

SWAP Learning Series #3: State Wildlife Action Plans and Renewable Energy

Date: January 18, 2023 **Time:** 2:00pm-3:30pm (ET)
Meeting Link: <https://fishwildlife-org.zoom.us/j/82058180843?pwd=d1BmRmJJWm1ONyttT3JpVFaxU1R2dz09>

Meeting ID: 820 5818 0843 **Passcode:** 583606

One tap mobile: +13052241968,,82058180843#,,,,*583606# US

Overview: This SWAP Learning Series will focus on renewable energy development and wildlife. We will discuss what the buildout of renewable energy looks like and how such developments can impact wildlife and their habitats. We will then hear about tools that SWAP coordinators can use to include energy in your SWAP revision including a dynamic dashboard that synthesizes renewable energy threats to wildlife from current SWAPs from the Renewable Energy Wildlife Institute and The Nature Conservancy’s Site Renewables Right tool to find appropriate ‘low impact’ siting locations.

MEETING AGENDA

Time (ET)	Topic	Speakers
2:00PM	Welcome and Intro	Mark Humpert, AFWA and Jason Goldberg, USFWS
2:05PM	Renewable Energy and SWAPS: Providing context and motivation for SWAPs <i>While renewable energy development is necessary to curb the effect of climate change, it will inevitably cause conflict with wildlife and habitats that SFWA’s are tasked with conserving. Thus, consideration of how energy development affects wildlife and habitats in SWAP revisions is critical.</i>	Meaghan Gade, AFWA
2:25PM	Renewable Energy and SWAPS (RE/SWAP) Dashboard <i>The Renewable Energy Wildlife Institute (REWI) developed a dynamic dashboard containing all instances of renewable energy in each states current SWAP. The RE/SWAP dashboard facilitates exploring the perceived threats by state, technology (wind/solar), taxa, or threat mechanism.</i> 2:45- Questions and feedback for Ryan <i>REWI is seeking feedback from the audience on the value-add and probable usage of this beta tool.</i>	Ryan Butryn, Renewable Energy Wildlife Institute
3:00PM	Site Renewables Right <i>The Nature Conservancy’s Site Renewables Right tool synthesizes more than 100 geospatial engineering, land-use, and wildlife data to identify where renewable</i>	Nathan Cummins, Director, Renewable Energy Programs

Commented [GJ1]: Mark

1) Do you have the link to the meeting recording?
 2) Are poll results available?

	<i>energy can be developed in the central U.S. while still conserving important wildlife habitats and natural areas at the same time.</i>	Chris Hise, Associate Director of Conservation, The Nature Conservancy
3:20PM	Questions and discussions	Mark Humpert, AFWA and Jason Goldberg, USFWS
3:30PM	Wrap up and adjourn	

Highlights:

- Links from the meeting:
 - Princeton Net Zero America: <https://netzeroamerica.princeton.edu/?explorer=pathway&state=national&table=e-positive&limit=200>
 - REWI website: <https://rewi.org/>
 - REWI Wind/Wildlife Guide: <https://rewi.org/guide/>
 - TNC Site Renewables Right:
 - www.nature.org/siterenewablesright
 - Publications referenced in the presentation are [here](#) and [here](#).
 - TNC Power of Place: <https://www.nature.org/en-us/what-we-do/our-priorities/tackle-climate-change/climate-change-stories/power-of-place/>
 - TNC Power of Place Voices from the West Companion Report: https://www.nature.org/content/dam/tnc/nature/en/documents/TNC_VoicesFromtheWest_Report_FINAL_LR.pdf

Introduction (Mark)

- We want to make sure that these serve your needs as you revise your SWAPs.
- AFWA was a founding member of American Wind Wildlife Institute (now Renewable Energy Wildlife Institute)

Renewable Energy and SWAPs: Providing context and motivation for SWAPs

Meaghan Gade, AFWA (Energy and Wildlife Program Manager)

- Renewable energy is a critical tool to decarbonize and help meet SWAP goals, help us reduce emissions and address climate change.
- It's necessary, but there are negative effects too – direct mortality (collisions), habitat fragmentation, species displacement, movement barriers.
- (We're talking today about solar and wind at utility scales – large acre footprints, not facilities like rooftop solar.)
- How do achieve buildout while minimizing impacts?
 - Current Administration has set ambitious carbon reduction goals, with significant funding through BIL and IRA. These offer significant investments in clean energy.
- What does this projected buildout look like on the ground?
 - One study from <https://netzeroamerica.princeton.edu> shows significant changes. ([Potential Pathways, Infrastructure, and Impacts](#))
 - Offshore wind is not a silver bullet or substitute for onshore wind.

