



WASHINGTON STATE UNIVERSITY
Energy Program

Least-Conflict Solar Siting on Washington's Columbia Plateau

Gathering 2

January 18, 2023



Welcome and a few reminders...

- The meeting is being recorded.
- Mute your microphone while others are speaking.
- Raise your virtual hand to contribute to the conversation.
- During presentations, feel free to chat questions to be answered during Q&A time.
- Please be respectful of this process. Allow everyone the chance to speak and listen actively to understand others' views.
- Chat directly to **Shelby Thomas** if you need technical assistance.



WASHINGTON STATE UNIVERSITY
Energy Program

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Gathering 2

January 18, 2023



WSU Energy Program

- Self-supporting department within WSU
- Based in Olympia, with remote locations
- Energy efficiency program management, on-site assessments, energy analysis, training, knowledge transfer
- Community solar program, Washington state energy codes (residential) support, efficiency systems training, workforce development, green transportation education and outreach, resource conservation manager support

Project Team



WASHINGTON STATE UNIVERSITY
Energy Program



Conservation
Biology Institute



Gathering 2 Objectives

- Learn about the first phase and progress of mapping group work
- Provide comments on mapping group work
- Learn about related key issues: transmission and Tribal considerations
- Hear about other related initiatives and current legislative proposals

Agenda Overview

- | | |
|------------------|--|
| 9:30 – 10:05 AM | Welcome and Project Overview/Updates |
| 10:05 – 10:20 AM | Solar Industry Mapping Group Update |
| 10:20 – 11:00 AM | Transmission Issues for Solar Projects |
| 11:00 – 11:10 AM | 10-minute Break |
| 11:10 – 12:15 PM | Mapping Group Updates |
| 12:15 – 12:25 PM | Preview of the Afternoon |
| 12:25 – 12:55 PM | 30-minute Lunch Break |
| 12:55 – 1:40 PM | Panel Discussion with Mapping Group Representatives |
| 1:40 – 2:05 PM | Tribal Considerations |
| 2:05 – 2:45 PM | Connections to Related Efforts |
| 2:45 – 3:00 PM | Meeting Wrap Up and Next Steps |

Impromptu Networking

Introduce yourself to a few other people here by sharing:

1. Your name
2. Your affiliation
3. What brings you to today's meeting?



Photo: WDFW

Zoom will automatically move you into a breakout room with three or four other attendees.

There will be three rounds.

An aerial photograph of a forested landscape, likely the Columbia Plateau. The terrain is covered with dense, low-lying vegetation in shades of green and brown, interspersed with larger, darker trees. The overall scene is a natural, undisturbed environment.

PROJECT UPDATES

Least-Conflict Solar Siting on the Columbia Plateau

Karen Janowitz

Washington State University Energy Program

Least-Conflict Solar Siting Process

Aims to answer the question:

Where can large-scale solar be developed in the Columbia Plateau region while also ensuring that important habitat, productive farmlands and ranchlands, and Tribal rights and cultural resources are protected?

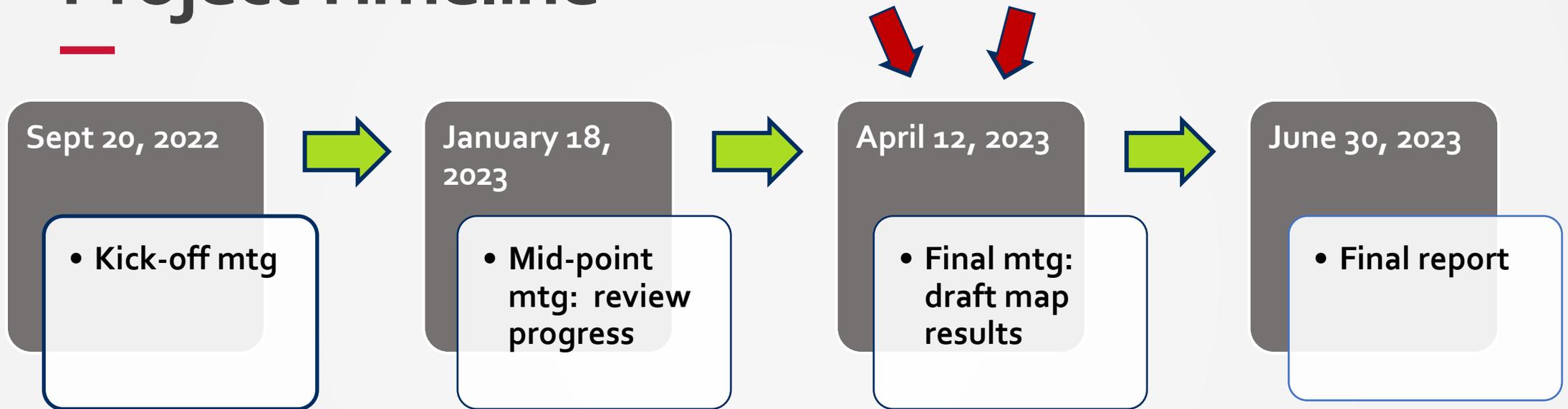


Spiva Butte Chelan-Douglas Land Trust property in Douglas County
photo credit: Ferdi Businger

Budget Proviso Mandate

- Identify areas where there is the least amount of potential conflict in the siting of utility scale PV solar in the Columbia Basin
- Develop a map highlighting these areas
- Summarize process and findings into a report
- Compile information on opportunities for dual-use and colocation of PV solar with other land values
- July 1, 2022 – June 30, 2023
- Budget Proviso – ESSB 5092, Sec. 607 (19), p. 460. 2021 session
<https://lawfilesexternal.wa.gov/biennium/2021-22/Pdf/Bills/Senate%20Passed%20Legislature/5092-S.PL.pdf>

Project Timeline

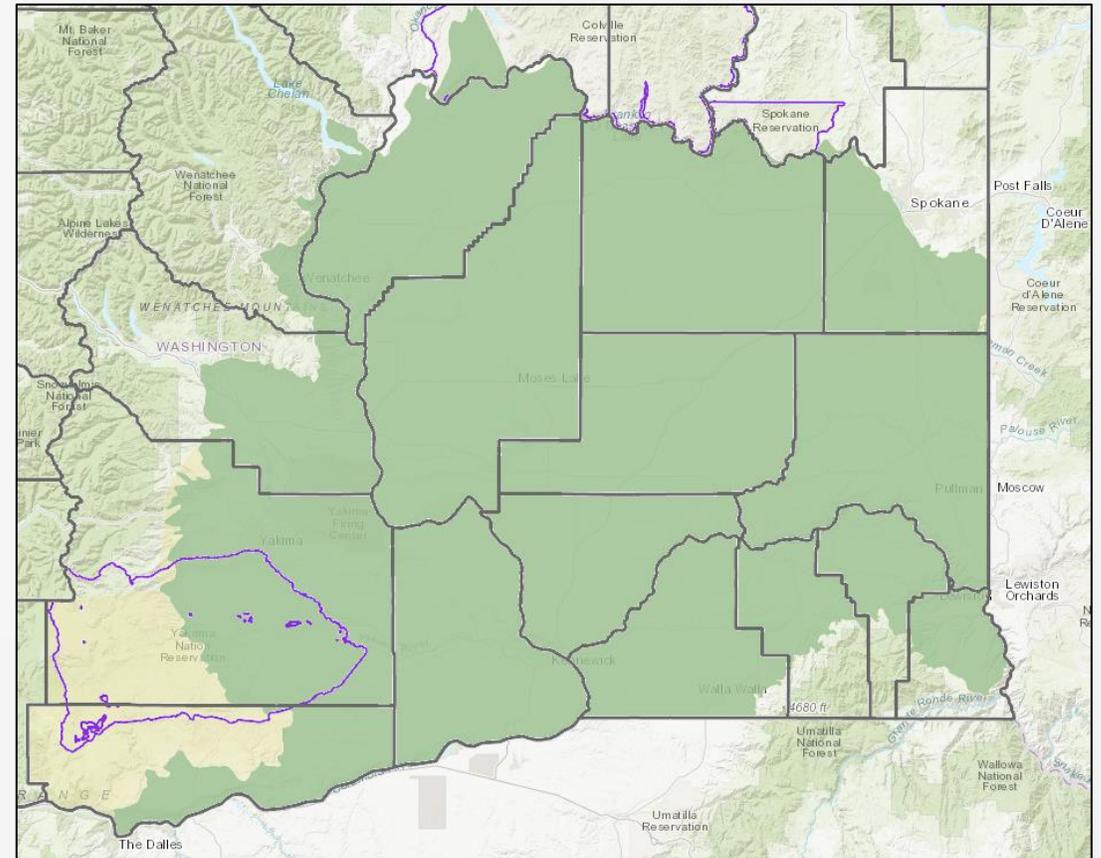


Mapping groups meet early Oct 2022 to late winter/early spring 2023

Additional meetings with Tribes and other to review maps – March through June 2023

Columbia Plateau

- Productive farmland and rangeland
- Unique shrubsteppe habitat
- Diverse and protected species
- Tribal treaty lands and cultural resources
- Suitable for solar PV
- State directive for renewable or non-emitting electricity sources



What Makes the Least-Conflict Process Unique?

- Landscape-based
- Data-based
- Not site-specific
- Non-regulatory
- People-oriented collaborative process
- Voluntary
- A tool to be used by planners, developers, agencies, and others

Mapping Process

- Find existing data
- Determine criteria that creates the highest value and other relative values with available data
- Create tree-based logic model based on criteria and input spatial data
- Create intermediate and apex map from logic model
 - Shows relative values
- Highest relative values on map = highest potential conflict
- Lowest relative values on map = lowest potential conflict (**least conflict**)

Mapping Groups



Farmlands



Ranchlands



Environmental
Conservation

Goal: Produce a map that illustrates least conflict lands based on available spatial data.

Other Groups



Solar Industry

Produce a map that illustrates suitability for solar based on available spatial data



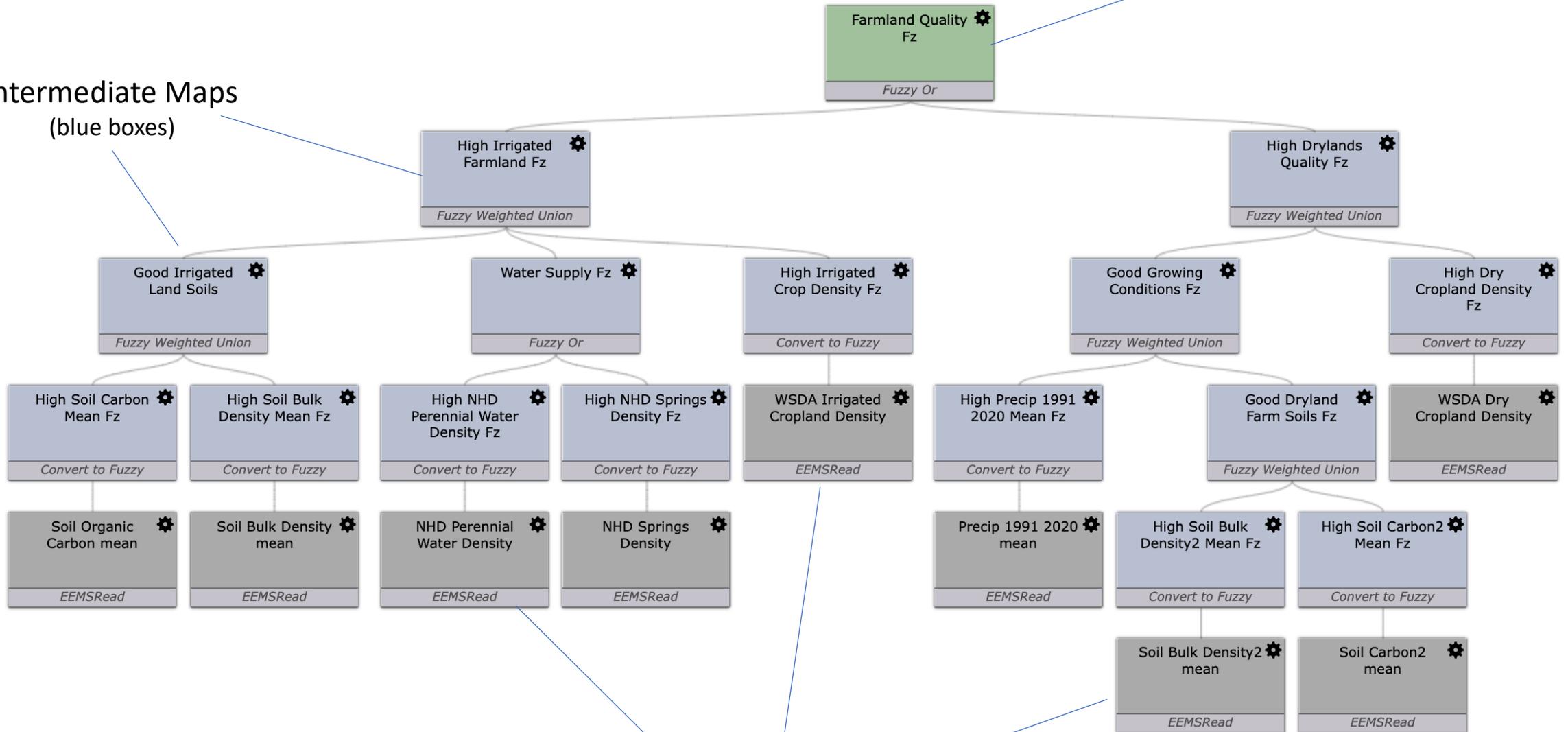
Local Community

Considered other data: county ordinances, economic data, health disparities, Re-Power sites, etc.

Tree-Based Model Diagrams

Apex Map
(green box)

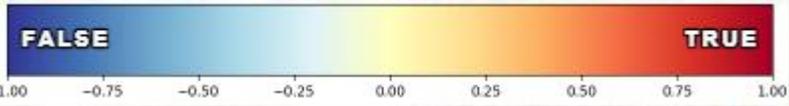
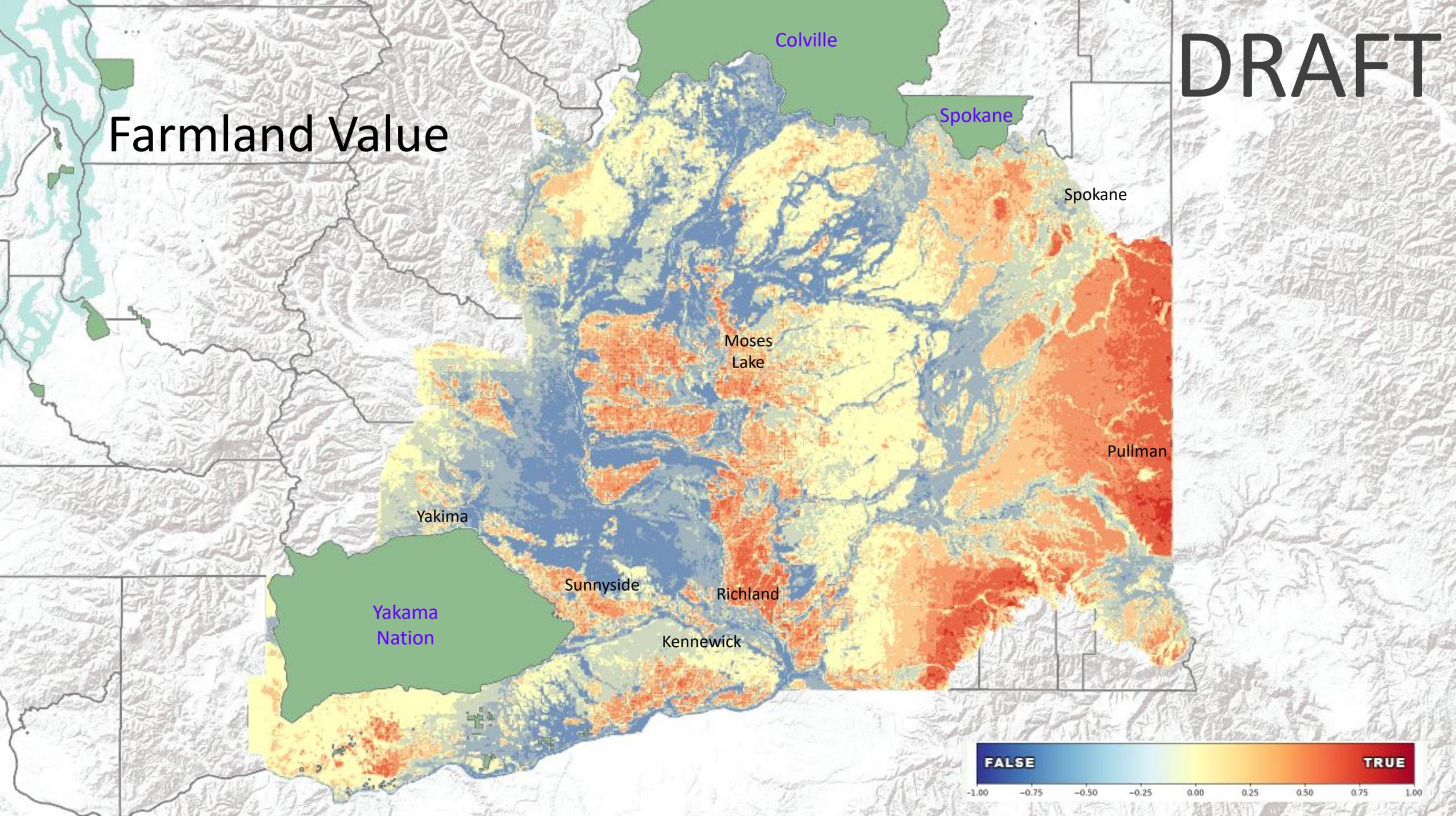
Intermediate Maps
(blue boxes)



Data Inputs
(gray boxes)

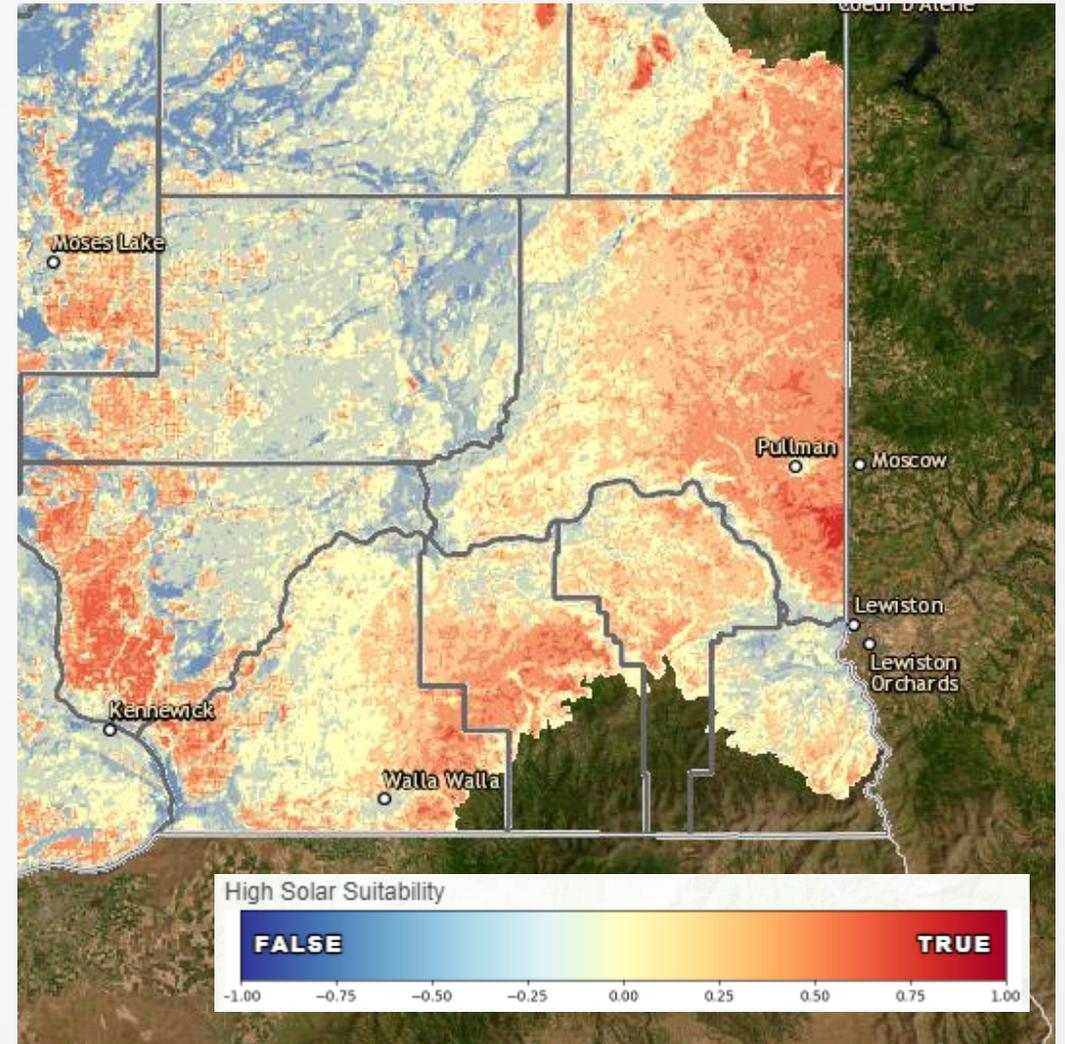
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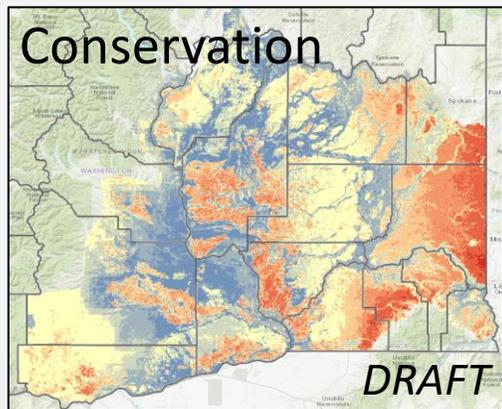
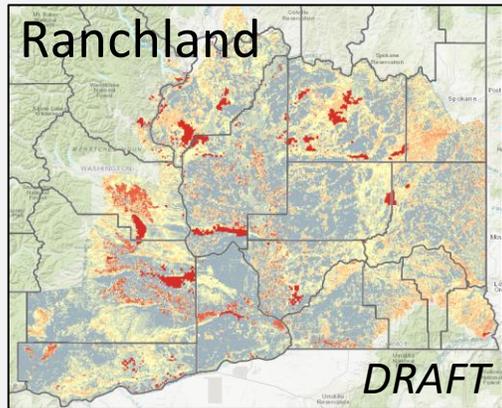
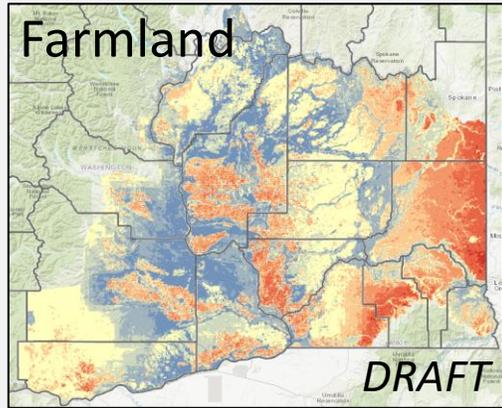
Farmland Value



Maps

- *Conservation, Farmland, Ranchland*
 - Red = higher potential conflict (higher value)
 - Blue = **least conflict** (lower value)
- Solar Industry
 - Red = higher solar suitability
 - Blue = lower solar suitability
- 500 meter grid

