

# BLM Solar Energy Program Data Sources: Program Implementation Website and Solar Mapper

Presented by:  
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Arizona Solar Regional Mitigation Strategies Workshop  
Phoenix, AZ  
April 2, 2014

Bureau of Land Management  
**Solar Energy Program** Western Solar Plan

Quick Links ▾

Home | Solar Program | Solar Energy Zones | Variance | Maps | Documents

Search

This Web site is the online center for public information regarding the ongoing implementation of the Bureau of Land Management's (BLM's) Solar Energy Program (also known as the Western Solar Plan), approved in October 2012 through the Record of Decision (ROD) for the Final Programmatic Environmental Impact Statement (PEIS) for Solar Energy Development in Six Southwestern States. The Web site will provide up-to-date information on the features of the BLM's Solar Energy Program for the purpose of aiding the public, solar energy developers, and regulators in understanding the BLM's requirements and incentives for utility-scale solar energy development on public lands.

MAR 14 Nevada – Dry Lake SEZ: BLM Seeks Public Interest In Development and Releases Mitigation Strategy  
 MAR 12 California – Silurian Valley Solar Project Public Meeting, March 27  
 MAR 4 Arizona: Solar Regional Mitigation Workshop April 2-3

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**Solar Energy Program**  
 Comprehensive information on the program, including summaries of the legal, regulatory, and policy requirements for utility-scale solar energy development on public lands. This section also includes required design features (i.e., required mitigation measures) and information on compliance with other laws, such as the Endangered Species Act and the National Historic Preservation Act. [more »](#)

**Solar Energy Zones (SEZs)**  
 General SEZ information, competitive leasing requirements, the protocol for identifying new or expanded SEZs, detailed information on individual SEZs, SEZ-specific design features, and long-term requirements for monitoring and mitigation. New data for individual SEZs will be provided as it becomes available (e.g., cultural survey data, groundwater information and models). [more »](#)

**Variance Areas**  
 Variance areas include about 19.3 million acres of public lands outside of SEZs. The policies that will be applied to site-specific proposals within variance areas are presented. These policies address early coordination with other agencies and the public, and early evaluation of variance ROW applications. [more »](#)

**Project Authorizations**  
 The ROD for the Final PEIS for Solar Energy Development in Six Southwestern States did not authorize any on-the-ground solar energy development. The Solar Energy Program requires additional, site-specific analyses prior to approval of utility-scale solar energy projects. The robust analysis in the Solar PEIS will be incorporated into the evaluation of future site-specific projects through "tiering." The analyses from the Solar PEIS will be applied, to the extent appropriate, to future proposed utility-scale solar energy projects, allowing future project analyses to focus on site-specific conditions and issues not fully addressed in the Solar PEIS. This is expected to streamline future decision-making on proposed utility-scale solar energy developments on BLM-administered public lands. This Web site contains links to the analysis that will be incorporated into future project authorizations.

Home | Solar Program | SEZs | Variance | Maps | Documents | Contact Us | Privacy

**BLM Solar Program Website:**  
<http://blmsolar.anl.gov>

Online resource sharing information about BLM's program implementation



- ▶ **Solar Energy Program**
- Authorization Policies
- Design Features
- Exclusions
- Laws, Orders, and Regulations
- Forms and Templates
- Pending Solar Applications
- Application Processing Flowchart

- ▶ **Solar Energy Zones (SEZs)**
- Policies
- Competitive Leasing for SEZs
- Identification Protocol for New SEZs
- Withdrawal of SEZ Lands
- Arizona
- California
- Colorado
- Nevada
- New Mexico
- Utah

- ▶ **Variance Areas**
  - Variance Process
  - Variance Applications
- 
- ▶ **Solar Program Maps**
  - Solar Program-Related Maps
  - ArcReader GIS Application
  - GIS Shape Files

Menus for each major page direct you to relevant information.





