



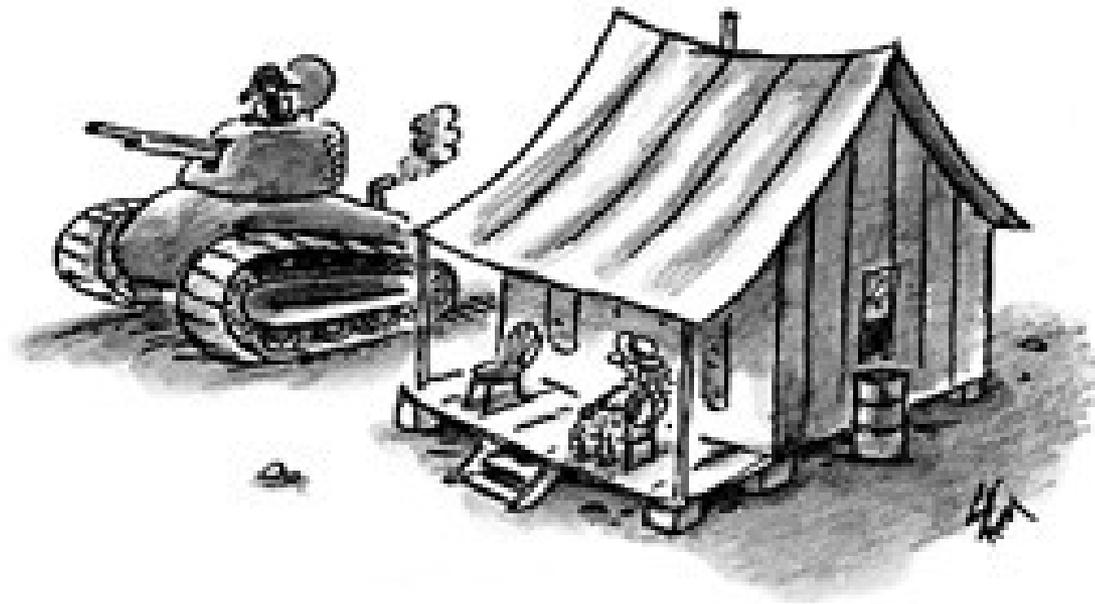
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# **Successful Inter-agency Consultation: The BLM & DoD Wind Energy Protocol**

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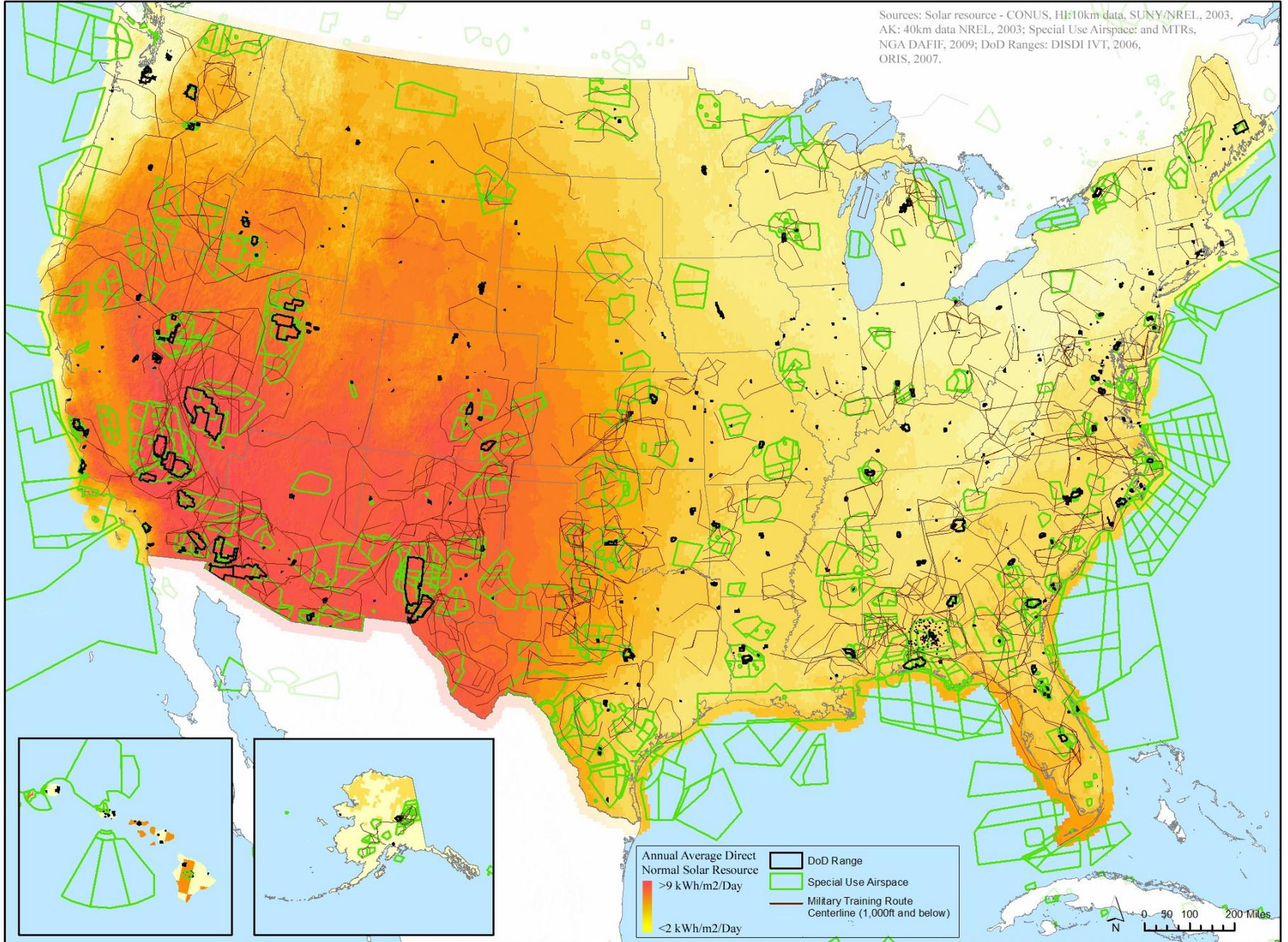
© Cartoonbank.com



