



UNCLASSIFIED



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# Ensuring Mission Compatibility With Renewable Energy Technologies

## Protecting DoD's Training and Testing Mission

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# Strategic DOD Mission California Outer Continental Shelf (OCS)



**Context:** DOD conducts training, testing and operations in the airspace, sea surface, subsurface and seafloor of California's Outer Continental Shelf (OCS) – all of which are critical to military readiness and National Security.

## **Geography:**

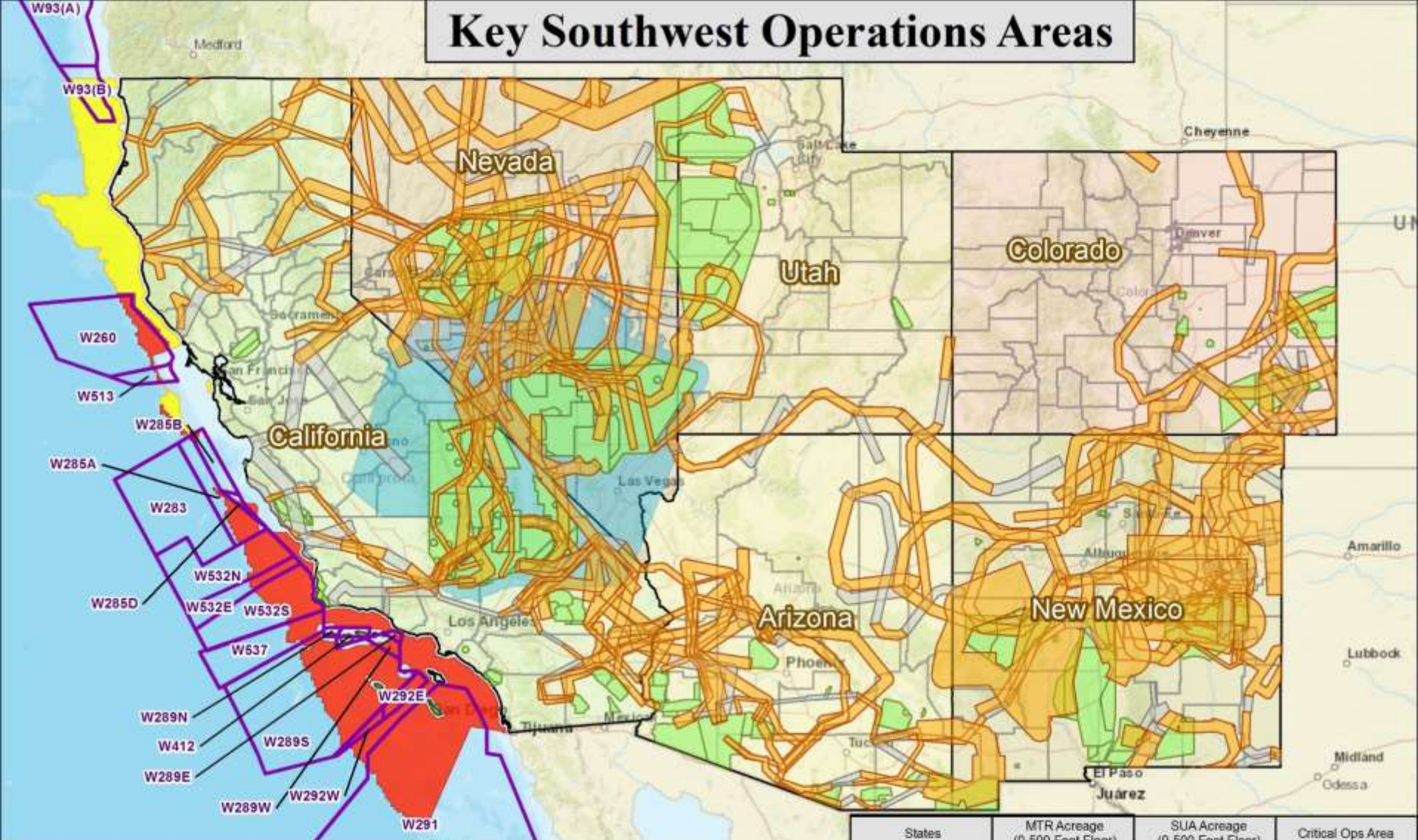
- Airspace– Restricted, Warning Areas, Air Traffic Control Assigned Airspace
- Sea and Undersea Space – Operating Areas, Safety/Danger/Exclusion/Restricted Zones
- Terrestrial – Dynamic full mission profile with live fire for Amphibious, Naval Special, and Strike Warfare
- Over-the-Horizon – Command & Control, Electromagnetic Warfare in contested environment, Combined Arms from sea to land

