

## Gathering 2 Summary

**Date** January 18, 2023  
**Time** 9:30am – 3:00pm PDT  
**Location** Zoom online meeting  
**Links** [WSU Energy Program Least-conflict Solar Siting project website](#)  
[Gathering 2 Agenda](#)  
[Gathering 2 Presentation Slides](#)  
[Gathering 2 Video Recording](#)

### Meeting 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

### Meeting Notes

#### Project Overview and Updates

Following an initial welcome, **Karen Janowitz (WSU Energy Program)** introduced the WSU Energy Program and the project team. She outlined the objectives and agenda for the day's gathering. Participants then had an opportunity for quick "impromptu networking" to meet others attending the meeting.

Karen continued with a brief overview and updates of the Least-Conflict Solar Siting on the Columbia Plateau project. The project overview mirrored the September 2022 Kickoff Gathering ([link to Kickoff Gathering summary](#)): Karen described the legislative directive and context for the work.

Project updates focused on the modeling approach being taken by the four mapping groups (farmlands, ranchlands, environmental conservation, and solar industry): Mapping group participants identify spatial datasets that reflect aspects of the Plateau's landscape that are important to them. Conservation Biology Institute (CBI) uses EEMS logic modeling software to integrate the datasets and produce easy-to-understand logic models and maps that reflect suitable areas of suitability for solar photovoltaics for the solar industry group, and areas of least and

#### At-a-Glance Information

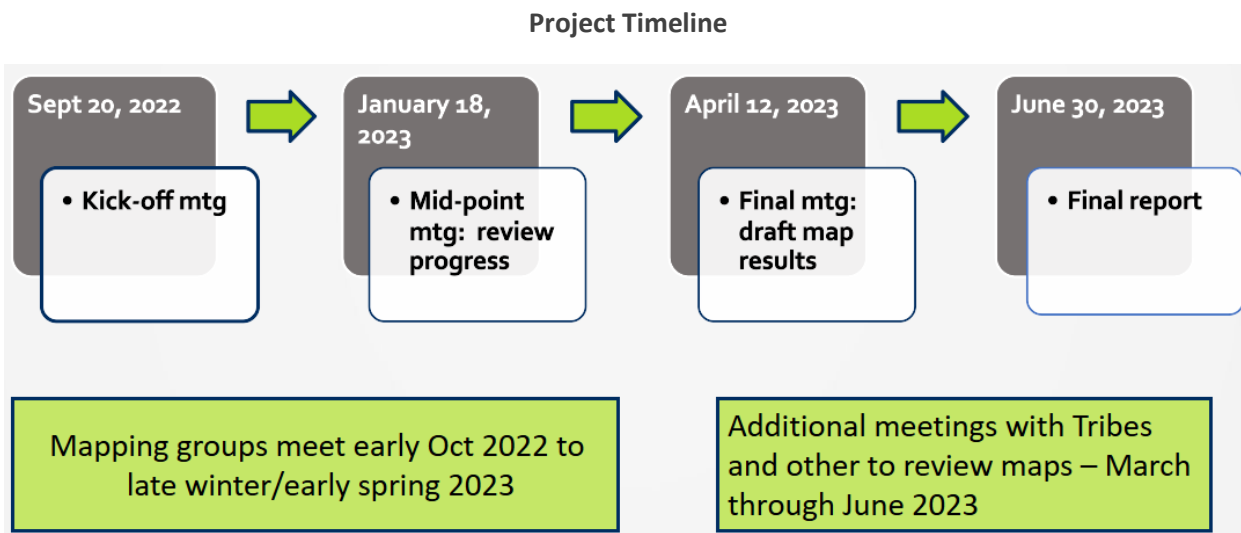
Hosted by Washington State University Energy Program in partnership with the Conservation Biology Institute and Ross Strategic.

Approximately 90 people joined the meeting.

Meeting participants represented a broad array of organizations.



high conflict for the other mapping groups. The groups' final maps will be combined into one map that reflects common areas of conflict with solar suitability.



