

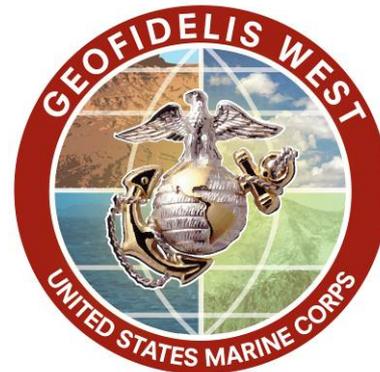
# USMC West GIS Efforts

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**Jason Thacker**

GEOFIWEST Program Manager

Technology Associates International Corporation



# Overview

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- USMC GIS Program (*GEOFidelis*)
- Marine Corps Installations West (MCIWEST)
- Enterprise GIS Architecture
- Regional Data Compilation and Map Products

# GEO*Fidelis*

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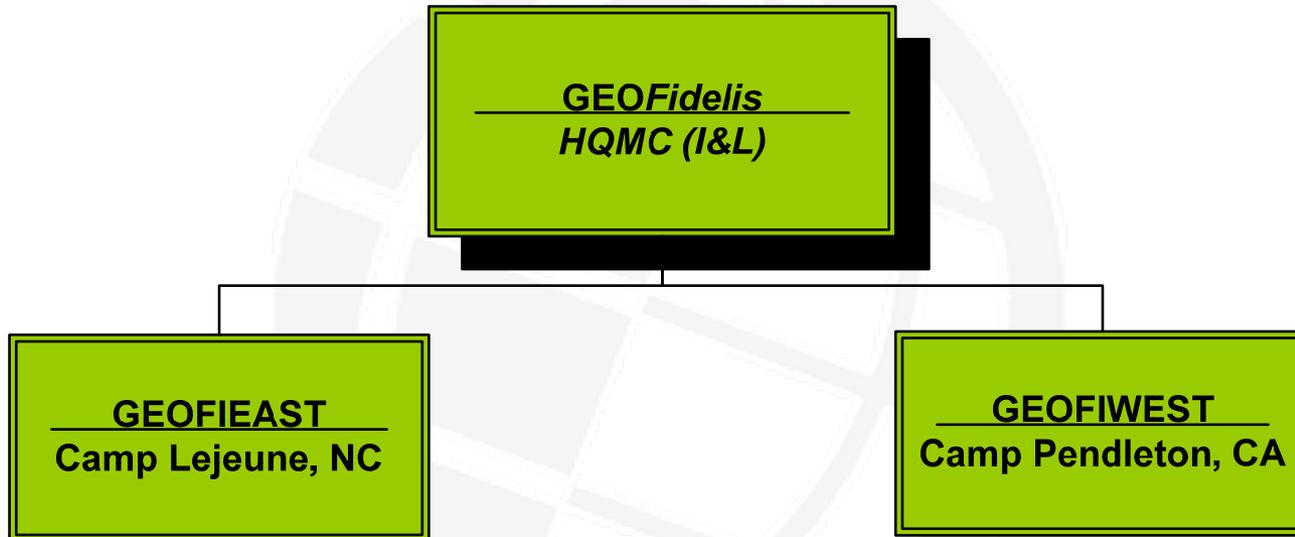
- Planning and Policy
- Program Management
- Marine Corps-wide Geospatial Data Management
- Enterprise GIS Applications
- Installation Advocacy



**GEO** **Fidelis**

# GEO*Fidelis*

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# MCI WEST

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- Operations and Training Support
  - Command and Control
  - Force Deployment Support
  - Force Protection
- Sustainment and Maintenance
  - Infrastructure
  - Services
- Workforce Management
  - Civilian
  - Military



# MCI WEST

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29 Palms



Barstow



Yuma



Bridgeport



Miramar



Pendleton



MCAS  
Pendleton

# GEOFIWEST



**GE**  *Fidelis*



**MCIWEST**



# Roles & Responsibilities

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## HQMC (I&L)

- Provides GEOFidelis Program leadership, funding, functional advocacy, and **Corps-wide coordination**.

## MCIWEST

- Provides leadership, resourcing, advocacy, **Region-wide coordination**, interface with external agencies, and guidance.

