



# Oregon Renewable Energy Siting Assessment (ORESAs)

*Oregon Global Warming Commission*  
**August 11, 2023**



# ORESA: PROJECT TEAM & COORDINATION

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- ▶ The ORESA project was funded through a **\$1.1 million grant through U.S. Department of Defense Office of Local Defense Community Cooperation (DOD-OLDCC)**. Closed June 30, 2022.
- ▶ The grant team includes **Oregon Department of Energy**, working with the **Department of Land Conservation & Development** and **Oregon State University's Institute for Natural Resources**.
- ▶ The project incorporated the expertise of **state, local, and tribal governments** through interagency agreements, along with input from **industry and technical advisors**, and **cross-sectoral stakeholder and community engagement**.

# ORESA: GOALS AND OBJECTIVES

## DOD Goals

Support **military compatibility through coordination** with local, regional, and state agencies and raise awareness about the military.

## Project Goals

Create **relevant educational tools** for stakeholders, agencies, local governments, and policy makers about renewable energy development, military training and operational areas, economic/community benefits, land use considerations, natural, cultural, and environmental resources, and other regulatory requirements. Users can explore these resources to inform discussions related to renewable energy in a way that **minimizes conflict and supports development opportunities**.

## Project Objectives

Baseline data, information, and perspectives to create **a transparent, consistent collection of trusted, accurate information** in Oregon, without recommendations or endorsements, and note where information may be imprecise or uncertain.

## Renewable Energy Market & Industry Assessment (ODOE / E3)

- Model future opportunities for renewables
- Perspectives of challenges and opportunities RE development community
- **COMPLETED**

## Natural Resources, Environment, & Development: Opportunities & Constraints Assessment (DLCD / CBI)

- Gather information on natural, cultural, & env. resources
- Identify opportunities and constraints for RE development
- **COMPLETED**

## Outreach & Engagement (ORESAs Project Team)

- Release near-final deliverables for review and corrections
- Publish final draft of ORESAs Report and Tool
- Provide presentations, Tool demos, and discussions
- **APRIL – JUNE 2022 (and ongoing)**

## Project Deliverables

ORESAs Report & ORESAs Mapping & Reporting Tool

## Military Needs & Interests Assessment (ODOE / DLCD / ESS)

- Assess interaction of current and future military activity and RE development
- **COMPLETED**

## Siting Procedures Review (ODOE / DLCD)

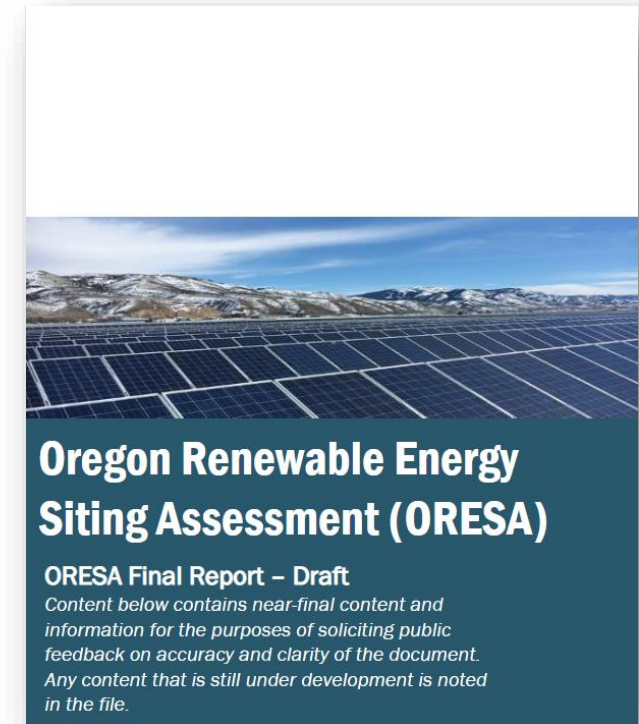
- Review and analysis of siting regulations, permitting, and project review processes
- **COMPLETED**

## Mapping & Reporting Tool (INR leading)

- Develop Mapping and Reporting tool
- Engage with stakeholders to inform and test functionality and reporting features
- Convene Focus and Cross-sector User Groups, conduct Beta testing
- **COMPLETED**

# ORESA REPORT

- **Section 1:** Explore – Summary of core activities and research methodologies from the ORESA assessments, procedures review, and Mapping and Reporting Tool. Includes findings and best practices for data collection and organization.
- **Section 2:** Report – Key findings from the assessments on what information is critical for discussions and planning of renewable energy development in Oregon. Includes context on the Reporting function and data in the Tool.
- **Section 3:** Learn – Lessons learned from the project, including important conversations, perspectives, and issues from stakeholders and project participants. Summarizes the Learn section of the Tool.
- **Section 4:** Conclusion – Additional items not addressed in the project including data gaps, Tool function and features, and resources that were of interest or highlighted by stakeholders and project participants.
- **Appendices:** Index and links to supporting materials including the assessment reports, procedures report, summary outreach documents and military brochure.



# MAPPING AND REPORTING TOOL

- Housed on [Oregon Explorer](#) with data related to renewable energy; military; economic development; land use; natural resources; and other regulatory or process considerations.
- Development involved stakeholders to help define use cases, data exploration needs and reporting functionality.
- Tool supports a more comprehensive understanding of renewable energy and supports early notification & coordination in the state.

OREGON EXPLORER Renewable Energy Siting Assessment Map Viewer (BETA)

Home

I want to...

### Welcome to the Oregon Renewable Energy Siting Assessment Tool

The ORESA tool is an interactive application that allows prospective developers to input project data in order to get a coarse level perspective of potential land use and military considerations.

#### Explore Data

Browse, download, and interact with map layers

#### Get a Report

Land use considerations and contact information for your area of interest

#### Learn

Learn about siting procedures, incentives, and processes for military coordination

DISCLAIMER: This product is for informational purposes, and may not be suitable for legal, engineering, or surveying purposes. This information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user. The sponsors of the tool make no claims, representations or warranties as to the accuracy or completeness of these data layers.