## **Instrumentation (communication and track):**

- 700+ sq nautical mile in-water bi-directional hydrophone array (deep to shallow water)
- Electronic Warfare (>500nm)
- Surface Fast Attack Craft/Fast Inshore Attack Craft (FAC/FIAC)
- Sub-surface minefields (sub, helo, ships, divers)

**SUPPORTING THE NATIONAL DEFENSE STRATEGY'S FOCUS ON  
WARFIGHTING READINESS AND LETHALITY**

# Key Southwest Operations Areas



- Offshore Operating Area
  - Military Training Route (0 - 500 Ft Floor)
  - Military Training Route (> 500 Ft Floor)
  - Special Use Airspace (0 - 500 Ft Floor)
  - Site-Specific Stipulations
  - RAIMORA
  - Wind Exclusion
- DoD Composite**
- No Restrictions
- Offshore Area Assessment**

States	MTR Acreage (0-500 Foot Floor)	SUA Acreage (0-500 Foot Floor)	Critical Ops Area
Arizona	~ 19 M Acres	~ 6 M Acres	~ 25 M Acres
California	~ 22 M Acres	~ 13 M Acres	~ 45 M Acres
Colorado	~ 8 M Acres	~ 4 M Acres	~ 12 M Acres
Nevada	~ 31 M Acres	~ 18 M Acres	~ 57 M Acres
New Mexico	~ 42 M Acres	~ 12 M Acres	~ 54 M Acres
Utah	~ 4 M Acres	~ 9 M Acres	~ 14 M Acres

0 25 50 100 150 200 250 300 Nautical Miles

0 25 50 100 150 200 250 300 350 400 Miles





# Strategic DOD Mission - CA OCS Training Requirements.



## DOD Training Requirements:

- Offshore Range availability ensures execution of Optimized Fleet Response Plan, and ability to meet deployment schedules for Navy forces across the spectrum (air, surface, undersea).
- Supports low-altitude training, electronic warfare training, surface navigation/seamanship, and ship/helo anti-submarine training.
  - ~2,500 training events/year
- Southern California Range Complex is the Pacific Fleet's primary west coast training area, supporting the largest concentration of naval forces in the world.
  - Supports ~30k training events/year.
- Supports unit level training, complex group level training and major training exercises, including live fire activities.
- Irreplaceable instrumented underwater ranges
- Strike Fighter Wing Pacific utilizes offshore special use airspace for daily flight operations used for completing unit level qualification.
  - Supports basic, intermediate and advanced squadron training requirements.
  - Critical open ocean areas for carrier landing certifications.



# Strategic DOD Mission – CA OCS Testing Requirements

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## DOD Testing Requirements:

- Real-time Command and Control of the Western Range
  - Spacelift Operations
  - Ballistic Missile Test and Evaluation
  - Orbital Vehicle Recovery
  - Aeronautical Test and Evaluation
- Assure our Nation's Access to and from Space
  - Plan, schedule, operate range in support of launch agencies
  - Develop tailored mission flight rules
  - Terminate flight if required; protect the public
- Plan and Schedule all Western Range Operations
  - Pre-launch, launch and aeronautical operations
  - Coordinate, plan and task midrange and downrange support



# Strategic DOD Mission – CA OCS Testing Requirements cont.



## DOD Testing Requirements cont.:

- The Point Mugu Sea Range provides operationally realistic climatic and physical features that closely simulate conditions in many of the primary threat regions of the world, which allows for realistic testing and training of new planes, weapons and other systems prior to deployment.
  