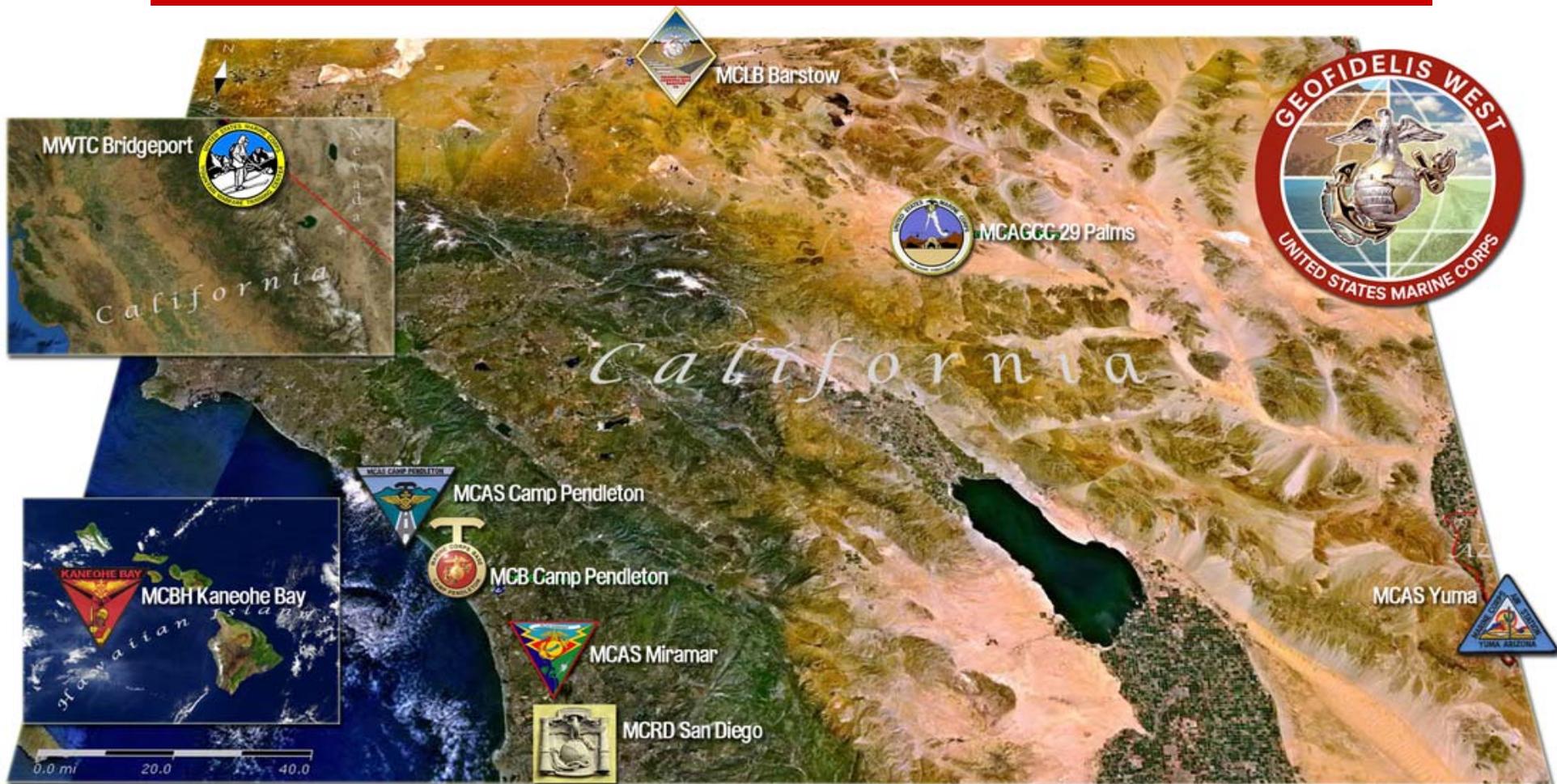
## GEOFIWEST (Geospatial Data Center)

- Provides centralized data/application **hosting**, regional coordination, and program management services to MCIWEST and Installations.

## Installations

- Provides local data stewardship, **ownership**, subject matter expertise, funding, coordination, and program management.

# GEOFI WEST



# West Coast Regional GEOFidelis Center

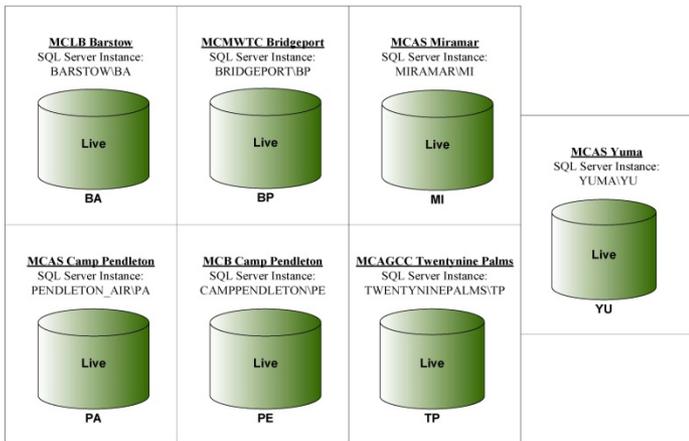
SQL Server 2005\ArcSDE 9.2 Geodatabases

## Microsoft Cluster Services (MSCS)

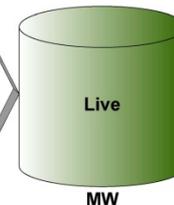
### SQL Server 2005\ArcSDE 9.2 Installation Instances