INSTITUTE FOR NATURAL RESOURCES  
Oregon State University Libraries and Press  
NAS WHIDBEY ISLAND  
OREGON DEPARTMENT OF ENERGY  
OREGON Department of Land Conservation & Development

# Tool Review

Welcome

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**OREGON**  
Department of  
Land Conservation  
& Development



[https://tools.oregonexplorer.info/OE\\_HtmlViewer/Index.html?viewer=renewable](https://tools.oregonexplorer.info/OE_HtmlViewer/Index.html?viewer=renewable)

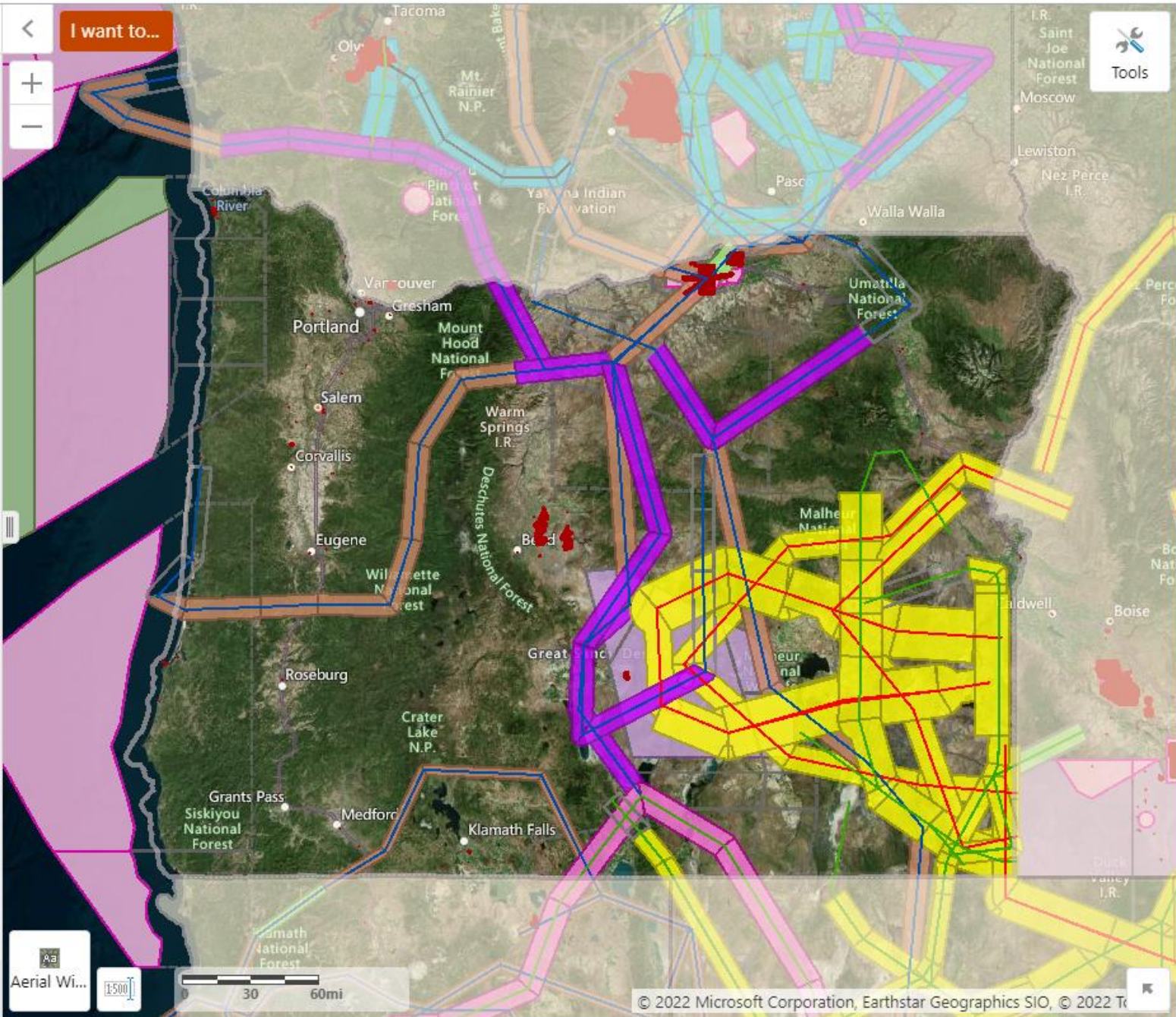
Layers

- Add Layers
- Upload
- Re-Order
- Toggle Legend

All Available Layers

Filter Layers... [Filter Button]

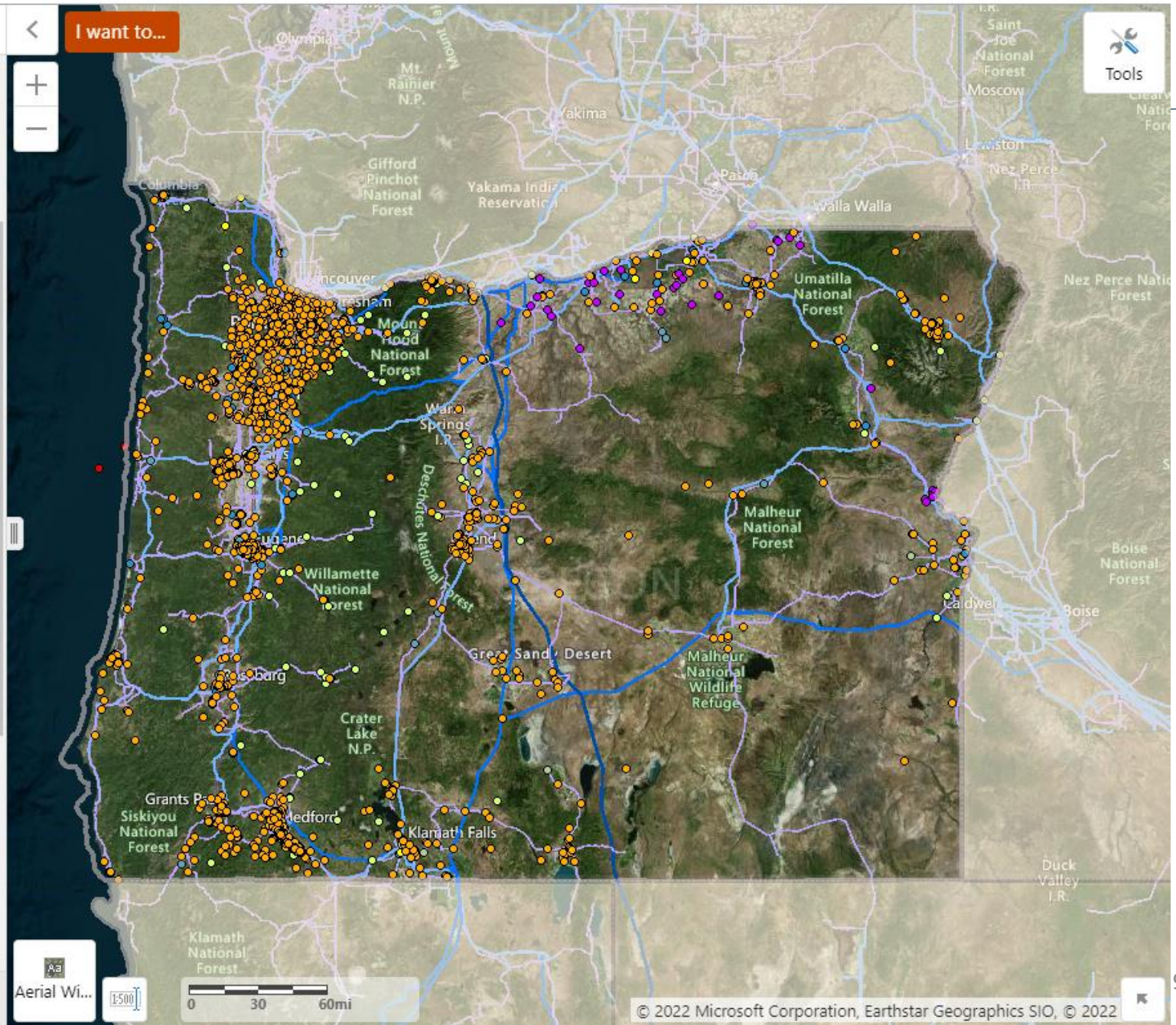
- Military Training Areas
  - Military Training Routes
    - Military Training Route Centerline
    - Military Training Route Corridor Floor Elevation (AGL)
  - Military Special Use Airspace Floor Elevation (AGL)
  - Military Special Use Airspace Floor Elevation (AGL)
  - Boardman Geographic Area of Concern
  - Installations, Ranges, and Training Areas
  - Other Military Operational Areas
- Energy
- Natural Resource Considerations
- Community Considerations
- National Register of Historic Places
- Administrative Boundaries and Planning