Solar Energy Zones (SEZs)
<a href="#">Policies</a>
<a href="#">Competitive Leasing for SEZs</a>
<a href="#">Identification Protocol for New SEZs</a>
<a href="#">Withdrawal of SEZ Lands</a>
▶ <a href="#">Arizona</a>
<a href="#">News/Announcements</a>
<a href="#">Agua Caliente</a>
<a href="#">Brenda</a>
<a href="#">Gillespie</a>

## Arizona

Two SEZs were identified in Arizona through the Record of Decision (ROD) for the Solar PEIS: [Brenda SEZ](#) and [Gillespie SEZ](#).

Arizona has conducted a statewide planning effort for facilitating renewable energy development (the [Restoration Design Energy Project or RDEP](#)) that builds off of the Solar PEIS, for which a ROD was signed in January 2013.

The ROD for the RDEP identified an additional SEZ: the [Agua Caliente SEZ](#) in western Arizona.

As of November 2013, there were four [pending applications](#) and two [approved projects](#) in Arizona.

### Arizona News

- March 4, 2014 [Solar Regional Mitigation Strategy for three Solar Energy Zones in Arizona: Public Workshop in Phoenix, AZ, April 2-3, 2014](#)
- December 20, 2013 [Brenda SEZ Groundwater Model Available](#)



### Arizona Solar News and Announcements

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March 4, 2014

#### Solar Regional Mitigation Strategy for three SEZs in Arizona: Public Workshop in Phoenix, AZ, April 2-3, 2014

The Bureau of Land Management (BLM) is developing a Solar Regional Mitigation Strategy (SRMS) for three solar energy zones (SEZs) in Arizona: Agua Caliente, Brenda, and Gillespie. The BLM will host a public workshop on April 2 and 3 at the BLM National Training Center (NTC), 9828 N 31st Avenue Phoenix, AZ 85051.

There is a page dedicated to each state and subpages for each SEZ.

News items are posted to share updates.





- Arizona
- News/Announcements
- Agua Caliente
- ▶ Brenda
  - Monitoring and Adaptive Management
  - Mitigation Strategy
  - Groundwater Modeling
  - Gillespie

- General description of the SEZ
  - Size and location
  - Physical characteristics
  - Technical suitability
  - Development status
- Maps
- Links to relevant sections in Solar PEIS or RDEP EIS
- Subpages dedicated to
  - Minerals report
  - Monitoring and adaptive management strategies
  - Mitigation strategies
  - Groundwater modeling
  - Class II surveys

### Maps

Arizona Variance Areas Brenda SEZ




 [Letter](#) (1.94 MB)
  [Letter](#) (528 KB)

 [Poster](#) (4.29 MB)

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### Solar PEIS SEZ Analyses

 [Brenda SEZ Analysis: Draft PEIS](#) (3.1 MB)

 [Brenda SEZ Analysis Updates in the Final Solar PEIS](#) (4.6 MB)

 [Brenda SEZ Recommended Additional Data Collection](#) (100 KB)

 [Brenda SEZ-Specific Design Features](#) (31 KB)

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### Other Studies and Information

- [Solar PEIS Mineral Report](#)
- [Brenda SEZ Monitoring and Adaptive Management](#)
- [Brenda SEZ Mitigation Strategy](#)
- [Brenda SEZ Groundwater Modeling](#)

 [Brenda SEZ Cultural Class II Surveys](#) (238 KB)



## Subscribe

Please provide the information requested below to subscribe to receive general e-mail announcements related to BLM's Solar Energy Program (for example, announcements related to new rulemaking or availability of Instruction Memoranda related to solar development). You may optionally subscribe to state-specific e-mail lists as well (see below).

### Contact Information

Name

Organization

**E-mail (required)**

### State Lists (Optional)

In addition to the general e-mail announcements, you can subscribe to receive state-specific announcements. Check one or more of the state-specific boxes below to also receive e-mail announcements related to the implementation of BLM's Solar Energy Program in the various states (for example, announcements about regional mitigation or monitoring work for specific solar energy zones, public meetings for various projects, or new applications in specific states).

- Arizona
- California
- Colorado
- Nevada
- New Mexico
- Utah

[Subscribe](#)

Subscribe for email updates either for just general program information or also for state-specific updates.



