

# ***Headquarters U.S. Air Force***

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## **Operations Sustainment Air Force Perspective 2009 Defense Community Conference**



**Colonel Ed Chupein**  
Chief, Ranges and Airspace  
HQ USAF, Washington, DC

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# *Today's Air Ranges*

## *Historical Perspective*

- Ranges developed in 1940s-1960s
  - Test and Training stovepipes
- Training focus – Crew performance (i.e. accuracy)
  - Repetitive events – mostly inert munitions, and low fidelity, low cost visual targets
  - Basic tactics & threats
- Test focus – System performance (i.e. accuracy, reliability, effects)
  - Fewer events – more live, higher fidelity, higher cost per event



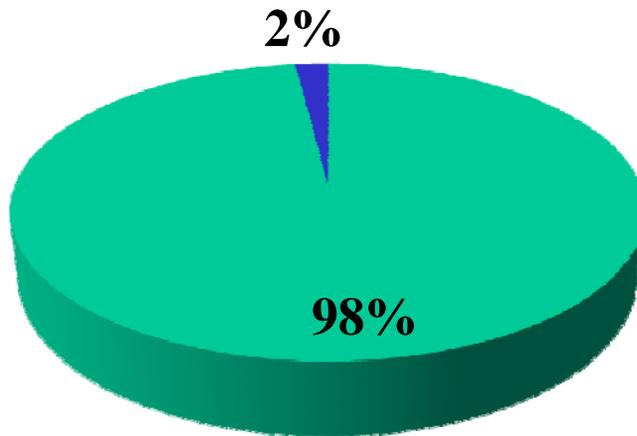
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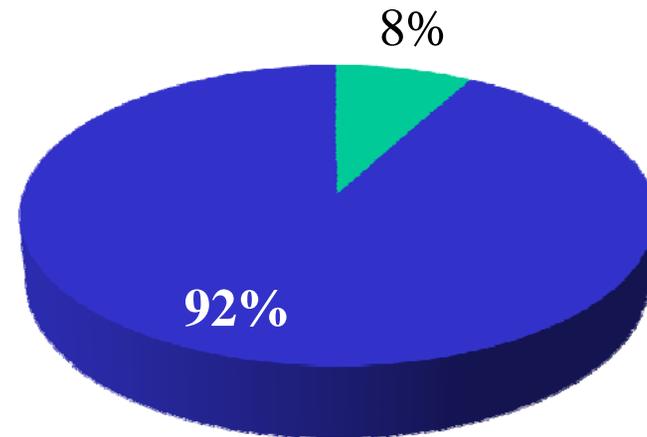
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# Munitions Expenditures

### Non-Combat Ops (Training)



### Combat Ops



■ General Purpose Munitions

■ Precision Guided Munitions

Munitions Expenditures FY05

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# Target Fidelity Lagged in the 90s



Did not always reflect what operators were “seeing” in combat



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# *Trends are positive*



**Mig 29 at Eglin R&D facility**



**SA-6 and T-72 replicas at Goldwater Range**



**SCUD replica at Ft Drum ANG Range**

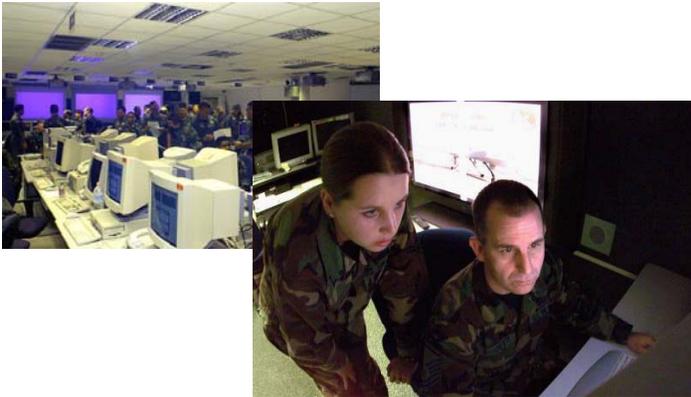


**F-15E LANTIRN video of No Drop area at Juniper Butte (Mt Home) Range**



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# *What has Changed?*



The C2/ISR Revolution  
...demand for information  
...ability to process and act on it

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# Special Use Airspace/Training Routes