*“I was hoping you  
had no more territorial ambitions.”*

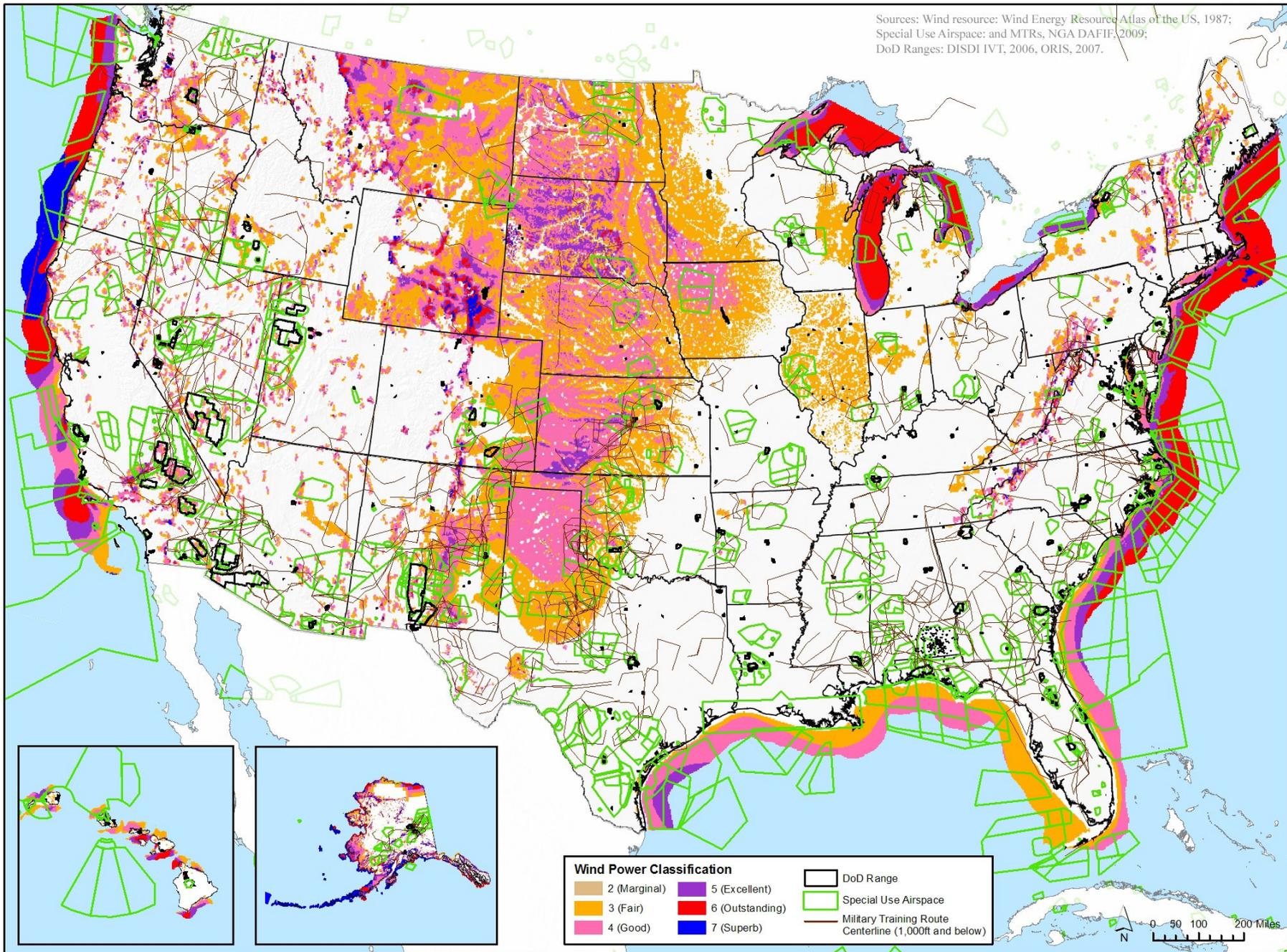
# U.S. Solar Resource and DoD Ranges and Special Use Airspace