#### GEOFI West Installations

##### MCIWest Installations

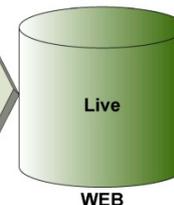
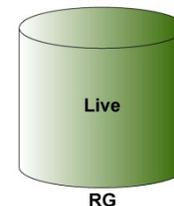


#### Marine Corps Installations West MCIWEST\MW



Enterprise Data Migrator (EDM)

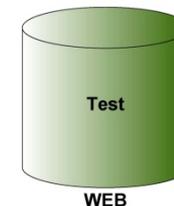
#### GEOFI West Regional Repository REGIONAL\RG



Enterprise Data Migrator (EDM)

### ArcGIS Server 9.3 Test\Future Architecture

#### ArcSDE 9.3 – ArcGIS Server 9.3 WEB\WEB



**Marine Corps Forces Pacific**  
SQL Server Instance: MARFORPAC\PAC

MCB Camp Butler  
Commonwealth of the Northern Mariana Islands  
Guam  
MCAS Iwakuni



**MCB Hawaii**  
SQL Server Instance: HAWAII\HI



**MCRD San Diego**  
SQL Server Instance: SAN DIEGO\SD



#### MSCS – SQL SERVER 2005\ARCSD 9.2 GEODATABASES:

High Availability SQL Server 2005 architecture utilizing Microsoft Cluster Services technology. SQL Server instances are created on each cluster node using active/active mode for failover. Active instances are specified to balance workload and resources. ArcSDE Services automatically failover with the SQL Server instances but any connected users must manually reconnect.

##### Live Geodatabases

- **Installation specific** – Contains all data layers for an Installation in their current SDSFIE version. Data resides in each Installation's local coordinate system.
- **MW** – Combination of all SDSFIE data layers from MCIWest Installations. Data is updated from each Installation's live geodatabase nightly, using the Enterprise Data Migrator (EDM). Data resides in WGS84.
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#### ARC GIS SERVER 9.3 GEODATABASE:

ArcSDE 9.3 geodatabase using 64-bit SQL Server 2005. Geodatabase is located in a non-MSCS environment.

##### Test Geodatabase

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4 User(s) Online

Hawaii 12:00:10 Pacific 14:00:10 Central 16:00:10 Eastern 17:00:10 Zulu 22:00:10 Iraq 01:00:10