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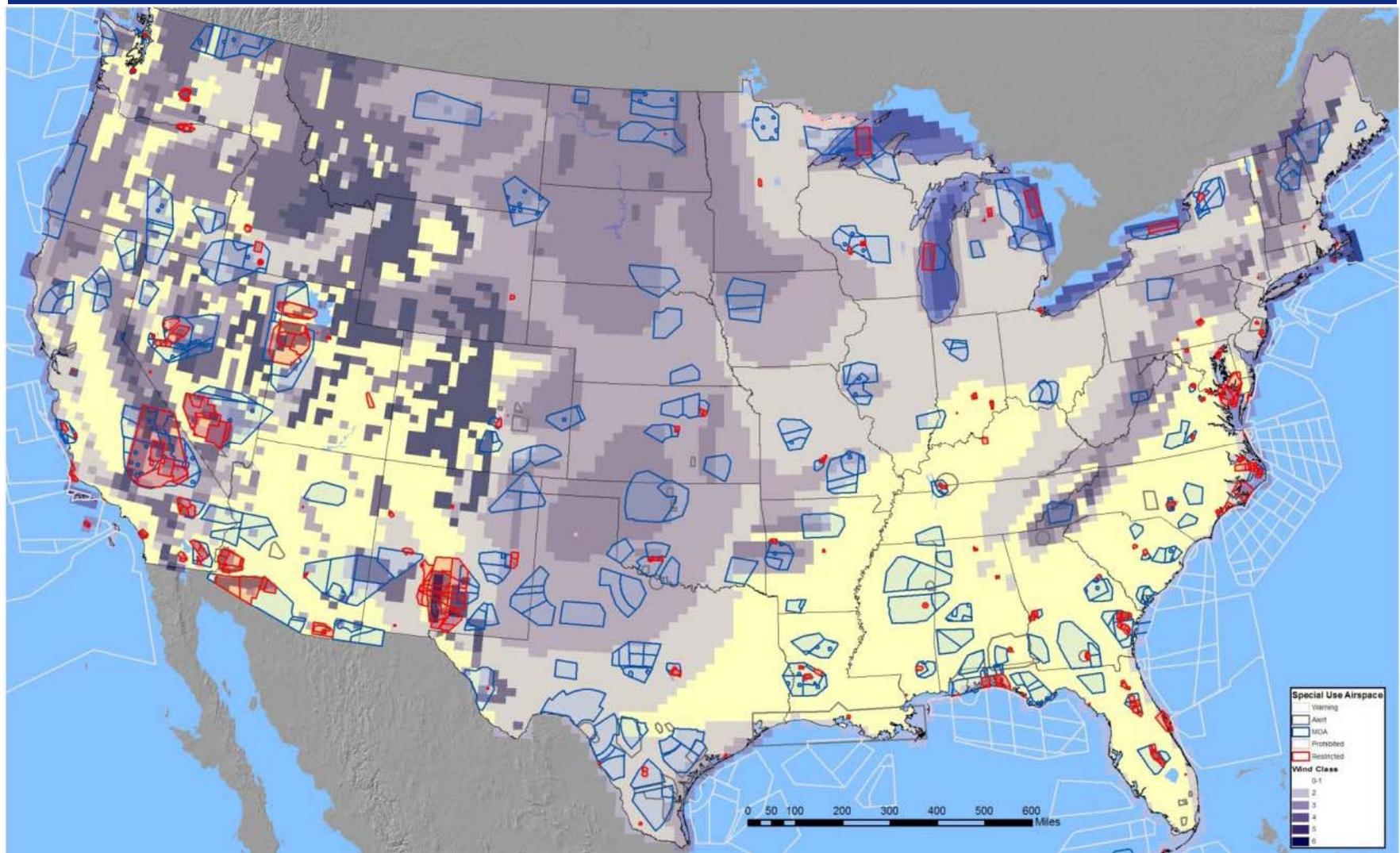