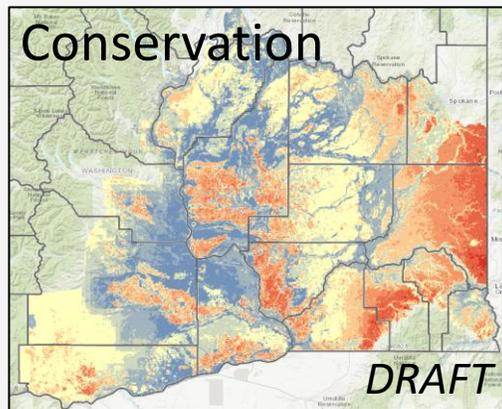
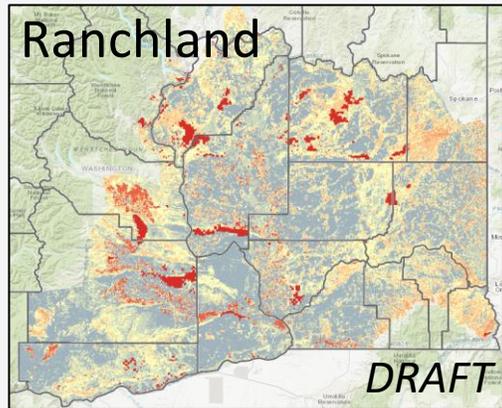
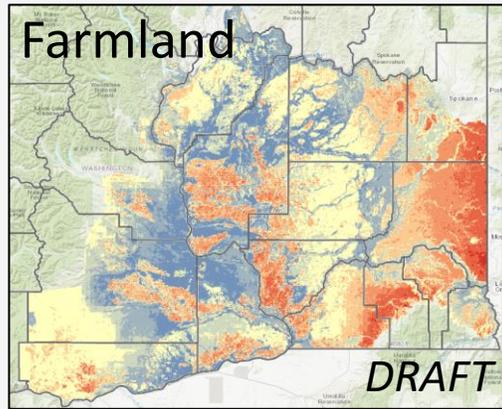
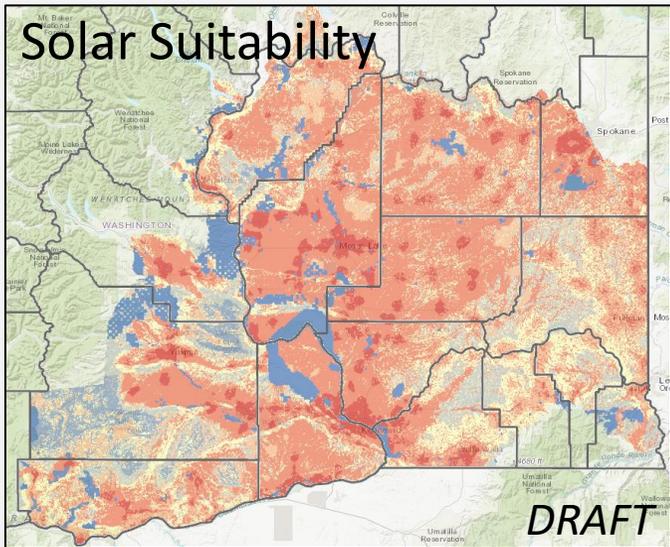




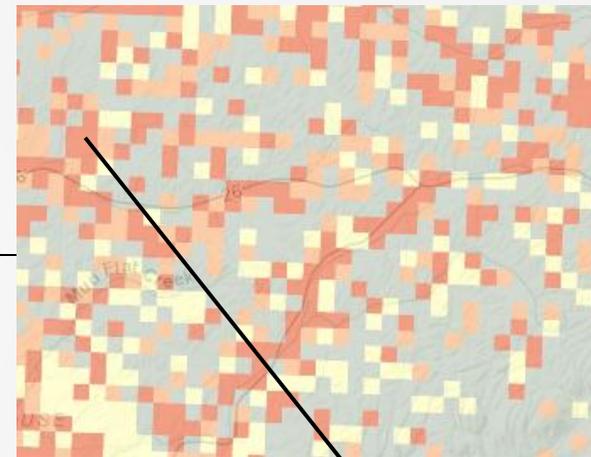
Least-Conflict Composite Map



Conservation Conflict	Moderate
Farmland Conflict	High
Ranchland Conflict	Very Low



Least-Conflict Composite Map



Solar Suitability	High
Conservation Conflict	Moderate
Farmland Conflict	High
Ranchland Conflict	Very Low

Washington Columbia Plateau Gateway

<https://wsuenergy.databasin.org/>



Conservation Biology Institute

Support



Energy Program
WASHINGTON STATE UNIVERSITY

Washington Columbia Plateau Least-Conflict Solar Siting Gateway

Search by keyword or location



powered by DATA BASIN

Get Started

Explore

Create

Community

Workspace

Led by Washington State University Energy Program, this gateway contains geospatial information and collaboration tools to assist participants in defining least-conflict utility scale solar siting in eastern Washington with the goal of achieving state climate goals while minimizing negative impacts on natural and working lands. [Learn more...](#)



Energy &
Transmission



Wildlife & Natural
Habitats



Development &
Socioeconomics



Agriculture &
Ranchlands



Physical
Environment

Project Description

The Least-Conflict Solar Siting Gateway was created to support a voluntary, non-regulatory stakeholder process for identifying

Quick Start Map



Featured Content

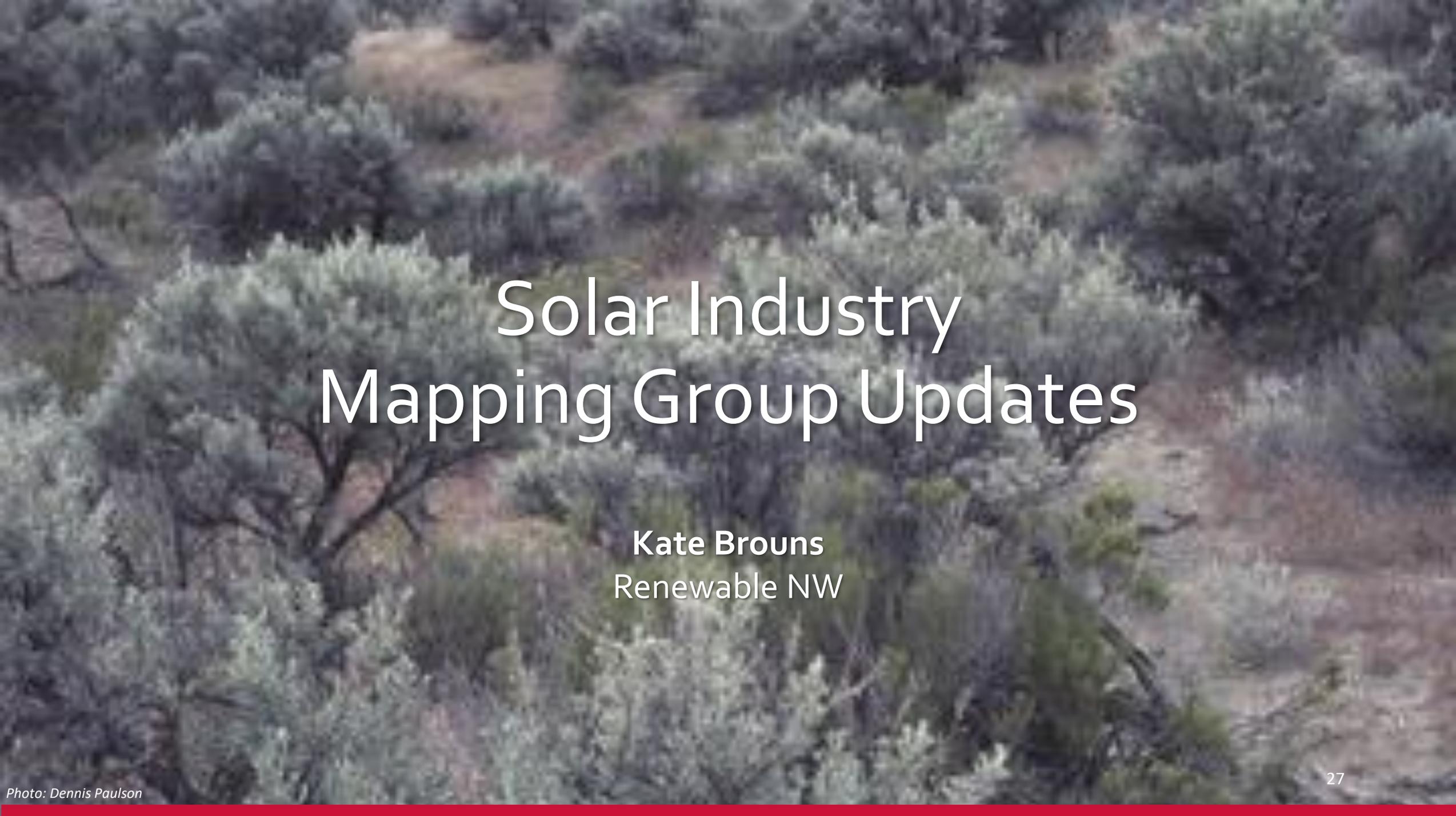


Opportunity for Comments

We welcome feedback and comments from other experts on model criteria and maps.

Contact Karen at janowitzk@energy.wsu.edu for more information how to contribute.

<https://www.energy.wsu.edu/LeastConflictSolar.aspx>



Solar Industry Mapping Group Updates

Kate Brouns
Renewable NW

Solar Development Mapping Group Update

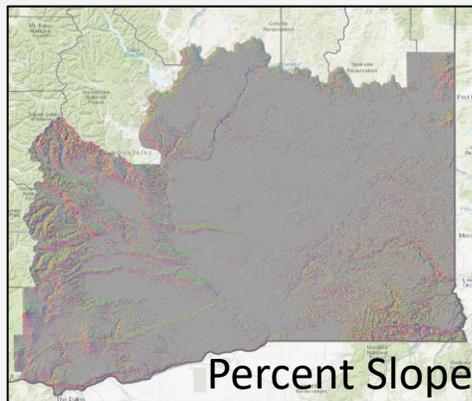
Presented by Kate Brouns, Washington Policy Manager - Renewable Northwest

Goal: Produce a map that illustrates the relative suitability of lands for utility scale solar development based on general, mappable criteria.

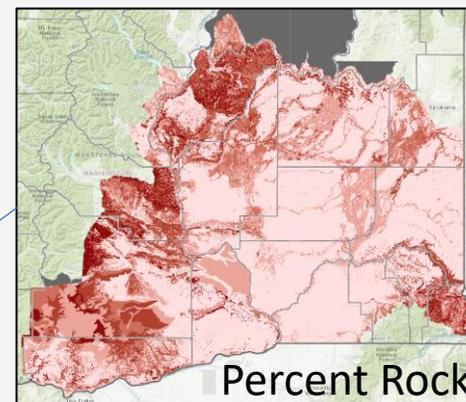


Solar Development Suitability

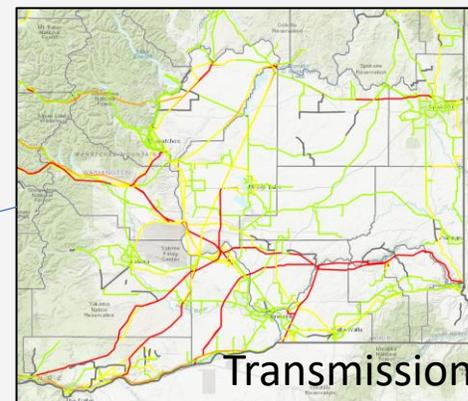
General Model Assessment Criteria



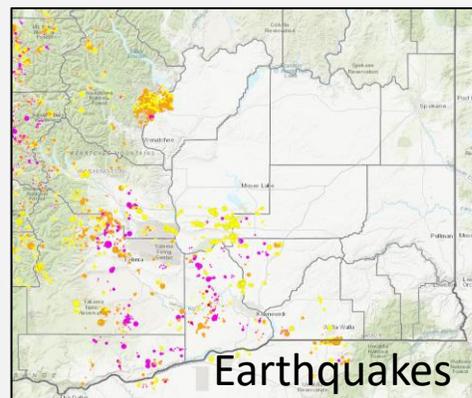
Substrate



Slope



Proximity to Infrastructure



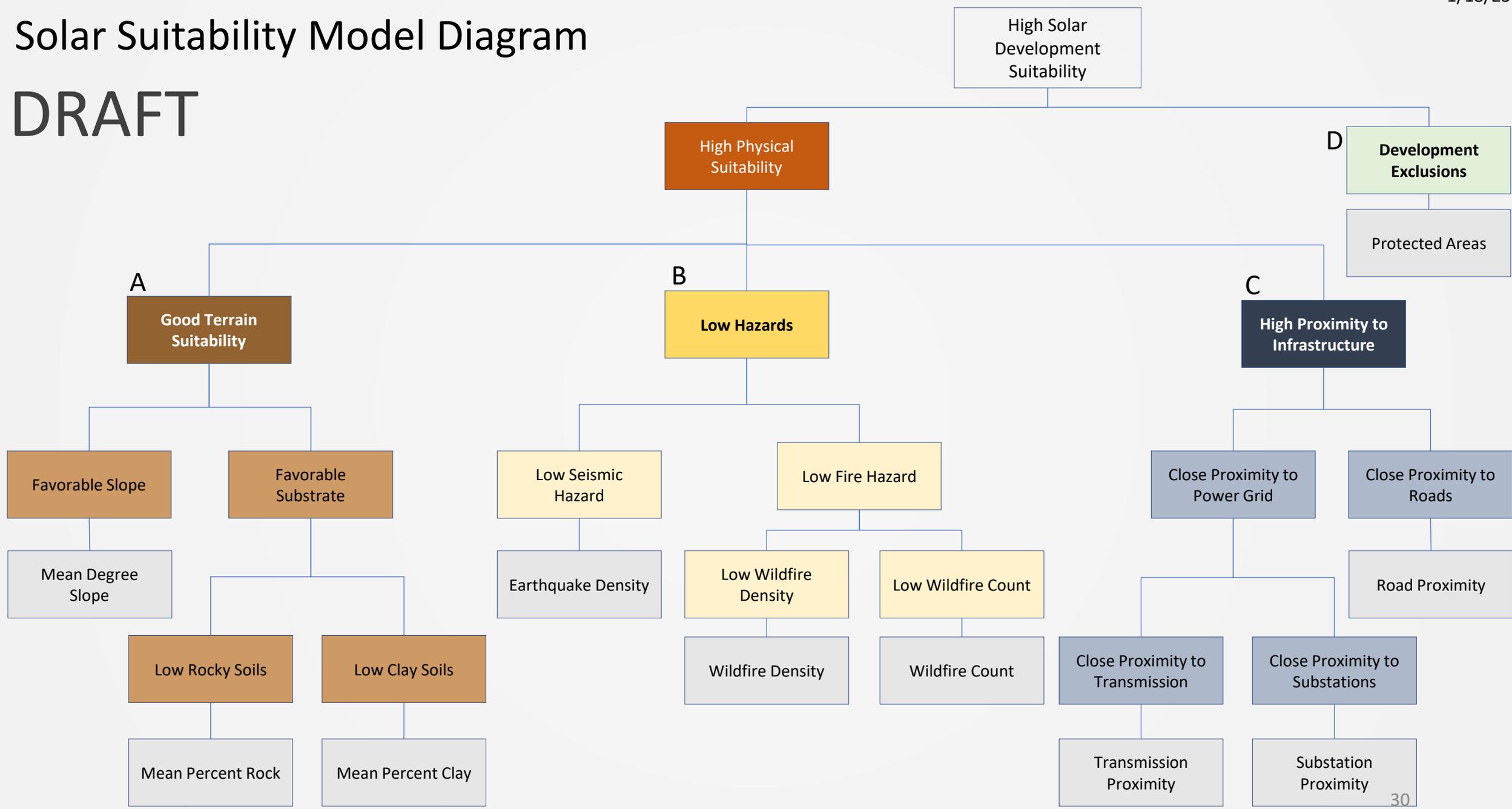
Potential Hazards



Categorical Exclusions

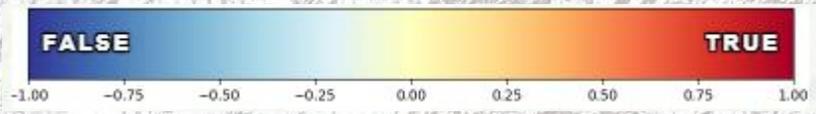
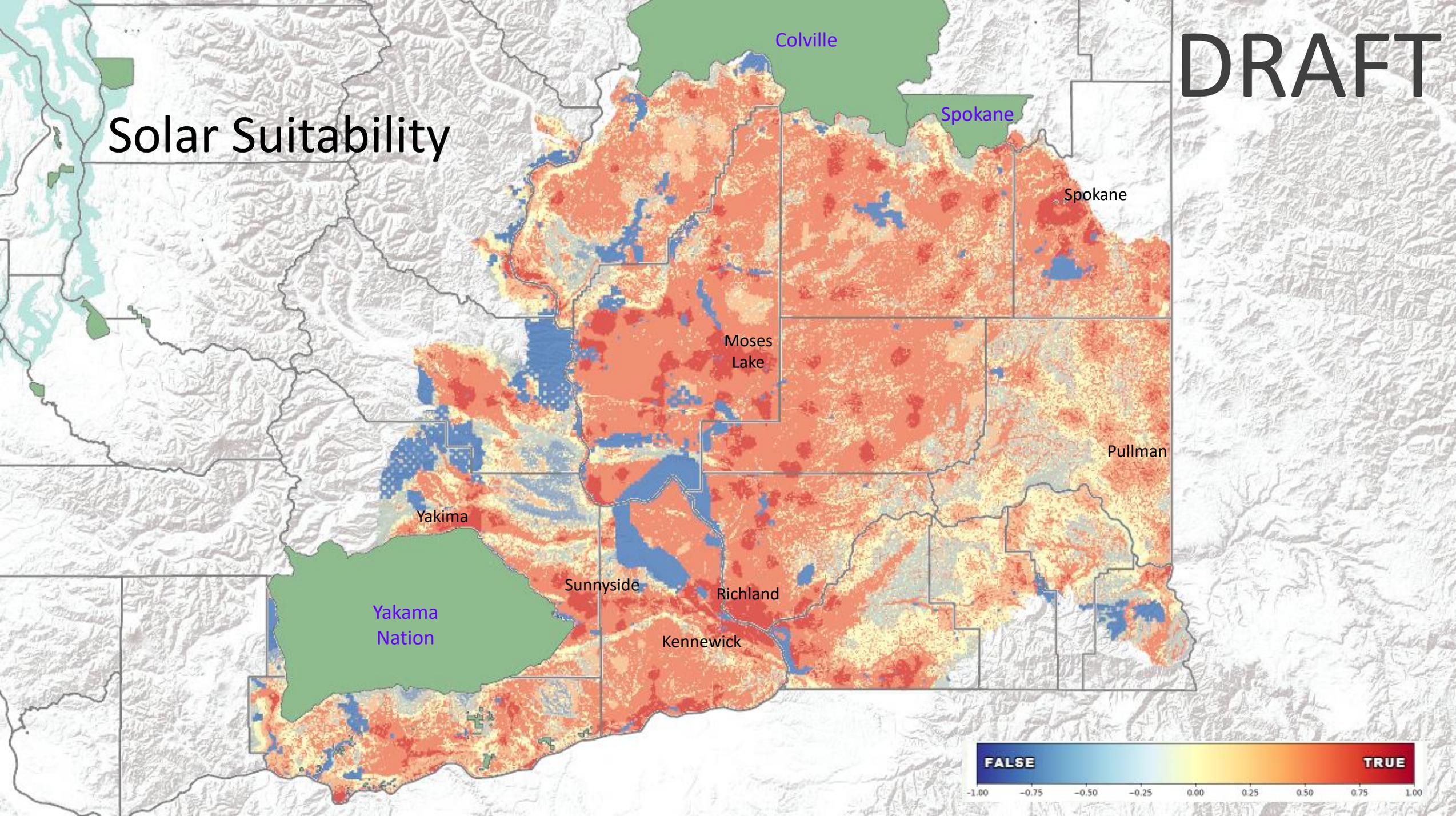
Solar Suitability Model Diagram

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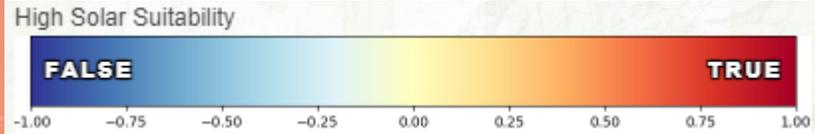
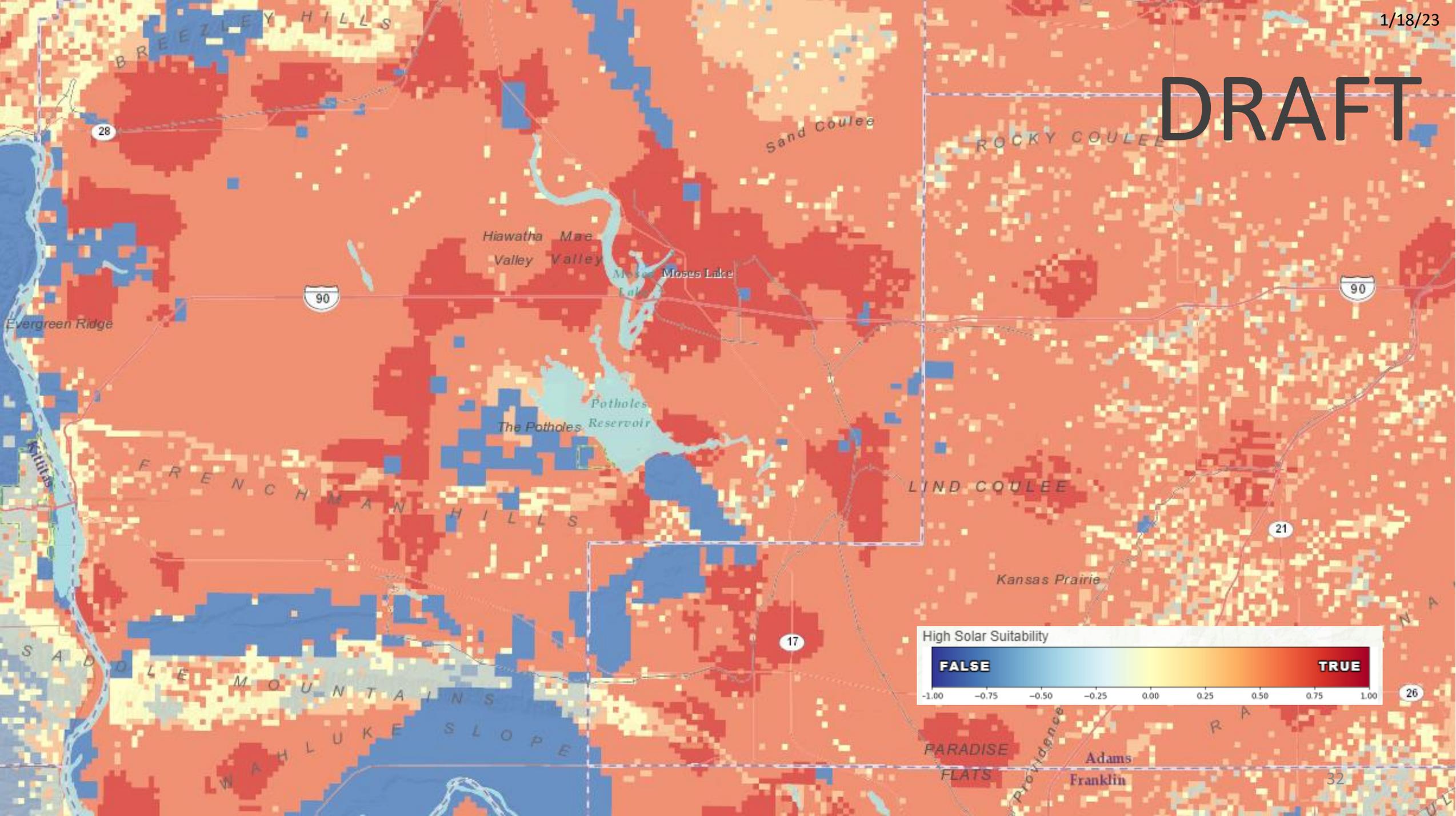


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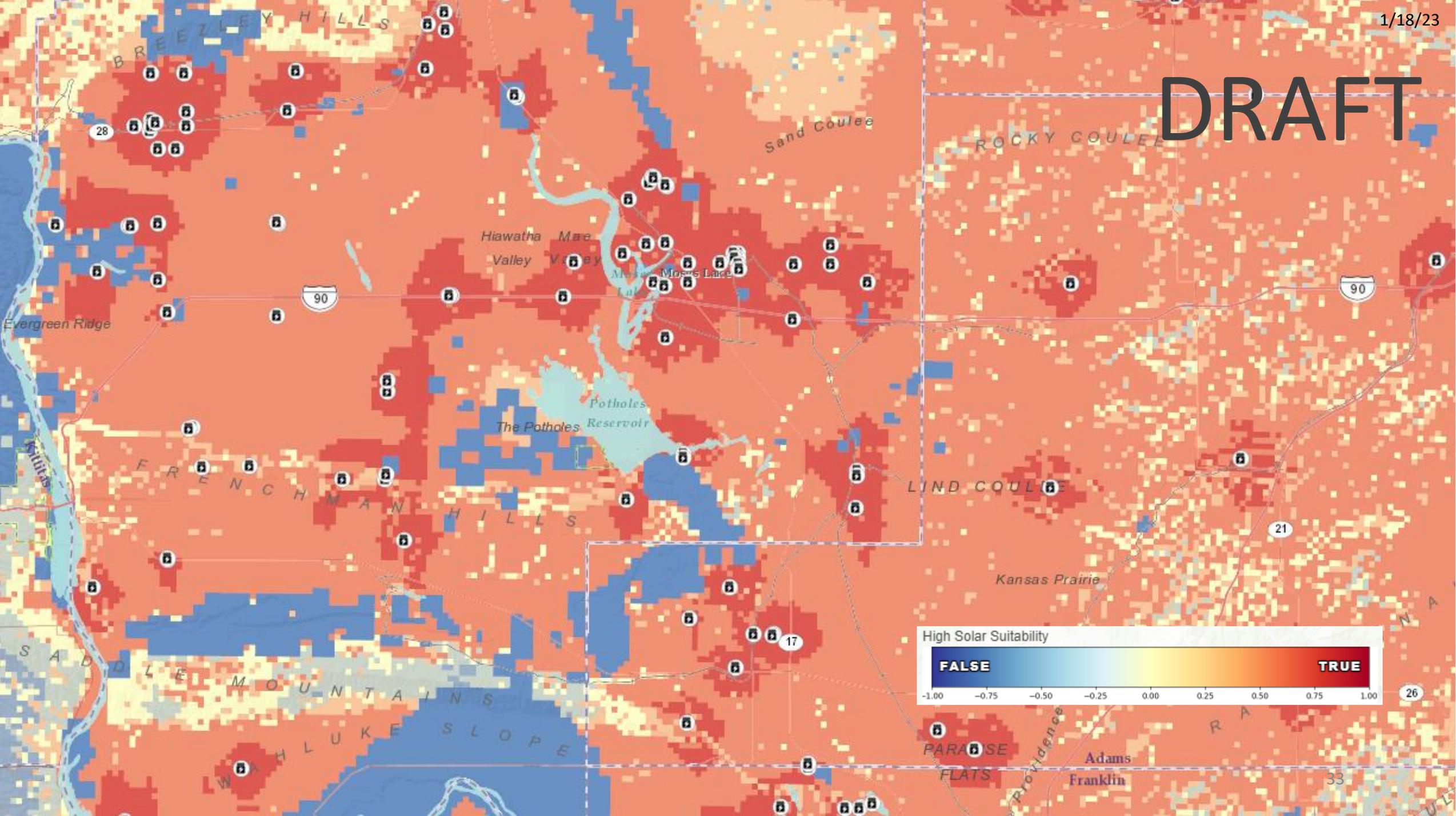
Solar Suitability