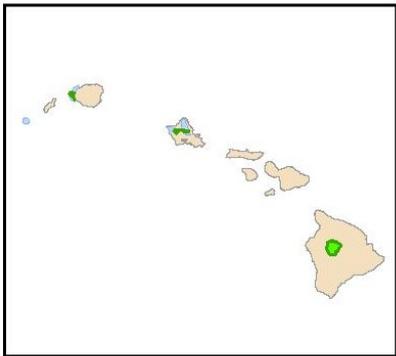
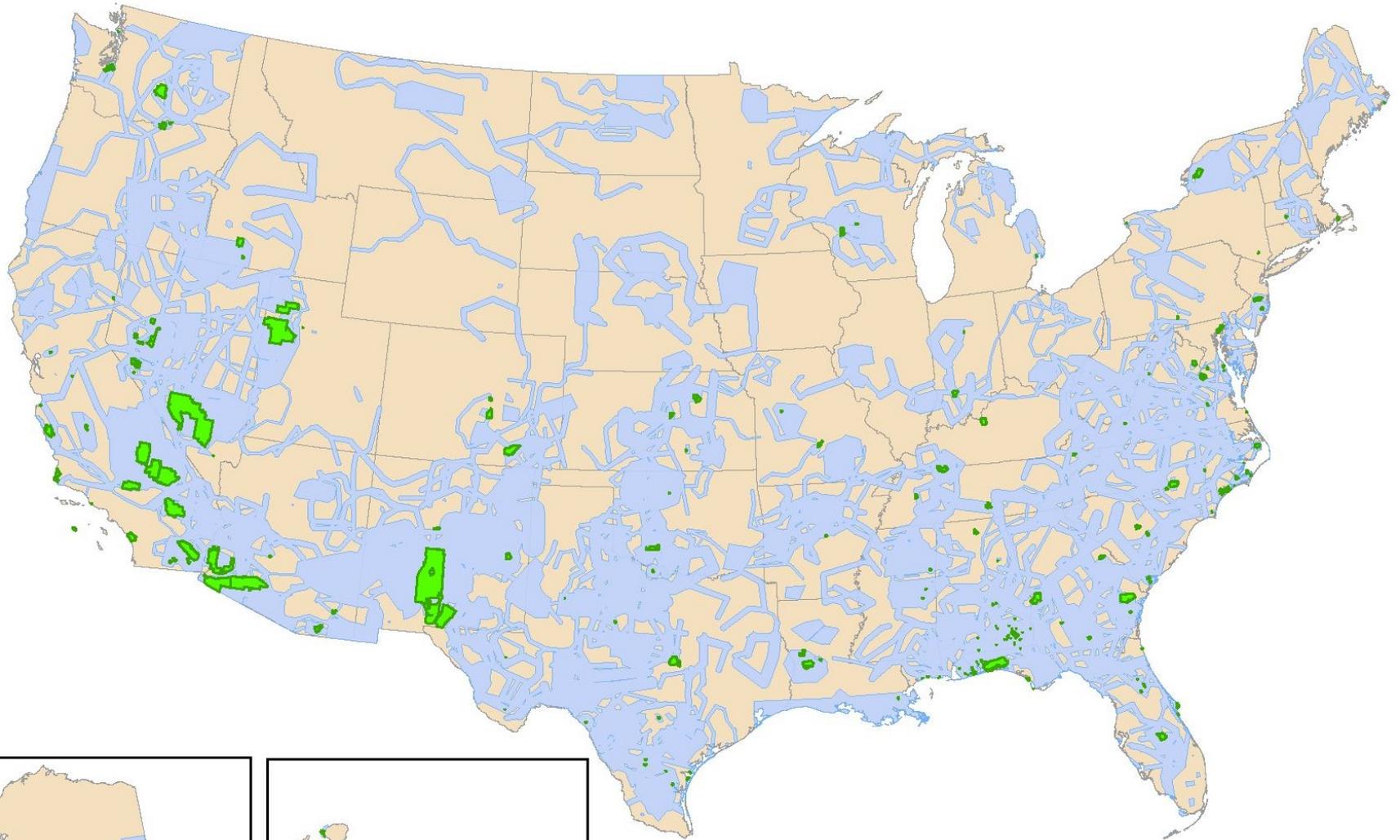
Sources: Solar resource - CONUS, HI+10km data, SUNY/NREL, 2003, AK: 40km data NREL, 2003; Special Use Airspace and MTRs, NGA DAFIF, 2009; DoD Ranges: DISDI IVT, 2006, ORIS, 2007.