**Map Selection**

Map Extent:  
MCIWEST Regional View

Background Map:  
StreetMap

Layer's Themes:  
MCIWEST\_COP

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**Advanced Tools**

RealTime Tracking: On

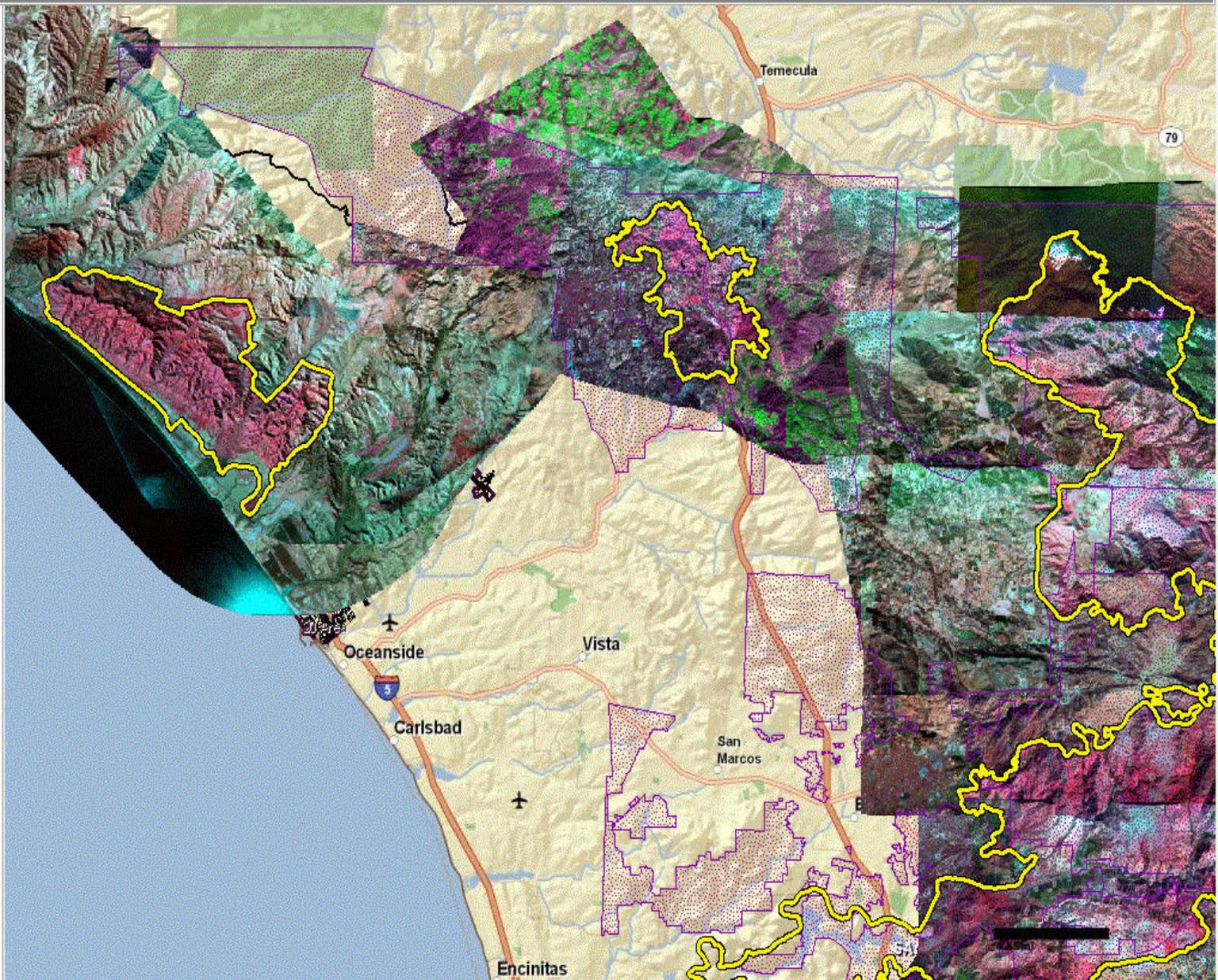
Markups	Active	Archived
Real World	<input type="checkbox"/>	<input type="checkbox"/>
Exercise	<input type="checkbox"/>	<input type="checkbox"/>

---

**Map Contents**

Fire Map 2007 Add/Update

- Fire Map 2007
  - MODIS Fire Detection Oct
  - MODIS Fire Detection Oct
  - Road Closure - SD Count
  - Burn Area - SD County 8
  - Burn Area Perimeter- SD
  - Mandatory Evacuation Ar