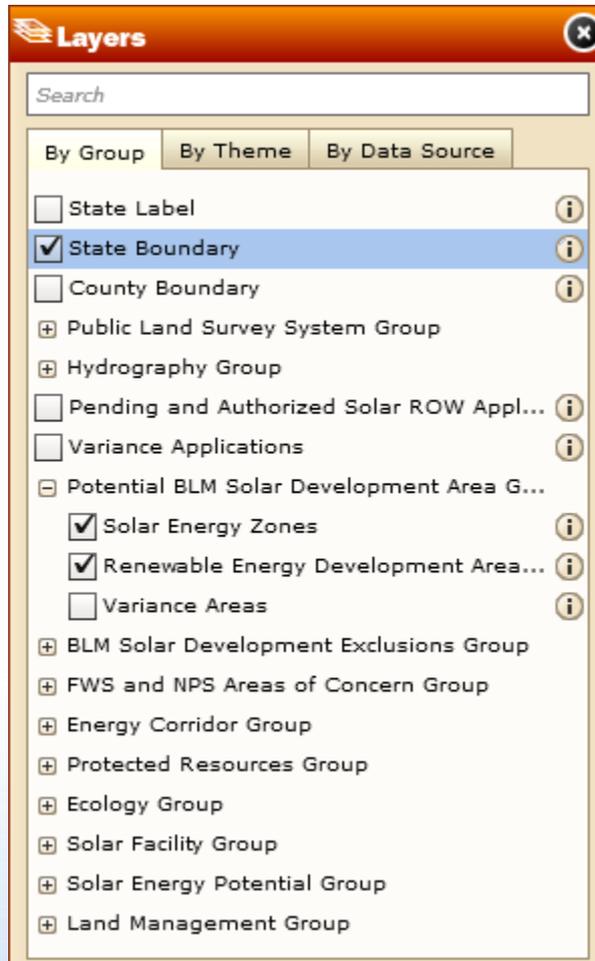
# Solar Energy Environmental Mapper: – An Interactive, Web-Based Tool Providing Access to Spatial Data Relevant to BLM’s Solar Energy Program



Available at

<http://solarmapper.anl.gov>

Provides access to spatial information relevant to siting utility-scale solar projects in six southwestern states.