- ❑ Multi-service, multi-national, multi-participant testing & training
- ❑ Small scale tests & large, complex events
- ❑ Long-range, large hazard pattern weapons
- ❑ Littoral operations
- ❑ Air, surface, submarine launched weapons (sea/land)
- ❑ ICBM, missile defense, and polar orbit satellite launch
  
- ❑ Unmanned Systems RDATE&E
- ❑ Threat/Target T&E for Navy Targets
- ❑ Directed Energy RDATE&E
- ❑ Hypersonic RDATE&E
- ❑ Electronic Warfare RDATE&E
- ❑ Concurrent live-fire operations
- ❑ Subsonic/supersonic launch platforms

**PROVIDE DECISION QUALITY DATA**



# DOD Engagement Activities

## California Outer Continental Shelf (OCS)

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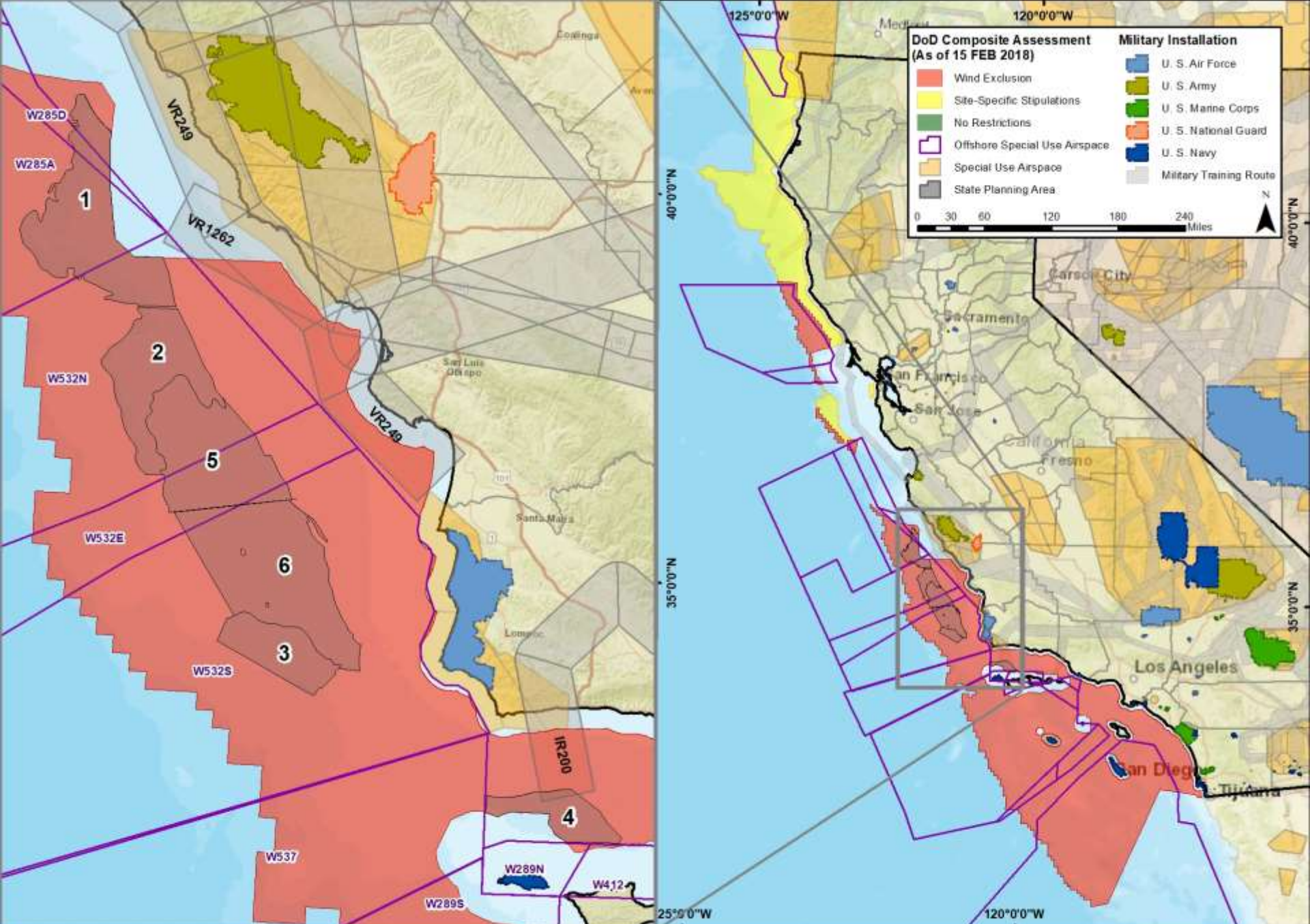


