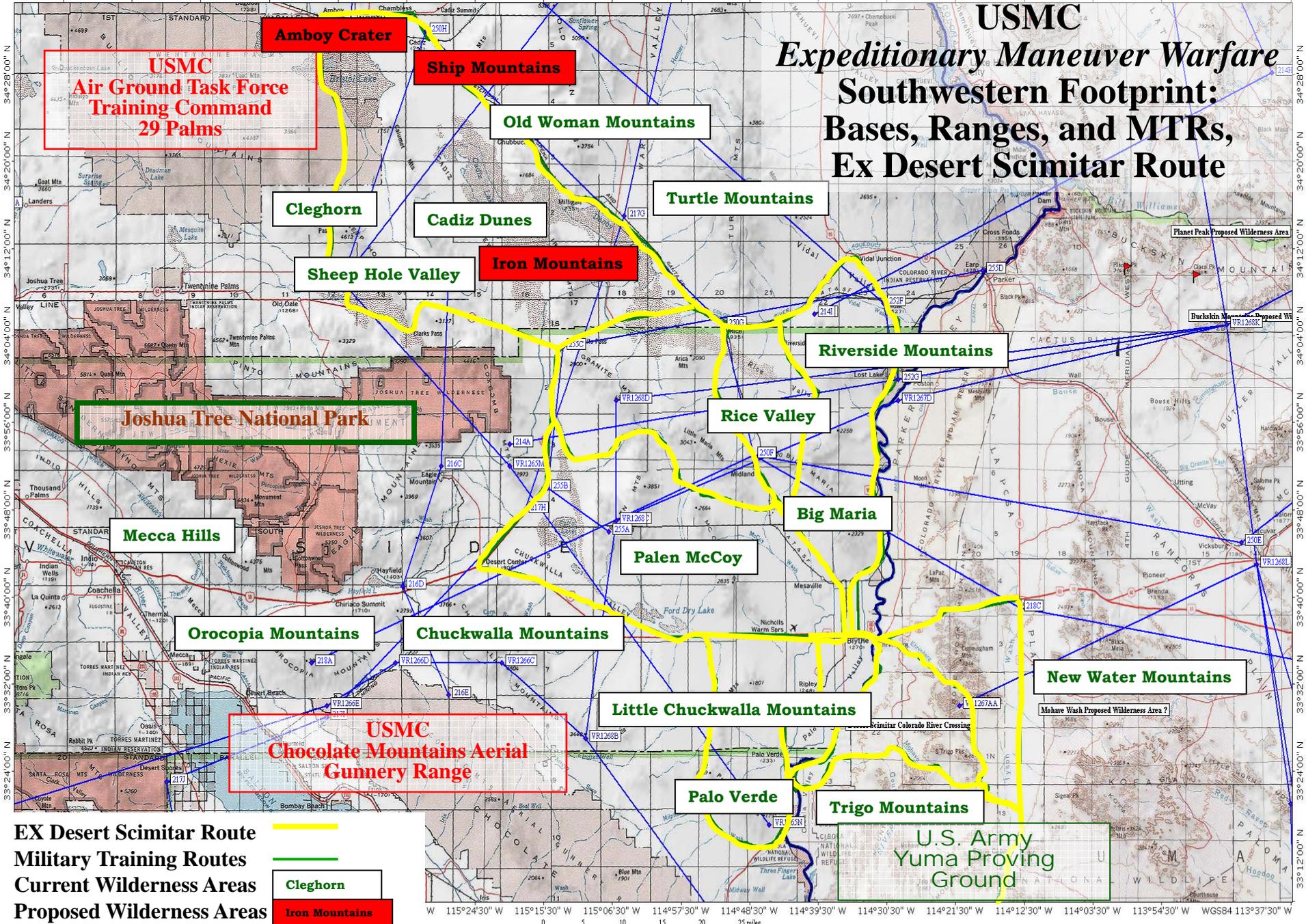
450' expeditionary bridging

DoD does not possess the range of conditions needed to fully rehearse current operational plans unless complemented by public lands



2003: 1st Marine Division crossing Southern Bridge into Baghdad

USMC Expeditionary Maneuver Warfare Southwestern Footprint: Bases, Ranges, and MTRs, Ex Desert Scimitar Route