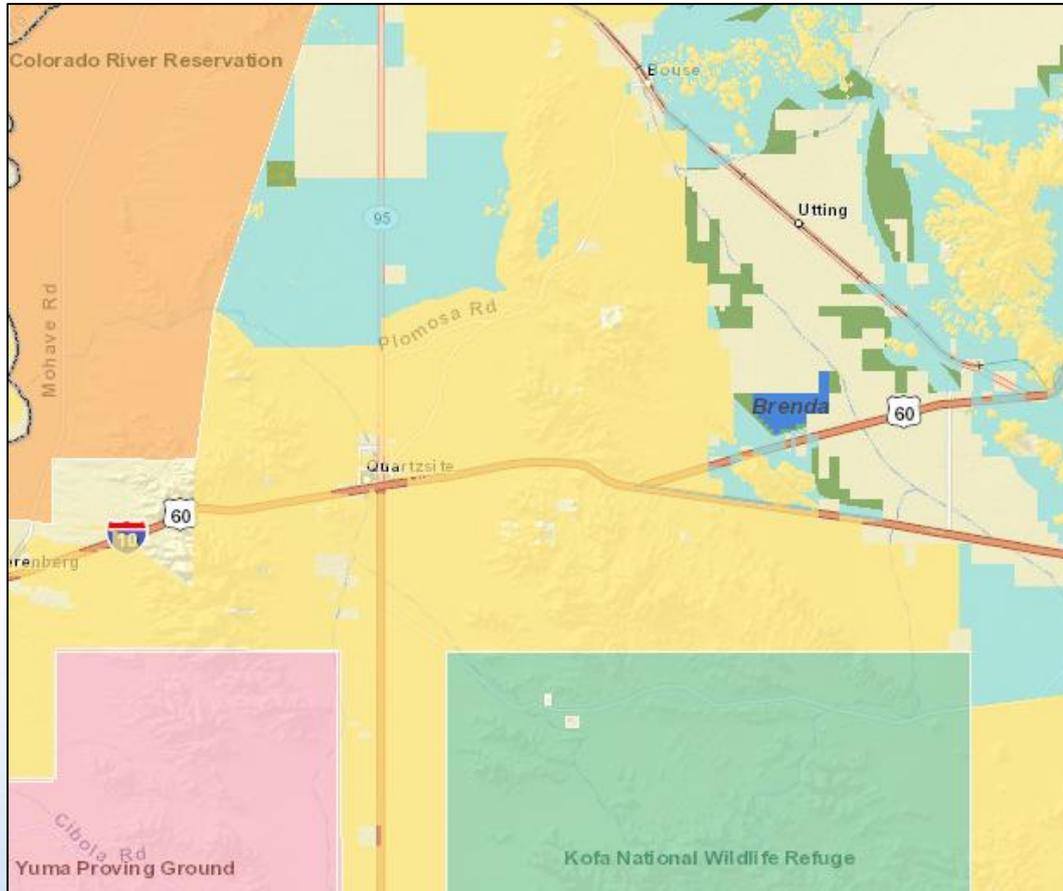


## A Variety of Spatial Data Are Available for Viewing on Solar Mapper

- Users can display or hide layers in order to evaluate specific resources of interest.
- Resources are organized by
  - Group,
  - Theme, and
  - Data source.
- Each group or theme can be expanded by clicking on the plus symbol.
- Metadata is available for each data layer via the information icon.



## BLM Solar Program Designations and Surface Management



Active Layers
Legend

**Solar Energy Zones**

- Non-Development Area
- Developable

**Renewable Energy Development Area (AZ RDEP)**

- 

**Variance Areas**

- 

**Surface Management Agency**

- Bureau of Land Management
- Bureau of Reclamation
- Department of Defense
- Department of Energy
- Fish and Wildlife Service
- National Park Service
- Other
- Tribal Land
- U.S. Forest Service