Layers

- Energy
  - Energy Infrastructure
    - Substations
    - Transmission Lines
    - Wind Turbines
  - ODOE Facilities Database
    - ODOE Facilities Database (Residential)
    - ODOE Facilities Database (Commercial and Utility)
    - Oregon Energy Facility Siting Council (EFSC) Facilities
    - Natural Gas Pipelines
  - Solar
  - Wind
  - Geothermal
  - Biomass
  - Hydroelectric
  - Marine and Hydrokinetic
- Natural Resource Considerations
- Community Considerations















Layers

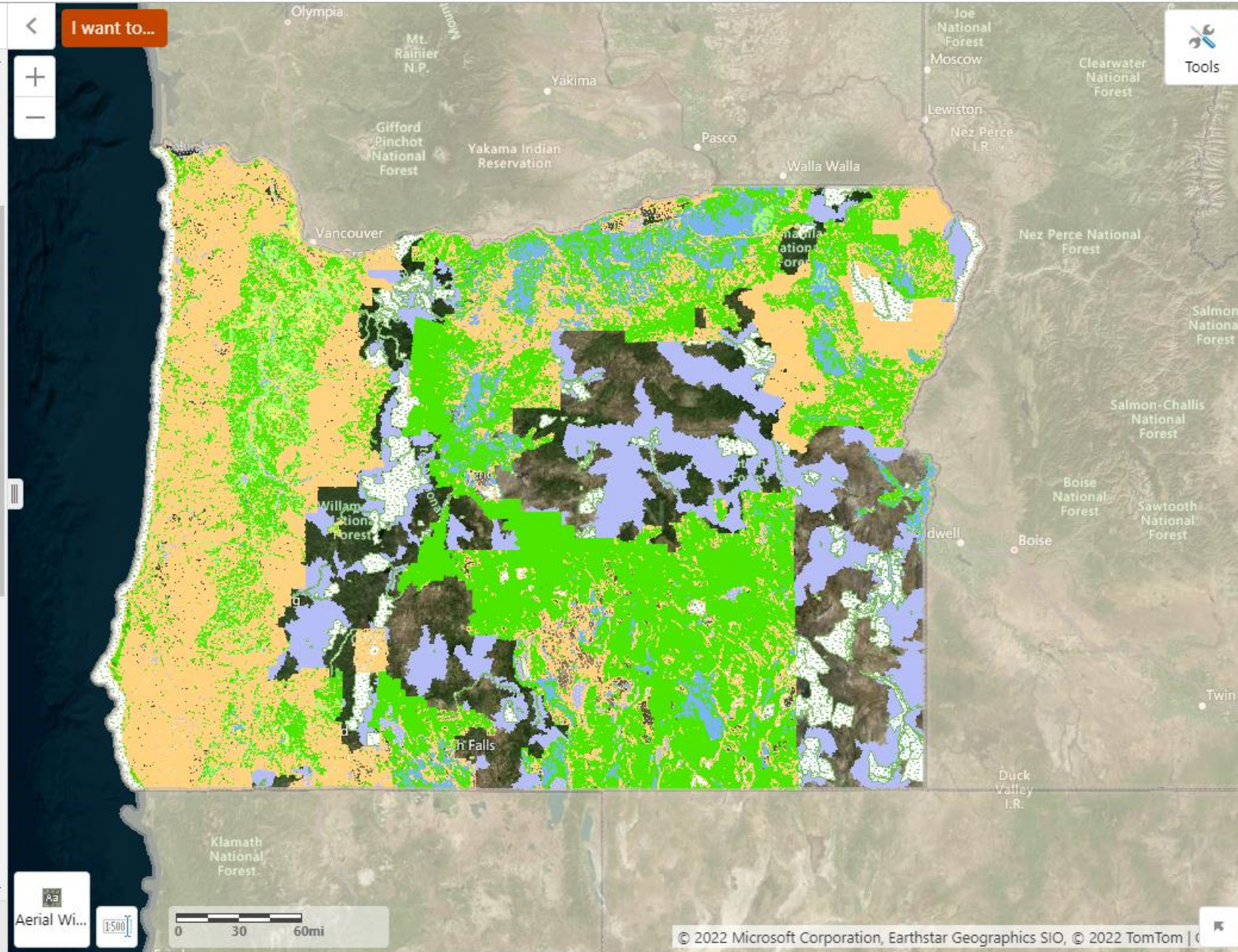


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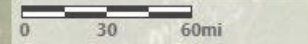


Natural Resource Considerations

- Protected Areas
- Wetlands
- Species and Habitats
- Farmland
- Water Rights by Use 
- Hazards
- Slope 
- Air Quality Maintenance and Nonattainment Areas 
- Hydrography and Watersheds
- Bathymetric Contours 
- Rocky Shore Managed Areas 
- Special Area Viewsheds 
- Special Area Viewpoints 
- Oregon Scenic Byways 
- Oregon State Scenic Waterway Classification Areas  
- Oregon State Scenic Waterway Water Courses  
- BLM-Administered Land Wind Energy Development Exclusions and Resource Sensitivities



Aerial Wi... 