EX Desert Scimitar Route —

Military Training Routes —

Current Wilderness Areas

Proposed Wilderness Areas

- Cleghorn
- Iron Mountains



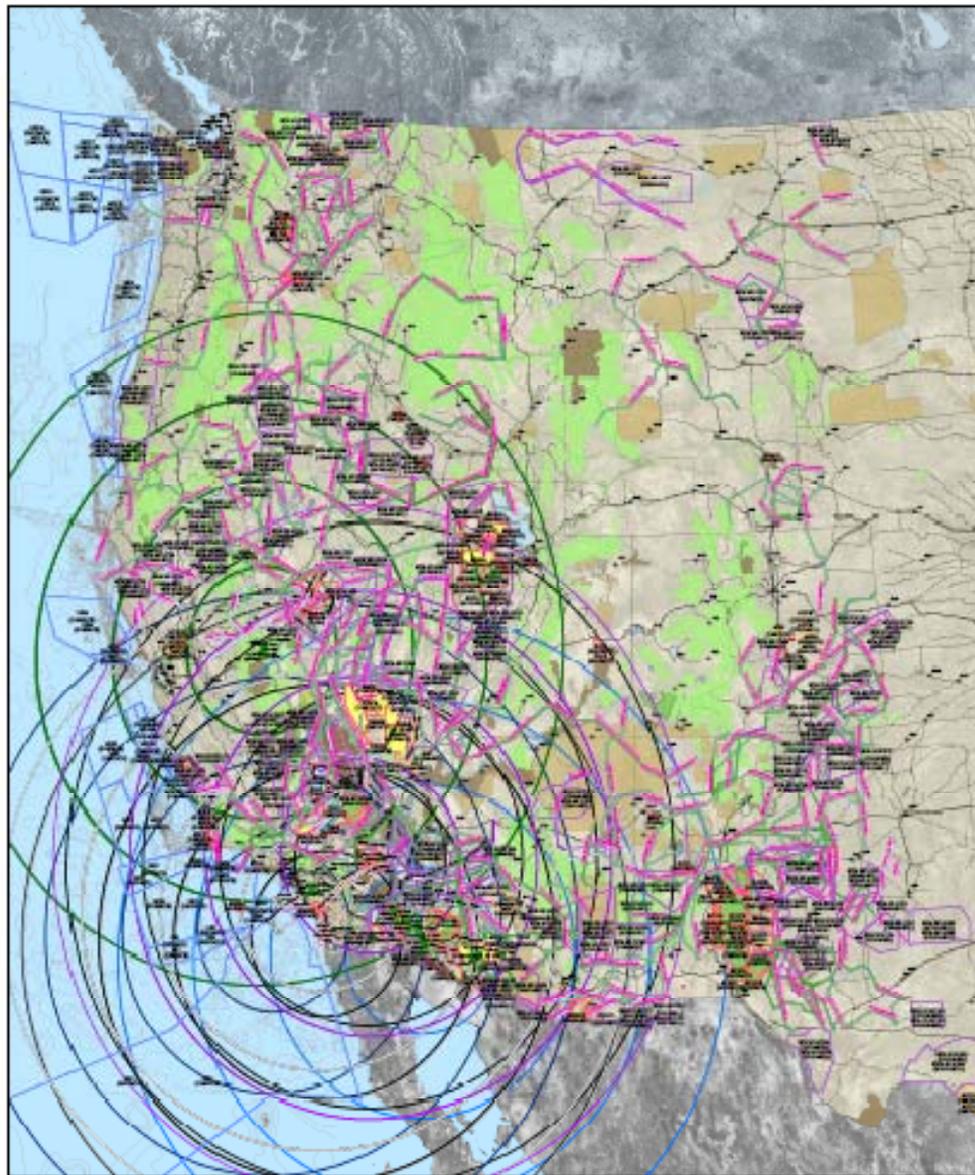
Introduction of New Technology: MV 22 & JSF





MV-22 Combat Radius,

MTR's, Helo Routes, Landing Zones and SUA's



Legend

Special Use Airspace	International Regions	Control Points	Control Points	Deliveries
<ul style="list-style-type: none"> ■ No-Fly Zone ■ Military Operations Area (MOA) ■ Restricted Area ■ Prohibited Area ■ Airport 	<ul style="list-style-type: none"> ■ 1000 ■ 1500 ■ 2000 ■ 2500 ■ 3000 	<ul style="list-style-type: none"> — Control Point — Mission Start Point — 1000 Control Point — 1500 Control Point — 2000 Control Point — 2500 Control Point — 3000 Control Point 	<ul style="list-style-type: none"> ■ 1000 ■ 1500 ■ 2000 ■ 2500 ■ 3000 	<ul style="list-style-type: none"> ■ 10-1200 ■ 10-1500 ■ 10-2000 ■ 10-2500 ■ 10-3000 ■ 10-3500

Deliveries

- 10-1200
- 10-1500
- 10-2000
- 10-2500
- 10-3000
- 10-3500

Control Points

- 10-1200



The Future: Cooperation in the “White Space”

*Would you be pleased to go where everything
is strange and weird and different?*

William T. Hornaday

For the Marine Corps, the Region has:
85% Airspace
67% Live Fire Ranges



Energy Corridors

- ◆ Federal Energy Corridors
- ❖ Section 368
- ❖ National Designation
- ❖ Native American Lands

- ◆ California Energy Corridors





Energy Development: Intentions and Warnings in the Western Region

Energy Policy Act of 2005: Federal Energy Corridor Programmatic Environmental Impact Study

