Solar Energy Siting

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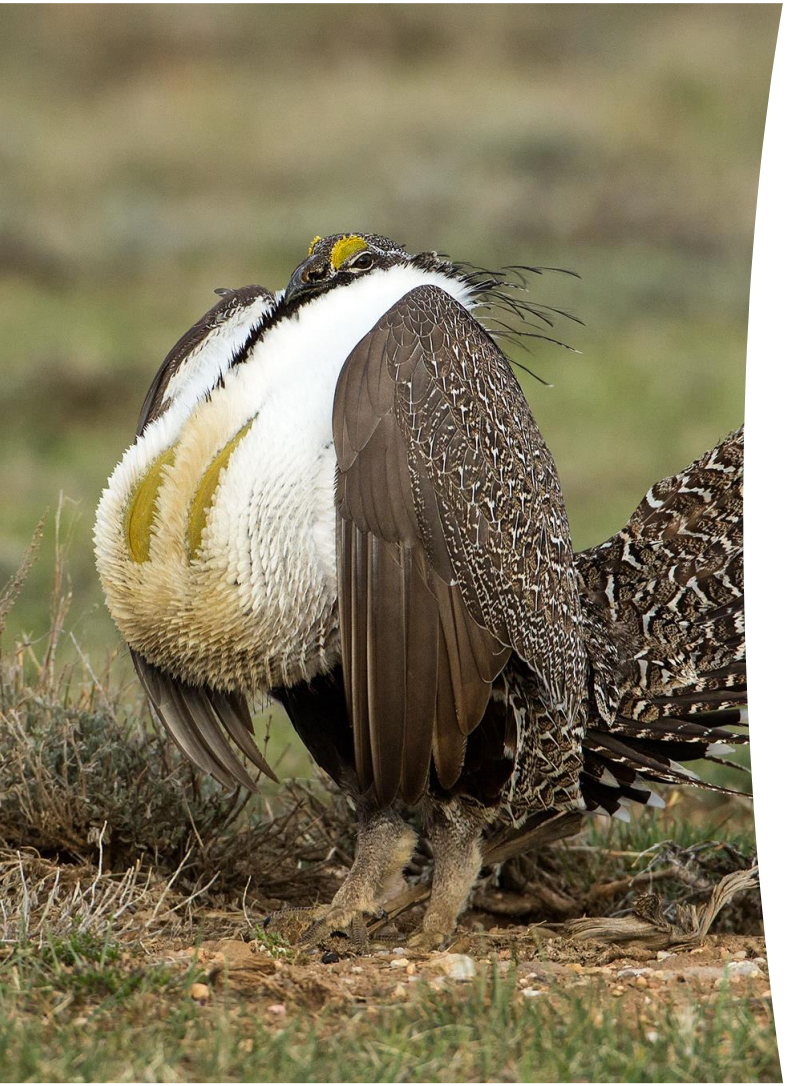
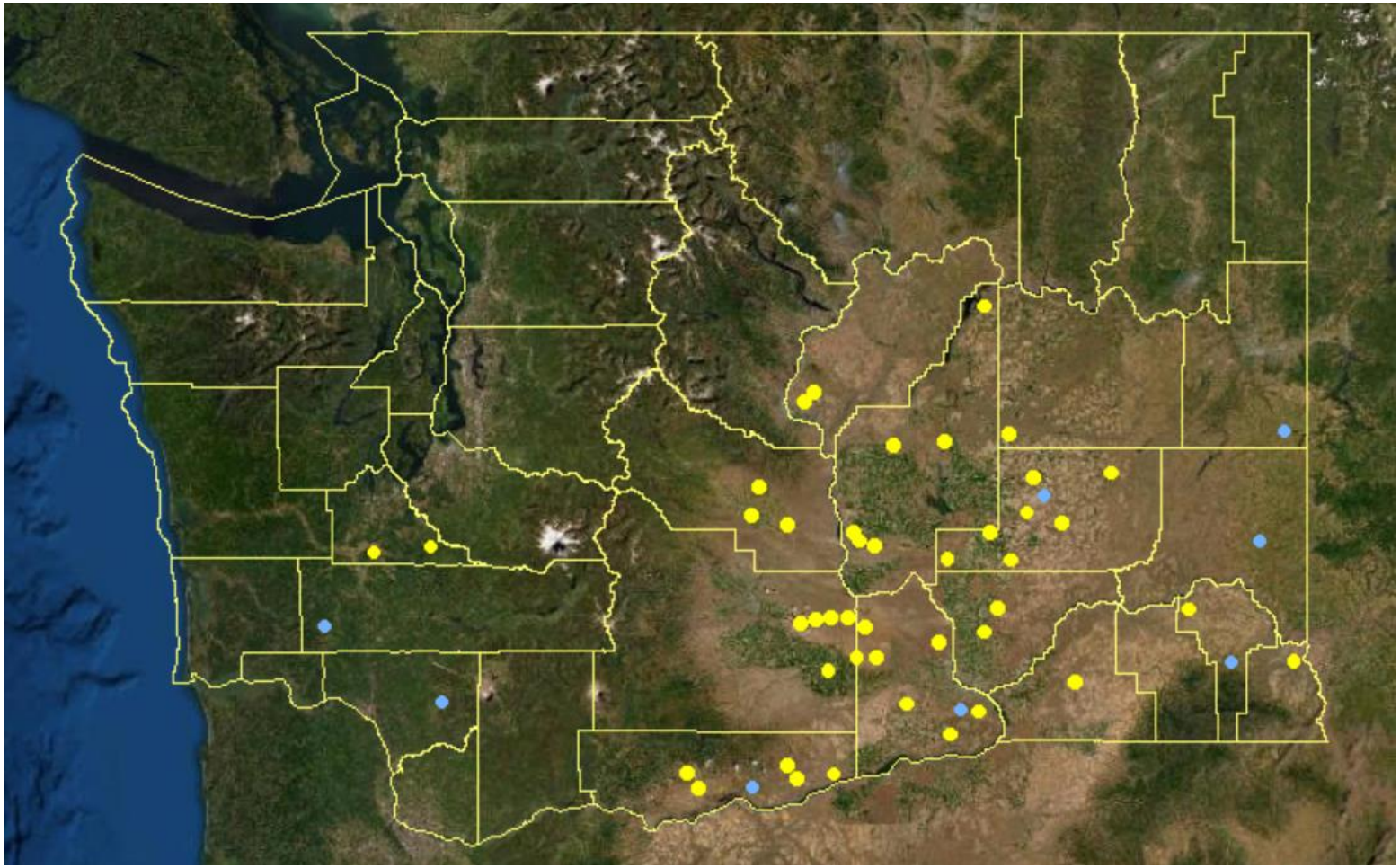
Washington Department of FISH and WILDLIFE