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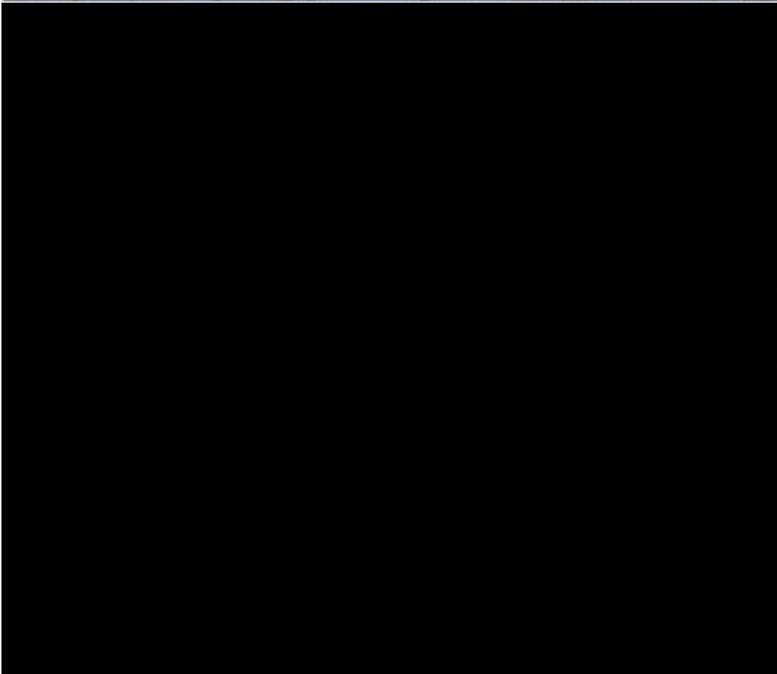
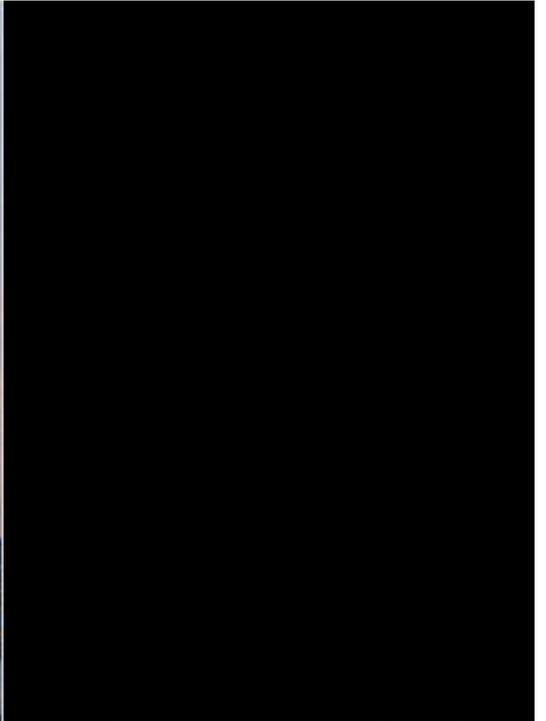


# Wind and Operations

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SOLAR TWO - MOJAVE DESERT, CALIFORNIA