# U.S. Wind Resource and DoD Ranges and Special Use Airspace

Sources: Wind resource: Wind Energy Resource Atlas of the US, 1987;  
Special Use Airspace; and MTRs, NGA DAFIF, 2009;  
DoD Ranges: DISDI IVT, 2006, ORIS, 2007.





 Airspace over DoD land  
 Airspace over Non-DoD land



# Military Airspace 101

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- **Military Operations Area (MOA)** is airspace designated for military training activities including acrobatic or abrupt flight maneuvers.
- **Military Training Routes (MTRs)** The military services train in a wide range of airborne tactics, one of which is low-level combat. The MTR program is a joint venture by the FAA and the Department of Defense to develop routes for the purpose of conducting low-altitude, high-speed training. Three types of MTRs:
  - Instrument Military Training Route (IR):** Operations on IR routes are conducted in accordance with IFR regardless of weather conditions.
  - Visual Military Training Route (VR):** Operations on VR routes are conducted in accordance with VFR.
  - Slow Speed Low Altitude Training Routes (SR):** About 200 SRs in the United States are used for military air operations at or below 1500' AGL and at air speeds of 250 K or less. SRs are flown both day and night, but only under VFR conditions.



# Wind Energy Protocol

- Improves communication and coordination between the agencies
- Establishes a process for DoD's review of and comment on proposed wind energy projects on BLM-administered lands
- Provides a process to develop mitigation measures
- Directs agencies to work together and share spatial data and GIS tools for evaluation of proposed wind energy projects

WIND ENERGY PROTOCOL  
BETWEEN  
THE DEPARTMENT OF DEFENSE  
AND  
THE BUREAU OF LAND MANAGEMENT  
CONCERNING CONSULTATION ON DEVELOPMENT  
OF  
WIND ENERGY PROJECTS AND TURBINE SITING ON PUBLIC LANDS  
ADMINISTERED BY THE BUREAU OF LAND MANAGEMENT  
TO  
ENSURE COMPATIBILITY WITH MILITARY ACTIVITIES