## Mapping Group Updates

A representative from each mapping group presented progress made by their group since the Kickoff Gathering in September 2022 and answered participant questions. Takeaways from each presentation are below.

### Solar Industry Mapping Group

The goal of the Solar Industry Mapping Group is to produce a map that illustrates the relative suitability of lands for utility-scale solar development based on general, mappable criteria. **Kate Brouns (Renewable NW)** presented the following information on behalf of the Solar Industry mapping group:

- Current map criteria:
  - Substrate
  - Slope
  - Proximity to infrastructure
  - Potential hazards
  - Categorical exclusion
- Other factors of interest: environmental constraints/concerns, Department of Defense concerns, Tribal interests, and socioeconomic considerations
- Draft map: See Figure 1 for draft solar development map (red areas = most suitable for solar development; blue areas = least suitable for solar development).
- Next steps:
  - Share draft map with colleagues and others for review and comment
  - Refine model diagram by including additional spatial datasets (e.g., water and wetlands) and evaluating model threshold and weight settings

During a brief Q&A period, the mapping group clarified how wildfire density and land slopes are currently being mapped. A participant noted it would be helpful to map future transmission capacity as well as current capacity of substations; working group members clarified that the current map only reflects current capacity of transmission lines and noted that that the group does not have data to map

either future capacity or the current capacity of substations. In response to a question, mapping group members clarified that local moratoria on solar development are not reflected in the solar map.

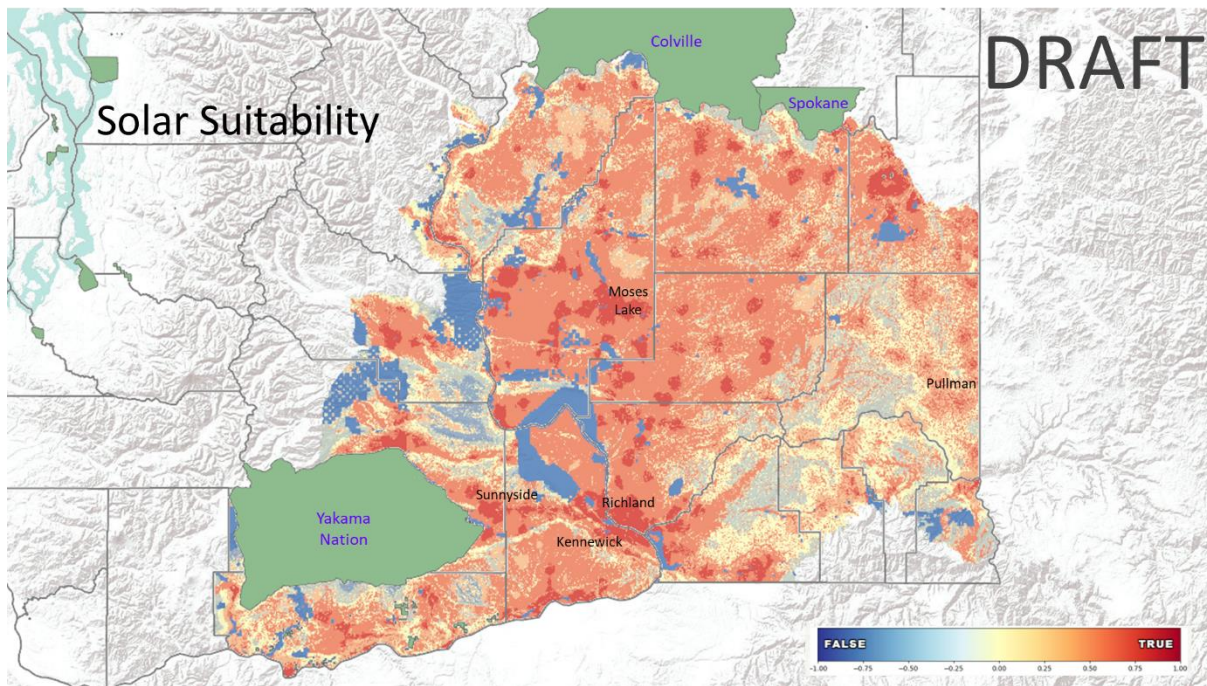


Figure 1. Snapshot of draft Solar Industry map. Red areas are considered most suitable for solar development; blue areas are considered least suitable.