Layers

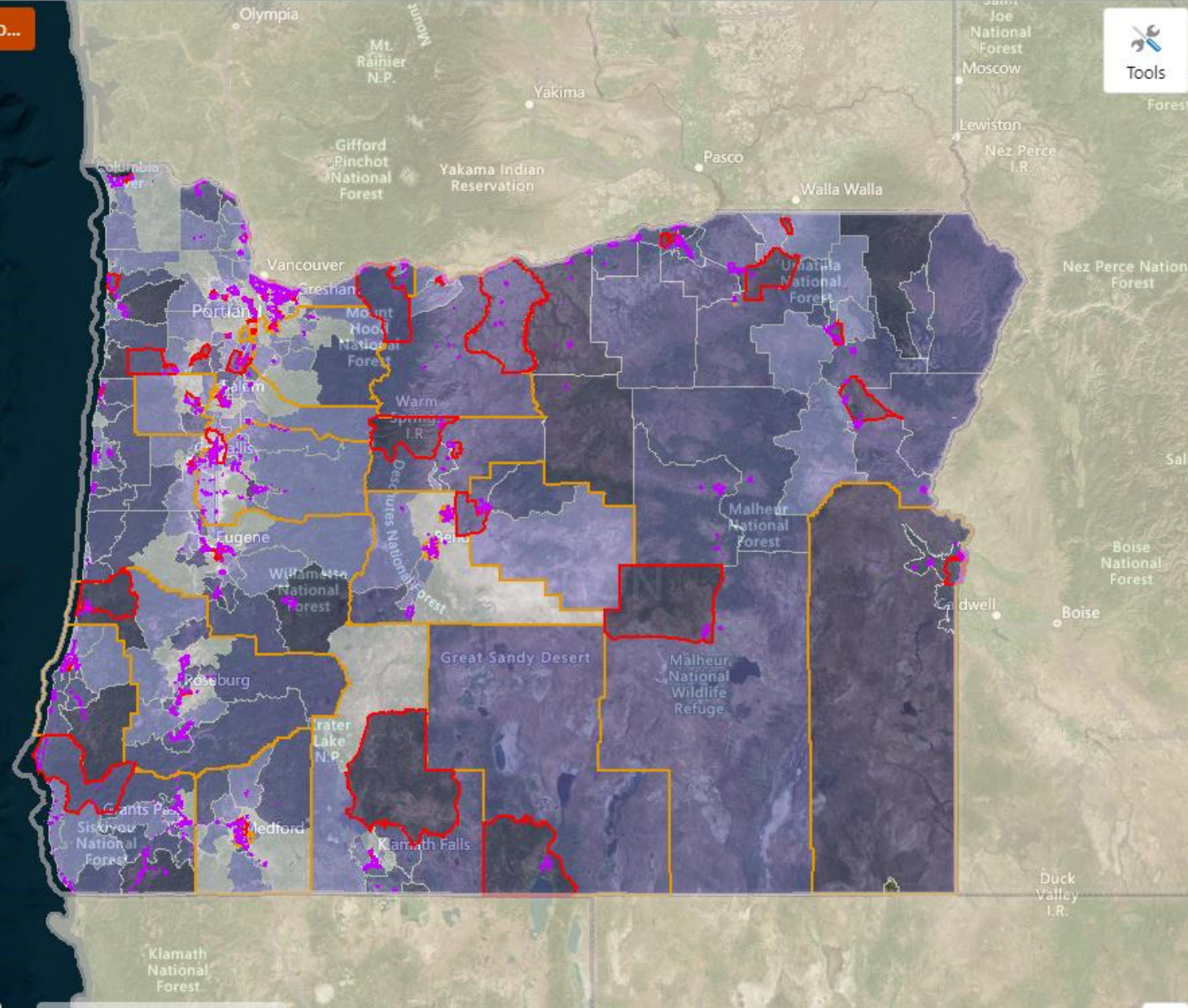


I want to...



Tools

- Energy
- Natural Resource Considerations
- Community Considerations
  - Economic Development Zones
    - Enterprise Zones
    - Opportunity Zones
    - RRED Zones
  - Energy Use Intensity In Residential Housing
  - Affordable Housing Assessment
  - Race and Ethnicity
  - Frontier and Remote (FAR) Zip Code Areas
  - EPA EJScreen
  - EPA RE-Powering Mapper Layers
- National Register of Historic Places
- Administrative Boundaries and Planning
- Land Cover and Ownership
- Transportation
- Unmanned Aircraft Systems (UAS) Flight Restrictions



0 30 60mi

Home

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#### Explore Data



Browse, download, and interact with map layers

#### Get a Report



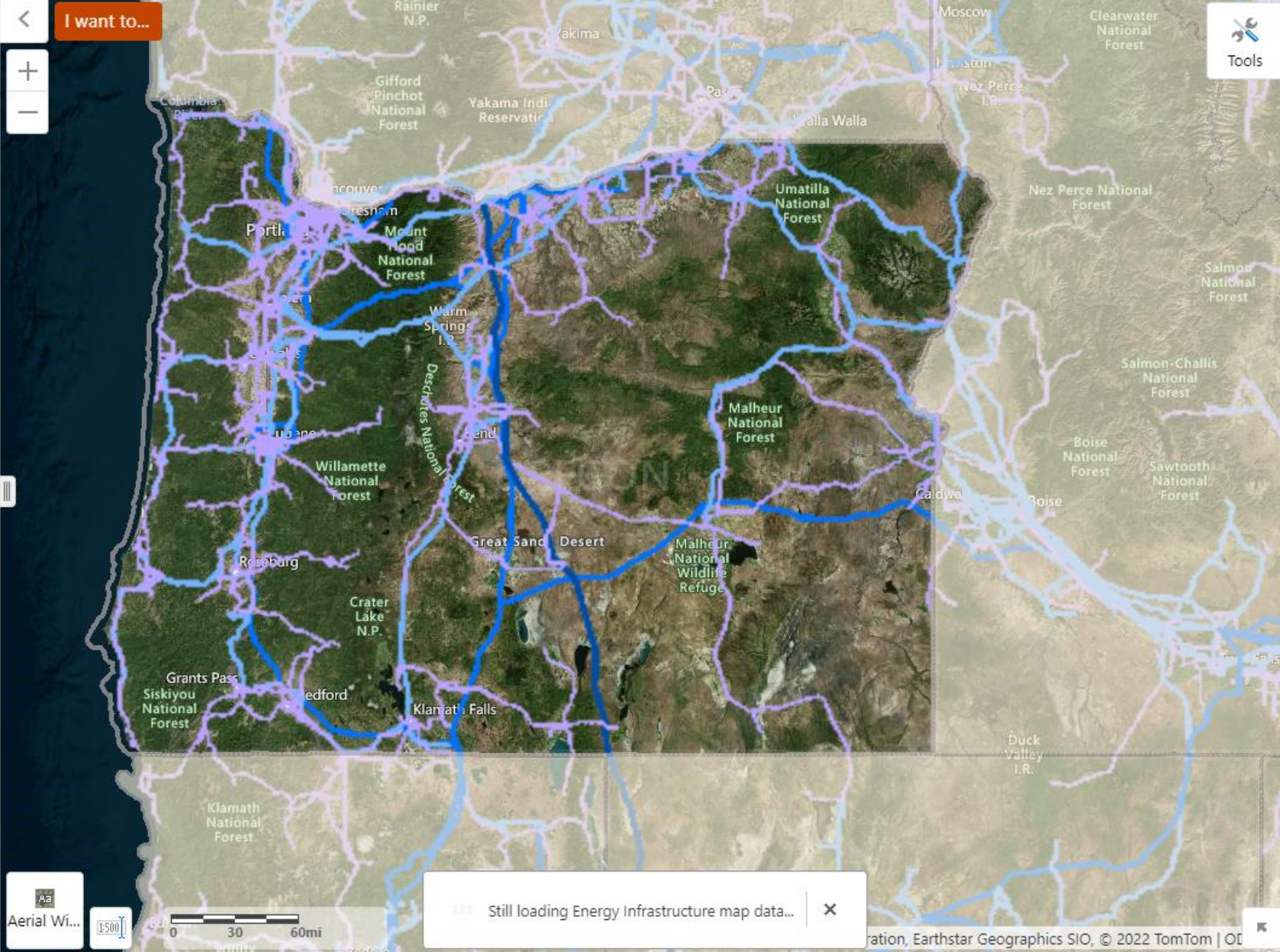
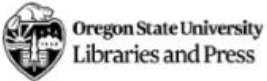
Land use considerations and contact information for your area of interest