- This will require historic buildout of resources, such as building out 15-15 GW/year of wind. It's possible but there are hurdles such as supply chain issues. We also need land for development.
 - Transmission is also an issue.
- About 44% (7,576 total) found within States with the most significant buildouts expected.
- AFWA did an AFWA Wind Energy survey in 2019 to understand impacts
 - Direct impacts – collisions
 - Indirect impacts – e.g., habitat loss
 - Cumulative impacts
- AFWA Solar Survey (2021)
 - Habitat fragmentation and other issues identified.
 - Responses are Regionally specific.
 - Habitats at risk – grassland/prairie, shrub steppe, ag and grazing lands.
 - Species include species such as migrating ungulates and amphibians.
- We know less about solar than wind. Developing this understanding is a priority for AFWA.
- Regulatory mechanisms
 - 2012 Federal Wind Energy Guidelines – Voluntary. Effective, but no Federal statute requiring developers to think about these. Every State is different in its own policies. Some have voluntary measures themselves. We need industry and government to work together.
 - Key Message: SWAP guidance can be an important tool and resource for developers.

Renewable Energy and SWAPS (RE/SWAP) Dashboard

Ryan Butryn, Renewable Energy Wildlife Institute

- www.rewi.org – website offers various resources. Introductory guide for wind and wildlife now available, solar coming later. For example, we have a Results Catalog with our products, whether journal publication or other resources. For example, we have a summary of wind power impacts on wildlife. We also have a Research Hub for solar and wind. [American Wind Wildlife Information Center](#) includes data on collisions – see Bird and Bat Technical Reports for summary info.
- Following will demo a new tool, not available on the web yet. Is it useful for you?
 - Post-doc reviewed SWAPs and identified threats to species based on references to “wind,” “solar,” and “renewable.”
 - Dashboard allows you to see the number of threats identified in a State, both on a map and with text taken from the SWAP. Table also breaks down the threat type. The dashboard can be filtered by different means, such as species type or type of impact. Starting point for exploring perceived threats in SWAPs.
 - Some of the threats are general, sometimes very specific relating to behavior of a species. There's a range of those threats.
- This was done for our internal use, is this useful for you?
- Survey:
 - Would you find value in having the RE/SWAP tool accessible to your agency? (Yes/No)

- Would the RE/SWAP tool be useful for your SWAP revisions? (Yes/No) (Similar to Q1)
 - 25 yes, 1 no
- Would the RE/SWAP tool be useful for your SWAP revisions?
 - 21 Yes, 5 No
- Besides SWAP revisions, are there other ways you could use the results?
 - 26 Yes, 7 No
 - Are there changes or improvement to the RE/SWAP tool that you recommend? (Open-ended response)
 - 13 Yes, 13 No
- Feedback
 - This seems like a great tool to improve regional cooperation
 - In a perfect world, I'd love to see the awesome data hub information linked to the dashboard
 - Suggestions would be that recognizing that each SWAP has been structured differently and data has been handled differently. And spending the time to find out and communicate the limitation of the integrated data/interpretation would be important.
 - I definitely think that SWAPs can be improved with access to data and sharing threats/actions across states can be helpful. And, I also am concerned that using 2015 SWAPs as the foundation for what I'm hearing in my state is more of an emerging concern wouldn't really reflect the updates to the threats, the data that's been generated, etc. In my state, SWAP revision for 2015 started in 2013. That feels like a really long time ago to go back and reference what any state thought was likely to be an issue with renewable energy. I could be wrong though; I am just learning!
 - I wish there was a "unsure" or "depends" option. Would like to explore the tool more to figure out applications. I think this tool is useful but perhaps in conjunction with SWAPs not necessarily within them.
 - This could also be helpful for considering our energy development guidelines and whether any topics/taxa are missing that have been identified elsewhere. However, this does seem more retrospective than forward thinking, since these SWAPs were based on information available ~8-10 years ago.
 - agree that adding actions and- separately or along w/SWAP info- research summary reports would be among the most valuable changes. also second that data gaps (rare spp., but also understudied/funded spp./taxa).

Commented [GJ2]: Mark, are more accurate poll results available?