Guiding principles

- WDFW supports WA's renewable energy goals, which include substantial solar energy resources
- Reducing the magnitude of climate change is good for fish and wildlife
- Deploying significant solar resources can be compatible with protecting wildlife habitat
- Policies and practices can avoid, minimize, and mitigate habitat impacts



- 42 Solar Projects proposed to date
  - > 54,000 acres
  - > 84 square miles
- 8 Wind Projects

Department of Fish and Wildlife

- Solar Projects are:
  - operational (2)
  - construction (1)
  - in permitting (6)
  - proposed/potential (34)

- 93% of projects are in Columbia Plateau ecoregion

- 80% of eastern WA projects have NOT initiated permitting, but many have spent several years in pre-permitting work, which includes working with WDFW

- Wind Projects are:
  - proposed/potential (8)
  - 6 in Columbia Plateau Ecoregion
  - 2 in western WA

Department of Fish and Wildlife

Shrubsteppe: a degraded baseline, fragmentation, fires, loss of functions and values

Only 40% remains of the 10.4 million acres of eastern Washington's shrubsteppe habitat remains relative to the mid-1800s(Dobler et al 1996)

Development continues. Washington's' shrubsteppe is attractive for development thanks to abundant sunshine, rural landscapes, transmission infrastructure, expanding agriculture, and a growing demand for carbon-free energy