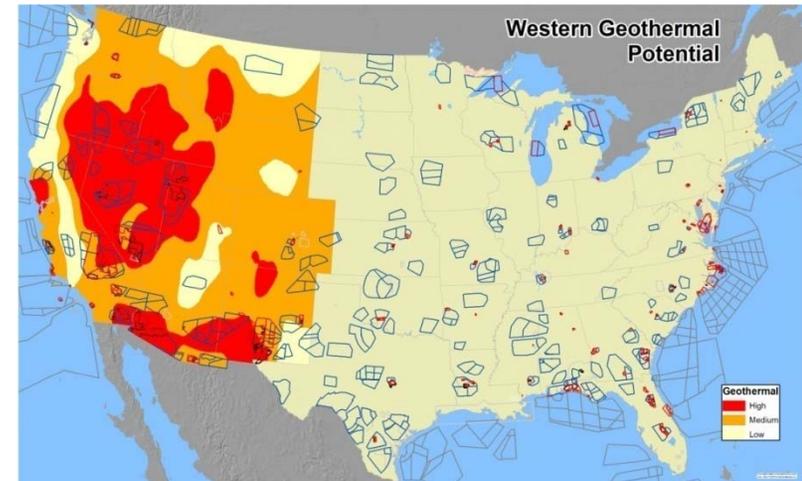
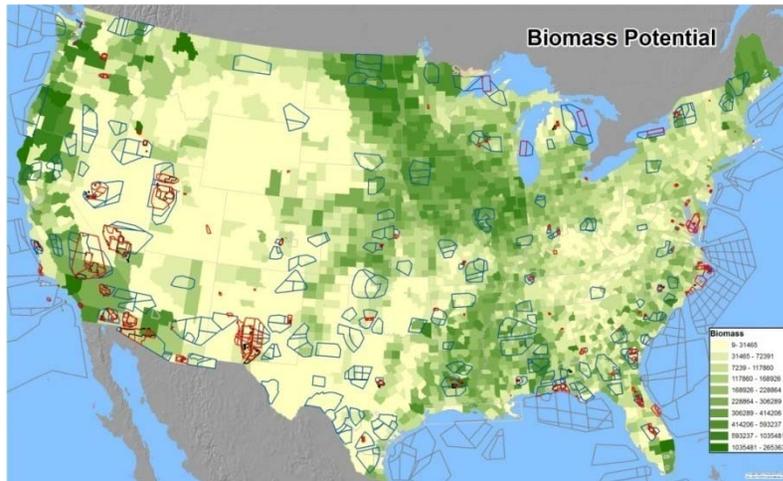
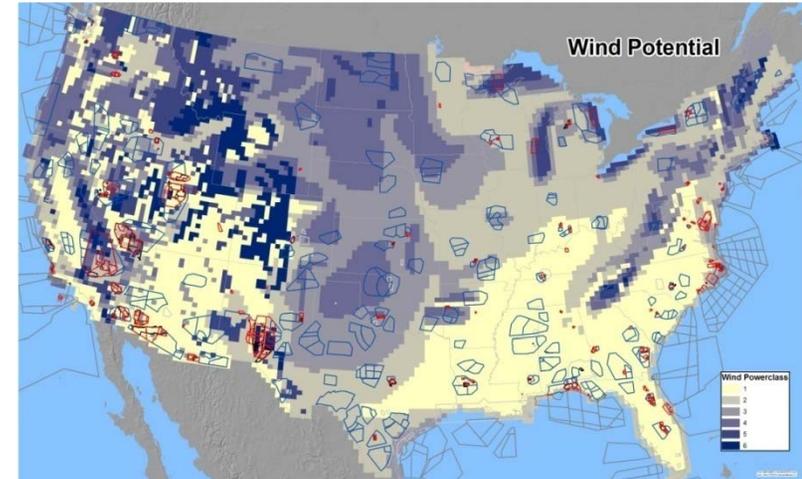
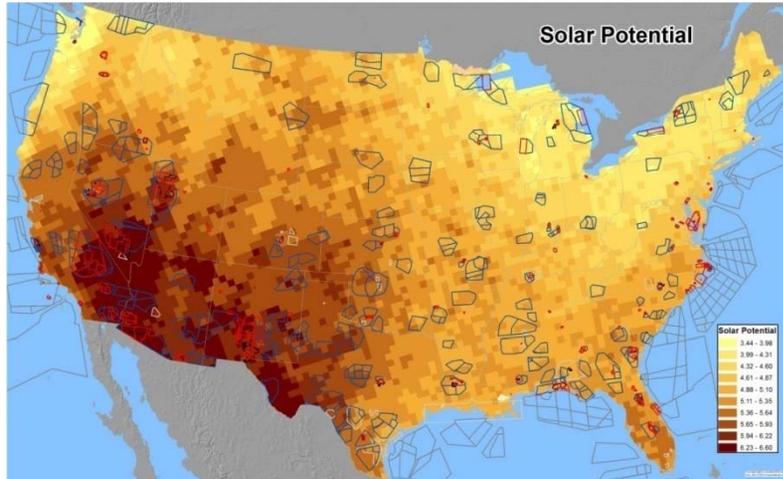






# Renewable Energy/Operating Space

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# *Potential Impacts to Operations*

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- **Electromagnetic Interference**
- **Flight Obstruction**
- **Security**
- **Lighting**
- **Reflection**

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## ***DoD Energy Development Evaluation Opportunities***

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- **FAA Obstruction Evaluation**
- **Local Zoning and Permitting**
- **Frequency/ Spectrum Oversight**
- **Department of Interior**