Map Selection

**Map Extent:**  
MCB Camp Pendleton

**Background Map:**  
Aerial Imagery Cached

**Layer's Themes:**  
MCIWEST\_COP

Advanced Tools

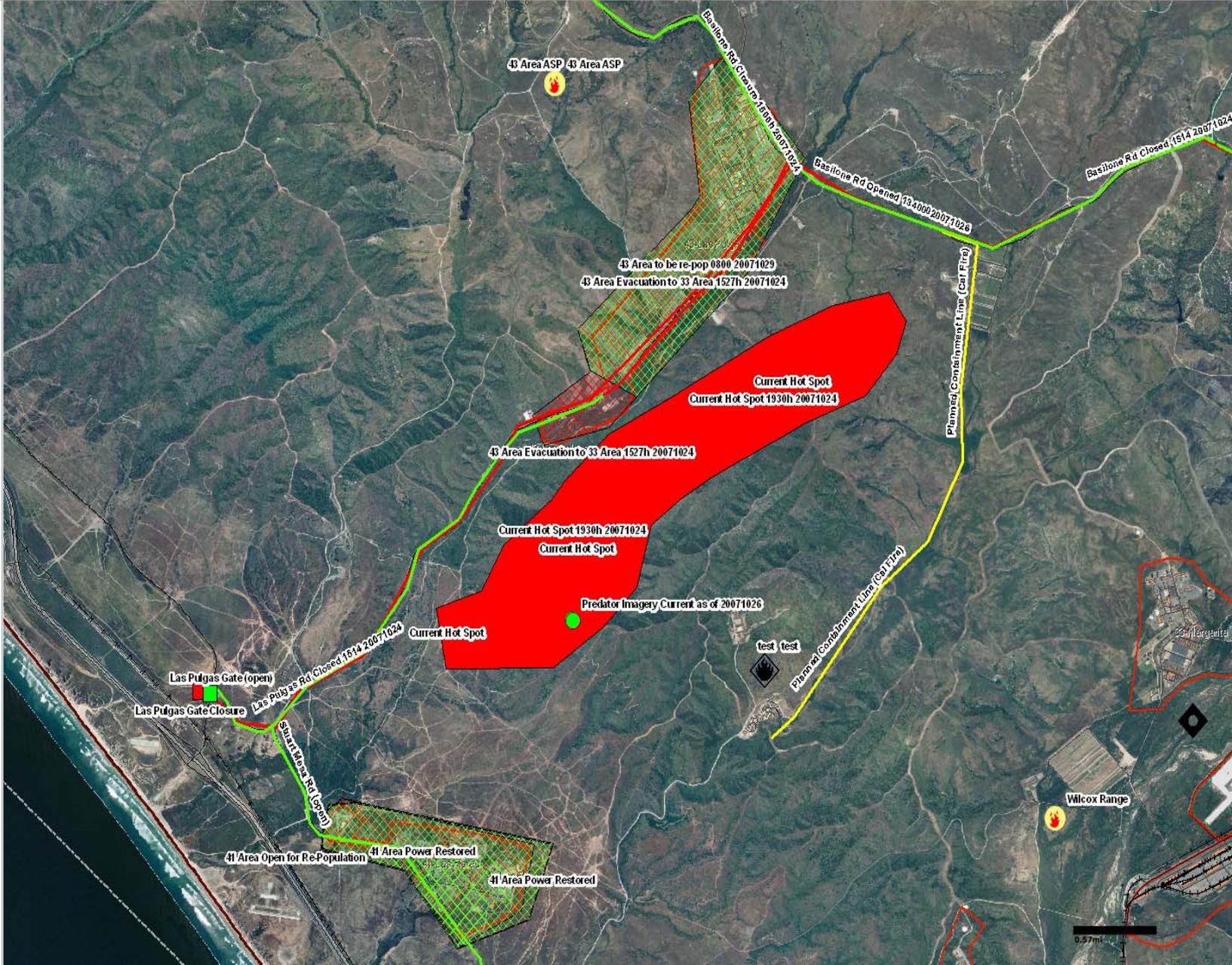
**RealTime Tracking: Off**

Markups	Active	Archived
Real World	<input type="checkbox"/>	<input type="checkbox"/>
Exercise	<input type="checkbox"/>	<input type="checkbox"/>

Map Contents

Markup Archive [Add/Update](#)

- Bomb
- Fire Incident
- Hot Spot
- Non-Residential Fire
- Residential Fire
- Wild Fire
- Hazardous Material Incident
- Air Incident





Map Selection

Map Extent: (Select Area...)

Background Content: Aerial Imagery (Cached)

Markups

Markups Active Archived
Real World [checked] [ ]
Exercise [ ] [ ]
Select and Refresh Map: [refresh icon]

Results

Map Contents

- Weather NOAA
[checked] Weather Stations
[checked] Infrastructure
Interactive Facility Data
Interactive Bus Stops
[checked] Map Annotation
[checked] DOD Boundary
[checked] Facilities
[checked] Transportation
[checked] World



Weather Underground Rapid Fire
LSF LAS FLORES CA US
Oceanside, CA
Current Temperature: 78.0°F / 25.5°C
Humidity: 66% Dew Pt: 66.0°F / 18.8°C
Rainfall: 0.00 in / 0.0 cm Press: 29.80 in / 1009.1 hPa
Today's Extremes High: 79.0°F / 26.1°C Low: 55.0°F / 13.3°C
5 Minute Wind Interval
West 8.0 mph / 12.8 km/h

# Western Regional Environmental Coordinator

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- Coordination of environmental issues of regional interest to the DoD and other services
  - Education of appropriate federal and state personnel on Marine Corps requirements and perspectives
  - Coordination of intra-Marine Corps environmental information exchange and training
  - Support efforts to achieve consistency in environmental programs across the Western US and Hawaii
- Participate in Desert Managers Group
  - Participate in Western Regional Partnership
  - Participated in Western Governors Association

# Regional Data Compilation

SDSFIE

**Spatial Data Standard for  
Facilities, Infrastructure and Environment**

MX CA AZ NV UT NM CO OR WA ID MT WY SD ND AK

**Auditory  
Boundary**

Noise Contours (Ranges, Installations)  
Federal Representative Districts  
State Assembly / Representative  
State Senate  
APCDs / AQMDs  
Water Districts  
Zip codes

**Regional** NPS Regional Boundaries  
**Regional** Forest Service Regional Boundaries  
**Regional** Fish and Wildlife Service Regional Boundaries  
**Regional** BuRec Regional Boundaries  
**Regional** Governmental Associations