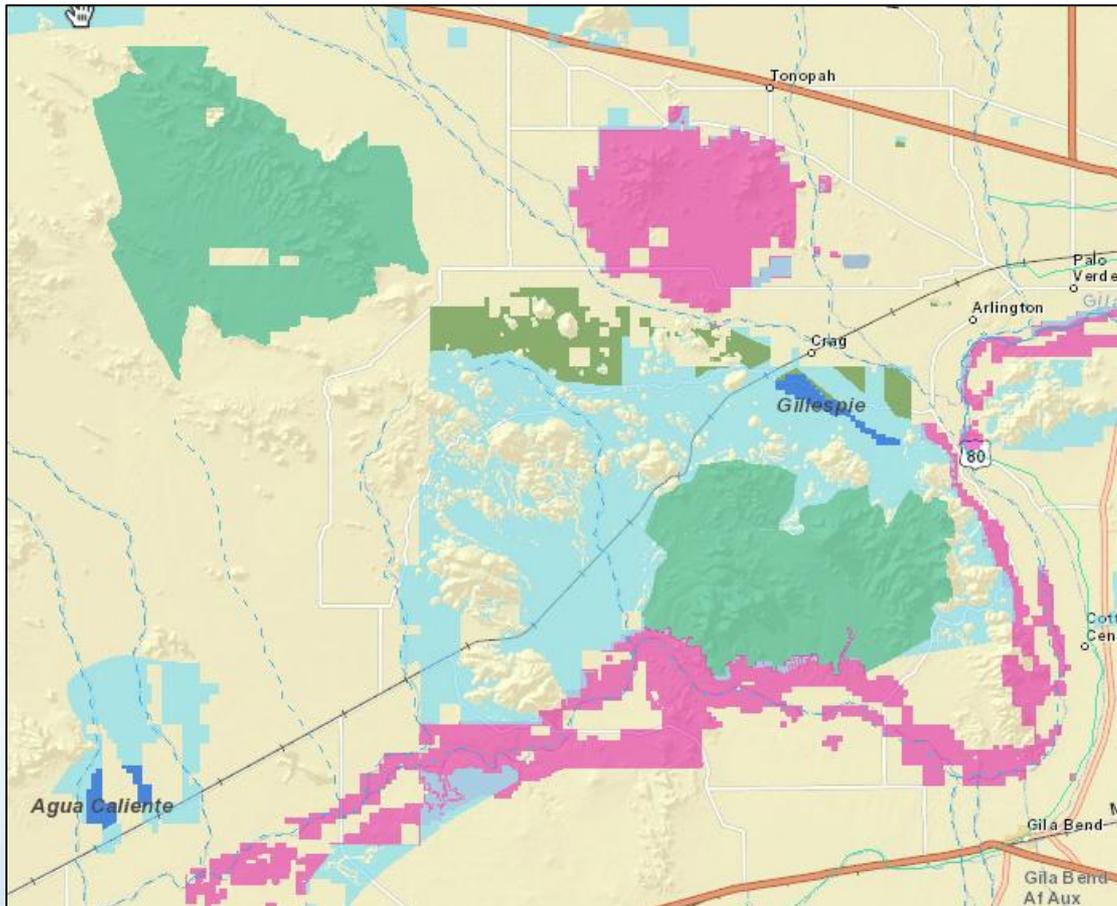
# Solar Energy Environmental Mapper

Explore geospatial solar energy environmental data

- ◆ HOME
- ◆ LEGAL NOTICE
- ◆ LEARN MORE
- ◆ CONTACT US
- ◆ ABOUT THE DATA
- ◆ HELP
- ◆ RELEASE NOTES



## Hydrography Data, ACECs, and BLM Wilderness Areas

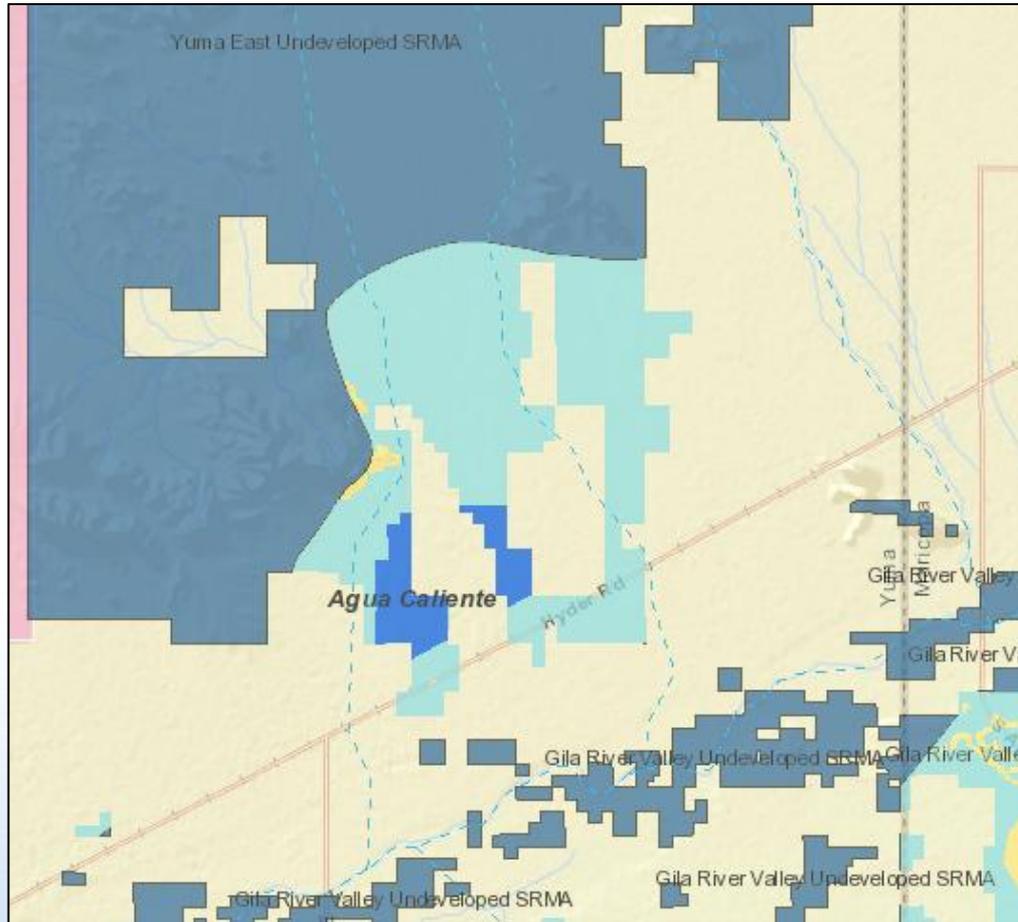


Active Layers Legend

- State Boundary
  - International
  - State
  - Coastline
- Stream or River
  - Stream Intermittent
  - Stream
  - Dam
  - Manmade
- Solar Energy Zones
  - Non-Development Area
  - Developable
- Renewable Energy Development Area (AZ RDEP)
- Variance Areas
- Areas of Critical Environmental Concern (3)
  - Wilderness Areas (21)



## Special Recreation Management Areas



Active Layers Legend

**Stream or River**

- Stream Intermittent
- Stream
- Dam
- Manmade

**Solar Energy Zones**

- Non-Development Area
- Developable

**Renewable Energy Development Area (AZ RDEP)**

- 

**Variance Areas**

- 

**Special Recreation Mgmt. Area**

- 

**Surface Management Agency**

- Bureau of Land Management
- Bureau of Reclamation
- Department of Defense
- Department of Energy
- Fish and Wildlife Service
- National Park Service
- Other
- Tribal Land
- U.S. Forest Service