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Other Factors of Interest

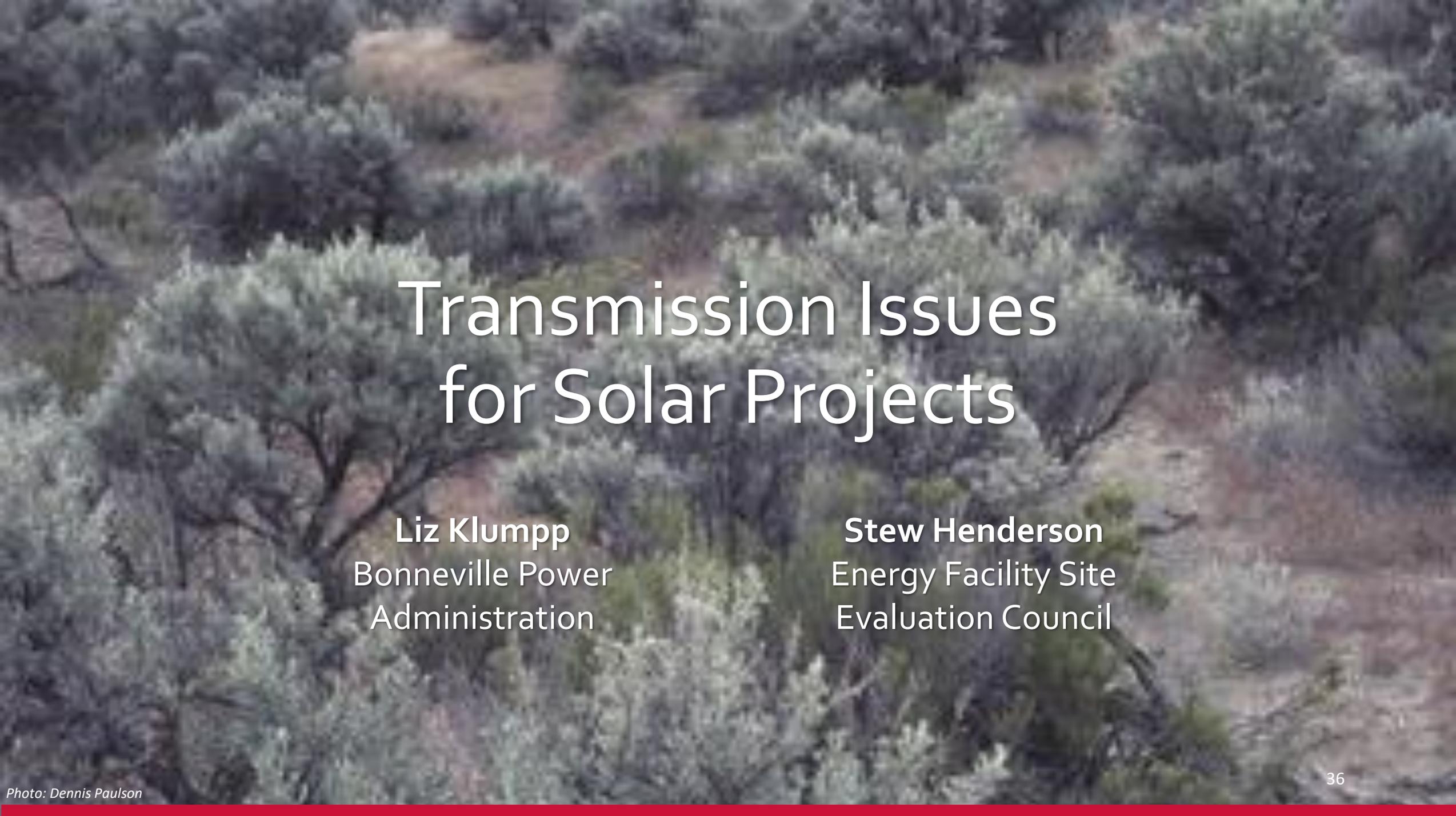
- Environmental Constraints/Concerns
- Department of Defense Concerns
- Tribal Interests
- Socioeconomic Considerations



Next Steps

- Share with colleagues and others for review and comment
- Make model diagram refinements
 - Include additional spatial datasets (e.g., water & wetlands)
 - Evaluate model threshold and weight settings





Transmission Issues for Solar Projects

Liz Klumpp
Bonneville Power
Administration

Stew Henderson
Energy Facility Site
Evaluation Council

Bonneville Power Administration Transmission

Wash. Least Conflict Solar

January, 2022

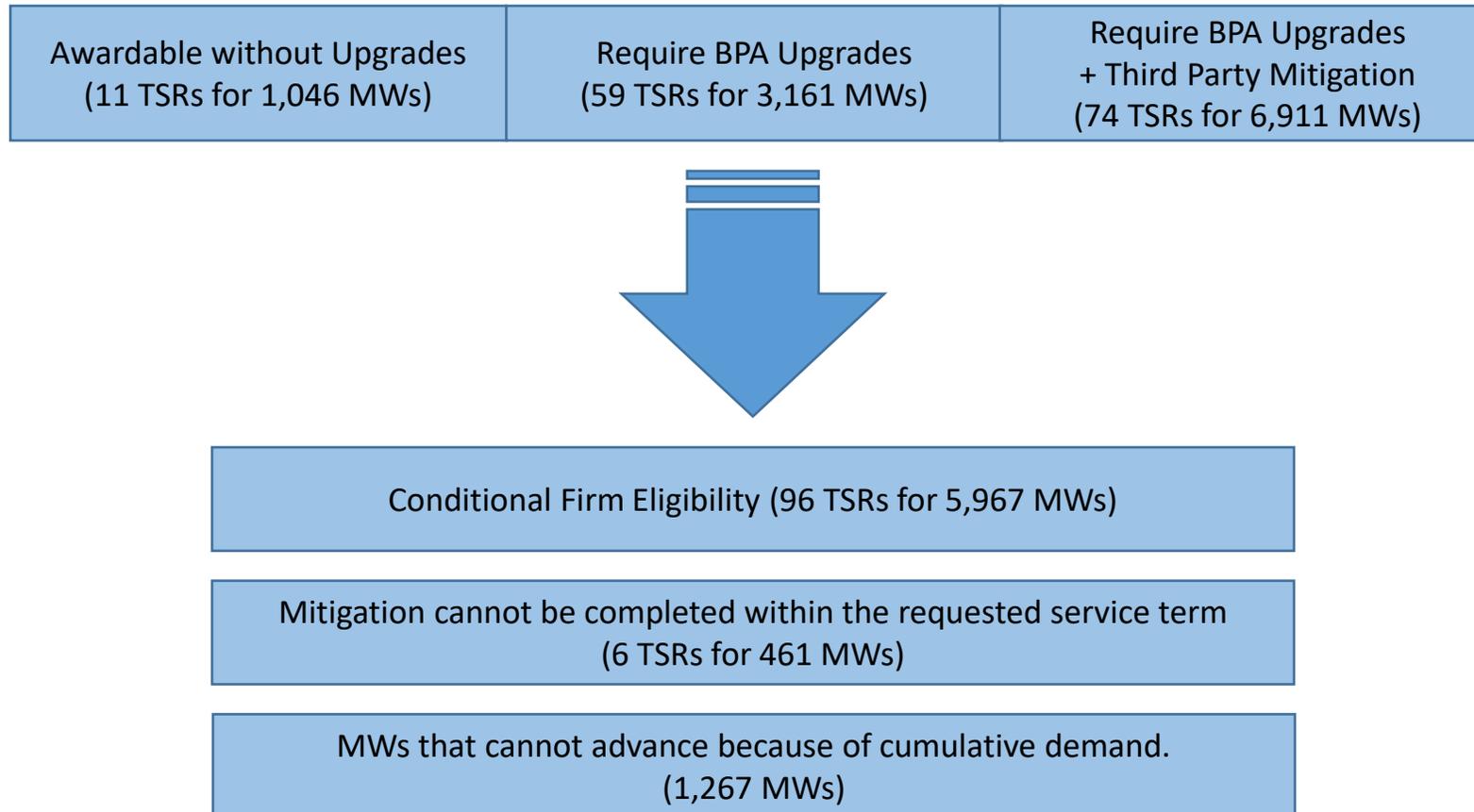
Liz Klumpp, Bonneville Power Administration, Washington Liaison



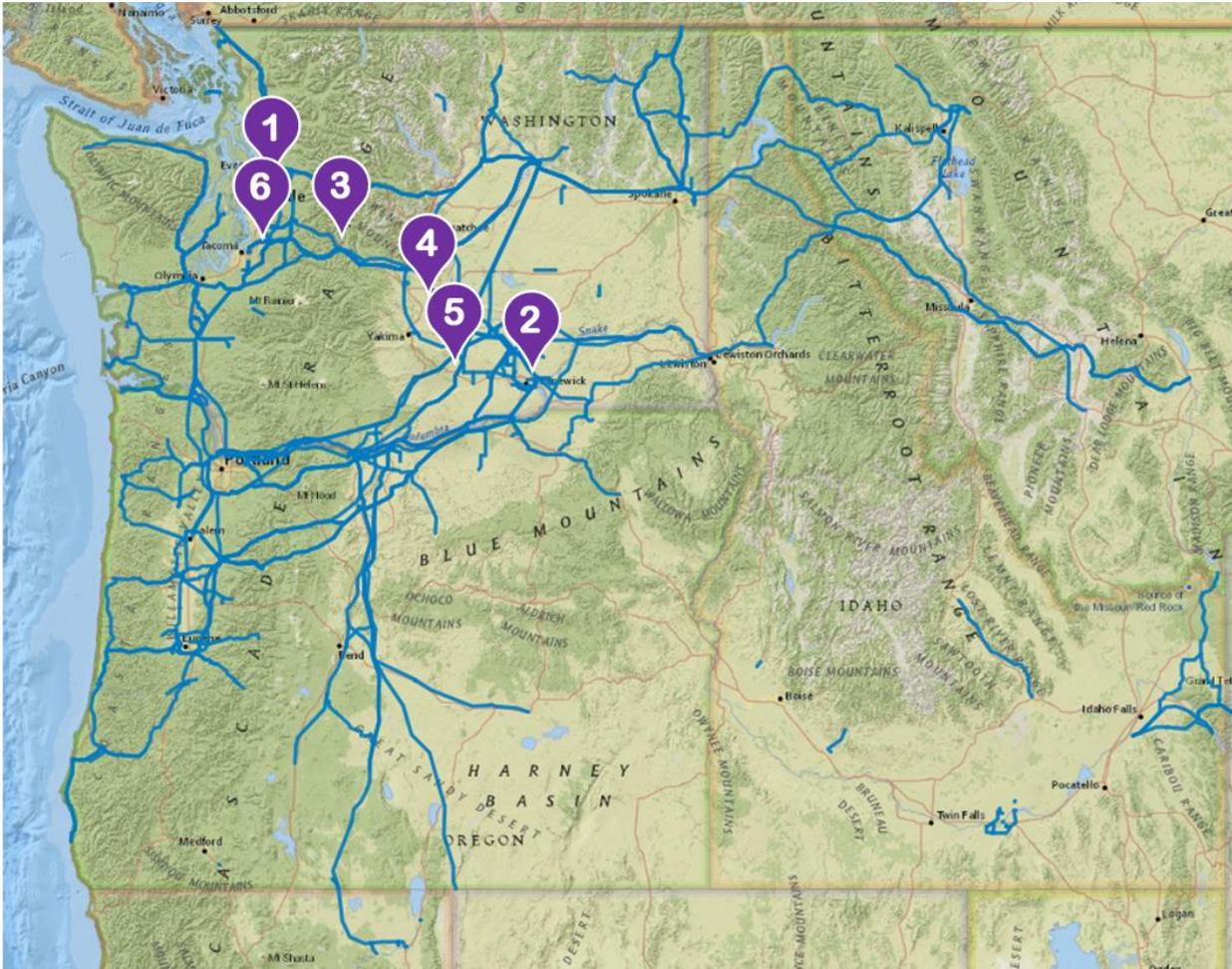
Is there transmission (TX) capacity to deliver solar power from E. Wash. to loads? If not, what?

- A party seeking TX service, files a request. BPA provides a response within 55 days that there is or is not firm capacity to serve this request. If yes – sign a contract and start taking service.
- If no firm capacity at that moment: Participate in Cluster Study
- BPA annually analyzes all requests for transmission service – some are load, some are generators. Results from 2022 study:
 - BPA offered 5,9670 MWs of ‘conditional firm’ TX; parties pursued 3,000 MWs
 - 1,046 MWs of requests were able to take service of firm TX without upgrades
 - Of the 11,118 MWs of request, 4,000 MWs dropped off after study was finished, didn’t pursue TX service
 - Schulz-Raver capacitor TX project – create 1,600 MWs of additional E-W capacity. Date: Nov. 2025.
 - If BPA Cluster Study finds TX project needs to serve requests, BPA funds construction cost of project. (There are a few exceptions to this, where customer pays some upfront costs & receives TX credits = upfront payment + interest on payment.)

Cluster Study Results Summary – Dec. 2022



Transmission Expansion in WA

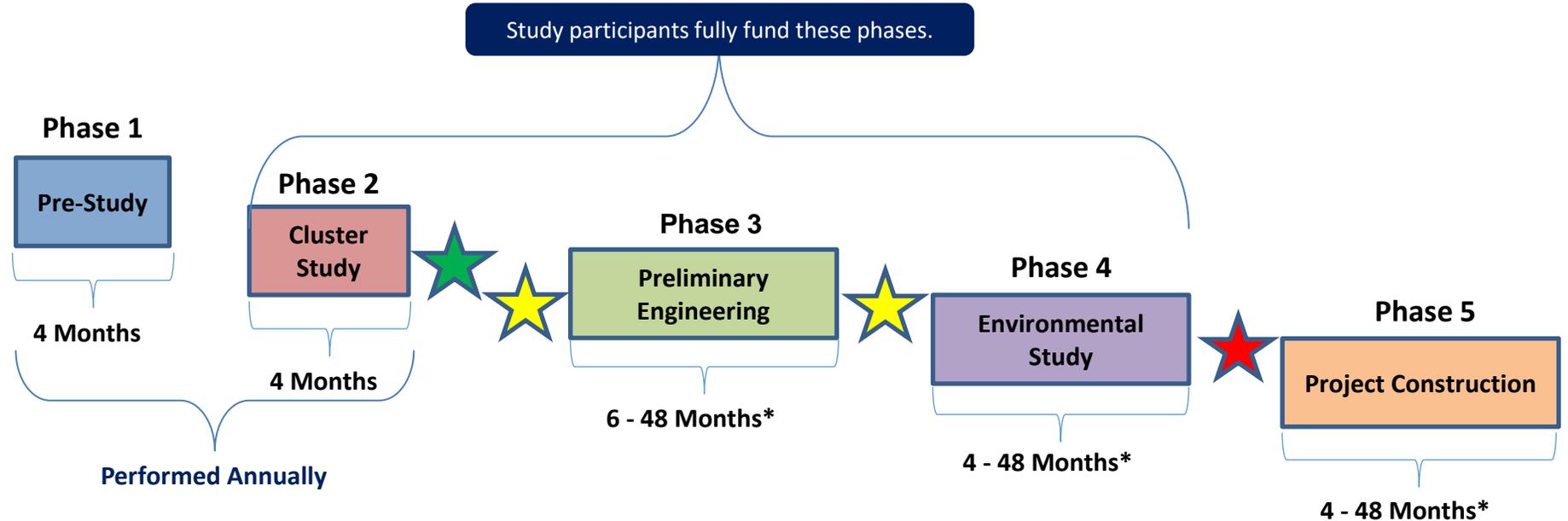


Top 6 Transmission Expansion Projects in Washington State by Costs

		\$ In Millions	Expected Energization
1	PSANI (Puget Sound Area Northern Intertie) (Seattle, Tacoma, and Olympia) In Construction	\$100	2021/2024
2	G0558: South Tri-Cities Reinforcement Webber Canyon (Tri-Cities) Design Phase	\$97	2025
3	Schultz-Raver: Series Caps TSEP 2020 (West of Cascades North) Queue Phase	\$50	2025
4	Schultz-Wautoma: 500 KV Series Capacitors (South of Allston) In Construction	\$30	2024
5	Northern Mid-Columbia Project (Mid-Columbia) In Construction	\$15	2023
6	Kitsap Capacitor Relocation and Breaker Replacement (Olympic Peninsula) Design	\$4	2023
—		BPA Transmission Lines	

With Planned upgrades, Studies show the bulk grid is capable of meeting 2030 decarbonization goals.

TSEP Overview



At each of these points, BPA refreshes project-specific information, and the customers may decide whether to proceed. Therefore, these steps must be completed sequentially for each project, rather than in parallel.

While BPA does not have any “off ramps,” the decision to build lies with the Administrator and BPA can influence the customers’ decision via the rate selected.



Customer Closeout Package – Study participants are provided with a study report, a closeout letter detailing the requirements for each of their TSRs to obtain service, and an election form to determine the next steps for each of their TSRs. If applicable, the customer may be tendered an offer for LTF service.

Next Step Agreements - Prior to the commencement of a next phase, BPA will provide customers with updated information on the rate treatment, percentage shares of projects, other non-binding information, such as estimated project costs or timelines. An offer of CFS, if applicable, maybe be made at this time. BPA will provide the customer with a Preliminary Engineering agreement and/or Environmental Study agreement as appropriate.

Service Agreement - Prior to the Administrator’s construction decision, BPA will determine whether to offer the requested service at an embedded or **incremental rate (subject to a 7(i) process)**. BPA will offer the Customer a service agreement for the requested service.

*Estimated range; actual timelines vary based on project scope and/or environmental impacts

Generation Interconnection Queue

- Second, and separate process to request transmission service. New generators (as do new large loads) need to file a Generation Interconnection (GI) request.
- Requires a Preliminary Engineering Study – participant funds this.
- If interconnecting requires a new TX project to serve load, generator (or load) will pay portion of NEPA (environmental) analysis costs. May only require a new or expanded substation; may be more complex.

BPA Inventory Maps – Explore Hypothetical Delivery Points

- <https://www.bpa.gov/energy-and-services/transmission/transmission-availability>

Transmission Services provides information to assist customers as they reserve and schedule transmission.

System Information

[POR/POD Combinations for 1:1 ATC Paths](#)

[Proposed Outages](#)

[Reservation to E-Tag Point Relationships](#)

[Transmission System Constraints](#)

Long-Term Transmission Inventory Map

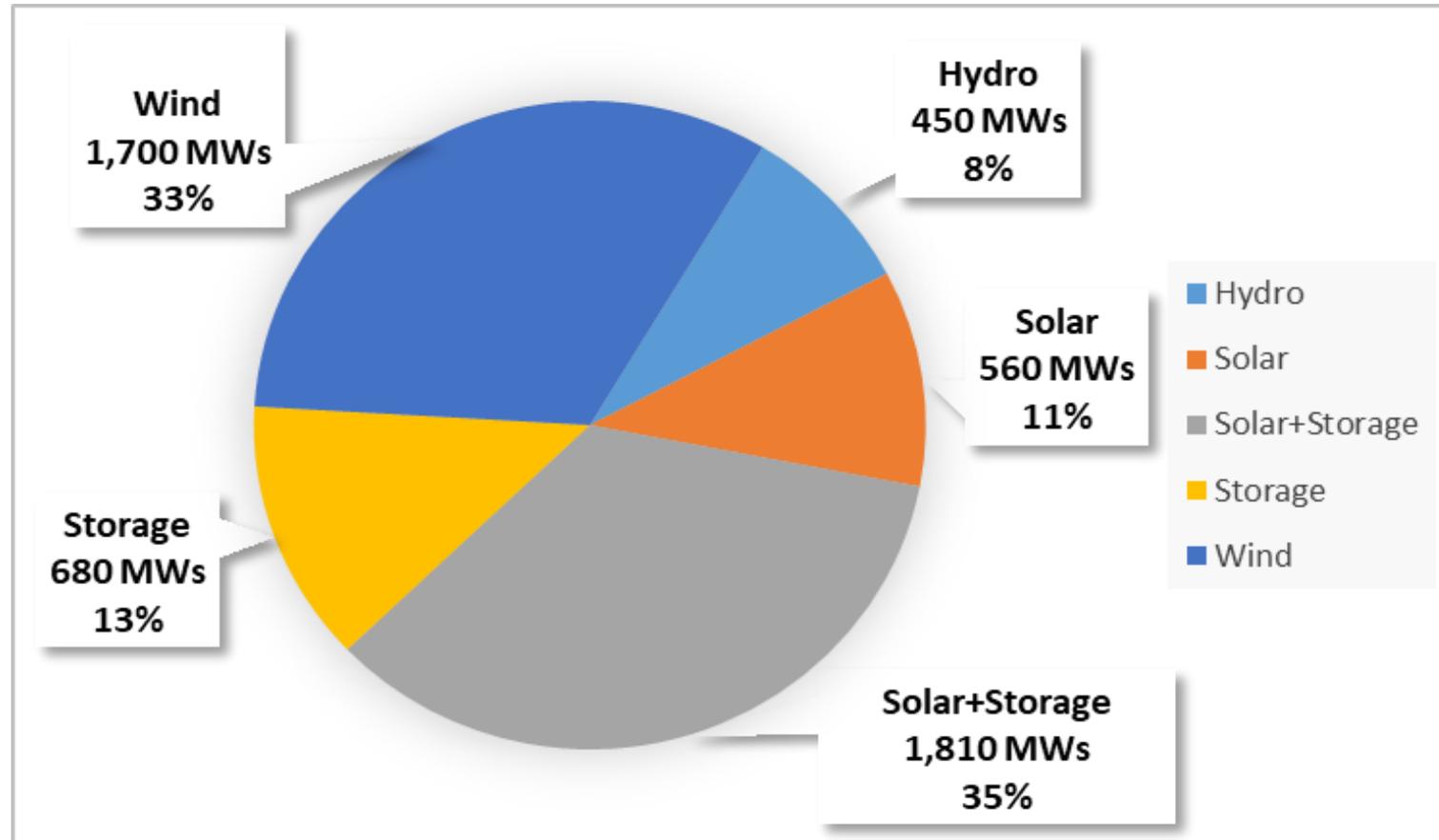
[Long-Term Redirect Inventory Map](#)

[Long-Term Original Inventory Map](#)

[Long-Term Transmission Inventory Map Instructions](#)