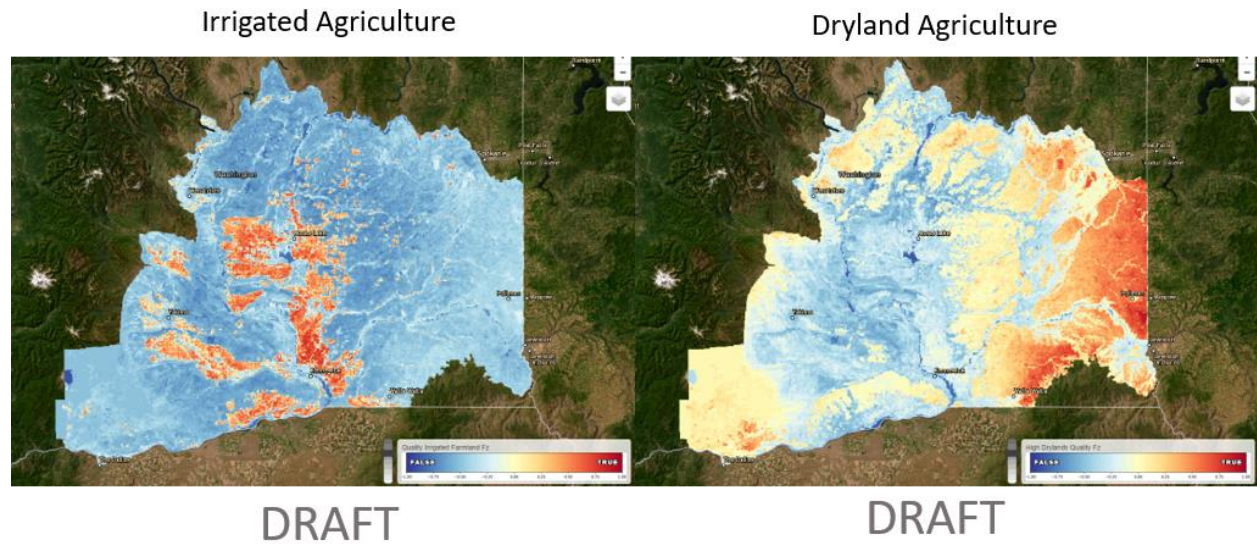
## Farmlands Mapping Group

The goal of the Farmlands Mapping Group is to produce a map that illustrates the relative value of irrigated and dryland farming lands based on available spatial data. **Mark Nielson (Franklin County Conservation District)** presented the following information on behalf of the Farmlands mapping group:

- Current map criteria:
  - Soils
  - Water supply
  - Existing agricultural use
  - Precipitation
  - Farm programs
- Draft map: See Figure 2 for draft farmlands map (red areas = most suitable for farming; blue areas = low suitability for farming).
- 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

During a brief Q&A period, mapping group participants clarified sources of data for irrigated and dryland farming. Participants discussed the opportunity to link the farmland modeling work to other related activities, such as Washington State University agricultural extension programs (to help farmers decide

on lands suitable for solar) and the University of Washington Climate Impacts Group (to understand how future climate change may affect siting). In the chat, participants clarified that PV projects proposed in the state don't use coolants or heat processes that could generate pollution.



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Figure 2. Snapshot of draft Farmlands map. Red areas are considered most suitable for farming; blue areas are considered least suitable.