Nathan Cummins, Director, Renewable Energy Programs

Chris Hise, Associate Director of Conservation, The Nature Conservancy

- www.nature.org/siterenewablesright
- What are the biodiversity impacts to the landscape? We are working to alleviate impacts to frontline communities.
- The Buildout Challenge – We're seeing significant needs for renewable energy. What is needed to achieve net zero goals? A lot of land is required. Potential for conflicts, which could slow progress toward a net zero future.

- We need to integrate approaches so we can meet goals for net-zero.
- What are the climate opportunities and optimize carbon opportunities on the landscape? This doesn't need to be an either/or conversation. We also want to support an equitable transition. Getting projects on rooftops, into historically disadvantaged communities, is a benefit.
- Happy to talk offline or with State chapters on some of these other strategies.
- TNC has been developing science on energy siting to effectively drive change. We want to make sure everything we do is grounded in science.
- Site Renewables Right started in KS and OK, now working in 19-State region across the U.S.
- Area of analysis focuses on Central U.S. "Wind Belt" – Includes top 5 States for installed wind capacity.
- Analysis incorporates key wildlife areas (rare species, sensitive habitats, etc.) – 100 data layers. We also mapped areas where there may be engineering constraints so our results can be more realistic, largely following other data from other organizations.
 - Data is available for everyone who wants to use for their own decision-making.
- By subtracting wildlife habitats and engineering constraints, still leaves potential for an additional 935 GW of electricity in just these 19 States.
 - The model is conceptual. Transmission is still needed. Landowners may not want wind on their property. Key message is that there is plenty of space needed to meet goals.
- Developed secondary key areas in development for solar.
 - Fewer environmental constraints for solar compared to wind. However, worth noting that different projects have different impacts.
- Science-based approach. Some of the best-available information is proprietary. Wildlife may still be impacted in unpredictable ways. Some impacts still not understood.
- We support more and ongoing research into these issues.
- Key Points
 - This is a source of information for screening and to inform guidelines, but consultation is still needed.
 - Not intended to replace Wind Energy Guidelines or consultation.
 - Not a "go/no go zone" map. It's a starting point.
 - Approach emphasizes the *avoid first* position – consistent with mitigation hierarchy.
 - Projects outside of low-risk area should be given greater scrutiny.
 - We continue to welcome partner input on the data and science to inform future updates.
- Renewables Grid Initiative has recognized this work, as have others.
- We're also working with other partners. Working to advance these principles into procurement practices.
- We can have clean energy and wildlife if we plan ahead.

Questions and discussion

- For Meagan / All
 - How is the impact of geographic placement of renewable energy infrastructure on frontline communities being incorporated into siting

recommendations/prioritization? How is community impact for communities bearing the impact or those that don't have access to how we're benefiting the most (rural, urban, Black / Brown)

- TNC: It's critically important that we consider these issues. We want to bring that kind of data into these assessments. When we talk about corporate guidelines, we have asked if these issues have been discussing these with the local communities. It's a balancing act. We also just hired an equitable siting advisor to help address these issues. We are also requiring developers to work on local benefits on TNC lands. Microsoft and Sol Systems are also doing similar. We're also working with IRA dollars to help local communities get the dollars they need, such as in Iowa. There's no one-size fits all, but we're trying different approaches.
 - Meaghan: [Power of Place West](#) and [Tribal Voices](#)
 - Nathan – Another strategy TNC is working on a follow-up to the Princeton Net Zero Report. What happens if we add other factors, looking through other options. We're consulting with Tribes.
 - Comment: The frontline community conversation seems doubly complicated b/c RE might be desired or not desired by individual communities, whereas wildlife impacts are generally more scales of negative impacts.
 - Comment: The frontline community conversation seems doubly complicated b/c RE might be desired or not desired by individual communities, whereas wildlife impacts are generally more scales of negative impacts.
- For Ryan
 - Out of curiosity, how much change has there been in the installation of renewable energy in the US since 2015? Is it possible that either the number of states that ID threats arising from renewable energy or the magnitude of concern has changed since the last SWAPs were written?
 - Considerable buildout has occurred. There may be more species of concern that people weren't thinking about in the past.
 - Meagan – Not every State has the wind resources to do wind energy, but threats are going to change for those that do. Having info from the past will be helpful for understanding the future.
 - I wonder if it would be interesting to take the data in your bird and bat research summary reports and present them in this dashboard? Instead of basing it on the SWAP threats, base it on the research synthesis you have done. Which species are showing the greatest impacts, where, etc.
 - That was my first instinct, to compare actual numbers in collision database and how they compare to threats listed in the SWAPs. Would it be valuable to have both pieces of information?
 - Could you provide the exact URL for this interactive map at REWI?
 - We're working with data contributors. Dashboard is currently only accessible to contributors but we are committed to making it accessible. Looking for feedback to decide if we should make this available.