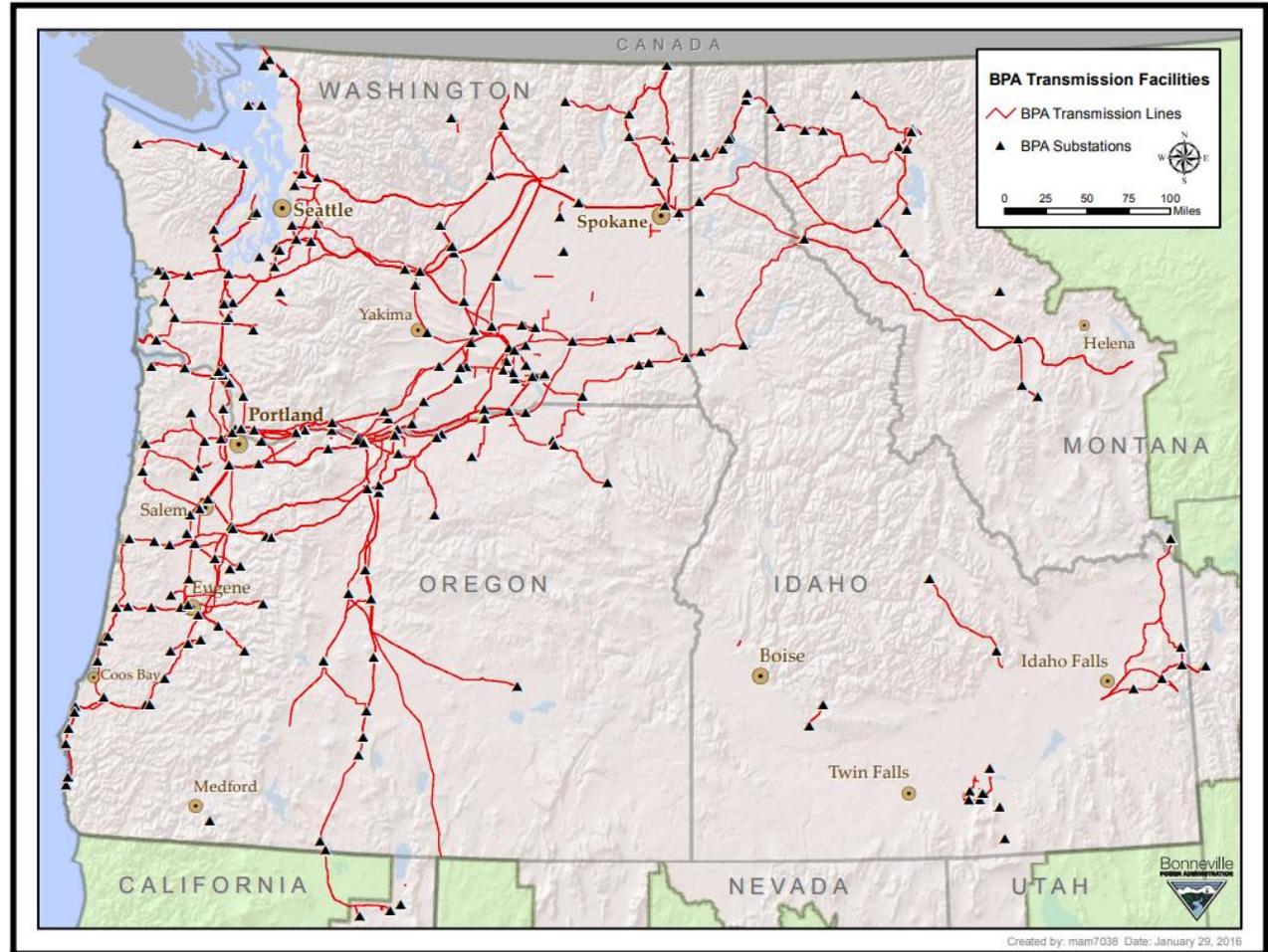
Long-Term Availability Transfer Capability

Types of Resources Advancing to Prelim. Engineering Phase – 2022



BPA Infrastructure

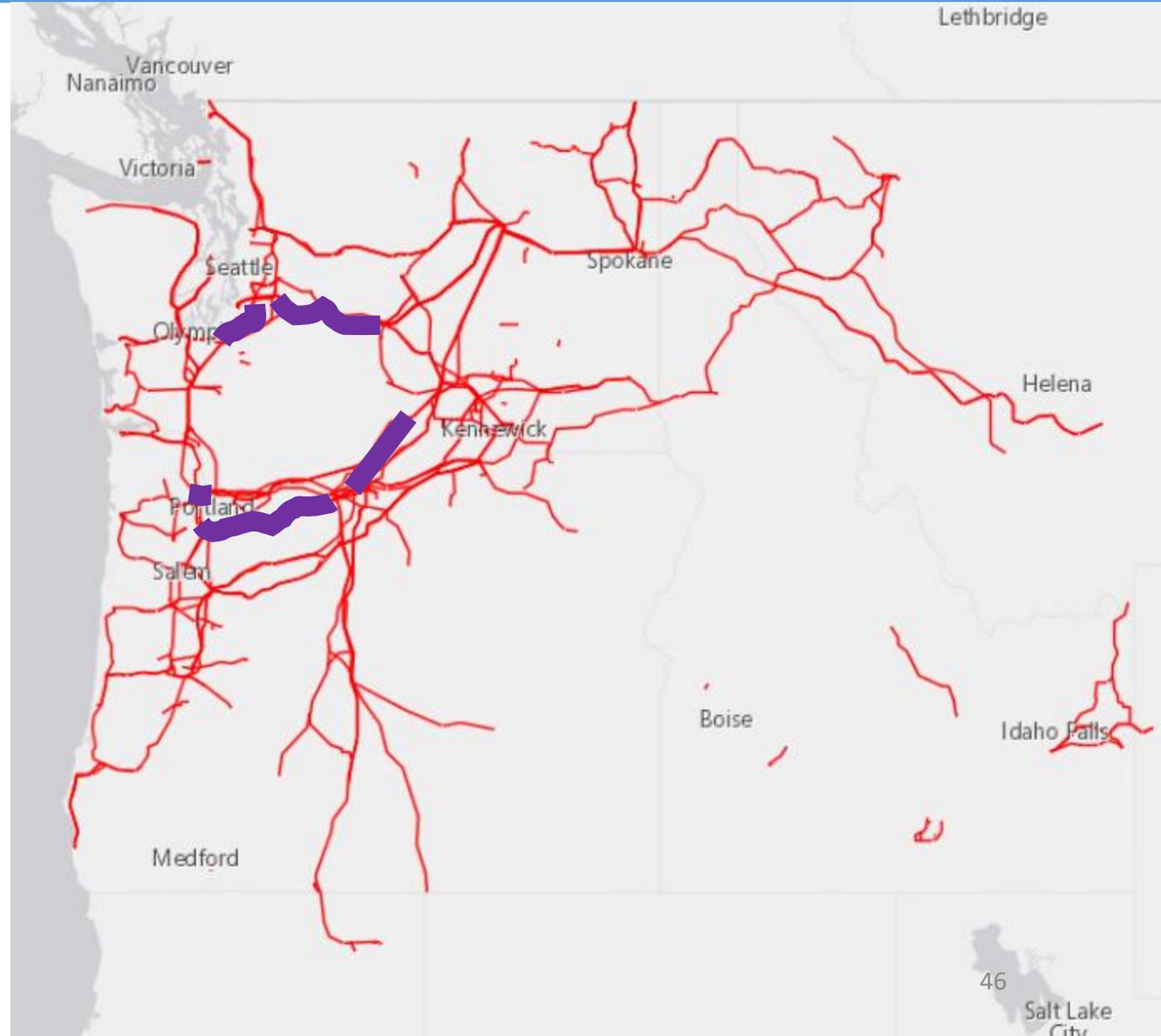
- BPA owns and operates 15,000+ circuit miles of transmission lines, about 75% of transmission in its service territory
- BPA owns and operates 3500+ miles of fiber optic network
- BPA transmission serves over 300 customers
- 17 transmission owners in Pacific Northwest (not shown on this map)



2022 Transmission Service Request Study Results

The following projects are needed in many future scenarios for reliability, expanded load service, and as renewable resources seek delivery to load:

- Portland Area
- Cross-Cascades South
- Raver-Paul
- Cross-Cascades North
- Ross - Rivergate
- South of Rock Creek



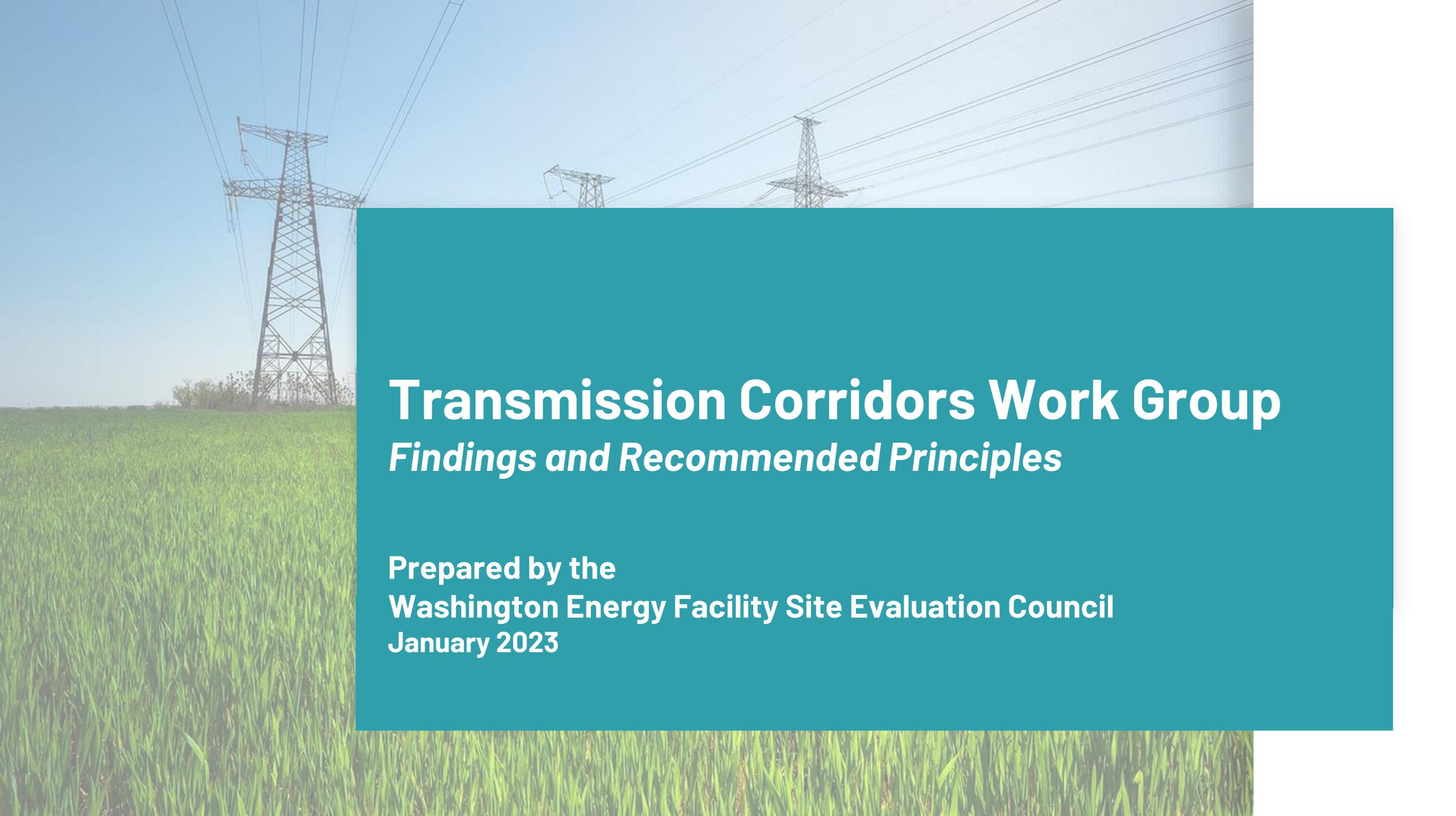
Thank you. Questions?

Liz Klumpp – Olympia, Wash.

ecklumpp@bpa.gov

Bonneville Power Administration



A photograph of several high-voltage transmission towers (pylons) with power lines stretching across a clear blue sky. The towers are situated in a vast, green field of tall grass or crops. The image is partially obscured by a teal-colored rectangular overlay on the right side, which contains the title and author information.

Transmission Corridors Work Group

Findings and Recommended Principles

**Prepared by the
Washington Energy Facility Site Evaluation Council
January 2023**

Transmission Corridors Work Group (TCWG) Legislative Charge

- 1. Review the need for upgraded and new electricity transmission and distribution facilities** to improve reliability, relieve congestion, and enhance the capability of the transmission and distribution facilities in the state to deliver electricity from electric generation, non-emitting electric generation, or renewable resources to retail electric load.
- 2. Identify areas where transmission and distribution facilities may need to be enhanced or constructed.**
- 3. Identify environmental review options** that may be required to complete the designation of such corridors **and recommend ways to expedite review of transmission projects** without compromising required environmental protection
- 4. Report its findings** to the governor and legislative charge by December 31, 2022

The responsibilities above are mandated by Section 25 of the Clean Energy Transformation Act (CETA) of 2019.

TCWG Members

Members represented state agencies, Public Utility Districts, Association of Washington Cities, Association of Washington Counties, sovereign Tribal governments, statewide environmental organizations, labor, and the renewable power industry. TCWG members include, but are not limited to representatives from:



Findings: Underlying Challenges

- **Meeting 2045 CETA requirements – doubling our current electricity load – means doubling our current high-voltage transmission capacity**
- **Mismatch: It takes much longer to build transmission (~10-20 years) than it does to build renewable generating facilities (2-3 years)**
- **No single entity is responsible for planning to overcome these issues**
- **No single entity is responsible to ensure enough transmission gets built to meet CETA requirements**

Known Renewable Energy Sources and their Associated New Transmission Needs

Generating Source	Transmission Corridor Capacity Needed				
	Cross-Cascades (I-90)	I-5 (w/in WA)	Inter-state (E-W)	Inter-state (N-S)	Coast to I-5
Columbia Wind & Solar ¹	✓				
MT & WY Wind ¹	✓	✓	✓		
SW Solar (CA, AZ, NV) ¹	✓	✓		✓	
Offshore Wind ²		✓		✓	✓
Canadian Hydro ²	✓	✓			

1 – current and projected source

2 – potential source

Implementing TCWG Recommended Principles

Challenges	Solutions (SB 5165/ HB1192)
<ul style="list-style-type: none"> • Transmission planning horizon is too short 	<ul style="list-style-type: none"> • Increase utility planning horizon to 20 years
<ul style="list-style-type: none"> • Utilities' acquisition process disadvantages renewable sources 	<ul style="list-style-type: none"> • Require consideration for "Conditional Firm" transmission
<ul style="list-style-type: none"> • Duplicative permitting processes impede large projects 	<ul style="list-style-type: none"> • Require multicounty transmission projects to go through EFSEC
<ul style="list-style-type: none"> • Need for pro-active siting studies, more Tribal input, prompt review 	<ul style="list-style-type: none"> • Fund EFSEC and DAHP to study siting pro-actively (Gov Budget)
<ul style="list-style-type: none"> • Transmission planning is diffuse (across multiple regional bodies) 	<ul style="list-style-type: none"> • Fund COM & UTC staff to work with regional transmission bodies (Gov Budget)



Question & Answers



Thank you!

*For questions, please contact Stewart Henderson,
Clean Energy Programs Manager, EFSEC, at
stewart.henderson@efsec.wa.gov or 360-644-1360.*

Least-Conflict Solar Siting

8-minute Break





Farmland Mapping Group Updates

Mark Nielson
Franklin County Conservation
District

Farming Mapping Group Update

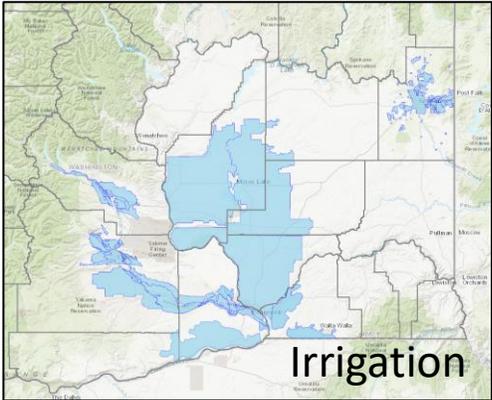
Presented by Mark Nielson, District Manager, Franklin Conservation District

Goal: Produce a map that illustrates the least conflict and relative value of irrigated and dryland farming lands based on available spatial data.