### Ranchlands Mapping Group

The goal of the Ranchlands Mapping Group is to produce a map that illustrates the relative value of ranchlands based on available spatial data. **Jesse Ingels (Land Broker)** presented the following information on behalf of the Ranchlands mapping group:

- Current map criteria:
  - Soils
  - Water access
  - Vegetation
  - Managed grasslands
  - Federal programs
- Draft map: See Figure 3 for draft ranchlands map (red areas = most suitable for ranching; blue areas = least suitable for ranching).
- 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

During a brief Q&A period, a participant suggested the importance of considering stock that over-winter in lower elevations after grazing in higher elevations during the summer. Other participants validated that dryland crop stubble is commonly used for livestock forage and that access to water is a critical consideration for grazing. Regarding both rangeland and farmland mapping, a participant noted that there are criteria that counties have to evaluate when designating "long-term commercially significant agricultural lands," which may be useful for evaluating least-conflict sites for solar development on resource lands.

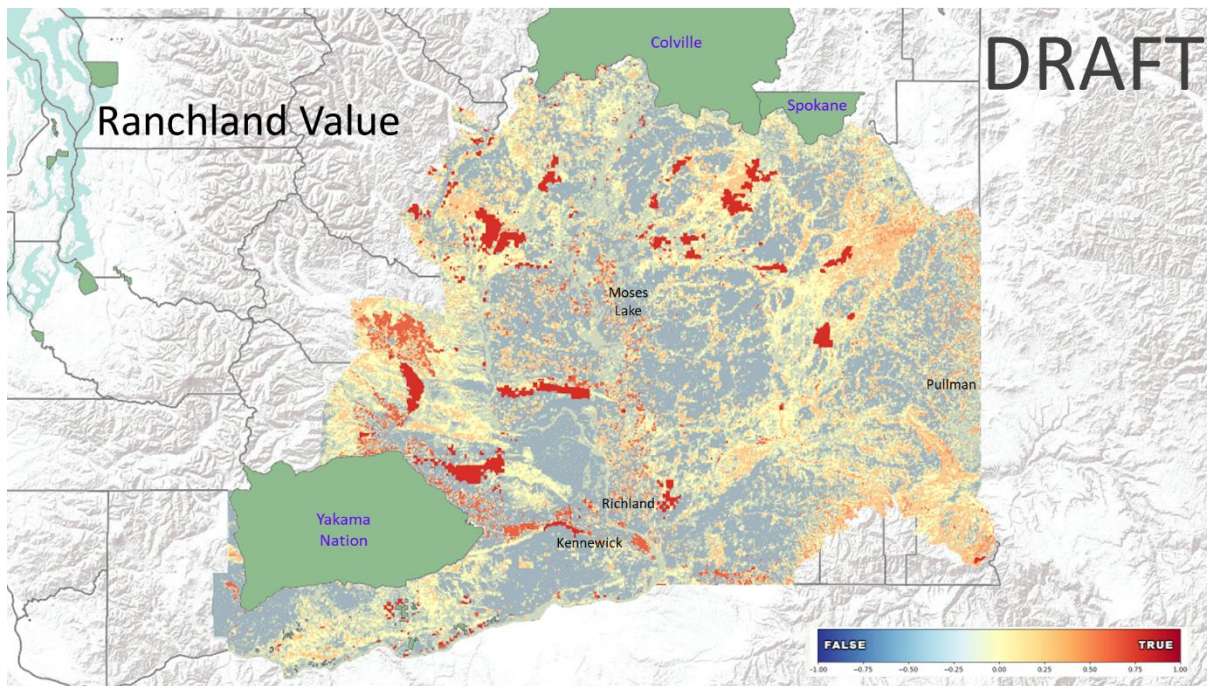


Figure 3. Snapshot of draft Ranchlands map. Red areas are considered most suitable for ranching; blue areas are considered least suitable.