- Can you please provide some background on why you have titled this as 'perceived' threats. States have identified these as actual threats to habitat and species based on extensive data and knowledge of energy development in their state so adding a qualifier such as 'perceived' could undermine the reporting included in the SWAPs.
 - Related: That was based on feedback we received on earlier versions of the Dashboard. There could be some lost in translation happening. Some threats are mentioned that are not in line with current science on some topics. There is room in SWAPs to review current science.
 - Comment: I appreciate that you addressed this question Ryan. However, I have concerns that this word choice will lump all state concerns under 'perceived' threats. While there may be some concerns where updates to the science and knowledge base might alter the assessment in future revisions, I would put forth that the vast majority are actual threats. And to me this wording could come across as REWI making a judgement call on state assessments. I would ask consideration of other options, state-identified threats or some other word choice that respects the work of states in these SWAP assessments.
 - Comment: Agree w/Karen about "perceived." Logic is understandable, but chosen language could undermine SWAPs and local knowledge/expertise that went into them.
- I think the ability to easily see what other states have said for threats to individual SGCN would be great. Sounds like conservation actions relevant to addressing threats were not pulled out. Conservation actions would be very useful- but likely also harder to tie to individual species. What is the feasibility of pulling out those actions?
 - I would like to echo Virginia's suggestion about complementing this data with specific conservation actions or recommendations that various states have published in their WAP's or elsewhere. I.E. what tactics have successfully abated these threats.
- You could layer the actual data into this, or it could be done separately, I think either would be fine.
- One of the issues with using research data in the dashboard is that often these SWAP species are rare species with have limited reports or research on impacts. Rare events such as collision are even more rare for species present in low numbers. And, habitat impacts are not necessarily included in the reports cited or included in summaries. So, both are likely of use.
 - Top collisions we see in our bird data are common species – pigeons, morning doves, horn lark
 - Trying to use data given where we know effort was invested to help understand possible risk. Currently reworking data to understand relationship of what was found. How do we know we did enough searching? That's different by region.
- I also agree with Virginia's suggestion of having a central database to seeing what language other states are using in their SWAPs for the threats associated with energy development. I also think that it is good to see what species other

- states have identified as being negatively impacted by energy development (e.g., box turtles and solar).
- Yes, this type of information is very valuable for different uses including for SWAP update but also for coordination among states... Through the last update in CA, we struggle to understand the wind facility impacts in population level.
 - For the tool, is there a plan in place to make regular updates? The data on SGCN and threats changes with each revision, that will be especially critical as the pace of renewable energy build out increases. The tool could quickly be outdated without a strategy to include new information as states publish revised SWAP.
 - Yes, assuming that the RE/SWAP tool is valuable for agencies to access, we will anticipate updating the tool as new SWAPS come out with some fundraising efforts.
 - agree that adding actions and- separately or along w/SWAP info- research summary reports would be among the most valuable changes. also second that data gaps (rare spp., but also understudied/funded spp./taxa).
 - REWI will need to consult with AFWA or others familiar with SWAPs to see if conservation actions tied to renewable energy threats are included in enough of the SWAPs to make it worth compiling.
 - Depending on your ability to maintain, the research findings could be more nimble/timely than SWAP data, typically updated every 10 yrs.
 - Agreed, SWAP threats are just one source of perspective on renewable and wildlife interactions.
- For TNC
 - Does the data analysis consider current conditions? What impacts will climate change have on their recommendations – will habitats identified as key wildlife areas still be key wildlife areas in 20 years? 50?
 - The data considers the best available science. We update it biannually based on the latest literature. The data incorporates portions of TNC's Resilient and Connected Lands Network that does look at that question – where species are expected to go. That is why we recommend a conservative, avoidance approach to developing in existing, unfragmented landscapes to allow for that movement.
 - Please do provide a source where I can read more about how the key wildlife areas (wind) were determined. Thank you!
 - We recommend reviewing our [methods paper](#) and [associated publication](#). Please reach out to Nathan Cummins, ncummins@tnc.org, if you have further questions.
 - Do the Key Wildlife Areas take into account the Conservation Opportunity Areas identified in many SWAPs? If not that would be helpful, because States are actively working to conserve and restore wildlife habitat in these areas.
 - In some cases, yes. We included SWAP polygons to identify important greater prairie chicken areas in Missouri. Happy to discuss further.