 Sempra Energy® Comments 28 Nov 05

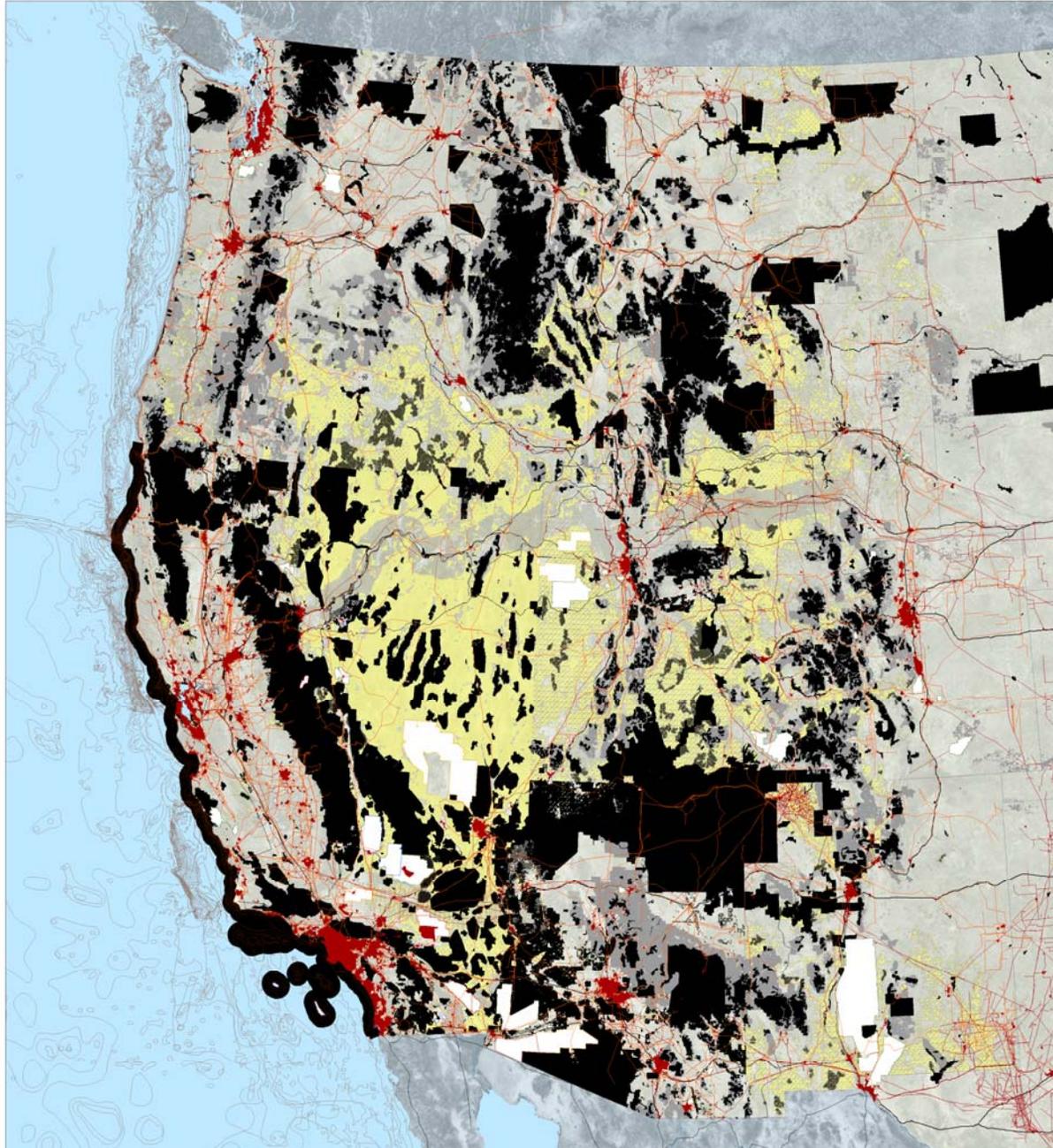
- ❖ “...We recommend that Department of Defense property be explicitly considered in this process. ...”

North American Electric Reliability Council Long Term Reliability Assessment (Oct 06)

- ◆ Electric utilities forecast demand to increase over the next ten years
- ◆ Proposed new transmission construction
 - ❖ More than 9,000 miles (230 kV and above) to be added through 2010
 - ❖ About 12,873 miles added over the 2006–2015 time frame.