#### Learn



Learn about siting procedures, incentives, and processes for military coordination

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Still loading Energy Infrastructure map data...

### Renewable Energy Siting Assessment Project Information

Information generated by this report will **only be available to you** and not shared unless you choose to initiate contact to coordinate further exploration and development.

#### Site Name

Test

#### Select Development Type(s)

Select if your project is planned to be onshore or offshore

- Onshore development
- Offshore development

On-shore development options

- Wind (onshore)
- Solar Photovoltaic
- Geothermal
- Other/hybrid (onshore)

#### Maximum Height (ft)

Anticipated max height of tallest structure in feet.

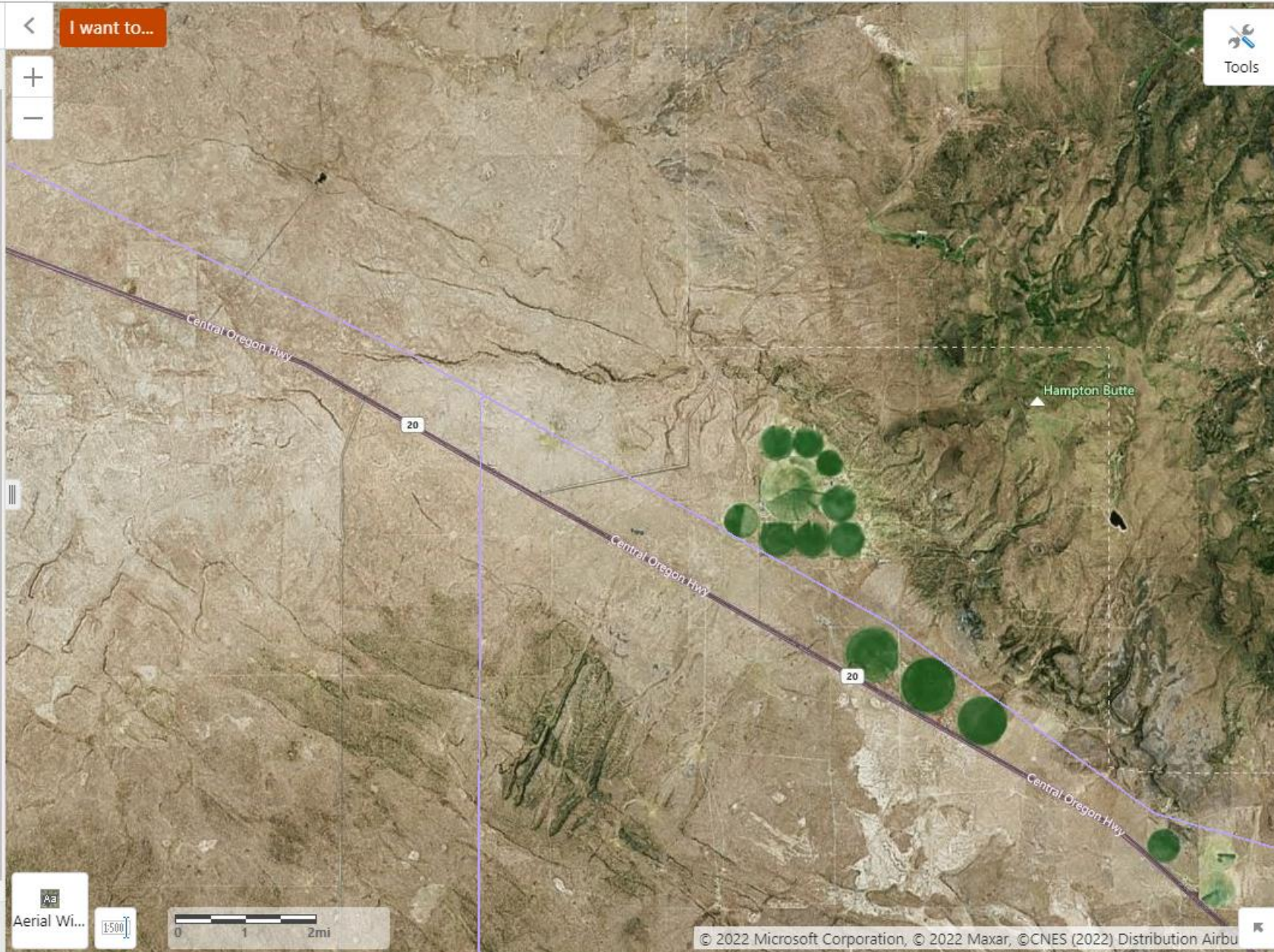
400

#### MegaWatts

Anticipated production of energy in MegaWatts.

200

Cancel Next >



Report Options

Default Report Sections

- Site Information
- Military Training Areas
- Contacts

Optional Report Sections

Check which sections to include in your report.

All None

- Energy Considerations
- Natural Resource Considerations
- Community Considerations

Results


- All queries/results
- Include only intersected/relevant results

<- Back Next ->

< I want to...