July 2008

## I. PURPOSE

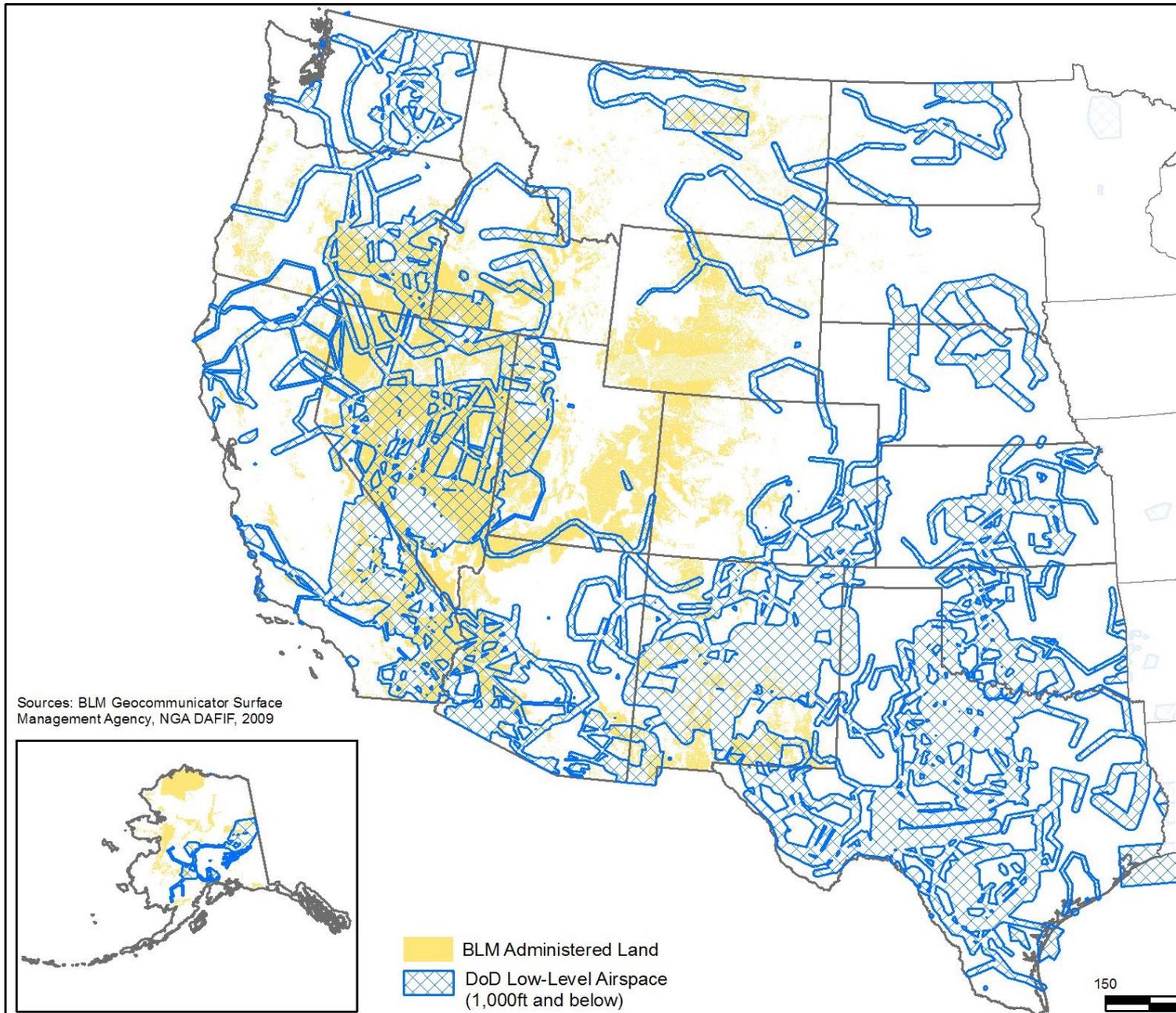
With the signing of the Wind Energy Protocol (Protocol), the Department of Defense (DOD) and the Department of the Interior, Bureau of Land Management (BLM), hereinafter referred to as the "Agencies," commit to work together to facilitate compatible land use through cooperative planning of wind energy projects on BLM-administered lands. Public lands withdrawn for military uses are outside the scope of the Protocol. Specific statutory and regulatory processes govern any request to use withdrawn lands for purposes other than military purposes. The purpose of the Protocol is to improve the communication and coordination process between BLM and DOD in the review of proposed wind energy right-of-way (ROW) applications on BLM-administered public lands. The Protocol will facilitate the timely processing of wind energy right-of-way applications and provide for the appropriate use of public lands for the development of wind energy resources. The ultimate goal of the Protocol is to promote long term wind energy development on BLM-administered public lands in a manner compatible with military activities.

Specifically, the Protocol:

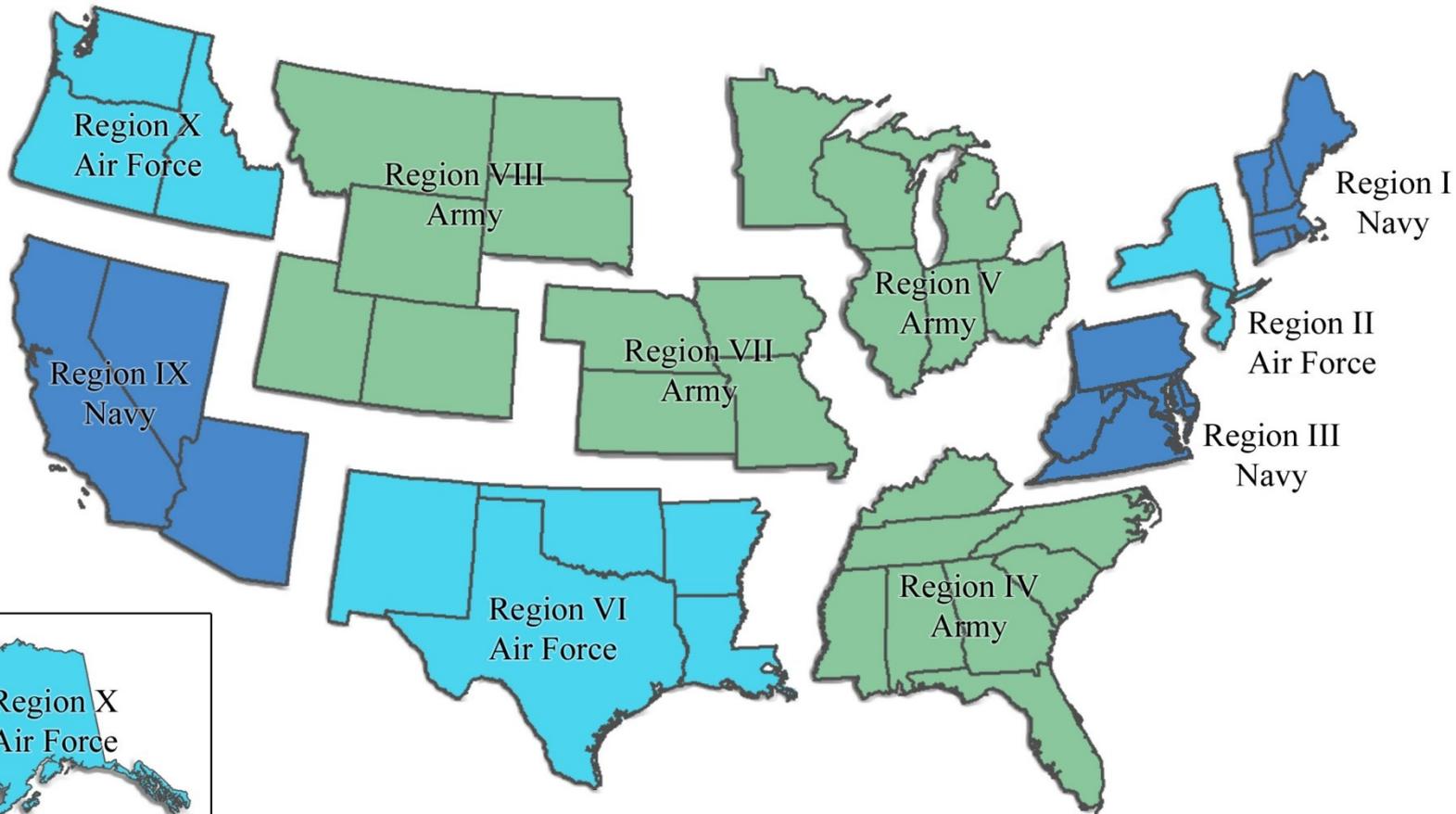
1. Establishes a process for DOD's review of and comment on proposed wind energy applications on BLM-administered public lands.
2. Provides a process to develop mitigation measures to minimize impacts on military activities and to increase opportunities for wind energy developers to utilize high value wind energy sites on public lands in the Western United States.

The Protocol recognizes that comments provided by DOD on any proposed wind energy project on public lands are recommendations and that the BLM has the ultimate responsibility for the allocation of land uses on public lands and retains the decision authority regarding applications for the use of the public lands. However, BLM fully acknowledges DOD's vital national security mission and commits to work closely with