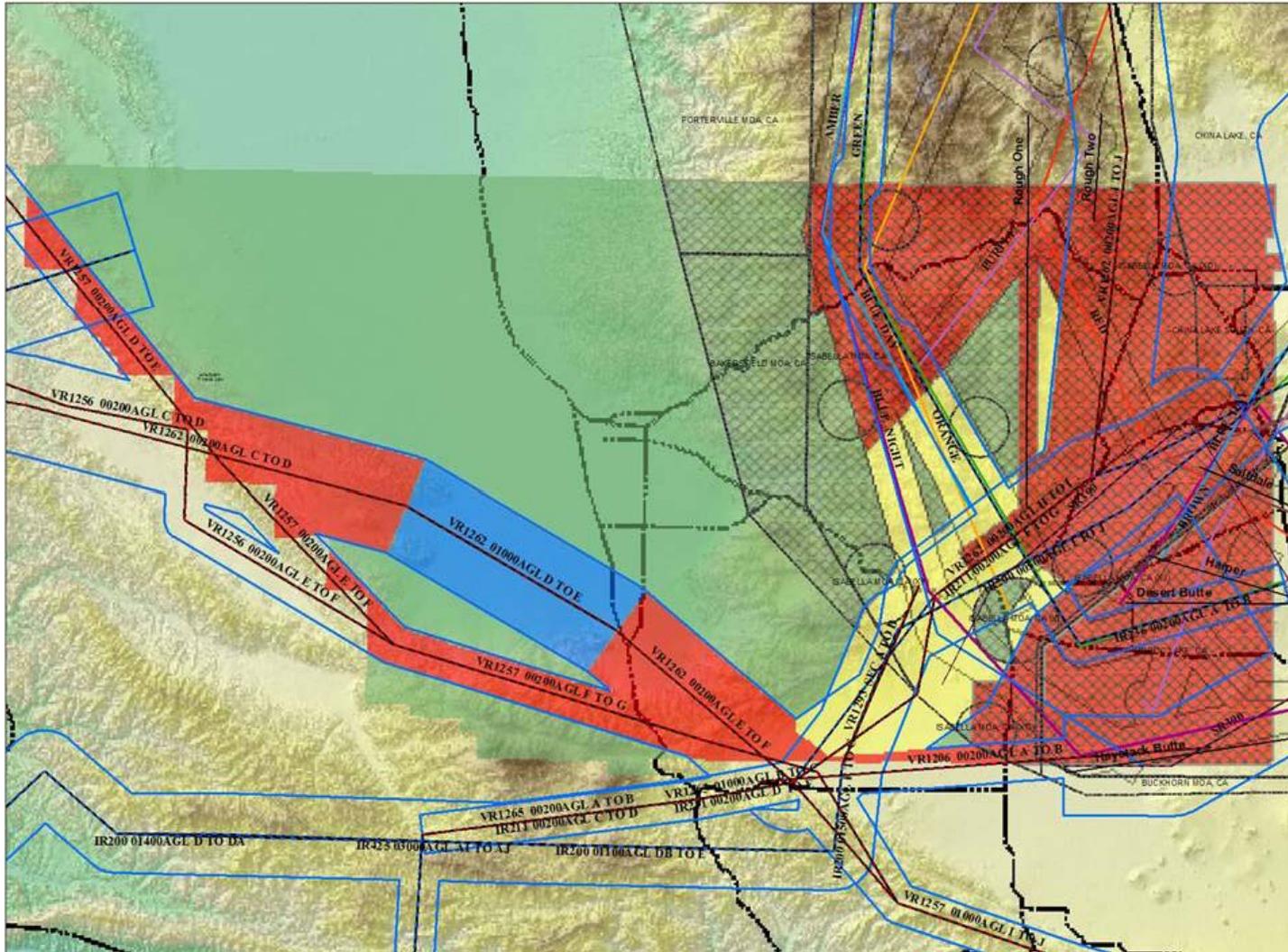
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# Outreach: Stoplight Chart

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# DoD Preliminary Screening Tool

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**Disclaimer:**

- The DoD Preliminary Screening Tool enables developers to obtain a preliminary review of potential impacts to Long Range Radar(s), Military Training Route(s) and Special Use Airspace prior to official OE/AAA filing. This tool will produce a map of the structure and any nearby military airspace or Long Range Radars. The use of this tool is **100 % optional** and will provide a first level of feedback and a single point of contact within DoD to discuss impacts/mitigation efforts of the military training mission. **The use of this tool does not in any way replace the official FAA processes/procedures.**

**Instructions:**

- Select a screening type for your initial evaluation. Currently the system supports pre-screening on:
  - Air Defense and Homeland Security radars(Long Range Radar)
  - Weather Surveillance Radar-1988 Doppler radars(NEXRAD)
  - Military Operations
- Enter either a single point or a polygon and click submit to generate a long range radar analysis map.
- Military Operations is only available for a single point.
- 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.