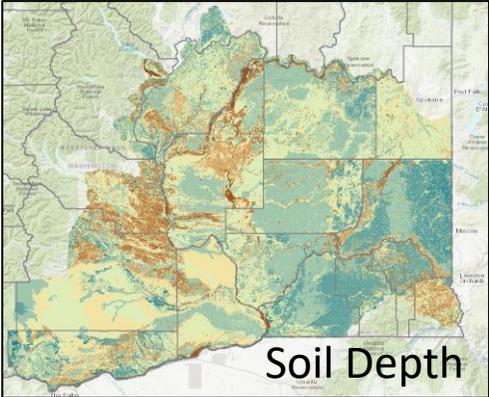
Farmland Value

Modeling Criteria



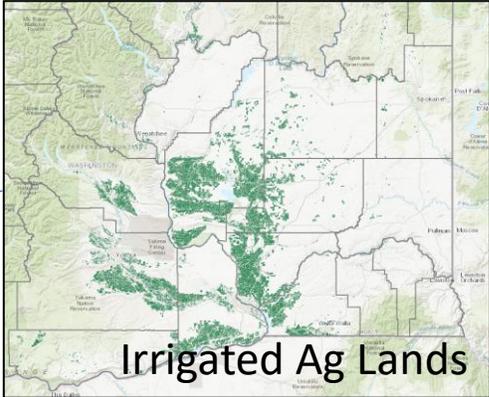
Irrigation

Soils



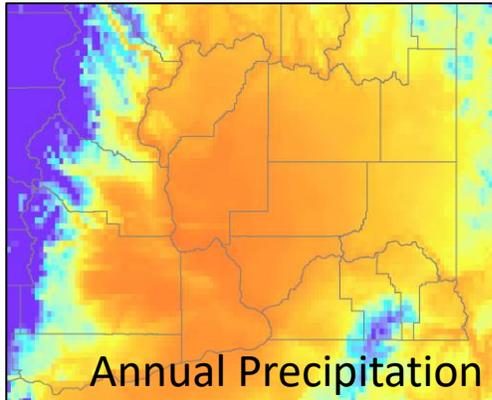
Soil Depth

Water Supply



Irrigated Ag Lands

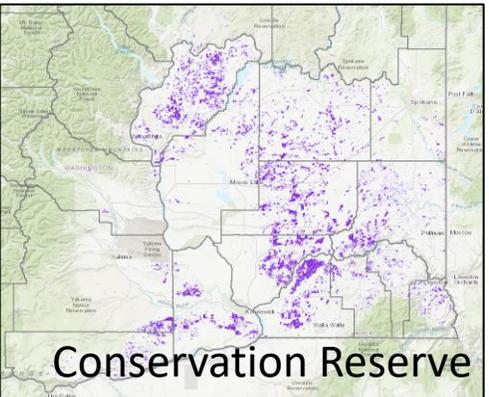
Existing Agricultural Use



Annual Precipitation

Precipitation

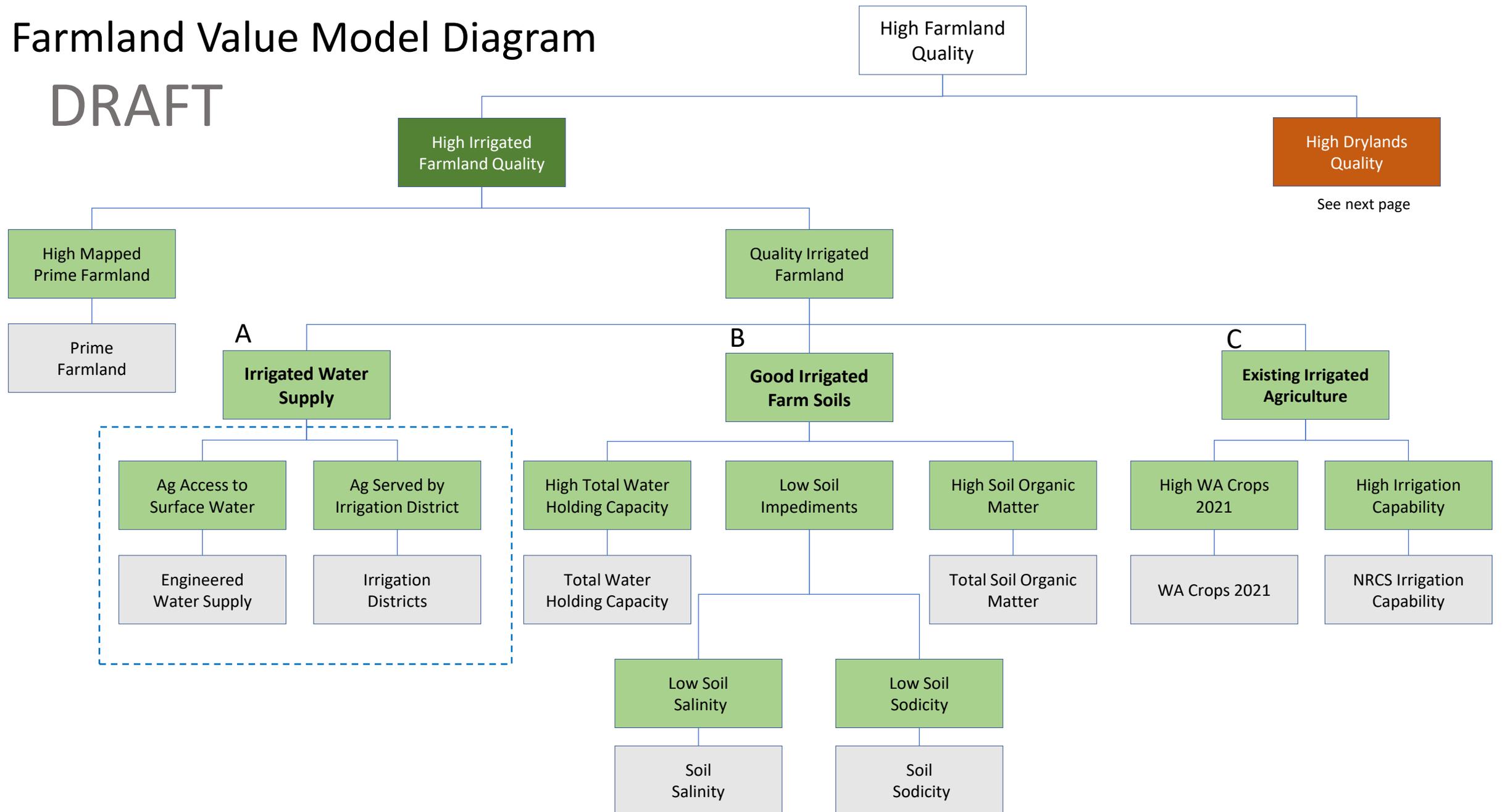
Farm Programs



Conservation Reserve

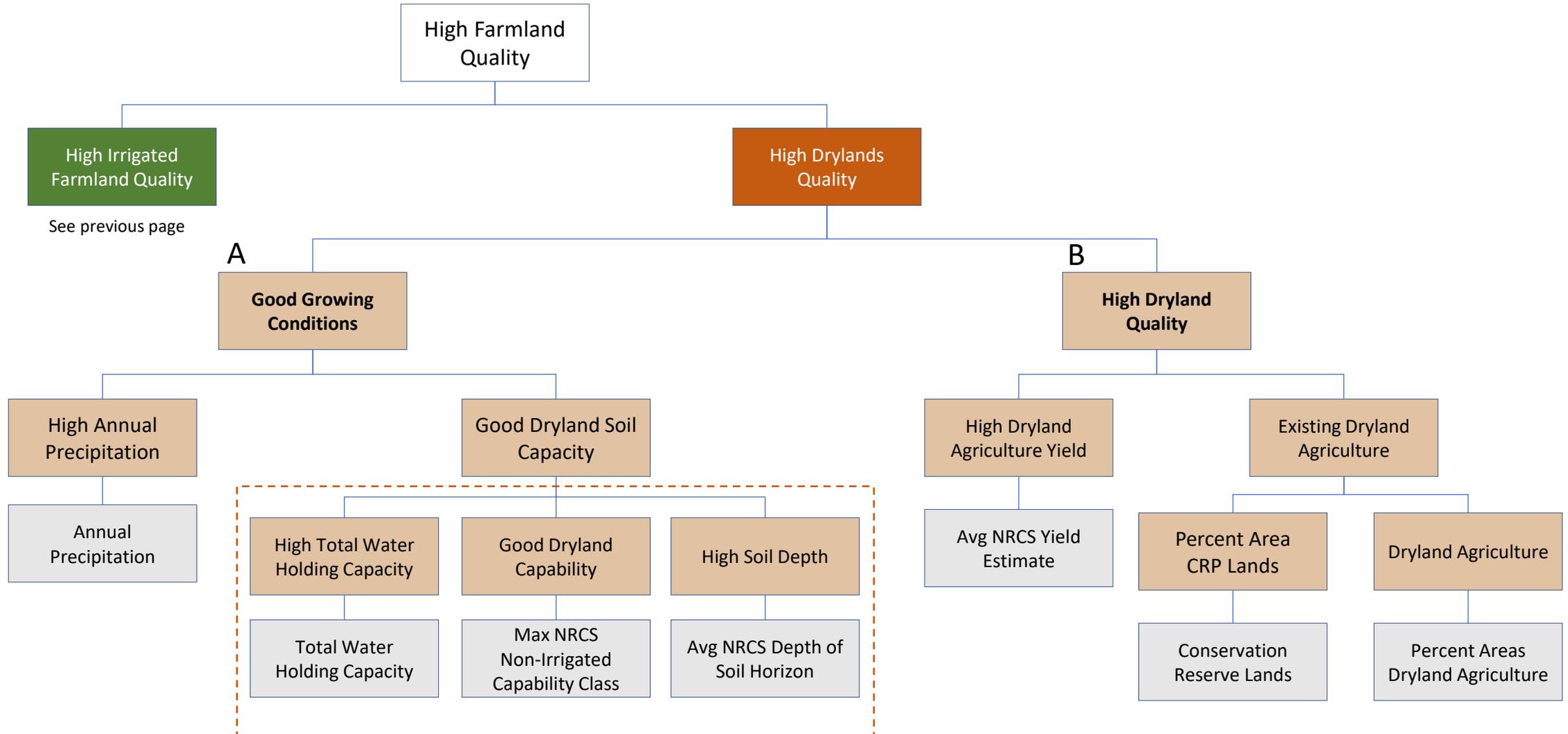
Farmland Value Model Diagram

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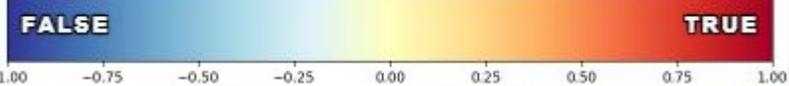
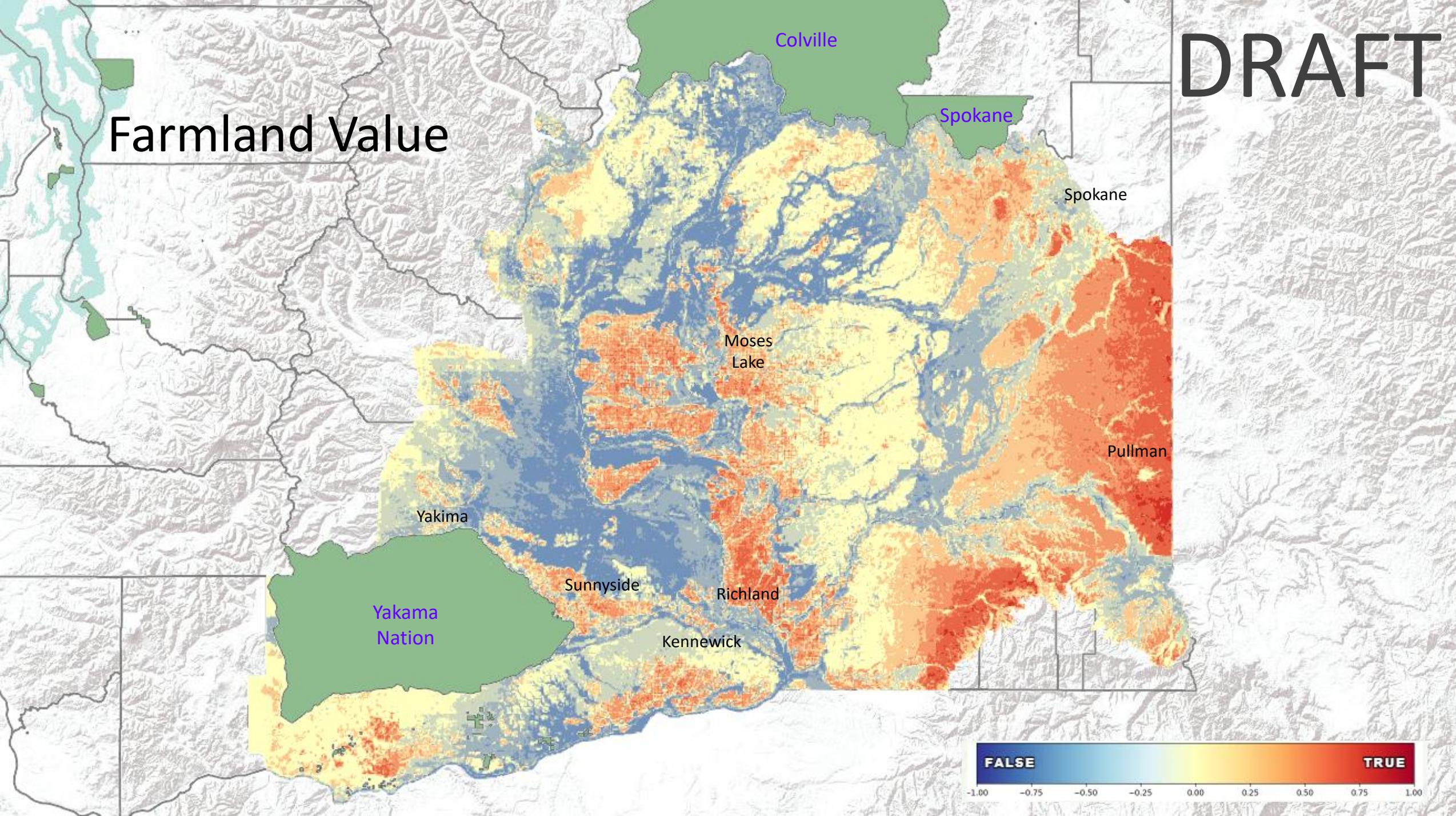
Farmland Value Model Diagram

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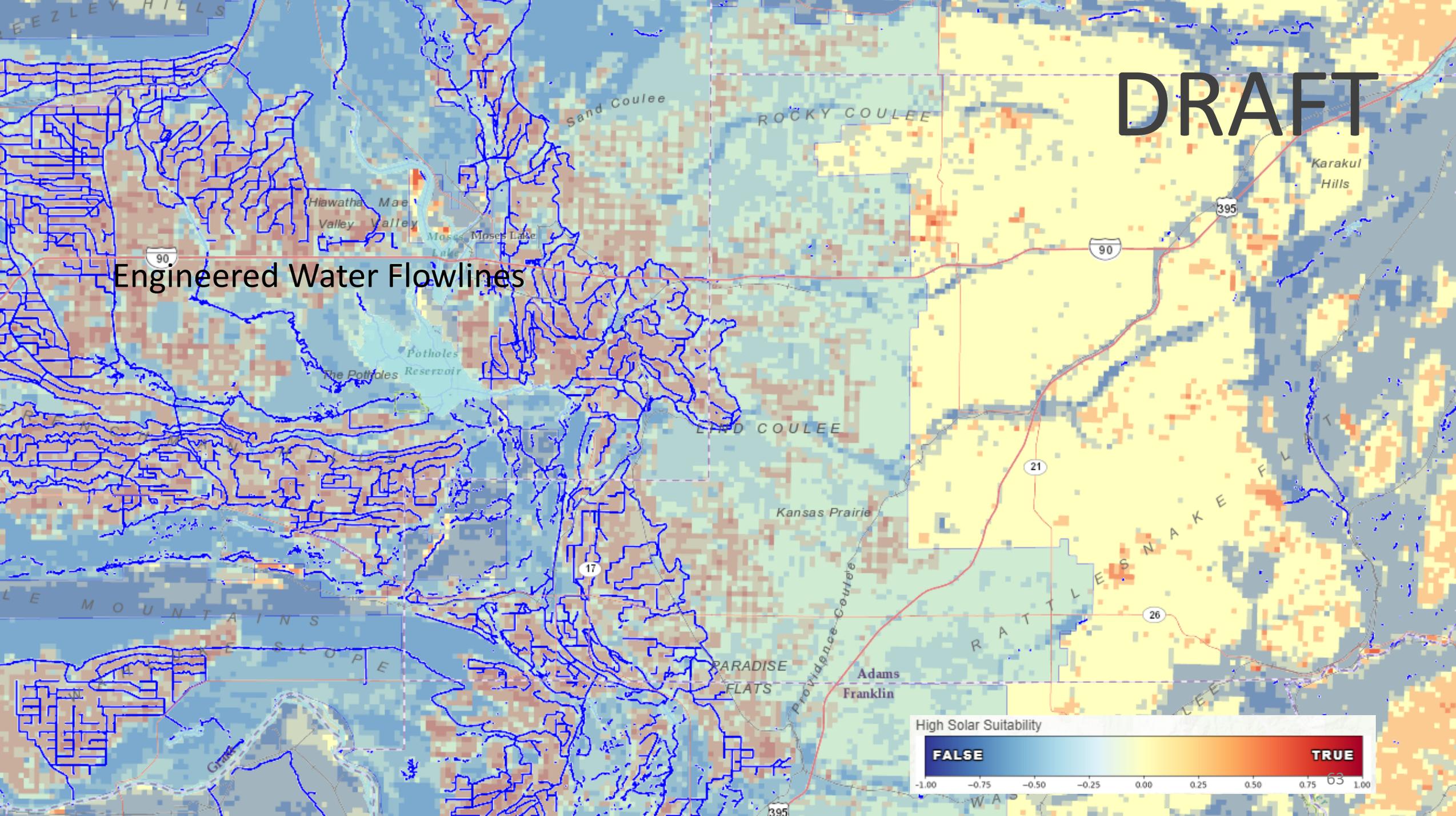
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Farmland Value



DRAFT

Engineered Water Flowlines



Next Steps

- Share with colleagues and others for review and comment
- Refine water availability for irrigated farmland
- Refine soil characteristics for dryland farming
- Exclude water, wetlands and developed land
- Evaluate and adjust model threshold and weight settings



An aerial photograph of a dense, green and brown forest landscape. The trees are mostly green, with some brown patches, suggesting a mix of vegetation or a recent fire. The text is overlaid on the center of the image.

Ranchland Mapping Group Updates

Jesse Ingels

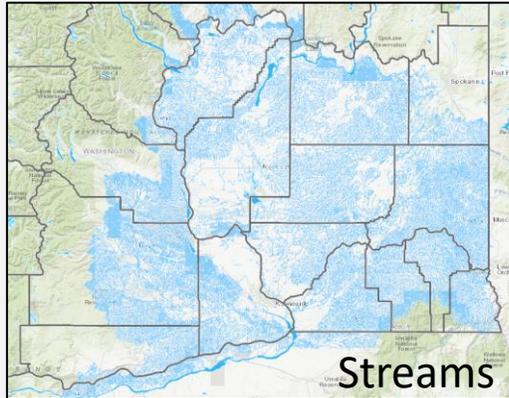
Ranchlands Mapping Group Update

Presented by Jesse Ingels

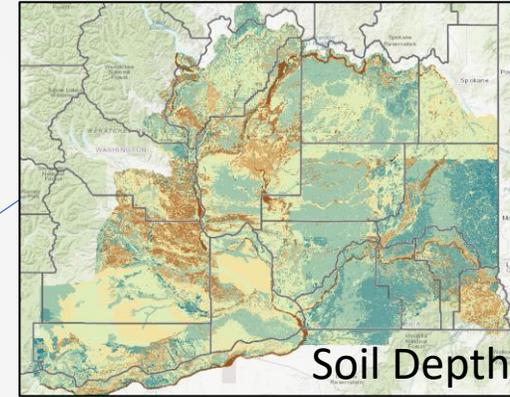
Goal: Produce a map that illustrates the least conflict and relative value of ranchlands based on available spatial data.



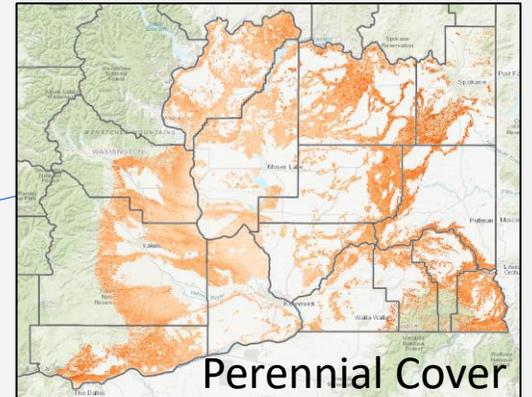
Ranchland Value Modeling Criteria



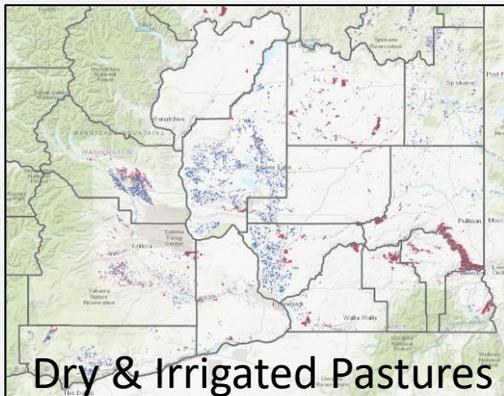
Soils



Water Access

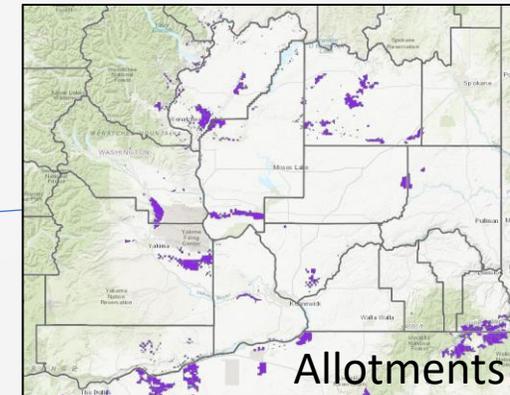


Vegetation



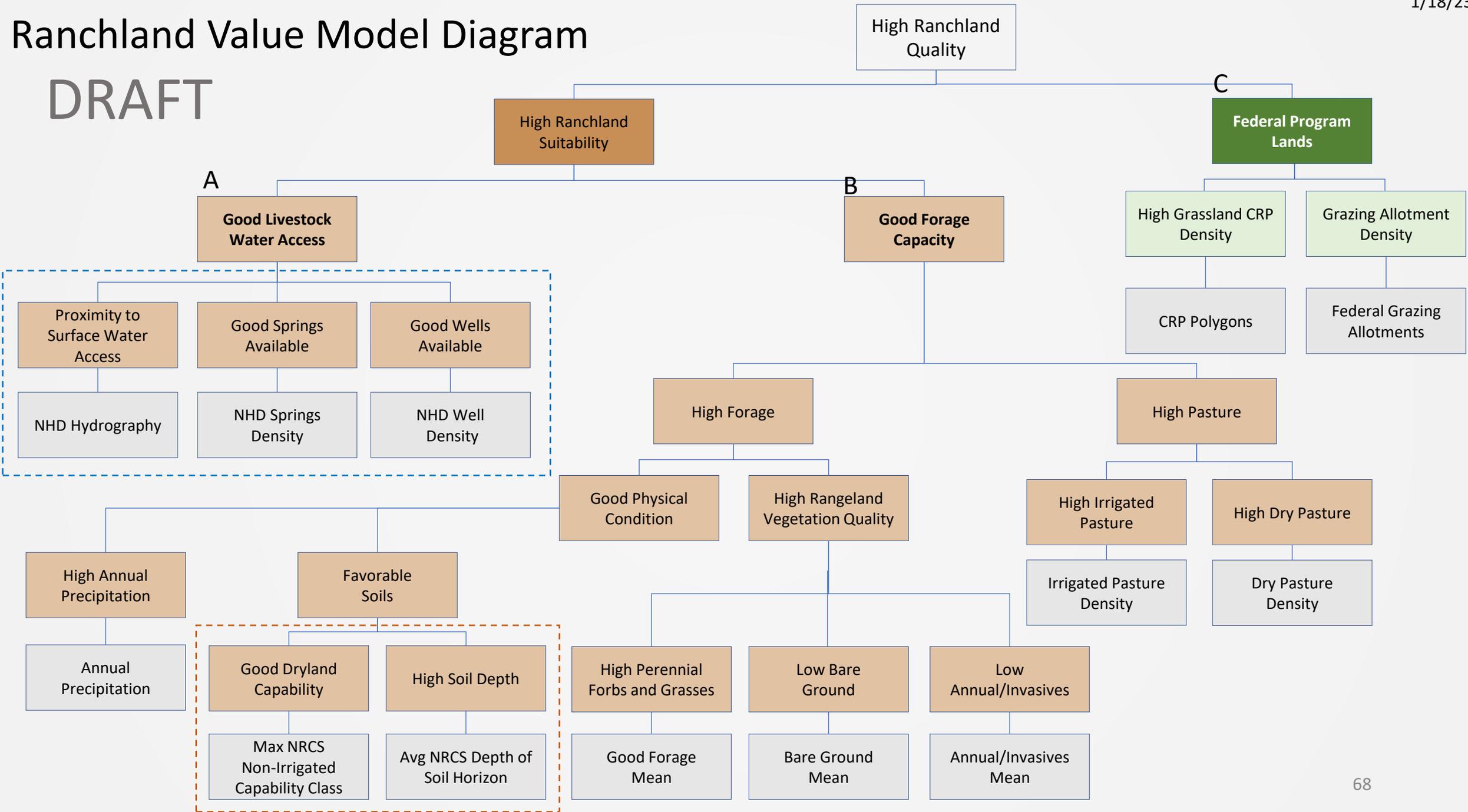
Managed Grasslands

Federal Programs



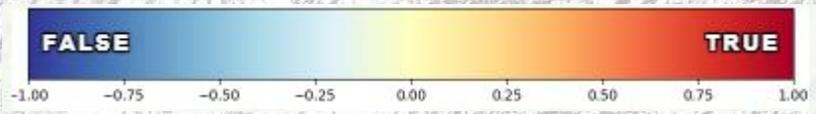
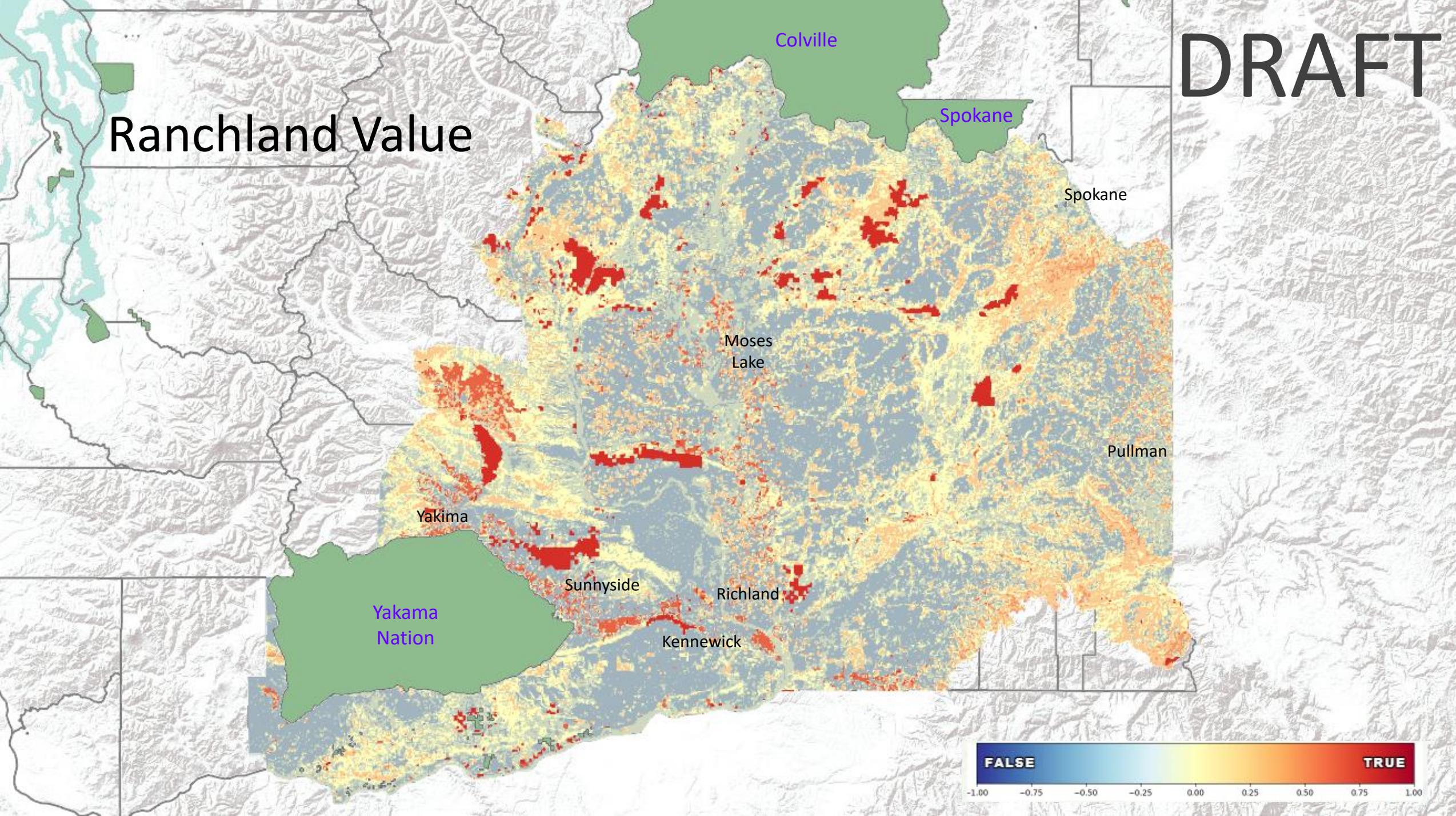
Ranchland Value Model Diagram