**Cadastre**

Orthographic Imagery  
TOPO Layers / Raster Maps  
Digital Elevation Model (DEMs)

**Communications**

**Cultural  
Ecology**

Archaeo Sensitive Areas (APE)  
Multi Species Conservation Plans (MSCPs)  
Habitat Conservation Plans (HCPs)  
Natural Community Conservation Plans (NCCPs)  
Wildlife Corridors

**Regional** Wilderness Areas NPS  
**Regional** Wilderness Areas BLM  
**Regional** Wilderness Areas FWS  
**Regional** Wilderness Areas FS  
**Regional** Wilderness Study Areas NPS  
**Regional** Wilderness Study Areas FWS  
**Regional** Wilderness Study Areas FS  
**Regional** Wilderness Study Areas BLM  
**Regional** NLCS NCAs  
**Regional** FWS Refuge Areas

**Environmental Hazards** Active and Non Active Mining Sites



[Link](#)

# West Coast Regional GEOFidelis Center

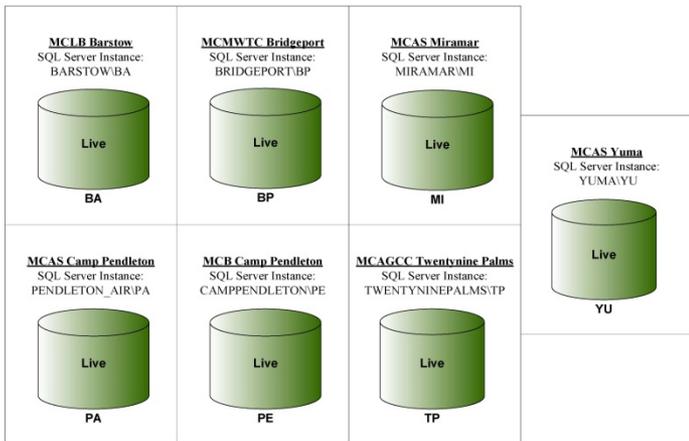
SQL Server 2005\ArcSDE 9.2 Geodatabases

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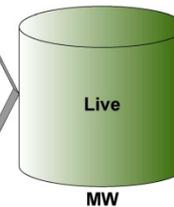
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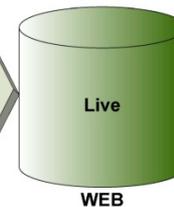
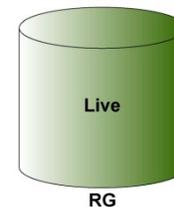


#### Marine Corps Installations West MCIWEST\MW



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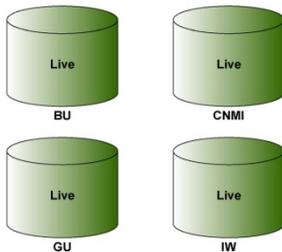
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MCAS Iwakuni