**Screening Type:** Military Operations **Geometry Type:** Single Point

Point	Latitude				Longitude			
	Deg	Min	Sec	Dir	Deg	Min	Sec	Dir
1	35	19	11.91	N	87	41	50.39	W

**Horizontal Datum:** NAD83

**Submit**

Your structure falls within the confines of IR066, and may have an impact on military operations. For a more detailed review, please contact Cpt Jason Rubenstein at (662)434-7633. This POC will review the analysis and identify any additional areas of concern. Upon completion of this process, the POC will provide you a letter stating the results of the review.

Your structure falls within the confines of VR1050, and may have an impact on military operations. For a more detailed review, please contact Cpt Jason Rubenstein at (662)434-7633. This POC will review the analysis and identify any additional areas of concern. Upon completion of this process, the POC will provide you a letter stating the results of the review.

Your structure falls within the confines of VR1051, and may have an impact on military operations. For a more detailed review, please contact Cpt Jason Rubenstein at (662)434-7633. This POC will review the analysis and identify any additional areas of concern. Upon completion of this process, the POC will provide you a letter stating the results of the review.

Any questions interpreting the map, please email Steve Sample with your phone number at [steven.sample@pentagon.af.mil](mailto:steven.sample@pentagon.af.mil)

**Contact information**

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# *Regional Partnerships*

The logo for the Western Regional Partnership (WRP). It features a brown silhouette of the Western United States. Overlaid on this map is the acronym "WRP" in large, bold, red letters with a white outline. Below the map, the full name "WESTERN REGIONAL PARTNERSHIP" is written in red, uppercase letters, centered within a thin yellow horizontal bar.

**WRP**

**WESTERN REGIONAL PARTNERSHIP**



**SERPPAS**

Southeast Regional Partnership for Planning and Sustainability

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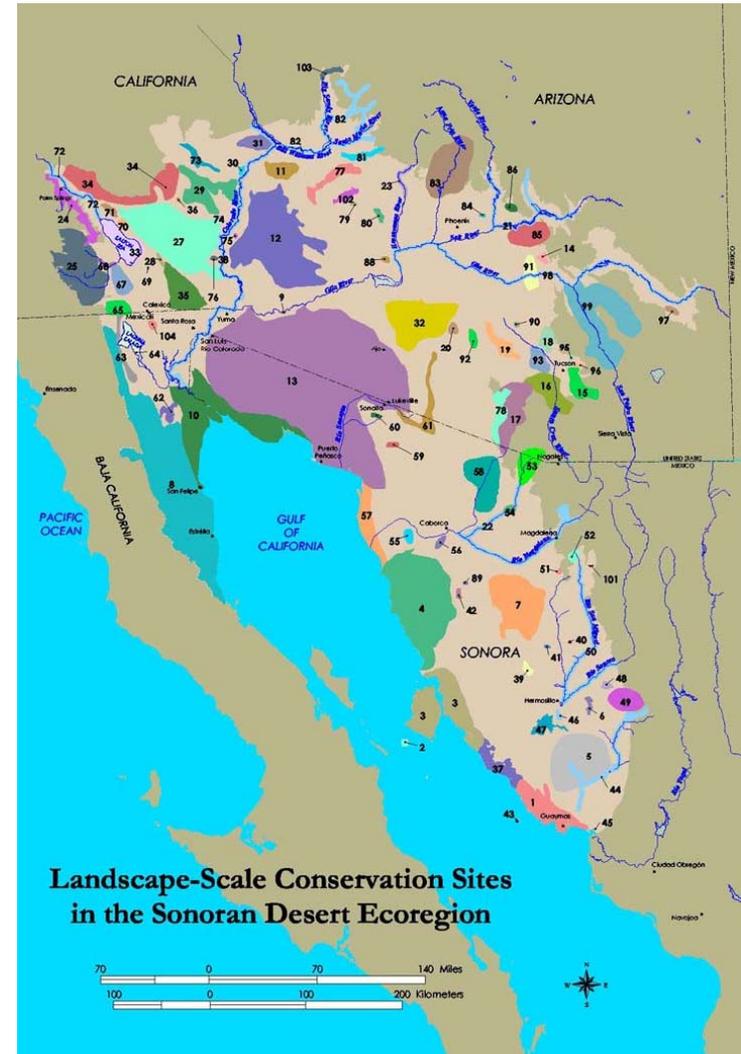
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# Sustaining Military Readiness