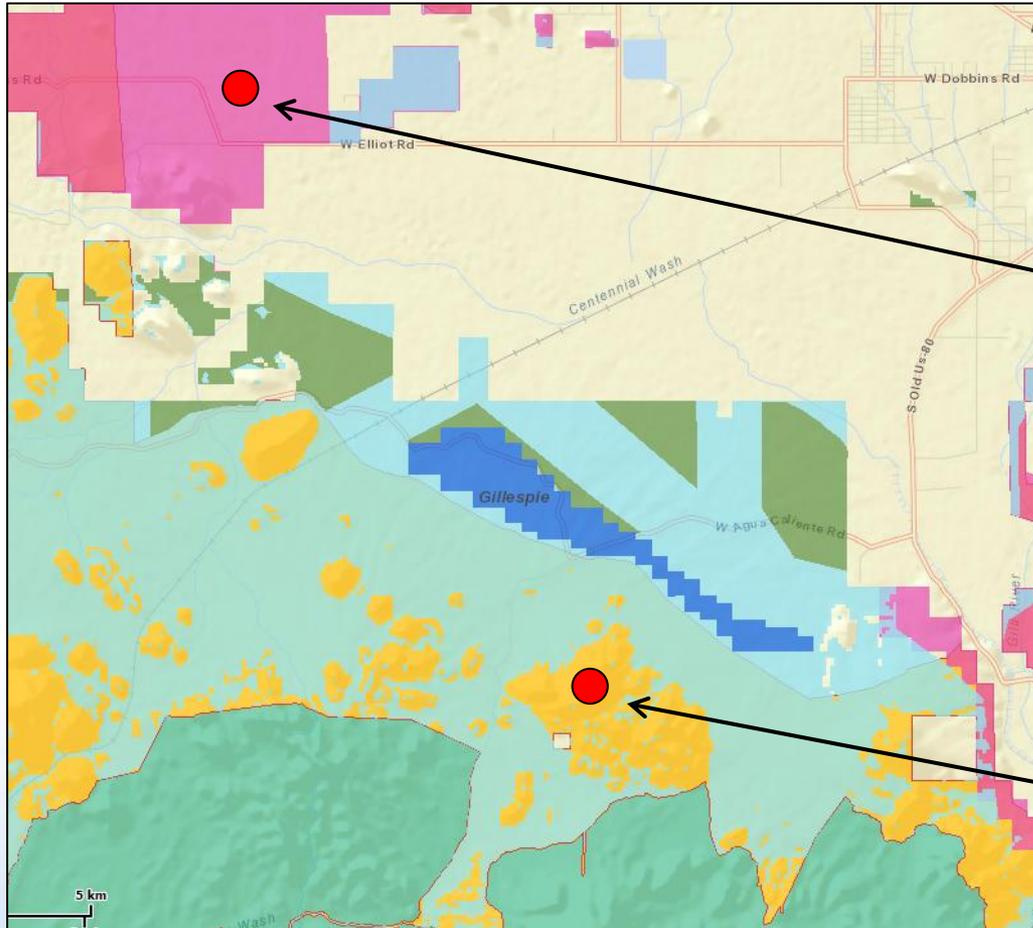


## Includes Data Layers for Many Types of Protected Areas

- National Register Site
- National Historic Landmark
- National Natural Landmark
- Scenic Byway
- National Monument
- National Trail
- National Conservation Area
- National Wildlife Refuge
- Special Recreation Mgmt. Area
- Area of Critical Env. Concern
- Wilderness
- Wilderness Study Area
- Wild and Scenic River
- ROW Avoidance Area
- ROW Exclusion Area
- No Surface Occupancy Area

## Includes Data Layers for Specific Solar Development Exclusions by State

Supports analysis of why specific tracts of land were excluded from solar energy development in the Solar PEIS.



Metadata and summary information are available for each data layer.

**Identify**

Layers: All active and identifiable layers

Click on the map for location information

Feature	Name	1 ▲	Value
▼ Area of Critical Env. Concern			
▼ Saddle Mountain (undefined)			
	Acreage		48511.376944
	Archaeological		Null
	BLM District Office Nar		Null
	BLM Field Office Name		Null
	BLM State Office Nam		Arizona
	BLM Sub Office Name		Null

Feature	Name	1 ▲	Value
▼ ROW Avoidance Areas (11)			
▼ 1502 (105)			
	Acreage		175081.019696
	OBJECTID		105
	Shape		Polygon
	Source ID		1502



## Solar Mapper Has A Report Tool to Support Analyses of Site Suitability for User-defined Area

- USGS Gap Analysis Program Protected Areas Database report
  - Identifies protected areas within footprint and their
    - Management agency/owner,
    - IUCN category (e.g., Nature Reserve, Wilderness Area, National Park),
    - GAP status code
- Land Jurisdiction and Protected Areas report
  - Identifies protected areas within footprint and their
    - Management agency/owner,
    - Type of protected area (e.g., national trail, wilderness, ACEC)
- Other reports will be added in future
  - Exclusion areas
  - Ecological resources



## Solar Mapper Has Numerous Features to Enhance the User's Experience

- Introductory video and extensive help function included to minimize need for previous experience with geospatial browsers.
- Bookmark tool allows users to save specific views.
- Photographic panoramas created to support the Solar PEIS analyses are available.
- There are several base map options, including standard street map, topographic, shaded relief, and aerial photography views.
- Users can subscribe to receive e-mail updates.

# BLM Solar Energy Program Data Sources



The screenshot shows the top navigation bar of the BLM Solar Energy Program website. On the left is the BLM logo. The text reads "Bureau of Land Management" and "Solar Energy Program" with "Western Solar Plan" in smaller text below it. On the right, there is a "Quick Links" dropdown menu. Below the main header is a secondary navigation bar with buttons for "Home", "Solar Program", "Solar Energy Zones", "Variance", "Maps", and "Documents". To the right of these buttons is a search box with a "Search" button. Further right are links for "ROD", "Subscribe", "News", "Glossary", and "Related Links".

<http://blmsolar.anl.gov>



The screenshot shows the header of the Solar Energy Environmental Mapper website. The main title is "Solar Energy Environmental Mapper" with the subtitle "Explore geospatial solar energy environmental data". On the right side, there is a list of navigation links: "HOME", "LEARN MORE", "ABOUT THE DATA", "RELEASE NOTES", "Legal Notice", "Contact Us", and "Help". Below the header is a dark navigation bar with icons and labels for "Layers", "Locate", "Bookmarks", "Identify", "Print", "Report", "Measure", "Panoramas", and "Help".

<http://solarmapper.anl.gov>