**MCB Hawaii**  
SQL Server Instance: HAWAII\HI



Live

HI

**MCRD San Diego**  
SQL Server Instance: SAN DIEGO\SD

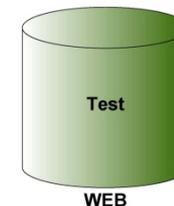


Live

SD

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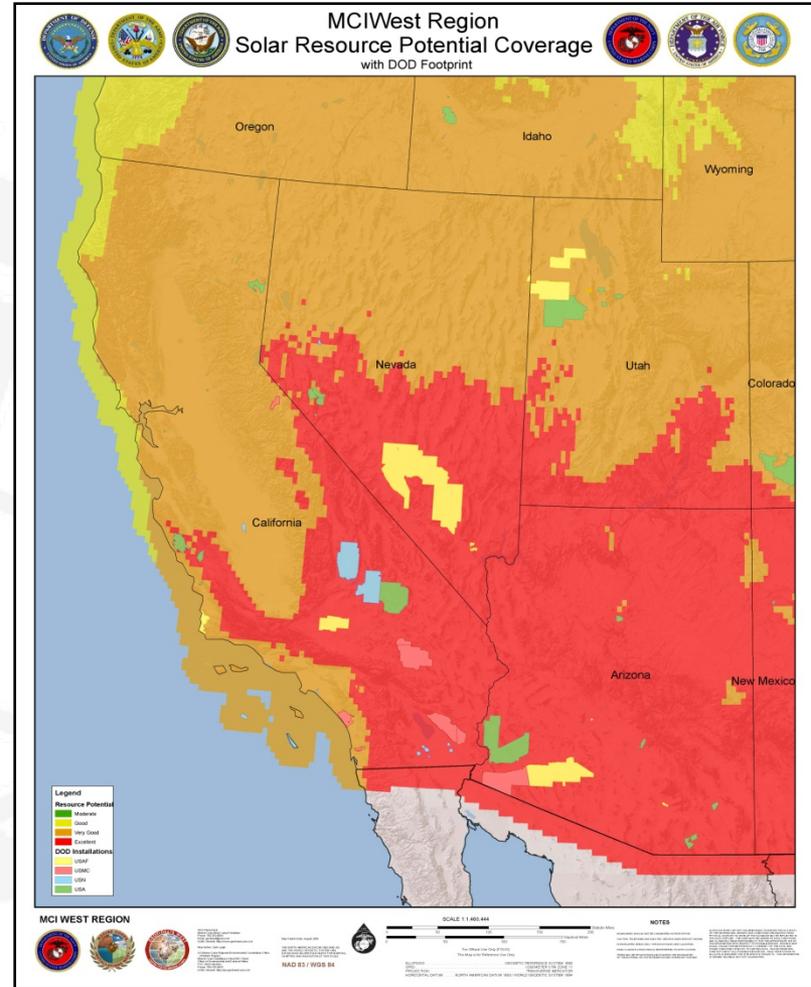
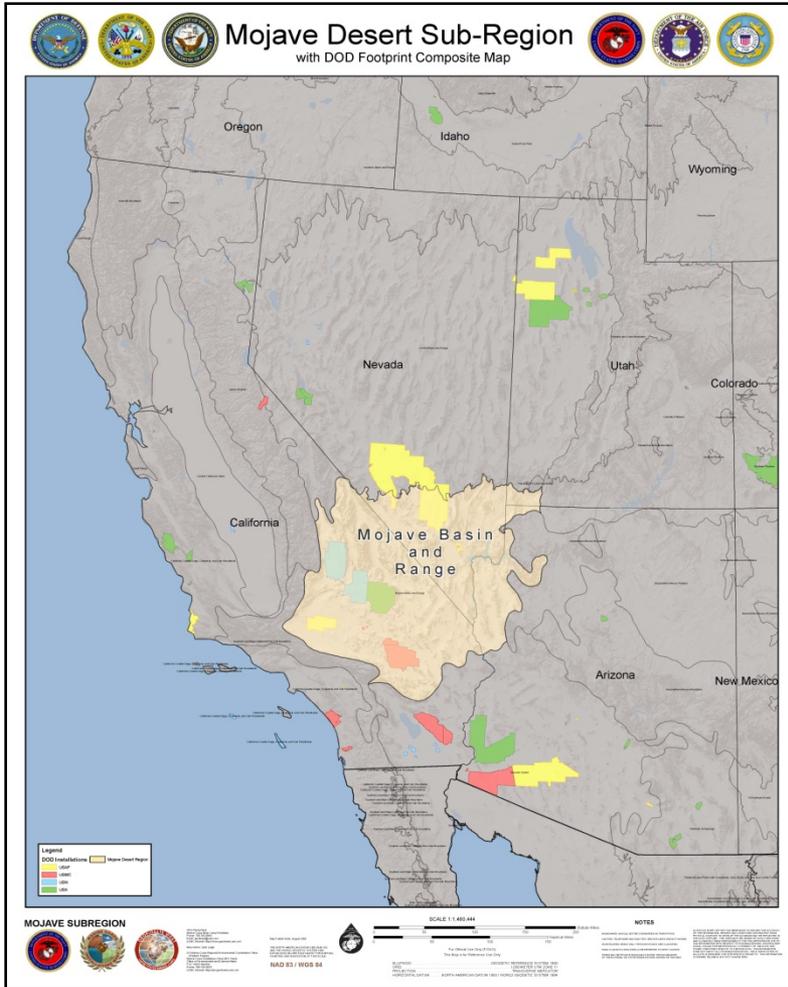
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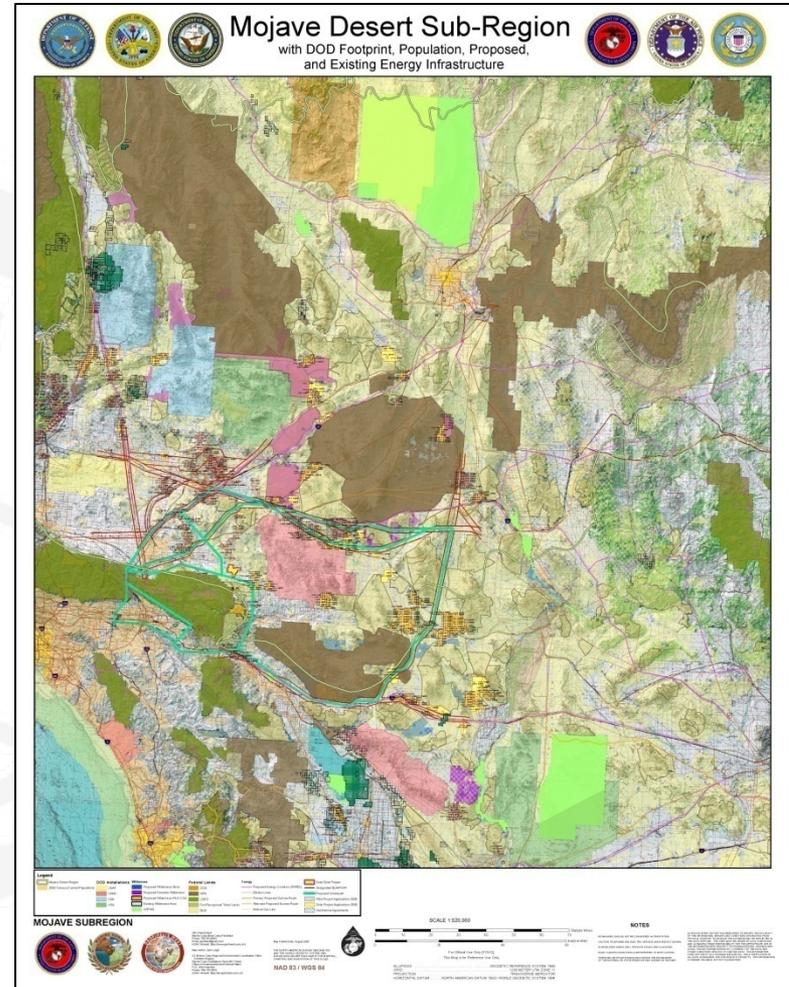