## Stewardship/Partnership/Legacy Program

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# ***Sustaining Military Readiness***

## ***Stewardship/Partnership/Legacy Program***

### ***Result – Sonoran Desert National Monument***

- **88,000 acres of BMGR no longer needed for AF operations returned to the BLM**

- **Pristine condition acknowledged**

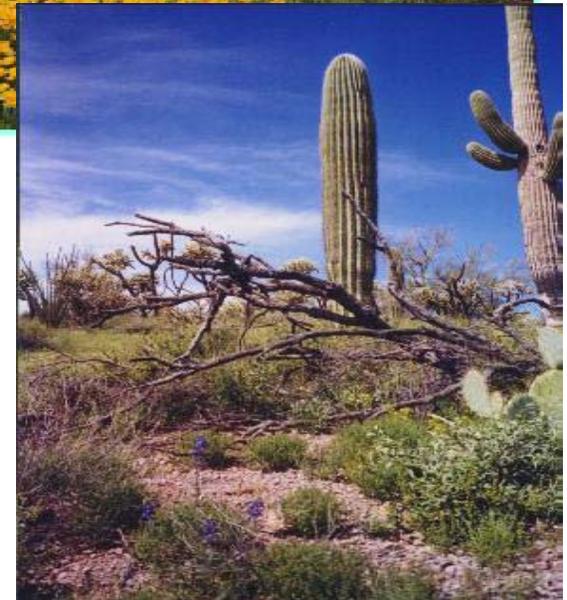
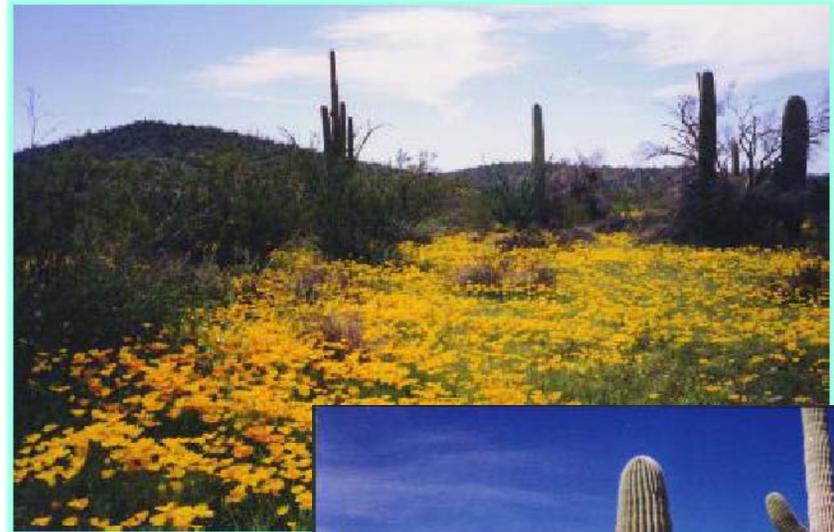
“management practices that have resulted in an exceptionally well preserved natural resource”

- **Operational protections provided**

“Nothing in this proclamation shall preclude low level overflights of military aircraft, the designation of new units of special use airspace, or the use or establishment of military flight training routes over the lands included in this proclamation.”

“current procedures for public access to the portion of the monument depicted as Area A on the attached map shall remain in full force and effect, except to the extent that the United States Air Force agrees to different procedures which the Bureau of Land Management determines are compatible with the protection of the objects identified in this proclamation.”