DRAFT

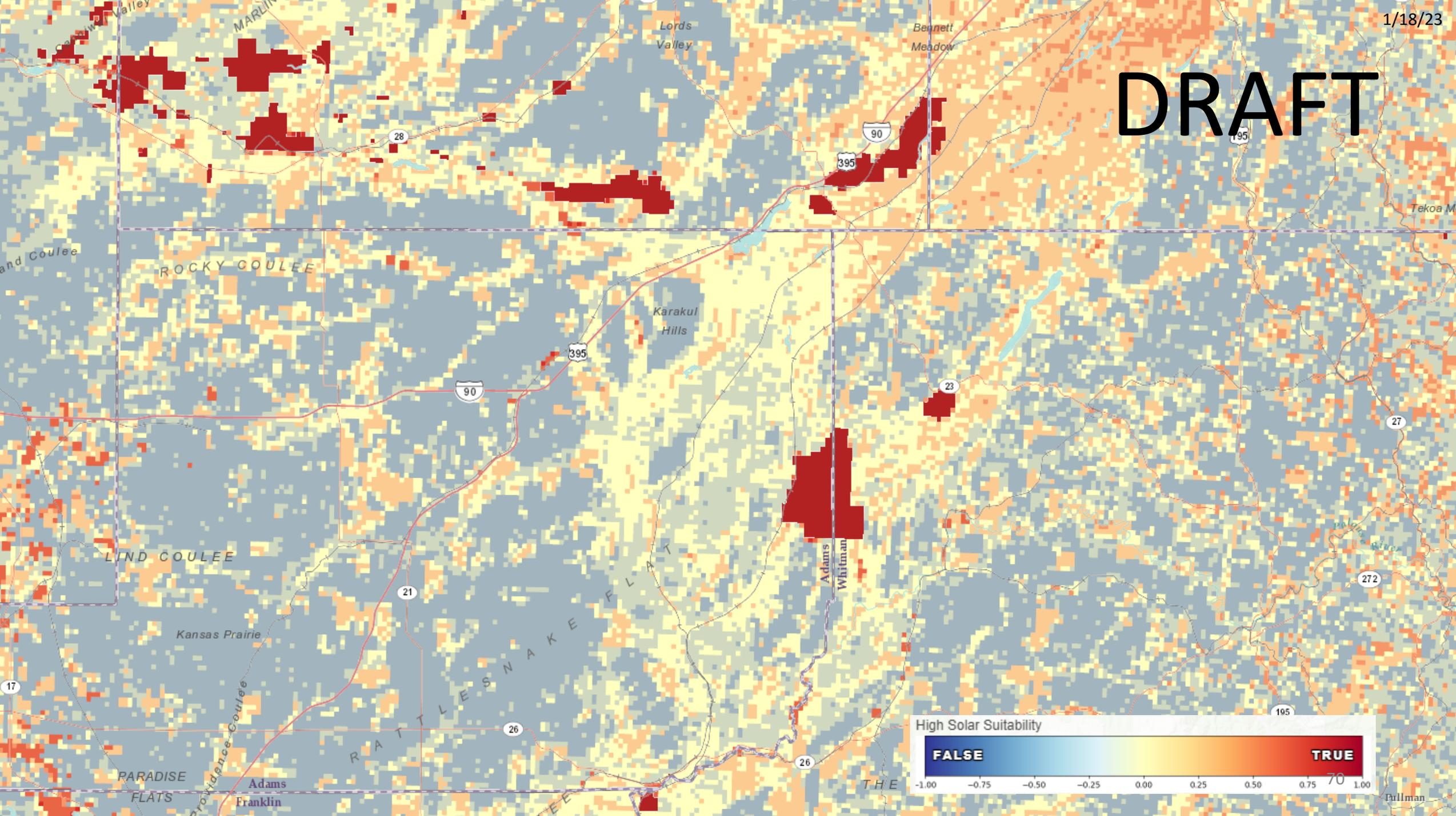


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Ranchland Value



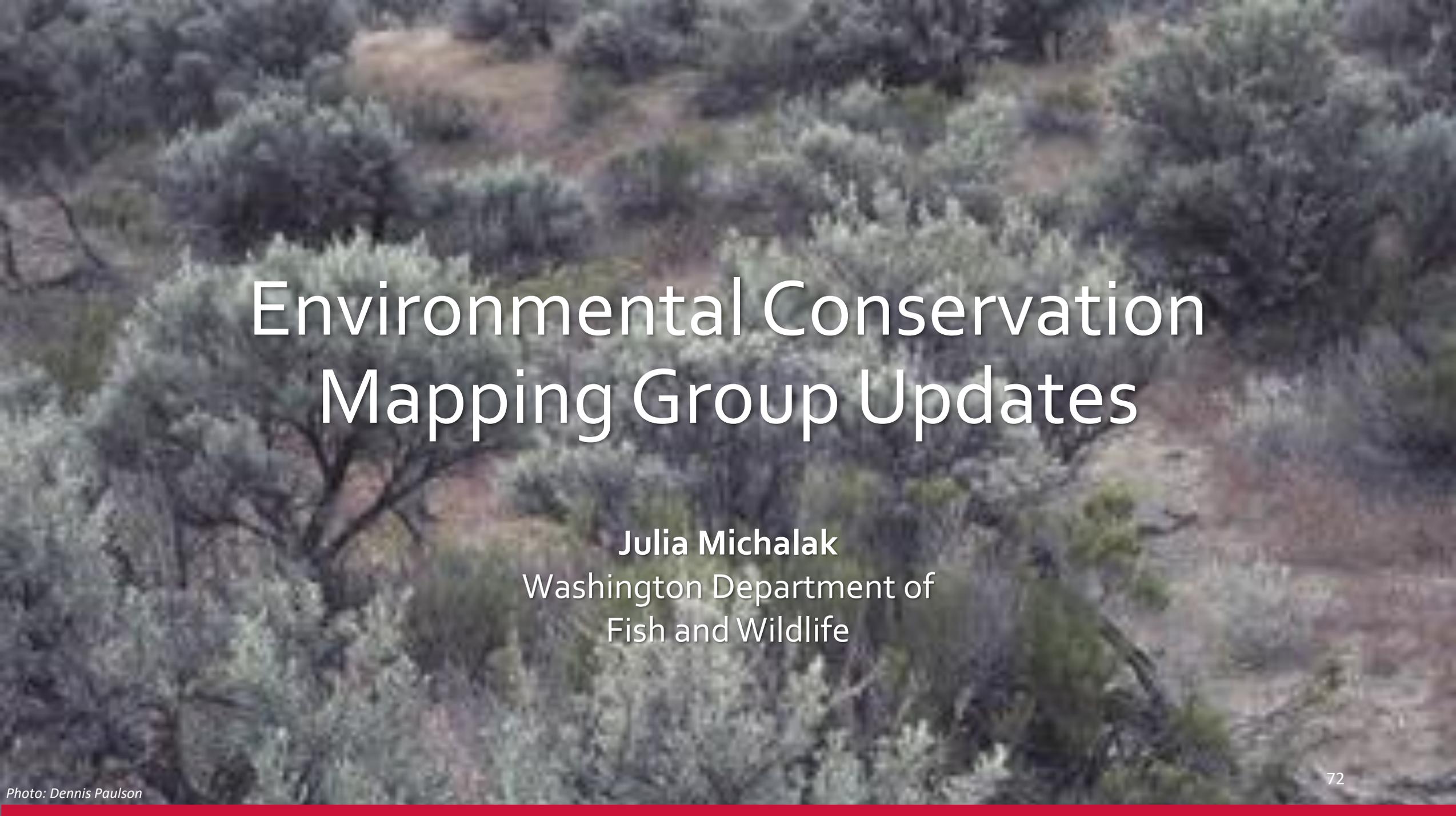
DRAFT



Next Steps

- Share with colleagues and others for review and comment
- Include dryland farm areas
- Refine water availability for domestic livestock
- Refine soil characteristics that influences forage quality
- Exclude water, wetlands and developed land
- Evaluate and adjust model threshold and weight settings





Environmental Conservation Mapping Group Updates

Julia Michalak
Washington Department of
Fish and Wildlife

Conservation Mapping Group Update

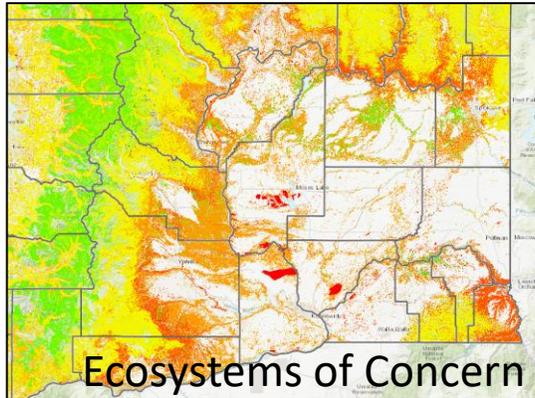
Presented by: Julia Michalak, Ecosystem Services Division, Washington Department of Fish and Wildlife
Michael Ritter, Energy and Major Projects Division, Washington Department of Fish and Wildlife

Goal: Produce a map that illustrates least conflict with conservation lands based on available spatial data.

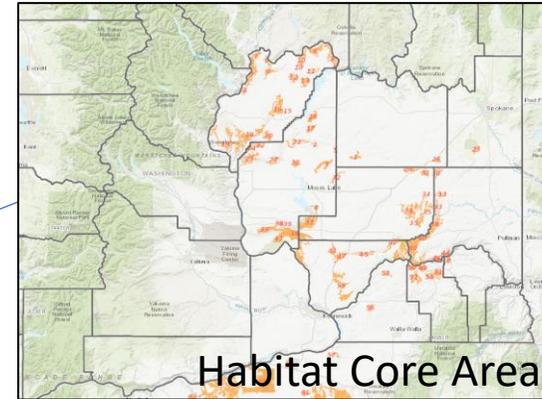


Conservation Value

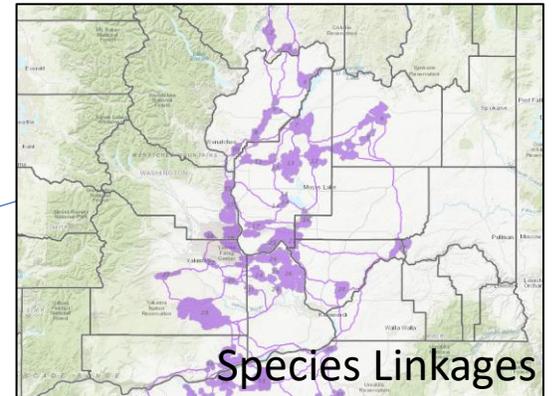
Modeling Criteria



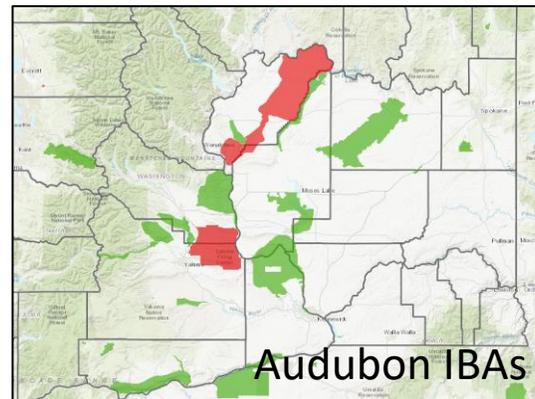
Species Locations
& Habitat



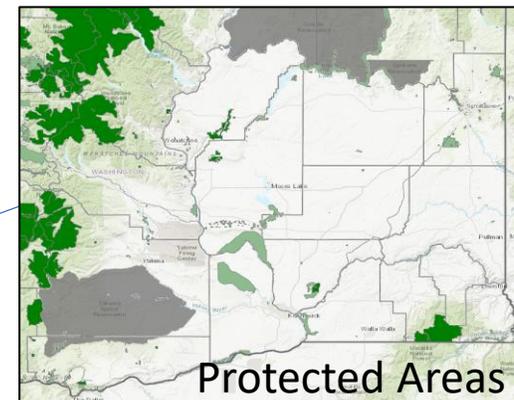
Priority Natural
Communities



Landscape Connectivity



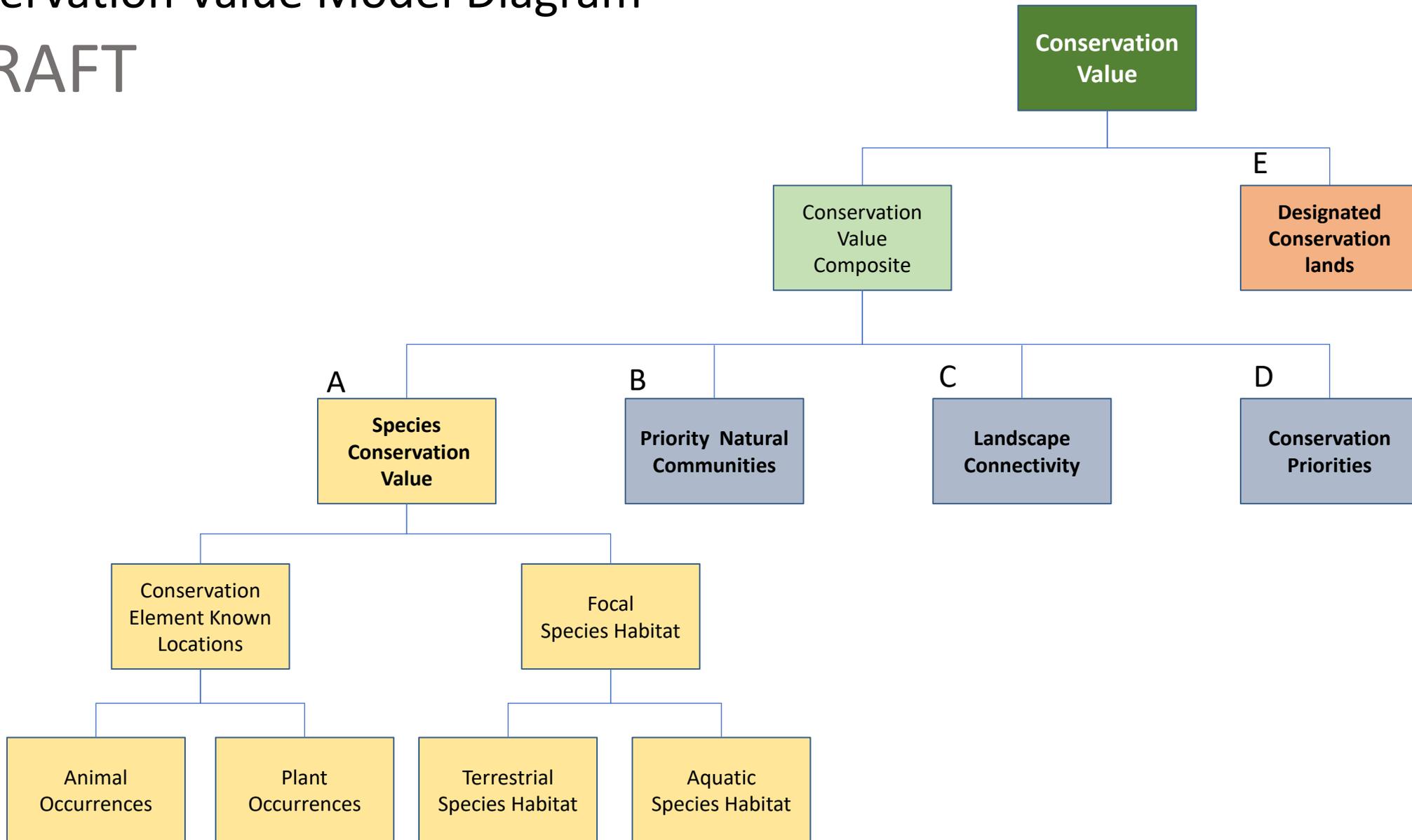
Conservation Priorities



Designated Lands

Conservation Value Model Diagram

DRAFT



Species Occurrences (Points) – Testing How Best to Include in the Model

- Focus on Listed, Candidate, and Other Species of Interest
- Mapping species based on their irreplaceability and vulnerability



Species Habitats (Polygons) – Test Group

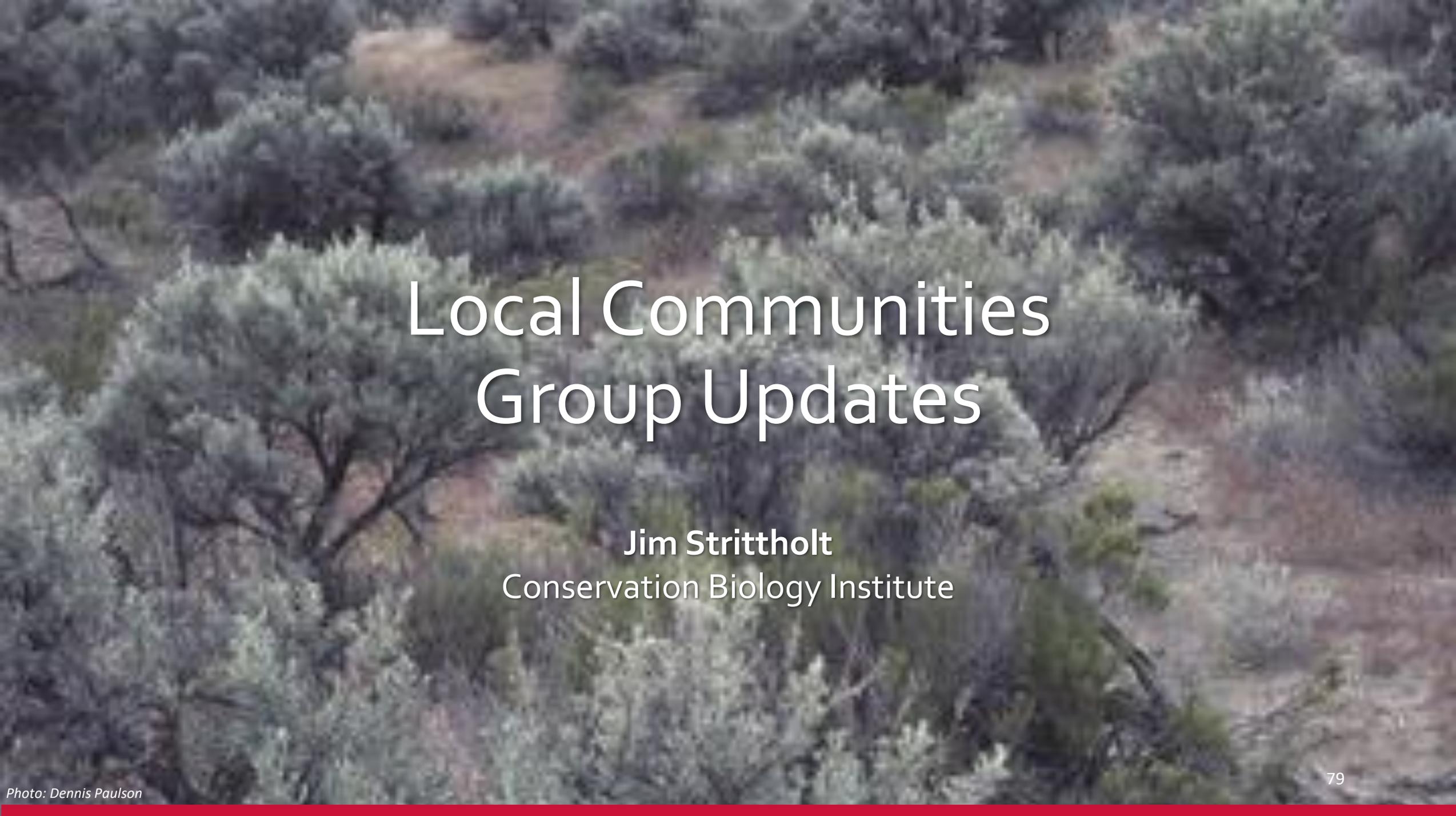


Listed Species	Candidate Species	Other Species of Interest
Pygmy Rabbit	Black-tailed Jackrabbit	Bighorn Sheep
	White-tailed Jackrabbit	Elk
	Townsend's Ground Squirrel	Mule Deer
	Washington Ground Squirrel	
	Townsend's Big-eared Bat	
Columbian Sharp-tailed Grouse	Burrowing Owl	
Ferruginous Hawk	Golden Eagle	
Greater Sage Grouse	Loggerhead Shrike	
Sandhill Crane	Sage Thrasher	
	Sagebrush Sparrow	
Northern Leopard Frog	Sagebrush Lizard	
	Sharp-tailed Snake	
Wetlands		
Waterfowl Concentrations		

Next Steps

- Testing species point locations and habitat polygon inputs
- Acquire and include botanic heritage data
- Review and incorporate priority natural habitats
- Review and incorporate landscape connectivity
- Review and incorporate conservation priorities mapped by others
- Develop model for review in stages
- Evaluate and adjust model threshold and weight settings



An aerial photograph of a dense forest with a mix of green and brownish vegetation. A large, dark tree trunk is visible in the lower-left foreground. The text is overlaid in the center of the image.

Local Communities Group Updates

Jim Strittholt
Conservation Biology Institute

Local Communities



- Held several very productive meetings, but decided that creating an integrated model would be extremely difficult and not particularly useful.
- Identified several large topics – some aided by [maps](#)
 - County level policies regarding solar development
 - [Other potential conflicts not covered by mapping groups](#)
 - [Important social considerations that influences development decisions](#)
 - [Focusing development on compromised areas](#)
 - Role of agrivoltaics

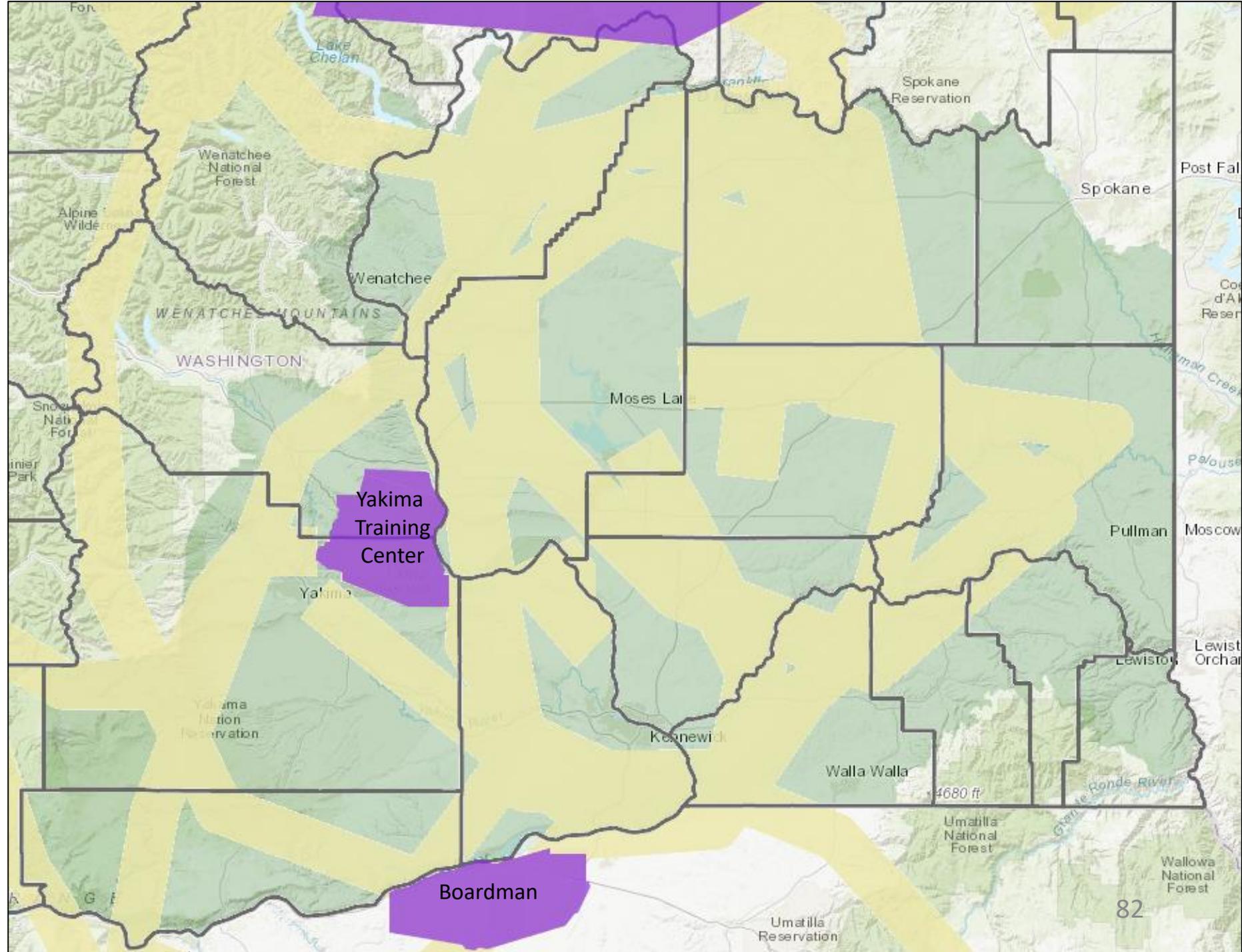
Washington Columbia Plateau Gateway

<https://wsuenergy.databasin.org/>

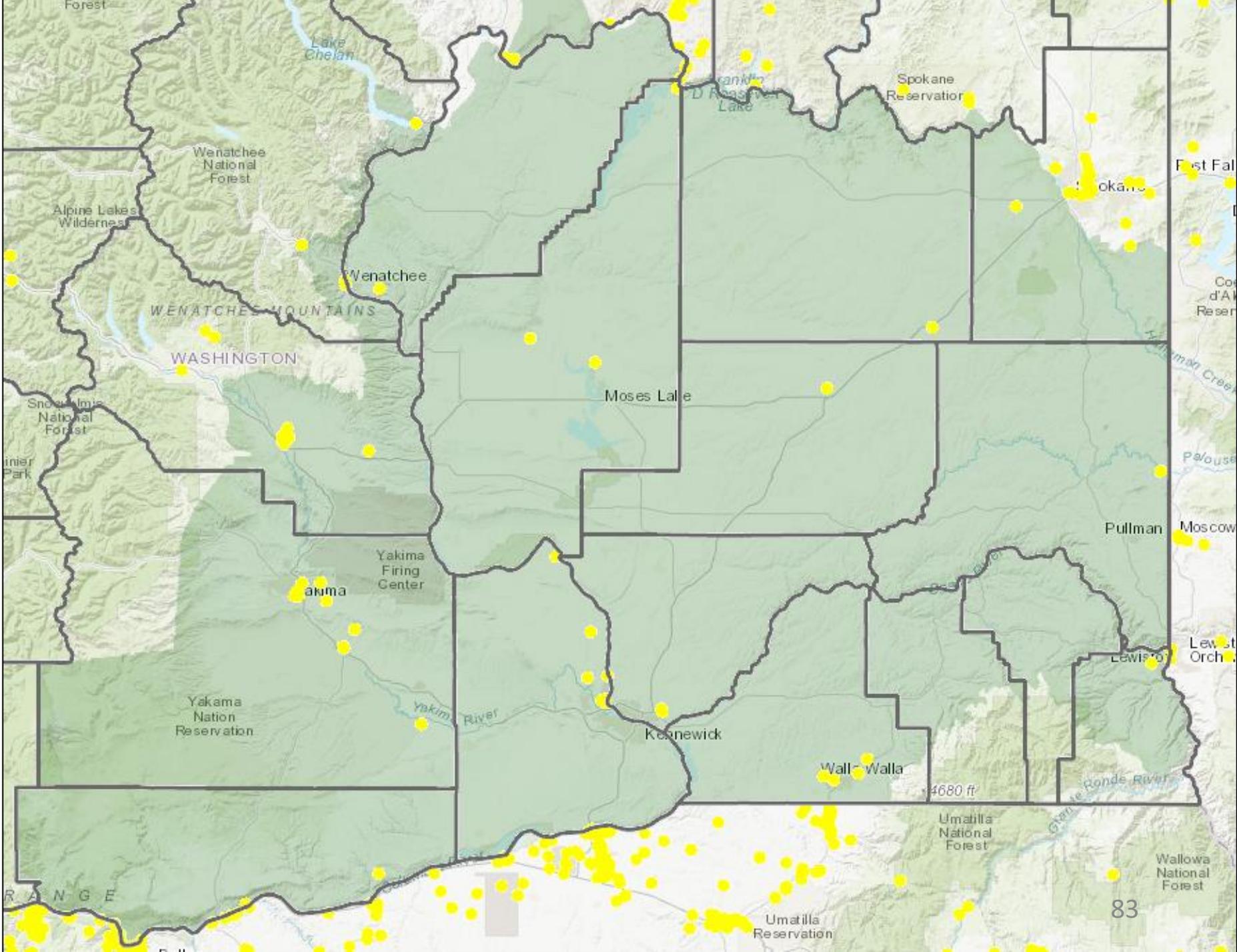
The screenshot shows the website's header with navigation icons (envelope, signal, globe) and dropdown menus for 'Conservation Biology Institute' and 'Support'. The main header features the Washington State University Energy Program logo and the title 'Washington Columbia Plateau Least-Conflict Solar Siting Gateway'. A search bar is present with the text 'Search by keyword or location'. Below the header is a dark red navigation bar with buttons for 'Get Started', 'Explore', 'Create', 'Community', and 'Workspace'. The main content area features a large landscape image of a river valley with purple wildflowers. A text box on the left of this image reads: 'Led by Washington State University Energy Program, this gateway contains geospatial information and collaboration tools to assist participants in defining least-conflict utility scale solar siting in eastern Washington with the goal of achieving state climate goals while minimizing negative impacts on natural and working lands. [Learn more...](#)'. Below this are five category tiles: 'Energy & Transmission' (solar panels), 'Wildlife & Natural Habitats' (deer), 'Development & Socioeconomics' (town), 'Agriculture & Ranchlands' (fields), and 'Physical Environment' (rocky terrain). At the bottom, there are three sections: 'Project Description' with text about the gateway's purpose, 'Quick Start Map' with a map of the region, and 'Featured Content' with a map showing specific data points.