## Environmental Conservation Mapping Group

The goal of the Environmental Conservation Mapping Group is to produce a map that illustrates the relative value of lands for environmental conservation based on available spatial data. **Julia Michalak (WA Department of Fish and Wildlife)** presented the following information on behalf of the Environmental Conservation mapping group:

- Current map criteria:
  - Species locations and habitat
  - Priority natural communities
  - Landscape connectivity
  - Conservation priorities
  - Designated lands
- The mapping group is currently prioritizing species habitats to be included in its map (no draft map available yet).
- 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

In response to a question during the Q&A period, Julia noted the mapping group is coordinating with (and drawing on) some of the work of the Washington Shrub Steppe Restoration and Resilience Initiative. Participants discussed how priorities related to species are being set, and members of the mapping group emphasized that priorities are based on available scientific and biological information and data about species' endangered status and their current distribution.

### Local Communities Group

**Jim Strittholt (CBI)** presented on behalf of the Local Communities Group, which differs from other groups in that it is not producing a map. The group has identified several large topics (some of which can be examined with maps), including county-level policies regarding solar development; potential conflicts not addressed by the other mapping groups; important social considerations that influence development decisions; focusing development on compromised areas; and the role of agrivoltaics (which is the use of land for both agriculture and solar energy generation). Although the group is not producing its own map, several spatial datasets have informed its conversations, including those that reflect environmental health disparities, economic information, and Department of Defense considerations.

### Transmission Issues for Solar Projects

**Liz Klumpp (Bonneville Power Administration, or BPA)** and **Stewart Henderson (WA Energy Facility Site Evaluation Council, or EFSEC)** shared transmission-related information and considerations after the Solar Industry mapping group presentation.

Liz addressed the question, “Is there transmission capacity to deliver solar power from eastern Washington to loads?” The basic answer is yes; studies indicate the state’s bulk power grid will accommodate transmission needs and meet the 2030 decarbonization goal (with currently planned upgrades and expansion projects). Liz also briefly described how solar companies and other energy generators request

transmission capacity from BPA, and factors for how BPA responds. Maps of BPA’s transmission lines are included in the 2<sup>nd</sup> Gathering’s presentation (available on the [WSU Energy Program project website](#)).

Stewart shared findings and recommendations from the Transmission Corridors Work Group (TCWG), which was

Implementing TCWG Recommended Principles	
Challenges	Solutions (SB 5165/ HB1192)
• Transmission planning horizon is too short	• Increase utility planning horizon to 20 years
• Utilities’ acquisition process disadvantages renewable sources	• Require consideration for “Conditional Firm” transmission
• Duplicative permitting processes impede large projects	• Require multicounty transmission projects to go through EFSEC
• Need for pro-active siting studies, more Tribal input, prompt review	• Fund EFSEC and DAHP to study siting pro-actively (Gov Budget)
• Transmission planning is diffuse	• Fund COM & UTC staff to work

Figure 4. TCWG-identified challenges and solutions

charged by the Washington Legislature to review the need for more transmission, how to achieve it, and identify how to expedite transmission capacity without compromising environmental protection. Four key challenges the TCWG identified in its 2022 final report were: (1) Meeting 2045 CETA requirements means doubling the current high-voltage transmission capacity; (2) There is a mismatch between the time needed to build transmission (~10-20 years) than needed to build renewable energy generating facilities (~2-3 years); (3) No single entity is responsible for planning to overcome these issues; and (4) No single entity is responsible to ensure enough transmission is built to meet CETA requirements.

## AUDIENCE ENGAGEMENT | Pre-lunch Poll

Before lunch, participants were asked to respond to the question, **“What are your impressions after hearing the mapping group updates?”** Using Poll Everywhere (an audience engagement platform), participants submitted their responses and were able to “upvote” others’ responses, which were shared in real time. Around 85% of the responses were explicitly positive about the process. The three responses with the most votes were:

*Seems like the effort is doing well in compiling various stakeholder concerns. Will definitely be interested in a map that shows all concerns. (14 votes)*

*Very impressed with this effort and grateful that there is funding for such a collaborative endeavor. (9 votes)*

*The way [the maps] are constructed makes a lot of sense to me. (8 votes)*

Additional comments highlighted the importance of addressing Tribal concerns, the importance of the location of transmission lines, and specific suggestions for mapping group criteria.