Regional Blackout Areas





Off-Shore Energy Development

Wind Turbines, Wave Energy

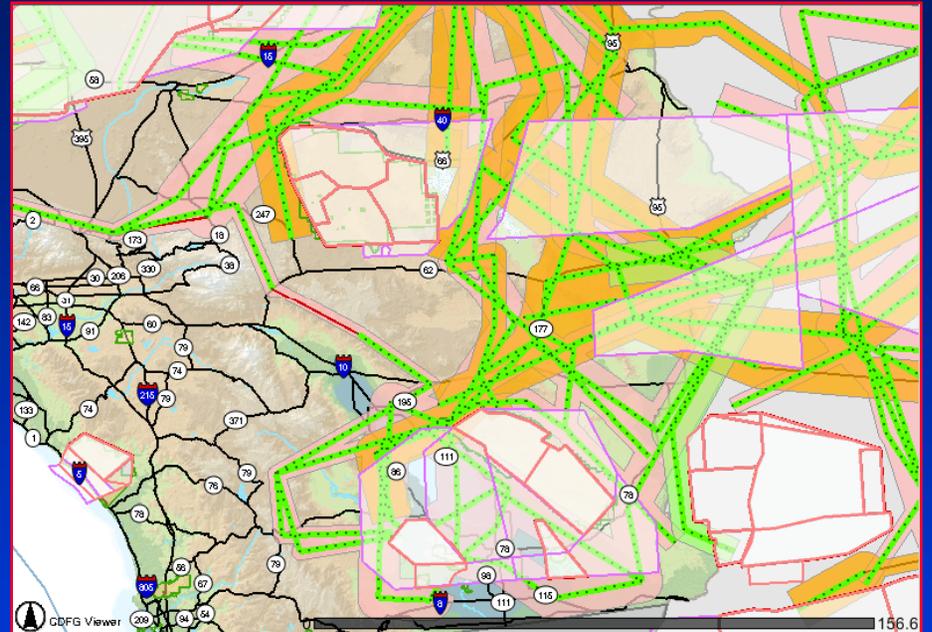
Oil Exploration and Drilling

Liquefied Natural Gas Terminals



Renewable Energy Development

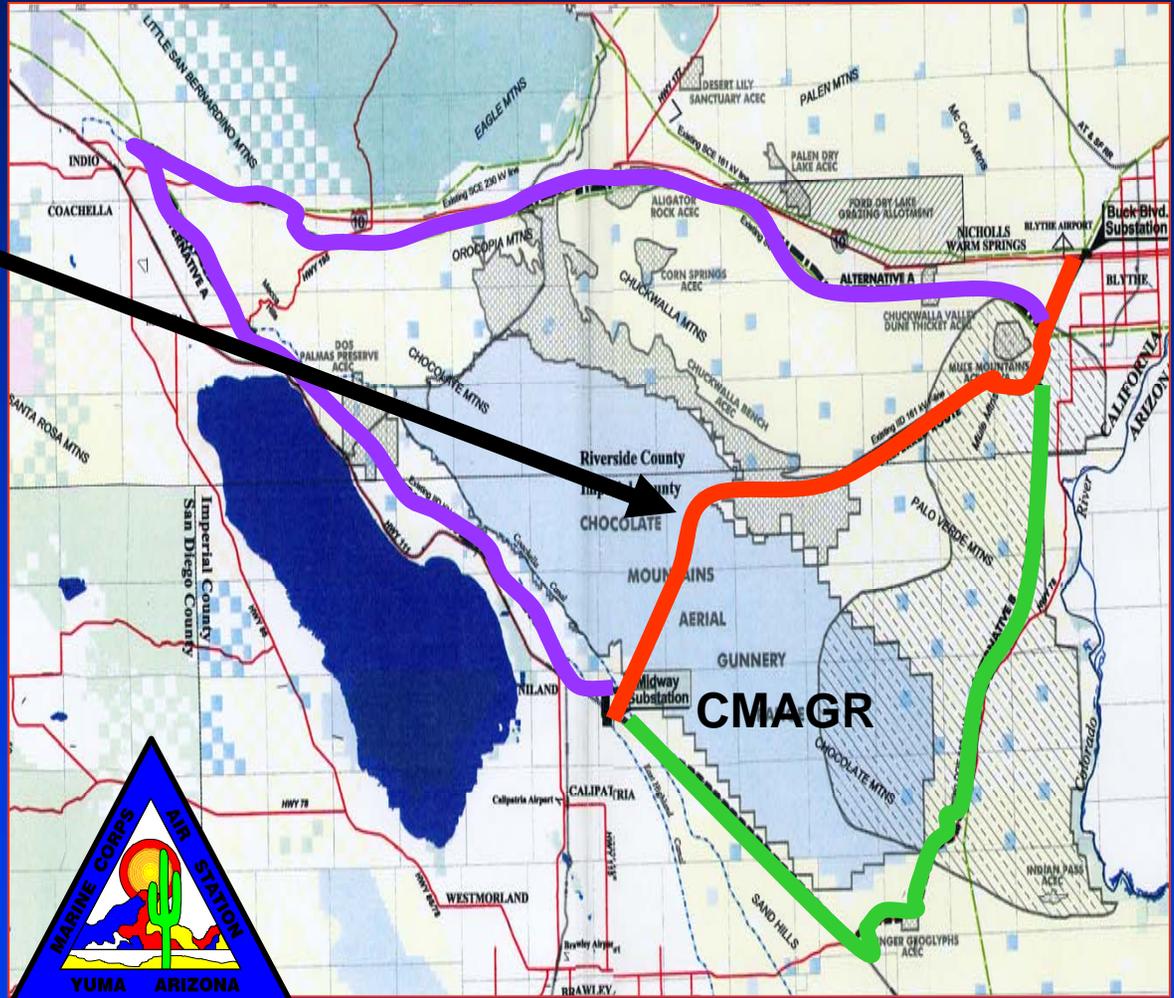
- ◆ **Solar; Wind; Geothermal**
- ◆ **Military Issues and Concerns**
 - ❖ **Location, location, location**
 - ❖ **Altitude, noise, water, habitat, reflectivity,**





Southwestern Regional Development

- ◆ Imperial Irrigation District (IID) request 230kv power line easement through the CMAGR





Alternative Energy Development: CA Governor's Executive Order S-14-08



Western Regional Energy Zone Initiative

- ◆ **WREZI will generate**
 - ❖ **Reliable information to support the cost-effective and environmentally sensitive development of renewable energy within each renewable energy zone (REZ) and quantifying non-REZ resources**
 - ❖ **Conceptual transmission plans for delivering the energy from specified zones to load centers across the Western Interconnection**

WREZ

Western Governors Association:

Draft Preliminary QRA Map

Qualified resource areas were identified to assess the high density of developable renewable energy resources after screening for known technical and environmental limitations for which data are available as of this map's release.