### **Agency & Industry Offshore Session of 15 FEB 2018:**

- Assembled a diverse group of agency & industry stakeholders with interest in offshore renewable wind
- DOD provided context to complexity of military operations within the central coast region
- Afforded a forum to facilitate candid discussions to express interests & concerns from agency representatives, industry and DOD
- DOD reiterated continued commitment to collaborate with industry and agency partners to conduct discovery consultations for mission compatibility with “new and detailed project level information”

### **DOD Discovery Engagements with Industry – Overview Since 15 FEB 2018:**

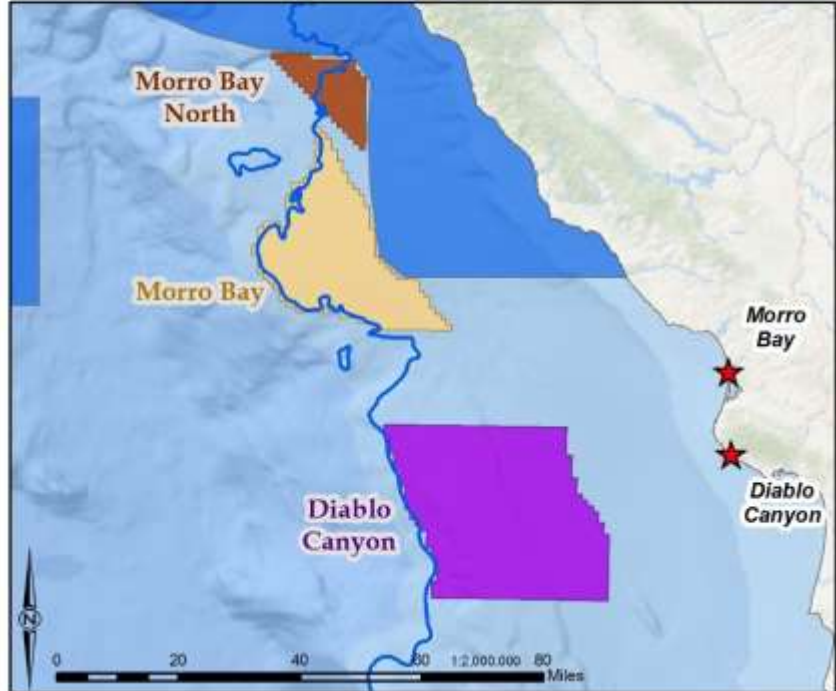
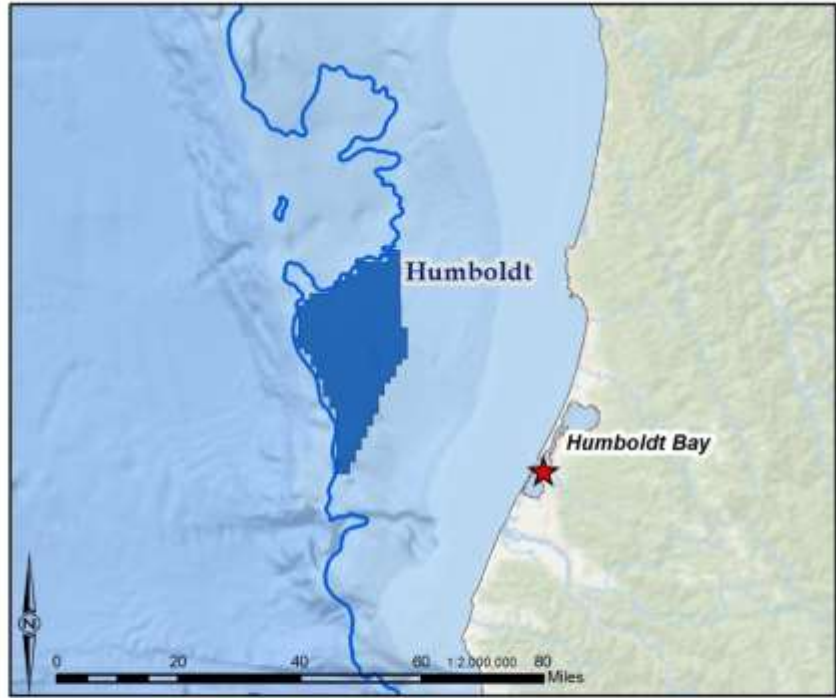
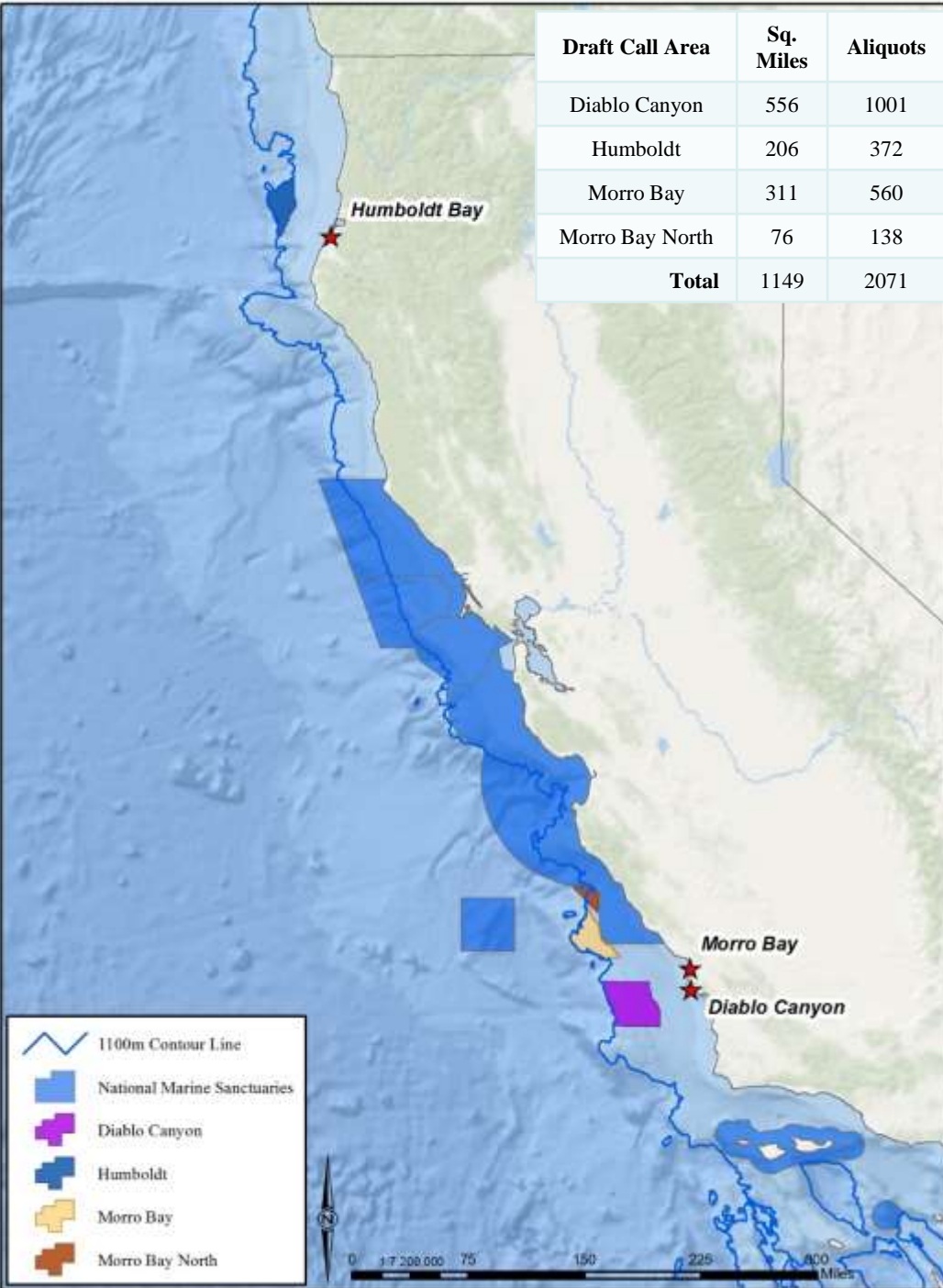
- DOD currently examining 22 proposed sites along CA Central Coast and 1 in NORCAL
- DOD engaged by 13 offshore industry representatives for discovery discussions
- DOD working diligently to collaborate and locate possible areas where offshore wind may be compatible with military operations