# Low-Level DoD Airspace and BLM Administered Land



# DoD Regional Environmental Coordinators



## Component Responsibilities

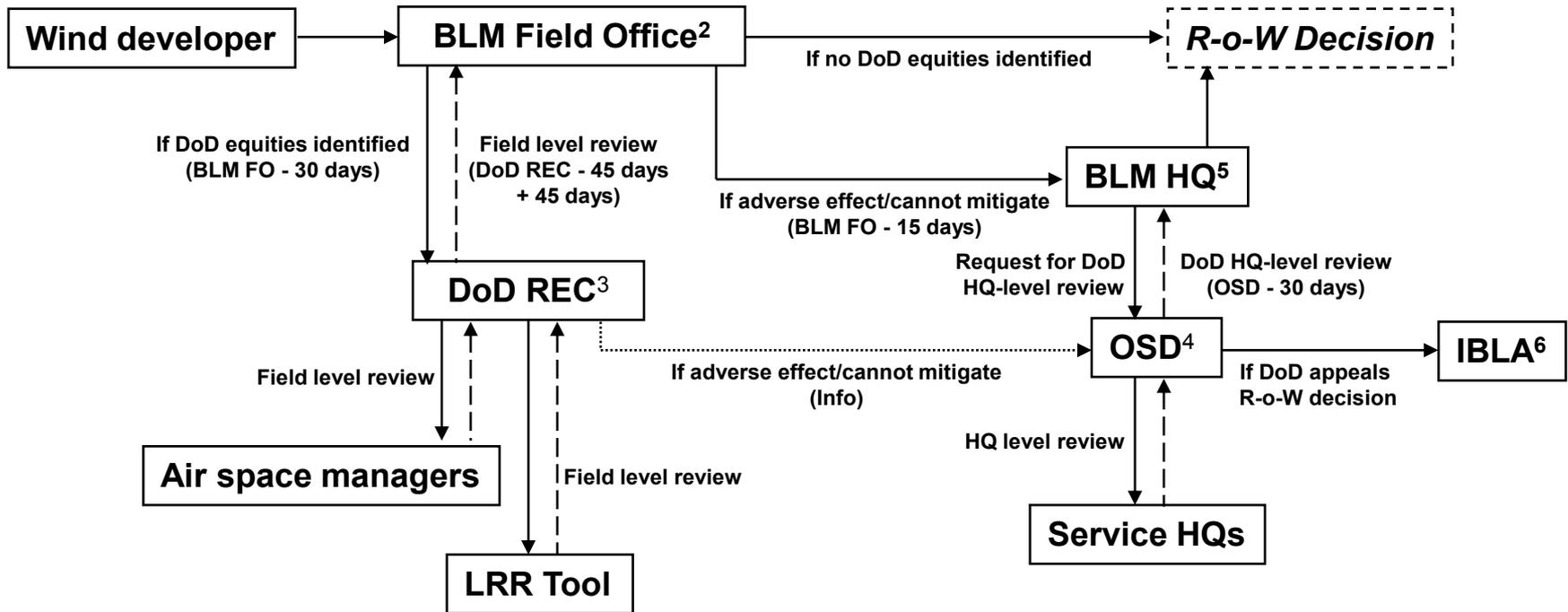
Army Navy Air Force

Region II includes Puerto Rico and the U.S. Virgin Islands

Region IX includes Guam and American Samoa



# DoD & BLM Wind Energy Protocol Process<sup>1</sup>



<sup>1</sup>Process is the same for MET towers and wind turbines

<sup>2</sup>BLM Field Offices (FO) have been provided GIS files with DoD low-level airspace and access to Long Range Radar (LRR) screening tool

<sup>3</sup>DoD REC informs OSD if adverse effect/cannot mitigate cases have been passed to BLM

<sup>4</sup>OSD contacts service HQs to conduct the HQ level review and provides BLM HQ with DoD-coordinated response

<sup>5</sup>BLM HQ staff forward any DoD objections to Bureau leadership for final right-of-way (R-o-W) decision

<sup>6</sup>Interior Board of Land Appeals





# Federal Aviation Administration

Bringing Safety to America's Skies

faa.gov Tools:

## Obstruction Evaluation

## Long Range Radar Tool

Home

FAA OE/AAA Offices

View Determined Cases (Form 7460-1)

View Proposed Cases (Form 7460-1)

View Supplemental Notices (Form 7460-2)

View Circularized Cases

Search Archives

Circle Search

Discretionary Review FAQs

No Notice Required Tool

Long Range Radar Tool

Distance Calculation Tool

### OE/AAA Account

Login

New User Registration

### Information Resources

### Instructions:

- Enter either a single point or a polygon and click submit to generate a long range radar analysis map.
- At least three points are required for a polygon, with an optional fourth point.
- The largest polygon allowed has a maximum perimeter of 100 miles.

Analysis Type:

Point	Latitude				Longitude			
	Deg	Min	Sec	Dir	Deg	Min	Sec	Dir
1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="N"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="W"/>

Datum:

### Map Legend:

- **Green:** Development unlikely to impact long range radar operations. Standard aeronautical study required.
- **Yellow:** Potential for long range radar operational impact and mitigations options vary with development specifics. Standard aeronautical study required.
- **Red:** Long range radar operational impact highly likely, with diminished mitigation options. Extensive aeronautical study required.





# Withdrawn Lands & Renewable Energy

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- **DoD installations to be 25% renewable energy by 2025**
- **Enhanced Use Leasing (EUL) is one approach**
- **EUL projects have been proposed for sites on withdrawn lands**
- **Issue is still under discussion within DoD**



# Next Steps

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- **Expand the protocol to include all renewable energy**
- **Identify additional DoD equities for evaluation under the protocol**
- **Provide the spatial data for additional equities**



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***Avoid the unmanageable and manage the unavoidable***