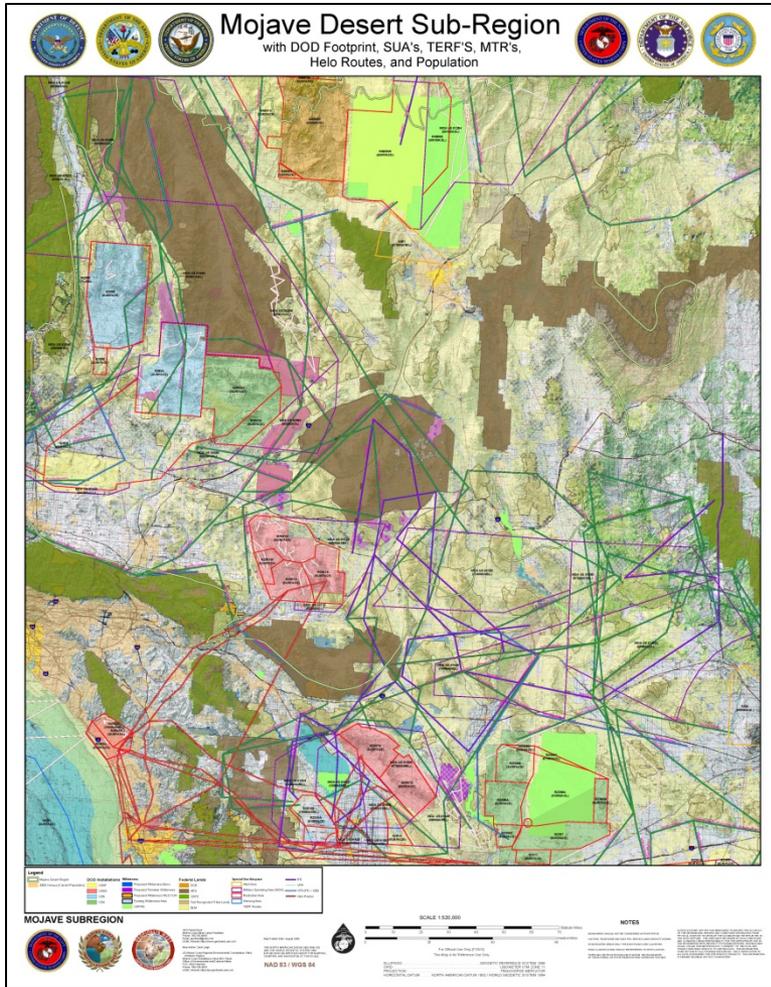
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# WREC GIS Projects



# WREC GIS Projects



[Link](#)

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For more information...

**Mr. Mike Hamilton**

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(WREC)  
760.763.1891

**Mr. Jason Thacker**

Program Manager, GEOFIWEST  
760.763.6696