+  
-





Aerial Wi...  0 0.5 1mi

Renewable Energy Siting Assessment Project Information


 Visible layer(s)
  Project Footprint
  PDF Report
  Help

Report Sections Show All




Site Information
Military Areas  3
Energy Considerations
  
Natural Resources  10
Community Considerations  1
Contacts

Site Information View:   All

Site Name:	test
Project Type(s):	Wind (onshore), Solar Photovoltaic
Maximum Height (ft):	400
MegaWatts:	200
Area:	6,036 Acres

Admin Boundaries & Planning

Boundary/Planning Area	Value/Intersects	View
State Land Inventory System	 Yes	
In Coastal Zone	 No	
USFWS Region	 Region 1: Pacific Region	
USFS District(s)	 No	
BLM District(s)	 Prineville District	
Comprehensive Plan Designation	 AGRICULTURE, RURAL NATURAL RESOURCE/OPEN SPACE	


 Home
  Layers
  Renewable Energy Siting...

**I want to...**





Home
Layers
Renewable Energy Siting...

Renewable Energy Siting Assessment Project Information

Admin Boundaries & Planning

Boundary/Planning Area	Value/Intersects	View
State Land Inventory System	Yes	
In Coastal Zone	No	
USFWS Region	Region 1: Pacific Region	
USFS District(s)	No	
BLM District(s)	Prineville District	
Comprehensive Plan Designation	AGRICULTURE, RURAL NATURAL RESOURCE/OPEN SPACE	
Zoning	Exclusive Farm Use 160+, Mineral and Aggregate, Open Space/Conservation	
County	Crook, Deschutes	

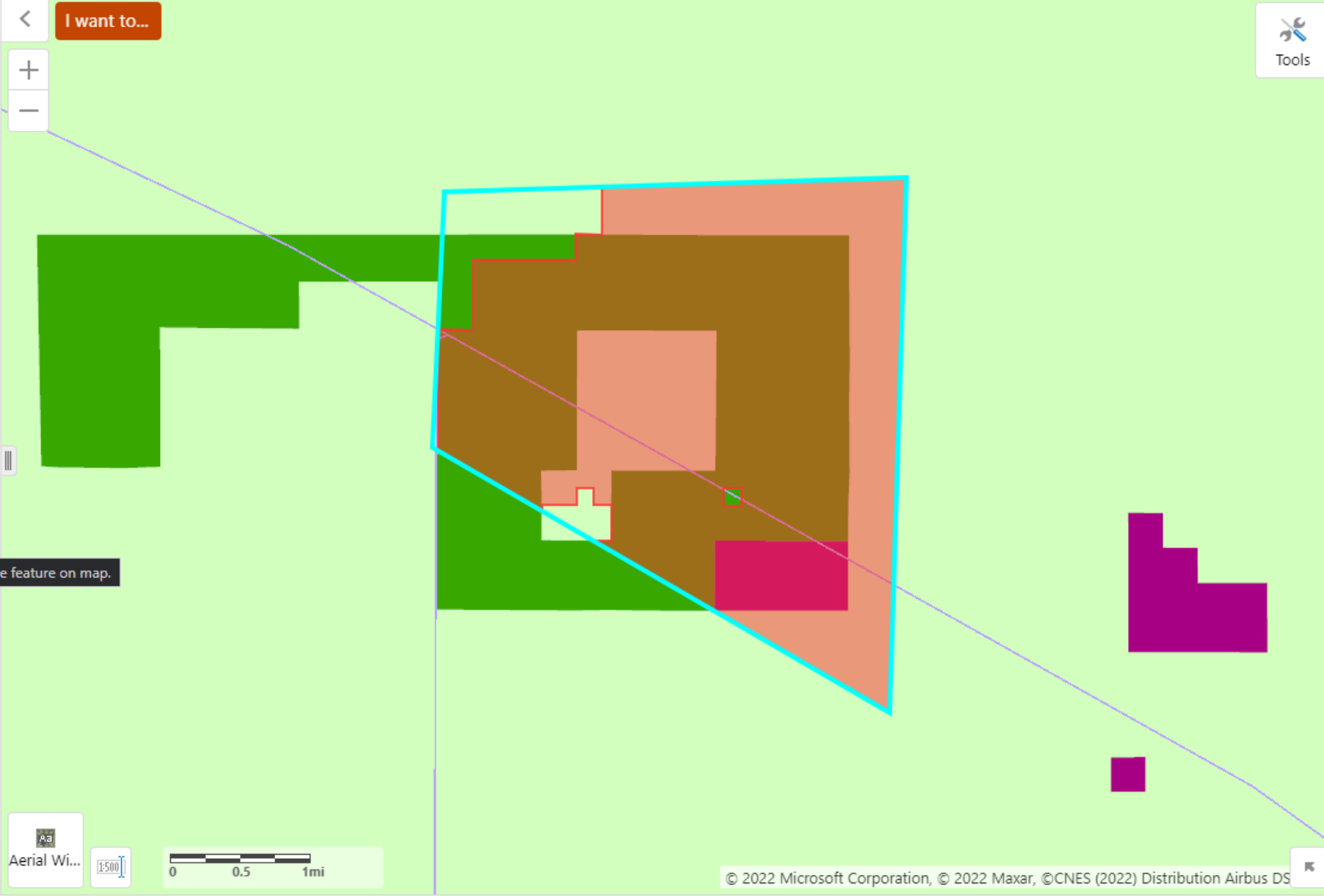
Land Management/Ownership


Land Manager/Owner	Area (acres)	Percent Area	Pin
State Government	5,529.50	91.6%	
Federal (BLM)	422.90	7.0%	
Private	75.80	1.3%	
Federal (Other)	10.20	0.2%	

Cultural Resources

- [Oregon State Historic Preservation Office Laws & Rules](#)
- [Oregon State Historic Preservation Office Project Review & Compliance](#)
- [Legislative Commission on Indian Services](#)
- [Legislative Commission on Indian Services Key Contact Information](#)

Installation and operation of renewable energy facilities have the potential to impact cultural resources which are protected by Federal and State law. Cultural



Aerial Wi...  0 0.5 1mi



Renewable Energy Siting Assessment Project Information

Military Training Areas

View: [Layers Icon] [Location Icon] All



Your project may pose a safety concern, physical and/or visual obstruction, or interfere with operations.

Your proposed site intersects with:

- Military Training Route Corridor Floor Elevation (AGL)
- Military Special Use Airspace Floor Elevation (AGL)

Initiate Contact

Military Training Route Corridor ⓘ

Areas with minimum flight floor elevation of 500ft or less above ground level

Elevation (ft)	Service	Area (Acres)	Percent Area	Pin
500	U.S. Navy	5,944.10	98.4%	[Pin Icon]
200	U.S. Navy	6,038.60	100.0%	[Pin Icon]

Military Special Use Airspace ⓘ

Areas with minimum flight floor elevation of 500ft or less above ground level

Elevation (ft)	Agency	Area (Acres)	Percent Area	Pin
500	FAA, SEATTLE ARTCC	6,038.60	100.0%	[Pin Icon]

Boardman Geographic Area of Concern ⓘ

No data intersected your area.