Note: there are thousands of potential small hydropower projects in Canada and the US. Only the largest, which define QRA boundaries are shown on this map. Small hydropower resources in Canada and incremental hydropower resources in the US that fall within QRA boundaries are quantified, even though they are not shown on this map.

LEGEND

-  Qualified resource area
-  Canadian hydropower resources
-  Conventional discovered geothermal

Solar thermal resource

Direct normal insolation (kWh/sqmtr/day)

-  6.5 - 7.0
-  7.0 - 7.5
-  7.5 +

Wind resource

Wind power class

-  3

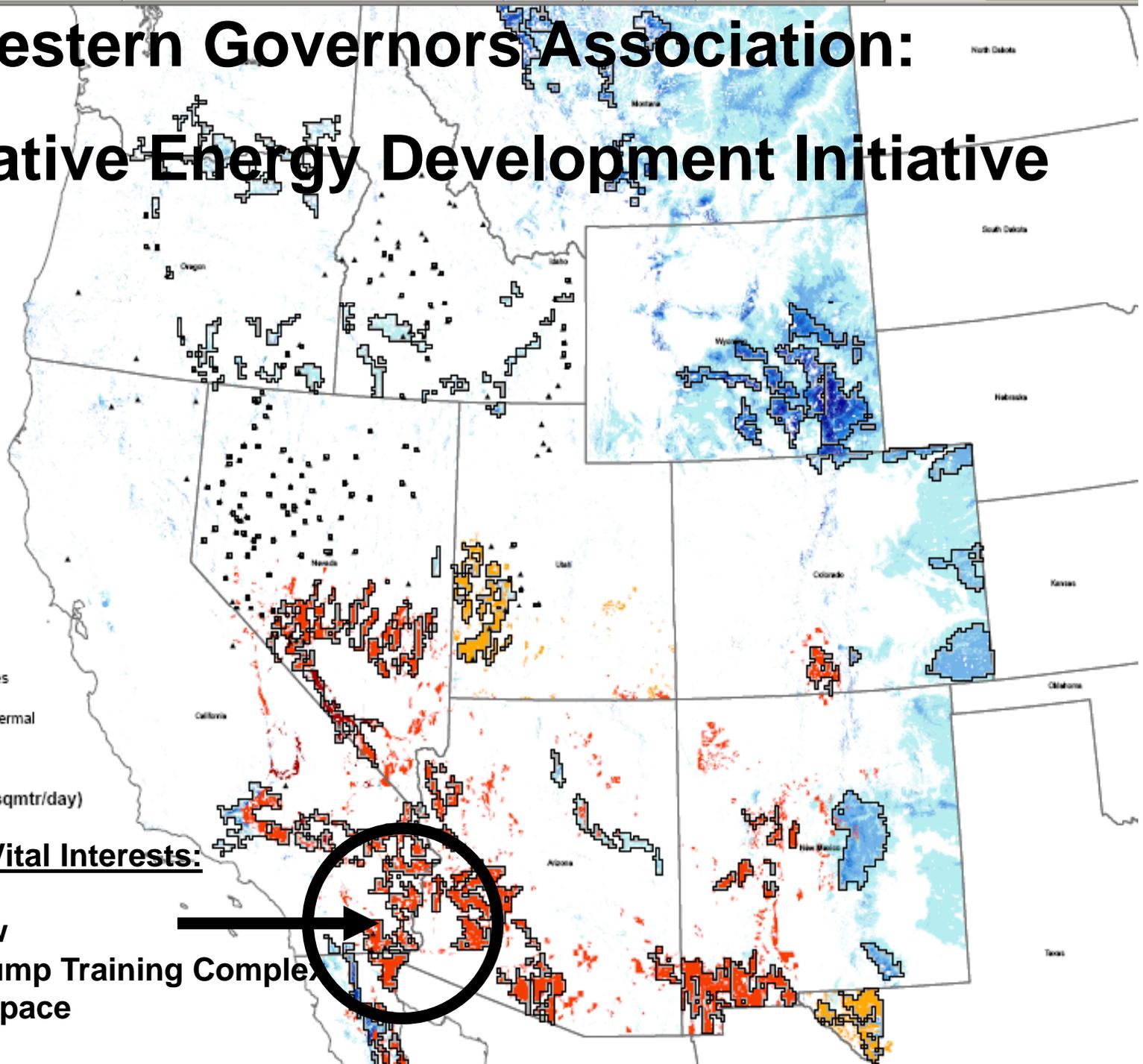
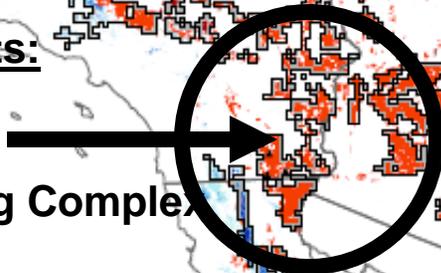
USMC Vital Interests:

29P

Barstow

Bob Stump Training Complex

White Space





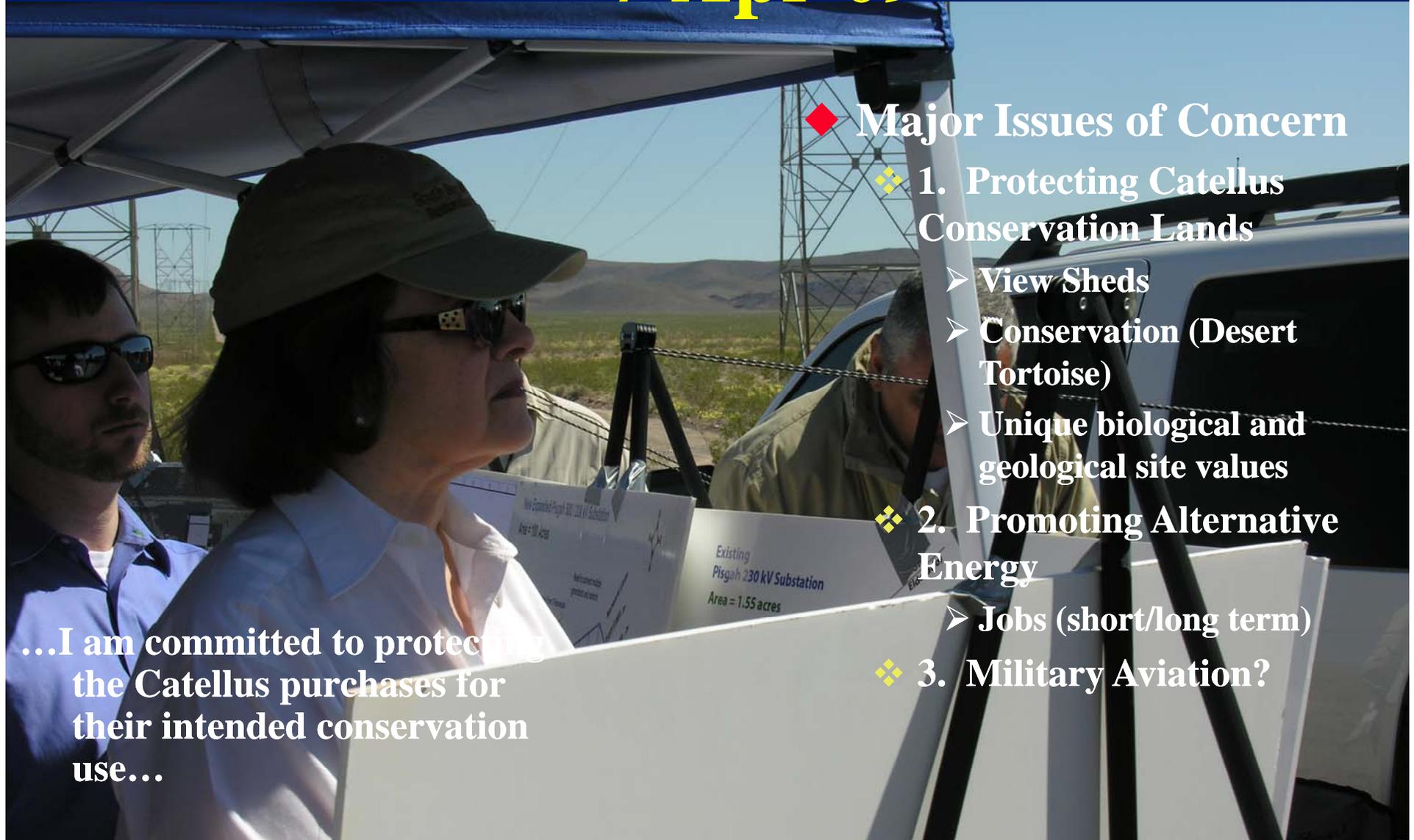
Senator Feinstein's Mojave Tour 7 Apr 09



◆ Major Issues of Concern

- ❖ 1. Protecting Catellus Conservation Lands
 - View Sheds
 - Conservation (Desert Tortoise)
 - Unique biological and geological site values
- ❖ 2. Promoting Alternative Energy
 - Jobs (short/long term)
- ❖ 3. Military Aviation?