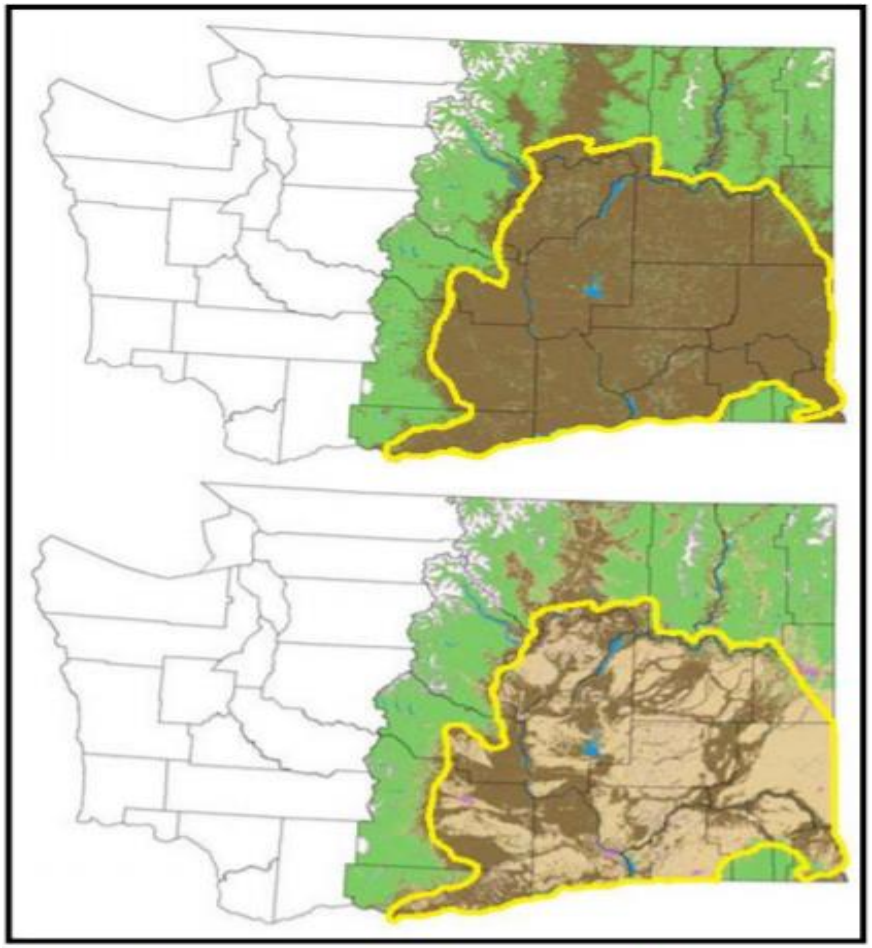


Figure 4. Historical (top) vs. current (bottom) shrubsteppe and steppe in eastern Washington (*53*). Green = forest; brown = shrubsteppe/ steppe; tan = agriculture; yellow = Columbia Plateau ecoregional boundary.

WDFW's Role

Pre-permitting, permitting, Technical Advisory Committee

- Provide Priority Habitat and Species Maps and information

- Provide Technical Expertise and Recommendations to Project and consultants
  - Pre-permitting meetings
    - Survey protocols for habitats and species
    - Best Available Science
  - Document review and comment

- Provide Technical Expertise and Recommendations to Permitting Authority
  - County - SEPA
  - EFSEC - SEPA

Solar projects on shrubsteppe habitat can impact ecological functions and values and can be a significant impact on an increasingly rare ecosystem

Lind Solar. Jesse Tinsley/THE SPOKESMAN-REVIEW 2018

(The Nature Conservancy, 2018)

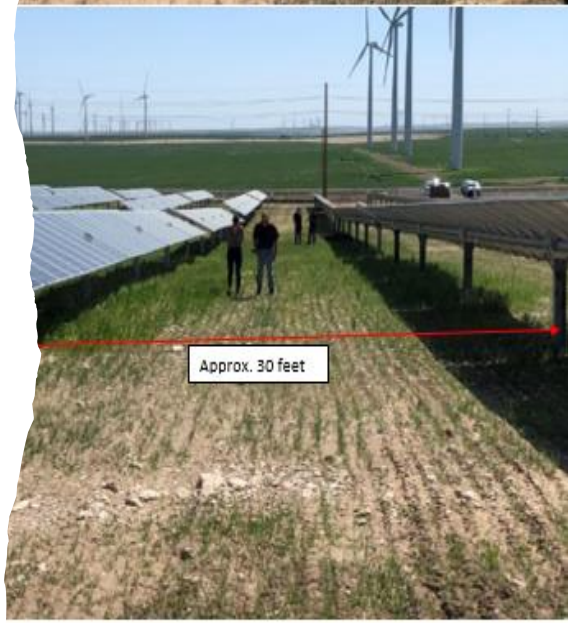
Fencing in thousands of acres can create landscape level impacts to connectivity corridors and impacts to resident, migratory, and special status species such as sage grouse, sharp-tailed grouse, pygmy rabbits, and elk and mule deer.

Siting

- Primarily driven by ability to acquire leases, distance to substation, economics = mitigate impacts to habitats and species. What happened to avoid?
- Impacts to native habitats range from 0 to > 90%
- Impacts to sensitive species can not be mitigated
- Landscape and cumulative impacts of not just solar
  - Agricultural expansion
  - Rural residential growth

The Technology

- Types of solar
  - Reflective, concentrating panels (not PV)
  - Community solar, solar parks (PV)
  - Industrial-scale PV
- What is being proposed in WA?
  - Mostly industrial solar with bi-facial panels on tracking system



WDFW is working to be part of the solution

- Identifying opportunities for low- and no-impact solar generation
  - E.g., placing solar on existing infrastructure and working landscapes

- WDFW is looking to “walk the talk” through adding solar to our own facilities

What WDFW is doing in policy/planning arenas

- Working toward statewide guidance using:
  - Refining internal DFW databases
  - Preparing for siting conversations, including “least conflict solar” forum
  - Hope/except to build on least conflict outcome through guidelines, local programmatic approaches
- Increasing internal capacity

Discussion?