I want to...

[Map Navigation: Back, Forward, Zoom In, Zoom Out]

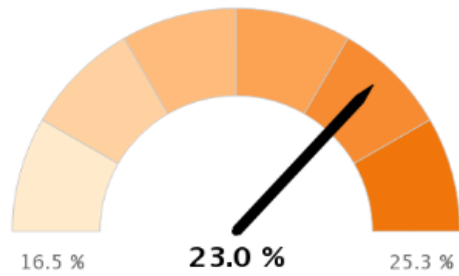
[Aerial View] [Scale: 0, 0.5, 1mi]

[Map Layers]

[Tools Icon] Tools

Renewable Energy Siting Assessment Project Information

Estimated Utility-Scale Solar  
Capacity Factor



Estimated Utility-Scale Solar ⓘ

  Map



Electric Substations ⓘ


 



Substation Name	Distance	Pin
HAMPTON	0.0 Miles	
CHRISTMAS VALLEY	0.0 Miles	
TAP203395	0.0 Miles	
TAP203396	0.0 Miles	
SAND SPRINGS	29.1 Miles	


Transmission Lines ⓘ



 

Owner	Voltage	Distance	Pin
BONNEVILLE POWER ADMINISTRATION	115	0.0 Miles	
BONNEVILLE POWER ADMINISTRATION	115	0.0 Miles	

 I want to...

 Tools

 Aerial Wi...  0 0.5 1mi

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Renewable Energy Siting Assessment Project Information

Natural Resource Considerations

View: [Layers Icon] [Location Icon] All

Show results (10) Show all queries (47)

PROTECTED AREAS

Layer	Value/Intersects	View
BLM Visual Resource Management	VRM 3	[Layers Icon] [Location Icon]

FARMLAND

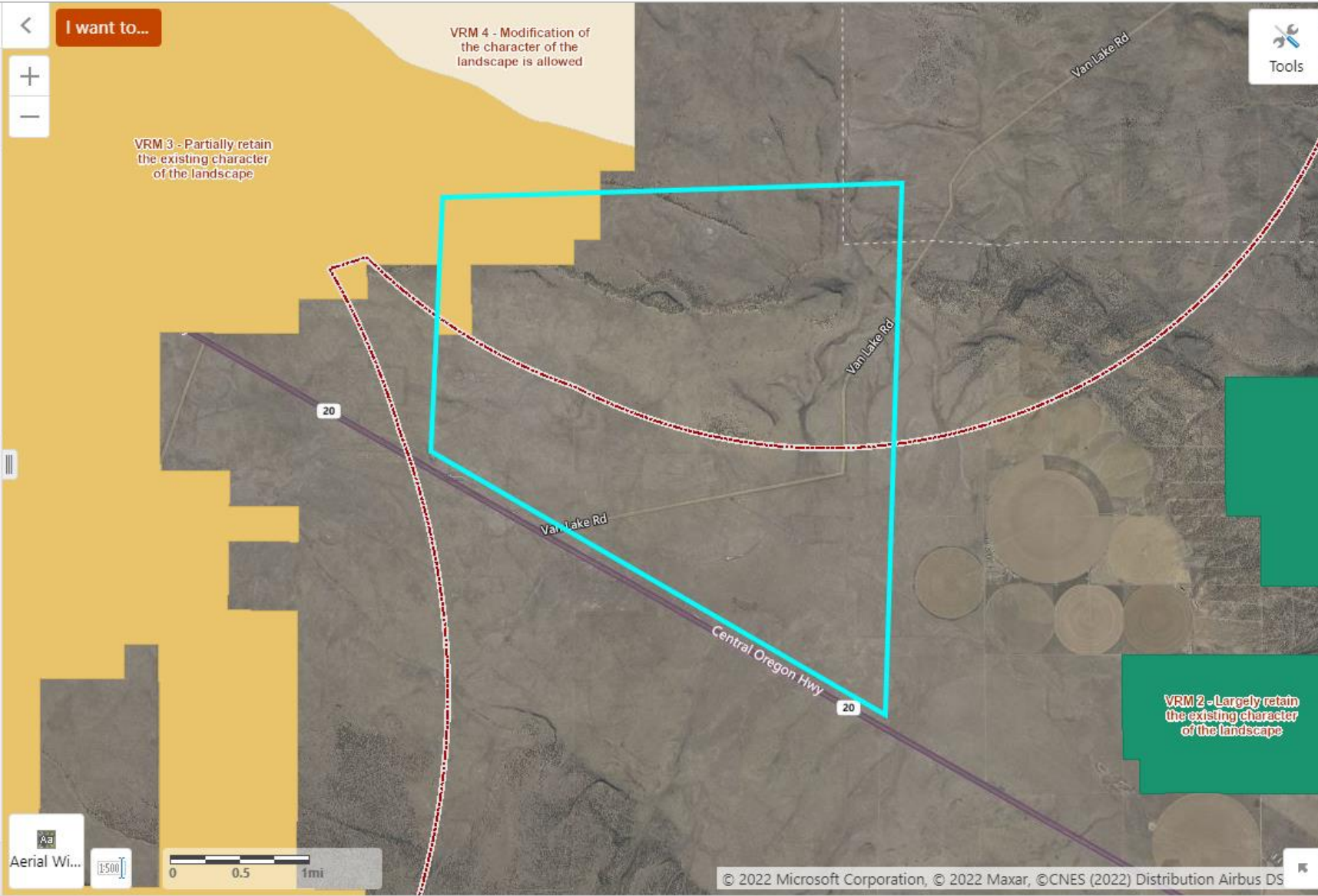
Layer	Value/Intersects	View
Non-Irrigated Soil Capability Class	6	[Location Icon]
Farm Soil Class	NA	[Location Icon]

SPECIES AND HABITATS

Layer	Value/Intersects	View
Pronghorn Essential and Limited Habitat	Yes	[Location Icon]
Eastern Oregon Elk Winter Range	Yes	[Location Icon]
Sage Grouse Core Areas	Yes	[Layers Icon] [Location Icon]
Conservation Opportunity Areas	Brothers-North Wagontire	[Location Icon]

WETLANDS

Layer	Value/Intersects	View
NHD Waterbody		[Location Icon]
NHD Streams and Rivers	Yes	[Location Icon]
Statewide Wetlands Inventory (NWI)	Yes	[Location Icon]



Renewable Energy Siting Assessment Project Information

Natural Resources 
**Community Considerations **
Contacts

Community Considerations

Layer	Value/Intersects	View
RRED Zones	 Yes	 
Opportunity Zones	 No	
Enterprise Zones	 No	

Additional Resources

- [Oregon Department of Energy Incentives information](#)
- [Business Oregon Rural Renewable Energy Development \(RRED\) Zone Program](#)
- [Business Oregon Oregon Investment Advantage](#)
- [Business Oregon, Oregon Prospector Tool](#)
- [U.S. Energy Information Administration Renewable Energy Incentives information](#)

Equity and Environmental Justice Resources

Oregon passed [HB 4077 \(2022\)](#) to develop a statewide equity mapping tool. Until that work is completed below are additional national scale resources to understand equity and environmental justice further.