**DoD Currently Examining 22 Proposed Sites – CA Central Coast**



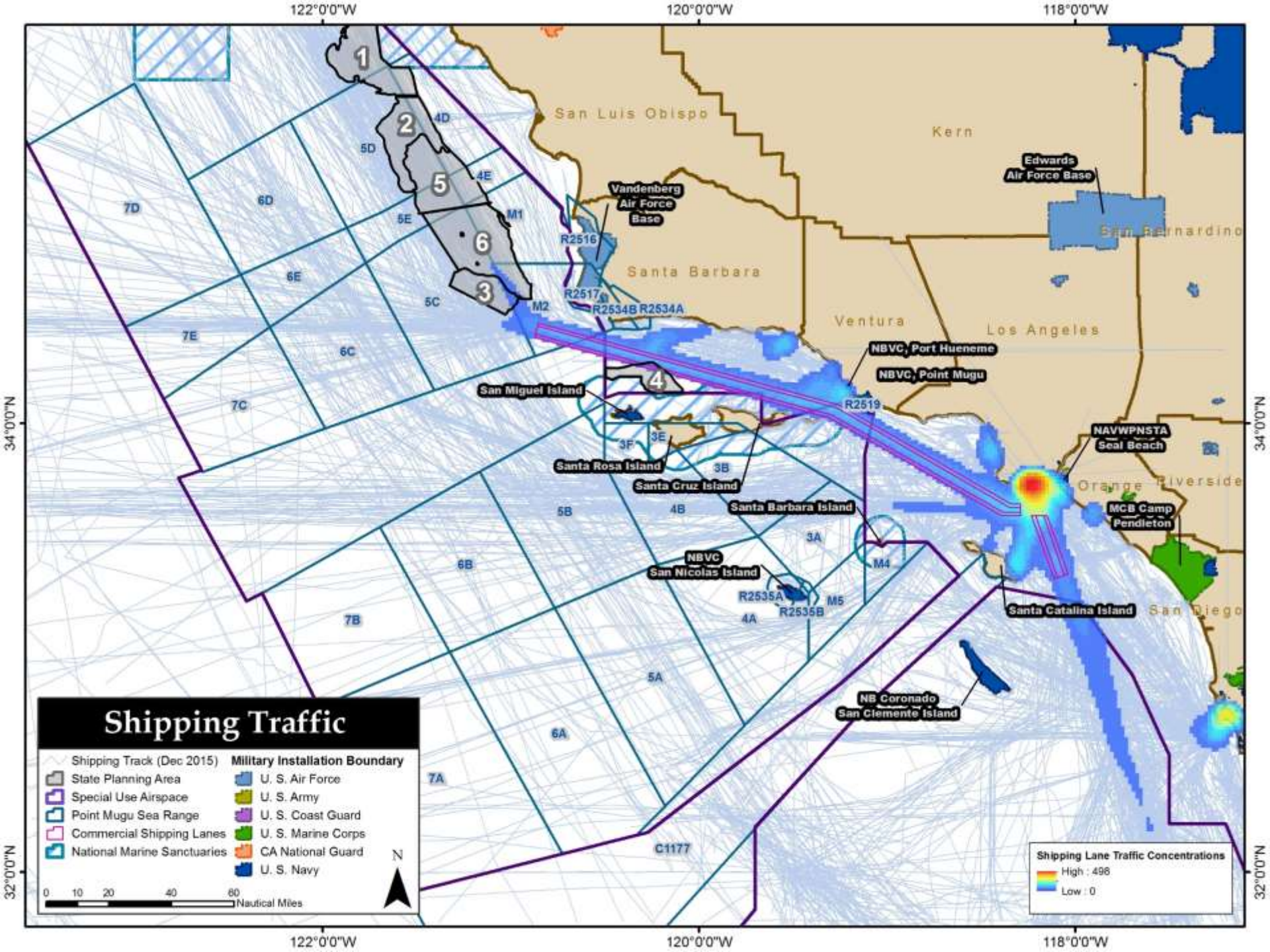
Draft Call Area	Sq. Miles	Aliquots
Diablo Canyon	556	1001
Humboldt	206	372
Morro Bay	311	560
Morro Bay North	76	138
<b>Total</b>	<b>1149</b>	<b>2071</b>