Department of Defense

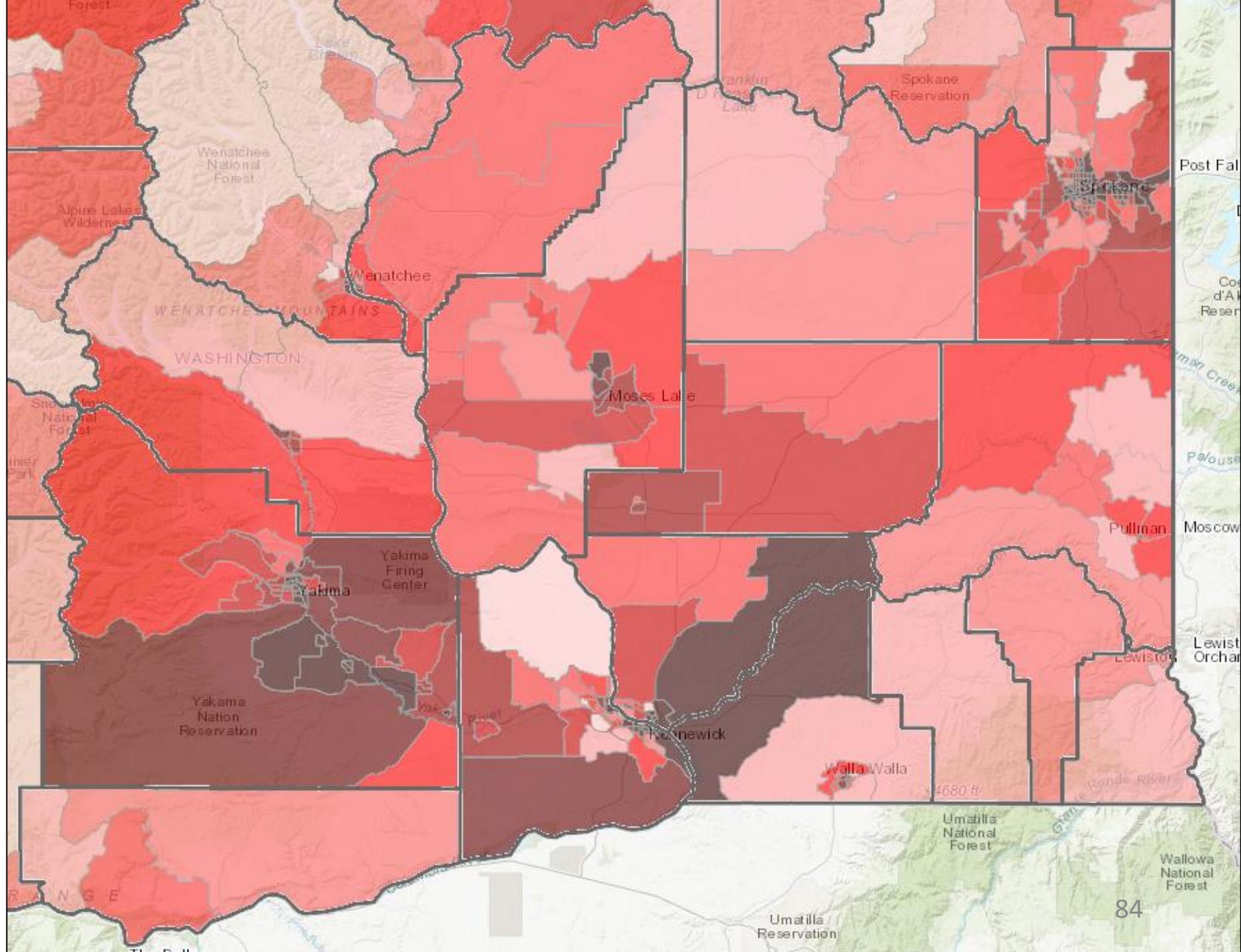
Military Lands
and
Airspace Interests



Pre-Screened RE-Power Sites



Washington Environmental Health Disparities 2022

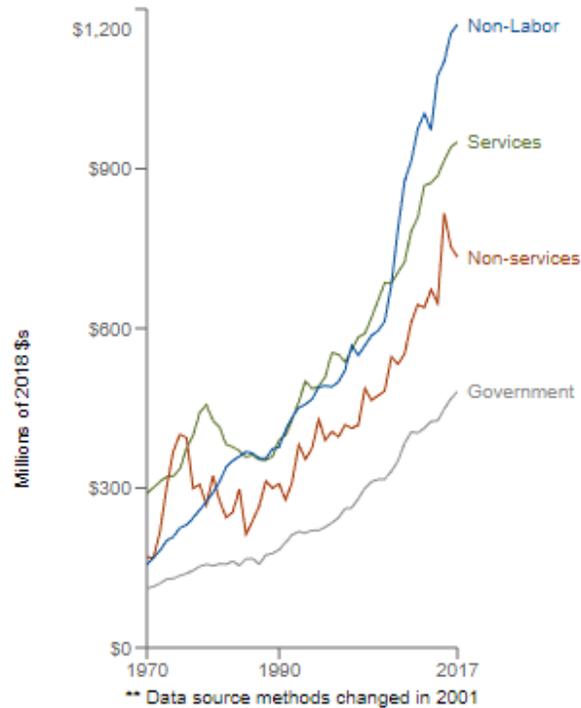


Summary Economic Data



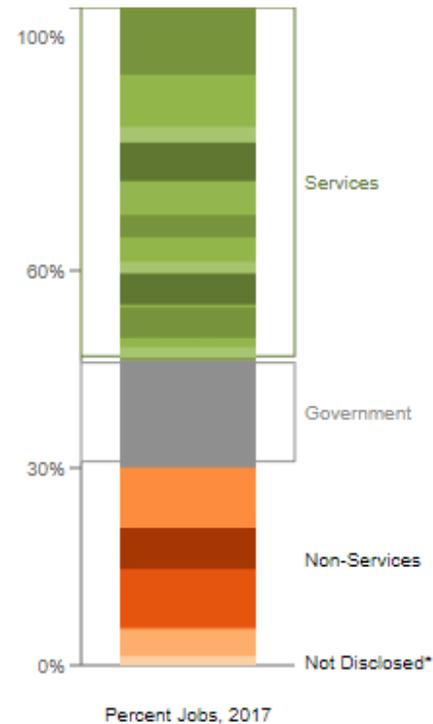
Franklin, WA

Personal income by source, 1970-2017

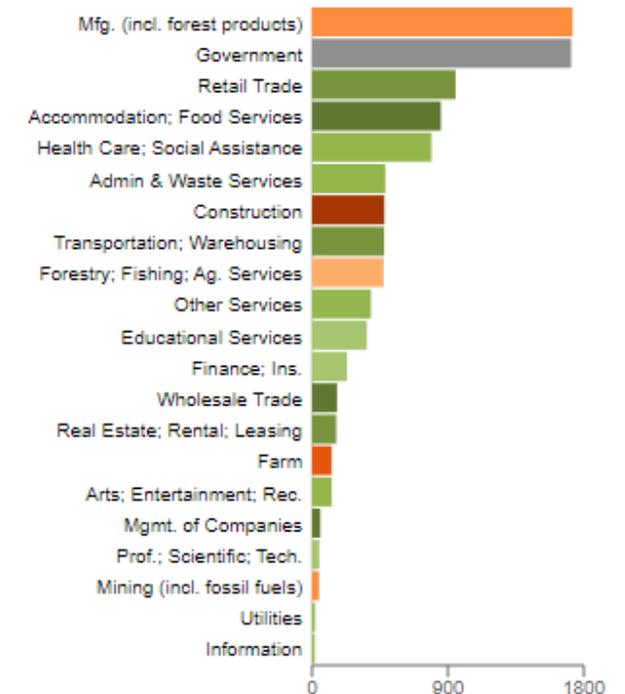


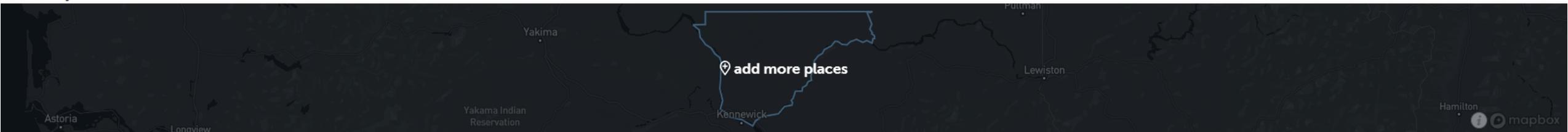
Western Region

Jobs by industry, 2017



New jobs by industry, 2008-2017





Get Socioeconomic Profiles Jump to: Comprehensive Natural Hazards Land Management Industries QUICKFACTS Franklin County

Comprehensive Reports Available for: Franklin County

- Demographics**
Population, age distribution, race and ethnicity, poverty and income, housing affordability, language, and education.
- Populations at Risk** Custom Tool
Populations more likely to experience adverse outcomes due to race, age, gender, poverty status, or other factors.
- Socioeconomic Trends**
Trends in population, employment, personal income, income by industry, wages, and unemployment.
- Key Indicators**
Metrics of population, employment, income, industry-specific economic summaries, and public lands.

Natural Hazards Reports Available for: Franklin County

- Wildfire Risk**
Summary of wildfire risk and exposure, community susceptibility, and land ownership.
- Neighborhoods at Risk** Custom Tool
Maps and information about where climate change is likely to impact the most vulnerable people.

Land Management Reports Available for: Franklin County

Population
2020
94K

Top 3 Sectors
Pct. jobs 2020
1. **Government** 16%
2. **Retail trade** 10%
3. **Farm** 10%

Median Household Income
\$66,904 (2020)

Franklin County, WA	\$66,904
United States	\$64,994

Household Income 2020

\$25K to \$100k (54%)	More than \$100K (31%)
Less than \$25K (15%)	

Employment 2020

61%	Full-time
16%	Part-time
23%	Did not work

People of Color & Hispanics
60%

High School Graduates
77%

Sources: Census Bureau and Bureau of Economic Analysis. How to cite these data



Afternoon Preview

Tom Beierle
Ross Strategic

What are your impressions after hearing the mapping group updates?

Join by Web



- 1 Go to **PollEv.com**
- 2 Enter **ROSSPOLL**
- 3 Respond to activity

Join by Text



- 1 Text **ROSSPOLL** to **22333**
- 2 Text in your message

What are your impressions after hearing the mapping group updates?

Top

Least-Conflict Solar Siting

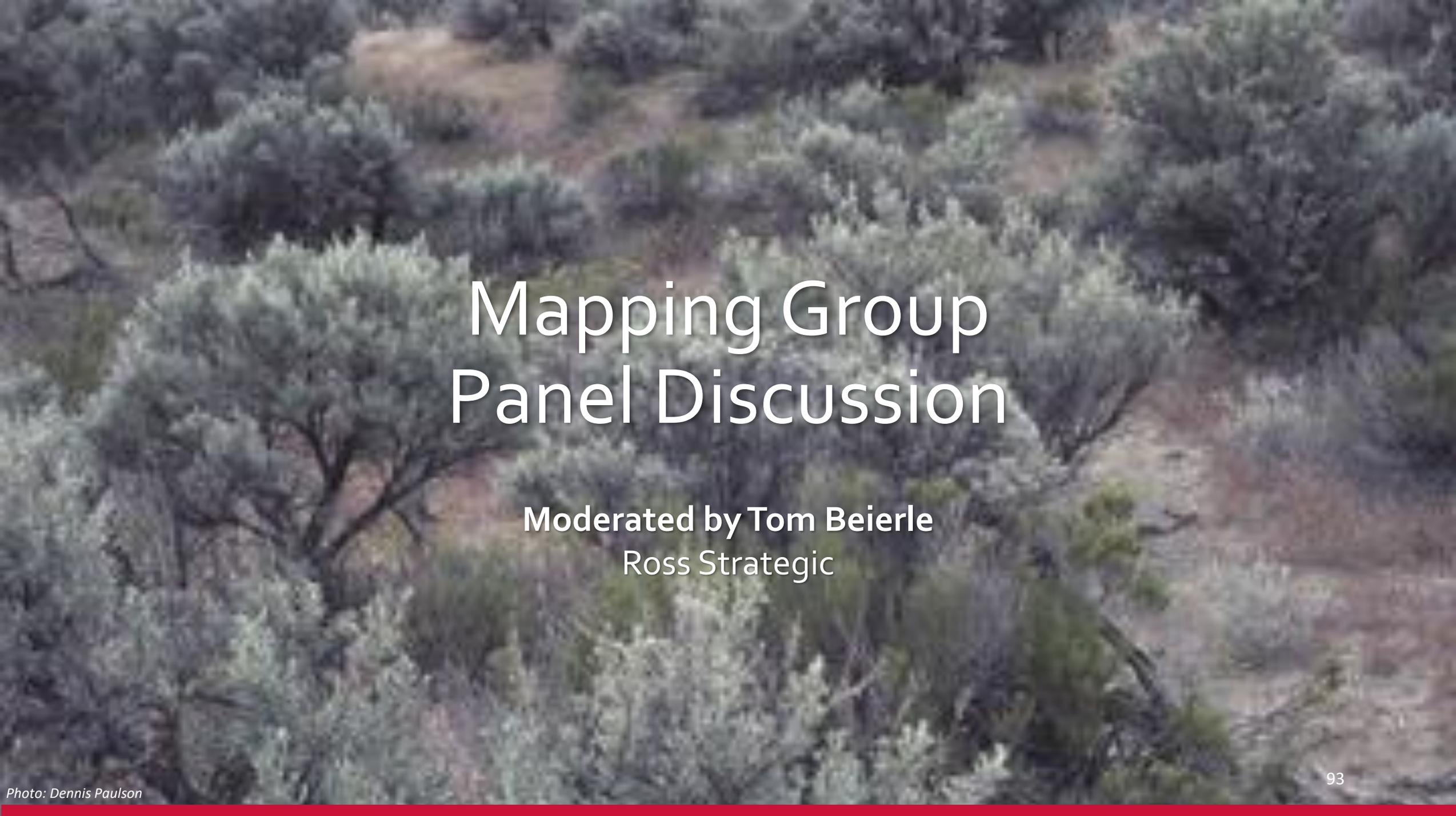
30-minute Lunch Break

Please
return at
12:55 pm



Afternoon Agenda

12:55 – 1:40 PM	Panel Discussion with Mapping Group Representatives
1:40 – 2:05 PM	Tribal Considerations
2:05 – 2:40 PM	Related Efforts
2:45 – 3:00 PM	Meeting Wrap Up

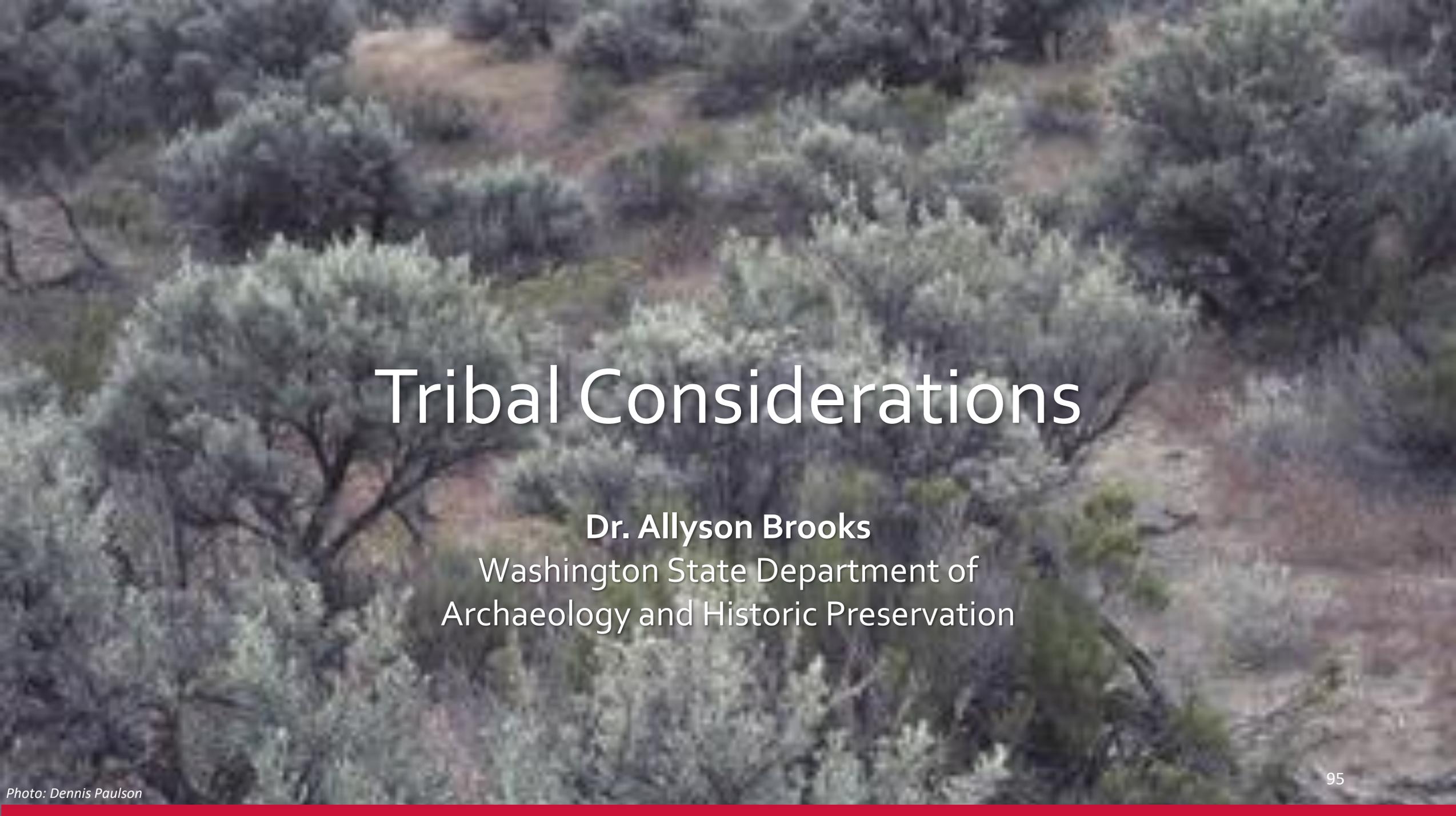


Mapping Group Panel Discussion

Moderated by Tom Beierle
Ross Strategic

Mapping Group Panelists

- Farmlands
Mark Nielson
- Ranchlands
Jesse Ingels
- Environmental Conservation
Julia Michalak
- Solar Industry
Kate Brouns



Tribal Considerations

Dr. Allyson Brooks

Washington State Department of
Archaeology and Historic Preservation



Related Efforts

Diane Butorac

Washington Department
of Ecology

Karen Janowitz

WSU Energy
Program

Nicole Hill

The Nature
Conservancy



Low-Carbon Energy Project Siting Improvement Study

Least-Conflict Solar Siting Project Presentation

January 18, 2023

Low-Carbon Energy Project Siting Improvement Report

- Legislature directed Ecology & Commerce to develop recommendations for improving siting and permitting for industrial clean energy projects.
- Ecology and Commerce engaged industry, Tribes, local governments, labor and environmental organizations, environmental justice entities, agencies, and the public on a [study](#).
- Final legislative report outlines 73 recommendations.

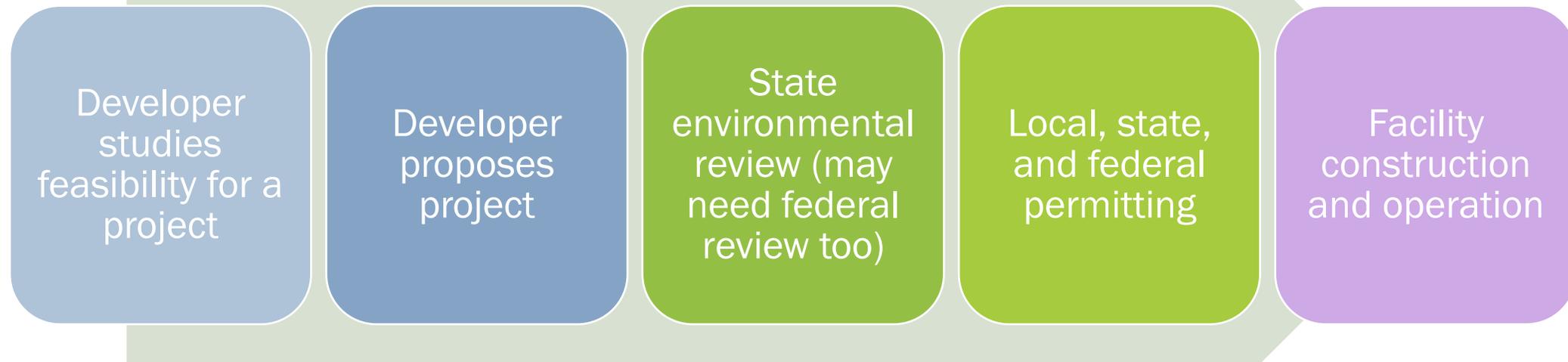
[Final Legislative Report](#), November 2022

[Interim Legislative Report](#), December 2021

Importance of Effective Siting and Permitting for Clean Energy Projects



Clean Energy Project Development Process*



*For a project not using the Energy Facility Siting Evaluation Council (EFSEC) process

State Environmental Policy Act

The SEPA review process helps agency decision-makers, developers, and public understand early in the process how a project will likely affect the environment.

Types of SEPA Actions

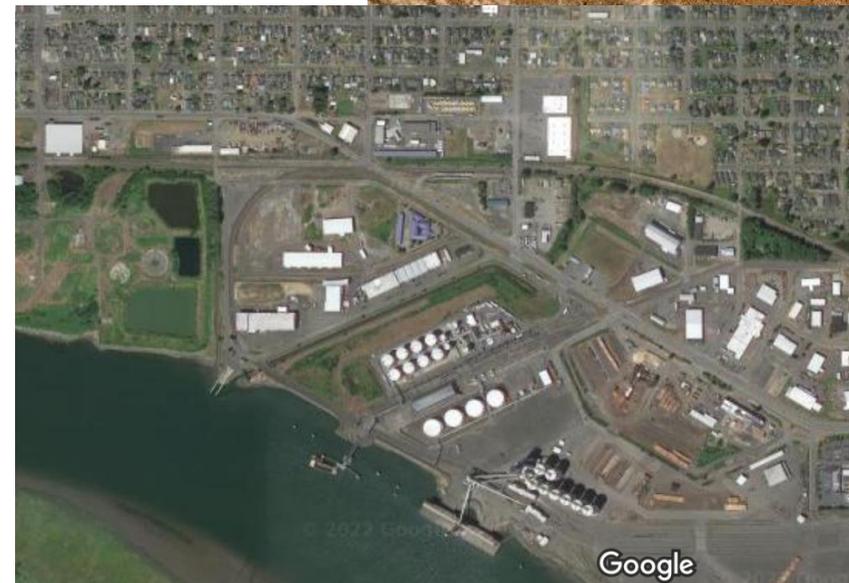
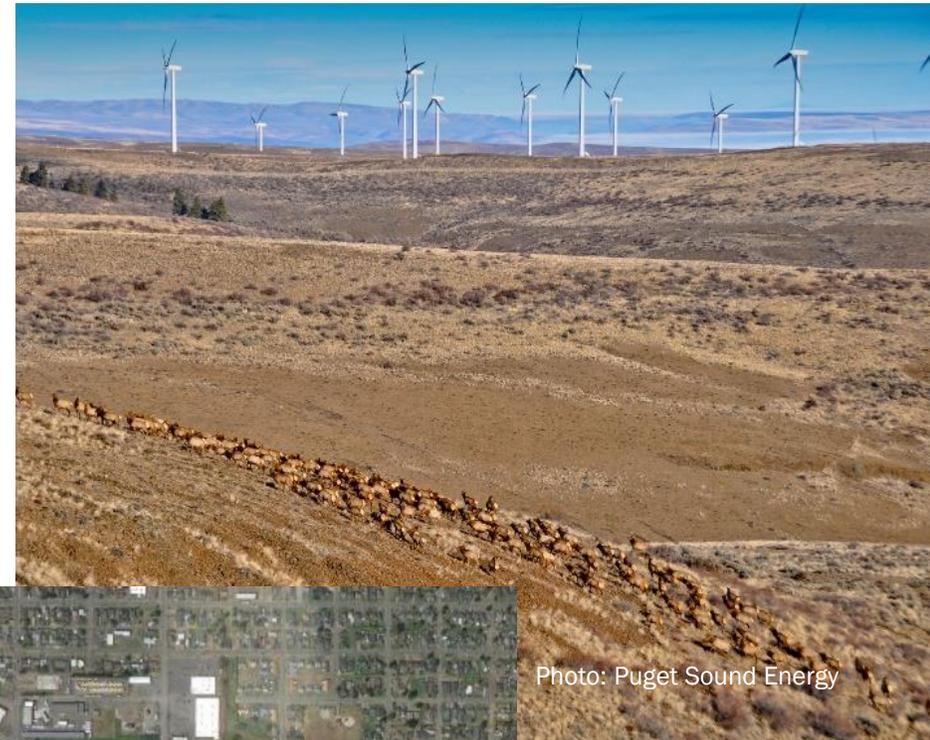
- Nonproject = programmatic environmental impact statement/ planned action
 - Upfront planning that provides a “big-picture” evaluation
 - Individual projects can use the analysis to streamline their reviews
- Project-level = specific to an individual project proposal
 - Led by city, county, or state agency

Permitting

- There is no single permit for clean energy.
- Permits depend on the type of project, location, and potential impacts.
- Requirements for permit processes are defined in statute and rule.