- **No anticipated impacts to military readiness**



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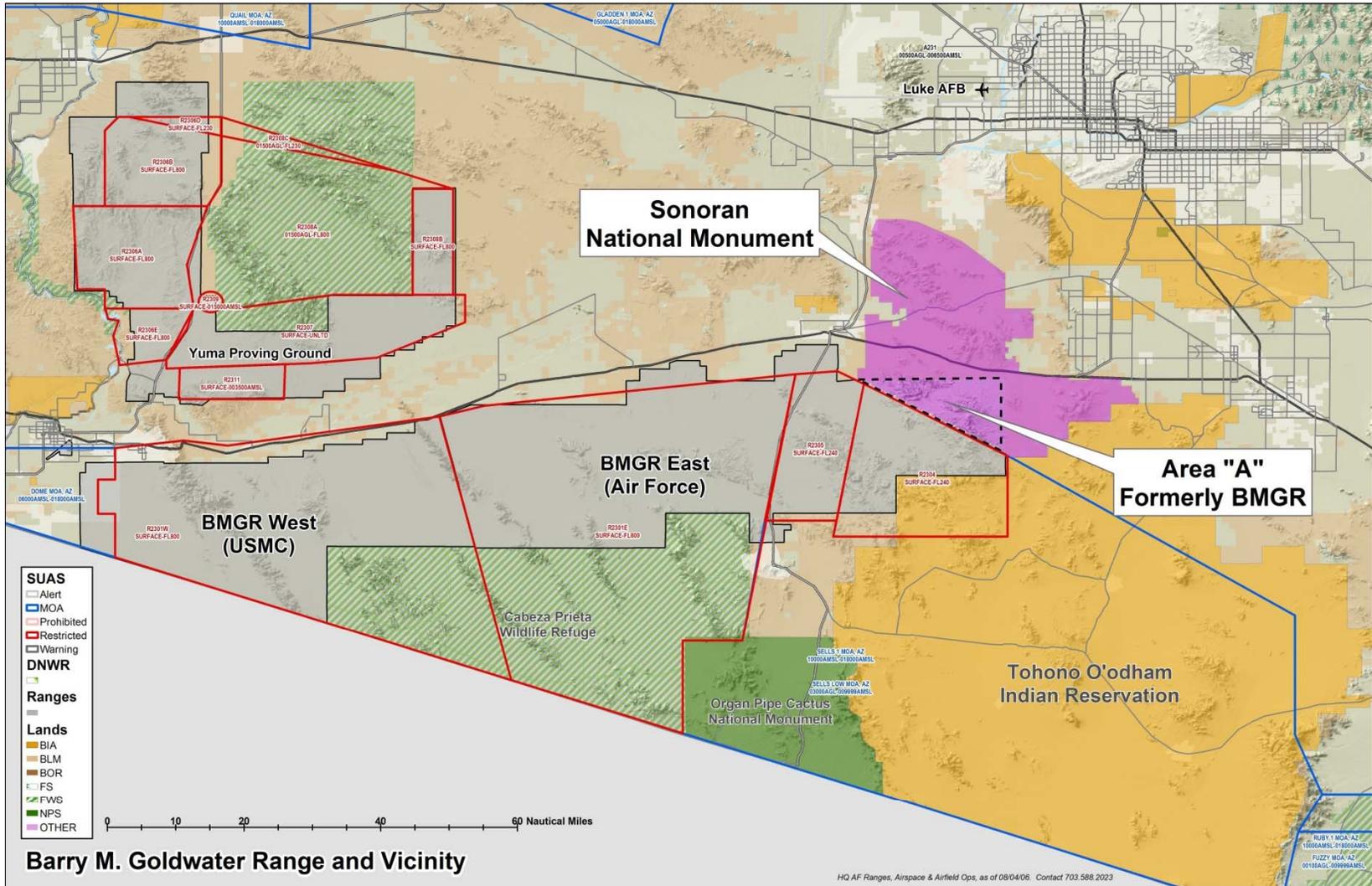


# Sustaining Military Readiness

## Stewardship/Partnership/Legacy Program

### Result – Encroachment Protection

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## *Review and Validation of Impacts and Mitigations*

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- **AFRL \$800k study on wind turbine impacts and mitigation techniques**
- **\$750k add to include all renewables**
- **Phase 1: Report on potential impacts and mitigations**
- **Phase 2: Begin validation and tests**
- **Began September 2009**



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# ***Sustaining Military Readiness***



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*Jet Enthusiast*



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