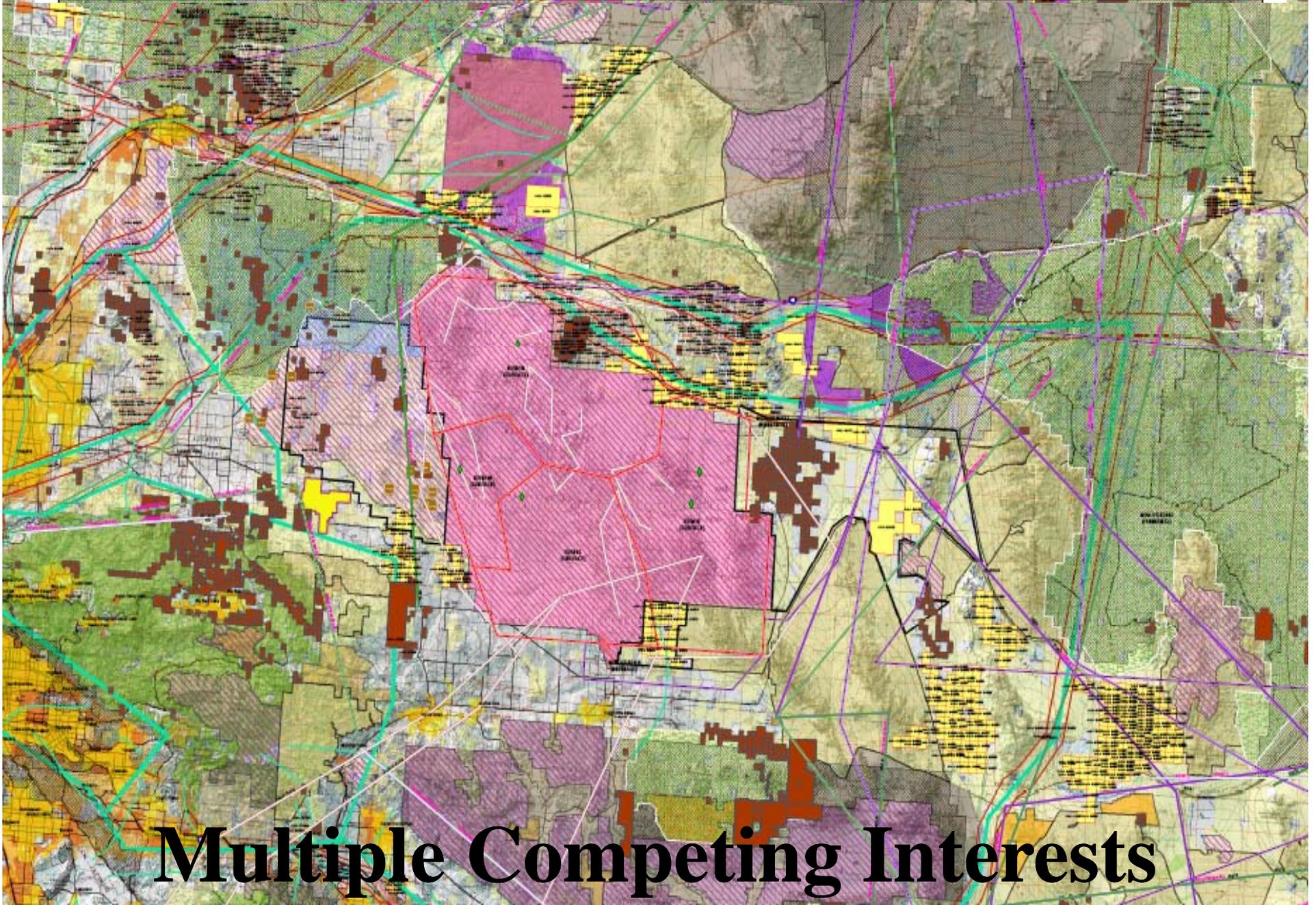
...I am committed to protecting the Catellus purchases for their intended conservation use...





Mojave Sub-Region: Twentynine Palms and Barstow Extent

with DOD Footprint, Composite Map and Projected Population

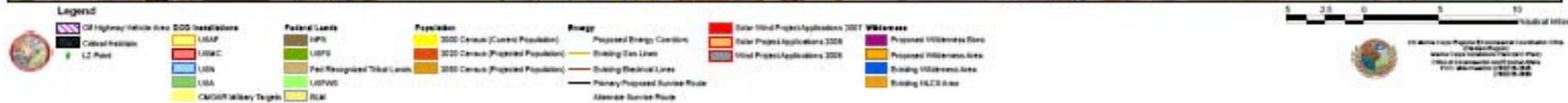
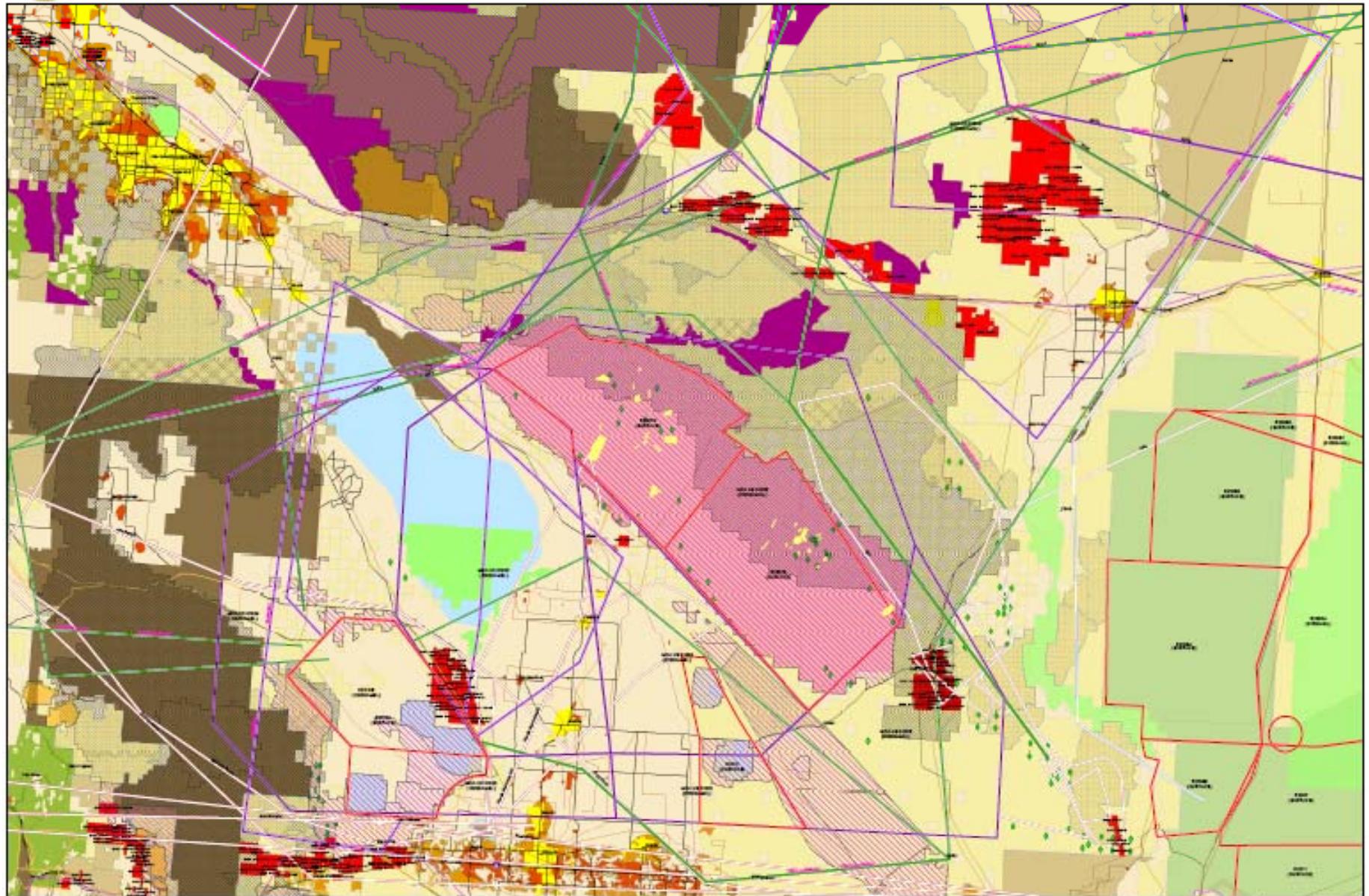