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# Back Up





# LAUNCH SATELLITES

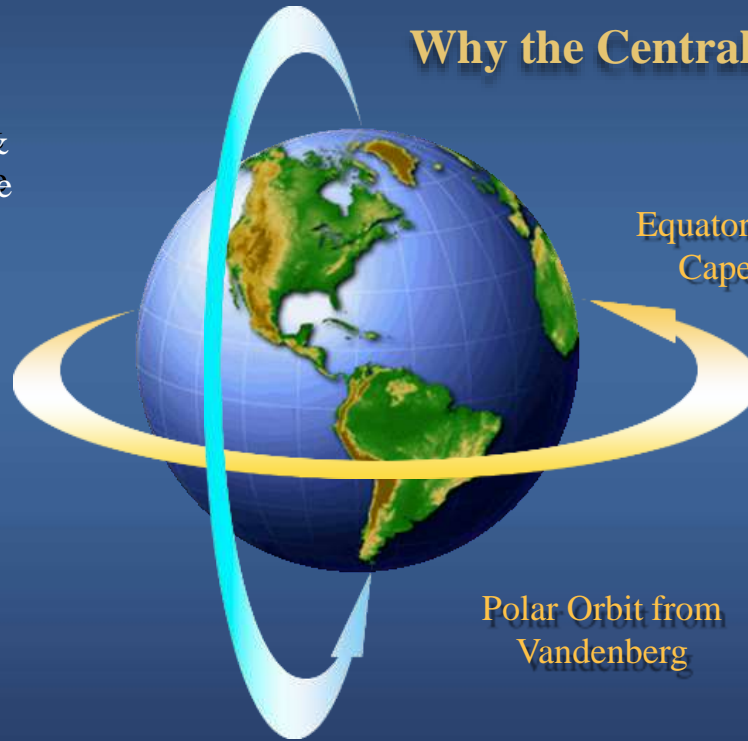
## Why the Central Coast?

Intelligence,  
Surveillance &  
Reconnaissance

Weather

Combat Search and  
Rescue Capability

Natural Disaster  
Monitoring

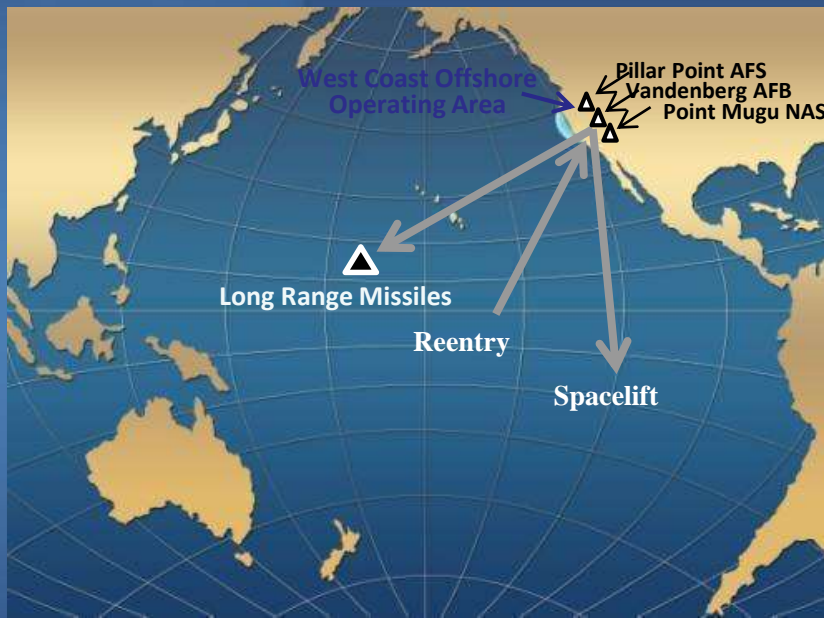


Equatorial Orbit from  
Cape Canaveral

Polar Orbit from  
Vandenberg



# OPERATE WESTERN RANGE



**Supports all launch, landing and airspace control activity from Vandenberg**

- Range Assets
  - Telemetry and Radar
  - Command and Control
  - Optics
  - Communications

Western Range provides Team V Partners unique capabilities for their vital National Missions