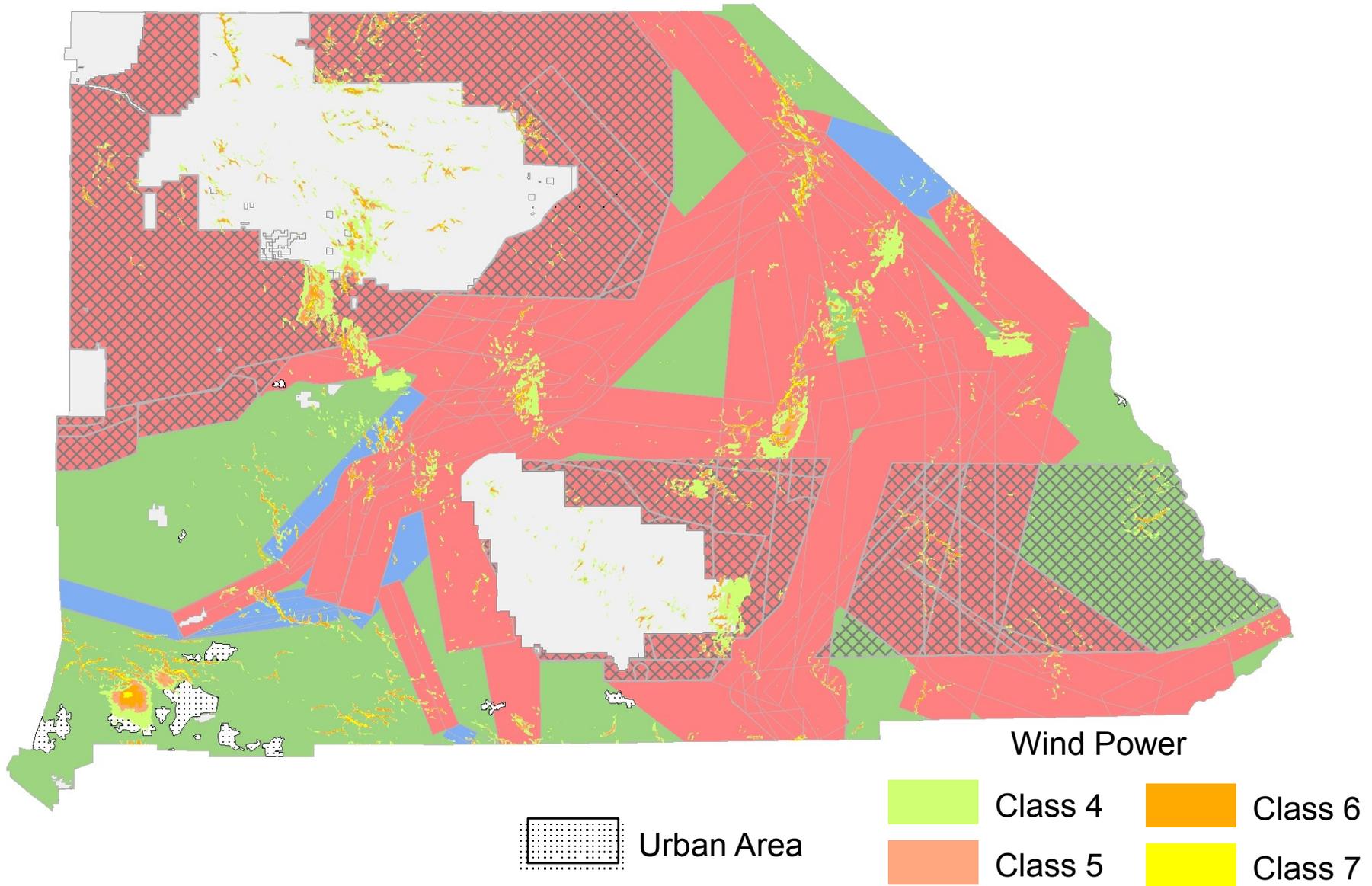
-- Tom Friedman, *Hot, Flat & Crowded*



# Backup Slides

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# San Bernardino County/R-2508 MoA





# Special Use Airspace

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- **A Military Operations Area (MOA)** is airspace designated for military training activities including acrobatic or abrupt flight maneuvers.
- **Alert Areas** may contain a high volume of pilot training or an unusual type of aerial activity that could present a hazard to other aircraft.
- **Prohibited Areas** prohibit overflight of a surface area in the interest of national security or environmental protection. No person may operate an aircraft in a Prohibited Area without permission of the using agency.
- **Restricted Areas** are established where ongoing or intermittent activities create unusual and often invisible hazards to aircraft, such as artillery firing, aerial gunnery, practice bomb dropping, and guided missile testing.
- **Warning Areas** contain the same kind of hazardous flight activity as restricted areas and MOA's, but they have a different title since they are located offshore over domestic and international waters.



# Airspace for Special Use

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**ASU** is a term used collectively to identify other airspace established for military use that does not meet the criteria for SUA.

**Air Traffic Control Assigned Airspace (ATCAA)** were established to permit the continuation of MOA activities above 18,000' MSL.

**Military Training Routes (MTRs)** The military services train in a wide range of airborne tactics, one of which is low-level combat. The MTR program is a joint venture by the FAA and the Department of Defense to develop routes for the purpose of conducting low-altitude, high-speed training.