Solutions to these challenges are listed in Figure 4, a snapshot of Stewart’s presentation, and largely captured in SB 5165/HB1192.

## Mapping Group Panel Discussion

**Tom Beierle (Ross Strategic)** moderated a 45-minute discussion among the four mapping group representatives that included time to consider participant comments and answer questions. Panelists began the discussion by sharing personal learnings from the mapping group process so far. Key points of discussion included:

- The ability to visualize data through mapping helped the mapping groups "ground truth" members' intuition and site-specific understanding and bring rigor to the process of understanding potential least-conflict areas.
- Each group found value in looking forward in time to consider criteria that may influence future land uses. For the solar group, this included the location of future transmission, distribution lines, and substations. For rangelands, it included considering future preservation of grazing lands owned by the Bureau of Land Management and others. For agriculture, it included consideration of future water supplies and the potential of bringing irrigation of dryland agricultural areas to increase productivity. For conservation, it included looking at the best

opportunities for future expansion of key habitats like shrub-steppe and how future changes in climate might shift species' locations and movement.

- Conservation Reserve Program (CRP) lands are important resources to consider across all the mapping groups. It may be valuable to map other areas governed by federal, state, and local programs and policies, such as conservation easements, lands designated in Habitat Conservation Plans, and other protected areas.
- It is important to engage with Tribes in the mapping process and to understand lands, species (e.g., pronghorn), and other factors that are particularly important to Tribes.
- A collaborative approach to the mapping group process has helped bring together the knowledge that each member has and test assumptions or subjective ideas they may bring.

## Tribal Considerations

**Dr. Allyson Brooks (WA Department of Archaeology and Historic Preservation)** shared general guidance for identifying and planning around important cultural resources in the state. This process typically includes working with Tribes and conducting government-to-government meetings. High-level takeaways include: (1) The cultural resources identification/mitigation process is ongoing (not a box to be checked off); (2) “Cultural resources” extends beyond historic buildings and sites and includes the landscape and its features (e.g., mist from waterfalls); and (3) It is important to approach these conversations with an open mind and positive intent.

Note: Dr. Brooks’ presentation and slides only appear in the video recording; slides with sensitive Tribal information were blurred out in the recording. (Recording link at top of summary.)

## Related Efforts

### Low-carbon Energy Project Siting Improvement Study

**Diane Butorac (WA Department of Ecology)** shared findings and recommendations from the 2022 Siting Improvement Study conducted by WA departments of Ecology and Commerce to identify systemic issues related to industrial clean energy projects. Major challenges the study identified included insufficient Tribal engagement, inefficient permitting process, lack of project transparency, and uncertainties over project impacts and benefits. The recommendation to conduct upfront planning to make siting more effective and ensure natural resources protection is directly related to the Least-conflict Solar Siting project. See Figure 5 for a snapshot of Diane’s presentation that highlights some of Ecology and Commerce’s 73 recommendations they developed with input from other state agencies, Tribes, stakeholders, and the public.

#### 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.

Figure 5. Summary of Clean Energy Siting Improvement Study recommendations

#### 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.



## Clean Energy Siting Bill (HB 1216)

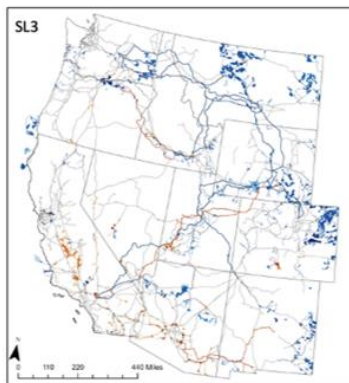
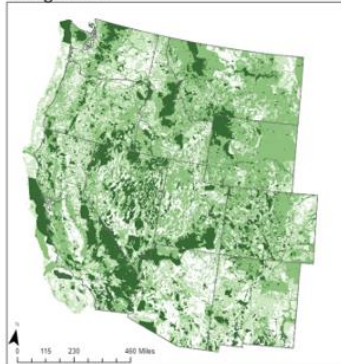
**Karen Janowitz (WSU Energy Program)** provided an overview of HB 1216, which is intended to enable more efficient and effective clean energy project siting, bring benefits to communities that host the projects, and facilitate a rapid transition to clean energy. Karen was joined by **Becky Kelley (WA Office of the Governor)** to answer questions. Participants are invited to reach out to Becky with questions.