- [EJScreen](#) EPA's Environmental Justice Screening and Mapping Tool
- [Energy Justice Dashboard \(BETA\)](#)
- [Climate & Economic Justice Screening Tool](#)
- [Low-Income Energy Affordability Data \(LEAD\) Tool](#)





# Renewable Energy Siting Assessment Project Information

Custom Area

Area : 6,036 Acres

## Introduction

The Oregon Renewable Energy Siting Assessment (ORESAs) project was funded through a \$1.1 million U.S. Department of Defense Office of Local Defense Community Cooperation grant awarded to the Oregon Department of Energy, working with the Department of Land Conservation & Development and Oregon State University's Institute for Natural Resources.

The project sought to support military compatibility through coordination with local, regional, and state agencies, and raise awareness about the military through the ORESAs project. The objective for the Oregon Renewable Energy Siting Assessment Map Viewer and Reporting Tool was to assemble baseline data to create a transparent, consistent collection of trusted, accurate information, without recommendations or endorsements.

This tool is for illustrative and administrative purposes only. The map viewer and reports generated by it are not meant to replace the formal permitting process in the state of Oregon. The tool provides the approximate physical, environmental, management, and jurisdictional conditions of a selected area within Oregon. This information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user. The sponsors of the tool make no claims, representations or warranties as to the accuracy or completeness of these data layers.

## Military Coordination

Since your specified area of interest for a possible development is near or intersects a military training area, installation, special use airspace, or geographic area of concern, it is important to coordinate AS EARLY AS POSSIBLE DURING the exploration of any projects with the military to ADDRESS possible issues in the future.

### U.S. Navy

Kimberly Peacher  
Email: [kimberly.n.peacher.civ@us.navy.mil](mailto:kimberly.n.peacher.civ@us.navy.mil)

[Initiate Contact](#)

### NW DoD Regional Coordination Team Representatives

Kimberly Peacher  
Email: [kimberly.n.peacher.civ@us.navy.mil](mailto:kimberly.n.peacher.civ@us.navy.mil)

[Initiate Contact](#)

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<a href="#">Natural Resource Considerations</a>	18		



# Renewable Energy Siting Assessment Project Information

Custom Area

Area : 6,036 Acres

## BLM District(s)

### Prineville District

3050 N.E. 3rd Street Prineville, OR 97754  
541-416-6700  
BLM\_OR\_PR\_Mail@blm.gov  
<https://www.blm.gov/office/prineville-district-office>

## US Fish & Wildlife

### U.S. Fish and Wildlife Service (Pacific Region, Oregon Office)

911 NE 11th Ave. Portland, Oregon 97232  
(503) 231-6120  
null  
<https://www.fws.gov/pacific/>

## State Contacts

### Oregon Department of Energy

550 Capitol St. NE, 1st Floor Salem, OR 97301  
(503) 378-4040  
<https://www.oregon.gov/energy/Pages/index.aspx>

### Oregon Department of Land Conservation and Development

635 Capitol Street NE, Suite 150, Salem, OR 97301  
(503) 373-0050  
dlcd.info@state.or.us  
<https://www.oregon.gov/LCD/pages/index.aspx>

### Oregon Military Department

1776 Militia Way SE, Salem, OR 97309-5047  
(503) 584-3980  
<https://www.oregon.gov/OMD/Pages/Home.aspx>

### Oregon Department of Fish and Wildlife

4034 Fairview Industrial Drive SE Salem, OR 97302  
(503) 947-6000  
odfw.info@state.or.us  
<https://www.dfw.state.or.us/>

### Oregon Parks and Recreation Department State Historic Preservation Office

725 Summer Street NE, Suite C Salem, OR 97301  
(503) 986-0707  
oregon.heritage@oregon.gov  
<https://www.oregon.gov/oprd/OH/Pages/default.aspx>

### Legislative Commission on Indian Services

900 Court St. NE, Room 167, Salem, OR 97301  
(503) 986-1067  
LCIS@oregonlegislature.gov  
<https://www.oregonlegislature.gov/cis>

### Oregon Department of State Lands

775 Summer St. NE, Suite 100 Salem, OR 97301-1279  
(503) 986-5200  
<https://www.oregon.gov/dsl/Pages/index.aspx>

### Oregon Department of Aviation

3040 25th Street SE, Salem, OR 97302  
(503) 378-4880  
aviation.mail@aviation.state.or.us  
<https://www.oregon.gov/aviation/Pages/index.aspx>

### Oregon Department of Environmental Quality

700 NE Multnomah Street, Suite 600 Portland, OR 97232-4100  
503-229-5696  
<https://www.oregon.gov/DEQ/Pages/index.aspx>

### Oregon Water Resources Department

725 Summer Street NE, Suite A Salem, OR 97301  
503-986-0900  
<https://www.oregon.gov/owrd/Pages/index.aspx>

### Oregon Department of Forestry

2600 State Street, Salem, Oregon 97310  
503-945-7200  
forestryinformation@oregon.gov  
<https://www.oregon.gov/odf/Pages/index.aspx>

### Public Utility Commission of Oregon

201 High Street SE, Suite 100, Salem, OR 97301-3398  
503-373-7394  
<https://www.oregon.gov/PUC/Pages/default.aspx>

# RESOURCES

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Project website: [Oregon Renewable Energy Siting Assessment \(ORESAs\)](#)

## Key Deliverables

- [ORESAs Mapping and Reporting tool](#)
  - [ORESAs Mapping & Reporting Tool Summary](#)
  - [ORESAs Mapping & Reporting Tool Demonstration Video](#)
- [ORESAs Report](#) (Near-Final)
- [Renewable Energy Landing Page](#) (Oregon Explorer)

## Supporting Materials

- [Renewable Energy Market and Industry Assessment Report](#)
- [Military Needs and Interests Assessment Report](#)
- [Natural Resources, Environment, And Development - Opportunities and Constraints Assessment Report](#)
- [ORESAs Procedures Report](#)
- [Brochure: Oregon and Our Nation's Military](#)

# STAY IN TOUCH!

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Learn more about the ORESA project:

<https://www.oregon.gov/energy/energy-oregon/Pages/ORESAspx>

Send comments and questions:

<https://odoe.powerappsportals.us/en-US/ORESAspx>

Sign up for email updates:

<http://web.energy.oregon.gov/cn/a6n53/subscribe>



**OREGON**  
Department of  
Land Conservation  
& Development