Multiple Competing Interests



Chocolate Mountain Aerial Gunnery Range

with DOD Footprint, SUA's, MTR's, TERF, Helo Route's, Critical Habitat, Energy, Current, and Projected Population





Desert Managers Group

The California Deserts are vast, harsh yet fragile lands within a day's drive of 40 million people. Approx 80 percent of the desert, or 25 million acres, is publicly owned:

Two national parks, one national preserve, six military bases, 72 wilderness areas, 14 state parks and extensive holdings of public lands managed by Bureau of Land Management.

Conflicting demands for use of California desert lands make it imperative for governmental agencies to work cooperatively in support of agency missions, protection of desert resources, and public use.

Conservation Land Acquisition Work Group (CLAWG)
And the Mojave Desert Ecosystem Project (MDEP)

www.dmg.gov





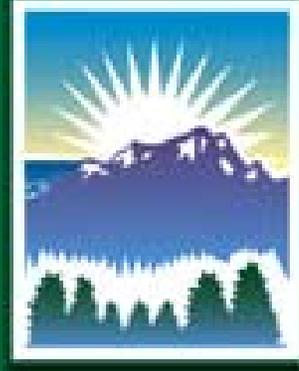
Western Regional Partnership



The Western Regional Partnership's purpose is to establish a regional senior level partnership among the Department of Defense, other Federal Agencies, and State and Tribal executive leadership in the states of Arizona, California, Nevada, New Mexico, and Utah.

- Border
- Disaster Preparedness
- Energy
- Geographical Information System (GIS) / Mapping
- Land Use
- Wildlife Corridors, Critical Habitat, and Threatened and Endangered Species

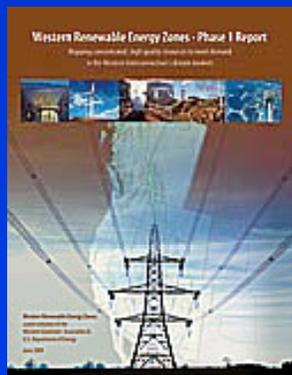
wrpinfo.org



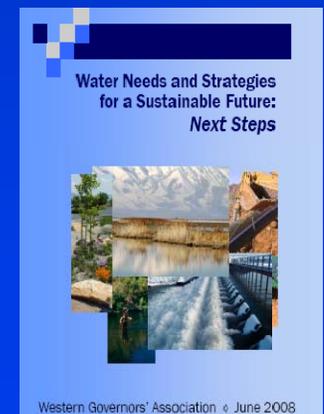
WESTERN
GOVERNORS'
ASSOCIATION

Serving the Governors of 19 States and 3 US-Flag Pacific Islands

Partnering with the WGA via the Western Regional Partnership



Wildlife Corridors
Water Issues
Energy Transmission and Renewables





Cooperative Partnerships: Addressing Regional & State Renewable Energy

- ◆ Ca Gov Military Advisory Committee
- ◆ NV Joint Military Advisory Committee
- ◆ Desert Managers Group
- ◆ Southwest Strategy
- ◆ DoD Southwest Renewable Energy Group
- ◆ Mojave Military Commanders Summit
- ◆ AZ Military Aviation Working Group
- ◆ AZ Gov Military Advisory Council
- ◆ AZ Commander's Summit
- ◆ Barry M. Goldwater Executive Committee
- ◆ Western Regional Partnership