## Power of Place: Land Use and Decarbonization Pathways in the West

**Nicole Hill (The Nature Conservancy, or TNC)** shared an overview of TNC's Power of Place work, which seeks to answer questions related to simultaneously achieving decarbonization and conservation goals. Power of Place is similar to the Least-conflict Solar Siting work in seeking areas to best site carbon-free energy sources, although there are many differences. Much of Washington is protected (based on the project's criteria) but there is still likely space to build the infrastructure needed to achieve both sets of goals. Figure 6 is a snapshot of Nicole's presentation.

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.

Figure 6. TNC Power of Place finding

## Project Next Steps

The third (and final) large group gathering will be on Wednesday, April 12, 2023. The project team will share the combined mapping group maps and discussion will focus on the project's next steps and how to use this information beyond the publication of the final report and maps.

### AUDIENCE ENGAGEMENT | Closing Poll

Before closing the meeting, participants were asked to respond to the question, “**What related topics do you hope to explore more?**” As with the pre-lunch poll, participants submitted their responses using Poll Everywhere and were able to “upvote” others’ responses, which were shared in real time. Around two-thirds of the responses related to various types of dual use of land, along with solar. The five responses with the most votes were:

*Solar over irrigation canals (8 votes)*

*Dual use solar (8 votes)*

*Solar under existing power lines (7 votes)*

*Mapping of large commercial/industrial areas that could be available for rooftop and parking area/unused areas for solar development (7 votes)*

*Multiuse solar with agriculture and in combination with wildlife corridors and pollinator habitat (5 votes)*

Additional responses indicated interest in the cumulative impacts of solar development, the relationship of least-conflict mapped areas to actual sites of interest to solar companies, and different approaches for combining maps.

## Gathering 2 Presenter Contact Information

Presenter Name	Affiliation and/or Role	Gathering 2 Topic(s)	Email
Karen Janowitz	WSU Energy Program and Least-conflict Solar Siting Project Lead	Project Updates and Related Efforts: Clean Energy Siting Bill (HB 1216)	<a href="mailto:janowitzk@energy.wsu.edu">janowitzk@energy.wsu.edu</a>
Jim Strittholt	Conservation Biology Institute and Project Mapping Lead	Mapping Group and Local Community Group Updates	<a href="mailto:stritt@consbio.org">stritt@consbio.org</a>
Liz Klumpp	Bonneville Power Administration	Transmission Issues for Solar Projects	<a href="mailto:ecklumpp@bpa.gov">ecklumpp@bpa.gov</a>
Stewart Henderson	WA Energy Facility Site Evaluation Council	Transmission Issues for Solar Projects	<a href="mailto:stewart.henderson@efsec.wa.gov">stewart.henderson@efsec.wa.gov</a>
Dr. Allyson Brooks	WA Department of Archaeology and Historic Preservation	Tribal Considerations	<a href="mailto:allyson.brooks@dahp.wa.gov">allyson.brooks@dahp.wa.gov</a>
Diane Butorac	WA Department of Ecology	Related Efforts: Low-carbon Energy Project Siting Improvement Study	<a href="mailto:diane.butorac@ecy.wa.gov">diane.butorac@ecy.wa.gov</a>
Becky Kelley	WA Office of the Governor	Related Efforts: Clean Energy Siting Bill (HB 1216)	<a href="mailto:becky.kelley@gov.wa.gov">becky.kelley@gov.wa.gov</a>
Nicole Hill	The Nature Conservancy	Power of Place	<a href="mailto:nicole.hill@tnc.org">nicole.hill@tnc.org</a>