Projects may need multiple permits:

- Local governments
- State agencies
- Federal agencies



Focus of Siting Study

- Identify systemic issues related to industrial clean energy projects
 - Siting of projects
 - Environmental review and permitting processes
 - Tribal treaty rights and cultural resource processes
 - Consideration of overburdened communities and vulnerable populations

Study Participation

We heard from people and groups involved in siting and permitting as well as those potentially affected by clean energy proposals

- Established an advisory board
 - Developers, local governments, ports, utilities, environmental organizations, environmental justice organizations, labor and businesses
 - Tribal government representatives
- Engaged with 24 Tribes and 2 Tribal organizations
- Coordinated with 10 state agencies
- Held 3 public meetings

Challenges Identified

During the study process, stakeholders and Tribes identified barriers and issues related to siting clean energy projects. These included:

- Insufficient Tribal engagement
- Inefficient and time-consuming permitting process
- Lack of project transparency
- Uncertainties over project impacts and benefits

Developing Recommendations

- Ecology and Commerce considered input for recommendations
 - Ideas from agencies, Tribes, stakeholders, public
- Iterative process over several months
 - Provided updates to Interagency Team, Advisory Board, and Tribes for feedback
 - Shared information and ideas with all groups for transparency

Report Recommendations

- Develop and implement equitable community engagement and ensure overburdened communities are not disproportionately impacted.
- Improve engagement and information sharing with Tribes and government-to-government consultation.
- Assist local governments to support coordinated clean energy and economic development.
- Support clean energy transition through equitable economic development.
- Conduct upfront planning to make siting and permitting projects more effective and ensure protection of natural resources, communities and Tribal treaty rights and cultural resources.

Report Recommendations

- Improve guidance, training and tools.
- Improve coordination at federal, state and local levels for low-carbon energy projects.
- Improve state organizational structure to implement recommendations, provide information and coordinate efforts.



Thank you!

For information, please contact:

Diane Butorac

Diane.Butorac@ecy.wa.gov

(360) 763-2394

Clean Energy Siting Bill – House Bill 1216

Intent

- Enable more efficient and effective siting and permitting of clean energy projects
- Bring benefits to the communities that host clean energy projects
- Facilitate rapid transition to clean energy to avoid worst impacts of climate change

Clean Energy Siting Bill

Efficient and effective siting and permitting will benefit from early and meaningful community and tribal engagement, and from up-front planning including identification of least-conflict sites, and programmatic environmental review that identifies measures to avoid, minimize, and mitigate project impacts

Clean Energy Siting Bill

- Establish an **interagency clean energy siting coordinating council** to improve siting and permitting of clean energy projects
- Create a designation for **clean energy projects of statewide significance** for additional state and local government coordination
- Improve processes for review of clean energy projects under state environmental policy act
- Require a **programmatic (nonproject) environmental impact statement** for solar energy projects located in the Columbia Basin

Clean Energy Siting Bill

- Interagency clean energy siting coordinating council
 - Co-chaired by Dept of Commerce and Dept of Ecology, with participation from many other agencies
 - Identify actions to improve siting and permitting
 - Develop a consolidated application for clean energy projects

Clean Energy Siting Bill

- Clean energy projects of statewide significance
 - Support coordinated permitting process by identifying tribal resources or rights potentially affected by the project and determine if there are solutions to avoid, minimize, or mitigate any adverse effects
 - Dept of Ecology must offer early, meaningful, and individual consultation with any affected federal recognized Indian Tribe on designated clean energy projects of statewide significance, to understand potential impacts to tribal rights and resources.
 - Consultation is independent of, and in addition to, any public participation process
 - Identify overburdened communities and verify they have been meaningfully engaged

Clean Energy Siting Bill

- Programmatic Environmental Impact Statement
 - Assess and disclose probably significant adverse environmental impacts, and identify related mitigation measures for:
 - Green electrolytic or renewable hydrogen projects
 - Solar energy projects located in the Columbia Basin of eastern and central Washington. The nonproject environmental impact statement for solar energy projects in the Columbia Basin of eastern and central Washington will consider the findings of the Washington State University least-conflict solar siting process.

The Nature
Conservancy



Power of Place: Land use and Decarbonization Pathways in the West

PRESENTATION TO:
WASHINGTON STATE UNIVERSITY ENERGY OFFICE:
LEAST-CONFLICT SOLAR SITING ON THE COLUMBIA PLATEAU
GATHERING TWO
JANUARY 18, 2023

NICOLE HILL, POWER OF PLACE – WEST LEAD, NICOLE.HILL@TNC.ORG

Power of Place – West

Study Questions

Can we get to economy-wide net zero by 2050 **and** meet our conservation objectives?

What decarbonization scenario is optimal (reliable and affordable) for achieving our climate and conservation goals?

How much new energy infrastructure will be needed to decarbonize the economy?

How much land and ocean area will be required to meet net-zero in the West by 2050?

Data and peer reviewed study available here:

[Power of Place-West: Renewable Energy for People & Nature](#)

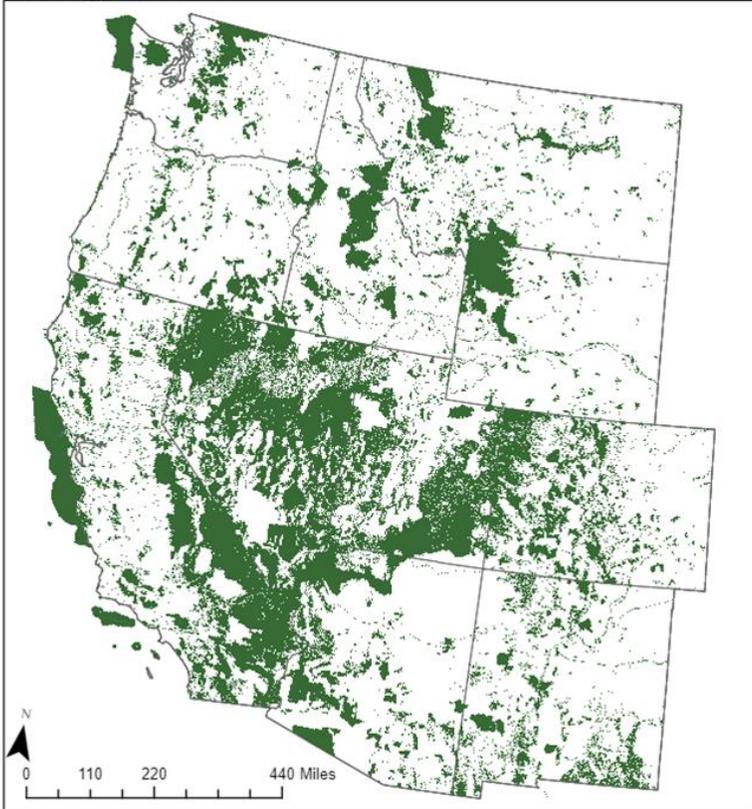


Siting Levels

Categories of Exclusion	Definition of Category	Examples
Level 1	Legally protected: Areas with existing legal restrictions	National Wildlife Refuges, National Parks, Marine Sanctuaries, Military Training Areas/ Corridors
Level 2	Administratively protected: Level 1 + areas with existing administrative and legal designations where state or federal law requires consultation or review and lands owned by non-governmental organizations (NGOs) on which there are conservation restrictions.	Critical Habitat for Threatened or Endangered Species, Sage Grouse Priority Habitat Management Areas, vernal pools and wetlands
Level 3	High conservation value: Level 1 + Level 2 + areas with high conservation value as determined through multi-state or ecoregional analysis (e.g., state, federal, academic, NGO) and lands with social, economic, or cultural value.	Prime Farmland, Important Bird Areas, big game priority habitat and corridors, TNC Ecologically Core Areas, “Resilient and Connected Network”

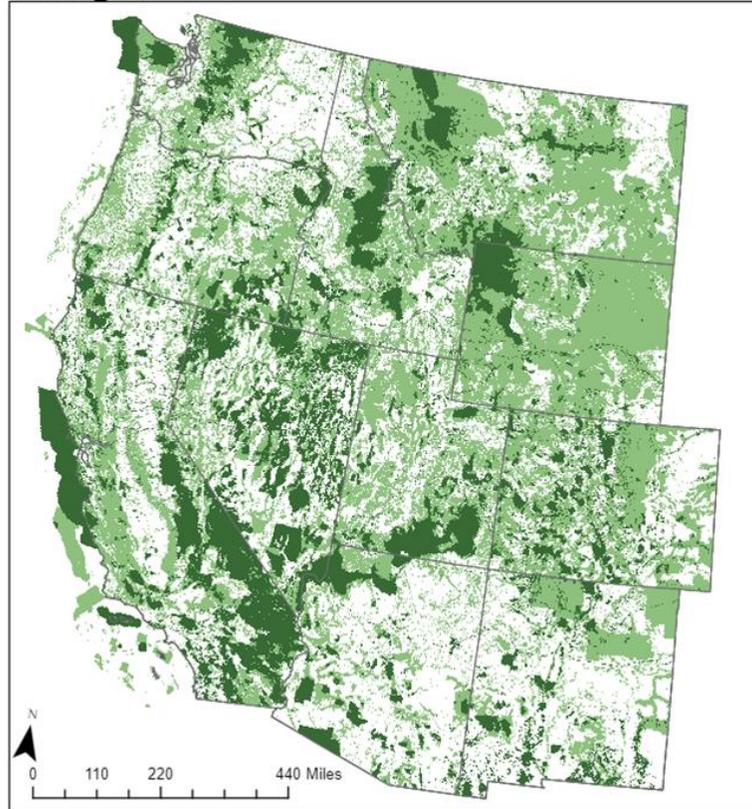
Siting Levels

Siting Level 1



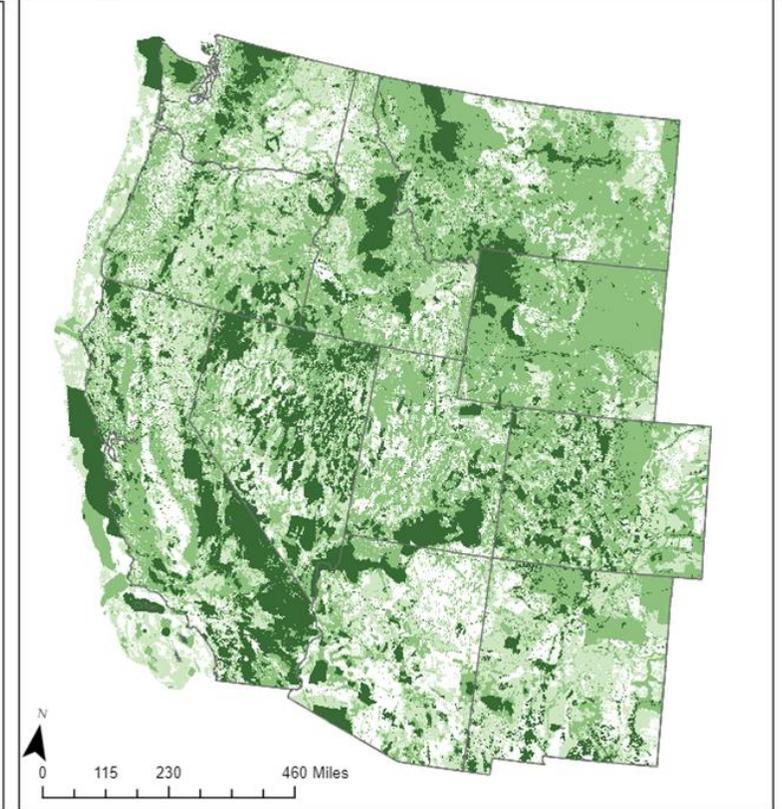
Legally Protected

Siting Level 2



Administratively Protected

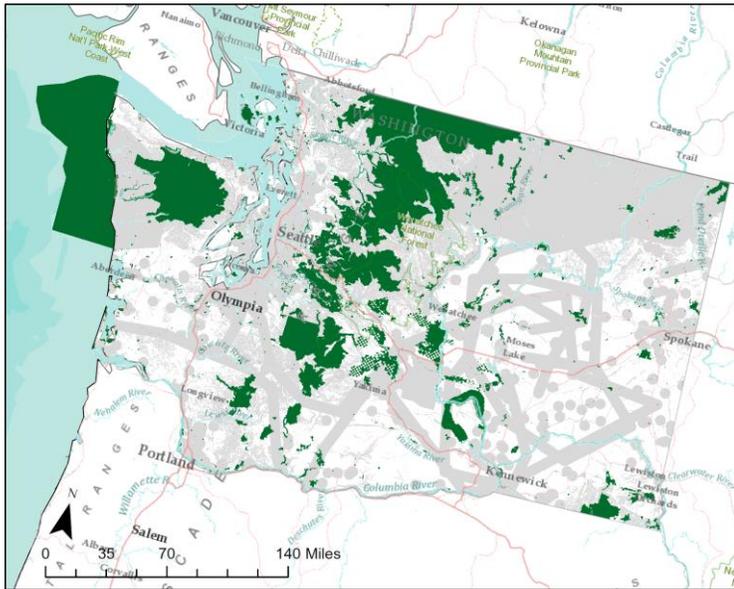
Siting Level 3



High Conservation Value

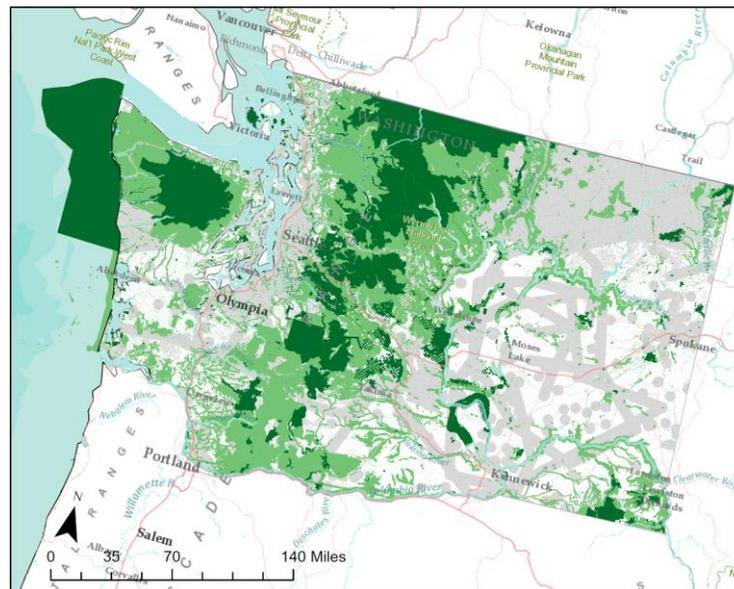
Washington Siting Levels

Siting Level 1



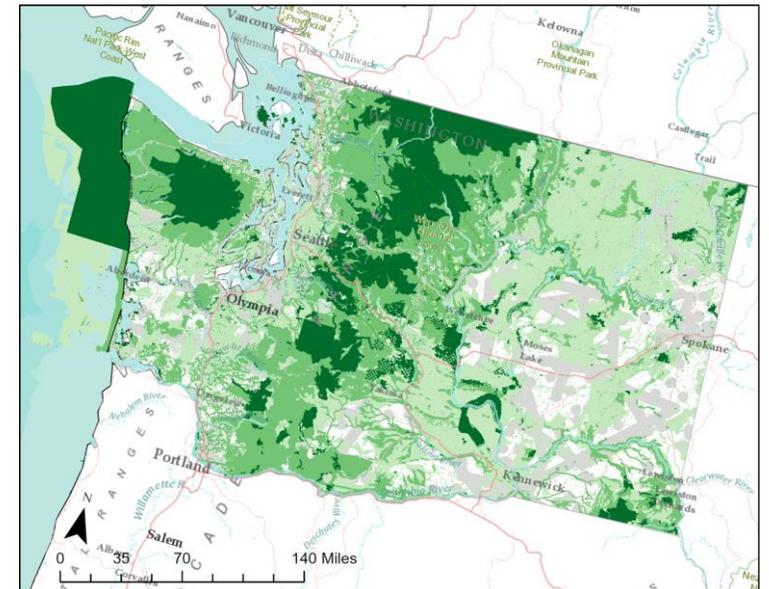
Legally Protected

Siting Level 2



Administratively Protected

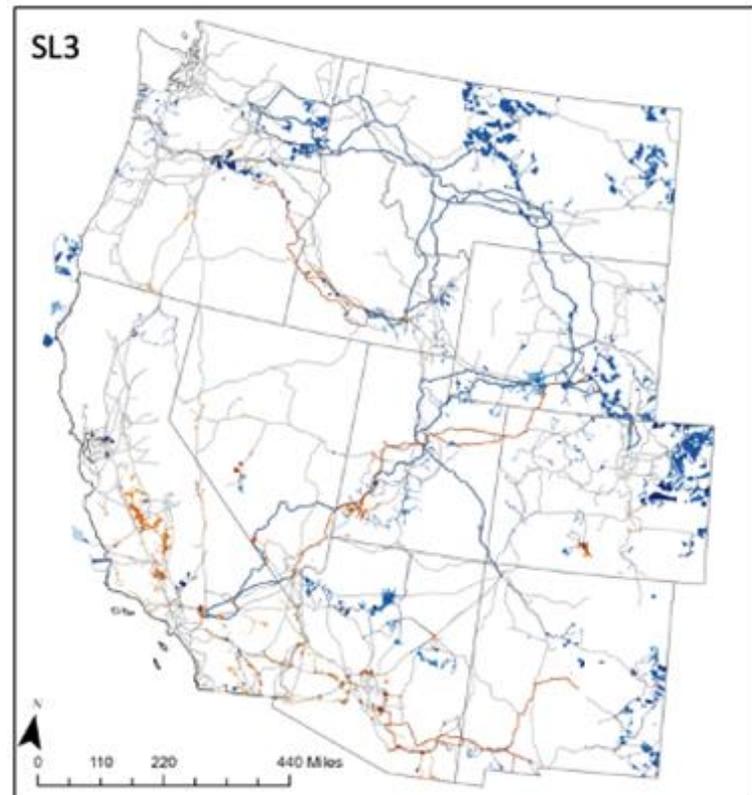
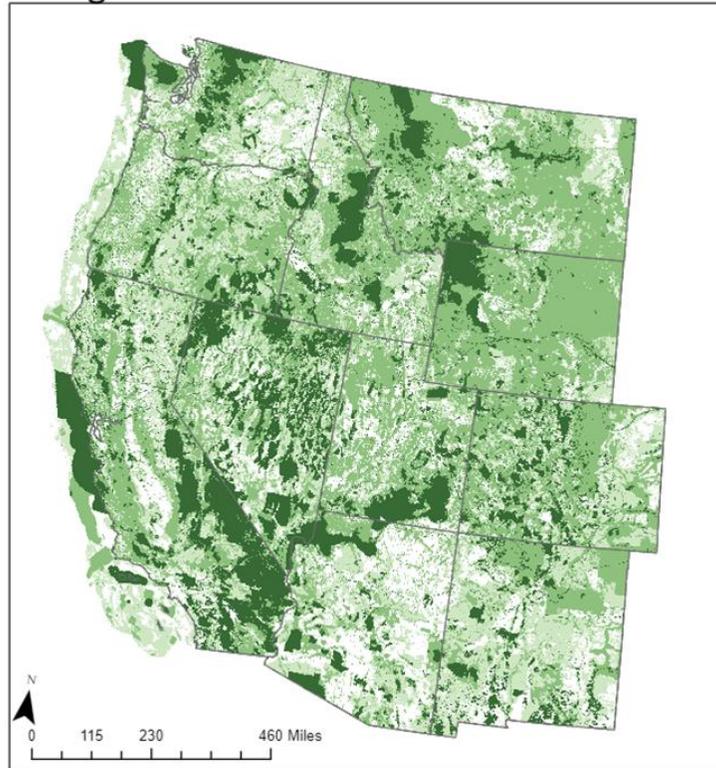
Siting Level 3



High Conservation Value

We can achieve economy-wide net-zero greenhouse gas emissions reductions across the West while avoiding the most sensitive natural and working lands

Siting Level 3



In this scenario, the model selects 75,000 acres of utility-scale solar (23 GW); 655,000 acres of wind (10 GW) in Washington.



Questions on Power of Place -West?

What related topics do you hope to explore more?

Join by Web



- 1 Go to **PollEv.com**
- 2 Enter **ROSSPOLL**
- 3 Respond to activity

Join by Text



- 1 Text **ROSSPOLL** to **22333**
- 2 Text in your message

What related topics do you hope to explore more?

Top

An aerial photograph of a forest with dense green trees and a prominent tree trunk in the foreground. The text is overlaid on the image.

Meeting Wrap Up

Karen Janowitz
WSU Energy Program

Next Gathering

- April 12, 2023
 - Review final draft of least-conflict maps



Sinlahekin Wildlife Area
WA Dept of Fish & Wildlife

Thank you!

<https://www.energy.wsu.edu/LeastConflictSolar.aspx>

Karen Janowitz

JanowitzK@energy.wsu.edu

Washington State University Energy Program



WASHINGTON STATE UNIVERSITY
Energy Program



The Washington State University (WSU) Energy Program
delivers program management, on-site assessments, analytical tools, and training to meet evolving energy challenges in the State of Washington, the Pacific Northwest, the United States, and internationally.

Partnering with a wide range of agencies, organizations, institutions, and businesses, our energy experts identify energy challenges and develop solutions.

Our customers include large and small businesses, public and private utilities, manufacturing plants, local and state governments, federal agencies and facilities, schools and universities, national laboratories, tribes, professional and trade associations, and consumers.

Our staff of energy engineers, energy specialists, technical experts, and software developers work out of Olympia, Washington. The WSU Energy Program is a self-supported department within the University.

We are part of the College of Agricultural, Human and Natural Resource Sciences (CAHNRS). Our Director reports to the Associate Dean of the College/ Director of WSU Extension.

Contact
Karen Janowitz
WSU Energy Program
janowitzk@energy.wsu.edu

Website: www.energy.wsu.edu

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Washington State University Energy Program
WSUENR22-004 • May 2022



Washington State Department of Commerce/ U.S. Fish and Wildlife Service

Columbia Plateau Least-Conflict Solar Siting

Exploring pathways to protect Washington's unique and diverse landscape values while producing the solar energy needed to help the state's utilities reach 100% clean electricity.

Washington State has a directive to eliminate coal in the state's resource mix by 2025, and for the state's electricity to be 100% carbon-free by the year 2045. One of the first milestones is to produce 80% of our electricity from clean sources by 2030. **To help meet the state's objectives, large-scale solar developments are necessary.**

The Columbia Plateau in eastern Washington supports productive farmland and rangeland as well as native shrubsteppe habitat. Less than 40% of intact shrubsteppe remains in eastern Washington. It is also some of the most preferred land in Washington state for solar energy developers.

The Least-Conflict Solar Siting project poses the question: **where can large-scale solar be developed in the Columbia Plateau region while also ensuring that important habitat, productive farmlands and rangelands, and tribal treaty rights are protected?**

To answer that question, Washington State University (WSU) Energy Program is leading a voluntary, collaborative effort that brings stakeholders together to identify areas in the Columbia Plateau region where the siting of utility-scale solar is less likely to generate significant conflict.

This non-regulatory, people-centered process is modeled after similar successful projects, such as in California's San Joaquin Valley. It is expected to

It is important to note that the process is landscape-scale and does not assess individual solar sites or proposals.



WASHINGTON STATE UNIVERSITY
Energy Program

Least-Conflict Solar Siting on Washington's Columbia Plateau

Thank you for joining us today!

